



# Polyurethane Belts

2025



**Elatech®**  
Technology in Motion.

# Contents

## ELATECH® Polyurethane Belts

|                                             |    |
|---------------------------------------------|----|
| ELATECH® Profiles table chart               | 02 |
| ELATECH® Company profile                    | 04 |
| Introduction to ELATECH® polyurethane belts | 08 |
| Product range                               | 08 |
| Material characteristics                    | 09 |
| Chemical resistance                         | 10 |
| Material overview                           | 11 |

## ELATECH® M and V

|                                    |    |
|------------------------------------|----|
| Introduction                       | 14 |
| Product certification              | 14 |
| Tension cords                      | 14 |
| Mechanical and chemical properties | 14 |
| Executions                         | 15 |

### Technical data

|                                                                        |    |
|------------------------------------------------------------------------|----|
| · Metric profile T, AT, ATF, SAT, ATL                                  | 16 |
| · Inch pitch profile MXL, XL, L, H, XH                                 | 30 |
| · HTD profile and HTD XHPL high load                                   | 35 |
| · RPD and STD profile                                                  | 40 |
| · EAGLE profile                                                        | 47 |
| · PG profile                                                           | 52 |
| · Self tracking profiles TK - ATK - HK - ATKK                          | 54 |
| · Total Protection belts<br>(T10TP - T20TP - AT10TP - HTD8MTP)         | 62 |
| · Flat belts, Flat belts Heavy Series,<br>Flat belts (Lift) and Poly-V | 66 |
| · TT5                                                                  | 74 |
| Clamping plates                                                        | 75 |

## ELATECH® SYNCRO MAX® - Extra-Wide

|                        |    |
|------------------------|----|
| Introduction           | 78 |
| <b>Technical data</b>  |    |
| · Metric profile T10   | 79 |
| · Inch pitch profile H | 80 |

## ELA-flex SD® Polyurethane Belts

|                              |    |
|------------------------------|----|
| Introduction                 | 82 |
| Double sided timing belts    | 82 |
| Product certification        | 82 |
| Tolerances and tension cords | 83 |
| Belt designation             | 83 |

### Technical data

|                                            |     |
|--------------------------------------------|-----|
| · Metric profile T and AT                  | 84  |
| · Inch pitch profile XL, L, H, XH          | 94  |
| · HTD profile                              | 98  |
| · RPD and STD profile                      | 101 |
| · EAGLE profile                            | 107 |
| · Self tracking profiles ATK5-K6, ATK10-K6 | 111 |
| · Flat belts                               | 113 |

## ELATECH® iSync® - High Performance Timing Belts

|                                                   |     |
|---------------------------------------------------|-----|
| Introduction                                      | 118 |
| Tension cords                                     | 118 |
| Standard belt sizes - Single Toothing             | 119 |
| Standard belt sizes - Dual Toothing Special belts | 121 |
| <b>Technical data</b>                             |     |
| · Metric profile T                                | 122 |
| · Metric profile AT                               | 125 |
| · Inch pitch profile XL - L                       | 127 |

## Polyurethane Belts for Conveying Applications

|                                                                       |     |
|-----------------------------------------------------------------------|-----|
| Belts with backings                                                   | 130 |
| · Fabric                                                              | 131 |
| · Cellular                                                            | 132 |
| · PVC and PU                                                          | 134 |
| · Rubber                                                              | 136 |
| · Special                                                             | 138 |
| EMF - Mechanical Fastening System (& Safe Lock)                       | 140 |
| EFT - False Tooth System                                              | 142 |
| Mechanical processing                                                 | 144 |
| Belts with profiles                                                   | 145 |
| ELACLEATS - download in CAD<br>or PDF format the most suitable cleats | 146 |

## Drive Calculation

|                                               |     |
|-----------------------------------------------|-----|
| Guidelines                                    | 150 |
| Belt installation                             | 151 |
| ELADRIIVE - on line calculation software      | 152 |
| · LINEAR - Drive Calculation                  | 153 |
| · ELA-Flex SD® and iSync® - Drive Calculation | 158 |

## Timing pulleys

## Troubleshooting



- M** Open end
- F** ELA-Flex SD®
- W** Syncro Max®
- U** iSync®
- \*** Dual tooth available (on request for special cords)

1/2

### TRAPEZOIDAL T - METRIC PROFILE

| T 2,5 | CORDS        | A | K | S | HFE | HPL |
|-------|--------------|---|---|---|-----|-----|
|       | AVAILABLE IN | M | • |   |     | •   |
|       |              | F | • | • |     |     |
|       |              | U | • |   |     |     |

| T 5 | CORDS        | A  | K | S | HFE | HPL |
|-----|--------------|----|---|---|-----|-----|
|     | AVAILABLE IN | M* | • |   | •   | •   |
|     |              | F* | • | • | •   |     |
|     |              | U* | • |   |     |     |

| T 10 | CORDS        | A  | K | S | HFE | HPL |
|------|--------------|----|---|---|-----|-----|
|      | AVAILABLE IN | M* | • | • | •   | •   |
|      |              | F* | • | • | •   | •   |
|      |              | W  |   | • |     |     |
|      |              | U* | • |   |     |     |

| TK20 K13 | CORDS        | A | K | S | HFE | HPL |
|----------|--------------|---|---|---|-----|-----|
|          | AVAILABLE IN | M | • |   |     |     |
|          |              |   |   |   |     |     |

### TRAPEZOIDAL AT - METRIC PROFILE

| AT3 | CORDS        | A | K | S | HFE | HPL |
|-----|--------------|---|---|---|-----|-----|
|     | AVAILABLE IN | M | • |   |     | •   |
|     |              | F | • |   |     |     |
|     |              |   |   |   |     |     |

| AT5 | CORDS        | A  | K | S | HFE | HPL |
|-----|--------------|----|---|---|-----|-----|
|     | AVAILABLE IN | M* | • | • | •   | •   |
|     |              | F* | • | • | •   | •   |
|     |              | U  | • |   |     |     |

| ATK5 K6 | CORDS        | A | K | S | HFE | HPL |
|---------|--------------|---|---|---|-----|-----|
|         | AVAILABLE IN | M | • | • | •   | •   |
|         |              | F | • | • | •   | •   |

| ATK10 K6 | CORDS        | A | K | S | HFE | HPL |
|----------|--------------|---|---|---|-----|-----|
|          | AVAILABLE IN | M | • | • |     |     |
|          |              | F | • | • | •   | •   |

| ATK10 K13 | CORDS        | A | K | S | HFE | HPL |
|-----------|--------------|---|---|---|-----|-----|
|           | AVAILABLE IN | M | • | • |     |     |
|           |              |   |   |   |     |     |

| ATM10 | CORDS        | A | K | S | HFE | HPL |
|-------|--------------|---|---|---|-----|-----|
|       | AVAILABLE IN | F | • | • |     |     |
|       |              |   |   |   |     |     |

### TRAPEZOIDAL IMPERIAL PROFILE

| MXL | CORDS        | A | K | S | HFE | HPL |
|-----|--------------|---|---|---|-----|-----|
|     | AVAILABLE IN | M | • |   |     | •   |
|     |              |   |   |   |     |     |

| XL | CORDS        | A | K | S | HFE | HPL |
|----|--------------|---|---|---|-----|-----|
|    | AVAILABLE IN | M | • | • |     | •   |
|    |              | F | • | • | •   |     |
|    |              | U | • |   |     |     |

| L | CORDS        | A  | K | S | HFE | HPL |
|---|--------------|----|---|---|-----|-----|
|   | AVAILABLE IN | M* | • | • | •   |     |
|   |              | F* | • | • | •   | •   |
|   |              | U  | • |   |     |     |

### HIGH TORQUE DRIVE PROFILE

| HTD3M | CORDS        | A | K | S | HFE | HPL |
|-------|--------------|---|---|---|-----|-----|
|       | AVAILABLE IN | M | • |   |     | •   |
|       |              |   |   |   |     |     |

| HTD5M | CORDS        | A  | K | S | HFE | HPL |
|-------|--------------|----|---|---|-----|-----|
|       | AVAILABLE IN | M* | • | • | •   |     |
|       |              | F* | • | • | •   |     |

| HTD8M | CORDS        | A  | K | S | HFE | HPL |
|-------|--------------|----|---|---|-----|-----|
|       | AVAILABLE IN | M* | • | • | •   | •   |
|       |              | F* | • | • | •   |     |

### SUPER TORQUE DRIVE PROFILE

| STD5M | CORDS        | A | K | S | HFE | HPL |
|-------|--------------|---|---|---|-----|-----|
|       | AVAILABLE IN | M | • | • | •   |     |
|       |              | F | • | • | •   | •   |

| STD8M | CORDS        | A  | K | S | HFE | HPL |
|-------|--------------|----|---|---|-----|-----|
|       | AVAILABLE IN | M* | • | • | •   | •   |
|       |              | F* | • | • | •   |     |

| STD14M | CORDS        | A | K | S | HFE | HPL |
|--------|--------------|---|---|---|-----|-----|
|        | AVAILABLE IN | M | • | • |     |     |
|        |              | F | • | • |     |     |

### PARABOLIC PROFILE

| RPD5M | CORDS        | A | K | S | HFE | HPL |
|-------|--------------|---|---|---|-----|-----|
|       | AVAILABLE IN | M | • | • | •   |     |
|       |              | F | • | • | •   |     |

| RPD8M | CORDS        | A  | K | S | HFE | HPL |
|-------|--------------|----|---|---|-----|-----|
|       | AVAILABLE IN | M* | • | • | •   | •   |
|       |              | F* | • | • | •   |     |

| RPD14M | CORDS        | A  | K | S | HFE | XHPL |
|--------|--------------|----|---|---|-----|------|
|        | AVAILABLE IN | M* | • | • | •   | •    |
|        |              | F* | • | • | •   |      |

### HELICAL OFFSET TOOTH PROFILE

| EAGLE 5M | CORDS        | A | K | S | HFE | HPL |
|----------|--------------|---|---|---|-----|-----|
|          | AVAILABLE IN | M | • |   |     |     |
|          |              | F | • |   |     |     |

| EAGLE 8M | CORDS        | A | K | S | HFE | HPL |
|----------|--------------|---|---|---|-----|-----|
|          | AVAILABLE IN | M | • | • |     | •   |
|          |              | F | • |   |     |     |

| EAGLE 10M | CORDS        | A | K | S | HFE | HPL |
|-----------|--------------|---|---|---|-----|-----|
|           | AVAILABLE IN | M | • |   |     |     |
|           |              | F | • |   |     |     |

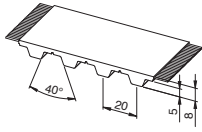
## CORD TYPES

|            |                  |             |                                  |
|------------|------------------|-------------|----------------------------------|
| <b>A</b>   | Steel            | <b>HPF</b>  | High Flexibility and Performance |
| <b>K</b>   | Aramid           | <b>HPL</b>  | High Performance                 |
| <b>S</b>   | Stainless Steel  | <b>XHPL</b> | Extra High Performance           |
| <b>HFE</b> | High Flexibility |             |                                  |

## PITCH/PROFILE

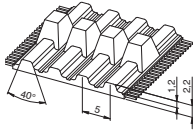
|                                                                                   |          |                                                                                     |       |                                                                                     |                  |
|-----------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|------------------|
|  | T        |  | STD   |  | FLAT             |
|  | AT       |  | RPD   |  | TOTAL PROTECTION |
|  | IMPERIAL |  | EAGLE |  | TT5              |
|  | HTD      |  | PG    |  | SPECIAL          |

### T 20



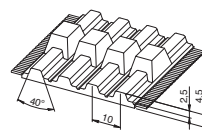
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M*           | • | • | • | •   |     |
| F*           | • | • | • | •   |     |

### TK5 K6



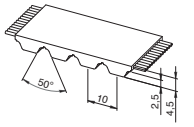
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • | • |   |     |     |

### TK10 K6 K13



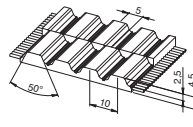
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • | • |   |     |     |

### AT10



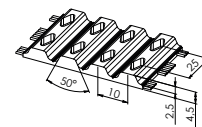
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M*           | • | • | • | •   |     |
| F*           | • | • | • | •   | •   |
| U            | • |   |   |     |     |

### SAT10



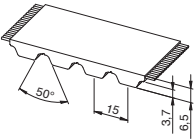
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • | • | • |     |     |

### ATF10



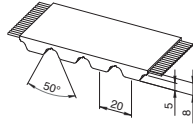
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • |   |   |     |     |

### AT15



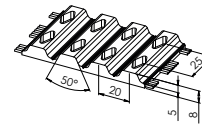
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| F            | • | • |   |     |     |

### AT20



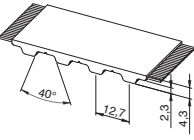
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M*           | • | • | • | •   | •   |
| F*           | • | • | • | •   | •   |

### ATF20



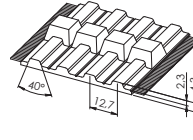
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • |   |   |     |     |

### H



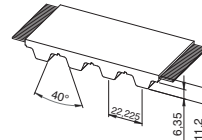
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M*           | • | • | • |     |     |
| F*           | • | • | • | •   |     |
| W            |   | • |   |     |     |

### H K13



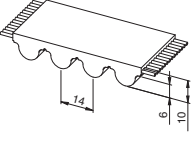
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • |   |   |     |     |

### XH



| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • | • | • |     |     |
| F            | • | • | • | •   |     |

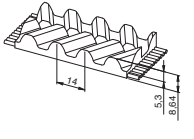
### HTD14M



| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M*           | • | • | • | •   |     |
| F*           | • | • | • | •   | •   |

| XHPL |
|------|
| •    |

### EAGLE 14M



| CORDS        | A | K | S | HFE | HPF |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • |   |   |     | •   |
| F            | • |   |   |     |     |

| XHPL |
|------|
| •    |

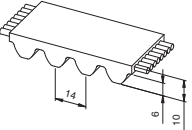


- M** Open end
- F** ELA-Flex SD®
- W** Syncro Max®
- U** iSync®
- \*** Dual tooth available  
(on request for special cords)

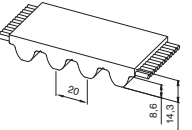
2/2

### PG ROUNDED PROFILE

| PG14M        |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • |   |     |     |  |

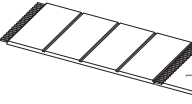


| PG20M        |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • |   |     |     |  |

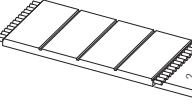


### FLAT TOOTH PROFILE

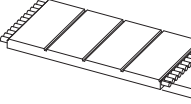
| F1           |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • | • | •   |     |  |



| F2           |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • | • | •   |     |  |
|              | F | • |   |     |     |  |

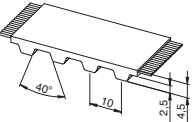


| F2.5         |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • | • | •   |     |  |
|              | F | • |   |     |     |  |

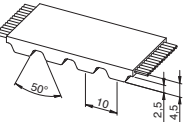


### TOTAL PROTECTION TOOTH PROFILE

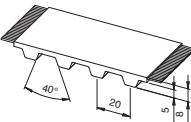
| T10TP Total Protection |   |   |   |     |     |  |
|------------------------|---|---|---|-----|-----|--|
| CORDS                  | A | K | S | HFE | HPL |  |
| AVAILABLE IN           | M | • |   |     |     |  |



| AT10TP Total Protection |   |   |   |     |     |  |
|-------------------------|---|---|---|-----|-----|--|
| CORDS                   | A | K | S | HFE | HPL |  |
| AVAILABLE IN            | M | • |   |     |     |  |

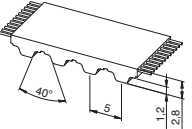


| T20TP Total Protection |   |   |   |     |     |  |
|------------------------|---|---|---|-----|-----|--|
| CORDS                  | A | K | S | HFE | HPL |  |
| AVAILABLE IN           | M | • |   |     |     |  |

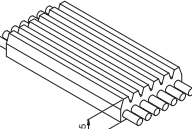


### SPECIAL PROFILE

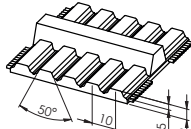
| TT5          |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • | • |     |     |  |



| POLY-V K     |   |   |   |     |     |  |
|--------------|---|---|---|-----|-----|--|
| CORDS        | A | K | S | HFE | HPL |  |
| AVAILABLE IN | M | • |   |     |     |  |



| ATK10P K13 Solid |   |   |   |     |     |   |
|------------------|---|---|---|-----|-----|---|
| CORDS            | A | K | S | HFE | HPL |   |
| AVAILABLE IN     | M |   |   |     |     | • |



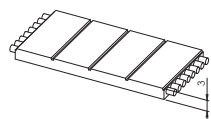
## CORD TYPES

|            |                  |             |                                  |
|------------|------------------|-------------|----------------------------------|
| <b>A</b>   | Steel            | <b>HPF</b>  | High Flexibility and Performance |
| <b>K</b>   | Aramid           | <b>HPL</b>  | High Performance                 |
| <b>S</b>   | Stainless Steel  | <b>XHPL</b> | Extra High Performance           |
| <b>HFE</b> | High Flexibility |             |                                  |

## PITCH/PROFILE

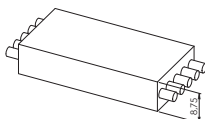
|                                                                                   |          |                                                                                     |       |                                                                                     |                  |
|-----------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------|------------------|
|  | T        |  | STD   |  | FLAT             |
|  | AT       |  | RPD   |  | TOTAL PROTECTION |
|  | IMPERIAL |  | EAGLE |  | TT5              |
|  | HTD      |  | PG    |  | SPECIAL          |

### F3



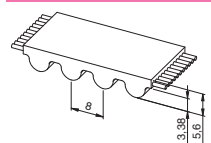
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • | • |   |     |     |
| F            | • |   |   |     |     |

### F8.75



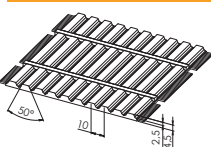
| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • |   |   |     | •   |

### HTD8M TP Total Protection

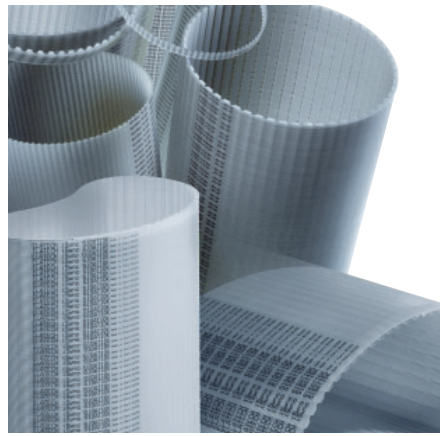
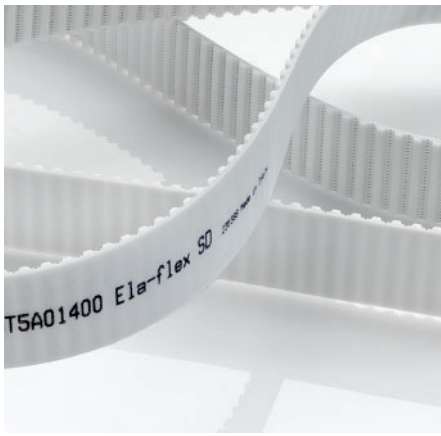


| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            | • |   |   |     |     |

### ATKK10



| CORDS        | A | K | S | HFE | HPL |
|--------------|---|---|---|-----|-----|
| AVAILABLE IN |   |   |   |     |     |
| M            |   | • |   |     |     |



---

**ELATECH®** is a Company fully dedicated to the research, development and manufacture of polyurethane belts for industrial applications. The unique manufacturing processes, made possible with the newest generation of technologies, the modern and efficient test and control equipment and a unique team of qualified technicians and engineers, allow **ELATECH®** to offer superior products with highest flexible service.

---

### Global Presence

With 6 sister Companies on 3 continents and a wide range of qualified distributors, **ELATECH®** guarantees superior technical and delivery service worldwide.

---

### Our Mission

Constantly growing, together with our customers, in product and process innovation to develop the best polyurethane belt for every industrial application.

# Designed for Performance Engineered for Excellence

# Research & Development

---

We strongly believe that innovation is the key to success for our customers. We are totally committed to quality and close cooperation with our customers to solve the problems of design engineers in the most advanced and economical way.

---

Our qualified technicians and our advanced test laboratory with the most modern resources allow us to offer the most effective solutions in all conveying, lifting or power transmission applications.

---

## Total Quality

In **ELATECH®** the term "quality" is not only limited to the product. We offer professional and competent consulting services with fast and reliable deliveries. The certification of our quality system confirms the quality consciousness of our Company and of all our employees. Our management system is certified according to ISO 9001.

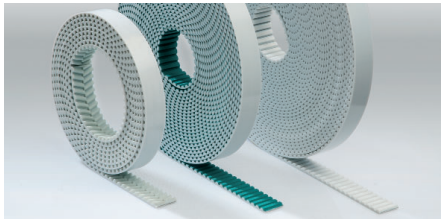




# Introduction

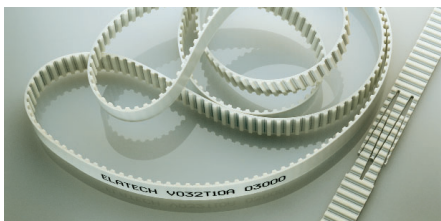
ELATECH® manufactures polyurethane belts for linear motion, conveying, lifting and power transmission applications. The combination of a polyurethane body reinforced with special steel or aramid tension members, allows the belt to fulfil the most severe requirements in all industrial applications. The unique manufacturing processes developed with the newest generation technologies such as test and control equipment, give us the ability to deliver superior products with the highest flexibility of service. ELATECH® offers the widest range of tooth profile to enable the design engineer the use of the best drive for every application. In addition to that, for special applications, ELATECH® studies and delivers innovative and unique solutions for even the most complex requirements.

## Product range



### ELATECH® M - OPEN END

ELATECH® M belts are produced in standard roll length of 100 m and delivered to any desired length. The excellent precision and dimensional stability and the high abrasion resistance make them ideal in all linear motion applications.



### ELATECH® V - JOINED

They are joined belts made from open-end belts. Our special manufacturing process allows any required length to be made. The high flexibility offers unique precision positioning, "ELATECH® V" joined belts are ideal for all conveying applications where synchronisation is needed. ELATECH® V have been designed specifically for transport applications with linear speeds up to 2 m/s. They cannot be used for power transmission applications.



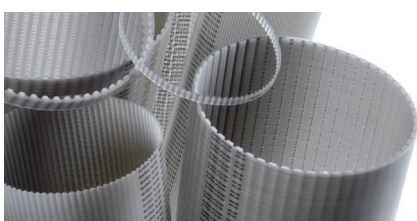
### ELATECH® SYNCRO MAX®

ELATECH® SYNCRO MAX® are extra wide polyurethane timing belts with aramid tension members that extend the advantages of synchronous belts to wider surfaces, suitable for typical applications of flat or modular conveyor belts. They are available in the most common range with a maximum width up to 500mm.



### ELATECH® ELA-FLEX SD®

ELA-flex SD® Synchro Drive belts are manufactured with truly endless steel tension cords. Having no splice or welding, they have no weak cross section and are therefore ideal for power transmission and high load conveying applications. They are available in a wide range of profiles and pitches and in any length tooth by tooth from 800 mm to 24.000 mm.



### ELATECH® iSync®

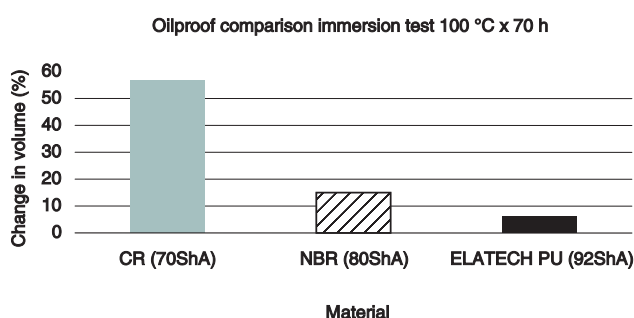
ELATECH® iSync® belts are made with a special polyurethane compound and high resistance steel tension cords which are processed with a unique and highly sophisticated technology to obtain a superior polyurethane belt. iSync® belts offer optimal performances on all type of industrial applications and particularly where high precision and accuracy are needed. iSync® belts are able to transmit up to 30% more than conventional T, AT type of belts in the same space or same power with a more compact drive.

# Material characteristics

ELATECH® belts are manufactured as standard in thermoplastic polyurethane 92 Sh. A hardness. Non standard material and compounds are available for applications in special environments or for special specifications. Standard colour, unless differently specified, is white. Other colours are available upon request.

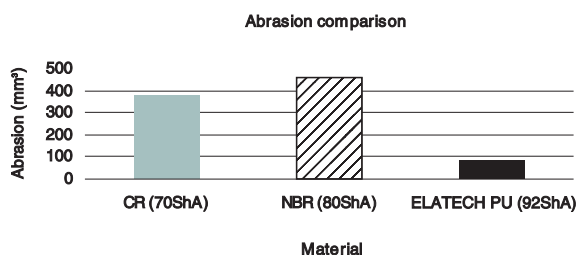
## Resistance to oils

ELATECH® polyurethane has an high resistance to most oils. The following graph compares synthetic rubber CR and NBR with ELATECH® polyurethane.



## Abrasion resistance

ELATECH® polyurethane has excellent abrasion resistance properties. The graph below shows comparison with synthetic rubber.



## Food Compliance

Standard material is not suitable for food contact. For applications where food compliance approval is required, a special material will be used.

## Chemical resistance

The impact of chemicals on ELATECH® polyurethane results in different modification of the material's properties. As the resistance mainly depends on the concentration and the temperatures used, the information provided can only be general. If further detailed information is required please contact our technical department.

## Oil and Grease

ELATECH® polyurethane is well-resistant to oil and grease and specifically to pure oils even at 80°C.

## Acids and alkaline solutions

The resistance to acids and alkaline solutions of the ELATECH® polyurethane is limited. It has shown to be moderately resistant to diluted acids and alkaline solutions at room temperature and to be resistant for a very a short time with high concentration solutions. Special compounds are available on specific request.

## Bacteria and microbes

In case of high exposure to microbe attack it is recommended to use a special material. Please contact our technical department.

## UV resistance

ELATECH® polyurethane is UV resistant. A long exposure to UV radiation (sunlight) will slightly change the color of the belt. However the technical performances of the product will remain unchanged.

## Low temperature compound

For low temperature use special compound (-30 +80 °C) can be supplied.

## High temperature compound

For high temperature use special compound (-20 +110 °C) can be supplied.

# Chemical resistance

| Chemical reference        | 20°C |
|---------------------------|------|
| Acetic acid               | B    |
| Acetone                   | D    |
| Aluminum chloride         | A    |
| Ammonia                   | B    |
| Amyl acetate              | D    |
| Aniline                   | D    |
| ASTM Fuel A               | A    |
| ASTM Fuel B               | C    |
| ASTM Fuel C               | C    |
| Baking Soda               | A    |
| Benzene                   | C    |
| Blood                     | B    |
| Brine                     | B    |
| Butyl acetate             | C    |
| Butanol                   | B    |
| Butter                    | A    |
| Butyric acid              | C    |
| Chloro benzene            | C    |
| Chloroform                | D    |
| Cyclohexanol              | B    |
| Cyclohexanone             | C    |
| Dibutylphthalate          | B    |
| Lubricant oil             | A    |
| Dibutyl phthalate         | B    |
| Dichloromethane           | C    |
| Dimethylformamide         | D    |
| Dioctyl phthalate         | B    |
| Ethanol                   | B    |
| Ethyl acetate             | C    |
| Ethyl ether               | B    |
| Ethylene dichloride       | D    |
| Ethylene glycol           | A    |
| Fe chloride               | B    |
| Formaldehyde              | B    |
| Fructose                  | A    |
| Fruit juice               | A    |
| Gasoline                  | B    |
| Glycerol                  | B    |
| Glycantin / water         | B    |
| Honey                     | A    |
| Hydrochloric acid         | C    |
| Hydrogen peroxide         | B    |
| IRM 901 (ASTM oil 1)      | A    |
| IRM 902 (ASTM oil 2)      | A    |
| IRM 903 (ASTM oil 3)      | A    |
| Isopropanol               | B    |
| Kerosene                  | A    |
| Lactic acid               | B    |
| Methanol                  | C    |
| Methyl ethyl ketone (MEK) | C    |
| Milk                      | A    |
| Mineral oil               | A    |
| Molasses                  | A    |

| Chemical reference  | 20°C |
|---------------------|------|
| N-methylpyrrolidone | D    |
| Nicotine            | B    |
| Nitric acid         | C    |
| Oils and fats       | A    |
| Oleic acid          | C    |
| Ozone               | A    |
| Paraffin            | B    |
| Petroleum ether     | B    |
| Pyridine            | D    |
| Sea water           | A    |
| Silicone fluid      | A    |
| Soap solution       | B    |
| Sodium chloride     | A    |
| Sodium hydroxide    | B    |
| Starch              | A    |
| Styrene             | B    |
| Sugar               | A    |
| Sulfuric acid       | C    |
| Tannic acid         | B    |
| Tar oil             | B    |
| Tetrachloroethylene | C    |
| Tetrahydrofuran     | D    |
| Toluene             | B    |
| Trichloroethylene   | C    |
| Tricresyl phosphate | C    |
| Turpentine          | C    |
| Vaseline            | A    |
| Vegetable oils      | A    |
| Water               | A    |
| Wax                 | A    |

A = excellent

B = good

C = limited

D = not recommended

For any request please contact  
our technical department.

# Material overview

## Materials for standard applications

| Material type | Belt Type                  | Color       | Hardness | Temperature range |
|---------------|----------------------------|-------------|----------|-------------------|
| TPU11         | ELATECH® M<br>ELA-flex SD® | White       | 92 Sh.A  | -10°C up to +80°C |
| TPU13         | ELATECH® M<br>ELA-flex SD® | Black       | 92 Sh.A  | -10°C up to +80°C |
| TPU12         | ELATECH® M<br>ELA-flex SD® | Transparent | 92 Sh.A  | -10°C up to +80°C |
| TPU22         | ELATECH® M<br>ELA-flex SD® | Transparent | 85 Sh.A  | 0°C up to +60°C   |
| PU51          | iSync®                     | Transparent | 90 Sh.A  | -10°C up to +80°C |

## Materials for applications involving contact with food

| Material type | Belt Type                  | Color       | Hardness | Temperature range |
|---------------|----------------------------|-------------|----------|-------------------|
| TPU17         | ELATECH® M<br>ELA-flex SD® | Transparent | 92 Sh.A  | 0°C up to +80°C   |
| TPU16         | ELATECH® M<br>ELA-flex SD® | White       | 92 Sh.A  | 0°C up to +80°C   |
| TPU19         | ELATECH® M<br>ELA-flex SD® | Blue        | 92 Sh.A  | 0°C up to +80°C   |
| PU52          | iSync®                     | Transparent | 90 Sh.A  | -10°C up to +80°C |

## Materials for high temperature applications

| Material type | Belt Type                  | Color       | Hardness | Temperature range  |
|---------------|----------------------------|-------------|----------|--------------------|
| TPU32         | ELATECH® M<br>ELA-flex SD® | White       | 95 Sh.A  | -20°C up to +110°C |
| PU53          | iSync®                     | Transparent | 90 Sh.A  | -20°C up to +125°C |

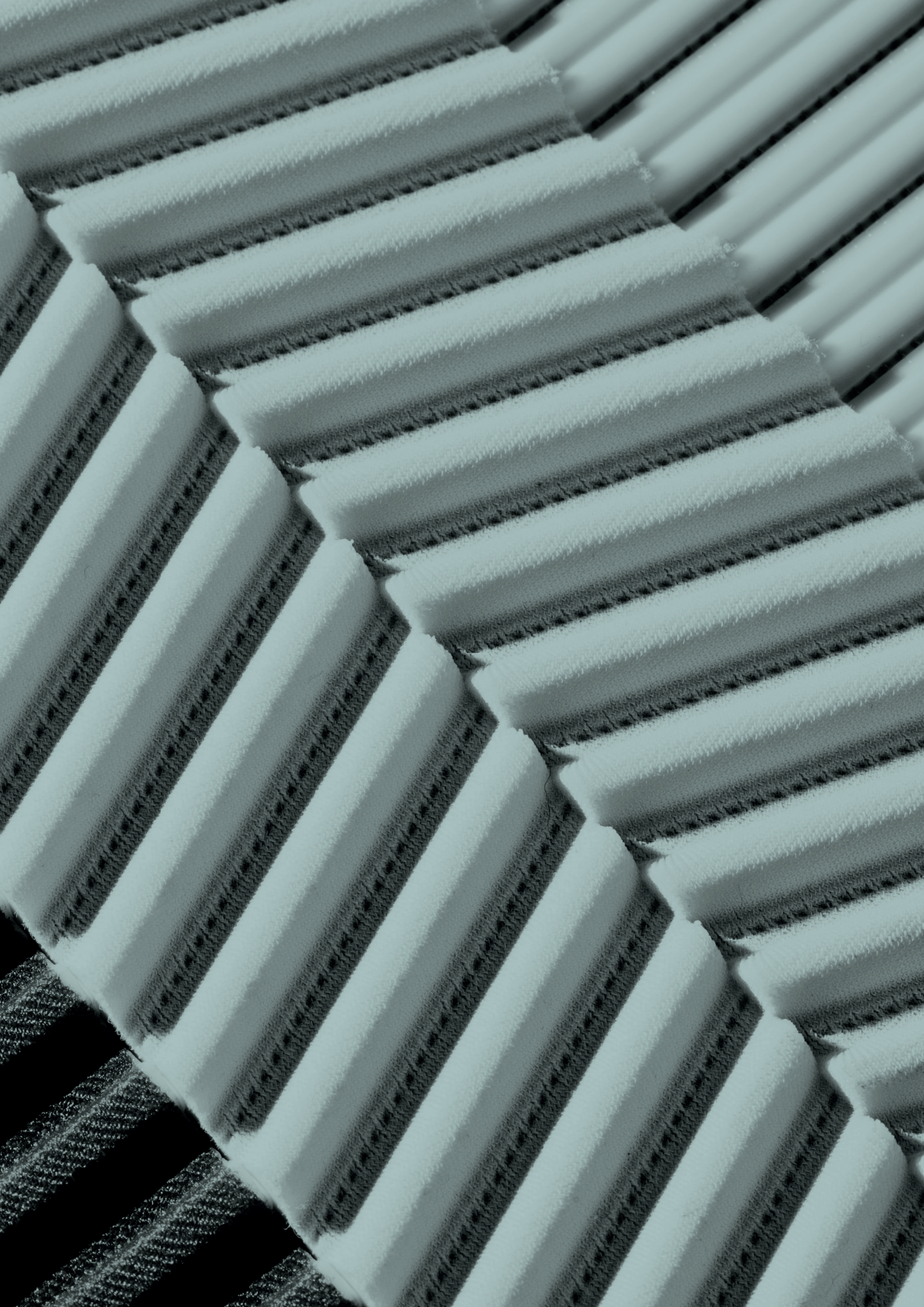
## Materials for low temperature applications

| Material type | Belt Type                  | Color       | Hardness | Temperature range |
|---------------|----------------------------|-------------|----------|-------------------|
| TPU18         | ELATECH® M<br>ELA-flex SD® | Transparent | 92 Sh.A  | -30°C up to +80°C |
| TPU27         | ELATECH® M<br>ELA-flex SD® | Transparent | 85 Sh.A  | -30°C up to +80°C |
| PU54          | iSync®                     | Transparent | 90 Sh.A  | -30°C up to +80°C |

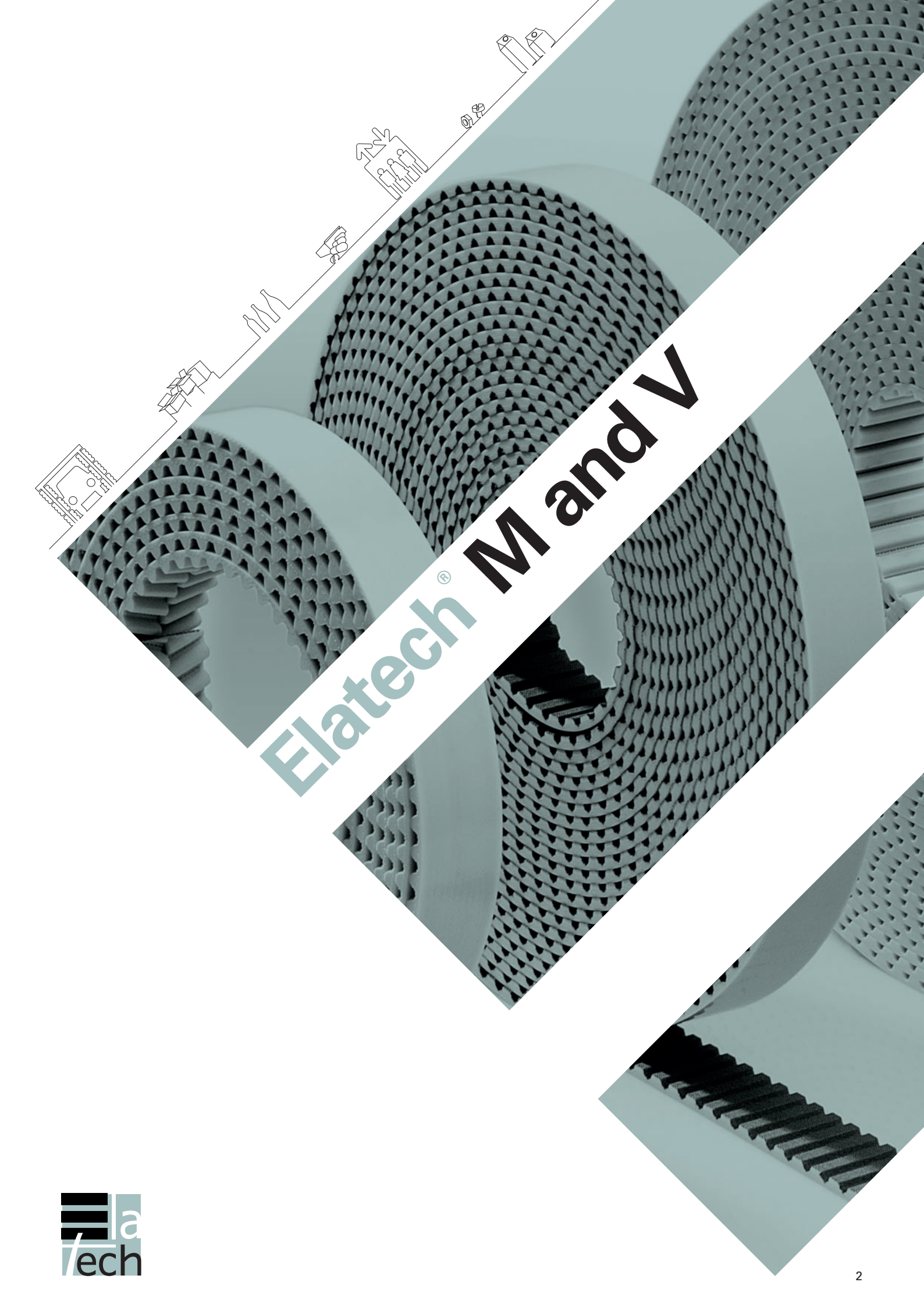
## Materials for applications where antistatic properties are required - Static conductive materials

→ Available on request, please contact our sales department.







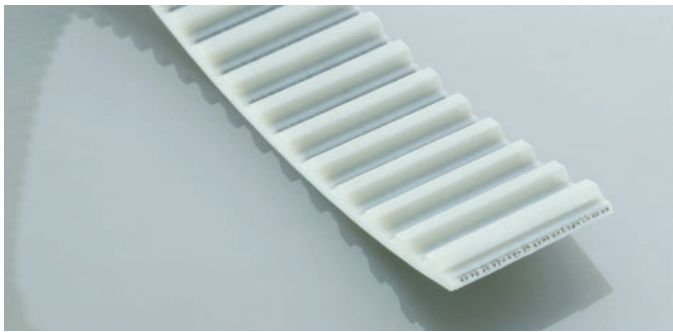


# Elatech<sup>®</sup> M and V

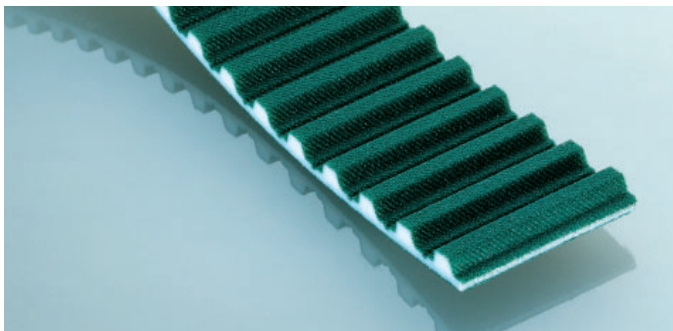
# ELATECH® Open End - M and V

The timing belts manufactured by ELATECH® have been designed to comply with every need of the design engineer in linear motion, power transmission and in conveying applications where precise synchronisation is needed. ELATECH® timing belts are manufactured with the body in thermoplastic polyurethane with excellent wear resistance and with high tensile strength steel cords. A special polyamide fabric on the tooth (on request) reduces the coefficient of friction, improves the tooth engagement and reduces noise.

## STANDARD BELT



## BELT WITH POLYAMIDE FABRIC ON TEETH PAZ



### Product declaration

- ELATECH® belts are certified to be according RoHS 2011/65/UE
- On request, it is possible to deliver belts:
- with antistatic properties according to ISO9563
- other special certifications available on request

### Colour

The standard colour ELATECH® timing belt is white. On demand it is possible to deliver belts in different colours.

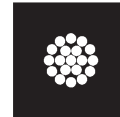
### Tension Cords

In order to maximize the application of ELATECH® timing belts, construction with special cords is available on request:

#### STANDARD CORD



#### HFE CORD



#### HPL CORD



- **HPL** high performance cords: the cord cross section is increased compared with standard. This results in a lower belt elongation and more precise positioning accuracy.
- **HFE** high flexibility cords: the cord cross section is spread on a higher number of single filaments. This results in a lower bending stress and therefore in a higher resistance at reverse bending of the cords. They allow using pulleys and idlers up to 30% smaller in diameter compared to standard.
- **STAINLESS STEEL (INOX)** cords are suitable for application in aggressive environments. They have lower tensile strength than standard cords.
- **ARAMID**: increases belt flexibility and decreases belt weight.

It is to be noted that steel cords offer the best technical performances and dimensional stability of the belts.

Belt length tolerances are valid for steel cord reinforcement. In case of other material (aramid) length tolerance may change.

For application with special cords ask our engineering department.

### Mechanical properties:

- Excellent dimensional stability
- High abrasion resistance
- Low pretension and shaft load
- Maintenance free
- High linear and angular positioning precision
- High efficiency

### Chemical properties:

High resistance to:

- Hydrolysis
- Ozone
- UVA
- Ageing
- Oils, greases and fats
- Gasoline
- Good resistance to acids
- Working temperatures range for standard material -10°C +80°C (peaks up to 110°C).

For very low temperature special compound material is available on request (see dedicated table)

- Silicon free production (on request)

# Executions

## ELATECH® M

They are manufactured in rolls with standard length of 100 m. On request longer or shorter lengths are available. Main applications are linear drives.

### Ordering example roll 100 m profile T:

| ELATECH® "R" - Roll 100 m                                                                                                                                            | R | 025 | T | 10 | A | / Z |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|----|---|-----|
| ELATECH® timing belt type "R"                                                                                                                                        |   |     |   |    |   |     |
| Width 25 mm (3 digits)                                                                                                                                               |   |     |   |    |   |     |
| Profile "T"                                                                                                                                                          |   |     |   |    |   |     |
| Pitch 10 mm                                                                                                                                                          |   |     |   |    |   |     |
| A= steel cords<br>S= stainless steel cords<br>K= aramid cords<br>F= high flexibility cords<br>H= high flexibility and performance cords<br>P= high performance cords |   |     |   |    |   |     |
| Z= fabric on teeth (PAZ)<br>R= fabric on back (PAR)<br>D= fabric PAZ + PAR                                                                                           |   |     |   |    |   |     |

### Ordering example profile H cut to length:

| ELATECH® "M" cut to length                                                                                                                                           | M | 100 | H | A | 01270 | / Z |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|---|-------|-----|
| ELATECH timing belt type "M"                                                                                                                                         |   |     |   |   |       |     |
| Width (x 0,254 = mm) - 3 digits                                                                                                                                      |   |     |   |   |       |     |
| Profile "H"                                                                                                                                                          |   |     |   |   |       |     |
| A= steel cords<br>S= stainless steel cords<br>K= aramid cords<br>F= high flexibility cords<br>H= high flexibility and performance cords<br>P= high performance cords |   |     |   |   |       |     |
| Length 1270 mm (5 digits)                                                                                                                                            |   |     |   |   |       |     |
| Z= fabric on teeth (PAZ)<br>R= fabric on back (PAR)<br>D= fabric PAZ + PAR                                                                                           |   |     |   |   |       |     |

## ELATECH® V

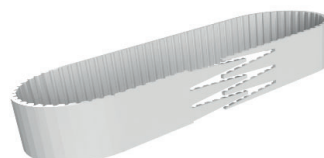
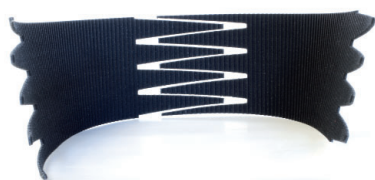
They are joined belts manufactured from open-end ELATECH® belts. Thanks to the specific manufacturing process, any length may be obtained tooth by tooth. Free combinations with special backing materials and welded profiles, make ELATECH® V belts ideal in synchronized conveying and highly specialised applications.

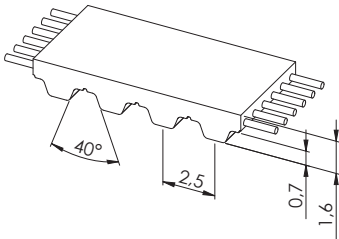
### Ordering example profile AT:

| ELATECH® "V" joined                                                                                                                                                  | V | 020 | AT5 | A | 03410 | / Z |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|-----|---|-------|-----|
| ELATECH timing belt type "V" joined                                                                                                                                  |   |     |     |   |       |     |
| Width 20 mm (3 digits)                                                                                                                                               |   |     |     |   |       |     |
| Profile "AT" - Pitch 5 mm                                                                                                                                            |   |     |     |   |       |     |
| A= steel cords<br>S= stainless steel cords<br>K= aramid cords<br>F= high flexibility cords<br>H= high flexibility and performance cords<br>P= high performance cords |   |     |     |   |       |     |
| Length 3410 mm (5 digits)                                                                                                                                            |   |     |     |   |       |     |
| Z= fabric on teeth (PAZ)<br>R= fabric on back (PAR)<br>D= fabric PAZ + PAR                                                                                           |   |     |     |   |       |     |

### Ordering example profile XL:

| ELATECH® "V" joined                                                                                                                                                  | V | 150 | XL | A | 00762 | / Z |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|----|---|-------|-----|
| ELATECH timing belt type "V" joined                                                                                                                                  |   |     |    |   |       |     |
| Width (x 0,254 = mm) - 3 digits                                                                                                                                      |   |     |    |   |       |     |
| Profile "XL"                                                                                                                                                         |   |     |    |   |       |     |
| A= steel cords<br>S= stainless steel cords<br>K= aramid cords<br>F= high flexibility cords<br>H= high flexibility and performance cords<br>P= high performance cords |   |     |    |   |       |     |
| Length 762 mm (5 digits)                                                                                                                                             |   |     |    |   |       |     |
| Z= fabric on teeth (PAZ)<br>R= fabric on back (PAR)<br>D= fabric PAZ + PAR                                                                                           |   |     |    |   |       |     |





### BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 2.5 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and light power transmission applications

#### STANDARD TOLERANCES

WIDTH TOLERANCE:     ±0,3 [mm]  
 LENGTH TOLERANCE:   ±0,5 [mm/m]  
 THICKNESS TOLERANCE: ±0,15 [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]      |                        | 4     | 6     | 10    | 20     | 50     | 100    |
|------------------------|------------------------|-------|-------|-------|--------|--------|--------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 100   | 190   | 320   | 700    | 1860   | 3780   |
| Breaking load          | F <sub>Br</sub> [N]    | 375   | 750   | 1250  | 2750   | 7250   | 14750  |
| Specific spring rate   | C <sub>spez</sub> [N]  | 24000 | 47500 | 80000 | 175000 | 465000 | 945000 |
| Weight                 | [kg/m]                 | 0,004 | 0,007 | 0,011 | 0,022  | 0,055  | 0,110  |

Other widths are available on request

#### Specialties

| Belt width b [mm]    |                        | 4   | 6   | 10   | 20   | 50   | 100   |
|----------------------|------------------------|-----|-----|------|------|------|-------|
| HFE High Flexibility | F <sub>Tzul</sub> [N]* | 110 | 215 | 360  | 790  | 2090 | 4250  |
|                      | F <sub>Br</sub> [N]    | 450 | 900 | 1500 | 3300 | 8700 | 17700 |

#### Tooth shear strength

| rpm                       | 0    | 20   | 40   | 60   | 80   | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| F <sub>Uspez</sub> [N/cm] | 9,10 | 8,77 | 8,51 | 8,30 | 8,13 | 8,00 | 7,39 | 7,00 | 6,71 | 6,48 | 6,29 | 6,13 | 5,99 | 5,86 | 5,75 | 5,64 |

| rpm                       | 1200 | 1300 | 1400 | 1440 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 | 3200 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| F <sub>Uspez</sub> [N/cm] | 5,55 | 5,46 | 5,38 | 5,35 | 5,31 | 5,24 | 5,17 | 5,11 | 5,05 | 4,99 | 4,88 | 4,79 | 4,70 | 4,62 | 4,54 | 4,47 |

| rpm                       | 3400 | 3600 | 3800 | 4000 | 4500 | 5000 | 5500 | 6000 | 6500 | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| F <sub>Uspez</sub> [N/cm] | 4,40 | 4,34 | 4,28 | 4,22 | 4,09 | 3,97 | 3,86 | 3,76 | 3,67 | 3,59 | 3,51 | 3,44 | 3,37 | 3,30 | 3,24 | 3,18  |

#### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|-----------------------------------|------------------------|--------------------------------|------------------------|
|                                                           | z <sub>min</sub>                  | idler d <sub>min</sub> | z <sub>min</sub>               | idler d <sub>min</sub> |
| STANDARD                                                  | 15                                | 15 mm                  | 18                             | 18 mm                  |
| HFE                                                       | 10                                | 15 mm                  | 18                             | 15 mm                  |

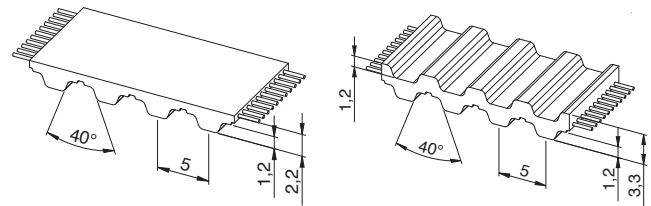
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and light power transmission applications
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
THICKNESS TOLERANCE:  $\pm 0,15$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10    | 16     | 25     | 32     | 50     | 75     | 100    |
|------------------------|-----------------|-------|--------|--------|--------|--------|--------|--------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 320   | 540    | 900    | 1150   | 1860   | 2820   | 3780   |
| Breaking load          | $F_{Br}$ [N]    | 1250  | 2125   | 3500   | 4500   | 7250   | 11000  | 14750  |
| Specific spring rate   | $C_{spez}$ [N]  | 80000 | 135000 | 225000 | 287500 | 465000 | 705000 | 945000 |
| Weight                 | [kg/m]          | 0,021 | 0,034  | 0,053  | 0,067  | 0,105  | 0,158  | 0,210  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 16   | 25   | 32    | 50    | 75    | 100   | 150   |
|----------------------|-----------------|------|------|------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 700  | 1190 | 1960 | 2520  | 4060  | 6160  | 8260  | -     |
|                      | $F_{Br}$ [N]    | 2800 | 4760 | 7840 | 10080 | 16240 | 24640 | 33040 | -     |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 360  | 610  | 1010 | 1295  | 2090  | 3170  | 4250  | -     |
|                      | $F_{Br}$ [N]    | 1500 | 2550 | 4200 | 5400  | 8700  | 13200 | 17700 | -     |
| HPL High Performance | $F_{Tzul}$ [N]  | 920  | 1610 | 2645 | 3450  | 5520  | 8395  | 11270 | 16905 |
|                      | $F_{Br}$ [N]    | 3360 | 5880 | 9660 | 12600 | 20160 | 30660 | 41160 | 61740 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 24,70 | 24,07 | 23,53 | 23,05 | 22,64 | 22,28 | 20,90 | 19,89 | 19,10 | 18,45 | 17,91 | 17,44 | 17,02 | 16,65 | 16,32 | 16,01 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 15,73 | 15,47 | 15,22 | 15,13 | 15,00 | 14,78 | 14,58 | 14,39 | 14,21 | 14,03 | 13,71 | 13,42 | 13,14 | 12,89 | 12,65 | 12,43 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500 | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|-------|
| $F_{Uspez}$ [N/cm] | 12,22 | 12,03 | 11,84 | 11,66 | 11,25 | 10,88 | 10,55 | 10,24 | 9,96 | 9,70 | 9,46 | 9,23 | 9,01 | 8,81 | 8,62 | 8,44  |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 10                            | 30 mm           | 15                         | 30 mm           |
| ARAMID                                                    | 10                            | 30 mm           | 15                         | 30 mm           |
| HFE                                                       | 10                            | 30 mm           | 12                         | 30 mm           |
| HPL                                                       | 24                            | 60 mm           | 38                         | 60 mm           |

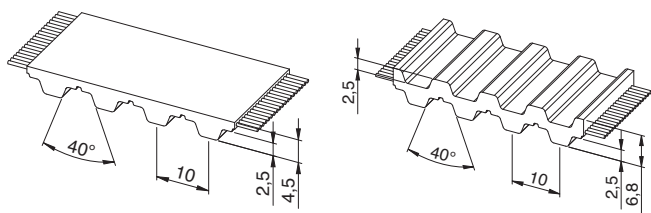
### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



**T10**

Elatech® M and V



## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and medium power transmission applications
- Double sided tooth available (on request for special cords)

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 16     | 25     | 32     | 50      | 75      | 100     | 150     | 200**   |
|------------------------|-----------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 920    | 1610   | 2650   | 3450   | 5520    | 8400    | 11270   | 17020   | 11270   |
| Breaking load          | $F_{Br}$ [N]    | 3360   | 5880   | 9660   | 12600  | 20160   | 30660   | 41160   | 62160   | 41160   |
| Specific spring rate   | $C_{spez}$ [N]  | 230000 | 402500 | 662500 | 862500 | 1380000 | 2100000 | 2817500 | 4255000 | 2817500 |
| Weight                 | [kg/m]          | 0,05   | 0,07   | 0,11   | 0,15   | 0,23    | 0,34    | 0,45    | 0,68    | 0,60    |

Other widths are available on request

\*\* = double cords spacing

### Specialties

| Belt width b [mm]    |                 | 10   | 16   | 25    | 32    | 50    | 75    | 100   | 150   | 200** |
|----------------------|-----------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 880  | 1540 | 2530  | 3300  | 5280  | 8030  | 10780 | 16280 | 10780 |
|                      | $F_{Br}$ [N]    | 3600 | 6300 | 10350 | 13500 | 21600 | 32850 | 44100 | 66600 | 44100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 600  | 1050 | 1730  | 2250  | 3600  | -     | -     | -     | -     |
|                      | $F_{Br}$ [N]    | 2400 | 4200 | 6900  | 9000  | 14400 | -     | -     | -     | -     |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 960  | 1680 | 2760  | 3600  | 5760  | -     | -     | -     | -     |
|                      | $F_{Br}$ [N]    | 3440 | 6020 | 9890  | 12900 | 20640 | -     | -     | -     | -     |
| HPL High Performance | $F_{Tzul}$ [N]  | -    | 2450 | 4165  | 5390  | 8575  | 12990 | 17400 | -     | -     |
|                      | $F_{Br}$ [N]    | -    | 9500 | 16150 | 20900 | 33250 | 50350 | 67450 | -     | -     |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 51,80 | 50,32 | 49,04 | 47,92 | 46,95 | 46,11 | 42,75 | 40,28 | 38,36 | 36,80 | 35,49 | 34,35 | 33,34 | 32,44 | 31,63 | 30,89 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 30,21 | 29,58 | 28,99 | 28,76 | 28,44 | 27,92 | 27,43 | 26,97 | 26,53 | 26,12 | 25,34 | 24,63 | 23,97 | 23,36 | 22,78 | 22,25 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 21,74 | 21,27 | 20,81 | 20,39 | 19,40 | 18,51 | 17,70 | 16,97 | 16,29 | 15,66 | 15,07 | 14,52 | 14,00 | 13,51 | 13,05 | 12,61 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 12                            | 60 mm           | 20                         | 60 mm           |
| ARAMID                                                    | 15                            | 60 mm           | 20                         | 60 mm           |
| STAINLESS                                                 | 15                            | 60 mm           | 25                         | 70 mm           |
| HFE                                                       | 10                            | 50 mm           | 15                         | 50 mm           |
| HPL                                                       | 15                            | 100 mm          | 30                         | 100 mm          |

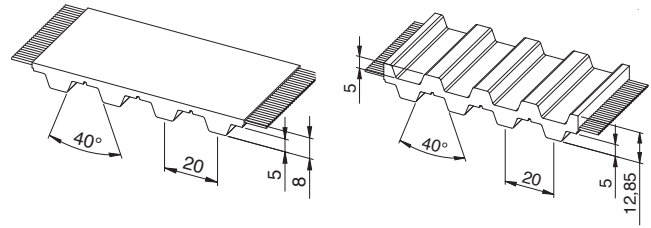
### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

Timing pulleys → page 162

## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and heavy power transmission applications
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 25      | 32      | 50      | 75      | 100     | 150     |
|------------------------|-----------------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 4170    | 5390    | 8580    | 12990   | 17400   | 26220   |
| Breaking load          | $F_{Br}$ [N]    | 16150   | 20900   | 33250   | 50350   | 67450   | 101650  |
| Specific spring rate   | $C_{spez}$ [N]  | 1042500 | 1347500 | 2145000 | 3247500 | 4350000 | 6555000 |
| Weight                 | [kg/m]          | 0,20    | 0,26    | 0,41    | 0,61    | 0,82    | 1,23    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 25    | 32    | 50    | 75    | 100   | 150    |
|----------------------|-----------------|-------|-------|-------|-------|-------|--------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 3740  | 4840  | 7700  | 11660 | 15620 | 23540  |
|                      | $F_{Br}$ [N]    | 17000 | 22000 | 35000 | 53000 | 71000 | 107000 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 3060  | 3960  | 6300  | -     | -     | -      |
|                      | $F_{Br}$ [N]    | 12750 | 16500 | 26250 | -     | -     | -      |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 3400  | 4400  | 7000  | -     | -     | -      |
|                      | $F_{Br}$ [N]    | 14450 | 18700 | 29750 | -     | -     | -      |

### Tooth shear strength

| rpm                | 0      | 20     | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 104,50 | 101,10 | 98,15 | 95,58 | 93,35 | 91,41 | 83,50 | 77,84 | 73,49 | 69,96 | 66,98 | 64,41 | 62,15 | 60,13 | 58,31 | 56,64 |

| rpm                | 1200  | 1300 | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200 | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 55,11 | 53,7 | 52,38 | 51,87 | 51,14 | 49,98 | 48,89 | 47,86 | 46,88 | 45,94 | 44,2 | 42,61 | 41,13 | 39,77 | 38,49 | 37,29 |

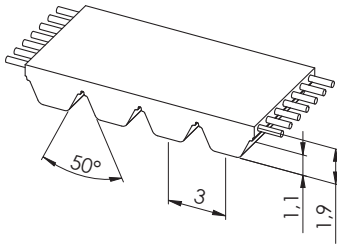
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 36,16 | 35,10 | 34,09 | 33,13 | 30,92 | 28,93 | 27,14 | 25,49 | 23,97 | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 120 mm          | 25                         | 120 mm          |
| ARAMID                                                    | 15                            | 120 mm          | 25                         | 120 mm          |
| STAINLESS                                                 | 20                            | 130 mm          | 30                         | 150 mm          |
| HFE                                                       | 12                            | 100 mm          | 22                         | 120 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



**STANDARD TOLERANCES**  
 WIDTH TOLERANCE: ±0,5 [mm]  
 LENGTH TOLERANCE: ±0,5 [mm/m]  
 THICKNESS TOLERANCE: ±0,2 [mm]

- BELT CHARACTERISTICS**
- Polyurethane timing belt with steel tension cords
  - Tooth profile according to ISO 17396
  - Metric pitch 3 mm
  - Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
  - High resistance and low stretch steel cords to guarantee high stability and low elongation
  - Reduced polygonal effect with reduced drive vibration
  - Particularly suitable for linear drives and light power transmission applications with high axial and angular positioning accuracy
  - Negative length tolerance available on request

**TECHNICAL DATA**

**Standard steel cord**

| Belt width b [mm]      |                        | 8     | 10    | 12     | 16     | 20     | 25     | 50     | 100    |
|------------------------|------------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 260   | 320   | 416    | 540    | 700    | 900    | 1860   | 3780   |
| Breaking load          | F <sub>Br</sub> [N]    | 1000  | 1250  | 1625   | 2125   | 2750   | 3500   | 7250   | 14750  |
| Specific spring rate   | C <sub>spez</sub> [N]  | 65000 | 80000 | 104000 | 135000 | 175000 | 225000 | 465000 | 945000 |
| Weight                 | [kg/m]                 | 0,018 | 0,022 | 0,026  | 0,035  | 0,044  | 0,054  | 0,110  | 0,220  |

Other widths are available on request

**Specialties**

| Belt width b [mm]    |                        | 8    | 10   | 12   | 16   | 20   | 25   | 50   | 100   |
|----------------------|------------------------|------|------|------|------|------|------|------|-------|
| HFE High Flexibility | F <sub>Tzul</sub> [N]* | 290  | 360  | 470  | 610  | 790  | 1010 | 2090 | 4250  |
|                      | F <sub>Br</sub> [N]    | 1200 | 1500 | 1950 | 2550 | 3300 | 4200 | 8700 | 17700 |

**Tooth shear strength**

| rpm                       | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 32,50 | 32,13 | 31,79 | 31,48 | 31,19 | 30,92 | 29,86 | 29,15 | 28,47 | 27,66 | 26,92 | 26,25 | 25,62 | 25,05 | 24,52 | 24,02 |

| rpm                       | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600 | 2800  | 3000  | 3200  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 23,56 | 23,13 | 22,72 | 22,57 | 22,34 | 21,97 | 21,63 | 21,29 | 20,98 | 20,68 | 20,11 | 19,59 | 19,1 | 18,64 | 18,22 | 17,81 |

| rpm                       | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 17,43 | 17,07 | 16,73 | 16,40 | 15,64 | 14,96 | 14,33 | 13,76 | 13,23 | 12,74 | 12,28 | 11,84 | 11,43 | 11,05 | 10,68 | 10,34 |

**Flexibility**

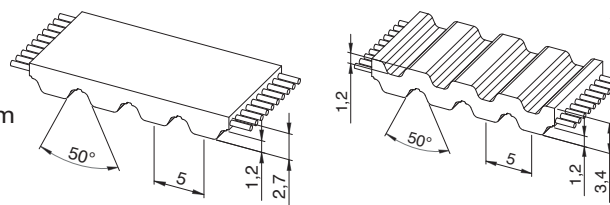
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 15                            | 20 mm                  | 20                         | 20 mm                  |
| HFE                                                       | 12                            | 15 mm                  | 15                         | 18 mm                  |

**Elatech® V Joined informations**  
 Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration
- Particularly suitable for linear drives and light power transmission applications with high axial and angular positioning accuracy
- Double sided tooth available (on request for special cords)
- Negative length tolerance available on request



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 16     | 25     | 32     | 50     | 75      | 100     | 150     |
|------------------------|-----------------|--------|--------|--------|--------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 640    | 1120   | 1840   | 2400   | 3840   | 5840    | 7840    | 11840   |
| Breaking load          | $F_{Br}$ [N]    | 2160   | 3780   | 6210   | 8100   | 12960  | 19710   | 26460   | 39960   |
| Specific spring rate   | $C_{spez}$ [N]  | 160000 | 280000 | 460000 | 600000 | 960000 | 1460000 | 1960000 | 2960000 |
| Weight                 | [kg/m]          | 0,03   | 0,05   | 0,09   | 0,11   | 0,17   | 0,26    | 0,34    | 0,57    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 16   | 25    | 32    | 50    | 75    | 100   | 150   |
|----------------------|-----------------|------|------|-------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 880  | 1540 | 2530  | 3300  | 5280  | 8030  | 10780 | 16280 |
|                      | $F_{Br}$ [N]    | 3600 | 6300 | 10350 | 13500 | 21600 | 32850 | 44100 | 66600 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 600  | 1050 | 1725  | 2250  | 3600  | 5475  | 7350  | -     |
|                      | $F_{Br}$ [N]    | 2400 | 4200 | 6900  | 9000  | 14400 | 21900 | 29400 | -     |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 960  | 1680 | 2760  | 3600  | 5760  | 8760  | 11760 | -     |
|                      | $F_{Br}$ [N]    | 3440 | 6020 | 9890  | 12900 | 20640 | 31390 | 42140 | -     |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 36,40 | 35,88 | 35,40 | 34,97 | 34,59 | 34,24 | 32,92 | 31,92 | 30,89 | 29,95 | 29,12 | 28,37 | 27,69 | 27,06 | 26,49 | 25,96 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 25,47 | 25,01 | 24,57 | 24,41 | 24,16 | 23,78 | 23,41 | 23,07 | 22,73 | 22,42 | 21,82 | 21,28 | 20,77 | 20,29 | 19,85 | 19,43 |

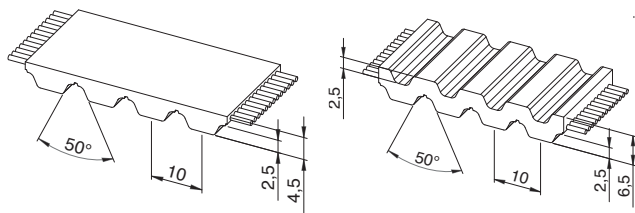
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 19,03 | 18,66 | 18,30 | 17,96 | 17,18 | 16,47 | 15,83 | 15,24 | 14,69 | 14,18 | 13,71 | 13,26 | 12,85 | 12,45 | 12,07 | 11,72 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 30 mm           | 25                         | 60 mm           |
| ARAMID                                                    | 15                            | 30 mm           | 25                         | 60 mm           |
| STAINLESS                                                 | 18                            | 40 mm           | 25                         | 65 mm           |
| HFE                                                       | 15                            | 25 mm           | 20                         | 50 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



#### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

#### BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration
- Particularly suitable for linear drives and medium power transmission applications with high axial and angular positioning accuracy
- Double sided tooth available (on request for special cords)
- Negative length tolerance available on request

#### TECHNICAL DATA

##### Standard steel cord

| Belt width b [mm]      |                 | 16     | 25      | 32      | 50      | 75      | 100     | 150     |
|------------------------|-----------------|--------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 2450   | 4170    | 5390    | 8580    | 12990   | 17400   | 26220   |
| Breaking load          | $F_{Br}$ [N]    | 9500   | 16150   | 20900   | 33250   | 50350   | 67450   | 101650  |
| Specific spring rate   | $C_{spez}$ [N]  | 612500 | 1042500 | 1347500 | 2145000 | 3247500 | 4350000 | 6555000 |
| Weight                 | [kg/m]          | 0,09   | 0,15    | 0,19    | 0,30    | 0,44    | 0,59    | 0,90    |

Other widths are available on request

##### Specialties

| Belt width b [mm]    |                 | 16    | 25    | 32    | 50    | 75    | 100   | 150    |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|--------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 2200  | 3740  | 4840  | 7700  | 11660 | 15620 | 23540  |
|                      | $F_{Br}$ [N]    | 10000 | 17000 | 22000 | 35000 | 53000 | 71000 | 107000 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 1800  | 3060  | 3960  | 6300  | 9540  | 12780 | -      |
|                      | $F_{Br}$ [N]    | 7500  | 12750 | 16500 | 26250 | 39750 | 53250 | -      |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 2000  | 3400  | 4400  | 7000  | -     | -     | -      |
|                      | $F_{Br}$ [N]    | 8500  | 14450 | 18700 | 29750 | -     | -     | -      |

##### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 88,57 | 87,06 | 85,66 | 84,35 | 83,13 | 81,99 | 77,36 | 75,09 | 71,99 | 69,27 | 66,88 | 64,75 | 62,83 | 61,09 | 59,49 | 58,02 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 56,66 | 55,39 | 54,20 | 53,74 | 53,08 | 52,02 | 51,02 | 50,06 | 49,16 | 48,29 | 46,67 | 45,18 | 43,80 | 42,51 | 41,30 | 40,17 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 39,09 | 38,08 | 37,11 | 36,20 | 34,08 | 32,17 | 30,43 | 28,84 | 27,37 | 26,01 | 24,73 | 23,53 | 22,41 | 21,34 | 20,33 | 19,37 |

##### Flexibility

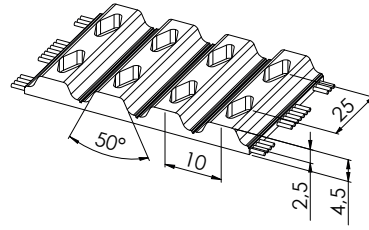
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 50 mm           | 25                         | 120 mm          |
| ARAMID                                                    | 15                            | 50 mm           | 20                         | 120 mm          |
| STAINLESS                                                 | 20                            | 70 mm           | 40                         | 120 mm          |
| HFE                                                       | 12                            | 50 mm           | 20                         | 80 mm           |

#### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

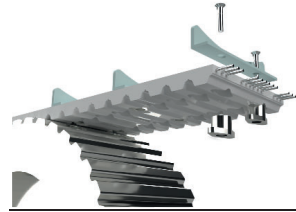
## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Particularly suitable for linear drives
- Rapid and easy configuration of cleat attachment with simple hand tool
- Stainless steel insert M4 available



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |



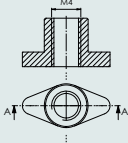
## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 25     | 50      | 75      | 100     |
|------------------------|-----------------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 2940   | 5880    | 8820    | 11760   |
| Breaking load          | $F_{Br}$ [N]    | 11400  | 22800   | 34200   | 45600   |
| Specific spring rate   | $C_{spez}$ [N]  | 735000 | 1470000 | 2205000 | 2940000 |
| Weight                 | [kg/m]          | 0,15   | 0,30    | 0,44    | 0,59    |

Other widths are available on request

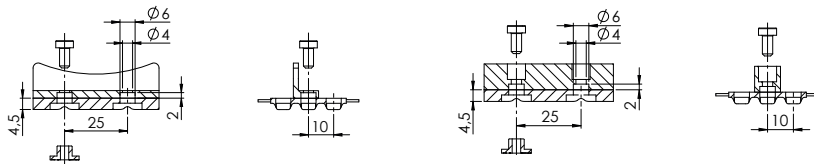
### Insert Types

| Insert Profile                                                                      | Dimensions                                                                          | Thread size | Material        | Applications                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|-----------------|--------------------------------------|
|  |  | M4          | Stainless Steel | - Small loads<br>- Low dynamic loads |

### ATF Advantages:

- Variable cleat pitch
- Different cleat materials can be used
- Standard timing belt pulleys can be used
- High shear strength
- Quick and easy cleat change
- Cleats spacing is extremely precise
- No cleat welding beads
- Reduced downtime

### Example of cleat configurations



### Tooth shear strength

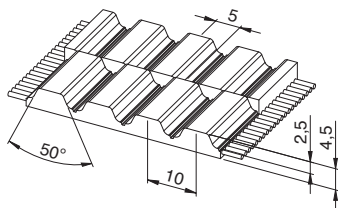
| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| $F_{Uspez}$ [N/cm] | 61,00 | 59,96 | 58,99 | 58,09 | 57,25 | 56,47 | 53,28 | 51,72 | 49,58 | 47,71 | 46,06 | 44,59 | 43,27 | 42,07 | 40,97 | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ |
| STANDARD                                                  | 25                            | 80 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



#### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

#### BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration thanks to the teeth offset
- Particularly suitable for linear drives and medium power transmission applications with high axial and angular positioning accuracy
- Negative length tolerance available on request

#### TECHNICAL DATA

##### Standard steel cord

| Belt width b [mm]      |                 | 50      | 75      | 100     |
|------------------------|-----------------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 8330    | 12740   | 17150   |
| Breaking load          | $F_{Br}$ [N]    | 32300   | 49400   | 66500   |
| Specific spring rate   | $C_{spez}$ [N]  | 2082500 | 3185000 | 4287500 |
| Weight                 | [kg/m]          | 0,29    | 0,43    | 0,57    |

Other widths are available on request

##### Specialties

| Belt width b [mm]    |                 | 50    |
|----------------------|-----------------|-------|
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 6120  |
|                      | $F_{Br}$ [N]    | 25500 |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 6800  |
|                      | $F_{Br}$ [N]    | 28900 |

##### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 88,57 | 87,06 | 85,66 | 84,35 | 83,13 | 81,99 | 77,36 | 75,09 | 71,99 | 69,27 | 66,88 | 64,75 | 62,83 | 61,09 | 59,49 | 58,02 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 56,66 | 55,39 | 54,20 | 53,74 | 53,08 | 52,02 | 51,02 | 50,06 | 49,16 | 48,29 | 46,67 | 45,18 | 43,80 | 42,51 | 41,30 | 40,17 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 39,09 | 38,08 | 37,11 | 36,20 | 34,08 | 32,17 | 30,43 | 28,84 | 27,37 | 26,01 | 24,73 | 23,53 | 22,41 | 21,34 | 20,33 | 19,37 |

##### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 50 mm           | 25                         | 120 mm          |
| STAINLESS                                                 | 20                            | 70 mm           | 40                         | 120 mm          |
| HFE                                                       | 12                            | 50 mm           | 20                         | 80 mm           |

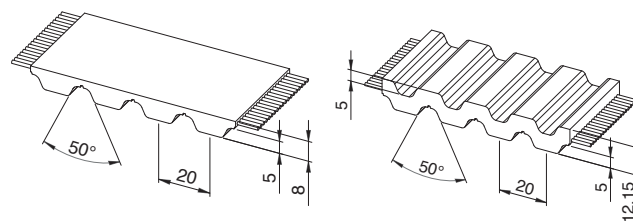
#### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration
- Particularly suitable for linear drives and heavy power transmission applications with high axial and angular positioning accuracy
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 25      | 32      | 50      | 75      | 100     | 150     |
|------------------------|-----------------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 5280    | 7200    | 11520   | 17280   | 23520   | 35520   |
| Breaking load          | $F_{Br}$ [N]    | 19250   | 26250   | 42000   | 63000   | 85750   | 129500  |
| Specific spring rate   | $C_{spez}$ [N]  | 1320000 | 1800000 | 2880000 | 4320000 | 5880000 | 8880000 |
| Weight                 | [kg/m]          | 0,24    | 0,31    | 0,48    | 0,73    | 0,97    | 1,45    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 25    | 32    | 50    | 75    | 100   |
|----------------------|-----------------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 2420  | 3300  | 5280  | 7920  | 10780 |
|                      | $F_{Br}$ [N]    | 11000 | 15000 | 24000 | 36000 | 49000 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 3300  | 4500  | 7200  | 10800 | 14700 |
|                      | $F_{Br}$ [N]    | 15400 | 21000 | 33600 | 50400 | 68600 |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 5060  | 6900  | 11040 | 16560 | 22540 |
|                      | $F_{Br}$ [N]    | 21175 | 28875 | 46200 | 69300 | 94325 |

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800   | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 151,40 | 148,56 | 145,89 | 143,38 | 141,01 | 138,78 | 129,43 | 122,28 | 115,96 | 110,45 | 105,61 | 101,31 | 97,44 | 93,93 | 90,73 | 87,77 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 85,02 | 82,47 | 80,07 | 79,16 | 77,82 | 75,70 | 73,69 | 71,77 | 69,96 | 68,22 | 64,97 | 61,98 | 59,20 | 56,62 | 54,20 | 51,92 |

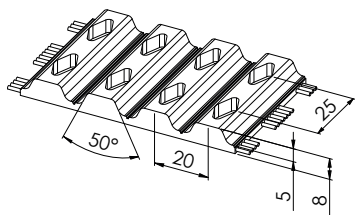
  

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 49,77 | 47,74 | 45,80 | 43,96 | 39,72 | 35,90 | 32,42 | 29,23 | 26,29 | - | - | - | - | - | - | - |

### Flexibility

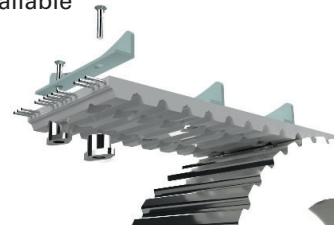
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 120 mm          | 25                         | 180 mm          |
| ARAMID                                                    | 18                            | 120 mm          | 25                         | 160 mm          |
| STAINLESS                                                 | 20                            | 125 mm          | 30                         | 200 mm          |
| HFE                                                       | 18                            | 120 mm          | 25                         | 150 mm          |

**Elatech® V Joined informations**  
Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Particularly suitable for linear drives
- Rapid and easy configuration of cleat attachment with simple hand tool
- Stainless steel insert M5 available



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 50      | 75      | 100     |
|------------------------|-----------------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 9600    | 14400   | 19200   |
| Breaking load          | $F_{Br}$ [N]    | 35000   | 52500   | 70000   |
| Specific spring rate   | $C_{spez}$ [N]  | 2400000 | 3600000 | 4800000 |
| Weight                 | [kg/m]          | 0,48    | 0,73    | 0,97    |

Other widths are available on request

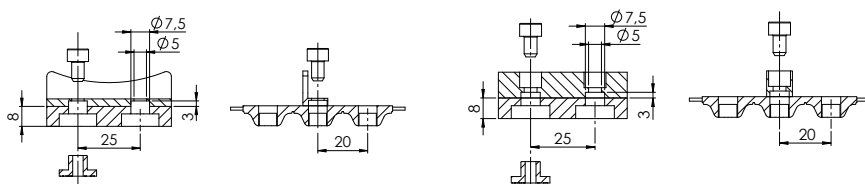
### Insert Types

| Insert Profile | Dimensions | Thread size | Material        | Applications                                     |
|----------------|------------|-------------|-----------------|--------------------------------------------------|
|                |            | M5          | Stainless Steel | - Medium and large loads<br>- High dynamic loads |

### ATF Advantages:

- Variable cleat pitch
- Different cleat materials can be used
- Standard timing belt pulleys can be used
- High shear strength
- Quick and easy cleat change
- Cleats spacing is extremely precise
- No cleat welding beads
- Reduced downtime

### Example of cleat configurations



### Tooth shear strength

| rpm                | 0      | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | - |
|--------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| $F_{Uspez}$ [N/cm] | 100,00 | 98,13 | 96,36 | 94,70 | 93,14 | 91,66 | 85,49 | 80,77 | 76,59 | 72,95 | 69,75 | 66,91 | 64,36 | 62,04 | 59,92 | - |

### Flexibility

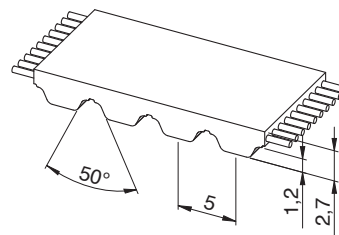
| Minimum pulley number of teeth and minimum idler diameter |           |                 |
|-----------------------------------------------------------|-----------|-----------------|
|                                                           | $z_{min}$ | idler $d_{min}$ |
| STANDARD                                                  | 20        | 130 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- High performance polyurethane timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Specially designed for linear drives
- Tension cords with increased allowable tensile load compared to standard for lower elongation
- Produced with special pretension and pitch tolerance to guarantee high positioning precision in linear drives
- Negative length tolerance available on request



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 10     | 16     | 25     | 32     | 50      | 75      | 100     | 150     |
|------------------------|----------------|--------|--------|--------|--------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N] | 920    | 1610   | 2650   | 3450   | 5520    | 8400    | 11270   | 17020   |
| Breaking load          | $F_{Br}$ [N]   | 3360   | 5880   | 9660   | 12600  | 20160   | 30660   | 41160   | 62160   |
| Specific spring rate   | $C_{spez}$ [N] | 230000 | 402500 | 662500 | 862500 | 1380000 | 2100000 | 2817500 | 4255000 |
| Weight                 | [kg/m]         | 0,04   | 0,06   | 0,1    | 0,12   | 0,19    | 0,29    | 0,38    | 0,57    |

Other widths are available on request

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 36,40 | 35,88 | 35,40 | 34,97 | 34,59 | 34,24 | 32,92 | 31,92 | 30,89 | 29,95 | 29,12 | 28,37 | 27,69 | 27,06 | 26,49 | 25,96 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 25,47 | 25,01 | 24,57 | 24,41 | 24,16 | 23,78 | 23,41 | 23,07 | 22,73 | 22,42 | 21,82 | 21,28 | 20,77 | 20,29 | 19,85 | 19,43 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 19,03 | 18,66 | 18,30 | 17,96 | 17,18 | 16,47 | 15,83 | 15,24 | 14,69 | 14,18 | 13,71 | 13,26 | 12,85 | 12,45 | 12,07 | 11,72 |

### Flexibility

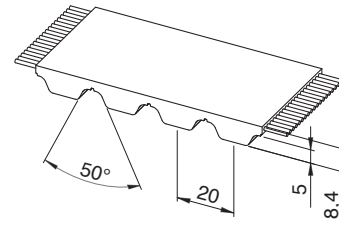
| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                 | <br>Drive with reverse bending |                 |
|-----------------------------------------------------------|-----------------------------------|-----------------|--------------------------------|-----------------|
|                                                           | $z_{min}$                         | idler $d_{min}$ | $z_{min}$                      | idler $d_{min}$ |
| STANDARD                                                  | 25                                | 40 mm           | 25                             | 60 mm           |





## BELT CHARACTERISTICS

- High performance polyurethane timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Specially designed for linear drives
- Tension cords with increased allowable tensile load compared to standard for lower elongation
- Produced with special pretension and pitch tolerance to guarantee high positioning precision in linear drives



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±1,0 [mm]   |
| LENGTH TOLERANCE:    | ±0,1 [mm/m] |
| THICKNESS TOLERANCE: | ±0,4 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 25      | 32      | 50      | 75      | 100     | 150      | 200      |
|------------------------|----------------|---------|---------|---------|---------|---------|----------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 7650    | 10200   | 16150   | 24650   | 33150   | 51000    | 68000    |
| Breaking load          | $F_{Br}$ [N]   | 28800   | 38400   | 60800   | 92800   | 124800  | 192000   | 256000   |
| Specific spring rate   | $C_{spez}$ [N] | 1912500 | 2550000 | 4037500 | 6162500 | 8287500 | 12750000 | 17000000 |
| Weight                 | [kg/m]         | 0,28    | 0,36    | 0,56    | 0,84    | 1,12    | 1,68     | 2,25     |

Other widths are available on request

### Specialties

| Belt width b [mm] |                | 25    | 32    | 50    | 75    | 100   |
|-------------------|----------------|-------|-------|-------|-------|-------|
| STAINLESS STEEL   | $F_{Tzul}$ [N] | 5220  | 6960  | 11020 | 16820 | 22620 |
|                   | $F_{Br}$ [N]   | 20700 | 27600 | 43700 | 66700 | 89700 |

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800   | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 151,40 | 148,56 | 145,89 | 143,38 | 141,01 | 138,78 | 129,43 | 122,28 | 115,96 | 110,45 | 105,61 | 101,31 | 97,44 | 93,93 | 90,73 | 87,77 |

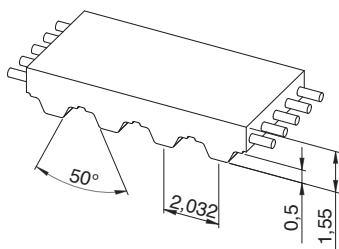
| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 85,02 | 82,47 | 80,07 | 79,16 | 77,82 | 75,70 | 73,69 | 71,77 | 69,96 | 68,22 | 64,97 | 61,98 | 59,20 | 56,62 | 54,20 | 51,92 |

| rpm                | 3400  | 3600  | 3800 | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | - | - | - | - | - | - | - |
|--------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 49,77 | 47,74 | 45,8 | 43,96 | 39,72 | 35,90 | 32,42 | 29,23 | 26,29 | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 25                            | 160 mm          | 25                         | 250 mm          |
| STAINLESS                                                 | 32                            | 200 mm          | 40                         | 250 mm          |



## BELT CHARACTERISTICS

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch  $2/25'' = 2,032$  mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)
- Trasparent (natural) PU colour

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,8$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,1$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm] |                 | 0,25 / 6,35 | 0,50 / 12,7 | 1,00 / 25,4 | 2,00 / 50,8 | 4,00 / 101,6 |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|--------------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 220         | 450         | 900         | 1790        | 3580         |
| Breaking load            | $F_{Br}$ [N]    | 875         | 1750        | 3500        | 7000        | 14000        |
| Specific spring rate     | $C_{spez}$ [N]  | 55000       | 112500      | 225000      | 447500      | 895000       |
| Weight                   | [kg/m]          | 0,014       | 0,025       | 0,05        | 0,095       | 0,19         |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 0,25 / 6,35 | 0,50 / 12,7 | 1,00 / 25,4 | 2,00 / 50,8 | 4,00 / 101,6 |
|----------------------|-----------------|-------------|-------------|-------------|-------------|--------------|
| HFE High Flexibility | $F_{Tzul}$ [N]* | 250         | 505         | 1010        | 2015        | 4030         |
|                      | $F_{Br}$ [N]    | 1050        | 2100        | 4200        | 8400        | 16800        |

### Tooth shear strength

| rpm                | 0    | 20   | 40   | 60   | 80   | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| $F_{Uspez}$ [N/cm] | 7,58 | 7,31 | 7,09 | 6,92 | 6,78 | 6,67 | 6,15 | 5,83 | 5,59 | 5,40 | 5,24 | 5,11 | 4,99 | 4,88 | 4,79 | 4,70 |

| rpm                | 1200 | 1300 | 1400 | 1440 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 | 3200 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| $F_{Uspez}$ [N/cm] | 4,62 | 4,55 | 4,48 | 4,46 | 4,42 | 4,36 | 4,31 | 4,25 | 4,21 | 4,16 | 4,07 | 3,99 | 3,92 | 3,85 | 3,78 | 3,72 |

| rpm                | 3400 | 3600 | 3800 | 4000 | 4500 | 5000 | 5500 | 6000 | 6500 | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| $F_{Uspez}$ [N/cm] | 3,67 | 3,61 | 3,56 | 3,52 | 3,41 | 3,31 | 3,22 | 3,14 | 3,06 | 2,99 | 2,93 | 2,86 | 2,81 | 2,75 | 2,70 | 2,65  |

### Flexibility

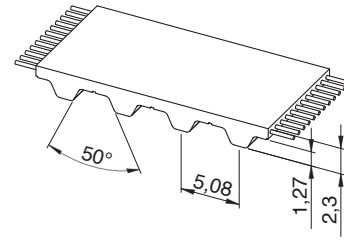
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 12                            | 20 mm           | 15                         | 25 mm           |
| HFE                                                       | 12                            | 15 mm           | 15                         | 20 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 1/5" = 5,08 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)



### STANDARD CORDS TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm] |                 | 0,25 / 6,35 | 0,31 / 7,94 | 0,37 / 9,53 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 4,00 / 101,6 |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 190         | 220         | 290         | 420         | 670         | 900         | 1410        | 1890        | 3840         |
| Breaking load            | $F_{Br}$ [N]    | 750         | 875         | 1125        | 1625        | 2625        | 3500        | 5500        | 7375        | 15000        |
| Specific spring rate     | $C_{spez}$ [N]  | 47500       | 55000       | 72500       | 105000      | 167500      | 225000      | 352500      | 472500      | 960000       |
| Weight                   | [kg/m]          | 0,015       | 0,019       | 0,023       | 0,031       | 0,046       | 0,061       | 0,092       | 0,122       | 0,244        |

Other widths are available on request

### Specialties

| Belt width b [inch]/[mm] |                 | 0,25 / 6,35 | 0,31 / 7,94 | 0,37 / 9,53 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 4,00 / 101,6 |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N]* | 420         | 490         | 630         | 910         | 1470        | 1960        | 3080        | 4130        | 8400         |
|                          | $F_{Br}$ [N]    | 1680        | 1960        | 2520        | 3640        | 5880        | 7840        | 12320       | 16520       | 33600        |
| HFE High Flexibility     | $F_{Tzul}$ [N]* | 215         | 250         | 325         | 470         | 755         | 1010        | 1585        | 2125        | 4320         |
|                          | $F_{Br}$ [N]    | 900         | 1050        | 1350        | 1950        | 3150        | 4200        | 6600        | 8850        | 18000        |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 25,10 | 24,46 | 23,90 | 23,42 | 23,00 | 22,63 | 21,24 | 20,22 | 19,42 | 18,77 | 18,22 | 17,74 | 17,32 | 16,94 | 16,60 | 16,29 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 16,01 | 15,74 | 15,49 | 15,40 | 15,26 | 15,04 | 14,84 | 14,64 | 14,46 | 14,28 | 13,96 | 13,66 | 13,38 | 13,12 | 12,88 | 12,65 |

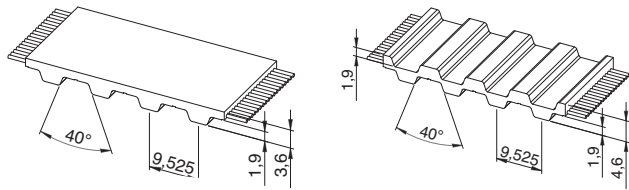
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|
| $F_{Uspez}$ [N/cm] | 12,44 | 12,24 | 12,05 | 11,87 | 11,45 | 11,08 | 10,74 | 10,43 | 10,14 | 9,87 | 9,63 | 9,39 | 9,17 | 8,97 | 8,77 | 8,59  |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 10                            | 30 mm           | 15                         | 30 mm           |
| ARAMID                                                    | 10                            | 30 mm           | 15                         | 30 mm           |
| HFE                                                       | 10                            | 30 mm           | 12                         | 30 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 3/8" = 9,525 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)
- Double sided tooth available (on request for special cords)

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm] |                 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 1270        | 1960        | 2760        | 4260        | 5640        | 8510        | 11390        |
| Breaking load            | $F_{Br}$ [N]    | 4620        | 7140        | 10080       | 15540       | 20580       | 31080       | 41580        |
| Specific spring rate     | $C_{spez}$ [N]  | 317500      | 490000      | 690000      | 1065000     | 1410000     | 2127500     | 2847500      |
| Weight                   | [kg/m]          | 0,049       | 0,073       | 0,098       | 0,146       | 0,195       | 0,293       | 0,39         |

Other widths are available on request

### Specialties

| Belt width b [inch]/[mm] |                 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N]* | 1210        | 1870        | 2640        | 4070        | 5390        | 8140        | 10890        |
|                          | $F_{Br}$ [N]    | 4950        | 7650        | 10800       | 16650       | 22050       | 33300       | 44550        |
| STAINLESS STEEL          | $F_{Tzul}$ [N]* | 830         | 1280        | 1800        | 2780        | 3680        | -           | -            |
|                          | $F_{Br}$ [N]    | 3300        | 5100        | 7200        | 11100       | 14700       | -           | -            |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 38,60 | 37,42 | 36,40 | 35,51 | 34,74 | 34,07 | 31,59 | 29,79 | 28,39 | 27,25 | 26,28 | 25,44 | 24,70 | 24,04 | 23,44 | 22,89 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 22,38 | 21,91 | 21,48 | 21,31 | 21,07 | 20,69 | 20,33 | 19,98 | 19,66 | 19,35 | 18,77 | 18,24 | 17,76 | 17,30 | 16,88 | 16,48 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000 | 9500 | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| $F_{Uspez}$ [N/cm] | 16,10 | 15,75 | 15,41 | 15,09 | 14,36 | 13,70 | 13,10 | 12,55 | 12,05 | 11,58 | 11,14 | 10,73 | 10,35 | 9,98 | 9,64 | 9,31  |

### Flexibility

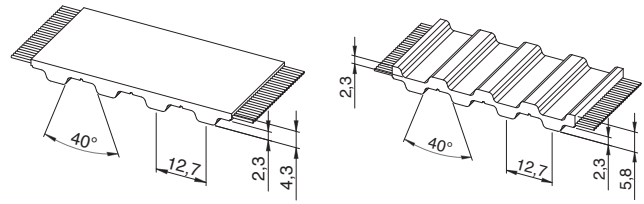
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 60 mm           | 20                         | 60 mm           |
| ARAMID                                                    | 15                            | 60 mm           | 20                         | 60 mm           |
| STAINLESS                                                 | 18                            | 65 mm           | 20                         | 65 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 1/2" = 12,7 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]  
LENGTH TOLERANCE: ±0,5 [mm/m]  
THICKNESS TOLERANCE: ±0,2 [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm] |                 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 | 8,00/203,2** |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 1270        | 1960        | 2760        | 4260        | 5640        | 8510        | 11390        | 17370        | 11390        |
| Breaking load            | $F_{Br}$ [N]    | 4620        | 7140        | 10080       | 15540       | 20580       | 31080       | 41580        | 63420        | 41580        |
| Specific spring rate     | $C_{spez}$ [N]  | 317500      | 490000      | 690000      | 1065000     | 1410000     | 2127500     | 2847500      | 4342500      | 2847500      |
| Weight                   | [kg/m]          | 0,05        | 0,08        | 0,11        | 0,16        | 0,22        | 0,32        | 0,43         | 0,56         | 0,65         |

Other widths are available on request

\*\* = double cords spacing

### Specialties

| Belt width b [inch]/[mm] |                 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 | 8,00/203,2** |
|--------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N]* | 1210        | 1870        | 2640        | 4070        | 5390        | 8140        | 10890        | 16610        | 10890        |
|                          | $F_{Br}$ [N]    | 4950        | 7650        | 10800       | 16650       | 22050       | 33300       | 44550        | 67950        | 44500        |
| STAINLESS STEEL          | $F_{Tzul}$ [N]* | 830         | 1280        | 1800        | 2780        | 3680        | -           | -            | -            | -            |
|                          | $F_{Br}$ [N]    | 3300        | 5100        | 7200        | 11100       | 14700       | -           | -            | -            | -            |

\*\* = double cords spacing

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 45,30 | 43,95 | 42,78 | 41,77 | 40,88 | 40,11 | 37,22 | 35,07 | 33,41 | 32,05 | 30,90 | 29,91 | 29,04 | 28,26 | 27,55 | 26,90 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 26,31 | 25,76 | 25,25 | 25,05 | 24,77 | 24,32 | 23,89 | 23,49 | 23,11 | 22,74 | 22,07 | 21,44 | 20,87 | 20,34 | 19,84 | 19,37 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 18,93 | 18,51 | 18,12 | 17,75 | 16,88 | 16,11 | 15,41 | 14,76 | 14,17 | 13,62 | 13,11 | 12,63 | 12,18 | 11,75 | 11,35 | 10,96 |

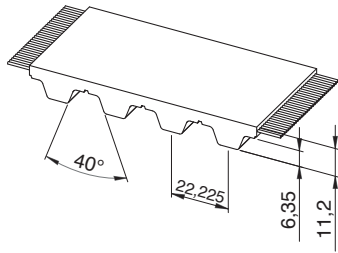
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 14                            | 60 mm           | 20                         | 80 mm           |
| ARAMID                                                    | 14                            | 60 mm           | 20                         | 80 mm           |
| STAINLESS                                                 | 20                            | 80 mm           | 40                         | 100 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]





## BELT CHARACTERISTICS

- Polyurethane timing belt with tooth profile according to UNI/ISO 5296 with steel tension cords
- Imperial pitch 7/8" = 22,225 mm
- Mainly used in applications where inch pitch is an advantage (USA / UK)

### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm] |                 | 1,00 / 25,4 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 |
|--------------------------|-----------------|-------------|-------------|-------------|--------------|--------------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 3920        | 8330        | 12740       | 17150        | 25970        |
| Breaking load            | $F_{Br}$ [N]    | 15200       | 32300       | 49400       | 66500        | 100700       |
| Specific spring rate     | $C_{spez}$ [N]  | 980000      | 2082500     | 3185000     | 4287500      | 6492500      |
| Weight                   | [kg/m]          | 0,37        | 0,66        | 0,99        | 1,33         | 1,99         |

Other widths are available on request

### Specialties

| Belt width b [inch]/[mm] |                 | 1,00 / 25,4 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 |
|--------------------------|-----------------|-------------|-------------|-------------|--------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N]* | 3520        | 7480        | 11440       | 15400        | 23320        |
|                          | $F_{Br}$ [N]    | 16000       | 34000       | 52000       | 70000        | 106000       |
| STAINLESS STEEL          | $F_{Tzul}$ [N]* | 2880        | 6120        | 9360        | 12600        | -            |
|                          | $F_{Br}$ [N]    | 12000       | 25500       | 39000       | 52500        | -            |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 96,00 | 92,98 | 90,27 | 87,85 | 85,68 | 83,73 | 74,80 | 69,42 | 65,53 | 62,48 | 59,97 | 57,84 | 55,99 | 54,35 | 52,88 | 51,55 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 50,33 | 49,20 | 48,16 | 47,77 | 47,19 | 46,29 | 45,43 | 44,62 | 43,86 | 43,14 | 41,79 | 40,56 | 39,43 | 38,37 | 37,40 | 36,48 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 35,62 | 34,81 | 34,04 | 33,31 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

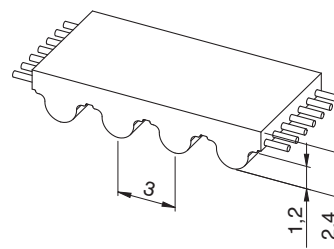
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 150 mm          | 20                         | 180 mm          |
| ARAMID                                                    | 18                            | 150 mm          | 20                         | 180 mm          |
| STAINLESS                                                 | 24                            | 160 mm          | 30                         | 200 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 3 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Widely used in linear positioning, light power transmission applications



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10    | 15     | 25     | 50     | 100    |
|------------------------|-----------------|-------|--------|--------|--------|--------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 320   | 510    | 900    | 1860   | 3780   |
| Breaking load          | $F_{Br}$ [N]    | 1250  | 2000   | 3500   | 7250   | 14750  |
| Specific spring rate   | $C_{spez}$ [N]  | 80000 | 127500 | 225000 | 465000 | 945000 |
| Weight                 | [kg/m]          | 0,02  | 0,03   | 0,06   | 0,12   | 0,24   |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 15   | 25   | 50   | 100   |
|----------------------|-----------------|------|------|------|------|-------|
| HFE High Flexibility | $F_{Tzul}$ [N]* | 360  | 575  | 1010 | 2090 | 4250  |
|                      | $F_{Br}$ [N]    | 1500 | 2400 | 4200 | 8700 | 17700 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 25,20 | 24,60 | 24,06 | 23,57 | 23,12 | 22,72 | 21,22 | 20,31 | 19,75 | 19,14 | 18,50 | 17,88 | 17,30 | 16,75 | 16,24 | 15,75 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000 | 3200 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| $F_{Uspez}$ [N/cm] | 15,29 | 14,86 | 14,45 | 14,29 | 14,06 | 13,69 | 13,33 | 12,99 | 12,67 | 12,36 | 11,77 | 11,22 | 10,71 | 10,24 | 9,79 | 9,36 |

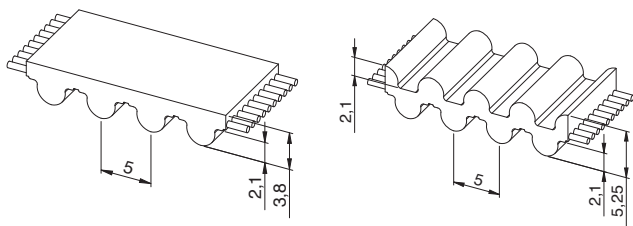
| rpm                | 3400 | 3600 | 3800 | 4000 | 4500 | 5000 | 5500 | 6000 | 6500 | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| $F_{Uspez}$ [N/cm] | 8,96 | 8,57 | 8,21 | 7,86 | 7,05 | 6,32 | 5,66 | 5,04 | 4,47 | 3,94 | 3,44 | 2,98 | 2,54 | 2,12 | 1,72 | 1,35  |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 20                            | 30 mm           | 20                         | 30 mm           |
| HFE                                                       | 15                            | 20 mm           | 20                         | 20 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Widely used in linear positioning, light power transmission applications
- Double sided tooth available (on request for special cords)

### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 25     | 50      | 75      | 100     |
|------------------------|-----------------|--------|--------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 920    | 1500   | 2650   | 5520    | 8400    | 11270   |
| Breaking load          | $F_{Br}$ [N]    | 3360   | 5460   | 9660   | 20160   | 30660   | 41160   |
| Specific spring rate   | $C_{spez}$ [N]  | 230000 | 375000 | 662500 | 1380000 | 2100000 | 2817500 |
| Weight                 | [kg/m]          | 0,05   | 0,07   | 0,12   | 0,24    | 0,36    | 0,48    |

Other widths are available on request

### Specialties

| Belt width b [mm] |                 | 10   | 15   | 25    | 50    | 75    | 100   |
|-------------------|-----------------|------|------|-------|-------|-------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N]* | 880  | 1430 | 2530  | 5280  | 8030  | 10780 |
|                   | $F_{Br}$ [N]    | 3600 | 5850 | 10350 | 21600 | 32850 | 44100 |
| STAINLESS STEEL   | $F_{Tzul}$ [N]* | 600  | 980  | 1730  | 3600  | 5475  | 7350  |
|                   | $F_{Br}$ [N]    | 2400 | 3900 | 6900  | 14400 | 21900 | 29400 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 36,80 | 36,25 | 35,75 | 35,30 | 34,89 | 34,52 | 33,13 | 30,87 | 30,10 | 29,31 | 28,56 | 27,86 | 27,21 | 26,61 | 26,05 | 25,52 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 25,03 | 24,56 | 24,13 | 23,96 | 23,71 | 23,32 | 22,94 | 22,58 | 22,24 | 21,91 | 21,30 | 20,72 | 20,19 | 19,69 | 19,23 | 18,78 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 18,37 | 17,97 | 17,59 | 17,23 | 16,40 | 15,64 | 14,95 | 14,32 | 13,74 | 13,19 | 12,68 | 12,20 | 11,75 | 11,33 | 10,92 | 10,53 |

### Flexibility

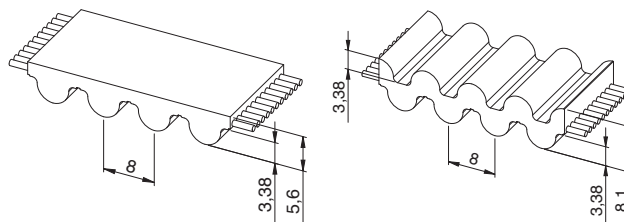
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 16                            | 30 mm           | 25                         | 60 mm           |
| ARAMID                                                    | 16                            | 30 mm           | 25                         | 60 mm           |
| STAINLESS                                                 | 18                            | 40 mm           | 25                         | 65 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Widely used in linear positioning, medium power transmission applications
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 20     | 30      | 50      | 85      | 100     | 150     |
|------------------------|-----------------|--------|--------|--------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 1470   | 2210   | 3190   | 4660    | 8580    | 14700   | 17400   | 26220   |
| Breaking load          | $F_{Br}$ [N]    | 5700   | 8550   | 12350  | 18050   | 33250   | 57000   | 67450   | 101650  |
| Specific spring rate   | $C_{spez}$ [N]  | 367500 | 552500 | 797500 | 1165000 | 2145000 | 3675000 | 4350000 | 6555000 |
| Weight                 | [kg/m]          | 0,07   | 0,10   | 0,14   | 0,21    | 0,35    | 0,59    | 0,69    | 0,95    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 15   | 20    | 30    | 50    | 85    | 100    | 150    |
|----------------------|-----------------|------|------|-------|-------|-------|-------|--------|--------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 1320 | 1980 | 2860  | 4180  | 7700  | 13200 | 15620  | 23540  |
|                      | $F_{Br}$ [N]    | 6000 | 9000 | 13000 | 19000 | 35000 | 60000 | 71000  | 107000 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 1080 | 1620 | 2340  | 3420  | 6300  | 10800 | 12780  | -      |
|                      | $F_{Br}$ [N]    | 4500 | 6750 | 9750  | 14250 | 26250 | 45000 | 53250  | -      |
| HPL High performance | $F_{Tzul}$ [N]  | -    | -    | 5280  | 8160  | 14400 | 24480 | 29280  | 44160  |
|                      | $F_{Br}$ [N]    | -    | -    | 19250 | 29750 | 52500 | 89250 | 106750 | 161000 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 74,00 | 72,62 | 71,34 | 70,16 | 69,07 | 68,07 | 64,09 | 61,68 | 59,03 | 56,71 | 54,66 | 52,84 | 51,20 | 49,71 | 48,35 | 47,09 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 45,93 | 44,84 | 43,82 | 43,43 | 42,86 | 41,96 | 41,10 | 40,29 | 39,52 | 38,78 | 37,39 | 36,12 | 34,94 | 33,83 | 32,80 | 31,83 |

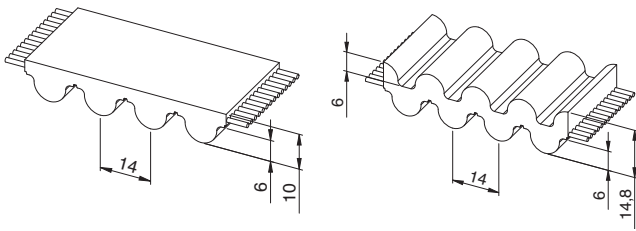
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 30,91 | 30,05 | 29,22 | 28,44 | 26,63 | 25,00 | 23,51 | 22,15 | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 18                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HPL                                                       | 30                            | 80 mm           | 30                         | 150 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



### BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Widely used in linear positioning, heavy power transmission applications
- Double sided tooth available (on request for special cords)

### STANDARD TOLERANCES

- WIDTH TOLERANCE: ±1,0 [mm]
- LENGTH TOLERANCE: ±0,5 [mm/m]
- THICKNESS TOLERANCE: ±0,4 [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]      |                        | 25      | 40      | 55      | 85      | 115     | 150     |
|------------------------|------------------------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 5280    | 9120    | 12480   | 19680   | 26880   | 35520   |
| Breaking load          | F <sub>Br</sub> [N]    | 19250   | 33250   | 45500   | 71750   | 98000   | 129500  |
| Specific spring rate   | C <sub>spez</sub> [N]  | 1320000 | 2280000 | 3120000 | 4920000 | 6720000 | 8880000 |
| Weight                 | [kg/m]                 | 0,28    | 0,44    | 0,61    | 0,94    | 1,25    | 1,68    |

Other widths are available on request

#### Specialties

| Belt width b [mm] |                        | 25    | 40    | 55    | 85    | 115   | 150   |
|-------------------|------------------------|-------|-------|-------|-------|-------|-------|
| ARAMID CORD       | F <sub>Tzul</sub> [N]* | 2420  | 4180  | 5720  | 9020  | 12320 | 16280 |
|                   | F <sub>Br</sub> [N]    | 11000 | 19000 | 26000 | 41000 | 56000 | 74000 |

#### Tooth shear strength

| rpm                       | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 130,00 | 127,69 | 125,56 | 123,60 | 121,78 | 120,11 | 109,77 | 104,29 | 99,19 | 94,65 | 90,64 | 87,04 | 83,80 | 80,85 | 78,14 | 75,63 |

| rpm                       | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 73,31 | 71,14 | 69,11 | 68,33 | 67,19 | 65,38 | 63,67 | 62,04 | 60,49 | 59,01 | 56,23 | 53,68 | 51,30 | 49,09 | 47,01 | 45,06 |

| rpm                       | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|---------------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| F <sub>Uspez</sub> [N/cm] | 43,22 | 41,48 | 39,82 | 38,24 | - | - | - | - | - | - | - | - | - | - | - | - |

#### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|-----------------------------------|------------------------|--------------------------------|------------------------|
|                                                           | z <sub>min</sub>                  | idler d <sub>min</sub> | z <sub>min</sub>               | idler d <sub>min</sub> |
| STANDARD                                                  | 28                                | 120 mm                 | 28                             | 180 mm                 |
| ARAMID                                                    | 28                                | 120 mm                 | 28                             | 180 mm                 |

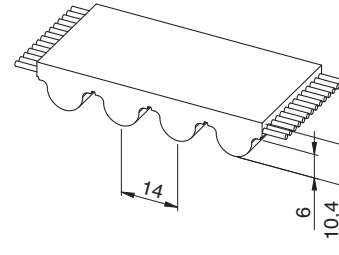
Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- HTD14M - XHPL is the ideal belt for heavy duty synchronous lifting applications
- Black color and PAZ fabric as standard for XHPL execution



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±1,0 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,5 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 40      | 55      | 85       | 115      | 150      |
|------------------------|----------------|---------|---------|----------|----------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 22000   | 32000   | 50000    | 68000    | 90000    |
| Breaking load          | $F_{Br}$ [N]   | 77000   | 112000  | 175000   | 238000   | 315000   |
| Specific spring rate   | $C_{spez}$ [N] | 5500000 | 8000000 | 12500000 | 17000000 | 22500000 |
| Weight                 | [kg/m]         | 0,59    | 0,75    | 1,29     | 1,75     | 2,21     |

Other widths are available on request

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 130,00 | 127,69 | 125,56 | 123,60 | 121,78 | 120,11 | 109,77 | 104,29 | 99,19 | 94,65 | 90,64 | 87,04 | 83,80 | 80,85 | 78,14 | 75,63 |

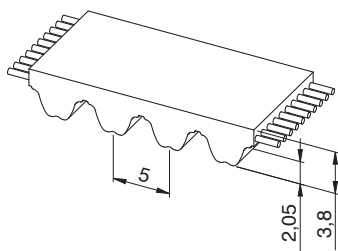
| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 73,31 | 71,14 | 69,11 | 68,33 | 67,19 | 65,38 | 63,67 | 62,04 | 60,49 | 59,01 | 56,23 | 53,68 | 51,30 | 49,09 | 47,01 | 45,06 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 43,22 | 41,48 | 39,82 | 38,24 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 34                            | 140 mm          | 34                         | 200 mm          |



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- Widely used in linear positioning, light power transmission applications

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 25     | 30     | 50      | 100     |
|------------------------|-----------------|--------|--------|--------|--------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 920    | 1500   | 2650   | 3220   | 5520    | 11270   |
| Breaking load          | $F_{Br}$ [N]    | 3360   | 5460   | 9660   | 11760  | 20160   | 41160   |
| Specific spring rate   | $C_{spez}$ [N]  | 230000 | 375000 | 662500 | 805000 | 1380000 | 2817500 |
| Weight                 | [kg/m]          | 0,05   | 0,07   | 0,12   | 0,15   | 0,23    | 0,46    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 15   | 25    | 30    | 50    | 100   |
|----------------------|-----------------|------|------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 880  | 1430 | 2530  | 3080  | 5280  | 10780 |
|                      | $F_{Br}$ [N]    | 3600 | 5850 | 10350 | 12600 | 21600 | 44100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 600  | 980  | 1730  | 2100  | 3600  | -     |
|                      | $F_{Br}$ [N]    | 2400 | 3900 | 6900  | 8400  | 14400 | -     |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 960  | 1560 | 2760  | 3360  | 5760  | -     |
|                      | $F_{Br}$ [N]    | 3440 | 5590 | 9890  | 12040 | 20640 | -     |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 37,80 | 37,25 | 36,75 | 36,30 | 35,89 | 35,52 | 34,13 | 32,87 | 32,10 | 31,31 | 30,56 | 29,86 | 29,21 | 28,61 | 28,05 | 27,52 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 27,03 | 26,56 | 26,13 | 25,96 | 25,71 | 25,32 | 24,94 | 24,58 | 24,24 | 23,91 | 23,30 | 22,72 | 22,19 | 21,69 | 21,23 | 20,78 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 20,37 | 19,97 | 19,59 | 19,23 | 18,40 | 17,64 | 16,95 | 16,32 | 15,74 | 15,19 | 14,68 | 14,20 | 13,75 | 13,33 | 12,92 | 12,53 |

### Flexibility

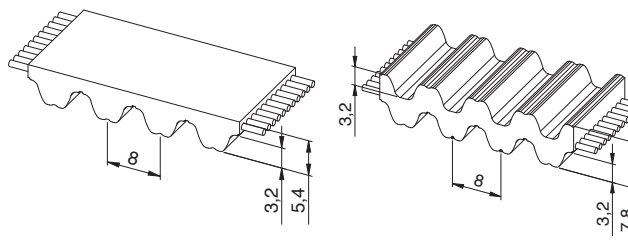
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 16                            | 30 mm           | 25                         | 60 mm           |
| ARAMID                                                    | 16                            | 30 mm           | 25                         | 60 mm           |
| STAINLESS                                                 | 18                            | 40 mm           | 25                         | 65 mm           |
| HFE                                                       | 15                            | 25 mm           | 20                         | 40 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- Widely used in linear positioning, medium power transmission applications
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 20     | 30      | 50      | 85      | 100     |
|------------------------|-----------------|--------|--------|--------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 1470   | 2210   | 3190   | 4660    | 8580    | 14700   | 17400   |
| Breaking load          | $F_{Br}$ [N]    | 5700   | 8550   | 12350  | 18050   | 33250   | 57000   | 67450   |
| Specific spring rate   | $C_{spez}$ [N]  | 367500 | 552500 | 797500 | 1165000 | 2145000 | 3675000 | 4350000 |
| Weight                 | [kg/m]          | 0,07   | 0,10   | 0,14   | 0,20    | 0,35    | 0,60    | 0,75    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 15   | 20    | 30    | 50    | 85    | 100    |
|----------------------|-----------------|------|------|-------|-------|-------|-------|--------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 1320 | 1980 | 2860  | 4180  | 7700  | 13200 | 15620  |
|                      | $F_{Br}$ [N]    | 6000 | 9000 | 13000 | 19000 | 35000 | 60000 | 71000  |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 1080 | 1620 | 2340  | 3420  | 6300  | 10800 | 12780  |
|                      | $F_{Br}$ [N]    | 4500 | 6750 | 9750  | 14250 | 26250 | 45000 | 53250  |
| HPL High Performance | $F_{Tzul}$ [N]  | -    | -    | 5280  | 8160  | 14400 | 24480 | 29280  |
|                      | $F_{Br}$ [N]    | -    | -    | 19250 | 29750 | 52500 | 89250 | 106750 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 76,00 | 74,62 | 73,34 | 72,16 | 71,07 | 70,07 | 66,09 | 63,68 | 61,03 | 58,71 | 56,66 | 54,84 | 53,20 | 51,71 | 50,35 | 49,09 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 47,93 | 46,84 | 45,82 | 45,43 | 44,86 | 43,96 | 43,10 | 42,29 | 41,52 | 40,78 | 39,39 | 38,12 | 36,94 | 35,83 | 34,80 | 33,83 |

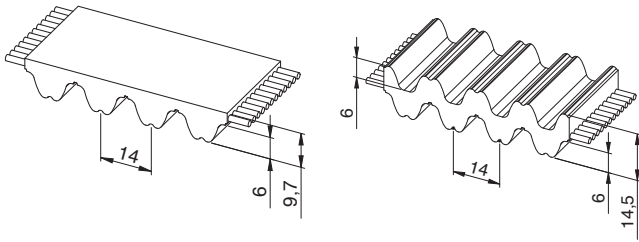
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 32,91 | 32,05 | 31,22 | 30,44 | 28,63 | 27,00 | 25,51 | 24,15 | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 18                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HPL                                                       | 30                            | 80 mm           | 30                         | 150 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



**STANDARD TOLERANCES**

WIDTH TOLERANCE: ±1,0 [mm]  
 LENGTH TOLERANCE: ±0,5 [mm/m]  
 THICKNESS TOLERANCE: ±0,4 [mm]

**BELT CHARACTERISTICS**

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- Widely used in linear positioning, heavy power transmission applications
- Double sided tooth available (on request for special cords)

**TECHNICAL DATA**

**Standard steel cord**

| Belt width b [mm]      |                        | 40      | 55      | 85      | 115     |
|------------------------|------------------------|---------|---------|---------|---------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 12750   | 17850   | 28050   | 39100   |
| Breaking load          | F <sub>Br</sub> [N]    | 48000   | 67200   | 105600  | 147200  |
| Specific spring rate   | C <sub>spez</sub> [N]  | 3187500 | 4462500 | 7012500 | 9775000 |
| Weight                 | [kg/m]                 | 0,48    | 0,68    | 1,00    | 1,40    |

Other widths are available on request

**Specialties**

| Belt width b [mm]                    |                        | 40    | 55    | 85     | 115    |
|--------------------------------------|------------------------|-------|-------|--------|--------|
| ARAMID CORD                          | F <sub>Tzul</sub> [N]* | 11250 | 15750 | 24750  | 34500  |
|                                      | F <sub>Br</sub> [N]    | 45000 | 63000 | 99000  | 138000 |
| HPF High flexibility and performance | F <sub>Tzul</sub> [N]  | 15000 | 21000 | 33000  | 46000  |
|                                      | F <sub>Br</sub> [N]    | 60000 | 84000 | 132000 | 184000 |

**Tooth shear strength**

| rpm                       | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700   | 800   | 900   | 1000  | 1100  |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 140,00 | 137,31 | 134,83 | 132,53 | 130,42 | 128,46 | 119,77 | 114,29 | 109,19 | 104,65 | 100,64 | 97,04 | 93,80 | 90,85 | 88,14 | 85,63 |

| rpm                       | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 83,31 | 81,14 | 79,11 | 78,33 | 77,19 | 75,38 | 73,67 | 72,04 | 70,49 | 69,01 | 66,23 | 63,68 | 61,30 | 59,09 | 57,01 | 55,06 |

| rpm                       | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|---------------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| F <sub>Uspez</sub> [N/cm] | 53,22 | 51,48 | 49,82 | 48,24 | - | - | - | - | - | - | - | - | - | - | - | - |

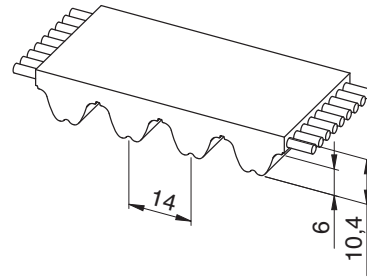
**Flexibility**

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|-----------------------------------|------------------------|--------------------------------|------------------------|
|                                                           | z <sub>min</sub>                  | idler d <sub>min</sub> | z <sub>min</sub>               | idler d <sub>min</sub> |
| STANDARD                                                  | 32                                | 140 mm                 | 32                             | 200 mm                 |
| ARAMID                                                    | 28                                | 120 mm                 | 28                             | 150 mm                 |
| HPF                                                       | 30                                | 130 mm                 | 30                             | 180 mm                 |

**Elatech® V Joined informations**  
 Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- PAZ fabric on tooth side delivered as standard reduces noise in the drive
- RTD14M - XHPL is the ideal belt for heavy duty synchronous lifting applications. Black colour as standard.



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±1,0 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,4 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 40      | 55      | 85       | 115      | 150      |
|------------------------|----------------|---------|---------|----------|----------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 22000   | 32000   | 50000    | 68000    | 90000    |
| Breaking load          | $F_{Br}$ [N]   | 77000   | 112000  | 175000   | 238000   | 315000   |
| Specific spring rate   | $C_{spez}$ [N] | 5500000 | 8000000 | 12500000 | 17000000 | 22500000 |
| Weight                 | [kg/m]         | 0,59    | 0,75    | 1,29     | 1,75     | 2,21     |

Other widths are available on request

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 140,00 | 137,31 | 134,83 | 132,53 | 130,42 | 128,46 | 119,77 | 114,29 | 109,19 | 104,65 | 100,64 | 97,04 | 93,80 | 90,85 | 88,14 | 85,63 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 83,31 | 81,14 | 79,11 | 78,33 | 77,19 | 75,38 | 73,67 | 72,04 | 70,49 | 69,01 | 66,23 | 63,68 | 61,30 | 59,09 | 57,01 | 55,06 |

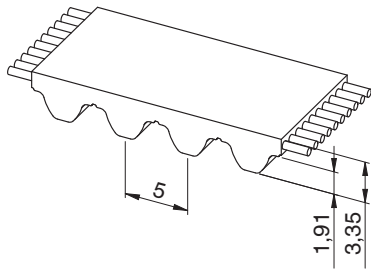
  

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 53,22 | 51,48 | 49,82 | 48,24 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 34                            | 140 mm          | 34                         | 250 mm          |





### BELT CHARACTERISTICS

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- Low noise generation in high speed drives
- Offers excellent operational reliability in linear positioning and light power transmission applications
- The special profile allows smooth running properties

### STANDARD TOLERANCES

- WIDTH TOLERANCE: ±0,5 [mm]  
LENGTH TOLERANCE: ±0,5 [mm/m]  
THICKNESS TOLERANCE: ±0,2 [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 25     | 50      | 100     | 150     |
|------------------------|-----------------|--------|--------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 920    | 1500   | 2650   | 5520    | 11270   | 17020   |
| Breaking load          | $F_{Br}$ [N]    | 3360   | 5460   | 9660   | 20160   | 41160   | 62160   |
| Specific spring rate   | $C_{spez}$ [N]  | 230000 | 375000 | 662500 | 1380000 | 2817500 | 4255000 |
| Weight                 | [kg/m]          | 0,05   | 0,07   | 0,12   | 0,23    | 0,46    | 0,69    |

Other widths are available on request

#### Specialties

| Belt width b [mm]    |                 | 10   | 15   | 25    | 50    | 100   | 150   |
|----------------------|-----------------|------|------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 880  | 1430 | 2530  | 5280  | 10780 | 16280 |
|                      | $F_{Br}$ [N]    | 3600 | 5850 | 10350 | 21600 | 44100 | 66600 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 600  | 980  | 1730  | 3600  | -     | -     |
|                      | $F_{Br}$ [N]    | 2400 | 3900 | 6900  | 14400 | -     | -     |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 960  | 1560 | 2760  | 5760  | -     | -     |
|                      | $F_{Br}$ [N]    | 3440 | 5590 | 9890  | 20640 | -     | -     |

#### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 36,90 | 36,35 | 35,85 | 35,40 | 34,99 | 34,62 | 33,23 | 31,37 | 30,60 | 29,81 | 29,06 | 28,36 | 27,71 | 27,11 | 26,55 | 26,02 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 25,53 | 25,06 | 24,63 | 24,46 | 24,21 | 23,82 | 23,44 | 23,08 | 22,74 | 22,41 | 21,80 | 21,22 | 20,69 | 20,19 | 19,73 | 19,28 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 18,87 | 18,47 | 18,09 | 17,73 | 16,90 | 16,14 | 15,45 | 14,82 | 14,24 | 13,69 | 13,18 | 12,70 | 12,25 | 11,83 | 11,42 | 11,03 |

#### Flexibility

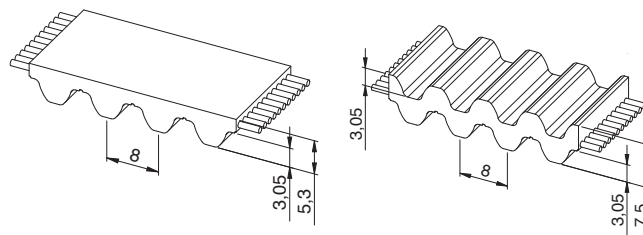
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 16                            | 30 mm           | 25                         | 60 mm           |
| ARAMID                                                    | 16                            | 30 mm           | 25                         | 60 mm           |
| STAINLESS                                                 | 18                            | 40 mm           | 25                         | 65 mm           |
| HFE                                                       | 15                            | 25 mm           | 20                         | 40 mm           |

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- Low noise generation in high speed drives
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- Widely used in automatic doors
- The special profile allows smooth running properties
- Double sided tooth available (on request for special cords)



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 20     | 30      | 50      | 85      | 100     |
|------------------------|-----------------|--------|--------|--------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 1470   | 2210   | 3190   | 4660    | 8580    | 14700   | 17400   |
| Breaking load          | $F_{Br}$ [N]    | 5700   | 8550   | 12350  | 18050   | 33250   | 57000   | 67450   |
| Specific spring rate   | $C_{spez}$ [N]  | 367500 | 552500 | 797500 | 1165000 | 2145000 | 3675000 | 4350000 |
| Weight                 | [kg/m]          | 0,07   | 0,10   | 0,13   | 0,20    | 0,33    | 0,56    | 0,66    |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 15   | 20    | 30    | 50    | 85    | 100    |
|----------------------|-----------------|------|------|-------|-------|-------|-------|--------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 1320 | 1980 | 2860  | 4180  | 7700  | 13200 | 15620  |
|                      | $F_{Br}$ [N]    | 6000 | 9000 | 13000 | 19000 | 35000 | 60000 | 71000  |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 1080 | 1620 | 2340  | 3420  | 6300  | 10800 | 12780  |
|                      | $F_{Br}$ [N]    | 4500 | 6750 | 9750  | 14250 | 26250 | 45000 | 53250  |
| HPL High Performance | $F_{Tzul}$ [N]  | -    | -    | 5280  | 8160  | 14400 | 24480 | 29280  |
|                      | $F_{Br}$ [N]    | -    | -    | 19250 | 29750 | 52500 | 89250 | 106750 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 74,10 | 73,05 | 72,06 | 71,13 | 70,26 | 69,43 | 65,98 | 62,11 | 59,43 | 57,08 | 55,02 | 53,18 | 51,53 | 50,03 | 48,66 | 47,39 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 46,22 | 45,12 | 44,10 | 43,70 | 43,13 | 42,22 | 41,36 | 40,54 | 39,76 | 39,02 | 37,62 | 36,34 | 35,15 | 34,04 | 33,00 | 32,02 |

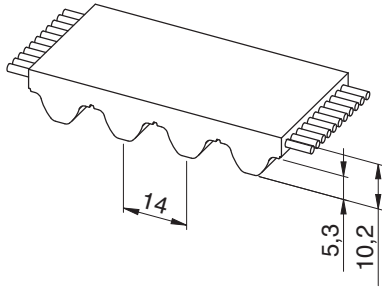
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 31,10 | 30,23 | 29,40 | 28,61 | 26,79 | 25,14 | 23,65 | 22,28 | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 18                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HPL                                                       | 30                            | 80 mm           | 30                         | 150 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane timing belt with involute tooth, high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- Low noise generation in high speed drives
- Tension cords with increased tensile load for lower elongation
- Superior performance in lifting applications
- The special profile allows smooth running properties

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 40      | 55      | 85      | 115     |
|------------------------|-----------------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 12750   | 17850   | 28050   | 39100   |
| Breaking load          | $F_{Br}$ [N]    | 48000   | 67200   | 105600  | 147200  |
| Specific spring rate   | $C_{spez}$ [N]  | 3187500 | 4462500 | 7012500 | 9775000 |
| Weight                 | [kg/m]          | 0,50    | 0,70    | 1,08    | 1,48    |

Other widths are available on request

### Specialties

| Belt width b [mm] |                 | 40    | 55    | 85    | 115    |
|-------------------|-----------------|-------|-------|-------|--------|
| ARAMID CORD       | $F_{Tzul}$ [N]* | 11250 | 15750 | 24750 | 34500  |
|                   | $F_{Br}$ [N]    | 45000 | 63000 | 99000 | 138000 |

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 134,00 | 131,31 | 128,83 | 126,53 | 124,42 | 122,46 | 114,77 | 109,29 | 104,19 | 99,65 | 95,64 | 92,04 | 88,80 | 85,85 | 83,14 | 80,63 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 78,31 | 76,14 | 74,11 | 73,33 | 72,19 | 70,38 | 68,67 | 67,04 | 65,49 | 64,01 | 61,23 | 58,68 | 56,30 | 54,09 | 52,01 | 50,06 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 48,22 | 46,48 | 44,82 | 43,24 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

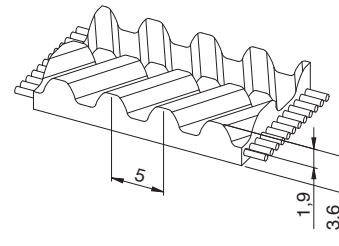
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 32                            | 140 mm          | 32                         | 250 mm          |
| ARAMID                                                    | 28                            | 120 mm          | 28                         | 150 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 5 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- The special profile allows most compact drive
- Black colour and black fabric on tooth side (PAZ) as standard



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 12,5   | 25     |
|------------------------|-----------------|--------|--------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 1150   | 2530   |
| Breaking load          | $F_{Br}$ [N]    | 4200   | 9240   |
| Specific spring rate   | $C_{spez}$ [N]  | 287500 | 632500 |
| Weight                 | [kg/m]          | 0,06   | 0,12   |

Other widths are available on request

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 37,80 | 37,25 | 36,75 | 36,30 | 35,89 | 35,52 | 34,13 | 32,87 | 32,10 | 31,31 | 30,56 | 29,86 | 29,21 | 28,61 | 28,05 | 27,52 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 27,03 | 26,56 | 26,13 | 25,96 | 25,71 | 25,32 | 24,94 | 24,58 | 24,24 | 23,91 | 23,30 | 22,72 | 22,19 | 21,69 | 21,23 | 20,78 |

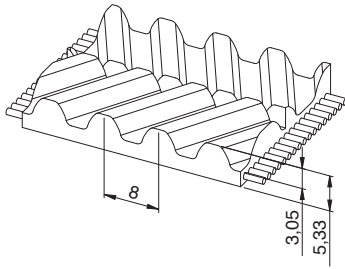
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 20,37 | 19,97 | 19,59 | 19,23 | 18,40 | 17,64 | 16,95 | 16,32 | 15,74 | 15,19 | 14,68 | 14,20 | 13,75 | 13,33 | 12,92 | 12,53 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 16                            | 30 mm           | 25                         | 60 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,8$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,8$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,3$  [mm]

## BELT CHARACTERISTICS

- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 8 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 16     | 25      | 32      | 50      |
|------------------------|-----------------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 2450   | 4170    | 5390    | 8580    |
| Breaking load          | $F_{Br}$ [N]    | 9500   | 16150   | 20900   | 33250   |
| Specific spring rate   | $C_{spez}$ [N]  | 612500 | 1042500 | 1347500 | 2145000 |
| Weight                 | [kg/m]          | 0,085  | 0,145   | 0,180   | 0,300   |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 16    | 25    | 32    | 50    |
|----------------------|-----------------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 2200  | 3740  | 4840  | 7700  |
|                      | $F_{Br}$ [N]    | 10000 | 17000 | 22000 | 35000 |
| STAINLESS STEEL      | $F_{Tzul}$ [N]* | 1800  | 3060  | 3960  | 6300  |
|                      | $F_{Br}$ [N]    | 7500  | 12750 | 16500 | 26250 |
| HPL High Performance | $F_{Tzul}$ [N]  | 3840  | 6720  | 8640  | 14400 |
|                      | $F_{Br}$ [N]    | 14000 | 24500 | 31500 | 52500 |

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 85,00 | 83,78 | 82,62 | 81,49 | 80,42 | 79,38 | 74,78 | 71,01 | 67,93 | 65,52 | 63,36 | 61,42 | 59,66 | 58,05 | 56,58 | 55,22 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 53,95 | 52,77 | 51,66 | 51,23 | 50,61 | 49,62 | 48,69 | 47,80 | 46,95 | 46,14 | 44,62 | 43,22 | 41,91 | 40,70 | 39,56 | 38,49 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 37,48 | 36,52 | 35,61 | 34,75 | 32,75 | 30,94 | 29,30 | 27,79 | 26,40 | 25,11 | 23,90 | 22,77 | 21,70 | 20,69 | 19,73 | 18,82 |

### Flexibility

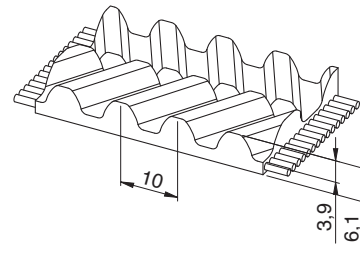
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 20                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 20                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HPL                                                       | 30                            | 80 mm           | 30                         | 150 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 10 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning and medium power transmission applications
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,8 [mm]   |
| LENGTH TOLERANCE:    | ±0,8 [mm/m] |
| THICKNESS TOLERANCE: | ±0,3 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 25      | 32      | 50      | 75      | 100     |
|------------------------|-----------------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 6720    | 8640    | 14400   | 21120   | 28800   |
| Breaking load          | $F_{Br}$ [N]    | 24500   | 31500   | 52500   | 77000   | 105000  |
| Specific spring rate   | $C_{spez}$ [N]  | 1680000 | 2160000 | 3600000 | 5280000 | 7200000 |
| Weight                 | [kg/m]          | 0,18    | 0,23    | 0,37    | 0,54    | 0,74    |

Other widths are available on request

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 93,50 | 92,03 | 90,63 | 89,28 | 88,00 | 86,77 | 81,36 | 77,02 | 73,54 | 70,76 | 68,43 | 66,33 | 64,43 | 62,70 | 61,11 | 59,63 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 58,27 | 56,99 | 55,79 | 55,33 | 54,66 | 53,59 | 52,58 | 51,62 | 50,70 | 49,83 | 48,19 | 46,67 | 45,27 | 43,96 | 42,73 | 41,57 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 40,48 | 39,45 | 38,46 | 37,53 | 35,37 | 33,42 | 31,65 | 30,02 | 28,51 | 27,12 | 25,81 | 24,59 | 23,43 | 22,34 | 21,31 | 20,33 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 25                            | 80 mm           | 25                         | 150 mm          |

### Elatech® V Joined informations

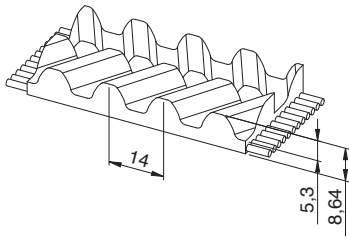
Allowable tensile load of joined belt is 50% of M - open end [\*]





# EAGLE14M

Elatech® M and V



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,2$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,8$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## BELT CHARACTERISTICS

- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 14 mm
- **Extremely reduced noise generation**
- Offers excellent operational reliability in linear positioning, heavy power transmission and lifting applications
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 35      | 52,5    | 70      | 105     |
|------------------------|-----------------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 11900   | 17000   | 23800   | 35700   |
| Breaking load          | $F_{Br}$ [N]    | 44800   | 64000   | 89600   | 134400  |
| Specific spring rate   | $C_{spez}$ [N]  | 2975000 | 4250000 | 5950000 | 8925000 |
| Weight                 | [kg/m]          | 0,40    | 0,60    | 0,80    | 1,20    |

Other widths are available on request

### Specialties

| Belt width b [mm]                    |                | 35    | 52,5  | 70     | 105    |
|--------------------------------------|----------------|-------|-------|--------|--------|
| HPF High flexibility and performance | $F_{Tzul}$ [N] | 14000 | 20000 | 28000  | 42000  |
|                                      | $F_{Br}$ [N]   | 56000 | 80000 | 112000 | 168000 |

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 160,00 | 157,00 | 154,22 | 151,64 | 149,24 | 147,01 | 138,04 | 129,87 | 123,12 | 117,24 | 112,07 | 107,48 | 103,35 | 99,60 | 96,17 | 93,01 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 90,08 | 87,35 | 84,80 | 83,82 | 82,39 | 80,12 | 77,97 | 75,93 | 73,99 | 72,13 | 68,66 | 65,46 | 62,50 | 59,73 | 57,15 | 54,71 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 52,42 | 50,24 | 48,18 | 46,21 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

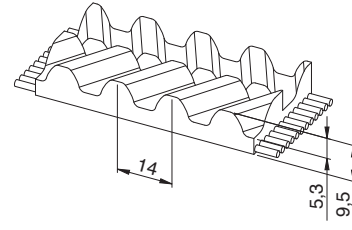
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 32                            | 140 mm          | 32                         | 200 mm          |
| HPF                                                       | 30                            | 130 mm          | 30                         | 180 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity.
- **Self tracking no need of pulley flanges**
- Metric pitch 14 mm
- **Extremely reduced noise generation**
- **E14M - XHPL is the ideal belt for heavy duty synchronous lifting applications.**
- The special profile allows most compact drive
- White colour and grey fabric on tooth side (PAZ) as standard



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±1,2 [mm]   |
| LENGTH TOLERANCE:    | ±1,0 [mm/m] |
| THICKNESS TOLERANCE: | ±0,5 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 35      | 52,5    |
|------------------------|----------------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N] | 16000   | 28000   |
| Breaking load          | $F_{Br}$ [N]   | 56000   | 98000   |
| Specific spring rate   | $C_{spez}$ [N] | 4000000 | 7000000 |
| Weight                 | [kg/m]         | 0,50    | 0,70    |

Other widths are available on request

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 160,00 | 157,00 | 154,22 | 151,64 | 149,24 | 147,01 | 138,04 | 129,87 | 123,12 | 117,24 | 112,07 | 107,48 | 103,35 | 99,60 | 96,17 | 93,01 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 90,08 | 87,35 | 84,80 | 83,82 | 82,39 | 80,12 | 77,97 | 75,93 | 73,99 | 72,13 | 68,66 | 65,46 | 62,50 | 59,73 | 57,15 | 54,71 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 52,42 | 50,24 | 48,18 | 46,21 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                 | <br>Drive with reverse bending |                 |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------|-----------------|
|                                                           | $z_{min}$                                                                                                            | idler $d_{min}$ | $z_{min}$                                                                                                         | idler $d_{min}$ |
| STANDARD                                                  | 34                                                                                                                   | 140 mm          | 34                                                                                                                | 200 mm          |

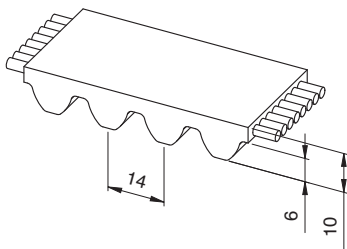
### Note

Special pulley profile required.  
Contact Elatech® technical dept. for details.



# PG14M

Elatech® M and V



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## BELT CHARACTERISTICS

- Polyurethane timing belt with curvilinear tooth profile and high tensile load steel cords
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- Offers excellent operational reliability heavy lifting applications
- The special profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Black colour and black fabric on tooth side (PAZ) as standard

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 50      | 100      | 150      | 180      |
|------------------------|----------------|---------|----------|----------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 32000   | 64000    | 96000    | 114000   |
| Breaking load          | $F_{Br}$ [N]   | 112000  | 224000   | 336000   | 399000   |
| Specific spring rate   | $C_{spez}$ [N] | 8000000 | 16000000 | 24000000 | 28500000 |
| Weight                 | [kg/m]         | 0,74    | 1,50     | 2,25     | 2,70     |

Other widths are available on request

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900   | 1000  | 1100  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 156,00 | 153,23 | 150,68 | 148,32 | 146,14 | 144,13 | 131,72 | 125,15 | 119,02 | 113,59 | 108,76 | 104,45 | 100,56 | 97,01 | 93,76 | 90,76 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 87,97 | 85,37 | 82,93 | 81,99 | 80,63 | 78,46 | 76,40 | 74,45 | 72,59 | 70,81 | 67,48 | 64,41 | 61,56 | 58,91 | 56,42 | 54,08 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 51,86 | 49,77 | 47,78 | 45,89 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

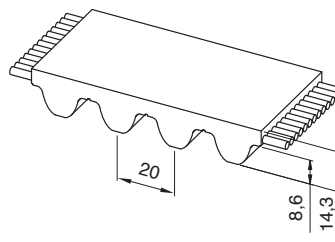
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 34                            | 140 mm          | 34                         | 250 mm          |

### Note

Special pulley profile required.  
 Contact Elatech® technical dept. for details.

## BELT CHARACTERISTICS

- Polyurethane timing belt with curvilinear tooth profile and high tensile load steel cords
- Metric pitch 20 mm
- Offers excellent operational reliability heavy lifting applications
- The special profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- Black colour and black fabric on tooth side (PAZ) as standard



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±1,0 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,4 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 50       | 100      | 150      | 180      |
|------------------------|----------------|----------|----------|----------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 40000    | 80000    | 120000   | 142500   |
| Breaking load          | $F_{Br}$ [N]   | 152000   | 304000   | 456000   | 541500   |
| Specific spring rate   | $C_{spez}$ [N] | 10000000 | 20000000 | 30000000 | 35625000 |
| Weight                 | [kg/m]         | 1,05     | 2,03     | 3,04     | 3,65     |

Other widths are available on request

### Tooth shear strength

| rpm                | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $F_{Uspez}$ [N/cm] | 212,00 | 208,03 | 204,29 | 200,76 | 197,45 | 194,32 | 181,23 | 171,22 | 162,37 | 154,65 | 147,88 | 141,85 | 136,44 | 131,53 | 127,04 | 122,90 |

| rpm                | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900  | 2000  | 2200  | 2400  | 2600 | 2800  | 3000  | 3200  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 119,06 | 115,48 | 112,12 | 110,84 | 108,97 | 106,00 | 103,18 | 100,50 | 97,96 | 95,53 | 90,98 | 86,79 | 82,9 | 79,28 | 75,89 | 72,70 |

| rpm                | 3400  | 3600  | 3800  | 4000  | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 69,69 | 66,84 | 64,14 | 61,56 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 30                            | 190 mm          | 34                         | 280 mm          |

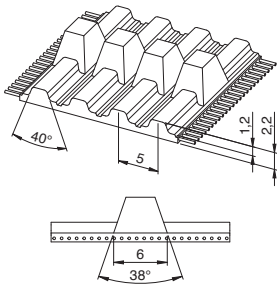
### Note

Special pulley profile required.  
Contact Elatech® technical dept. for details.



# TK5 K6

Elatech® M and V



## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T5 with central guide - K6 x 4 mm (+0/-1)
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

### STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]  
 LENGTH TOLERANCE: ±0,5 [mm/m]  
 THICKNESS TOLERANCE: ±0,2 [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                        | 32     | 50     | 75     | 100    |
|------------------------|------------------------|--------|--------|--------|--------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 1150   | 1860   | 2820   | 3780   |
| Breaking load          | F <sub>Br</sub> [N]    | 4500   | 7250   | 11000  | 14750  |
| Specific spring rate   | C <sub>spez</sub> [N]  | 287500 | 465000 | 705000 | 945000 |
| Weight                 | [kg/m]                 | 0,080  | 0,130  | 0,200  | 0,260  |

Other widths are available on request

### Specialties

| Belt width b [mm] |                        | 32    | 50    | 75    | 100   |
|-------------------|------------------------|-------|-------|-------|-------|
| ARAMID CORD       | F <sub>Tzul</sub> [N]* | 2520  | 4060  | 6160  | 8260  |
|                   | F <sub>Br</sub> [N]    | 10080 | 16240 | 24640 | 33040 |

## Flexibility

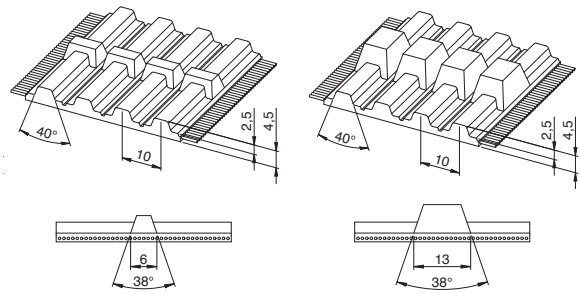
| Minimum pulley number of teeth and minimum idler diameter |          | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|----------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           |          | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | Guide K6 | 14                            | 40 mm                  | 15                         | 50 mm                  |
| ARAMID                                                    | Guide K6 | 14                            | 40 mm                  | 15                         | 50 mm                  |

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T10 with central guide - K13 x 6,5 mm (+0/-1)
- Profile T10 with central guide - K6 x 4,0 mm (+0/-1)
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 32     | 50      | 75      | 100     | 150     |
|------------------------|-----------------|--------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 3450   | 5520    | 8400    | 11270   | 17020   |
| Breaking load          | $F_{Br}$ [N]    | 12600  | 20160   | 30660   | 41160   | 62160   |
| Specific spring rate   | $C_{spez}$ [N]  | 862500 | 1380000 | 2100000 | 2817500 | 4255000 |
| Weight                 | [kg/m]          | 0,220  | 0,300   | 0,410   | 0,530   | 0,850   |

Other widths are available on request

### Specialties

| Belt width b [mm] |                 | 32    | 50    | 75    | 100   | 150   |
|-------------------|-----------------|-------|-------|-------|-------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N]* | 3300  | 5280  | 8030  | 10780 | 16280 |
|                   | $F_{Br}$ [N]    | 13500 | 21600 | 32850 | 44100 | 66600 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter |           | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-----------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           |           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | Guide K6  | 14                            | 60 mm           | 20                         | 60 mm           |
|                                                           | Guide K13 | 16                            | 80 mm           | 20                         | 60 mm           |
| ARAMID                                                    | Guide K6  | 14                            | 60 mm           | 20                         | 60 mm           |
|                                                           | Guide K13 | 16                            | 80 mm           | 20                         | 60 mm           |

### Elatech® V Joined informations

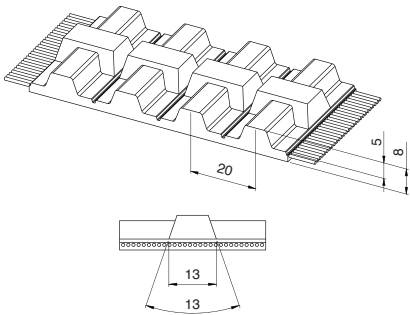
Allowable tensile load of joined belt is 50% of M - open end [\*]





# TK20 K13

Elatech® M and V



## STANDARD TOLERANCES

WIDTH TOLERANCE: ±1,0 [mm]  
 LENGTH TOLERANCE: ±0,5 [mm/m]  
 THICKNESS TOLERANCE: ±0,4 [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 32      | 50      |
|------------------------|----------------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N] | 5390    | 8580    |
| Breaking load          | $F_{Br}$ [N]   | 20900   | 33250   |
| Specific spring rate   | $C_{spez}$ [N] | 1347500 | 2145000 |
| Weight                 | [kg/m]         | 0,29    | 0,45    |

Other widths are available on request

## BELT CHARACTERISTICS

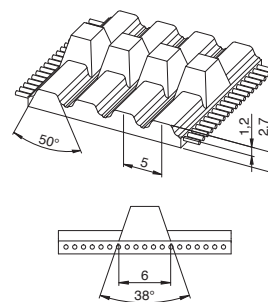
- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile T20 with central guide K13 x 6,5 mm (+0/-1)
- Ideal for drives where high belt flexibility is requested
- Widely used for conveying, linear drive and heavy power transmission applications
- Double sided tooth construction available

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                 | <br>Drive with reverse bending |                 |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------|-----------------|
|                                                           | $z_{min}$                                                                                                            | idler $d_{min}$ | $z_{min}$                                                                                                         | idler $d_{min}$ |
| STANDARD                                                  | 20                                                                                                                   | 120 mm          | 25                                                                                                                | 180 mm          |

## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile AT5 with central guide - K6 x 4 mm (+0/-1)
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product



### STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 32     | 50      | 75      | 100     |
|------------------------|-----------------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 3450   | 5520    | 8400    | 11270   |
| Breaking load          | $F_{Br}$ [N]    | 12600  | 20160   | 30660   | 41160   |
| Specific spring rate   | $C_{spez}$ [N]  | 862500 | 1380000 | 2100000 | 2817500 |
| Weight                 | [kg/m]          | 0,11   | 0,19    | 0,29    | 0,38    |

Other widths are available on request

### Specialties

| Belt width b [mm] |                 | 32    | 50    | 75    | 100   |
|-------------------|-----------------|-------|-------|-------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N]* | 3300  | 5280  | 8030  | 10780 |
|                   | $F_{Br}$ [N]    | 13500 | 21600 | 32850 | 44100 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter |          | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|----------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           |          | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | Guide K6 | 15                            | 60 mm           | 25                         | 80 mm           |
| ARAMID                                                    | Guide K6 | 15                            | 60 mm           | 25                         | 80 mm           |

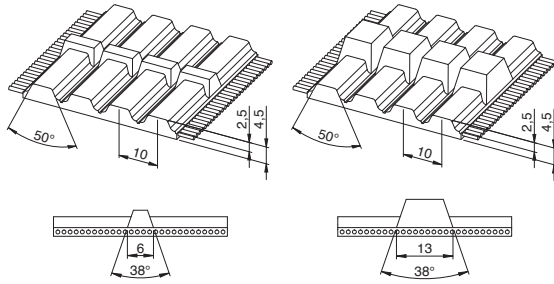
### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



# ATK10 K6 - K13

Elatech® M and V



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile AT10 with central guide - K13 x 6,5 mm (+0/-1)
- Profile AT10 with central guide - K6 x 4 mm (+0/-1)
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 32      | 50      | 75      | 100     | 150     |
|------------------------|-----------------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 5390    | 8580    | 12990   | 17400   | 26220   |
| Breaking load          | $F_{Br}$ [N]    | 20900   | 33250   | 50350   | 67450   | 101650  |
| Specific spring rate   | $C_{spez}$ [N]  | 1347500 | 2145000 | 3247500 | 4350000 | 6555000 |
| Weight                 | [kg/m]          | 0,27    | 0,36    | 0,50    | 0,72    | 1,08    |

Other widths are available on request

### Specialties

| Belt width b [mm] |                 | 32    | 50    | 75    | 100   | 150    |
|-------------------|-----------------|-------|-------|-------|-------|--------|
| ARAMID CORD       | $F_{Tzul}$ [N]* | 4840  | 7700  | 11660 | 15620 | 23540  |
|                   | $F_{Br}$ [N]    | 22000 | 35000 | 53000 | 71000 | 107000 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter |           | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-----------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           |           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | Guide K6  | 15                            | 50 mm           | 25                         | 120 mm          |
|                                                           | Guide K13 | 20                            | 50 mm           | 25                         | 120 mm          |
| ARAMID                                                    | Guide K6  | 15                            | 50 mm           | 20                         | 120 mm          |
|                                                           | Guide K13 | 20                            | 50 mm           | 20                         | 120 mm          |

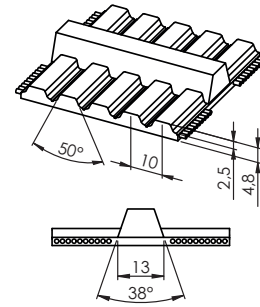
### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

Timing pulleys → page 199

## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with HPL steel tension cords
- Tooth profile according to ISO 17396
- Profile AT10 with central guide - K13 x 8 mm (+0/-1)
- Self tracking no need of pulley flanges
- Metric pitch 10 mm



### STANDARD TOLERANCES

- WIDTH TOLERANCE: ±0,5 [mm]  
 LENGTH TOLERANCE: ±0,2 [mm/m]  
 THICKNESS TOLERANCE: ±0,2 [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 50      |
|------------------------|-----------------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 9600    |
| Breaking load          | $F_{Br}$ [N]    | 35000   |
| Specific spring rate   | $C_{spez}$ [N]  | 2400000 |
| Weight                 | [kg/m]          | 0,40    |

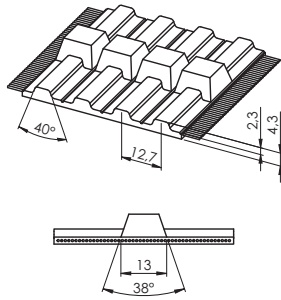
Other widths are available on request

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 30                            | 95 mm           | 30                         | 180 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Profile H with central guide - K13 x 6,5 mm (+0/-1)
- Self tracking no need of pulley flanges
- Imperial pitch 1/2" = 12,7 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)

## STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]  
 LENGTH TOLERANCE: ±0,5 [mm/m]  
 THICKNESS TOLERANCE: ±0,2 [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm] |                 | 1,00 / 25,4 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 |
|--------------------------|-----------------|-------------|-------------|-------------|--------------|--------------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 2760        | 5640        | 8510        | 11390        | 17370        |
| Breaking load            | $F_{Br}$ [N]    | 10080       | 20580       | 31080       | 41580        | 63420        |
| Specific spring rate     | $C_{spez}$ [N]  | 690000      | 1410000     | 2127500     | 2847500      | 4342500      |
| Weight                   | [kg/m]          | 0,16        | 0,30        | 0,38        | 0,51         | 0,70         |

Other widths are available on request

## Flexibility

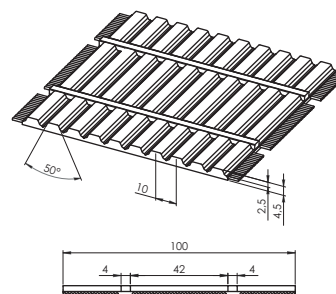
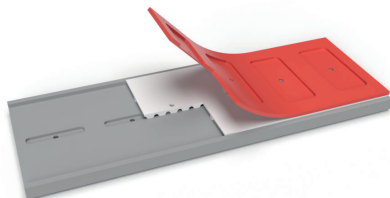
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 20                            | 80 mm           | 22                         | 160 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt available only with aramid tension cords
- Tooth profile according to ISO 17396
- Self tracking no need of pulley flanges
- Metric pitch 10 mm
- Allow to use small diameter pulley
- Grey fabric on tooth side (PAZ) as standard



### STANDARD TOLERANCES

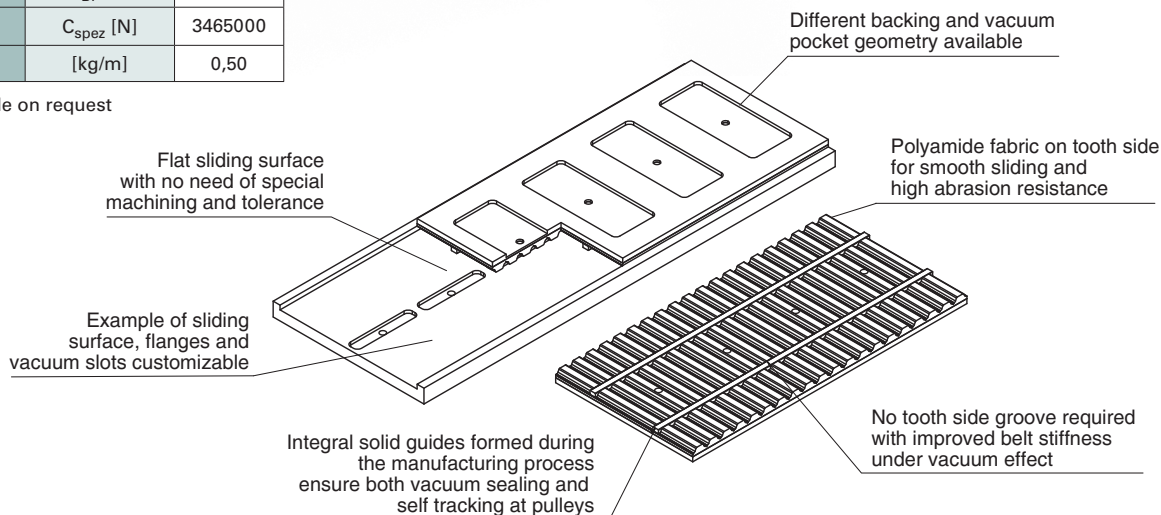
WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard aramid cord

| Belt width b [mm]      |                 | 100     |
|------------------------|-----------------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 13860   |
| Breaking load          | $F_{Br}$ [N]    | 63000   |
| Specific spring rate   | $C_{spez}$ [N]  | 3465000 |
| Weight                 | [kg/m]          | 0,50    |

Other widths are available on request



### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 81,48 | 80,10 | 78,80 | 77,60 | 76,48 | 75,43 | 71,17 | 69,09 | 66,23 | 63,73 | 61,53 | 59,57 | 57,80 | 56,20 | 54,73 | 53,38 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 52,12 | 50,95 | 49,86 | 49,44 | 48,83 | 47,85 | 46,93 | 46,06 | 45,22 | 44,43 | 42,94 | 41,56 | 40,29 | 39,10 | 37,99 | 36,95 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 35,96 | 35,03 | 34,14 | 33,29 | 31,34 | 29,59 | 27,99 | 26,53 | 25,17 | 23,92 | 22,74 | 21,64 | 20,60 | 19,63 | 18,70 | 17,81 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| ARAMID                                                    | 17                            | 50 mm           | 25                         | 120 mm          |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

### Note

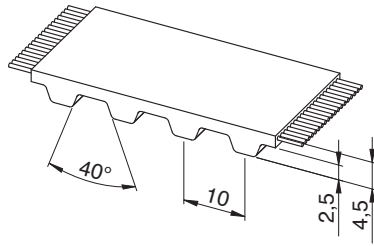
Special pulley profile required.  
Contact Elatech® technical dept. for details.





**T10**

**TOTAL PROTECTION - Elatech® M and V**



### BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- **TP (Total Protection) belt.** The absence of tooth gap makes the belt cords protected against corrosion
- **Widely used in applications with corrosive environment, high humidity**
- Light blue colour available on request

### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]      |                 | 10     | 16     | 25     | 32     | 50      | 75      | 100     |
|------------------------|-----------------|--------|--------|--------|--------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 920    | 1610   | 2650   | 3450   | 5520    | 8400    | 11270   |
| Breaking load          | $F_{Br}$ [N]    | 3360   | 5880   | 9660   | 12600  | 20160   | 30660   | 41160   |
| Specific spring rate   | $C_{spez}$ [N]  | 230000 | 402500 | 662500 | 862500 | 1380000 | 2100000 | 2817500 |
| Weight                 | [kg/m]          | 0,05   | 0,07   | 0,11   | 0,15   | 0,23    | 0,34    | 0,45    |

Other widths are available on request

#### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 51,80 | 50,32 | 49,04 | 47,92 | 46,95 | 46,11 | 42,75 | 40,28 | 38,36 | 36,80 | 35,49 | 34,35 | 33,34 | 32,44 | 31,63 | 30,89 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 30,21 | 29,58 | 28,99 | 28,76 | 28,44 | 27,92 | 27,43 | 26,97 | 26,53 | 26,12 | 25,34 | 24,63 | 23,97 | 23,36 | 22,78 | 22,25 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 21,74 | 21,27 | 20,81 | 20,39 | 19,40 | 18,51 | 17,70 | 16,97 | 16,29 | 15,66 | 15,07 | 14,52 | 14,00 | 13,51 | 13,05 | 12,61 |

#### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 12                            | 60 mm           | 20                         | 60 mm           |

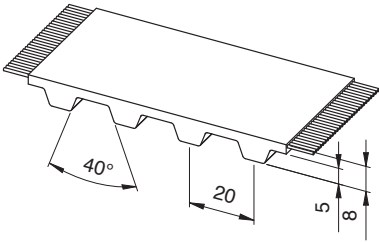
#### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- **TP (Total Protection) belt. The absence of tooth gap makes the belt cords protected against corrosion**
- **Widely used in applications with corrosive environment, high humidity**



**STANDARD TOLERANCES**  
WIDTH TOLERANCE: ±0,5 [mm]  
LENGTH TOLERANCE: ±0,5 [mm/m]  
THICKNESS TOLERANCE: ±0,2 [mm]

TECHNICAL DATA

Standard steel cord

| Belt width b [mm]      |                        | 50      | 100     |
|------------------------|------------------------|---------|---------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 8580    | 17400   |
| Breaking load          | F <sub>Br</sub> [N]    | 33250   | 67450   |
| Specific spring rate   | C <sub>spez</sub> [N]  | 2145000 | 4350000 |
| Weight                 | [kg/m]                 | 0,41    | 0,82    |

Other widths are available on request

Tooth shear strength

| rpm                       | 0      | 20     | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|---------------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 104,50 | 101,10 | 98,15 | 95,58 | 93,35 | 91,41 | 83,50 | 77,84 | 73,49 | 69,96 | 66,98 | 64,41 | 62,15 | 60,13 | 58,31 | 56,64 |

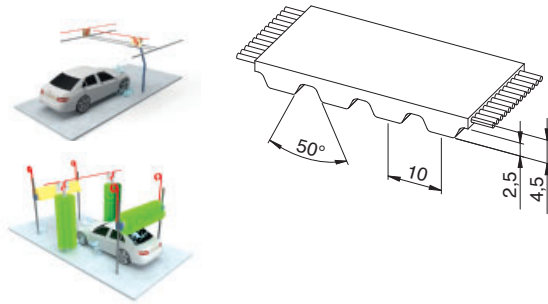
| rpm                       | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| F <sub>Uspez</sub> [N/cm] | 55,11 | 53,70 | 52,38 | 51,87 | 51,14 | 49,98 | 48,89 | 47,86 | 46,88 | 45,94 | 44,20 | 42,61 | 41,13 | 39,77 | 38,49 | 37,29 |

| rpm                       | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | - | - | - | - | - | - | - |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|
| F <sub>Uspez</sub> [N/cm] | 36,16 | 35,10 | 34,09 | 33,13 | 30,92 | 28,93 | 27,14 | 25,49 | 23,97 | - | - | - | - | - | - | - |

Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 15                            | 120 mm                 | 25                         | 120 mm                 |

**Elatech® V Joined informations**  
Allowable tensile load of joined belt is 50% of M - open end [\*]



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 LENGTH TOLERANCE:  $\pm 0,5$  [mm/m]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## BELT CHARACTERISTICS

- Polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced drive vibration
- **TP (Total Protection) belt. The absence of tooth gap makes the belt cords protected against corrosion**
- **Widely used in applications with corrosive environment, high humidity**
- Light blue colour available on request

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 16     | 25      | 32      | 50      | 75      | 100     | 120     |
|------------------------|-----------------|--------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 2450   | 4170    | 5390    | 8580    | 12990   | 17400   | 20830   |
| Breaking load          | $F_{Br}$ [N]    | 9500   | 16150   | 20900   | 33250   | 50350   | 67450   | 80750   |
| Specific spring rate   | $C_{spez}$ [N]  | 612500 | 1042500 | 1347500 | 2145000 | 3247500 | 4350000 | 5207500 |
| Weight                 | [kg/m]          | 0,09   | 0,15    | 0,19    | 0,30    | 0,44    | 0,59    | 0,71    |

Other widths are available on request

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 88,57 | 87,06 | 85,66 | 84,35 | 83,13 | 81,99 | 77,36 | 75,09 | 71,99 | 69,27 | 66,88 | 64,75 | 62,83 | 61,09 | 59,49 | 58,02 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 56,66 | 55,39 | 54,20 | 53,74 | 53,08 | 52,02 | 51,02 | 50,06 | 49,16 | 48,29 | 46,67 | 45,18 | 43,80 | 42,51 | 41,30 | 40,17 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 39,09 | 38,08 | 37,11 | 36,20 | 34,08 | 32,17 | 30,43 | 28,84 | 27,37 | 26,01 | 24,73 | 23,53 | 22,41 | 21,34 | 20,33 | 19,37 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 50 mm           | 25                         | 120 mm          |

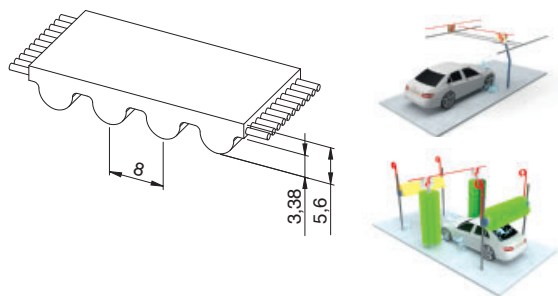
### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



### BELT CHARACTERISTICS

- Polyurethane timing belt with round tooth profile and high tensile load tension cords.
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performances, high transmissible torque and precise tooth engagement
- **TP (Total Protection) belt. The absence of tooth gap makes the belt protected against corrosion**
- **Widely used in applications with corrosive environment**
- Light blue colour available on request



#### STANDARD TOLERANCES

- WIDTH TOLERANCE: ±0,5 [mm]  
LENGTH TOLERANCE: ±0,5 [mm/m]  
THICKNESS TOLERANCE: ±0,2 [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 20     | 30      | 50      | 85      | 100     |
|------------------------|-----------------|--------|--------|--------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 1470   | 2210   | 3190   | 4660    | 8580    | 14700   | 17400   |
| Breaking load          | $F_{Br}$ [N]    | 5700   | 8550   | 12350  | 18050   | 33250   | 57000   | 67450   |
| Specific spring rate   | $C_{spez}$ [N]  | 367500 | 552500 | 797500 | 1165000 | 2145000 | 3675000 | 4350000 |
| Weight                 | [kg/m]          | 0,07   | 0,11   | 0,14   | 0,21    | 0,35    | 0,60    | 0,70    |

Other widths are available on request

#### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 74,00 | 72,62 | 71,34 | 70,16 | 69,07 | 68,07 | 64,09 | 61,68 | 59,03 | 56,71 | 54,66 | 52,84 | 51,20 | 49,71 | 48,35 | 47,09 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 45,93 | 44,84 | 43,82 | 43,43 | 42,86 | 41,96 | 41,10 | 40,29 | 39,52 | 38,78 | 37,39 | 36,12 | 34,94 | 33,83 | 32,80 | 31,83 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | - | - | - | - | - | - | - | - |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|---|---|---|---|---|---|
| $F_{Uspez}$ [N/cm] | 30,91 | 30,05 | 29,22 | 28,44 | 26,63 | 25,00 | 23,51 | 22,15 | - | - | - | - | - | - | - | - |

#### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 18                         | 120 mm          |

Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

# ELATECH® flat belts®

ELATECH® flat belt's superior construction makes them the best solution in a wide range of lifting applications. Compared to steel rope they offer proven reliability, highly compact drives, maintenance-free operation and excellent dynamic properties. Compact size and maintenance-free operation allow:

- low inertia, space savings and therefore lower manufacturing cost solutions
- lower power consumption in operation and therefore reduced running costs

In order to optimize the application in load and flexibility, ELATECH® flat belts are produced in a range of different thicknesses and steel cord diameters.

## Pulleys

In some cases it is also possible to use guiding pulleys with a convex barrel shape. In this case we recommend following the specifications of the ISO R22 - DIN 111 norms. The use of the convex barrel pulleys, will result in an uneven force distribution in the belt. Therefore the allowable forces in the belt need to be revised.

## Belt storage

Belts must be stored in a dry environment (max 60% relative humidity) with a temperature from 5 to 35 °C.

## Belt installation

For a correct belt installation it is important that the belt's ends are securely and firmly fastened by the use of the correct belt end attachments. It is also recommended to use a very rigid and accurate assembly with perfectly parallel and rigid shafts. Belts and pulleys must be free from oil and grease and any dust or residual material which may affect the belt integrity during operation. Pulley diameter depends on the type of belt and on the design load required by the application. Our catalogue suggests minimum diameters for use with the maximum allowable load. For an accurate pulley diameter calculation under different load conditions please contact our technical department.

The recommended pulley geometry is cylindrical with side flanges.

Proper design of belt ends is recommended to ensure application safety. Some possible design solutions for belt end clamping are shown here as examples.

ELATECH® flat belts are produced with a polyurethane body ensuring very high wear resistance. Steel tension cords of opposite construction (Z and S) are laid out in pairs to maximize dynamic properties. They provide excellent operational performance with low noise and vibrations and long lifetime.

In applications with more belts acting in parallel it is suggested to use belts from the same manufacturing batch with minimum belt thickness tolerance. The belt drive must be started up only when the entire machine or assembly has the necessary protective systems which meet the machine's safety guidelines. Belts are maintenance free, however, an accurate visual inspection of the belts and end attachments must be taken at least once per year.

## TP (Total Protection) Belts

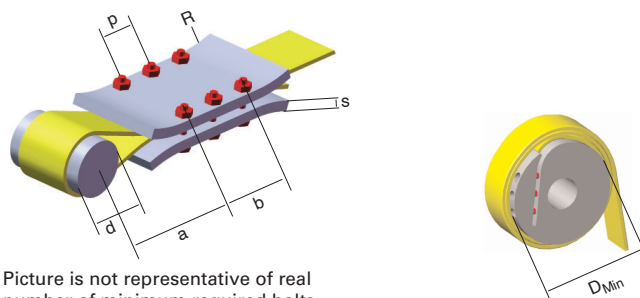
TP flat belts (without tooth gap) are available on demand. Ask our technical department for product specifications.

## Belt life

Due to the wide application range and considering the fact that belts are one component of complex equipment, the loads in the belt itself are very seldom precisely predictable. This fact makes it impossible to confirm a precise belt service life. In order to optimize the belt life, it is important to follow the catalogue technical specifications related to pulley geometry and belt storage and installation. When all the catalogues of specifications are followed, a belt life of 3 million reverse bending cycles occurring over 10 years can be expected. This value was measured in tests under laboratory conditions.

## ELATECH® FLAT belt heavy series

These belts have been developed for the need in the automotive industry. They are used to lift car bodies in production lines or to convey car bodies or finished cars (skid supporting belt). They are made with 85 Sh.A polyurethane body to ensure high grip on the motor pulley and with high performance steel tension member.



Picture is not representative of real number of minimum required bolts.

## Belt fastening guidelines

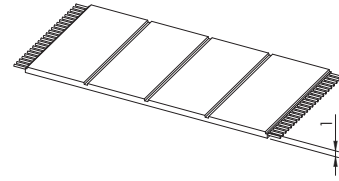
| Belt width b [mm] | F1 | F2 | F2,5 | F3  |
|-------------------|----|----|------|-----|
| a                 | 25 | 45 | 50   | 75  |
| b                 | 40 | 60 | 80   | 125 |
| p                 | 20 | 20 | 20   | 25  |
| s                 | 3  | 5  | 5    | 5   |
| d                 | 15 | 30 | 30   | 50  |
| Bolt              | M5 | M6 | M8   | M8  |
| R (Radius)        | 12 | 12 | 12   | 20  |

| Pulley [mm] | F1 | F2 | F2,5 | F3  |
|-------------|----|----|------|-----|
| Dmin        | 50 | 60 | 80   | 120 |

It's recommended to have at least 2 turns on pulley.

## BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10    | 20     | 30     | 40     | 50     | 100    |
|------------------------|-----------------|-------|--------|--------|--------|--------|--------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 320   | 700    | 1090   | 1470   | 1860   | 3780   |
| Breaking load          | $F_{Br}$ [N]    | 1250  | 2750   | 4250   | 5750   | 7250   | 14750  |
| Specific spring rate   | $C_{spez}$ [N]  | 80000 | 175000 | 272500 | 367500 | 465000 | 945000 |
| Weight                 | [kg/m]          | 0,02  | 0,04   | 0,05   | 0,08   | 0,09   | 0,21   |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                 | 10   | 20   | 30   | 40    | 50    | 100   |
|----------------------|-----------------|------|------|------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N]* | 700  | 1540 | 2380 | 3220  | 4060  | 8260  |
|                      | $F_{Br}$ [N]    | 2800 | 6160 | 9520 | 12880 | 16240 | 33040 |
| HFE High Flexibility | $F_{Tzul}$ [N]* | 360  | 790  | 1225 | 1655  | 2090  | 4250  |
|                      | $F_{Br}$ [N]    | 1500 | 3300 | 5100 | 6900  | 8700  | 17700 |

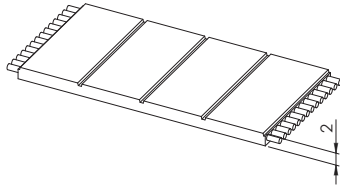
### Flexibility

| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler $d_{min}$               | idler $d_{min}$            |
| STANDARD                | 16 mm                         | 30 mm                      |
| ARAMID                  | 16 mm                         | 30 mm                      |
| HFE                     | 15 mm                         | 15 mm                      |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]





## BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 10     | 15     | 25      | 30      | 50      | 75      | 100     |
|------------------------|-----------------|--------|--------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 1470   | 2210   | 4170    | 4660    | 8580    | 12990   | 17400   |
| Breaking load          | $F_{Br}$ [N]    | 5700   | 8550   | 16150   | 18050   | 33250   | 50350   | 67450   |
| Specific spring rate   | $C_{spez}$ [N]  | 367500 | 552500 | 1042500 | 1165000 | 2145000 | 3247500 | 4350000 |
| Weight                 | [kg/m]          | 0,03   | 0,05   | 0,08    | 0,10    | 0,17    | 0,25    | 0,34    |

Other widths are available on request

### Specialties

| Belt width b [mm] |                 | 10   | 15   | 25    | 30    | 50    | 75    | 100   |
|-------------------|-----------------|------|------|-------|-------|-------|-------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N]* | 1320 | 1980 | 3740  | 4180  | 7700  | 11660 | 15620 |
|                   | $F_{Br}$ [N]    | 6000 | 9000 | 17000 | 19000 | 35000 | 53000 | 71000 |
| STAINLESS STEEL   | $F_{Tzul}$ [N]* | 1080 | 1620 | 3060  | 3420  | 6300  | 9540  | 12780 |
|                   | $F_{Br}$ [N]    | 4500 | 6750 | 12750 | 14250 | 26250 | 39750 | 53250 |

## Flexibility

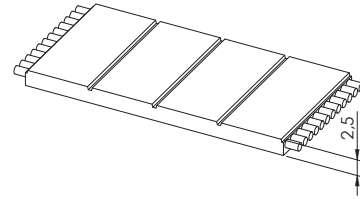
| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler $d_{min}$               | idler $d_{min}$            |
| STANDARD                | 50 mm                         | 100 mm                     |
| ARAMID                  | 50 mm                         | 100 mm                     |
| STAINLESS               | 70 mm                         | 120 mm                     |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                 | 20      | 25      | 50      | 75      | 100     | 120     |
|------------------------|-----------------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 5280    | 6720    | 14400   | 21600   | 29280   | 35040   |
| Breaking load          | $F_{Br}$ [N]    | 19250   | 24500   | 52500   | 78750   | 106750  | 127750  |
| Specific spring rate   | $C_{spez}$ [N]  | 1320000 | 1680000 | 3600000 | 5400000 | 7320000 | 8760000 |
| Weight                 | [kg/m]          | 0,08    | 0,09    | 0,18    | 0,27    | 0,36    | 0,42    |

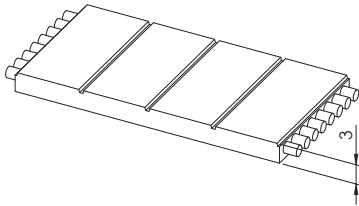
Other widths are available on request

### Flexibility

| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler $d_{min}$               | idler $d_{min}$            |
| STANDARD                | 80 mm                         | 150 mm                     |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



### BELT CHARACTERISTICS

- Polyurethane flat belt with HPL steel tension cords
- It is mainly used in lifting application where there is no need for synchronization
- Allows the use of small diameter pulleys
- Black colour as standard
- Maintenance free
- Reduced thickness tolerance available on request

#### STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]  
THICKNESS TOLERANCE: ±0,2 [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]      |                        | 25      | 30      | 60      | 120      | 150      |
|------------------------|------------------------|---------|---------|---------|----------|----------|
| Allowable tensile load | F <sub>Tzul</sub> [N]* | 8500    | 10200   | 21250   | 43350    | 53550    |
| Breaking load          | F <sub>Br</sub> [N]    | 32000   | 38400   | 80000   | 163200   | 201600   |
| Specific spring rate   | C <sub>spez</sub> [N]  | 2125000 | 2550000 | 5312500 | 10837500 | 13387500 |
| Weight                 | [kg/m]                 | 0,11    | 0,12    | 0,24    | 0,48     | 0,60     |

Other widths are available on request

#### Specialties

| Belt width b [mm] |                        | 25    | 30    | 60     | 120    | 150    |
|-------------------|------------------------|-------|-------|--------|--------|--------|
| ARAMID CORD       | F <sub>Tzul</sub> [N]* | 10000 | 12000 | 25000  | 51000  | 63000  |
|                   | F <sub>Br</sub> [N]    | 40000 | 48000 | 100000 | 204000 | 252000 |

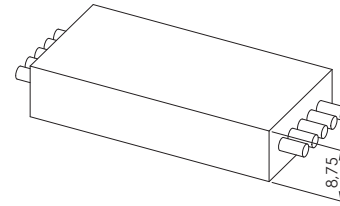
#### Flexibility

| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler d <sub>min</sub>        | idler d <sub>min</sub>     |
| STANDARD                | 120 mm                        | 180 mm                     |
| ARAMID                  | 120 mm                        | 180 m                      |

**Elatech® V Joined informations**  
Allowable tensile load of joined belt is 50% of M - open end [\*]

## BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- Long service life
- Maintenance free
- No cord exposed
- Black colour as standard



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,5$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]      |                | 75      | 150      |
|------------------------|----------------|---------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 27500   | 55000    |
| Breaking load          | $F_{Br}$ [N]   | 112500  | 225000   |
| Specific spring rate   | $C_{spez}$ [N] | 6875000 | 13750000 |
| Weight                 | [kg/m]         | 0,93    | 1,85     |

Other widths are available on request

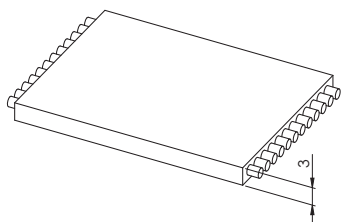
### Specialties

| Belt width b [mm]    |                | 75      | 90       | 150      | 180      |
|----------------------|----------------|---------|----------|----------|----------|
| HPL High Performance | $F_{Tzul}$ [N] | 34000   | 42000    | 72000    | 88000    |
|                      | $F_{Br}$ [N]   | 119000  | 147000   | 252000   | 308000   |
|                      | $C_{spez}$ [N] | 8500000 | 10500000 | 18000000 | 22000000 |
|                      | [kg/m]         | 1,10    | 1,60     | 2,30     | 2,80     |

Other widths are available on request

## Flexibility

| Minimum pulley diameter | Drive without reverse bending [mm] | Drive with reverse bending [mm] |
|-------------------------|------------------------------------|---------------------------------|
|                         | idler $d_{min}$                    | idler $d_{min}$                 |
| STANDARD                | 200                                | 260                             |
| HPL                     | 250                                | 300                             |



## BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords certified according to 2014/33EU
- Long service life
- Black colour as standard
- Maintenance free
- No cord exposed

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,5$  [mm]

## TECHNICAL DATA

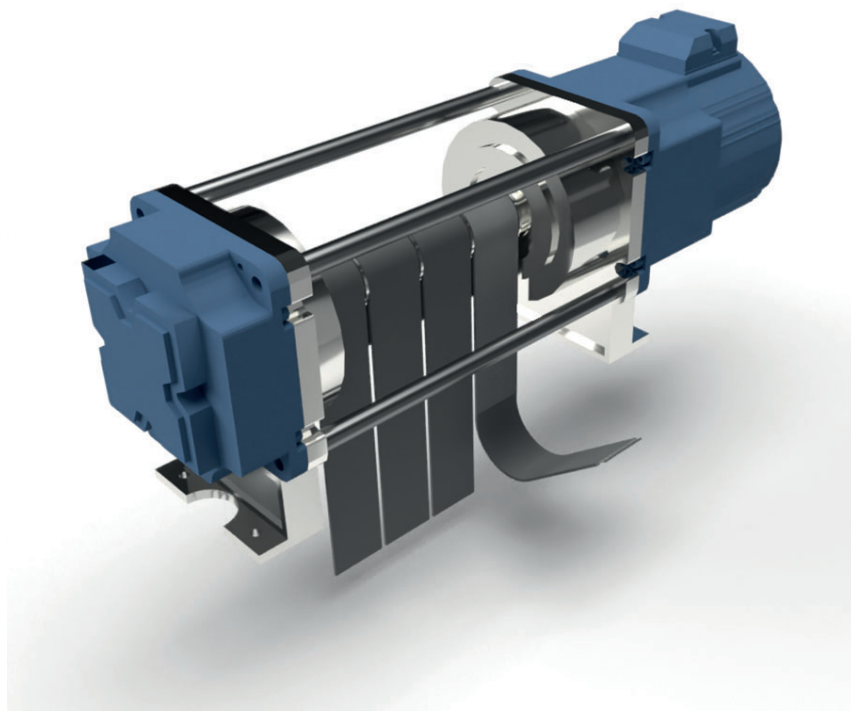
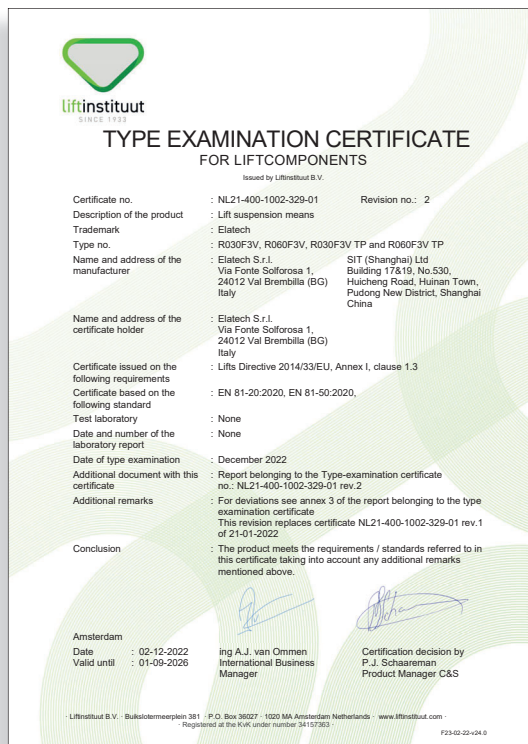
### Standard steel cord

| Belt width b [mm] |              | 30    | 60    |
|-------------------|--------------|-------|-------|
| Breaking load     | $F_{Br}$ [N] | 45000 | 90000 |
| Weight            | [kg/m]       | 0,24  | 0,48  |

Other widths are available on request

### BELTS ADVANTAGES

- Reduced pulley diameter
- Reduced encumbrance in the machine room
- No lubrication
- Low energy consumption
- Low noise level
- Abrasion resistance
- Long life service

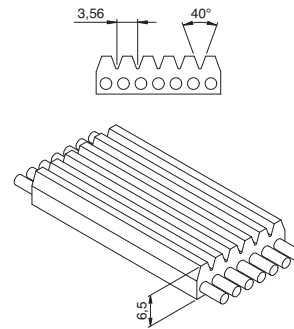


## Flexibility

| Minimum pulley diameter | Drive without reverse bending [mm] |
|-------------------------|------------------------------------|
|                         | idler $d_{min}$                    |
| STANDARD                | 75                                 |

## BELT CHARACTERISTICS

- Polyurethane Poly-V belt with K profile and high tensile load steel cords for high performance and increased flexibility
- The Poly-V profile allows torque high transmission, small pulley diameter
- Low noise generation
- Widely used in lifting applications
- Special cords available on request



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]

THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

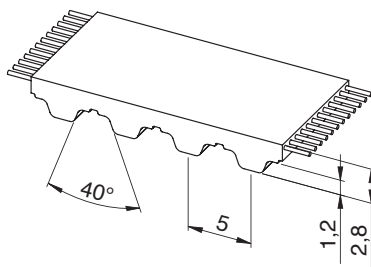
| Belt width b [mm]      |                | 25      | 30      | 75      | 100     | 150      |
|------------------------|----------------|---------|---------|---------|---------|----------|
| Allowable tensile load | $F_{Tzul}$ [N] | 7700    | 9900    | 27500   | 35200   | 55000    |
| Breaking load          | $F_{Br}$ [N]   | 31500   | 40500   | 112500  | 144000  | 225000   |
| Specific spring rate   | $C_{spez}$ [N] | 1925000 | 2475000 | 6875000 | 8800000 | 13750000 |
| Weight                 | [kg/m]         | 0,28    | 0,34    | 0,89    | 1,11    | 1,67     |

Other widths are available on request

### Flexibility

| Minimum pulley diameter | Drive without reverse bending [mm] | Drive with reverse bending [mm] |
|-------------------------|------------------------------------|---------------------------------|
|                         | idler $d_{min}$                    | idler $d_{min}$                 |
| STANDARD                | 150                                | 250                             |





## BELT CHARACTERISTICS

- Trapezoidal tooth profile according to ISO 17396
- Metric pitch 5 mm
- Standard colour: blue with Aramid cords, white with steel cords, other colours available on request
- Polyurethane 88 Sh A

## STANDARD TOLERANCES

|                      |             |
|----------------------|-------------|
| WIDTH TOLERANCE:     | ±0,5 [mm]   |
| LENGTH TOLERANCE:    | ±0,5 [mm/m] |
| THICKNESS TOLERANCE: | ±0,2 [mm]   |

## TECHNICAL DATA

ELATECH® manufactures special TT5 belts which have been expressly designed for application in circular knitting machines drives.

ELATECH® belts TT5 are available in the following executions:

### ELATECH® - V

- A special splicing and welding process offers superior traction load resistance
- They are available both with steel and aramid cords
- Special colours available on demand
- Available in any length tooth by tooth

### ELA-FLEX SD® TRULY ENDLESS

- ELA-flex SD® TT5 have no splice and welding and therefore offer best traction resistance load
- They are available both with steel and aramid cords
- Special colours available on demand
- Available in all lengths tooth by tooth up to a length of 17900 mm

| Cords                  |                 | ARAMID | STEEL |
|------------------------|-----------------|--------|-------|
| Belt width b [mm]      |                 | 10     | 10    |
| Allowable tensile load | $F_{Tzul}$ [N]* | 840    | 320   |
| Breaking load          | $F_{Br}$ [N]    | 3360   | 1250  |
| Weight                 | [kg/m]          | 0,019  | 0,021 |

| Type        | Belt length [mm] | Type         | Belt length [mm] |
|-------------|------------------|--------------|------------------|
| 10TT5/4800K | 4800             | 10TT5/9200K  | 9200             |
| 10TT5/5000K | 5000             | 10TT5/9400K  | 9400             |
| 10TT5/5200K | 5200             | 10TT5/9600K  | 9600             |
| 10TT5/5600K | 5600             | 10TT5/9800K  | 9800             |
| 10TT5/5800K | 5800             | 10TT5/10000K | 10000            |
| 10TT5/6000K | 6000             | 10TT5/10200K | 10200            |
| 10TT5/6200K | 6200             | 10TT5/10300K | 10300            |
| 10TT5/6400K | 6400             | 10TT5/10400K | 10400            |
| 10TT5/6600K | 6600             | 10TT5/10600K | 10600            |
| 10TT5/6800K | 6800             | 10TT5/10800K | 10800            |
| 10TT5/7000K | 7000             | 10TT5/11200K | 11200            |
| 10TT5/7200K | 7200             | 10TT5/11300K | 11300            |
| 10TT5/7400K | 7400             | 10TT5/11800K | 11800            |
| 10TT5/7500K | 7500             | 10TT5/12000K | 12000            |
| 10TT5/7600K | 7600             | 10TT5/12300K | 12300            |
| 10TT5/7800K | 7800             | 10TT5/12700K | 12700            |
| 10TT5/8000K | 8000             | 10TT5/12800K | 12800            |
| 10TT5/8200K | 8200             | 10TT5/13000K | 13000            |
| 10TT5/8300K | 8300             | 10TT5/13200K | 13200            |
| 10TT5/8400K | 8400             | 10TT5/13400K | 13400            |
| 10TT5/8600K | 8600             | 10TT5/13600K | 13600            |
| 10TT5/8800K | 8800             | 10TT5/15400K | 15400            |
| 10TT5/8900K | 8900             | 10TT5/17900K | 17900            |
| 10TT5/9000K | 9000             |              |                  |

Note: Steel tensile cord member available upon request

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 12                            | 30 mm           | 15                         | 30 mm           |
| ARAMID                                                    | 12                            | 30 mm           | 15                         | 30 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]

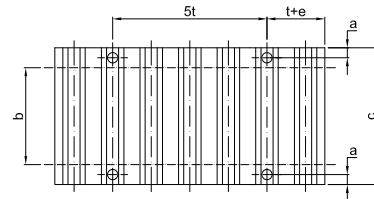
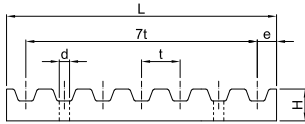
# Clamp plates

Clamp plates may be used as positive attachment of the belt ends in numerous applications in linear drives. Clamp plates must have the correct belt profile, guarantee a uniform clamping force on all the clamped belt surface and must be rigid.

For **standard applications** a minimum of **7 teeth** in clamp is recommended.

For use with timing belts with **HPL cords**, a minimum of **12 teeth** in clamp is recommended.

EAGLE clamp plates are available as semi finished product. Standard material for clamp plates is aluminium.

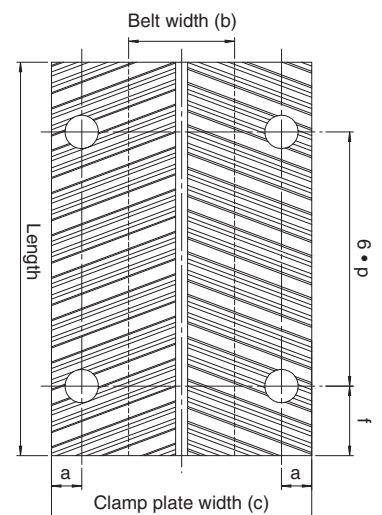
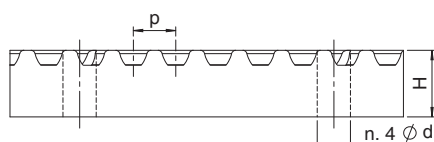


| Type | a<br>[mm] | d<br>[mm] | e<br>[mm] | L<br>[mm] | H<br>[mm] | Belt width - b [mm]        |    |    |    |    |    |     |     |
|------|-----------|-----------|-----------|-----------|-----------|----------------------------|----|----|----|----|----|-----|-----|
|      |           |           |           |           |           | 6                          | 10 | 16 | 25 | 32 | 50 | 75  | 100 |
|      |           |           |           |           |           | Clamp plate width - c [mm] |    |    |    |    |    |     |     |
| T5   | 6         | 5,5       | 3,2       | 41,8      | 8         | -                          | 29 | 35 | 44 | -  | -  | -   | -   |
| AT5  | 6         | 5,5       | 3,2       | 41,8      | 8         | -                          | 29 | 35 | 44 | -  | -  | -   | -   |
| T10  | 8         | 9         | 5         | 80        | 15        | -                          | -  | 41 | 50 | 57 | 75 | 100 | 125 |
| AT10 | 8         | 9         | 5         | 80        | 15        | -                          | -  | 41 | 50 | 57 | 75 | 100 | 125 |
| T20  | 10        | 11        | 10        | 160       | 20        | -                          | -  | -  | 56 | 63 | 81 | 106 | 132 |
| AT20 | 10        | 11        | 10        | 160       | 20        | -                          | -  | -  | 56 | 63 | 81 | 106 | 132 |

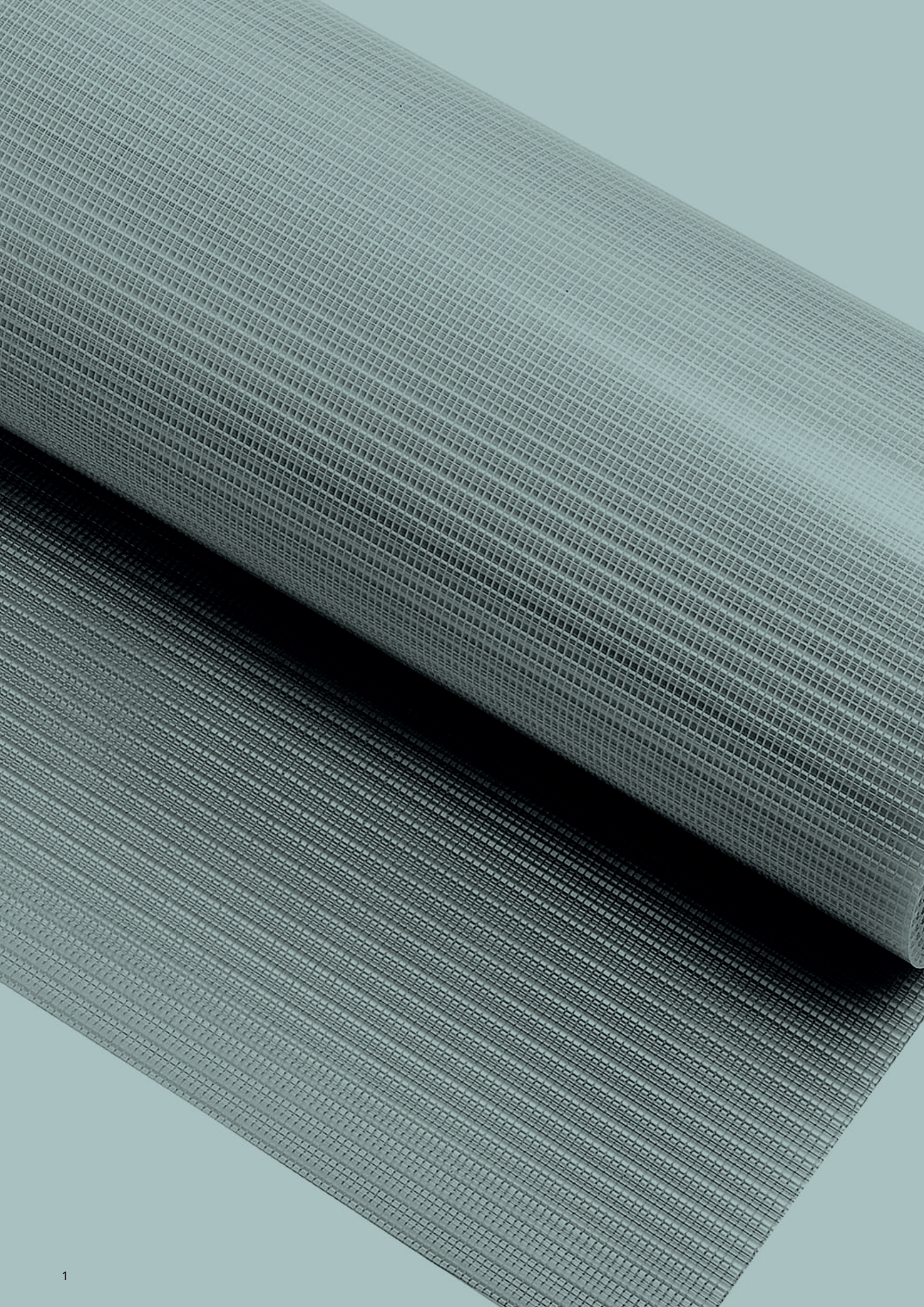
| Type | a<br>[mm] | d<br>[mm] | e<br>[mm] | L<br>[mm] | H<br>[mm] | Belt width - b [inch/100]  |    |      |    |    |      |     |     |
|------|-----------|-----------|-----------|-----------|-----------|----------------------------|----|------|----|----|------|-----|-----|
|      |           |           |           |           |           | 25                         | 32 | 37   | 50 | 75 | 100  | 150 | 200 |
|      |           |           |           |           |           | Clamp plate width - c [mm] |    |      |    |    |      |     |     |
| XL   | 6         | 5,5       | 3,5       | 42,5      | 8         | 25,5                       | 27 | 28,5 | -  | -  | -    | -   | -   |
| L    | 8         | 9         | 6         | 76,6      | 15        | -                          | -  | 36   | 39 | 45 | 51,5 | 64  | 77  |
| H    | 10        | 11        | 9         | 106,9     | 22        | -                          | -  | -    | 45 | 51 | 57,5 | 70  | 83  |

| Type | a<br>[mm] | d<br>[mm] | e<br>[mm] | L<br>[mm] | H<br>[mm] | Belt width - b [mm]        |    |    |    |    |    |    |     |     |
|------|-----------|-----------|-----------|-----------|-----------|----------------------------|----|----|----|----|----|----|-----|-----|
|      |           |           |           |           |           | 15                         | 20 | 25 | 30 | 40 | 50 | 55 | 85  | 115 |
|      |           |           |           |           |           | Clamp plate width - c [mm] |    |    |    |    |    |    |     |     |
| 3M   | 5         | 4,5       | 2         | 25        | 5         | 21                         | 24 | 30 | -  | -  | -  | -  | -   | -   |
| 5M   | 6         | 5,5       | 3,4       | 41,8      | 8         | 34                         | -  | 44 | -  | -  | -  | -  | -   | -   |
| 8M   | 8         | 9         | 5         | 66        | 15        | 40                         | 45 | -  | 55 | -  | 75 | -  | 110 | -   |
| 14M  | 10        | 11        | 9         | 116       | 22        | -                          | -  | 56 | -  | 71 | -  | 86 | 116 | 146 |

| EAGLE Belts | Clamp plates |     |     |                |      | Belt width<br>b [mm]       |    |    |    |    |    |      |     |     |     |  |
|-------------|--------------|-----|-----|----------------|------|----------------------------|----|----|----|----|----|------|-----|-----|-----|--|
| Pitch       | a            | d   | f   | Length<br>[mm] | H    | 12,5                       | 16 | 25 | 32 | 35 | 50 | 52,5 | 70  | 105 |     |  |
|             |              |     |     |                |      | Clamp plate width - c [mm] |    |    |    |    |    |      |     |     |     |  |
| EAGLE 5     | 6            | 5,5 | 8,5 | 47             | 7,5  | 30                         | -  | -  | -  | -  | -  | -    | -   | -   |     |  |
|             | 7            |     |     |                |      | -                          | -  | 45 | -  | -  | -  | -    | -   | -   |     |  |
| EAGLE 8     | 7,5          | 9   | 13  | 74             | 14,5 | -                          | 40 | -  | -  | -  | -  | -    | -   | -   |     |  |
|             | 8            |     |     |                |      | -                          | -  | 50 | 57 | -  | 75 | -    | -   | -   |     |  |
| EAGLE 10    | 8            | 9   | 17  | 94             | 14,5 | -                          | -  | 50 | 57 | -  | 75 | -    | -   | -   |     |  |
| EAGLE 14    | 9,5          | 11  | 23  | 130            | 22   | -                          | -  | -  | -  | 65 | -  | 82,5 | 100 | -   |     |  |
|             | 10           |     |     |                |      | -                          | -  | -  | -  | -  | -  | -    | -   | -   | 136 |  |











# Elatech<sup>®</sup> SYNCRO MAX<sup>®</sup>

# ELATECH® SYNCRO MAX® – Extra-wide

ELATECH® SYNCRO MAX® Extra-wide Polyurethane Belts extend the advantages of synchronous timing belts to wider surfaces and to the typical applications of flat and modular conveyor belts.

Made of polyurethane and reinforced with aramid cords, ELATECH® SYNCRO MAX® Extra-wide Belts provide positive drive and synchronous conveying resulting in no slippage, better tracking, higher indexing/positioning precision, smaller drive pulley requirements, lower belt tension, lower shaft loads and consequently power saving. Open or joined, coated with Silicon, Rubber, PU or PVC

backings, perforated or grooved with complex design, and equipped with a wide range of tracking guides and profiles of different shapes and dimensions.

ELATECH® SYNCRO MAX® Extra-wide Belts offer the best solution for a great number of applications such as the production of baby diapers and feminine hygiene products and the production of tires as well as in many other industrial fields like food, tobacco, metal, wood, glass, and of course conveying and packaging.

## Product overview

- Natural colour PU compound material
- High durability
- Cut resistant
- Grease, chemicals and water resistant
- Non-marking
- Kevlar (Aramid) parallel cord reinforcement
- No cords exposure on belt edges
- Even cord tension

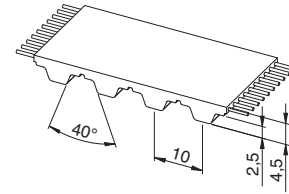
## Available options

- PU compound for food contact
- PAZ/PAR for noise reduction
- Tracking guides on teeth and/or on back
- Silicon, PU, PVC and rubber backings
- Wide range of cleats, flights and profiles
- Perforation by high precision water-jet cutting technology



## BELT CHARACTERISTICS

- Polyurethane timing belt with aramid tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Natural colour PU compound 92 Sh A
- Standard roll length = 50 m



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,3$  [mm]

## TECHNICAL DATA

### Standard aramid cord

| Belt width b [mm]      |                 | 250     | 300     | 350     | 400     | 450     | 500/510 |
|------------------------|-----------------|---------|---------|---------|---------|---------|---------|
| Allowable tensile load | $F_{Tzul}$ [N]* | 10210   | 12280   | 14360   | 16430   | 18500   | 20570   |
| Breaking load          | $F_{Br}$ [N]    | 39088   | 47016   | 54945   | 62874   | 70802   | 78731   |
| Specific spring rate   | $C_{spez}$ [N]  | 1276250 | 1535000 | 1795000 | 2053750 | 2312500 | 2571250 |
| Weight                 | [kg/m]          | 0,95    | 1,14    | 1,33    | 1,52    | 1,71    | 1,90    |

Other widths are available on request

### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 51,80 | 50,32 | 49,04 | 47,92 | 46,95 | 46,11 | 42,75 | 40,28 | 38,36 | 36,80 | 35,49 | 34,35 | 33,34 | 32,44 | 31,63 | 30,89 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 30,21 | 29,58 | 28,99 | 28,76 | 28,44 | 27,92 | 27,43 | 26,97 | 26,53 | 26,12 | 25,34 | 24,63 | 23,97 | 23,36 | 22,78 | 22,25 |

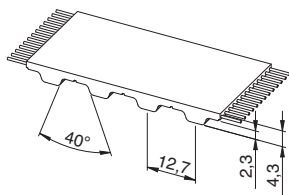
| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 21,74 | 21,27 | 20,81 | 20,39 | 19,40 | 18,51 | 17,70 | 16,97 | 16,29 | 15,66 | 15,07 | 14,52 | 14,00 | 13,51 | 13,05 | 12,61 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 60 mm           | 20                         | 60 mm           |

### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]



### BELT CHARACTERISTICS

- Polyurethane timing belt with aramid tension cord
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/2" = 12,7 mm
- Natural colour PU compound 92 Sh A
- Standard roll length = 50 m

#### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,3$  [mm]

### TECHNICAL DATA

#### Standard aramid cord

| Belt width b [inch]/[mm] |                 | 10 / 254 | 12 / 304,8 | 14 / 355,6 | 16 / 406,4 | 18 / 457,2 | 20 / 508 |
|--------------------------|-----------------|----------|------------|------------|------------|------------|----------|
| Allowable tensile load   | $F_{Tzul}$ [N]* | 10210    | 12280      | 14360      | 16430      | 18500      | 20570    |
| Breaking load            | $F_{Br}$ [N]    | 39088    | 47016      | 54945      | 62874      | 70802      | 78731    |
| Specific spring rate     | $C_{spez}$ [N]  | 1276250  | 1535000    | 1795000    | 2053750    | 2312500    | 2571250  |
| Weight                   | [kg/m]          | 0,90     | 1,05       | 1,24       | 1,42       | 1,60       | 1,80     |

Other widths are available on request

#### Tooth shear strength

| rpm                | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 45,30 | 43,95 | 42,78 | 41,77 | 40,88 | 40,11 | 37,22 | 35,07 | 33,41 | 32,05 | 30,90 | 29,91 | 29,04 | 28,26 | 27,55 | 26,90 |

| rpm                | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 26,31 | 25,76 | 25,25 | 25,05 | 24,77 | 24,32 | 23,89 | 23,49 | 23,11 | 22,74 | 22,07 | 21,44 | 20,87 | 20,34 | 19,84 | 19,37 |

| rpm                | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $F_{Uspez}$ [N/cm] | 18,93 | 18,51 | 18,12 | 17,75 | 16,88 | 16,11 | 15,41 | 14,76 | 14,17 | 13,62 | 13,11 | 12,63 | 12,18 | 11,75 | 11,35 | 10,96 |

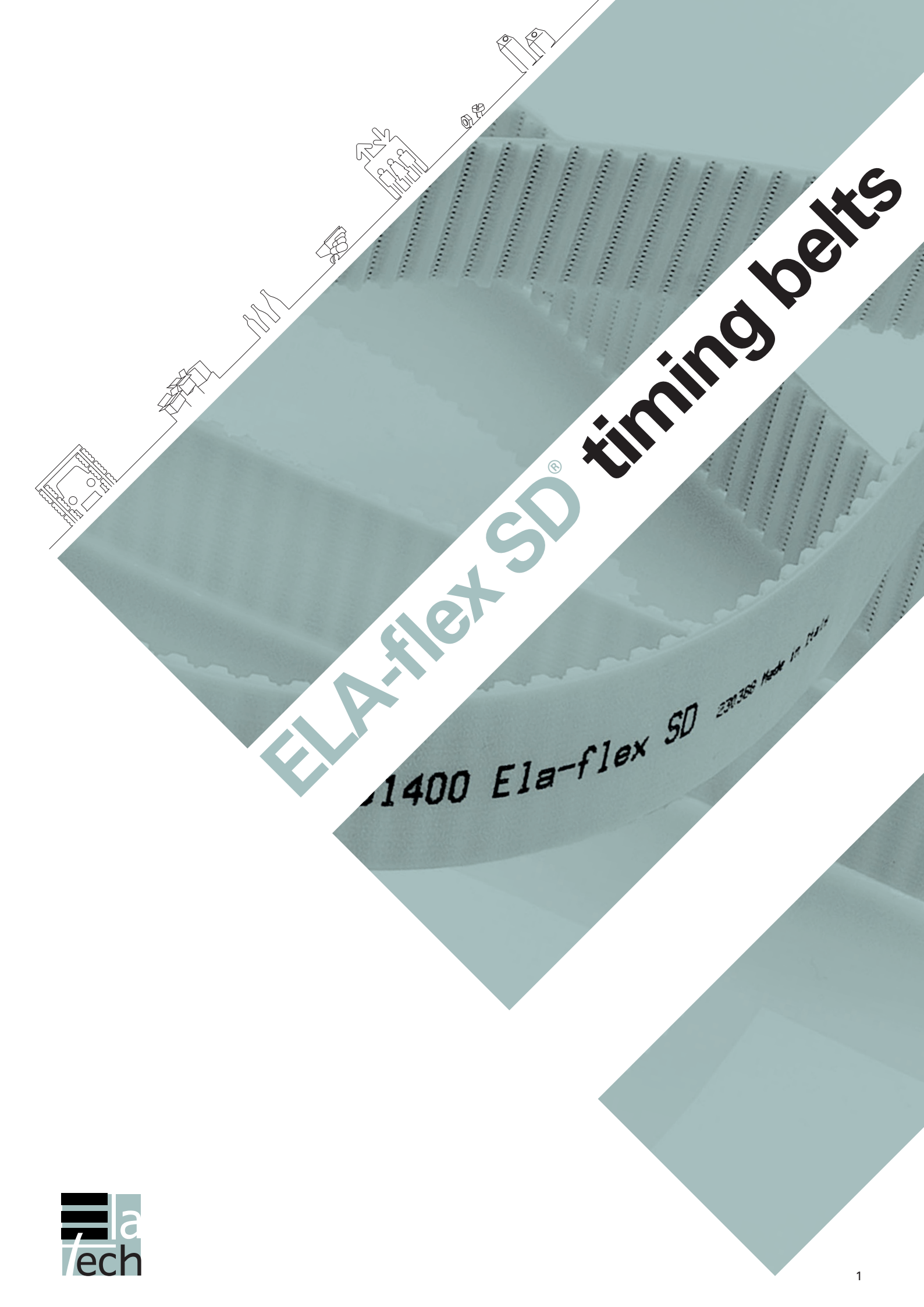
#### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 14                            | 60 mm           | 20                         | 80 mm           |

#### Elatech® V Joined informations

Allowable tensile load of joined belt is 50% of M - open end [\*]





# ELA-flex SD<sup>®</sup> timing belts

1400 Ela-flex SD 231300 Made in France

# ELA-flex SD<sup>®</sup> Synchro Drive timing belts

ELA-flex SD<sup>®</sup> timing belts are manufactured with truly endless high tension strength steel tension cords and high wear, abrasion and tear resistant polyurethane.

Having no splice or welding, the belts have no weak cross sections. ELA-flex SD<sup>®</sup> timing belts are therefore ideal for high speed power transmission and high load conveying applications.

The unique high tech manufacturing process designed by our research and development allows the production of every belt length, tooth by tooth from a **minimum 800 mm** to a maximum of 24.000 mm to permit the best flexibility in application.

## Double sided timing belts

On demand it is possible to supply ELA-flex SD<sup>®</sup> as double sided belts. Please ask for the minimum quantity.

## STANDARD CORD



## HFE CORD



## HPL CORD



## Special cords

In order to solve any design needs, ELA-flex SD<sup>®</sup> belts may be produced with special cords:

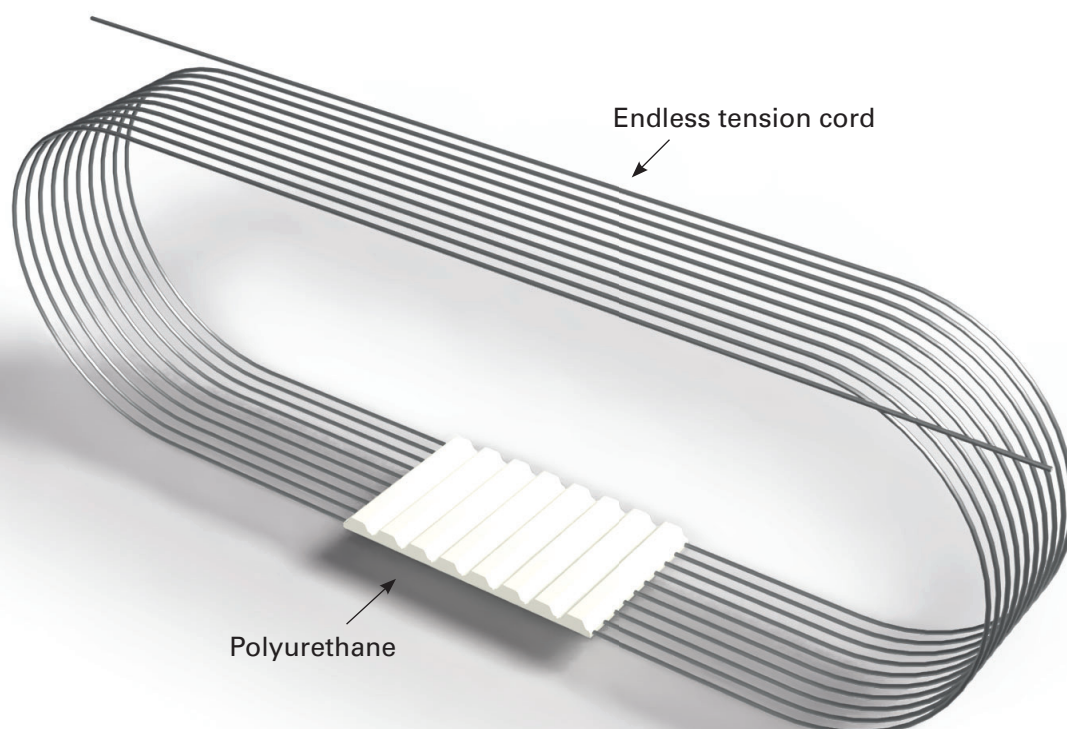
- HPL** high performance
- HFE** high flexibility
- INOX** stainless steel for high aggressive environments
- ARAMID** low weight, non magnetic  
(Bifilar cords construction available on request)

## Antistatic belts

On request it is possible to deliver ELA-flex SD<sup>®</sup> belts with anti-static properties by using a specific electrically conductive coating or a special compound. A minimum quantity is applied.

## Product certification

- ELATECH<sup>®</sup> belts are certified according to RoHS 2011/65/UE



### Thickness and width tolerance

Standard ELA-flex SD® belts are ground on the back and are manufactured at precise width (see technical tables).

For special application needs, special thickness and width tolerances can be produced.

### Length tolerances

| Belt length [mm] | Length tolerance (+/-) [mm] | Belt length [mm] | Length tolerance (+/-) [mm] |
|------------------|-----------------------------|------------------|-----------------------------|
| 900              | 0,75                        | 4000             | 2,11                        |
| 1100             | 0,85                        | 4250             | 2,24                        |
| 1300             | 0,95                        | 4500             | 2,32                        |
| 1500             | 1,04                        | 4750             | 2,40                        |
| 1700             | 1,13                        | 5000             | 2,52                        |
| 1900             | 1,22                        | 5300             | 2,64                        |
| 2120             | 1,30                        | 5600             | 2,72                        |
| 2240             | 1,35                        | 6000             | 2,92                        |
| 2360             | 1,44                        | 6300             | 3,04                        |
| 2500             | 1,49                        | 6700             | 3,19                        |
| 2650             | 1,57                        | 7100             | 3,35                        |
| 2800             | 1,61                        | 7500             | 3,51                        |
| 3000             | 1,70                        | 8000             | 3,70                        |
| 3550             | 1,91                        | 9000             | 4,09                        |
| 3750             | 2,03                        | more             | on request                  |

### Belt designation

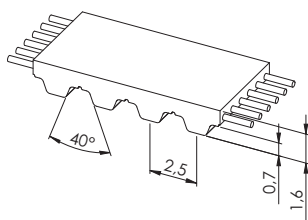
Ordering example "AT" metric pitch:

| ELA-flex SD® metric pitch                                                                                                                                      | F | 075 | AT20 | A | 11200 | / Z |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|------|---|-------|-----|
| ELA-flex SD® Belt                                                                                                                                              |   |     |      |   |       |     |
| Width mm (3 digits)                                                                                                                                            |   |     |      |   |       |     |
| Profile "AT" pitch 20 mm                                                                                                                                       |   |     |      |   |       |     |
| A= steel cords<br>S= stainless steel cords<br>K= aramid cords<br>F= high flexibility cords<br>H= high flexibility and performance cords<br>P= high power cords |   |     |      |   |       |     |
| Length 11200 mm (5 digits)                                                                                                                                     |   |     |      |   |       |     |
| Z= fabric on teeth (PAZ)<br>R= fabric on back (PAR)<br>D= fabric PAZ + PAR                                                                                     |   |     |      |   |       |     |

Ordering example "H" inch pitch:

| ELA-flex SD® inch pitch                                                                                                                                        | F | 200 | H | A | 01702 | / Z |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----|---|---|-------|-----|
| ELA-flex SD® Belt                                                                                                                                              |   |     |   |   |       |     |
| Width (x 0,254 = mm) - 3 digits                                                                                                                                |   |     |   |   |       |     |
| Profile "H"                                                                                                                                                    |   |     |   |   |       |     |
| A= steel cords<br>S= stainless steel cords<br>K= aramid cords<br>F= high flexibility cords<br>H= high flexibility and performance cords<br>P= high power cords |   |     |   |   |       |     |
| Length 1702 mm (5 digits)                                                                                                                                      |   |     |   |   |       |     |
| Z= fabric on teeth (PAZ)<br>R= fabric on back (PAR)<br>D= fabric PAZ + PAR                                                                                     |   |     |   |   |       |     |





## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 2.5 mm
- Ideal for drives where high belt flexibility is requested
- Allows the use of small diameter pulleys

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,3$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 4     | 6     | 10    | 20    | 50    | 100   |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Allowable tensile load [N] | 128   | 224   | 352   | 736   | 1856  | 3744  |
| Weight [kg/m]              | 0,004 | 0,007 | 0,011 | 0,022 | 0,055 | 0,110 |

Other widths are available on request

### Specialties

| Belt width b [mm] |                | 4   | 6   | 10  | 20   | 50   | 100  |
|-------------------|----------------|-----|-----|-----|------|------|------|
| ARAMID            | $F_{Tzul}$ [N] | 280 | 490 | 770 | 1610 | 4060 | 8190 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 0,362 | 0,349 | 0,339 | 0,330 | 0,324 | 0,318 | 0,294 | 0,278 | 0,267 | 0,258 | 0,250 | 0,244 | 0,238 | 0,233 | 0,229 | 0,225 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,007 | 0,014 | 0,021 | 0,027 | 0,033 | 0,062 | 0,087 | 0,112 | 0,135 | 0,157 | 0,179 | 0,199 | 0,220 | 0,239 | 0,259 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 0,221 | 0,217 | 0,214 | 0,213 | 0,211 | 0,208 | 0,206 | 0,203 | 0,201 | 0,199 | 0,194 | 0,191 | 0,187 | 0,184 | 0,181 | 0,178 |
| $P_{spez}$ [W/cm]        | 0,277 | 0,296 | 0,314 | 0,321 | 0,332 | 0,349 | 0,366 | 0,383 | 0,399 | 0,416 | 0,448 | 0,479 | 0,509 | 0,539 | 0,567 | 0,596 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 0,175 | 0,173 | 0,170 | 0,168 | 0,163 | 0,158 | 0,154 | 0,150 | 0,146 | 0,143 | 0,140 | 0,137 | 0,134 | 0,131 | 0,129 | 0,127 |
| $P_{spez}$ [W/cm]        | 0,623 | 0,650 | 0,677 | 0,703 | 0,766 | 0,827 | 0,885 | 0,940 | 0,994 | 1,046 | 1,097 | 1,146 | 1,193 | 1,239 | 1,283 | 1,725 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 15 mm           | 18                         | 18 mm           |
| ARAMID                                                    | 15                            | 15 mm           | 18                         | 18 mm           |

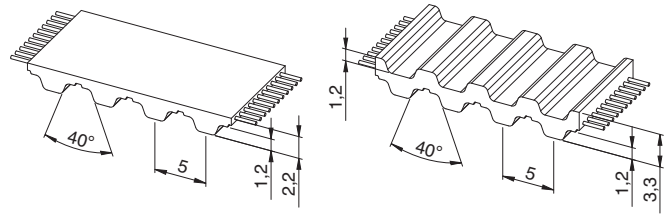
### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys
- Transmissible power up to 5 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 16   | 25   | 32   | 50   | 75   | 100  | 150  |
|----------------------------|------|------|------|------|------|------|------|------|
| Allowable tensile load [N] | 384  | 610  | 930  | 1215 | 1890 | 2815 | 3775 | 5665 |
| Weight [kg/m]              | 0,02 | 0,03 | 0,05 | 0,07 | 0,11 | 0,16 | 0,21 | 0,32 |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 10  | 16   | 25   | 32   | 50   | 75   | 100  | 150   |
|----------------------|----------------|-----|------|------|------|------|------|------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 770 | 1260 | 2030 | 2590 | 4060 | 6160 | 8260 | 12320 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 220 | 360  | 580  | 740  | 1160 | 1760 | 2340 | 3520  |
| HFE High Flexibility | $F_{Tzul}$ [N] | 396 | 648  | 1044 | 1332 | 2088 | 3160 | 4212 | 6336  |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,966 | 1,915 | 1,872 | 1,834 | 1,802 | 1,773 | 1,663 | 1,583 | 1,520 | 1,468 | 1,425 | 1,388 | 1,354 | 1,325 | 1,299 | 1,274 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,040 | 0,078 | 0,115 | 0,151 | 0,186 | 0,348 | 0,497 | 0,637 | 0,769 | 0,895 | 1,017 | 1,135 | 1,249 | 1,360 | 1,467 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,252 | 1,231 | 1,211 | 1,204 | 1,194 | 1,176 | 1,160 | 1,145 | 1,131 | 1,116 | 1,091 | 1,068 | 1,046 | 1,026 | 1,007 | 0,989 |
| $P_{spez}$ [W/cm]        | 1,573 | 1,676 | 1,776 | 1,815 | 1,875 | 1,971 | 2,065 | 2,158 | 2,250 | 2,338 | 2,513 | 2,684 | 2,847 | 3,007 | 3,162 | 3,314 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 0,972 | 0,957 | 0,942 | 0,928 | 0,895 | 0,866 | 0,840 | 0,815 | 0,793 | 0,772 | 0,753 | 0,735 | 0,717 | 0,701 | 0,686 | 0,672 |
| $P_{spez}$ [W/cm]        | 3,462 | 3,609 | 3,749 | 3,886 | 4,218 | 4,533 | 4,835 | 5,120 | 5,395 | 5,658 | 5,912 | 6,153 | 6,382 | 6,607 | 6,824 | 7,033 |

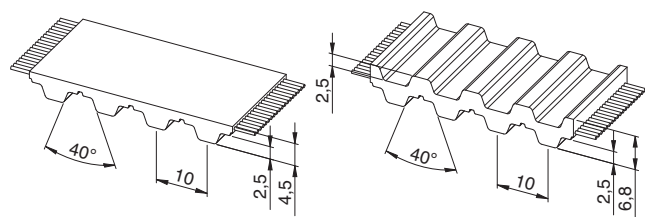
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 10                            | 30 mm           | 15                         | 30 mm           |
| ARAMID                                                    | 10                            | 30 mm           | 15                         | 30 mm           |
| STAINLESS                                                 | 15                            | 30 mm           | 20                         | 40 mm           |
| HFE                                                       | 10                            | 30 mm           | 15                         | 30 mm           |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 161



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys
- Transmissible power up to 30 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

## STANDARD TOLERANCES

 WIDTH TOLERANCE:  $\pm 0,5$  [mm]

 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 16   | 25   | 32   | 50   | 75   | 100   | 150   |
|----------------------------|------|------|------|------|------|------|-------|-------|
| Allowable tensile load [N] | 1150 | 1840 | 2760 | 3570 | 5640 | 8400 | 11160 | 16790 |
| Weight [kg/m]              | 0,05 | 0,07 | 0,12 | 0,15 | 0,23 | 0,35 | 0,46  | 0,69  |

Other widths are available on request

## Specialties

| Belt width b [mm]    |                | 10   | 16   | 25   | 32   | 50   | 75    | 100   | 150   |
|----------------------|----------------|------|------|------|------|------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 770  | 1210 | 1980 | 2530 | 3960 | 6050  | 8030  | 12100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 675  | 1125 | 1800 | 2325 | 3600 | 5475  | 7275  | 10950 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 1080 | 1800 | 2880 | 3720 | 5760 | 8670  | 11640 | 17520 |
| HPL High Performance | $F_{Tzul}$ [N] | 1470 | 2695 | 4165 | 5390 | 8330 | 12740 | 16905 | 25480 |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 8,244 | 8,009 | 7,805 | 7,627 | 7,472 | 7,339 | 6,804 | 6,411 | 6,105 | 5,857 | 5,648 | 5,467 | 5,306 | 5,163 | 5,034 | 4,916 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,168 | 0,327 | 0,479 | 0,626 | 0,768 | 1,425 | 2,014 | 2,557 | 3,066 | 3,549 | 4,007 | 4,445 | 4,866 | 5,271 | 5,663 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600   | 2800   | 3000   | 3200   |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 4,808 | 4,708 | 4,614 | 4,577 | 4,526 | 4,444 | 4,366 | 4,292 | 4,222 | 4,157 | 4,033 | 3,920 | 3,815  | 3,718  | 3,626  | 3,541  |
| $P_{spez}$ [W/cm]        | 6,042 | 6,409 | 6,764 | 6,902 | 7,109 | 7,445 | 7,771 | 8,090 | 8,401 | 8,706 | 9,291 | 9,851 | 10,386 | 10,901 | 11,389 | 11,866 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 3,460  | 3,385  | 3,312  | 3,245  | 3,088  | 2,946  | 2,817  | 2,701  | 2,593  | 2,492  | 2,398  | 2,311  | 2,228  | 2,150  | 2,077  | 2,007  |
| $P_{spez}$ [W/cm]        | 12,318 | 12,761 | 13,179 | 13,592 | 14,549 | 15,424 | 16,224 | 16,969 | 17,646 | 18,269 | 18,836 | 19,359 | 19,832 | 20,264 | 20,661 | 21,015 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 12                            | 60 mm           | 20                         | 60 mm           |
| ARAMID                                                    | 15                            | 60 mm           | 20                         | 60 mm           |
| STAINLESS                                                 | 15                            | 60 mm           | 25                         | 70 mm           |
| HFE                                                       | 10                            | 50 mm           | 15                         | 50 mm           |
| HPL                                                       | 15                            | 100 mm          | 30                         | 100 mm          |

## Min. available length

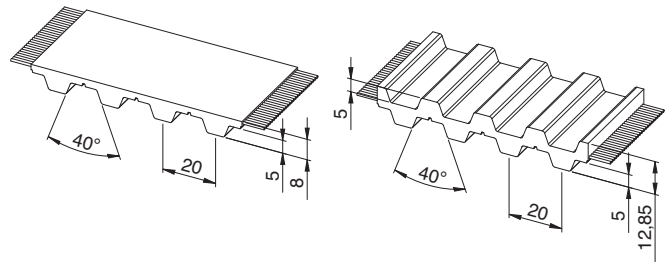
| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 162



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Ideal for drives where high belt flexibility is required
- Transmissible power up to 100 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**
- **HPL cord execution available**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 25   | 32   | 50   | 75    | 100   | 150   |
|----------------------------|------|------|------|-------|-------|-------|
| Allowable tensile load [N] | 4165 | 5390 | 8330 | 12740 | 16905 | 25480 |
| Weight [kg/m]              | 0,18 | 0,23 | 0,37 | 0,55  | 0,73  | 1,10  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 25   | 32   | 50   | 75    | 100   | 150   |
|----------------------|----------------|------|------|------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 3080 | 4180 | 6380 | 9680  | 12980 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 3060 | 3960 | 6120 | 9360  | 12420 | 18720 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 3400 | 4400 | 6800 | 10400 | 13800 | 20800 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 33,263 | 32,181 | 31,242 | 30,424 | 29,714 | 29,097 | 26,579 | 24,777 | 23,393 | 22,269 | 21,320 | 20,502 | 19,783 | 19,140 | 18,561 | 18,029 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,674  | 1,309  | 1,911  | 2,489  | 3,047  | 5,566  | 7,783  | 9,798  | 11,659 | 13,395 | 15,028 | 16,572 | 18,038 | 19,435 | 20,766 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 17,542 | 17,093 | 16,673 | 16,511 | 16,278 | 15,909 | 15,562 | 15,234 | 14,922 | 14,623 | 14,069 | 13,563 | 13,092 | 12,659 | 12,252 | 11,870 |
| $P_{spez}$ [W/cm]        | 22,042 | 23,268 | 24,442 | 24,896 | 25,568 | 26,654 | 27,702 | 28,714 | 29,689 | 30,624 | 32,411 | 34,086 | 35,643 | 37,116 | 38,487 | 39,773 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|------|------|-------|
| $M_{spez}$ [Ncm/cm]      | 11,510 | 11,173 | 10,851 | 10,546 | 9,842  | 9,209  | 8,639  | 8,114  | 7,630  | -    | -    | -    | -    | -    | -    | -     |
| $P_{spez}$ [W/cm]        | 40,978 | 42,117 | 43,178 | 44,170 | 46,377 | 48,213 | 49,753 | 50,976 | 51,931 | -    | -    | -    | -    | -    | -    | -     |

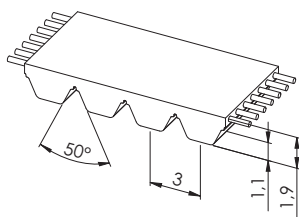
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 120 mm          | 25                         | 120 mm          |
| ARAMID                                                    | 15                            | 120 mm          | 25                         | 120 mm          |
| STAINLESS                                                 | 20                            | 130 mm          | 30                         | 150 mm          |
| HFE                                                       | 12                            | 100 mm          | 22                         | 120 mm          |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 900$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 163


**STANDARD TOLERANCES**

 WIDTH TOLERANCE:  $\pm 0,5$  [mm]

 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

**BELT CHARACTERISTICS**

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 3 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced vibration & noise
- Transmissible power up to 5 kW
- **Max. length 2400 mm**

**TECHNICAL DATA**
**Standard steel cord**

| Belt width b [mm]          | 8     | 10    | 12    | 16    | 20    | 25    | 32    | 50    | 75    | 100   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Allowable tensile load [N] | 225   | 290   | 350   | 480   | 610   | 770   | 990   | 1535  | 2305  | 3105  |
| Weight [kg/m]              | 0,018 | 0,022 | 0,026 | 0,035 | 0,044 | 0,054 | 0,070 | 0,108 | 0,162 | 0,216 |

Other widths are available on request

**Tooth shear strength**

| rpm [min <sup>-1</sup> ]   | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 1,550 | 1,530 | 1,520 | 1,500 | 1,490 | 1,470 | 1,420 | 1,390 | 1,360 | 1,320 | 1,290 | 1,250 | 1,224 | 1,196 | 1,170 | 1,147 |
| P <sub>spez</sub> [W/cm]   | 0,000 | 0,032 | 0,064 | 0,094 | 0,125 | 0,154 | 0,298 | 0,437 | 0,571 | 0,693 | 0,809 | 0,919 | 1,025 | 1,127 | 1,226 | 1,321 |

| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 1,124 | 1,104 | 1,084 | 1,077 | 1,066 | 1,048 | 1,031 | 1,016 | 1,001 | 0,986 | 0,959 | 0,934 | 0,911 | 0,889 | 0,868 | 0,849 |
| P <sub>spez</sub> [W/cm]   | 1,413 | 1,502 | 1,589 | 1,623 | 1,674 | 1,756 | 1,836 | 1,914 | 1,991 | 2,065 | 2,209 | 2,347 | 2,479 | 2,606 | 2,728 | 2,845 |

| rpm [min <sup>-1</sup> ]   | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 0,831 | 0,814 | 0,797 | 0,782 | 0,746 | 0,713 | 0,683 | 0,656 | 0,631 | 0,607 | 0,585 | 0,565 | 0,545 | 0,527 | 0,510 | 0,493 |
| P <sub>spez</sub> [W/cm]   | 2,958 | 3,068 | 3,173 | 3,274 | 3,513 | 3,733 | 3,935 | 4,122 | 4,293 | 4,452 | 4,597 | 4,732 | 4,855 | 4,967 | 5,070 | 5,164 |

**Flexibility**

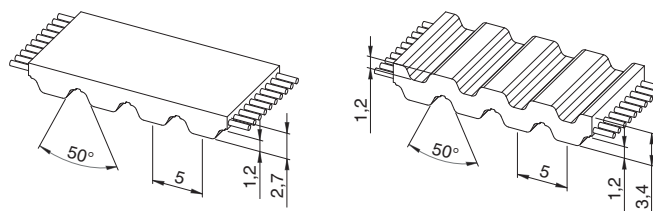
| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|-----------------------------------|------------------------|--------------------------------|------------------------|
|                                                           | z <sub>min</sub>                  | idler d <sub>min</sub> | z <sub>min</sub>               | idler d <sub>min</sub> |
| STANDARD                                                  | 15                                | 20 mm                  | 20                             | 20 mm                  |

**Min. available length**

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 100 mm    | ≥ 800 mm  | ≥ 900 mm |

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced vibration & noise
- Transmissible power up to 15 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 16   | 25   | 32   | 50   | 75   | 100   | 150   |
|----------------------------|------|------|------|------|------|------|-------|-------|
| Allowable tensile load [N] | 1150 | 1840 | 2760 | 3570 | 5640 | 8400 | 11160 | 16790 |
| Weight [kg/m]              | 0,03 | 0,05 | 0,08 | 0,11 | 0,17 | 0,25 | 0,33  | 0,50  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 10   | 16   | 25   | 32   | 50   | 75   | 100   | 150   |
|----------------------|----------------|------|------|------|------|------|------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 770  | 1210 | 1980 | 2530 | 3960 | 6050 | 8030  | 12100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 525  | 825  | 1350 | 1725 | 2700 | 4125 | 5475  | 8250  |
| HFE High Flexibility | $F_{Tzul}$ [N] | 840  | 1320 | 2160 | 2760 | 4320 | 6600 | 8760  | 13200 |
| HPL High Performance | $F_{Tzul}$ [N] | 1270 | 2030 | 3040 | 3930 | 6200 | 9240 | 12280 | 18470 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,897 | 2,855 | 2,817 | 2,783 | 2,753 | 2,725 | 2,62  | 2,54  | 2,458 | 2,383 | 2,317 | 2,258 | 2,204 | 2,153 | 2,108 | 2,066 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,060 | 0,118 | 0,175 | 0,231 | 0,285 | 0,549 | 0,798 | 1,030 | 1,248 | 1,456 | 1,655 | 1,846 | 2,029 | 2,207 | 2,379 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,027 | 1,990 | 1,955 | 1,942 | 1,923 | 1,892 | 1,863 | 1,836 | 1,809 | 1,784 | 1,736 | 1,693 | 1,653 | 1,615 | 1,580 | 1,546 |
| $P_{spez}$ [W/cm]        | 2,547 | 2,709 | 2,866 | 2,929 | 3,020 | 3,170 | 3,316 | 3,460 | 3,599 | 3,736 | 4,000 | 4,256 | 4,500 | 4,734 | 4,962 | 5,181 |

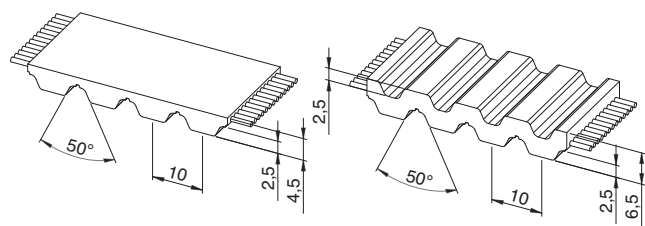
| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,514 | 1,485 | 1,456 | 1,429 | 1,367 | 1,311 | 1,260 | 1,213 | 1,169 | 1,128 | 1,091 | 1,055 | 1,023 | 0,991 | 0,961 | 0,933 |
| $P_{spez}$ [W/cm]        | 5,391 | 5,598 | 5,795 | 5,986 | 6,442 | 6,862 | 7,255 | 7,619 | 7,957 | 8,271 | 8,568 | 8,839 | 9,101 | 9,337 | 9,555 | 9,766 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 30 mm           | 25                         | 60 mm           |
| ARAMID                                                    | 15                            | 30 mm           | 25                         | 60 mm           |
| STAINLESS                                                 | 18                            | 40 mm           | 25                         | 65 mm           |
| HFE                                                       | 15                            | 25 mm           | 20                         | 50 mm           |
| HPL                                                       | 25                            | 40 mm           | 25                         | 60 mm           |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |


**STANDARD TOLERANCES**

 WIDTH TOLERANCE:  $\pm 0,5$  [mm]

 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

**TECHNICAL DATA**
**Standard steel cord**

| Belt width b [mm]          | 16   | 25   | 32   | 50   | 75    | 100   | 150   |
|----------------------------|------|------|------|------|-------|-------|-------|
| Allowable tensile load [N] | 2695 | 4165 | 5390 | 8330 | 12740 | 16905 | 25480 |
| Weight [kg/m]              | 0,09 | 0,14 | 0,18 | 0,29 | 0,43  | 0,57  | 0,86  |

Other widths are available on request

**BELT CHARACTERISTICS**

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced vibration & noise
- Transmissible power up to 70 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**
- **HPL cord execution available**

**Specialties**

| Belt width b [mm]    |                | 16   | 25   | 32   | 50    | 75    | 100   | 150   |
|----------------------|----------------|------|------|------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 1980 | 3080 | 4180 | 6380  | 9680  | 12980 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 1980 | 3060 | 3960 | 6120  | 9360  | 12420 | 18720 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 2200 | 3400 | 4400 | 6800  | 10400 | 13800 | 20800 |
| HPL High Performance | $F_{Tzul}$ [N] | 3360 | 5760 | 7200 | 11520 | 17280 | 23040 | 34560 |

**Tooth shear strength**

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80    | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900   | 1000  | 1100   |
|--------------------------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|
| $M_{spez}$ [Ncm/cm]      | 14,096 | 13,856 | 13,633 | 13,424 | 13,23 | 13,049 | 12,312 | 11,951 | 11,457 | 11,025 | 10,644 | 10,305 | 10,000 | 9,723 | 9,469 | 9,235  |
| $P_{spez}$ [W/cm]        | 0,000  | 0,290  | 0,571  | 0,843  | 1,108 | 1,366  | 2,578  | 3,754  | 4,799  | 5,772  | 6,687  | 7,553  | 8,377  | 9,163 | 9,915 | 10,637 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 9,018  | 8,815  | 8,626  | 8,553  | 8,447  | 8,279  | 8,119  | 7,968  | 7,824  | 7,686  | 7,429  | 7,191  | 6,971  | 6,766  | 6,573  | 6,393  |
| $P_{spez}$ [W/cm]        | 11,331 | 12,000 | 12,645 | 12,897 | 13,268 | 13,871 | 14,454 | 15,018 | 15,566 | 16,097 | 17,113 | 18,072 | 18,978 | 19,836 | 20,649 | 21,420 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 6,222  | 6,060  | 5,907  | 5,761  | 5,424  | 5,120  | 4,844  | 4,591  | 4,357  | 4,139  | 3,936  | 3,746  | 3,566  | 3,397  | 3,236  | 3,084  |
| $P_{spez}$ [W/cm]        | 22,152 | 22,846 | 23,504 | 24,130 | 25,557 | 26,807 | 27,897 | 28,841 | 29,652 | 30,339 | 30,912 | 31,377 | 31,742 | 32,012 | 32,193 | 32,289 |

**Flexibility**

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 50 mm           | 25                         | 120 mm          |
| ARAMID                                                    | 15                            | 50 mm           | 20                         | 120 mm          |
| STAINLESS                                                 | 20                            | 70 mm           | 40                         | 120 mm          |
| HFE                                                       | 12                            | 50 mm           | 20                         | 80 mm           |
| HPL                                                       | 25                            | 80 mm           | 25                         | 150 mm          |

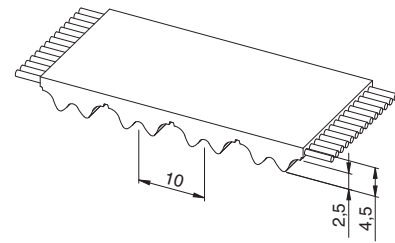
**Min. available length**

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 166

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords.
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced vibration & noise
- Transmissible power up to 70 kW
- **Max. length 2400 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 16   | 25   | 32   | 50   | 75    | 100   |
|----------------------------|------|------|------|------|-------|-------|
| Allowable tensile load [N] | 2430 | 4040 | 5120 | 8090 | 12400 | 16440 |
| Weight [kg/m]              | 0,09 | 0,14 | 0,18 | 0,29 | 0,43  | 0,57  |

Other widths are available on request

### Specialties

| Belt width b [mm] |                | 16   | 25   | 32   | 50   | 75   | 100   |
|-------------------|----------------|------|------|------|------|------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N] | 1980 | 3080 | 4180 | 6380 | 9680 | 12980 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 15,510 | 15,220 | 14,950 | 14,700 | 14,470 | 14,260 | 13,410 | 13,150 | 12,600 | 12,130 | 11,710 | 11,340 | 11,000 | 10,690 | 10,420 | 10,160 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,320  | 0,630  | 0,920  | 1,210  | 1,490  | 2,810  | 4,130  | 5,280  | 6,350  | 7,360  | 8,310  | 9,210  | 10,080 | 10,910 | 11,700 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 9,920  | 9,700  | 9,490  | 9,410  | 9,290  | 9,110  | 8,930  | 8,760  | 8,610  | 8,450  | 8,170  | 7,910  | 7,670  | 7,440  | 7,230  | 7,030  |
| $P_{spez}$ [W/cm]        | 12,460 | 13,200 | 13,910 | 14,190 | 14,590 | 15,260 | 15,900 | 16,520 | 17,120 | 17,710 | 18,820 | 19,880 | 20,880 | 21,820 | 22,710 | 23,560 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 6,840  | 6,670  | 6,500  | 6,340  | 5,970  | 5,630  | 5,330  | 5,050  | 4,790  | 4,550  | 4,330  | 4,120  | 3,920  | 3,740  | 3,560  | 3,390  |
| $P_{spez}$ [W/cm]        | 24,370 | 25,130 | 25,850 | 26,540 | 28,110 | 29,490 | 30,690 | 31,730 | 32,620 | 33,370 | 34,000 | 34,510 | 34,920 | 35,210 | 35,410 | 35,520 |

### Flexibility

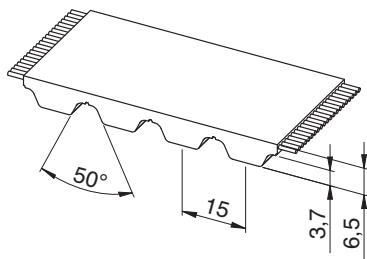
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 50 mm           | 25                         | 120 mm          |
| ARAMID                                                    | 15                            | 50 mm           | 20                         | 120 mm          |

### Note

Special pulley profile required.  
Contact Elatech® technical dept. for details.

### Min. available length

| Max width | Execution     |               |
|-----------|---------------|---------------|
|           | Standard      | PAZ           |
| 100 mm    | $\geq 800$ mm | $\geq 900$ mm |


**STANDARD TOLERANCES**

 WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

**TECHNICAL DATA**
**Standard steel cord**

| Belt width b [mm]          | 25   | 32   | 50    | 75    | 100   | 150   |
|----------------------------|------|------|-------|-------|-------|-------|
| Allowable tensile load [N] | 5760 | 7200 | 11520 | 17280 | 23040 | 34560 |
| Weight [kg/m]              | 0,22 | 0,28 | 0,44  | 0,66  | 0,88  | 1,33  |

Other widths are available on request

**Specialties**

| Belt width b [mm] |                | 25   | 32   | 50   | 75   | 100   | 150   |
|-------------------|----------------|------|------|------|------|-------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N] | 3080 | 4180 | 6380 | 9680 | 12980 | 19580 |

**Tooth shear strength**

| rpm [min <sup>-1</sup> ] | 0     | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 34,33 | 33,874 | 33,435 | 33,012 | 32,606 | 32,217 | 30,489 | 27,999 | 26,49  | 25,174 | 24,019 | 22,992 | 22,068 | 21,230 | 20,467 | 19,760 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,709  | 1,400  | 2,074  | 2,731  | 3,374  | 6,385  | 8,795  | 11,095 | 13,180 | 15,090 | 16,853 | 18,487 | 20,008 | 21,431 | 22,760 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 19,103 | 18,495 | 17,922 | 17,704 | 17,385 | 16,878 | 16,399 | 15,940 | 15,508 | 15,093 | 14,317 | 13,603 | 12,939 | 12,323 | 11,746 | 11,201 |
| $P_{spez}$ [W/cm]        | 24,004 | 25,176 | 26,273 | 26,696 | 27,306 | 28,278 | 29,191 | 30,044 | 30,854 | 31,608 | 32,981 | 34,186 | 35,227 | 36,131 | 36,897 | 37,533 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500 | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|------|------|------|-------|
| $M_{spez}$ [Ncm/cm]      | 10,688 | 10,203 | 9,740  | 9,301  | 8,289  | 7,377  | 6,546  | 5,784  | -    | -    | -    | -    | -    | -    | -    | -     |
| $P_{spez}$ [W/cm]        | 38,052 | 38,463 | 38,757 | 38,957 | 39,057 | 38,622 | 37,700 | 36,342 | -    | -    | -    | -    | -    | -    | -    | -     |

**Flexibility**

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 25                            | 120 mm          | 40                         | 180 mm          |
| ARAMID                                                    | 25                            | 120 mm          | 35                         | 180 mm          |

**Min. available length**

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

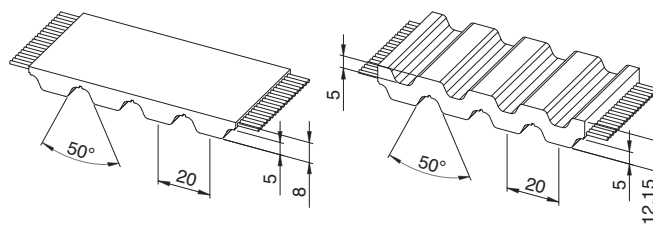
**Note**

 Special pulley profile required.  
 Contact Elatech® technical dept. for details.



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 20 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation
- Reduced polygonal effect with reduced vibration & noise
- Transmissible power up to 200 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 25   | 32   | 50    | 75    | 100   | 150   |
|----------------------------|------|------|-------|-------|-------|-------|
| Allowable tensile load [N] | 5760 | 7200 | 11520 | 17280 | 23040 | 34560 |
| Weight [kg/m]              | 0,24 | 0,31 | 0,48  | 0,73  | 0,97  | 1,45  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 25   | 32    | 50    | 75    | 100   | 150   |
|----------------------|----------------|------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 3080 | 4180  | 6380  | 9680  | 12980 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 3600 | 4500  | 7200  | 10800 | 14400 | 21600 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 5520 | 6900  | 11040 | 16560 | 22080 | 33120 |
| HPL High Performance | $F_{Tzul}$ [N] | 7650 | 10200 | 16150 | 24650 | 32300 | 49300 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 48,192 | 47,288 | 46,438 | 45,639 | 44,885 | 44,175 | 41,199 | 38,923 | 36,911 | 35,157 | 33,617 | 32,248 | 31,016 | 29,899 | 28,880 | 27,938 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,990  | 1,945  | 2,867  | 3,760  | 4,626  | 8,628  | 12,227 | 15,460 | 18,407 | 21,120 | 23,637 | 25,982 | 28,177 | 30,241 | 32,180 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 27,063 | 26,251 | 25,487 | 25,197 | 24,771 | 24,096 | 23,456 | 22,845 | 22,269 | 21,715 | 20,681 | 19,729 | 18,844 | 18,023 | 17,252 | 16,527 |
| $P_{spez}$ [W/cm]        | 34,006 | 35,734 | 37,363 | 37,994 | 38,907 | 40,370 | 41,755 | 43,059 | 44,305 | 45,477 | 47,641 | 49,58  | 51,303 | 52,841 | 54,196 | 55,377 |

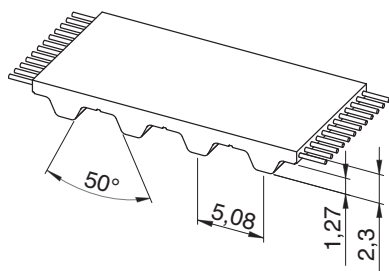
| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500 | 7000 | 7500 | 8000 | 8500 | 9000 | 9500 | 10000 |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|------|------|------|-------|
| $M_{spez}$ [Ncm/cm]      | 15,842 | 15,196 | 14,579 | 13,993 | 12,643 | 11,427 | 10,320 | 9,304  | -    | -    | -    | -    | -    | -    | -    | -     |
| $P_{spez}$ [W/cm]        | 56,402 | 57,284 | 58,009 | 58,609 | 59,576 | 59,829 | 59,432 | 58,456 | -    | -    | -    | -    | -    | -    | -    | -     |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 120 mm          | 25                         | 180 mm          |
| ARAMID                                                    | 18                            | 120 mm          | 25                         | 160 mm          |
| STAINLESS                                                 | 20                            | 125 mm          | 30                         | 200 mm          |
| HFE                                                       | 18                            | 120 mm          | 25                         | 150 mm          |
| HPL                                                       | 25                            | 160 mm          | 25                         | 250 mm          |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 900$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/5" = 5,08 mm
- Allow to use small diameter pulley
- Transmissible power up to 5 kW

### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm]   | 0,25 / 6,35 | 0,37 / 9,53 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 4,00 / 101,6 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Allowable tensile load [N] | 224         | 352         | 480         | 704         | 960         | 1440        | 1920        | 3840         |
| Weight [kg/m]              | 0,016       | 0,024       | 0,033       | 0,049       | 0,065       | 0,098       | 0,130       | 0,260        |

Other widths are available on request

### Specialties

| Belt width b [inch]/[mm] |                | 0,25 / 6,35 | 0,31 / 7,94 | 0,37 / 9,53 | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 4,00 / 101,6 |
|--------------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N] | 490         | 770         | 980         | 1540        | 2030        | 3080        | 4130        | 8330        | 8400         |
| HFE High Flexibility     | $F_{Tzul}$ [N] | 252         | 396         | 504         | 792         | 1044        | 1584        | 2124        | 4284        | 4320         |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,029 | 1,978 | 1,932 | 1,894 | 1,860 | 1,830 | 1,717 | 1,635 | 1,570 | 1,518 | 1,473 | 1,434 | 1,400 | 1,370 | 1,342 | 1,317 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,041 | 0,081 | 0,119 | 0,156 | 0,192 | 0,360 | 0,514 | 0,658 | 0,795 | 0,926 | 1,051 | 1,173 | 1,291 | 1,405 | 1,517 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,294 | 1,273 | 1,252 | 1,245 | 1,234 | 1,216 | 1,200 | 1,184 | 1,169 | 1,155 | 1,129 | 1,104 | 1,082 | 1,061 | 1,041 | 1,023 |
| $P_{spez}$ [W/cm]        | 1,626 | 1,732 | 1,836 | 1,877 | 1,938 | 2,037 | 2,136 | 2,231 | 2,326 | 2,418 | 2,600 | 2,776 | 2,945 | 3,110 | 3,271 | 3,427 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,006 | 0,990 | 0,974 | 0,960 | 0,926 | 0,896 | 0,868 | 0,843 | 0,820 | 0,798 | 0,779 | 0,759 | 0,741 | 0,725 | 0,709 | 0,695 |
| $P_{spez}$ [W/cm]        | 3,581 | 3,730 | 3,877 | 4,020 | 4,362 | 4,690 | 5,001 | 5,298 | 5,580 | 5,849 | 6,115 | 6,360 | 6,599 | 6,835 | 7,053 | 7,272 |

### Flexibility

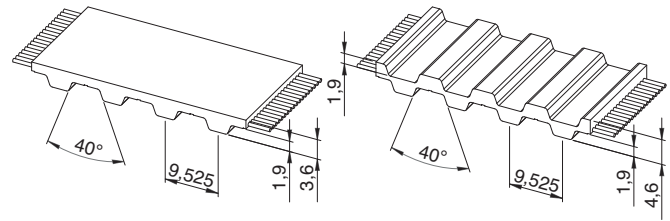
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 10                            | 30 mm           | 15                         | 30 mm           |
| ARAMID                                                    | 10                            | 30 mm           | 15                         | 30 mm           |
| HFE                                                       | 10                            | 30 mm           | 12                         | 30 mm           |

### Min. available length

| Max width | Execution     |               |
|-----------|---------------|---------------|
|           | Standard      | PAZ           |
| 4"        | $\geq 800$ mm | $\geq 900$ mm |

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 3/8" = 9,525 mm
- Transmissible power up to 20 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE: ±0,5 [mm]  
THICKNESS TOLERANCE: ±0,2 [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm]   | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Allowable tensile load [N] | 1380        | 2185        | 2875        | 4255        | 5635        | 8510        | 11385        |
| Weight [kg/m]              | 0,05        | 0,08        | 0,10        | 0,15        | 0,20        | 0,30        | 0,40         |

Other widths are available on request

### Specialties

| Belt width b [inch]/[mm] |                | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 |
|--------------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N] | 990         | 1540        | 1980        | 3080        | 4070        | 6160        | 8250         |
| STAINLESS STEEL          | $F_{Tzul}$ [N] | 900         | 1350        | 1800        | 2775        | 3675        | 5550        | 7350         |
| HFE High Flexibility     | $F_{Tzul}$ [N] | 1440        | 2160        | 2880        | 4440        | 5880        | 8880        | 11760        |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 5,852 | 5,673 | 5,518 | 5,383 | 5,266 | 5,165 | 4,789 | 4,516 | 4,304 | 4,131 | 3,984 | 3,857 | 3,744 | 3,644 | 3,553 | 3,470 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,119 | 0,231 | 0,338 | 0,441 | 0,541 | 1,003 | 1,419 | 1,803 | 2,163 | 2,503 | 2,827 | 3,137 | 3,434 | 3,721 | 3,997 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 3,393 | 3,321 | 3,256 | 3,230 | 3,194 | 3,137 | 3,082 | 3,029 | 2,980 | 2,933 | 2,845 | 2,765 | 2,692 | 2,623 | 2,559 | 2,498 |
| $P_{spez}$ [W/cm]        | 4,263 | 4,521 | 4,774 | 4,871 | 5,017 | 5,255 | 5,486 | 5,709 | 5,930 | 6,143 | 6,555 | 6,949 | 7,330 | 7,689 | 8,039 | 8,371 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|--------------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 2,441 | 2,388 | 2,336 | 2,288 | 2,177  | 2,077  | 1,986  | 1,903  | 1,827  | 1,755  | 1,689  | 1,627  | 1,569  | 1,513  | 1,461  | 1,411  |
| $P_{spez}$ [W/cm]        | 8,689 | 9,000 | 9,295 | 9,581 | 10,258 | 10,874 | 11,437 | 11,953 | 12,433 | 12,867 | 13,263 | 13,626 | 13,965 | 14,258 | 14,537 | 14,779 |

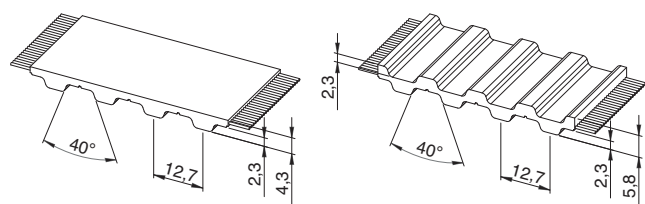
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 15                            | 60 mm           | 20                         | 60 mm           |
| ARAMID                                                    | 15                            | 60 mm           | 20                         | 60 mm           |
| STAINLESS                                                 | 18                            | 65 mm           | 20                         | 65 mm           |
| HFE                                                       | 15                            | 60 mm           | 18                         | 60 mm           |

### Min. available length

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 4"        | ≥ 800 mm  | ≥ 900 mm |

Timing pulleys → page 176



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch 1/2" = 12,7 mm
- Allow to use small diameter pulley
- Transmissible power up to 30 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm]   | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Allowable tensile load [N] | 1380        | 2185        | 2875        | 4255        | 5635        | 8510        | 11385        |
| Weight [kg/m]              | 0,056       | 0,084       | 0,113       | 0,169       | 0,225       | 0,338       | 0,450        |

Other widths are available on request

## Specialties

| Belt width b [inch]/[mm] |                | 0,50 / 12,7 | 0,75 / 19,1 | 1,00 / 25,4 | 1,50 / 38,1 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 |
|--------------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N] | 990         | 1540        | 1980        | 3080        | 4070        | 6160        | 8250         |
| STAINLESS STEEL          | $F_{Tzul}$ [N] | 900         | 1350        | 1800        | 2775        | 3675        | 5550        | 7350         |
| HFE High Flexibility     | $F_{Tzul}$ [N] | 1440        | 2160        | 2880        | 4440        | 5880        | 8880        | 11760        |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 9,156 | 8,883 | 8,647 | 8,443 | 8,263 | 8,107 | 7,523 | 7,089 | 6,753 | 6,478 | 6,246 | 6,046 | 5,870 | 5,712 | 5,569 | 5,437 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,186 | 0,362 | 0,530 | 0,692 | 0,849 | 1,576 | 2,227 | 2,829 | 3,392 | 3,924 | 4,431 | 4,917 | 5,383 | 5,831 | 6,263 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 5,318 | 5,207 | 5,104 | 5,063 | 5,007 | 4,916 | 4,829 | 4,748 | 4,671 | 4,596 | 4,461  | 4,334  | 4,218  | 4,111  | 4,010  | 3,915  |
| $P_{spez}$ [W/cm]        | 6,682 | 7,088 | 7,482 | 7,635 | 7,864 | 8,236 | 8,596 | 8,949 | 9,293 | 9,626 | 10,277 | 10,891 | 11,485 | 12,054 | 12,597 | 13,119 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 3,826  | 3,741  | 3,663  | 3,588  | 3,412  | 3,256  | 3,115  | 2,983  | 2,864  | 2,753  | 2,650  | 2,553  | 2,462  | 2,375  | 2,294  | 2,215  |
| $P_{spez}$ [W/cm]        | 13,622 | 14,104 | 14,573 | 15,027 | 16,077 | 17,049 | 17,939 | 18,744 | 19,494 | 20,179 | 20,811 | 21,385 | 21,912 | 22,382 | 22,821 | 23,197 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 14                            | 60 mm           | 20                         | 80 mm           |
| ARAMID                                                    | 14                            | 60 mm           | 20                         | 80 mm           |
| STAINLESS                                                 | 20                            | 80 mm           | 40                         | 100 mm          |
| HFE                                                       | 14                            | 60 mm           | 18                         | 80 mm           |

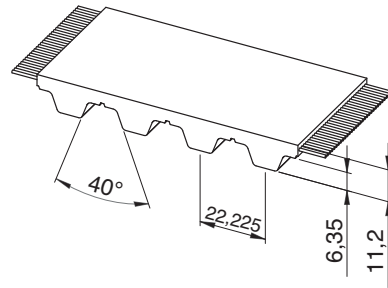
## Min. available length

| Max width | Execution     |               |
|-----------|---------------|---------------|
|           | Standard      | PAZ           |
| 4"        | $\geq 800$ mm | $\geq 900$ mm |

Timing pulleys → page 177

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to UNI/ISO 5296
- Imperial pitch  $7/8'' = 22,225$  mm
- Transmissible power up to 100 kW



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm]   | 1,00 / 25,4 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 |
|----------------------------|-------------|-------------|-------------|--------------|--------------|
| Allowable tensile load [N] | 4165        | 8575        | 12985       | 17150        | 25970        |
| Weight [kg/m]              | 0,27        | 0,53        | 0,80        | 1,06         | 1,59         |

Other widths are available on request

### Specialties

| Belt width b [inch]/[mm] |                | 1,00 / 25,4 | 2,00 / 50,8 | 3,00 / 76,2 | 4,00 / 101,6 | 6,00 / 152,4 |
|--------------------------|----------------|-------------|-------------|-------------|--------------|--------------|
| ARAMID CORD              | $F_{Tzul}$ [N] | 3300        | 6600        | 9900        | 13200        | 20020        |
| HFE High Flexibility     | $F_{Tzul}$ [N] | 3400        | 7000        | 10600       | 14000        | 21200        |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200   | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 33,957 | 32,889 | 31,932 | 31,074 | 30,306 | 29,618 | 26,46 | 24,554 | 23,178 | 22,100 | 21,213 | 20,459 | 19,804 | 19,224 | 18,704 | 18,233 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,689  | 1,337  | 1,952  | 2,539  | 3,101  | 5,541 | 7,713  | 9,708  | 11,571 | 13,327 | 14,996 | 16,590 | 18,117 | 19,586 | 21,001 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 17,802 | 17,405 | 17,037 | 16,897 | 16,693 | 16,372 | 16,070 | 15,785 | 15,515 | 15,259 | 14,782 | 14,347 | 13,946 | 13,574 | 13,228 | 12,904 |
| $P_{spez}$ [W/cm]        | 22,369 | 23,692 | 24,975 | 25,477 | 26,22  | 27,43  | 28,606 | 29,752 | 30,867 | 31,955 | 34,053 | 36,054 | 37,967 | 39,798 | 41,553 | 43,237 |

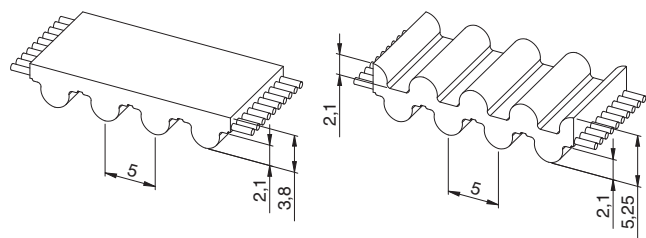
| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 12,599 | 12,312 | 12,040 | 11,782 | - | - | - | - | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 44,855 | 46,411 | 47,907 | 49,347 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 150 mm          | 20                         | 180 mm          |
| KEVLAR                                                    | 18                            | 150 mm          | 20                         | 180 mm          |
| HFE                                                       | 18                            | 150 mm          | 18                         | 180 mm          |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 4"        | $\geq 900$ mm  | $\geq 900$ mm  |
| 6"        | $\geq 1600$ mm | $\geq 1800$ mm |



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- The round tooth profile allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 6 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 15   | 25   | 50   | 100   | 150   |
|----------------------------|------|------|------|------|-------|-------|
| Allowable tensile load [N] | 1150 | 1725 | 2760 | 5635 | 11155 | 16790 |
| Weight [kg/m]              | 0,05 | 0,07 | 0,11 | 0,23 | 0,46  | 0,68  |

Other widths are available on request

## Specialties

| Belt width b [mm]    |                | 10   | 15   | 25   | 50   | 75    | 100   |
|----------------------|----------------|------|------|------|------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 770  | 1210 | 1980 | 3960 | 8030  | 12100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 675  | 1050 | 1800 | 3600 | 7275  | 10950 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 1080 | 1680 | 2880 | 5760 | 11640 | 17520 |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,928 | 2,885 | 2,845 | 2,809 | 2,776 | 2,747 | 2,637 | 2,457 | 2,395 | 2,333 | 2,273 | 2,217 | 2,166 | 2,118 | 2,073 | 2,031 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,060 | 0,119 | 0,176 | 0,233 | 0,288 | 0,552 | 0,772 | 1,003 | 1,221 | 1,428 | 1,625 | 1,814 | 1,996 | 2,170 | 2,339 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,992 | 1,955 | 1,920 | 1,906 | 1,887 | 1,855 | 1,826 | 1,797 | 1,770 | 1,744 | 1,695 | 1,649 | 1,607 | 1,567 | 1,530 | 1,495 |
| $P_{spez}$ [W/cm]        | 2,503 | 2,661 | 2,814 | 2,875 | 2,964 | 3,109 | 3,25  | 3,387 | 3,521 | 3,652 | 3,904 | 4,145 | 4,375 | 4,595 | 4,806 | 5,009 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,461 | 1,430 | 1,400 | 1,371 | 1,305 | 1,245 | 1,190 | 1,140 | 1,093 | 1,050 | 1,009 | 0,971 | 0,935 | 0,901 | 0,869 | 0,838 |
| $P_{spez}$ [W/cm]        | 5,203 | 5,390 | 5,570 | 5,743 | 6,148 | 6,517 | 6,854 | 7,161 | 7,440 | 7,695 | 7,926 | 8,135 | 8,324 | 8,493 | 8,644 | 8,778 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 16                            | 30 mm           | 25                         | 60 mm           |
| ARAMID                                                    | 16                            | 30 mm           | 25                         | 60 mm           |
| STAINLESS                                                 | 18                            | 40 mm           | 25                         | 65 mm           |
| HFE                                                       | 16                            | 30 mm           | 20                         | 60 mm           |

## Min. available length

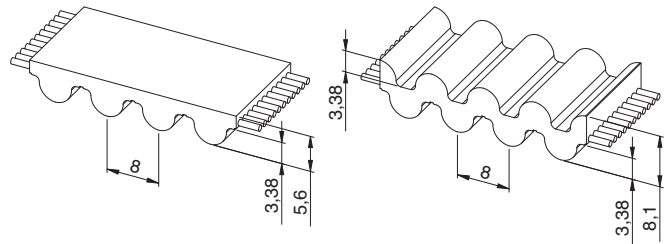
| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 180



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- The round tooth profile allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 80 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 15   | 20   | 30   | 50   | 85    | 100   | 150   |
|----------------------------|------|------|------|------|------|-------|-------|-------|
| Allowable tensile load [N] | 1715 | 2450 | 3185 | 4900 | 8330 | 14455 | 16905 | 25480 |
| Weight [kg/m]              | 0,07 | 0,10 | 0,13 | 0,20 | 0,33 | 0,56  | 0,66  | 1,00  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 10   | 15   | 20   | 30   | 50   | 85    | 100   | 150   |
|----------------------|----------------|------|------|------|------|------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 1100 | 1760 | 2420 | 3740 | 6380 | 11000 | 12980 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 720  | 1260 | 1620 | 2520 | 4320 | 14760 | 17460 | 26280 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 1800 | 2800 | 3800 | 4000 | 6800 | 11800 | 13800 | 20800 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 9,422 | 9,246 | 9,083 | 8,933 | 8,794 | 8,666 | 8,160 | 7,853 | 7,516 | 7,220 | 6,959 | 6,728 | 6,519 | 6,330 | 6,156 | 5,996 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,194 | 0,380 | 0,561 | 0,737 | 0,907 | 1,709 | 2,467 | 3,148 | 3,780 | 4,372 | 4,931 | 5,461 | 5,965 | 6,446 | 6,907 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 5,848 | 5,709 | 5,580 | 5,530 | 5,458 | 5,343 | 5,233 | 5,130 | 5,031  | 4,937  | 4,761  | 4,599  | 4,448  | 4,308  | 4,176  | 4,053  |
| $P_{spez}$ [W/cm]        | 7,348 | 7,772 | 8,180 | 8,338 | 8,572 | 8,951 | 9,316 | 9,669 | 10,010 | 10,340 | 10,968 | 11,557 | 12,110 | 12,630 | 13,119 | 13,580 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 3,936  | 3,826  | 3,721  | 3,621  | 3,390  | 3,183  | 2,994  | 2,821  | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 14,013 | 14,421 | 14,805 | 15,166 | 15,975 | 16,663 | 17,241 | 17,720 | - | - | - | - | - | - | - | - |

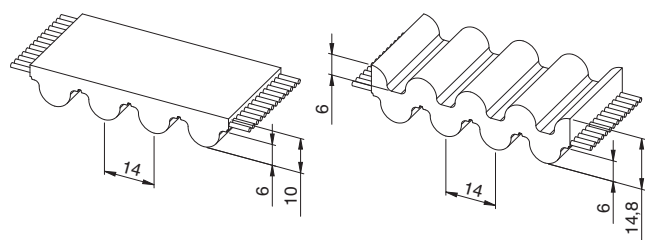
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 18                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HFE                                                       | 18                            | 50 mm           | 25                         | 120 mm          |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 181



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- The round tooth profile allows a uniform load distribution that guarantees high performance, high transmissible torque and precise tooth engagement
- Transmissible power up to 200 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 40   | 55    | 85    | 115   | 150   |
|----------------------------|------|-------|-------|-------|-------|
| Allowable tensile load [N] | 9120 | 12480 | 19680 | 26400 | 34560 |
| Weight [kg/m]              | 0,42 | 0,57  | 0,89  | 1,24  | 1,70  |

Other widths are available on request

## Specialties

| Belt width b [mm]    |                | 40    | 55    | 85    | 115   | 150   |
|----------------------|----------------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 5060  | 7040  | 11000 | 14960 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 5700  | 7800  | 12000 | 16500 | 21600 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 8740  | 11960 | 18400 | 25300 | 33120 |
| HPL High Performance | $F_{Tzul}$ [N] | 12750 | 17850 | 28050 | 37400 | -     |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 28,966 | 28,452 | 27,978 | 27,540 | 27,136 | 26,762 | 24,458 | 23,239 | 22,100 | 21,091 | 20,195 | 19,394 | 18,672 | 18,014 | 17,410 | 16,853 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,596  | 1,172  | 1,730  | 2,273  | 2,802  | 5,122  | 7,300  | 9,257  | 11,042 | 12,688 | 14,216 | 15,641 | 16,976 | 18,230 | 19,411 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 16,335 | 15,852 | 15,398 | 15,225 | 14,972 | 14,569 | 14,187 | 13,824 | 13,478 | 13,148 | 12,530 | 11,960 | 11,431 | 10,938 | 10,476 | 10,041 |
| $P_{spez}$ [W/cm]        | 20,526 | 21,578 | 22,573 | 22,957 | 23,516 | 24,408 | 25,254 | 26,056 | 26,816 | 27,536 | 28,865 | 30,056 | 31,121 | 32,069 | 32,908 | 33,645 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 9,630  | 9,242  | 8,872  | 8,521  | - | - | - | - | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 34,286 | 34,837 | 35,303 | 35,688 | - | - | - | - | - | - | - | - | - | - | - | - |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 28                            | 120 mm          | 28                         | 180 mm          |
| ARAMID                                                    | 28                            | 120 mm          | 28                         | 180 mm          |
| STAINLESS                                                 | 34                            | 150 mm          | 34                         | 200 mm          |
| HFE                                                       | 22                            | 100 mm          | 22                         | 120 mm          |
| HPL                                                       | 32                            | 140 mm          | 32                         | 200 mm          |

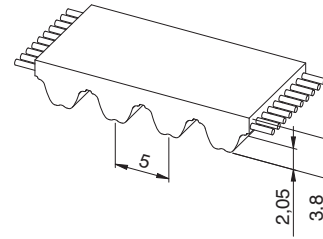
## Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 800$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 182

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- PAZ fabric on tooth delivered as standard decreases noise in high speed drives
- Transmissible power up to 6 kW



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 15   | 25   | 50   | 100   | 150   |
|----------------------------|------|------|------|------|-------|-------|
| Allowable tensile load [N] | 1150 | 1725 | 2760 | 5635 | 11155 | 16790 |
| Weight [kg/m]              | 0,05 | 0,07 | 0,11 | 0,23 | 0,46  | 0,69  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 10   | 15   | 25   | 50   | 100   | 150   |
|----------------------|----------------|------|------|------|------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 770  | 1210 | 1980 | 3960 | 8030  | 12100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 675  | 1050 | 1800 | 3600 | 7275  | 10950 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 1080 | 1680 | 2880 | 5760 | 11640 | 17520 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 3,008 | 2,964 | 2,924 | 2,888 | 2,856 | 2,826 | 2,716 | 2,616 | 2,555 | 2,492 | 2,432 | 2,376 | 2,325 | 2,277 | 2,232 | 2,190 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,062 | 0,122 | 0,181 | 0,239 | 0,296 | 0,569 | 0,822 | 1,070 | 1,305 | 1,528 | 1,742 | 1,947 | 2,146 | 2,337 | 2,523 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,151 | 2,114 | 2,079 | 2,066 | 2,046 | 2,015 | 1,985 | 1,956 | 1,929 | 1,903 | 1,854 | 1,808 | 1,766 | 1,726 | 1,689 | 1,654 |
| $P_{spez}$ [W/cm]        | 2,703 | 2,878 | 3,048 | 3,115 | 3,214 | 3,375 | 3,533 | 3,687 | 3,838 | 3,985 | 4,271 | 4,545 | 4,808 | 5,062 | 5,306 | 5,542 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500   | 10000  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 1,621 | 1,589 | 1,559 | 1,530 | 1,464 | 1,404 | 1,349 | 1,299 | 1,252 | 1,209 | 1,168 | 1,130 | 1,094 | 1,060 | 1,028  | 0,997  |
| $P_{spez}$ [W/cm]        | 5,770 | 5,990 | 6,203 | 6,410 | 6,898 | 7,351 | 7,770 | 8,161 | 8,524 | 8,861 | 9,176 | 9,468 | 9,740 | 9,993 | 10,228 | 10,445 |

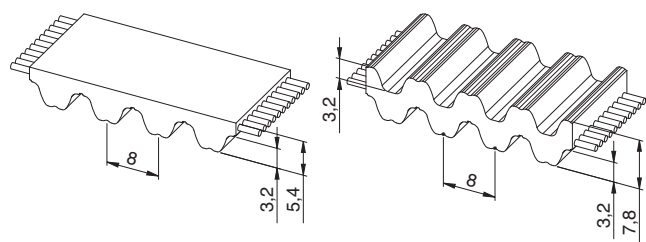
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                 | <br>Drive with reverse bending |                 |
|-----------------------------------------------------------|-----------------------------------|-----------------|--------------------------------|-----------------|
|                                                           | $z_{min}$                         | idler $d_{min}$ | $z_{min}$                      | idler $d_{min}$ |
| STANDARD                                                  | 16                                | 30 mm           | 25                             | 60 mm           |
| ARAMID                                                    | 16                                | 30 mm           | 25                             | 60 mm           |
| STAINLESS                                                 | 18                                | 40 mm           | 25                             | 65 mm           |
| HFE                                                       | 15                                | 25 mm           | 20                             | 40 mm           |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 184



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- PAZ fabric on tooth delivered as standard decreases noise in high speed drives
- Transmissible power up to 80 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 15   | 20   | 30   | 50   | 85    | 100   | 150   |
|----------------------------|------|------|------|------|------|-------|-------|-------|
| Allowable tensile load [N] | 1715 | 2450 | 3185 | 4900 | 8330 | 14455 | 16905 | 25480 |
| Weight [kg/m]              | 0,07 | 0,10 | 0,13 | 0,20 | 0,33 | 0,56  | 0,66  | 1,00  |

Other widths are available on request

## Specialties

| Belt width b [mm]    |                | 10   | 15   | 20   | 30   | 50   | 85    | 100   | 150   |
|----------------------|----------------|------|------|------|------|------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 1100 | 1760 | 2420 | 3740 | 6380 | 11000 | 12980 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 1080 | 1800 | 2340 | 3600 | 6120 | 10620 | 12420 | 18720 |
| HPL High Performance | $F_{Tzul}$ [N] | 1200 | 2000 | 2600 | 4000 | 6800 | 11800 | 13800 | 20800 |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 9,677 | 9,500 | 9,338 | 9,188 | 9,049 | 8,921 | 8,415 | 8,108 | 7,770 | 7,475 | 7,214 | 6,982 | 6,774 | 6,584 | 6,411 | 6,251 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,199 | 0,391 | 0,577 | 0,758 | 0,934 | 1,762 | 2,547 | 3,255 | 3,913 | 4,532 | 5,118 | 5,674 | 6,205 | 6,713 | 7,200 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 6,102 | 5,964 | 5,834 | 5,785 | 5,712 | 5,597 | 5,488 | 5,385  | 5,296  | 5,192  | 5,016  | 4,853  | 4,703  | 4,562  | 4,431  | 4,307  |
| $P_{spez}$ [W/cm]        | 7,668 | 8,118 | 8,553 | 8,722 | 8,972 | 9,377 | 9,769 | 10,149 | 10,517 | 10,873 | 11,554 | 12,197 | 12,803 | 13,377 | 13,919 | 14,433 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 4,191  | 4,080  | 3,975  | 3,875  | 3,645  | 3,437  | 3,248  | 3,075  | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 14,920 | 15,381 | 15,818 | 16,232 | 17,175 | 17,996 | 18,708 | 19,320 | - | - | - | - | - | - | - | - |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 18                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HPL                                                       | 30                            | 80 mm           | 30                         | 150 mm          |

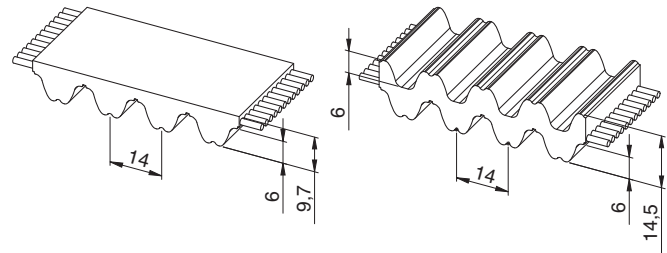
## Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 900$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1800$ mm | $\geq 1800$ mm |

Timing pulleys → page 185

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with round tooth profile and steel tension cords
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- PAZ fabric on tooth delivered as standard decreases noise in high speed drives
- Transmissible power up to 200 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 40    | 55    | 85    | 115   | 150   |
|----------------------------|-------|-------|-------|-------|-------|
| Allowable tensile load [N] | 13600 | 17850 | 28050 | 38250 | 49300 |
| Weight [kg/m]              | 0,48  | 0,63  | 1,00  | 1,40  | 1,85  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 40    | 55    | 85    | 115   | 150   |
|----------------------|----------------|-------|-------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 11250 | 15750 | 24750 | 33000 | 43500 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 8700  | 12180 | 19140 | 25520 | 33640 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 15000 | 21000 | 33000 | 44000 | 58000 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 31,194 | 30,595 | 30,041 | 29,530 | 29,059 | 28,623 | 26,687 | 25,467 | 24,328 | 23,319 | 22,423 | 21,623 | 20,900 | 20,242 | 19,638 | 19,081 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,641  | 1,258  | 1,855  | 2,434  | 2,997  | 5,589  | 8,000  | 10,190 | 12,209 | 14,088 | 15,849 | 17,508 | 19,076 | 20,564 | 21,978 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 18,563 | 18,080 | 17,626 | 17,453 | 17,200 | 16,797 | 16,415 | 16,052 | 15,707 | 15,377 | 14,758 | 14,188 | 13,659 | 13,166 | 12,704 | 12,269 |
| $P_{spez}$ [W/cm]        | 23,325 | 24,611 | 25,84  | 26,316 | 27,016 | 28,141 | 29,22  | 30,255 | 31,249 | 32,202 | 33,998 | 35,656 | 37,187 | 38,602 | 39,907 | 41,111 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 11,858 | 11,470 | 11,100 | 10,749 | - | - | - | - | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 42,219 | 43,237 | 44,169 | 45,021 | - | - | - | - | - | - | - | - | - | - | - | - |

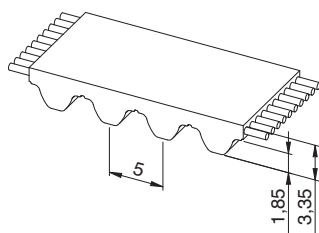
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 32                            | 140 mm          | 32                         | 200 mm          |
| ARAMID                                                    | 28                            | 120 mm          | 28                         | 150 mm          |
| STAINLESS                                                 | 40                            | 180 mm          | 40                         | 220 mm          |
| HFE                                                       | 30                            | 130 mm          | 30                         | 180 mm          |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 900$ mm  | $\geq 900$ mm  |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 186



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 5 mm
- Low noise generation in high speed drives
- Offer excellent operational reliability
- The special profile allows smooth running properties
- Transmissible power up to 6 kW

## STANDARD TOLERANCES

 WIDTH TOLERANCE:  $\pm 0,5$  [mm]

 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10    | 15    | 25    | 50    | 100   | 150   |
|----------------------------|-------|-------|-------|-------|-------|-------|
| Allowable tensile load [N] | 1150  | 1725  | 2760  | 5635  | 11155 | 16790 |
| Weight [kg/m]              | 0,046 | 0,068 | 0,114 | 0,228 | 0,456 | 0,684 |

Other widths are available on request

## Specialties

| Belt width b [mm]    |                | 10   | 15   | 25   | 50   | 100   | 150   |
|----------------------|----------------|------|------|------|------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 770  | 1210 | 1980 | 3960 | 8030  | 12100 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 675  | 1050 | 1800 | 3600 | 7275  | 10950 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 1080 | 1680 | 2880 | 5760 | 11640 | 17520 |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,936 | 2,892 | 2,853 | 2,817 | 2,784 | 2,755 | 2,645 | 2,497 | 2,435 | 2,372 | 2,313 | 2,257 | 2,205 | 2,157 | 2,113 | 2,071 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,061 | 0,119 | 0,177 | 0,233 | 0,288 | 0,554 | 0,784 | 1,020 | 1,242 | 1,453 | 1,654 | 1,847 | 2,033 | 2,212 | 2,385 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,031 | 1,995 | 1,960 | 1,946 | 1,927 | 1,895 | 1,865 | 1,837 | 1,810 | 1,784 | 1,734 | 1,689 | 1,647 | 1,607 | 1,570 | 1,535 |
| $P_{spez}$ [W/cm]        | 2,553 | 2,715 | 2,873 | 2,935 | 3,026 | 3,175 | 3,321 | 3,462 | 3,600 | 3,735 | 3,996 | 4,245 | 4,483 | 4,712 | 4,931 | 5,142 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,501 | 1,470 | 1,440 | 1,411 | 1,345 | 1,285 | 1,230 | 1,180 | 1,133 | 1,090 | 1,049 | 1,011 | 0,975 | 0,941 | 0,909 | 0,878 |
| $P_{spez}$ [W/cm]        | 5,345 | 5,54  | 5,728 | 5,910 | 6,336 | 6,726 | 7,083 | 7,411 | 7,711 | 7,987 | 8,238 | 8,469 | 8,678 | 8,868 | 9,040 | 9,195 |

## Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                 | <br>Drive with reverse bending |                 |
|-----------------------------------------------------------|-----------------------------------|-----------------|--------------------------------|-----------------|
|                                                           | $z_{min}$                         | idler $d_{min}$ | $z_{min}$                      | idler $d_{min}$ |
| STANDARD                                                  | 16                                | 30 mm           | 25                             | 60 mm           |
| ARAMID                                                    | 16                                | 30 mm           | 25                             | 60 mm           |
| STAINLESS                                                 | 18                                | 40 mm           | 25                             | 65 mm           |
| HFE                                                       | 15                                | 25 mm           | 20                             | 40 mm           |

## Min. available length

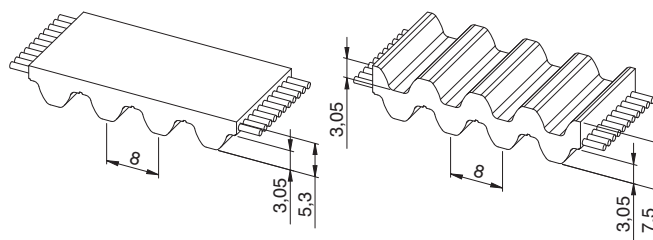
| Max width | Execution     |               |
|-----------|---------------|---------------|
|           | Standard      | PAZ           |
| 100 mm    | $\geq 800$ mm | $\geq 900$ mm |

Timing pulleys → page 188



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 8 mm
- Low noise generation in high speed drives
- Offer excellent operational reliability
- The special profile allows smooth running properties
- Transmissible power up to 80 kW
- Double sided tooth available (on request for special cords)
- **Dual toothing available from 1500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10   | 15   | 20   | 30   | 50   | 85    | 100   | 150   |
|----------------------------|------|------|------|------|------|-------|-------|-------|
| Allowable tensile load [N] | 1715 | 2490 | 3185 | 4900 | 8330 | 14455 | 16905 | 25480 |
| Weight [kg/m]              | 0,07 | 0,10 | 0,13 | 0,20 | 0,33 | 0,56  | 0,66  | 1,00  |

Other widths are available on request

### Specialties

| Belt width b [mm]    |                | 10   | 15   | 20   | 30   | 50   | 85    | 100   | 150   |
|----------------------|----------------|------|------|------|------|------|-------|-------|-------|
| ARAMID CORD          | $F_{Tzul}$ [N] | 1100 | 1760 | 2420 | 3740 | 6380 | 11000 | 12980 | 19580 |
| STAINLESS STEEL      | $F_{Tzul}$ [N] | 1080 | 1800 | 2340 | 3600 | 6120 | 10620 | 12420 | 18720 |
| HFE High Flexibility | $F_{Tzul}$ [N] | 1200 | 2000 | 2600 | 4000 | 6800 | 11800 | 13800 | 20800 |

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 9,435 | 9,301 | 9,176 | 9,057 | 8,946 | 8,841 | 8,401 | 7,908 | 7,567 | 7,268 | 7,005 | 6,772 | 6,561 | 6,370 | 6,195 | 6,034 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,195 | 0,384 | 0,569 | 0,749 | 0,926 | 1,759 | 2,484 | 3,169 | 3,805 | 4,401 | 4,963 | 5,496 | 6,003 | 6,487 | 6,950 |

| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 5,885 | 5,745 | 5,615 | 5,565 | 5,492 | 5,376 | 5,266 | 5,162 | 5,063  | 4,968  | 4,790  | 4,627  | 4,475  | 4,334  | 4,202  | 4,077  |
| $P_{spez}$ [W/cm]        | 7,394 | 7,821 | 8,231 | 8,391 | 8,626 | 9,007 | 9,374 | 9,729 | 10,072 | 10,404 | 11,035 | 11,628 | 12,184 | 12,707 | 13,199 | 13,662 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | 4500  | 5000   | 5500   | 6000   | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|-------|--------|--------|--------|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 3,960  | 3,849  | 3,743  | 3,643  | 3,410 | 3,201  | 3,011  | 2,837  | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 14,098 | 14,508 | 14,894 | 15,257 | 16,07 | 16,762 | 17,343 | 17,824 | - | - | - | - | - | - | - | - |

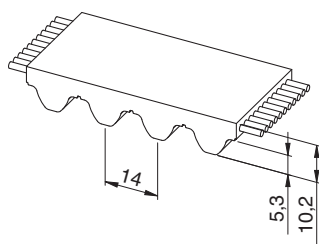
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 18                            | 50 mm           | 30                         | 120 mm          |
| ARAMID                                                    | 18                            | 50 mm           | 30                         | 120 mm          |
| STAINLESS                                                 | 24                            | 70 mm           | 40                         | 120 mm          |
| HFE                                                       | 30                            | 80 mm           | 30                         | 150 mm          |

### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 150 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

Timing pulleys → page 189



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with high tensile load steel cords and high torque capacity
- Tooth profile according to ISO 13050
- Metric pitch 14 mm
- Low noise generation in high speed drives
- Offer excellent operational reliability
- The special profile allows smooth running properties
- Transmissible power up to 200 kW

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 40    | 55    | 85    | 100   |
|----------------------------|-------|-------|-------|-------|
| Allowable tensile load [N] | 13600 | 17850 | 28050 | 33150 |
| Weight [kg/m]              | 0,48  | 0,85  | 1,10  | 1,54  |

Other widths are available on request

## Specialties

| Belt width b [mm] |                | 40    | 55    | 85    | 100   |
|-------------------|----------------|-------|-------|-------|-------|
| ARAMID CORD       | $F_{Tzul}$ [N] | 11250 | 15750 | 24750 | 28500 |
| STAINLESS STEEL   | $F_{Tzul}$ [N] | 8700  | 12180 | 19140 | 22040 |

## Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 29,857 | 29,258 | 28,704 | 28,193 | 27,722 | 27,286 | 25,572 | 24,353 | 23,214 | 22,205 | 21,309 | 20,509 | 19,786 | 19,128 | 18,524 | 17,967 |
| $P_{spez}$ [W/cm]        | 0,000  | 0,613  | 1,202  | 1,771  | 2,322  | 2,857  | 5,355  | 7,650  | 9,723  | 11,626 | 13,388 | 15,032 | 16,575 | 18,026 | 19,397 | 20,695 |

| rpm [min <sup>-1</sup> ] | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $M_{spez}$ [Ncm/cm]      | 17,449 | 16,966 | 16,512 | 16,339 | 16,086 | 15,683 | 15,301 | 14,938 | 14,592 | 14,262 | 13,644 | 13,074 | 12,545 | 12,052 | 11,590 | 11,155 |
| $P_{spez}$ [W/cm]        | 21,925 | 23,095 | 24,207 | 24,636 | 25,266 | 26,275 | 27,237 | 28,156 | 29,032 | 29,869 | 31,431 | 32,856 | 34,154 | 35,335 | 36,408 | 37,378 |

| rpm [min <sup>-1</sup> ] | 3400   | 3600   | 3800   | 4000   | - | - | - | - | - | - | - | - | - | - | - | - |
|--------------------------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|
| $M_{spez}$ [Ncm/cm]      | 10,744 | 10,356 | 9,986  | 9,63   | - | - | - | - | - | - | - | - | - | - | - | - |
| $P_{spez}$ [W/cm]        | 38,252 | 39,037 | 39,736 | 40,354 | - | - | - | - | - | - | - | - | - | - | - | - |

## Flexibility

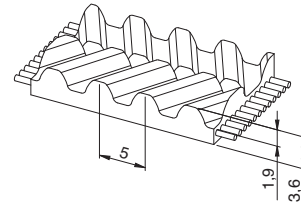
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                 | Drive with reverse bending |                 |
|-----------------------------------------------------------|-------------------------------|-----------------|----------------------------|-----------------|
|                                                           | $z_{min}$                     | idler $d_{min}$ | $z_{min}$                  | idler $d_{min}$ |
| STANDARD                                                  | 32                            | 140 mm          | 32                         | 250 mm          |
| ARAMID                                                    | 28                            | 120 mm          | 28                         | 150 mm          |
| STAINLESS                                                 | 40                            | 180 mm          | 40                         | 220 mm          |

## Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 5 mm
- **Extremely reduced noise generation**
- The special profile allows most compact drive



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,8$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

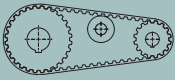
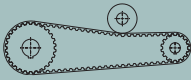
| Belt width b [mm]          | 12,5 | 25   |
|----------------------------|------|------|
| Allowable tensile load [N] | 1380 | 2760 |
| Weight [kg/m]              | 0,06 | 0,12 |

Other widths or special cords are available on request

### Tooth shear strength

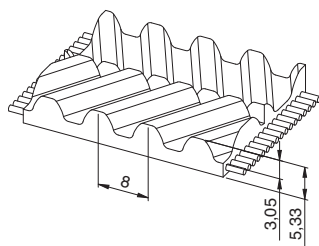
| rpm [min <sup>-1</sup> ]   | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 3,008 | 2,964 | 2,924 | 2,888 | 2,856 | 2,826 | 2,716 | 2,616 | 2,555 | 2,492 | 2,432 | 2,376 | 2,325 | 2,277 | 2,232 | 2,190 |
| P <sub>spez</sub> [W/cm]   | 0,000 | 0,062 | 0,122 | 0,182 | 0,240 | 0,296 | 0,570 | 0,823 | 1,068 | 1,304 | 1,527 | 1,745 | 1,944 | 2,149 | 2,335 | 2,523 |
| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
| M <sub>spez</sub> [Ncm/cm] | 2,151 | 2,114 | 2,079 | 2,066 | 2,046 | 2,015 | 1,985 | 1,956 | 1,929 | 1,903 | 1,854 | 1,808 | 1,766 | 1,726 | 1,689 | 1,654 |
| P <sub>spez</sub> [W/cm]   | 2,702 | 2,872 | 3,049 | 3,121 | 3,220 | 3,368 | 3,525 | 3,695 | 3,840 | 3,979 | 4,262 | 4,549 | 4,819 | 5,073 | 5,306 | 5,542 |
| rpm [min <sup>-1</sup> ]   | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | -     | -     | -     | -     | -     | -     | -     |
| M <sub>spez</sub> [Ncm/cm] | 1,621 | 1,589 | 1,559 | 1,530 | 1,464 | 1,404 | 1,349 | 1,299 | 1,252 | -     | -     | -     | -     | -     | -     | -     |
| P <sub>spez</sub> [W/cm]   | 5,768 | 5,994 | 6,208 | 6,409 | 6,880 | 7,330 | 7,775 | 8,168 | 8,508 | -     | -     | -     | -     | -     | -     | -     |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------|
|                                                           | z <sub>min</sub>                                                                                                     | idler d <sub>min</sub> | z <sub>min</sub>                                                                                                  | idler d <sub>min</sub> |
| STANDARD                                                  | 16                                                                                                                   | 30 mm                  | 25                                                                                                                | 60 mm                  |

### Min. available length

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 25 mm     | ≥ 900 mm  | ≥ 900 mm |



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 8 mm
- **Extremely reduced noise generation**
- The special profile allows most compact drive

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,8$  [mm]

THICKNESS TOLERANCE:  $\pm 0,3$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 16    | 25    | 32   | 50   |
|----------------------------|-------|-------|------|------|
| Allowable tensile load [N] | 2695  | 4165  | 5390 | 8330 |
| Weight [kg/m]              | 0,085 | 0,145 | 0,18 | 0,30 |

Other widths or special cords are available on request

## Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0      | 20     | 40     | 60     | 80     | 100    | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 10,823 | 10,668 | 10,519 | 10,376 | 10,239 | 10,107 | 9,521 | 9,042 | 8,649 | 8,343 | 8,067 | 7,820 | 7,596 | 7,392 | 7,204 | 7,030 |
| P <sub>spez</sub> [W/cm]   | 0,000  | 0,223  | 0,441  | 0,652  | 0,858  | 1,058  | 1,994 | 2,840 | 3,623 | 4,368 | 5,068 | 5,732 | 6,363 | 6,966 | 7,543 | 8,098 |

| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2880   | 3000   | 3200   |
|----------------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 6,869 | 6,719 | 6,577 | 6,523 | 6,444  | 6,318  | 6,199  | 6,086  | 5,977  | 5,874  | 5,681  | 5,502  | 5,337  | 5,182  | 5,037  | 4,901  |
| P <sub>spez</sub> [W/cm]   | 8,631 | 9,146 | 9,642 | 9,836 | 10,122 | 10,585 | 11,035 | 11,470 | 11,892 | 12,302 | 13,087 | 13,828 | 14,529 | 15,450 | 15,824 | 16,422 |

| rpm [min <sup>-1</sup> ]   | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | - | - | - | - | - | - | - |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|
| M <sub>spez</sub> [Ncm/cm] | 4,772  | 4,650  | 4,535  | 4,424  | 4,169  | 3,940  | 3,731  | 3,539  | 3,362  | - | - | - | - | - | - | - |
| P <sub>spez</sub> [W/cm]   | 16,991 | 17,531 | 18,044 | 18,531 | 19,647 | 20,627 | 21,486 | 22,234 | 22,880 | - | - | - | - | - | - | - |

## Flexibility

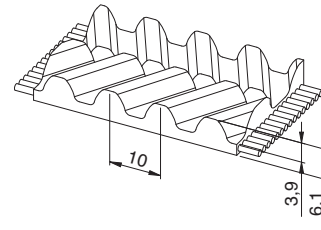
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 20                            | 50 mm                  | 30                         | 120 mm                 |

## Min. available length

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 50 mm     | ≥ 900 mm  | ≥ 900 mm |

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 10 mm
- **Extremely reduced noise generation**
- The special profile allows most compact drive



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,8$  [mm]

THICKNESS TOLERANCE:  $\pm 0,3$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 25   | 32   | 50    |
|----------------------------|------|------|-------|
| Allowable tensile load [N] | 5810 | 7920 | 12140 |
| Weight [kg/m]              | 0,18 | 0,23 | 0,37  |

Other widths or special cords are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900   | 1000   | 1100   |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 14,881 | 14,647 | 14,424 | 14,210 | 14,005 | 13,809 | 12,949 | 12,259 | 11,705 | 11,263 | 10,890 | 10,556 | 10,254 | 9,979 | 9,725  | 9,491  |
| P <sub>spez</sub> [W/cm]   | 0,000  | 0,307  | 0,604  | 0,893  | 1,173  | 1,446  | 2,712  | 3,851  | 4,903  | 5,897  | 6,842  | 7,738  | 8,590  | 9,404 | 10,184 | 10,932 |

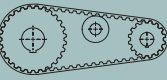
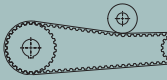
  

| rpm [min <sup>-1</sup> ]   | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 9,273  | 9,070  | 8,879  | 8,806  | 8,699  | 8,530  | 8,369  | 8,215  | 8,070  | 7,930  | 7,669  | 7,428  | 7,205  | 6,996  | 6,800  | 6,616  |
| P <sub>spez</sub> [W/cm]   | 11,653 | 12,347 | 13,017 | 13,278 | 13,664 | 14,290 | 14,897 | 15,485 | 16,055 | 16,608 | 17,667 | 18,668 | 19,615 | 20,512 | 21,363 | 22,170 |

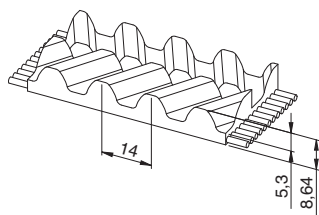
| rpm [min <sup>-1</sup> ]   | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 6,443  | 6,278  | 6,122  | 5,973  | 5,629  | 5,319  | 5,036  | 4,778  | 4,540  | 4,320  | 4,110  | 3,910  | 3,730  | 3,560  | 3,390  | 3,230  |
| P <sub>spez</sub> [W/cm]   | 22,937 | 23,666 | 24,359 | 25,017 | 26,523 | 27,847 | 29,006 | 30,016 | 30,890 | 31,630 | 32,260 | 32,780 | 33,190 | 33,510 | 33,740 | 33,870 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------|
|                                                           | z <sub>min</sub>                                                                                                     | idler d <sub>min</sub> | z <sub>min</sub>                                                                                                  | idler d <sub>min</sub> |
| STANDARD                                                  | 25                                                                                                                   | 80 mm                  | 25                                                                                                                | 150 mm                 |

### Min. available length

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 50 mm     | ≥ 900 mm  | ≥ 900 mm |



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with helical offset tooth, high tensile load steel cords and high torque capacity
- **Self tracking no need of pulley flanges**
- Metric pitch 14 mm
- **Extremely reduced noise generation**
- The special profile allows most compact drive

### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,2$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,4$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 35    | 52,5  | 70    | 105   |
|----------------------------|-------|-------|-------|-------|
| Allowable tensile load [N] | 13090 | 18700 | 26180 | 39270 |
| Weight [kg/m]              | 0,4   | 0,6   | 0,8   | 1,2   |

Other widths or special cords are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 35,651 | 34,960 | 34,330 | 33,756 | 33,232 | 32,756 | 30,618 | 28,937 | 27,434 | 26,123 | 24,971 | 23,948 | 23,028 | 22,193 | 21,429 | 20,725 |
| P <sub>spez</sub> [W/cm]   | 0,000  | 0,733  | 1,439  | 2,123  | 2,786  | 3,430  | 6,441  | 9,090  | 11,491 | 13,677 | 15,689 | 17,553 | 19,290 | 20,915 | 22,439 | 23,872 |

| rpm [min <sup>-1</sup> ]   | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 20,072 | 19,464 | 18,894 | 18,676 | 18,358 | 17,852 | 17,373 | 16,918 | 16,485 | 16,072 | 15,299 | 14,586 | 13,925 | 13,310 | 12,733 | 12,191 |
| P <sub>spez</sub> [W/cm]   | 25,222 | 26,495 | 27,698 | 28,160 | 28,834 | 29,909 | 30,926 | 31,888 | 32,798 | 33,659 | 35,243 | 36,656 | 37,912 | 39,023 | 39,999 | 40,849 |

| rpm [min <sup>-1</sup> ]   | 3400   | 3600   | 3800   | 4000   | - | - | - | - | - | - | - | - | - | - | - | - |
|----------------------------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|
| M <sub>spez</sub> [Ncm/cm] | 11,679 | 11,195 | 10,735 | 10,297 | - | - | - | - | - | - | - | - | - | - | - | - |
| P <sub>spez</sub> [W/cm]   | 41,581 | 42,201 | 42,715 | 43,129 | - | - | - | - | - | - | - | - | - | - | - | - |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 32                            | 140 mm                 | 32                         | 200 mm                 |

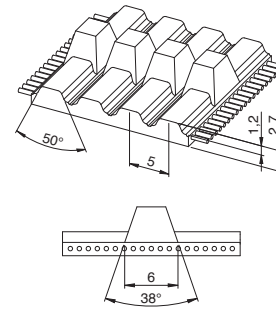
### Min. available length

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 105 mm    | ≥ 900 mm  | ≥ 900 mm |



## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Profile AT5 with central guide - K6 x 4 mm
- Central guide height 4,0 mm
- Allow to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading transferring a product
- **Max length 2500 mm**



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 25   | 32   | 50   |
|----------------------------|------|------|------|
| Allowable tensile load [N] | 2760 | 3565 | 5635 |
| Weight [kg/m]              | 0,08 | 0,11 | 0,17 |

Other widths are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 2,897 | 2,855 | 2,817 | 2,783 | 2,753 | 2,725 | 2,620 | 2,540 | 2,458 | 2,383 | 2,317 | 2,258 | 2,204 | 2,153 | 2,108 | 2,066 |
| P <sub>spez</sub> [W/cm]   | 0,000 | 0,060 | 0,118 | 0,175 | 0,231 | 0,285 | 0,549 | 0,798 | 1,030 | 1,248 | 1,456 | 1,655 | 1,846 | 2,029 | 2,207 | 2,379 |

| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 2,027 | 1,990 | 1,955 | 1,942 | 1,923 | 1,892 | 1,863 | 1,836 | 1,809 | 1,784 | 1,736 | 1,693 | 1,653 | 1,615 | 1,580 | 1,546 |
| P <sub>spez</sub> [W/cm]   | 2,547 | 2,709 | 2,866 | 2,929 | 3,020 | 3,170 | 3,316 | 3,460 | 3,599 | 3,736 | 4,000 | 4,256 | 4,500 | 4,734 | 4,962 | 5,181 |

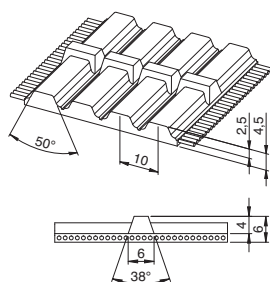
| rpm [min <sup>-1</sup> ]   | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 1,514 | 1,485 | 1,456 | 1,429 | 1,367 | 1,311 | 1,260 | 1,213 | 1,169 | 1,128 | 1,091 | 1,055 | 1,023 | 0,991 | 0,961 | 0,933 |
| P <sub>spez</sub> [W/cm]   | 5,391 | 5,598 | 5,795 | 5,986 | 6,442 | 6,862 | 7,255 | 7,619 | 7,957 | 8,271 | 8,568 | 8,839 | 9,101 | 9,337 | 9,555 | 9,766 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 25                            | 30 mm                  | 25                         | 60 mm                  |

### Min. available length

| Max width | Execution |          |
|-----------|-----------|----------|
|           | Standard  | PAZ      |
| 50 mm     | ≥ 800 mm  | ≥ 900 mm |



## BELT CHARACTERISTICS

- Polyurethane self tracking timing belt with steel tension cords
- Profile AT10 with central guide
- Central guide height 4 mm
- Allows to use pulleys without flanges
- The central guide is notched in order to maximize belt flexibility
- Ideal for conveying applications where a side load is generated by loading/unloading or transferring a product

## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 32   | 50   | 75    |
|----------------------------|------|------|-------|
| Allowable tensile load [N] | 5390 | 8330 | 12740 |
| Weight [kg/m]              | 0,27 | 0,36 | 0,54  |

Other widths are available on request

## Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0      | 20     | 40     | 60    | 80     | 100    | 200    | 300    | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|--------|--------|--------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 12,048 | 11,871 | 11,706 | 11,55 | 11,403 | 11,265 | 10,684 | 10,215 | 9,793 | 9,424 | 9,097 | 8,808 | 8,547 | 8,309 | 8,093 | 7,893 |
| P <sub>spez</sub> [W/cm]   | 0,000  | 0,249  | 0,490  | 0,726 | 0,955  | 1,180  | 2,238  | 3,209  | 4,102 | 4,934 | 5,716 | 6,456 | 7,159 | 7,831 | 8,474 | 9,091 |

| rpm [min <sup>-1</sup> ]   | 1200  | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|----------------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 7,708 | 7,534  | 7,372  | 7,310  | 7,219  | 7,076  | 6,939  | 6,810  | 6,688  | 6,570  | 6,349  | 6,147  | 5,959  | 5,782  | 5,618  | 5,464  |
| P <sub>spez</sub> [W/cm]   | 9,685 | 10,256 | 10,807 | 11,022 | 11,339 | 11,855 | 12,352 | 12,836 | 13,305 | 13,759 | 14,625 | 15,447 | 16,223 | 16,953 | 17,649 | 18,308 |

| rpm [min <sup>-1</sup> ]   | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 5,317  | 5,180  | 5,048  | 4,924  | 4,636  | 4,377  | 4,140  | 3,923  | 3,724  | 3,538  | 3,365  | 3,202  | 3,048  | 2,903  | 2,766  | 2,636  |
| P <sub>spez</sub> [W/cm]   | 18,931 | 19,529 | 20,088 | 20,625 | 21,846 | 22,915 | 23,841 | 24,648 | 25,348 | 25,933 | 26,423 | 26,825 | 27,127 | 27,358 | 27,516 | 27,598 |

## Flexibility

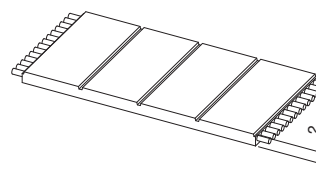
| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 20                            | 50 mm                  | 25                         | 120 mm                 |

## Min. available length

| Max width | Execution |           |
|-----------|-----------|-----------|
|           | Standard  | PAZ       |
| 75 mm     | ≥ 1600 mm | ≥ 1800 mm |

**BELT CHARACTERISTICS**

- Polyurethane flat belt with steel tension cords
- It is mainly used in drive applications where there is no need for synchronization
- Allows the use of small diameter pulleys

**STANDARD TOLERANCES**

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

**TECHNICAL DATA****Standard steel cord**

| Belt width b [mm]          | 25   | 32   | 50   | 75    | 100   |
|----------------------------|------|------|------|-------|-------|
| Allowable tensile load [N] | 4040 | 4850 | 8090 | 12400 | 16440 |
| Weight [kg/m]              | 0,07 | 0,10 | 0,16 | 0,24  | 0,30  |

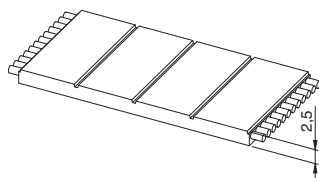
Other widths are available on request

**Flexibility**

| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler $d_{min}$               | idler $d_{min}$            |
| <b>STANDARD</b>         | 50 mm                         | 100 mm                     |

**Min. available length**

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 1600$ mm | $\geq 1800$ mm |



### BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in drive applications where there is no need for synchronization
- Allows the use of small diameter pulleys

#### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,8$  [mm]  
 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

### TECHNICAL DATA

#### Standard steel cord

| Belt width b [mm]          | 20   | 25   | 50    | 75    | 100   |
|----------------------------|------|------|-------|-------|-------|
| Allowable tensile load [N] | 4800 | 5760 | 11520 | 17280 | 23040 |
| Weight [kg/m]              | 0,08 | 0,09 | 0,18  | 0,27  | 0,36  |

Other widths are available on request

#### Flexibility

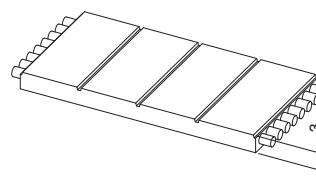
| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler $d_{min}$               | idler $d_{min}$            |
| STANDARD                | 80 mm                         | 150 mm                     |

#### Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 1600$ mm | $\geq 1800$ mm |

## BELT CHARACTERISTICS

- Polyurethane flat belt with steel tension cords
- It is mainly used in drive applications where there is no need for synchronization
- Allows the use of small diameter pulleys



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 1,0$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 25   | 30    | 60    | 100   |
|----------------------------|------|-------|-------|-------|
| Allowable tensile load [N] | 9350 | 11220 | 22440 | 37400 |
| Weight [kg/m]              | 0,20 | 0,25  | 0,50  | 1,00  |

Other widths are available on request

## Flexibility

| Minimum pulley diameter | Drive without reverse bending | Drive with reverse bending |
|-------------------------|-------------------------------|----------------------------|
|                         | idler $d_{min}$               | idler $d_{min}$            |
| STANDARD                | 120 mm                        | 180 mm                     |

## Min. available length

| Max width | Execution      |                |
|-----------|----------------|----------------|
|           | Standard       | PAZ            |
| 100 mm    | $\geq 1600$ mm | $\geq 1800$ mm |









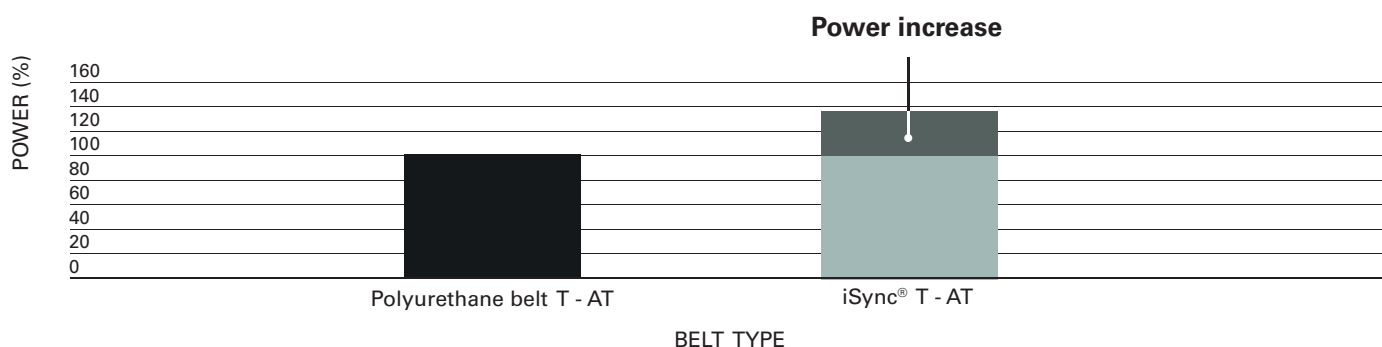
# Elatech® iSync®

## high performance timing belts

# ELATECH® iSync®

In the spirit of continuous innovation, in order to answer to the increased need of industry in power transmission, ELATECH® has developed the iSync® range of belts. iSync® belts are made with special polyurethane compound and high resistance steel tension cords which are processed with a unique and highly sophisticated technology to get

a superior polyurethane belt. iSync® belts offer optimal performances on all types of industrial applications. **iSync® belts are able to transmit up to 30% more than conventional T, AT type of belts in the same space or same power with a more compact drive.**



## Features

- High power transmission capabilities
- Maintenance free
- Superior length stability
- Clean power transmission with no dust dispersion
- No contamination of object in contact
- Very high chemical resistance and particularly to oils, greases and gasoline
- Superior abrasion resistance
- High quality, thermo-set polyurethane designed specifically for timing belt applications
- Available with either steel or Kevlar® reinforcement
- Application temperature -10°C - +80 °C (standard)
- Up to +125 °C with special compound PU 53

## Typical application fields

ELATECH® iSync® belts are suitable for power transmission drives where high precision is needed, cleanliness is critical and in difficult environment (presence of chemicals).

- |                                 |                                    |
|---------------------------------|------------------------------------|
| • Plotters                      | • Cameras                          |
| • Office automation             | • Machine tools                    |
| • Medical technology            | • Robot arms                       |
| • Packaging machines            | • Home appliances                  |
| • Swimming pool cleaning robots | • Vacuum systems                   |
| • Banking machines              | • Food processing machines         |
| • Coin dispenser                | • Textile machines                 |
| • Vending machines              | • Gardening equipment and machines |
| • Optical instruments           |                                    |

Applications with special backing and cleats are specifically designed for special heavy duty conveying drives.

## Available profile range

ELATECH® iSync® belts are available in a standard range in the following profile range:

**T2,5, T5, T10, AT5, AT10, XL, L**

As special the following profile can be manufactured on request **MXL, H, HTD5M, DD double sided executions.**

## Tension cords

ELATECH® iSync® timing belts are manufactured with high tensile strength steel cords as standard. All technical data shown in the catalogue are valid for standard cords. Belt with special cords have different mechanical and chemical properties. Special type of tension member such as stainless steel, HFE high flexibility or aramid fiber (Kevlar®) are available on request for special applications.

Aramid (Kevlar®) tension cords are used where non-magnetic drives are requested.

Stainless steel is used where high corrosion resistance is required.

Fiberglass and polyester are used where high flexibility and water resistance are required.

## Food contact approved belts - on request

ELATECH® has developed a special formulation for iSync® moulded belts for application in:

- packing
- conveying
- processing

of dairy, meat and food products which complies to the food contact law and regulations.

Please contact our Sales Department for more details.

# Standard belt sizes - Single toothing

| T2,5              |             |
|-------------------|-------------|
|                   |             |
| Number of teeth z | Length [mm] |
| 48                | 120         |
| 58                | 145         |
| 64                | 160         |
| 71                | 177,5       |
| 72                | 180         |
| 74                | 185         |
| 80                | 200         |
| 84                | 210         |
| 92                | 230         |
| 98                | 245         |
| 106               | 265         |
| 111               | 277,5       |
| 114               | 285         |
| 116               | 290         |
| 122               | 305         |
| 127               | 317,5       |
| 132               | 330         |
| 137               | 342,5       |
| 152               | 380         |
| 168               | 420         |
| 192               | 480         |
| 200               | 500         |
| 216               | 540         |
| 240               | 600         |
| 248               | 620         |
| 260               | 650         |
| 312               | 780         |
| 366               | 915         |
| 380               | 950         |
| 590               | 1475        |

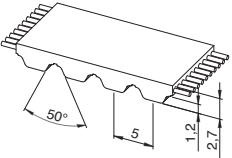
| T5                |             |                   |             |
|-------------------|-------------|-------------------|-------------|
|                   |             |                   |             |
| Number of teeth z | Length [mm] | Number of teeth z | Length [mm] |
| 18                | 90          | 112               | 560         |
| 33                | 165         | 115               | 575         |
| 36                | 180         | 118               | 590         |
| 37                | 185         | 120               | 600         |
| 40                | 200         | 122               | 610         |
| 42                | 210         | 124               | 620         |
| 43                | 215         | 125               | 625         |
| 44                | 220         | 126               | 630         |
| 45                | 225         | 128               | 640         |
| 49                | 245         | 130               | 650         |
| 50                | 250         | 132               | 660         |
| 51                | 255         | 135               | 675         |
| 52                | 260         | 138               | 690         |
| 54                | 270         | 140               | 700         |
| 55                | 275         | 144               | 720         |
| 56                | 280         | 145               | 725         |
| 59                | 295         | 150               | 750         |
| 60                | 300         | 153               | 765         |
| 61                | 305         | 156               | 780         |
| 64                | 320         | 160               | 800         |
| 65                | 325         | 163               | 815         |
| 66                | 330         | 166               | 830         |
| 68                | 340         | 168               | 840         |
| 70                | 350         | 170               | 850         |
| 71                | 355         | 172               | 860         |
| 72                | 360         | 180               | 900         |
| 73                | 365         | 188               | 940         |
| 75                | 375         | 198               | 990         |
| 78                | 390         | 200               | 1000        |
| 80                | 400         | 215               | 1075        |
| 82                | 410         | 220               | 1100        |
| 84                | 420         | 223               | 1115        |
| 85                | 425         | 228               | 1140        |
| 86                | 430         | 232               | 1160        |
| 88                | 440         | 240               | 1200        |
| 89                | 445         | 243               | 1215        |
| 90                | 450         | 253               | 1265        |
| 91                | 455         | 255               | 1275        |
| 92                | 460         | 256               | 1280        |
| 95                | 475         | 263               | 1315        |
| 96                | 480         | 270               | 1350        |
| 100               | 500         | 271               | 1355        |
| 102               | 510         | 276               | 1380        |
| 105               | 525         | 280               | 1400        |
| 109               | 545         | 288               | 1440        |
| 110               | 550         | 391               | 1955        |

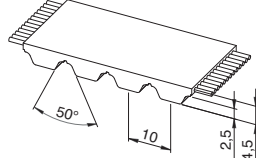
| T10               |             |                   |             |
|-------------------|-------------|-------------------|-------------|
|                   |             |                   |             |
| Number of teeth z | Length [mm] | Number of teeth z | Length [mm] |
| 26                | 260         | 95                | 950         |
| 32                | 320         | 96                | 960         |
| 35                | 350         | 97                | 970         |
| 37                | 370         | 98                | 980         |
| 40                | 400         | 100               | 1000        |
| 41                | 410         | 101               | 1010        |
| 44                | 440         | 105               | 1050        |
| 45                | 450         | 108               | 1080        |
| 48                | 480         | 110               | 1100        |
| 50                | 500         | 111               | 1110        |
| 51                | 510         | 114               | 1140        |
| 53                | 530         | 115               | 1150        |
| 55                | 550         | 120               | 1200        |
| 56                | 560         | 121               | 1210        |
| 60                | 600         | 124               | 1240        |
| 61                | 610         | 125               | 1250        |
| 63                | 630         | 130               | 1300        |
| 65                | 650         | 132               | 1320        |
| 66                | 660         | 135               | 1350        |
| 68                | 680         | 139               | 1390        |
| 69                | 690         | 140               | 1400        |
| 70                | 700         | 142               | 1420        |
| 72                | 720         | 144               | 1440        |
| 73                | 730         | 145               | 1450        |
| 75                | 750         | 146               | 1460        |
| 76                | 760         | 150               | 1500        |
| 78                | 780         | 156               | 1560        |
| 80                | 800         | 160               | 1600        |
| 81                | 810         | 161               | 1610        |
| 84                | 840         | 170               | 1700        |
| 85                | 850         | 175               | 1750        |
| 88                | 880         | 178               | 1780        |
| 89                | 890         | 180               | 1800        |
| 90                | 900         | 188               | 1880        |
| 91                | 910         | 196               | 1960        |
| 92                | 920         | 225               | 2250        |

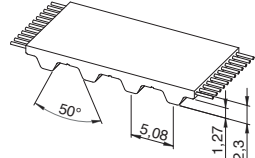
Ordering example metric pitch:

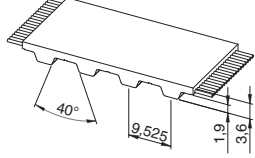
|                              |   |     |    |     |
|------------------------------|---|-----|----|-----|
| iSync® metric pitch          | U | 420 | T5 | /16 |
| ELATECH® iSync® metric pitch |   |     |    |     |
| Length in mm                 |   |     |    |     |
| Profile "T" pitch 5 mm       |   |     |    |     |
| Width in mm                  |   |     |    |     |

| VACUUM - T10      |             |
|-------------------|-------------|
|                   |             |
| Number of teeth z | Length [mm] |
| 60                | 600         |
| 63                | 630         |
| 72                | 720         |
| 80                | 800         |
| 92                | 920         |

| AT5                                                                               |             |  |
|-----------------------------------------------------------------------------------|-------------|--|
|  |             |  |
| Number of teeth<br>z                                                              | Length [mm] |  |
| 35                                                                                | 175         |  |
| 45                                                                                | 225         |  |
| 51                                                                                | 255         |  |
| 56                                                                                | 280         |  |
| 60                                                                                | 300         |  |
| 64                                                                                | 320         |  |
| 68                                                                                | 340         |  |
| 75                                                                                | 375         |  |
| 78                                                                                | 390         |  |
| 84                                                                                | 420         |  |
| 90                                                                                | 450         |  |
| 91                                                                                | 455         |  |
| 96                                                                                | 480         |  |
| 100                                                                               | 500         |  |
| 105                                                                               | 525         |  |
| 109                                                                               | 545         |  |
| 114                                                                               | 570         |  |
| 120                                                                               | 600         |  |
| 122                                                                               | 610         |  |
| 132                                                                               | 660         |  |
| 142                                                                               | 710         |  |
| 144                                                                               | 720         |  |
| 150                                                                               | 750         |  |
| 156                                                                               | 780         |  |
| 165                                                                               | 825         |  |
| 172                                                                               | 860         |  |
| 180                                                                               | 900         |  |
| 195                                                                               | 975         |  |
| 210                                                                               | 1050        |  |
| 225                                                                               | 1125        |  |
| 257                                                                               | 1285        |  |
| 300                                                                               | 1500        |  |

| AT10                                                                              |             |  |
|-----------------------------------------------------------------------------------|-------------|--|
|  |             |  |
| Number of teeth<br>z                                                              | Length [mm] |  |
| 50                                                                                | 500         |  |
| 53                                                                                | 530         |  |
| 56                                                                                | 560         |  |
| 58                                                                                | 580         |  |
| 60                                                                                | 600         |  |
| 61                                                                                | 610         |  |
| 63                                                                                | 630         |  |
| 66                                                                                | 660         |  |
| 70                                                                                | 700         |  |
| 73                                                                                | 730         |  |
| 75                                                                                | 750         |  |
| 78                                                                                | 780         |  |
| 80                                                                                | 800         |  |
| 81                                                                                | 810         |  |
| 84                                                                                | 840         |  |
| 88                                                                                | 880         |  |
| 89                                                                                | 890         |  |
| 92                                                                                | 920         |  |
| 96                                                                                | 960         |  |
| 98                                                                                | 980         |  |
| 100                                                                               | 1000        |  |
| 101                                                                               | 1010        |  |
| 105                                                                               | 1050        |  |
| 108                                                                               | 1080        |  |
| 110                                                                               | 1100        |  |
| 115                                                                               | 1150        |  |
| 120                                                                               | 1200        |  |
| 121                                                                               | 1210        |  |
| 123                                                                               | 1230        |  |
| 124                                                                               | 1240        |  |
| 125                                                                               | 1250        |  |
| 128                                                                               | 1280        |  |
| 130                                                                               | 1300        |  |
| 132                                                                               | 1320        |  |
| 135                                                                               | 1350        |  |
| 136                                                                               | 1360        |  |
| 140                                                                               | 1400        |  |
| 142                                                                               | 1420        |  |
| 148                                                                               | 1480        |  |
| 150                                                                               | 1500        |  |
| 160                                                                               | 1600        |  |
| 170                                                                               | 1700        |  |
| 172                                                                               | 1720        |  |
| 180                                                                               | 1800        |  |
| 186                                                                               | 1860        |  |
| 194                                                                               | 1940        |  |

| XL                                                                                  |             |               |
|-------------------------------------------------------------------------------------|-------------|---------------|
|  |             |               |
| Number of teeth<br>z                                                                | Length [mm] | Length [inch] |
| 30                                                                                  | 152,4       | 6,00          |
| 35                                                                                  | 177,8       | 7,00          |
| 40                                                                                  | 203,2       | 8,00          |
| 45                                                                                  | 228,6       | 9,00          |
| 50                                                                                  | 254,0       | 10,00         |
| 55                                                                                  | 279,4       | 11,00         |
| 60                                                                                  | 304,8       | 12,00         |
| 65                                                                                  | 330,2       | 13,00         |
| 70                                                                                  | 355,6       | 14,00         |
| 75                                                                                  | 381,0       | 15,00         |
| 80                                                                                  | 406,4       | 16,00         |
| 85                                                                                  | 431,8       | 17,00         |
| 90                                                                                  | 457,2       | 18,00         |
| 95                                                                                  | 482,6       | 19,00         |
| 100                                                                                 | 508,6       | 20,00         |
| 105                                                                                 | 533,4       | 21,00         |
| 110                                                                                 | 558,8       | 22,00         |
| 115                                                                                 | 584,2       | 23,00         |
| 120                                                                                 | 609,6       | 24,00         |
| 125                                                                                 | 635,0       | 25,00         |
| 130                                                                                 | 660,4       | 26,00         |
| 135                                                                                 | 685,8       | 27,00         |
| 140                                                                                 | 711,2       | 28,00         |
| 145                                                                                 | 736,6       | 29,00         |
| 150                                                                                 | 762,0       | 30,00         |

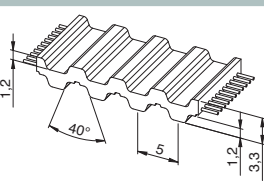
| L                                                                                     |             |               |
|---------------------------------------------------------------------------------------|-------------|---------------|
|  |             |               |
| Number of teeth<br>z                                                                  | Length [mm] | Length [inch] |
| 33                                                                                    | 314,3       | 12,38         |
| 40                                                                                    | 381,0       | 15,00         |
| 44                                                                                    | 419,1       | 16,50         |
| 46                                                                                    | 438,2       | 17,30         |
| 50                                                                                    | 476,3       | 18,75         |
| 54                                                                                    | 514,4       | 20,25         |
| 56                                                                                    | 533,4       | 21,00         |
| 60                                                                                    | 571,5       | 22,50         |
| 64                                                                                    | 609,6       | 24,00         |
| 68                                                                                    | 647,7       | 25,50         |
| 72                                                                                    | 685,8       | 27,00         |
| 76                                                                                    | 723,9       | 28,50         |
| 80                                                                                    | 762,0       | 30,00         |
| 86                                                                                    | 819,2       | 32,25         |
| 92                                                                                    | 876,3       | 34,50         |
| 98                                                                                    | 933,5       | 36,70         |
| 104                                                                                   | 990,6       | 39,00         |
| 112                                                                                   | 1066,8      | 42,00         |
| 120                                                                                   | 1143,0      | 45,00         |
| 128                                                                                   | 1219,2      | 48,00         |
| 136                                                                                   | 1295,4      | 51,00         |
| 144                                                                                   | 1371,6      | 54,00         |
| 160                                                                                   | 1524,0      | 60,00         |

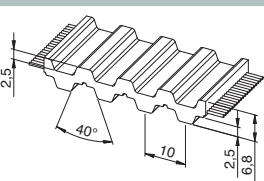
Ordering example imperial pitch:

|                             |   |     |   |      |
|-----------------------------|---|-----|---|------|
| iSync® imperial pitch       | U | 225 | L | /100 |
| ELATECH® iSync® Timing Belt |   |     |   |      |
| Length x 10 (inches)        |   |     |   |      |
| Pitch "L"                   |   |     |   |      |
| Width x 100 (inches)        |   |     |   |      |



# Standard belt sizes - Dual toothing

| DT5                                                                               |             |
|-----------------------------------------------------------------------------------|-------------|
|  |             |
| Number of teeth z                                                                 | Length [mm] |
| 82                                                                                | 410         |
| 92                                                                                | 460         |
| 110                                                                               | 550         |
| 118                                                                               | 590         |
| 124                                                                               | 620         |
| 125                                                                               | 625         |
| 130                                                                               | 650         |
| 140                                                                               | 700         |
| 150                                                                               | 750         |
| 160                                                                               | 800         |
| 163                                                                               | 815         |
| 168                                                                               | 840         |
| 172                                                                               | 860         |
| 188                                                                               | 940         |
| 220                                                                               | 1100        |

| DT10                                                                              |             |
|-----------------------------------------------------------------------------------|-------------|
|  |             |
| Number of teeth z                                                                 | Length [mm] |
| 26                                                                                | 260         |
| 53                                                                                | 530         |
| 63                                                                                | 630         |
| 66                                                                                | 660         |
| 70                                                                                | 700         |
| 72                                                                                | 720         |
| 80                                                                                | 800         |
| 81                                                                                | 810         |
| 84                                                                                | 840         |
| 90                                                                                | 900         |
| 92                                                                                | 920         |
| 98                                                                                | 980         |
| 110                                                                               | 1100        |
| 121                                                                               | 1210        |
| 124                                                                               | 1240        |
| 125                                                                               | 1250        |
| 132                                                                               | 1320        |
| 135                                                                               | 1350        |
| 142                                                                               | 1420        |
| 161                                                                               | 1610        |
| 188                                                                               | 1880        |

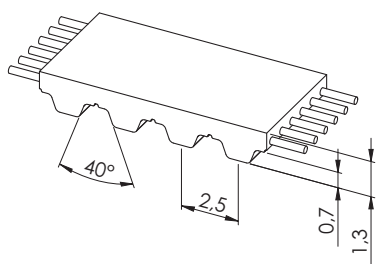
Ordering example dual imperial pitch:

iSync® dual metric pitch UD 620 DT5 /16  
 ELATECH® iSync® Timing Belt  
 Length in mm  
 Profile "T" pitch 5 mm - DUAL  
 Width in mm

## Special belts

Special belts with cleats, backing and with special moulded shape are designed and manufactured to maximize application performance.




**STANDARD TOLERANCES**

WIDTH TOLERANCE:  $\pm 0,3$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,15$  [mm]

**TECHNICAL DATA**
**Standard steel cord**

| Belt width b [mm]          | 4   | 6   | 8   | 10  | 12  | 16  | 25  | 32   |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|------|
| Allowable tensile load [N] | 100 | 160 | 220 | 300 | 360 | 480 | 780 | 1000 |
| Weight [g/m]               | 6   | 9   | 12  | 15  | 18  | 24  | 37  | 48   |

Other widths are available on request

**BELT CHARACTERISTICS**

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 2,5 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys
- Transmissible power up to 5 kW

**Tooth shear strength**

| rpm [min <sup>-1</sup> ]         | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 0,471 | 0,454 | 0,440 | 0,429 | 0,421 | 0,414 | 0,382 | 0,362 | 0,347 | 0,335 | 0,325 | 0,317 | 0,31  | 0,303 | 0,297 | 0,292 |
| <b>P<sub>spez</sub></b> [W/cm]   | 0,000 | 0,010 | 0,018 | 0,027 | 0,035 | 0,043 | 0,080 | 0,114 | 0,145 | 0,175 | 0,204 | 0,232 | 0,259 | 0,286 | 0,311 | 0,336 |

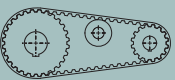
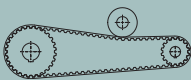
  

| rpm [min <sup>-1</sup> ]         | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 0,287 | 0,283 | 0,278 | 0,277 | 0,274 | 0,271 | 0,267 | 0,264 | 0,261 | 0,258 | 0,253 | 0,248 | 0,243 | 0,239 | 0,235 | 0,231 |
| <b>P<sub>spez</sub></b> [W/cm]   | 0,361 | 0,385 | 0,408 | 0,417 | 0,431 | 0,454 | 0,476 | 0,498 | 0,519 | 0,541 | 0,582 | 0,622 | 0,662 | 0,700 | 0,715 | 0,738 |

| rpm [min <sup>-1</sup> ]         | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 0,228 | 0,224 | 0,221 | 0,218 | 0,211 | 0,205 | 0,200 | 0,195 | 0,190 | 0,186 | 0,182 | 0,178 | 0,174 | 0,171 | 0,168 | 0,165 |
| <b>P<sub>spez</sub></b> [W/cm]   | 0,810 | 0,845 | 0,880 | 0,914 | 0,996 | 1,074 | 1,150 | 1,223 | 1,293 | 1,360 | 1,426 | 1,489 | 1,551 | 1,611 | 1,668 | 1,725 |

**Flexibility**

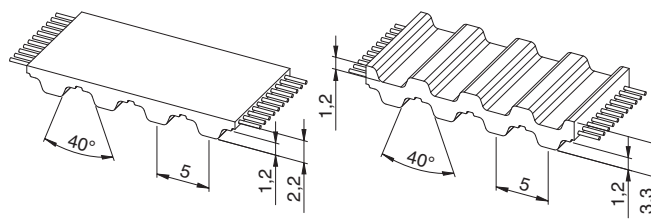
| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                              | <br>Drive with reverse bending |                              |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------|
|                                                           | <b>z<sub>min</sub></b>                                                                                               | <b>idler d<sub>min</sub></b> | <b>z<sub>min</sub></b>                                                                                            | <b>idler d<sub>min</sub></b> |
| <b>STANDARD</b>                                           | 10                                                                                                                   | 15 mm                        | 18                                                                                                                | 15 mm                        |

Timing pulleys → page 160



## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,15$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10  | 12  | 16  | 25   | 32   | 50   | 75   | 100  |
|----------------------------|-----|-----|-----|------|------|------|------|------|
| Allowable tensile load [N] | 430 | 520 | 690 | 1090 | 1380 | 2170 | 3290 | 4160 |
| Weight [g/m]               | 24  | 28  | 38  | 60   | 77   | 120  | 180  | 240  |
| Weight DT5 [g/m]           | 27  | 32  | 43  | 68   | 97   | 138  | 210  | 270  |

Other widths are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ] | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 2,523 | 2,458 | 2,403 | 2,354 | 2,312 | 2,276 | 2,135 | 2,032 | 1,951 | 1,884 | 1,829 | 1,781 | 1,738 | 1,701 | 1,667 | 1,635 |
| $P_{spez}$ [W/cm]        | 0,000 | 0,051 | 0,101 | 0,148 | 0,194 | 0,238 | 0,447 | 0,638 | 0,817 | 0,987 | 1,149 | 1,306 | 1,456 | 1,603 | 1,745 | 1,884 |

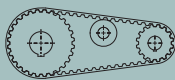
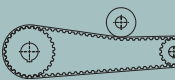
  

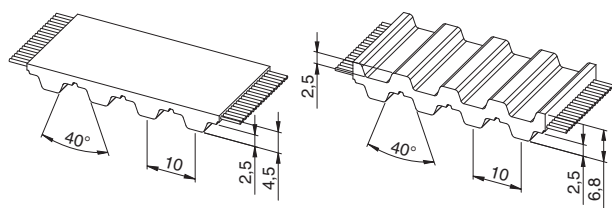
| rpm [min <sup>-1</sup> ] | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,607 | 1,580 | 1,555 | 1,545 | 1,532 | 1,510 | 1,489 | 1,470 | 1,451 | 1,433 | 1,400 | 1,371 | 1,342 | 1,317 | 1,306 | 1,292 |
| $P_{spez}$ [W/cm]        | 2,019 | 2,151 | 2,279 | 2,330 | 2,406 | 2,529 | 2,651 | 2,770 | 2,888 | 3,001 | 3,226 | 3,445 | 3,654 | 3,860 | 3,940 | 4,059 |

| rpm [min <sup>-1</sup> ] | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $M_{spez}$ [Ncm/cm]      | 1,248 | 1,229 | 1,209 | 1,191 | 1,149 | 1,111 | 1,078 | 1,046 | 1,017 | 0,991 | 0,966 | 0,943 | 0,920 | 0,900 | 0,880 | 0,862 |
| $P_{spez}$ [W/cm]        | 4,444 | 4,632 | 4,812 | 4,988 | 5,414 | 5,818 | 6,206 | 6,571 | 6,924 | 7,262 | 7,588 | 7,897 | 8,191 | 8,480 | 8,758 | 9,027 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                 | <br>Drive with reverse bending |                 |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------|-----------------|
|                                                           | $z_{min}$                                                                                                            | idler $d_{min}$ | $z_{min}$                                                                                                         | idler $d_{min}$ |
| STANDARD                                                  | 10                                                                                                                   | 30 mm           | 15                                                                                                                | 30 mm           |



## STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Ideal for drives where high belt flexibility is required
- Allows the use of small diameter pulleys

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 10  | 16   | 25   | 32   | 50   | 75   | 100  | 150   |
|----------------------------|-----|------|------|------|------|------|------|-------|
| Allowable tensile load [N] | 890 | 1520 | 2280 | 3040 | 4680 | 7080 | 9490 | 14170 |
| Weight [g/m]               | 50  | 77   | 120  | 155  | 240  | 365  | 480  | 725   |
| Weight DT10 [g/m]          | 62  | 92   | 145  | 190  | 290  | 430  | 570  | 900   |

Other widths are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0      | 20     | 40     | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 10,717 | 10,412 | 10,147 | 9,916 | 9,715 | 9,541 | 8,846 | 8,334 | 7,938 | 7,615 | 7,342 | 7,106 | 6,899 | 6,713 | 6,545 | 6,391 |
| P <sub>spez</sub> [W/cm]   | 0,000  | 0,218  | 0,425  | 0,623 | 0,814 | 0,999 | 1,853 | 2,618 | 3,325 | 3,987 | 4,613 | 5,209 | 5,779 | 6,326 | 6,853 | 7,362 |

| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|----------------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 6,250 | 6,119 | 5,998 | 5,951 | 5,884 | 5,777 | 5,676  | 5,580  | 5,490  | 5,404  | 5,243  | 5,095  | 4,959  | 4,832  | 4,714  | 4,603  |
| P <sub>spez</sub> [W/cm]   | 7,854 | 8,330 | 8,792 | 8,974 | 9,242 | 9,678 | 10,104 | 10,518 | 10,922 | 11,316 | 12,077 | 12,805 | 13,501 | 14,168 | 14,809 | 15,424 |

| rpm [min <sup>-1</sup> ]   | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 4,499  | 4,400  | 4,307  | 4,218  | 4,013  | 3,829  | 3,663  | 3,510  | 3,370  | 3,239  | 3,118  | 3,004  | 2,897  | 2,795  | 2,700  | 2,609  |
| P <sub>spez</sub> [W/cm]   | 16,017 | 16,587 | 17,136 | 17,666 | 18,910 | 20,049 | 21,094 | 22,054 | 22,935 | 23,743 | 24,484 | 25,162 | 25,781 | 26,345 | 26,855 | 27,317 |

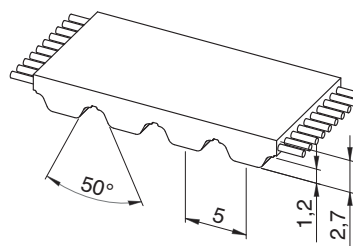
### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 12                            | 60 mm                  | 20                         | 60 mm                  |

Timing pulleys → page 162

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 5 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]  
THICKNESS TOLERANCE:  $\pm 0,15$  [mm]

## TECHNICAL DATA

### Standard steel cord

| Belt width b [mm]          | 6   | 10  | 16   | 25   | 32   | 50   | 75   | 100  |
|----------------------------|-----|-----|------|------|------|------|------|------|
| Allowable tensile load [N] | 430 | 790 | 1350 | 2200 | 2950 | 4700 | 7100 | 9500 |
| Weight [g/m]               | 21  | 34  | 54   | 86   | 110  | 175  | 260  | 350  |

Other widths are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 3,813 | 3,758 | 3,708 | 3,663 | 3,623 | 3,586 | 3,448 | 3,343 | 3,235 | 3,137 | 3,050 | 2,972 | 2,900 | 2,834 | 2,775 | 2,719 |
| P <sub>spez</sub> [W/cm]   | 0,000 | 0,079 | 0,155 | 0,230 | 0,304 | 0,376 | 0,722 | 1,050 | 1,355 | 1,642 | 1,916 | 2,178 | 2,430 | 2,671 | 2,905 | 3,132 |

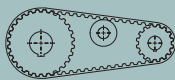
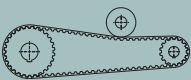
  

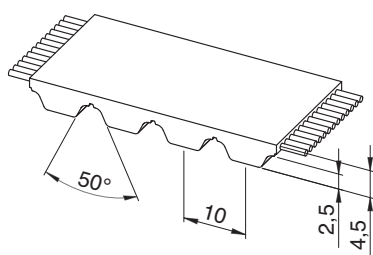
| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 2,668 | 2,620 | 2,574 | 2,557 | 2,531 | 2,491 | 2,452 | 2,416 | 2,381 | 2,348 | 2,285 | 2,229 | 2,175 | 2,125 | 2,106 | 2,079 |
| P <sub>spez</sub> [W/cm]   | 3,352 | 3,566 | 3,773 | 3,855 | 3,975 | 4,173 | 4,365 | 4,554 | 4,737 | 4,918 | 5,265 | 5,601 | 5,923 | 6,231 | 6,352 | 6,531 |

| rpm [min <sup>-1</sup> ]   | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 1,993 | 1,954 | 1,917 | 1,881 | 1,799 | 1,725 | 1,658 | 1,596  | 1,539  | 1,485  | 1,436  | 1,389  | 1,346  | 1,304  | 1,264  | 1,228  |
| P <sub>spez</sub> [W/cm]   | 7,096 | 7,368 | 7,627 | 7,879 | 8,479 | 9,032 | 9,549 | 10,029 | 10,473 | 10,887 | 11,278 | 11,635 | 11,980 | 12,289 | 12,576 | 12,854 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                        | <br>Drive with reverse bending |                        |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------|
|                                                           | z <sub>min</sub>                                                                                                     | idler d <sub>min</sub> | z <sub>min</sub>                                                                                                  | idler d <sub>min</sub> |
| STANDARD                                                  | 15                                                                                                                   | 25 mm                  | 20                                                                                                                | 60 mm                  |


**STANDARD TOLERANCES**

 WIDTH TOLERANCE:  $\pm 0,5$  [mm]

 THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

**BELT CHARACTERISTICS**

- Truly endless polyurethane timing belt with steel tension cords
- Tooth profile according to ISO 17396
- Metric pitch 10 mm
- Tooth profile and dimension are optimised to guarantee uniform load distribution and minimum deformation under load
- High resistance and low stretch steel cords to guarantee high stability and low elongation

**TECHNICAL DATA**
**Standard steel cord**

| Belt width b [mm]          | 16   | 25   | 32   | 50    | 75    | 100   | 150   |
|----------------------------|------|------|------|-------|-------|-------|-------|
| Allowable tensile load [N] | 3150 | 5450 | 7100 | 11000 | 17200 | 23000 | 34600 |
| Weight [g/m]               | 101  | 158  | 200  | 316   | 475   | 630   | 950   |

Other widths are available on request

**Tooth shear strength**

| rpm [min <sup>-1</sup> ]         | 0      | 20     | 40     | 60     | 80     | 100    | 200    | 300    | 400    | 500    | 600    | 700    | 800    | 900    | 1000   | 1100   |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 15,903 | 15,670 | 15,452 | 15,246 | 15,053 | 14,870 | 14,103 | 13,483 | 12,927 | 12,439 | 12,008 | 11,626 | 11,282 | 10,969 | 10,683 | 10,418 |
| <b>P<sub>spez</sub></b> [W/cm]   | 0,000  | 0,328  | 0,647  | 0,958  | 1,261  | 1,557  | 2,954  | 4,236  | 5,414  | 6,513  | 7,545  | 8,522  | 9,451  | 10,337 | 11,186 | 12,000 |

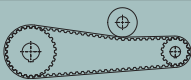
  

| rpm [min <sup>-1</sup> ]         | 1200   | 1300   | 1400   | 1440   | 1500   | 1600   | 1700   | 1800   | 1900   | 2000   | 2200   | 2400   | 2600   | 2800   | 3000   | 3200   |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 10,174 | 9,945  | 9,731  | 9,649  | 9,529  | 9,340  | 9,160  | 8,990  | 8,828  | 8,672  | 8,380  | 8,113  | 7,866  | 7,632  | 7,544  | 7,416  |
| <b>P<sub>spez</sub></b> [W/cm]   | 12,785 | 13,538 | 14,266 | 14,550 | 14,968 | 15,649 | 16,305 | 16,944 | 17,563 | 18,162 | 19,305 | 20,390 | 21,414 | 22,378 | 22,751 | 23,296 |

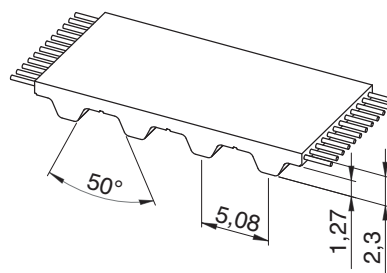
| rpm [min <sup>-1</sup> ]         | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 7,019  | 6,838  | 6,664  | 6,500  | 6,120  | 5,777  | 5,464  | 5,179  | 4,916  | 4,670  | 4,441  | 4,227  | 4,023  | 3,832  | 3,651  | 3,479  |
| <b>P<sub>spez</sub></b> [W/cm]   | 24,989 | 25,778 | 26,516 | 27,225 | 28,837 | 30,248 | 31,470 | 32,536 | 33,460 | 34,232 | 34,878 | 35,409 | 35,808 | 36,113 | 36,322 | 36,429 |

**Flexibility**

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                              | <br>Drive with reverse bending |                              |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------|
|                                                           | <b>z<sub>min</sub></b>                                                                                               | <b>idler d<sub>min</sub></b> | <b>z<sub>min</sub></b>                                                                                            | <b>idler d<sub>min</sub></b> |
| <b>STANDARD</b>                                           | 15                                                                                                                   | 50 mm                        | 25                                                                                                                | 120 mm                       |

## BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to UNI/ISO 5296
- Imperial pitch  $1/5'' = 5,08 \text{ mm}$
- Transmissible power up to 5 kW



### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5 \text{ [mm]}$   
THICKNESS TOLERANCE:  $\pm 0,2 \text{ [mm]}$

## TECHNICAL DATA

### Standard steel cord

| Belt width b [inch]/[mm]   | 0,25/6,35 | 0,31/7,94 | 0,37/9,53 | 0,50/12,7 |
|----------------------------|-----------|-----------|-----------|-----------|
| Allowable tensile load [N] | 224       | 320       | 384       | 512       |
| Weight [g/m]               | 12        | 16        | 19        | 22        |

Other widths are available on request

### Tooth shear strength

| rpm [min <sup>-1</sup> ]         | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 2,638 | 2,571 | 2,512 | 2,462 | 2,417 | 2,379 | 2,233 | 2,125 | 2,041 | 1,973 | 1,915 | 1,865 | 1,821 | 1,781 | 1,745 | 1,712 |
| <b>P<sub>spez</sub></b> [W/cm]   | 0,000 | 0,054 | 0,105 | 0,155 | 0,202 | 0,249 | 0,468 | 0,668 | 0,855 | 1,033 | 1,203 | 1,367 | 1,525 | 1,678 | 1,827 | 1,972 |

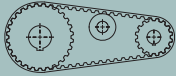
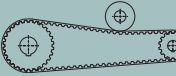
  

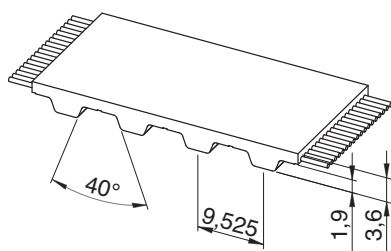
| rpm [min <sup>-1</sup> ]         | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000  | 3200  |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 1,682 | 1,654 | 1,628 | 1,618 | 1,604 | 1,581 | 1,560 | 1,539 | 1,520 | 1,501 | 1,467 | 1,435 | 1,406 | 1,379 | 1,354 | 1,330 |
| <b>P<sub>spez</sub></b> [W/cm]   | 2,114 | 2,252 | 2,387 | 2,440 | 2,519 | 2,649 | 2,776 | 2,901 | 3,024 | 3,144 | 3,379 | 3,607 | 3,828 | 4,043 | 4,253 | 4,457 |

| rpm [min <sup>-1</sup> ]         | 3400  | 3600  | 3800  | 4000  | 4500  | 5000  | 5500  | 6000  | 6500  | 7000  | 7500  | 8000  | 8500  | 9000  | 9500  | 10000 |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>M<sub>spez</sub></b> [Ncm/cm] | 1,308 | 1,287 | 1,266 | 1,247 | 1,204 | 1,164 | 1,129 | 1,096 | 1,066 | 1,038 | 1,012 | 0,987 | 0,964 | 0,943 | 0,922 | 0,903 |
| <b>P<sub>spez</sub></b> [W/cm]   | 4,655 | 4,850 | 5,039 | 5,225 | 5,671 | 6,095 | 6,499 | 6,885 | 7,253 | 7,606 | 7,945 | 8,270 | 8,582 | 8,883 | 9,172 | 9,450 |

### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | <br>Drive without reverse bending |                              | <br>Drive with reverse bending |                              |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------|
|                                                           | <b>z<sub>min</sub></b>                                                                                               | <b>idler d<sub>min</sub></b> | <b>z<sub>min</sub></b>                                                                                            | <b>idler d<sub>min</sub></b> |
| STANDARD                                                  | 10                                                                                                                   | 30 mm                        | 15                                                                                                                | 30 mm                        |



#### STANDARD TOLERANCES

WIDTH TOLERANCE:  $\pm 0,5$  [mm]

THICKNESS TOLERANCE:  $\pm 0,2$  [mm]

#### BELT CHARACTERISTICS

- Truly endless polyurethane timing belt with steel tension cords and trapezoidal tooth profile according to UNI/ISO 5296
- Imperial pitch  $3/8'' = 9,525$  mm
- Transmissible power up to 20 kW

#### TECHNICAL DATA

##### Standard steel cord

| Belt width b [inch]/[mm]   | 0,50/12,7 | 0,75/19,1 | 1,00/25,4 | 1,50/38,1 | 2,00/50,8 | 3,00/76,2 | 4,00/101,6 |
|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Allowable tensile load [N] | 880       | 1280      | 1760      | 2720      | 3600      | 5440      | 7280       |
| Weight [g/m]               | 50        | 80        | 100       | 150       | 200       | 300       | 400        |

Other widths are available on request

#### Tooth shear strength

| rpm [min <sup>-1</sup> ]   | 0     | 20    | 40    | 60    | 80    | 100   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  | 1100  |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| M <sub>spez</sub> [Ncm/cm] | 7,607 | 7,375 | 7,174 | 6,999 | 6,847 | 6,714 | 6,225 | 5,872 | 5,596 | 5,370 | 5,179 | 5,013 | 4,867 | 4,737 | 4,618 | 4,510 |
| P <sub>spez</sub> [W/cm]   | 0,000 | 0,154 | 0,300 | 0,440 | 0,574 | 0,703 | 1,304 | 1,844 | 2,344 | 2,811 | 3,254 | 3,675 | 4,077 | 4,464 | 4,836 | 5,195 |

| rpm [min <sup>-1</sup> ]   | 1200  | 1300  | 1400  | 1440  | 1500  | 1600  | 1700  | 1800  | 1900  | 2000  | 2200  | 2400  | 2600  | 2800  | 3000   | 3200   |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 4,411 | 4,319 | 4,233 | 4,200 | 4,153 | 4,077 | 4,006 | 3,938 | 3,874 | 3,813 | 3,700 | 3,596 | 3,499 | 3,410 | 3,326  | 3,248  |
| P <sub>spez</sub> [W/cm]   | 5,543 | 5,879 | 6,205 | 6,333 | 6,522 | 6,831 | 7,131 | 7,423 | 7,708 | 7,986 | 8,523 | 9,036 | 9,527 | 9,997 | 10,448 | 10,882 |

| rpm [min <sup>-1</sup> ]   | 3400   | 3600   | 3800   | 4000   | 4500   | 5000   | 5500   | 6000   | 6500   | 7000   | 7500   | 8000   | 8500   | 9000   | 9500   | 10000  |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| M <sub>spez</sub> [Ncm/cm] | 3,174  | 3,104  | 3,038  | 2,975  | 2,830  | 2,700  | 2,582  | 2,474  | 2,374  | 2,282  | 2,196  | 2,115  | 2,039  | 1,967  | 1,899  | 1,835  |
| P <sub>spez</sub> [W/cm]   | 11,299 | 11,701 | 12,087 | 12,460 | 13,335 | 14,135 | 14,869 | 15,542 | 16,159 | 16,725 | 17,243 | 17,716 | 18,148 | 18,540 | 18,894 | 19,214 |

#### Flexibility

| Minimum pulley number of teeth and minimum idler diameter | Drive without reverse bending |                        | Drive with reverse bending |                        |
|-----------------------------------------------------------|-------------------------------|------------------------|----------------------------|------------------------|
|                                                           | z <sub>min</sub>              | idler d <sub>min</sub> | z <sub>min</sub>           | idler d <sub>min</sub> |
| STANDARD                                                  | 15                            | 60 mm                  | 20                         | 60 mm                  |

Timing pulleys → page 176





# Elatech® Conveying Applications

# Polyurethane belts for conveying applications

## Backings

The unique chemical and mechanical features of ELATECH® belts together with the possibility of a wide range of backings in different materials make ELATECH® belts ideal for all conveying applications where synchronization is required. The engineer designer has unlimited possibilities to make a unique design.

### Minimum pulley diameter

The minimum pulley diameter can be calculated by means of the “pulley multiplier” shown for each type of backing.

**Minimum pulley diameter = backing thickness x pulley multiplier  $C_p$ .**

As a general rule, we may say that the smaller the pulley, the thinner the backing has to be.

The diameters obtained are valid for application with speed up to 1 m/s and a temperature of 20° C. If smaller pulley diameters are needed, please contact Elatech technical dept.

### Drive with reverse bending

ELATECH® polyurethane timing belts are suitable for drives with reverse bending. Tension should be adjusted, depending on backing hardness.

### Temperature range

The choice of the correct backing may allow the conveying of hot items. However, the toothed structure of the belt must not be exposed to temperatures over 80° C. The minimum contact temperature should be -10° C for all backing materials, however, special material compounds may be available for lower temperatures. In such cases, please check with Elatech technical department.

### Coefficient of friction

The values shown in the table refer to the approximate static coefficient of friction against steel. In order to reduce the pulley’s diameter, it is possible to splice the backing allowing a better flexibility. Pulley diameter, should never be smaller than the minimum diameter recommended for the standard belt. Please ask Elatech technical dept. for further details on coefficient of friction with other materials.

### Colours

Standard colours shown in the table may change without notice. Special/personalized colours are available on

request.

### Chemical resistance

The values given in the table for the resistance to oils and fat of each backing material are purely indicative and may vary depending on the concentration and the temperature of chemical agents. When in doubt, please check with Elatech technical department.

### General remarks

Elatech wide range of different backings can be grouped into four main categories: cellular, PVC & PU, rubber, and special. Each different category provides special features and top quality performance and endurance making the various backings especially suitable for specific applications. These features include different degrees of hardness, cellular, fabric, felt or solid material compounds, different levels of grip, FDA-compliant materials, antistatic materials, different resistance to oils and fats, and different resistance to abrasion, tear and wear.

Such variety, combined with top quality mechanical and technical properties and state of the art manufacturing systems and techniques including the application of different flights and cleats, the combination of different backing materials, the slitting and grinding of the final product to match exact dimensions and shapes without any burrs or any other imperfections left on the surface, as well as water jet cutting for extremely precise perforations, make Elatech coated belts the best and the most reliable solution for specific applications in the most diversified fields of industry.



**Polyamide  
fabric backings**

The special polyamide fabric backings allow a reduction of the friction coefficient and when applied on teeth, decrease noise in high speed drives. They are very useful in applications with sliding surfaces or product accumulation. Polyamide fabrics with antistatic properties are available.

|         |                                                                                                                   |
|---------|-------------------------------------------------------------------------------------------------------------------|
| PAZ     | Polyamide backing on tooth side.<br>Reduces coefficient of friction<br>and allows a smoother tooth<br>engagement. |
| PAR     | Polyamide backing on back side.<br>Reduces coefficient of friction.                                               |
| PAZ-PAR | PAZ-PAR: Polyamide backing on both<br>tooth and back side.                                                        |

**Coefficient of static friction**

|                             |              |
|-----------------------------|--------------|
| · Polyurethane on steel     | $\mu = 0,7$  |
| · Polyamide on steel        | $\mu = 0,35$ |
| · Polyurethane on aluminium | $\mu = 0,8$  |
| · Polyamide on aluminium    | $\mu = 0,45$ |

| Elatech Code | TZ11                                                                                | TZ21                                                                                | TZ15                                                                                 | TZ25                                                                                  |
|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Description  | PAZ Standard                                                                        | PAR Standard                                                                        | PAZ Antistatic                                                                       | PAR Antistatic                                                                        |
|              |  |  |  |  |
|              | Nylon fabric<br>on teeth                                                            | Nylon fabric<br>on back                                                             | Antistatic nylon fabric<br>on teeth                                                  | Antistatic nylon fabric<br>on back                                                    |



Polyurethane / Rubber foam backings are easily compressible according to the cellular structure of the material. Due to this main characteristic, common applications are: labelling equipment, light and/or fragile materials conveying, glass and paper industry, vacuum conveyors.

**Pulley diameter:  $C_D \bullet$  Backing Thickness**

| Elatech Code                            | CFX                                                                               | PY50                                                                               | PY70                                                                                |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | CELLOFLEX                                                                         | PU YELLOW 50                                                                       | PUYELLOW 70                                                                         |
|                                         |  |  |  |
| Material                                | Microcellular elastomeric polyurethane                                            | Polyurethane                                                                       | Polyurethane                                                                        |
| Colour                                  | brown/yellow                                                                      | yellow                                                                             | yellow                                                                              |
| Hardness [Sh.A]                         | -                                                                                 | 50                                                                                 | 70                                                                                  |
| Standard thickness [mm]                 | 3 - 10                                                                            | 2 - 3 - 4 - 5 - 6 - 8 - 10                                                         | 2 - 3 - 4 - 5 - 6 - 8 - 10                                                          |
| Temperature range (°C)                  | -30 ; +80                                                                         | -10 ; +70                                                                          | -20 ; +80                                                                           |
| Oil and fat resistance                  | low                                                                               | medium                                                                             | high                                                                                |
| Coefficient of static friction on steel | 0,3                                                                               | 0,8                                                                                | 0,75                                                                                |
| FDA food grade                          | No                                                                                | No                                                                                 | No                                                                                  |
| Pulley multiplier $C_D$                 | 16                                                                                | 20                                                                                 | 25                                                                                  |

**Pulley diameter:  $C_D \bullet$  Backing Thickness**

| Elatech Code                            | SYL-B                                                                               | SYL-V                                                                                | SYL-M                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Description                             | SYLOMER BLU                                                                         | SYLOMER GREEN                                                                        | SYLOMER BROWN                                                                         |
|                                         |  |  |  |
| Material                                | Elastomeric PUR                                                                     | Elastomeric PUR                                                                      | Elastomeric PUR                                                                       |
| Colour                                  | blue                                                                                | green                                                                                | brown                                                                                 |
| Hardness [Sh.A]                         | -                                                                                   | -                                                                                    | -                                                                                     |
| Standard thickness [mm]                 | 6 - 12 - 25                                                                         | 6 - 12 - 25                                                                          | 6 - 12 - 25                                                                           |
| Temperature range (°C)                  | -30 ; +70                                                                           | -30 ; +70                                                                            | -30 ; +70                                                                             |
| Oil and fat resistance                  | medium                                                                              | medium                                                                               | medium                                                                                |
| Coefficient of static friction on steel | 0,5                                                                                 | 0,5                                                                                  | 0,5                                                                                   |
| FDA food grade                          | No                                                                                  | No                                                                                   | No                                                                                    |
| Pulley multiplier $C_D$                 | 12                                                                                  | 14                                                                                   | 15                                                                                    |

**Pulley diameter:  $C_D \bullet$  Backing Thickness**

| Elatech Code                            | POR                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------|
| Description                             | POROL                                                                             |
|                                         |  |
| Material                                | Cellular rubber                                                                   |
| Colour                                  | black                                                                             |
| Hardness [Sh.A]                         | ~ 15                                                                              |
| Standard thickness [mm]                 | 3 - 5 - 8 - 10 - 15                                                               |
| Temperature range (°C)                  | -40 ; +70                                                                         |
| Oil and fat resistance                  | medium                                                                            |
| Coefficient of static friction on steel | 0,8                                                                               |
| FDA food grade                          | No                                                                                |
| Pulley multiplier $C_D$                 | 6                                                                                 |



PVC has a high coefficient of friction and a good resistance to acids. Due to its versatility, it is used in many applications in the paper, glass, ceramic industry, labelling and packing equipment. Its quality allows the application in food industry processes.

Among all synthetic materials and rubber compounds, polyurethane is the material which offers the best resistance to abrasion. Polyurethane films of different thickness and different shore hardness, applied on ELATECH® belts, are an ideal solution in many applications in the wood processing, ceramic and glass industry. On request it is possible to supply polyurethane backings approved for food contact.

## Pulley diameter: $C_D$ • Backing Thickness

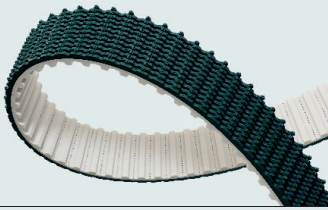
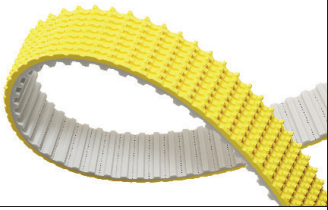
| Elatech Code                            | FBPU                                                                              | FBPVC                                                                              | PUR70                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | FISHBONE PU                                                                       | FISHBONE PVC                                                                       | PUR70                                                                               |
|                                         |  |  |  |
| Material                                | PU                                                                                | PVC                                                                                | PU                                                                                  |
| Colour                                  | transparent                                                                       | white                                                                              | transparent                                                                         |
| Hardness [Sh.A]                         | 70 / 85                                                                           | 65                                                                                 | 70                                                                                  |
| Standard thickness [mm]                 | 4                                                                                 | 4                                                                                  | 2 - 5                                                                               |
| Temperature range (°C)                  | -20 ; +80                                                                         | -10 ; +90                                                                          | -20 ; +80                                                                           |
| Oil and fat resistance                  | high                                                                              | high                                                                               | high                                                                                |
| Coefficient of static friction on steel | 0,7                                                                               | 0,7                                                                                | 0,7                                                                                 |
| FDA food grade                          | No                                                                                | Yes                                                                                | No                                                                                  |
| Pulley multiplier $C_D$                 | 18                                                                                | 18                                                                                 | 25                                                                                  |

## Pulley diameter: $C_D$ • Backing Thickness

| Elatech Code                            | PUR85                                                                               | PVCW                                                                                 | PVCG                                                                                  |
|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Description                             | PUR85                                                                               | PVC WHITE                                                                            | PVC GREEN                                                                             |
|                                         |  |  |  |
| Material                                | PU                                                                                  | PVC                                                                                  | PVC                                                                                   |
| Colour                                  | transparent                                                                         | white                                                                                | green                                                                                 |
| Hardness [Sh.A]                         | 85                                                                                  | ~ 65                                                                                 | ~ 40                                                                                  |
| Standard thickness [mm]                 | 2 - 5                                                                               | 2,3                                                                                  | 1,0                                                                                   |
| Temperature range (°C)                  | -20 ; +80                                                                           | -10 ; +90                                                                            | -10 ; +90                                                                             |
| Oil and fat resistance                  | high                                                                                | high                                                                                 | high                                                                                  |
| Coefficient of static friction on steel | 0,6                                                                                 | 1,0                                                                                  | 0,9                                                                                   |
| FDA food grade                          | No                                                                                  | Yes                                                                                  | No                                                                                    |
| Pulley multiplier $C_D$                 | 30                                                                                  | 35                                                                                   | 40                                                                                    |



**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | SG50R                                                                             | SG60                                                                               | SG70                                                                                |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | SUPERGRIP 50 R                                                                    | SUPERGRIP 60 GL                                                                    | SUPERGRIP 70 Y                                                                      |
|                                         |  |  |  |
| Material                                | Thermoplastic compound                                                            | PVC                                                                                | PU                                                                                  |
| Colour                                  | red                                                                               | green                                                                              | yellow                                                                              |
| Hardness [Sh.A]                         | 55                                                                                | 60                                                                                 | 70                                                                                  |
| Standard thickness [mm]                 | 4,5 - 12                                                                          | 4,5                                                                                | 4,5                                                                                 |
| Temperature range (°C)                  | -10 ; +70                                                                         | -10 ; +80                                                                          | -20 ; +80                                                                           |
| Oil and fat resistance                  | medium                                                                            | high                                                                               | high                                                                                |
| Coefficient of static friction on steel | 0,9                                                                               | 0,9                                                                                | 0,8                                                                                 |
| FDA food grade                          | No                                                                                | No                                                                                 | No                                                                                  |
| Pulley multiplier $C_D$                 | 12                                                                                | 12                                                                                 | 12                                                                                  |

**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | MG                                                                                  |
|-----------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | MINIGRIP PVC                                                                        |
|                                         |  |
| Material                                | PVC                                                                                 |
| Colour                                  | green                                                                               |
| Hardness [Sh.A]                         | ~ 65                                                                                |
| Standard thickness [mm]                 | 1,5                                                                                 |
| Temperature range (°C)                  | -10 ; +80°                                                                          |
| Oil and fat resistance                  | high                                                                                |
| Coefficient of static friction on steel | 0,4                                                                                 |
| FDA food grade                          | No                                                                                  |
| Pulley multiplier $C_D$                 | 40                                                                                  |

Many different rubber backings in both synthetic and natural rubber are available. Due to rubber's high friction coefficient and high temperature resistance, ELATECH® polyurethane belt with rubber backing is used in many different conveying application: paper industry, ceramic industry, wood processing industry, glass industry, labelling and packaging machines.

## Pulley diameter: $C_D \bullet$ Backing Thickness

| Elatech Code                            | SG40T                                                                             | SGR40BT                                                                            | LTX                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | SUPERGRIP 50 RT                                                                   | SUPERGRIP 50 RT                                                                    | LINATEX                                                                             |
|                                         |  |  |  |
| Material                                | Natural rubber                                                                    | Natural rubber                                                                     | Natural rubber                                                                      |
| Colour                                  | red                                                                               | black                                                                              | red                                                                                 |
| Hardness [Sh.A]                         | 40                                                                                | 40                                                                                 | ~ 40                                                                                |
| Standard thickness [mm]                 | 4,5                                                                               | 4,5                                                                                | 2,4 - 3,2 - 4,8 - 6,4 - 8,0 - 9,6                                                   |
| Temperature range (°C)                  | -40 ; +70                                                                         | -40 ; +70                                                                          | -40 ; +70                                                                           |
| Oil and fat resistance                  | low                                                                               | low                                                                                | low                                                                                 |
| Coefficient of static friction on steel | 1,0                                                                               | 1,0                                                                                | 1,1                                                                                 |
| FDA food grade                          | No                                                                                | No                                                                                 | No                                                                                  |
| Pulley multiplier $C_D$                 | 15                                                                                | 15                                                                                 | 15                                                                                  |

## Pulley diameter: $C_D \bullet$ Backing Thickness

| Elatech Code                            | LTR                                                                                 | NBR                                                                                  | NBR-W                                                                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Description                             | LINATRILE                                                                           | NITRILE                                                                              | NITRILE                                                                               |
|                                         |  |  |  |
| Material                                | Nitrile rubber                                                                      | Nitrile rubber                                                                       | Nitrile rubber                                                                        |
| Colour                                  | orange                                                                              | black                                                                                | white                                                                                 |
| Hardness [Sh.A]                         | ~ 55                                                                                | 65                                                                                   | 65                                                                                    |
| Standard thickness [mm]                 | 3 - 6                                                                               | -                                                                                    | -                                                                                     |
| Temperature range (°C)                  | -20 ; +110                                                                          | -20 ; +80                                                                            | -20 ; +80                                                                             |
| Oil and fat resistance                  | medium                                                                              | medium                                                                               | medium                                                                                |
| Coefficient of static friction on steel | 1,0                                                                                 | 0,7                                                                                  | 0,7                                                                                   |
| FDA food grade                          | No                                                                                  | No                                                                                   | No                                                                                    |
| Pulley multiplier $C_D$                 | 20                                                                                  | 18                                                                                   | 18                                                                                    |

**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | LNP                                                                               | RP400                                                                              | TNX                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | LINAPLUS                                                                          | YELLOW RUBBER                                                                      | TENAX / ISOGUM                                                                      |
|                                         |  |  |  |
| Material                                | Natural rubber                                                                    | Natural rubber                                                                     | Rubber                                                                              |
| Colour                                  | white                                                                             | yellow                                                                             | red                                                                                 |
| Hardness [Sh.A]                         | ~ 40                                                                              | ~ 35                                                                               | 40                                                                                  |
| Standard thickness [mm]                 | 2,4 - 3,2 - 4,8 - 6, 4 - 8,0 - 9,6                                                | 3 - 4 - 5 - 6 - 8 - 10 - 12 - 15<br>20 - 25 - 30                                   | 2 - 15                                                                              |
| Temperature range (°C)                  | -40 ; +70                                                                         | -35 ; +80                                                                          | -40 ; +70                                                                           |
| Oil and fat resistance                  | low                                                                               | low                                                                                | low                                                                                 |
| Coefficient of static friction on steel | 1,1                                                                               | 1,2                                                                                | 0,75                                                                                |
| FDA food grade                          | Yes                                                                               | No                                                                                 | No                                                                                  |
| Pulley multiplier $C_D$                 | 15                                                                                | 13                                                                                 | 15                                                                                  |

**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | CRX                                                                                 | VTN                                                                                  |
|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Description                             | CORREX                                                                              | VITON                                                                                |
|                                         |  |  |
| Material                                | Para rubber                                                                         | FKM Fluoroelastomer                                                                  |
| Colour                                  | brown                                                                               | black                                                                                |
| Hardness [Sh.A]                         | ~ 40                                                                                | ~ 75                                                                                 |
| Standard thickness [mm]                 | 6 - 10                                                                              | 2 - 4                                                                                |
| Temperature range (°C)                  | -10 ; +60                                                                           | -10 ; +250                                                                           |
| Oil and fat resistance                  | low                                                                                 | high                                                                                 |
| Coefficient of static friction on steel | 0,9                                                                                 | 0,7                                                                                  |
| FDA food grade                          | No                                                                                  | No                                                                                   |
| Pulley multiplier $C_D$                 | 15                                                                                  | 30                                                                                   |

Special backings are available in quite a different range of materials to cover even the most demanding design requirements.

**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | APL                                                                               | SLC                                                                                | SLCPU                                                                               |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | APL                                                                               | SILICON                                                                            | SILICON                                                                             |
|                                         |  |  |  |
| Material                                | Thermoplastic compound                                                            | Silicon                                                                            | Special silicon compound                                                            |
| Colour                                  | red-purple                                                                        | transparent                                                                        | white                                                                               |
| Hardness [Sh.A]                         | 55                                                                                | 30                                                                                 | 60                                                                                  |
| Standard thickness [mm]                 | 3,5                                                                               | 3 - 10                                                                             | 3 - 10                                                                              |
| Temperature range (°C)                  | -20 ; +60                                                                         | -40 ; +200                                                                         | -20 ; +120                                                                          |
| Oil and fat resistance                  | high                                                                              | high                                                                               | high                                                                                |
| Coefficient of static friction on steel | 0,7                                                                               | 1,0                                                                                | 0,85                                                                                |
| FDA food grade                          | No                                                                                | No                                                                                 | No                                                                                  |
| Pulley multiplier $C_D$                 | 25                                                                                | 20                                                                                 | 20                                                                                  |

**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | SLCF                                                                                | TG50                                                                                 | TG70                                                                                  |
|-----------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Description                             | SILICON FDA                                                                         | TECNOGUM 50                                                                          | TECNOGUM 70                                                                           |
|                                         |  |  |  |
| Material                                | Silicon                                                                             | Thermoplastic rubber compound                                                        | Thermoplastic rubber compound                                                         |
| Colour                                  | blue                                                                                | red                                                                                  | red                                                                                   |
| Hardness [Sh.A]                         | 30                                                                                  | ~ 50                                                                                 | ~ 70                                                                                  |
| Standard thickness [mm]                 | 3 - 10                                                                              | 1 - 6                                                                                | 1 - 6                                                                                 |
| Temperature range (°C)                  | -40 ; +220                                                                          | -10 ; +70                                                                            | -20 ; +80                                                                             |
| Oil and fat resistance                  | high                                                                                | medium                                                                               | high                                                                                  |
| Coefficient of static friction on steel | 1,1                                                                                 | 0,7                                                                                  | 0,6                                                                                   |
| FDA food grade                          | Yes                                                                                 | No                                                                                   | No                                                                                    |
| Pulley multiplier $C_D$                 | 20                                                                                  | 20                                                                                   | 25                                                                                    |

**Pulley diameter:  $C_D$  • Backing Thickness**

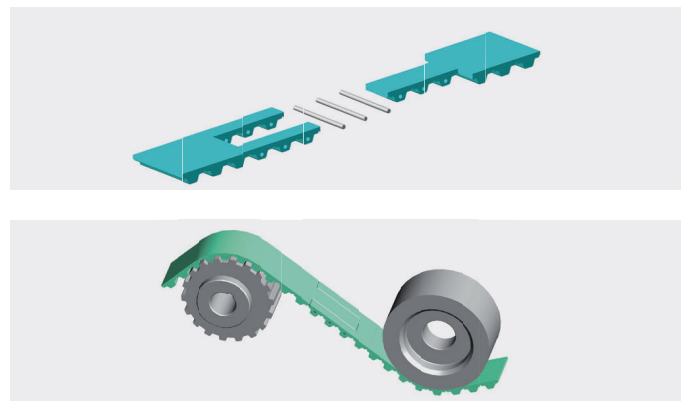
| Elatech Code                            | CHRL                                                                              | TZ26                                                                               | RIB-H-APL                                                                           |
|-----------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | CHROME LEATHER                                                                    | TZ PAR                                                                             | MULTIRIB                                                                            |
|                                         |  |  |  |
| Material                                | Chrome leather                                                                    | HDPE                                                                               | Thermoplastic compound                                                              |
| Colour                                  | grey / blue                                                                       | green                                                                              | red                                                                                 |
| Hardness [Sh.A]                         | 65                                                                                | -                                                                                  | 55                                                                                  |
| Standard thickness [mm]                 | 3                                                                                 | 0,3                                                                                | 3,5                                                                                 |
| Temperature range (°C)                  | -10 ; +70                                                                         | -10 ; +80                                                                          | -20 ; +60                                                                           |
| Oil and fat resistance                  | high                                                                              | high                                                                               | high                                                                                |
| Coefficient of static friction on steel | 0,8                                                                               | 0,18                                                                               | -                                                                                   |
| FDA food grade                          | No                                                                                | No                                                                                 | No                                                                                  |
| Pulley multiplier $C_D$                 | 30                                                                                | -                                                                                  | -                                                                                   |

**Pulley diameter:  $C_D$  • Backing Thickness**

| Elatech Code                            | RIB-H-PU70                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------|
| Description                             | MULTIRIB                                                                            |
|                                         |  |
| Material                                | PU                                                                                  |
| Colour                                  | trasparent                                                                          |
| Hardness [Sh.A]                         | 70                                                                                  |
| Standard thickness [mm]                 | 3,5                                                                                 |
| Temperature range (°C)                  | -20 ; +80                                                                           |
| Oil and fat resistance                  | high                                                                                |
| Coefficient of static friction on steel | 0,7                                                                                 |
| FDA food grade                          | No                                                                                  |
| Pulley multiplier $C_D$                 | -                                                                                   |

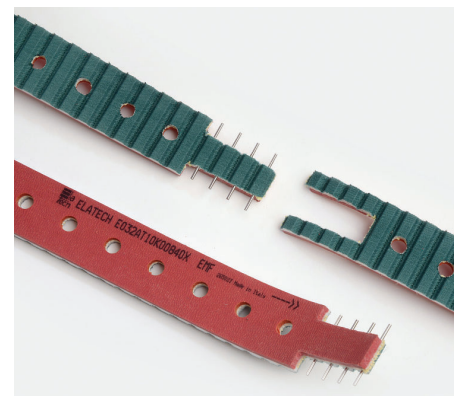
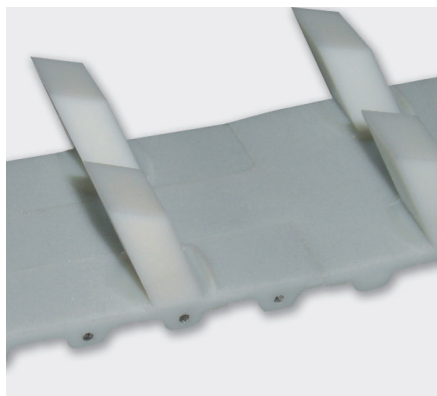
# ELATECH® EMF – Mechanical Fastening System

ELATECH® EMF - Mechanical Fastening System allows in many conveying applications cost savings associated with being able to design equipment around the installation principle of EMF.



## Features

- EMF has no exposed metal parts, therefore no metal contact is made with pulleys, so it runs very quietly. Since there are no exposed metal parts, EMF will not damage conveyed products like competing metal based mechanical fastening alternatives.
- EMF maintains the same minimum pulley requirements as the belt and can operate with back bend idlers.
- It is excellent for belt applications with special backings such as Linatex, Supergrip, PVC, Fishbone, etc. EMF fits snug, which eliminates gaps otherwise seen in competing designs.
- It is suitable for belts with profiles for quick installation, saving time and money.
- EMF installs in seconds, making it the fastest timing belt installation for product conveyance.
- There is no need for time-consuming field welding.
- It is simple to install and requires no cumbersome or expensive field welding equipment.
- It can be custom designed according to the application strength needed. EMF can reach the same strength as the traditional welding.
- It is available on all pitches, making it a “must have” for all of your customer’s conveying applications.
- EMF on double sided tooth is available only on request.





## ELATECH® EMF

| Profile | Width [mm] | Number of pins | Max working tension [N] | SAFELOCK | Carbon pin |
|---------|------------|----------------|-------------------------|----------|------------|
| T 5     | 10         | 5              | 96                      | -        | -          |
|         | 16         | 5              | 144                     | -        | -          |
|         | 8          | 8              | 224                     | -        | -          |
|         | 20         | 5              | 176                     | -        | -          |
|         | 8          | 8              | 232                     | -        | -          |
|         | 25         | 5              | 176                     | -        | -          |
|         | 8          | 8              | 256                     | -        | -          |
|         | 32         | 5              | 304                     | -        | -          |
|         | 8          | 8              | 450                     | -        | -          |
|         | 50         | 5              | 360                     | -        | -          |
|         | 8          | 8              | 480                     | -        | -          |
| T 10    | 16         | 4              | 216                     | -        | -          |
|         |            | 8              | 320                     | -        | -          |
|         |            | 12             | 640                     | -        | -          |
|         | 20         | 4              | 240                     | •        | •          |
|         |            | 8              | 304                     | •        | •          |
|         |            | 11             | 680                     | •        | •          |
|         | 25         | 8              | 504                     | •        | •          |
|         |            | 11             | 680                     | •        | •          |
|         |            | 4              | 400                     | •        | •          |
|         | 32         | 8              | 576                     | •        | •          |
|         |            | 12             | 880                     | •        | •          |
|         |            | 4              | 624                     | •        | •          |
|         | 50         | 8              | 1120                    | •        | •          |
|         |            | 11             | 1480                    | •        | •          |
|         |            | 4              | 800                     | •        | -          |
|         | 75         | 8              | 1600                    | •        | -          |
|         |            | 11             | 1760                    | •        | -          |
|         |            | 4              | 1040                    | •        | -          |
| T 20    | 25         | 4              | 536                     | •        | -          |
|         |            | 11             | 1600                    | •        | -          |
|         |            | 6              | 1200                    | •        | -          |
|         | 32         | 4              | 784                     | •        | -          |
|         |            | 11             | 2000                    | •        | -          |
|         |            | 8              | 960                     | •        | -          |
|         | 50         | 11             | 3040                    | •        | -          |
|         |            | 4              | 1600                    | •        | -          |
|         |            | 11             | 3560                    | •        | -          |
|         | 100        | 4              | 2130                    | •        | -          |
|         |            | 11             | 7600                    | •        | -          |
| AT 5    | 10         | 5              | 144                     | -        | -          |
|         |            | 5              | 168                     | -        | -          |
|         | 16         | 8              | 240                     | -        | -          |
|         |            | 5              | 280                     | -        | -          |
|         | 20         | 8              | 320                     | -        | -          |
|         |            | 5              | 208                     | -        | -          |
|         | 25         | 8              | 288                     | -        | -          |
|         |            | 5              | 320                     | -        | -          |
|         | 32         | 8              | 380                     | -        | -          |
|         |            | 5              | 440                     | -        | -          |
|         | 50         | 8              | 600                     | -        | -          |
|         |            | 4              | 256                     | -        | -          |
| AT 10   | 16         | 8              | 500                     | -        | -          |
|         |            | 12             | 960                     | -        | -          |
|         |            | 4              | 344                     | •        | •          |
|         | 25         | 4              | 384                     | •        | •          |
|         |            | 8              | 624                     | •        | •          |
|         |            | 11             | 904                     | •        | •          |
|         | 32         | 4              | 640                     | •        | •          |
|         |            | 8              | 800                     | •        | •          |
|         |            | 12             | 1200                    | •        | •          |
|         | 50         | 4              | 880                     | •        | •          |
|         |            | 8              | 1680                    | •        | •          |
|         |            | 11             | 2160                    | •        | •          |
|         | 75         | 4              | 1040                    | •        | -          |
|         |            | 8              | 2320                    | •        | -          |
|         |            | 11             | 2640                    | •        | -          |
|         | 100        | 4              | 1440                    | •        | -          |
|         |            | 8              | 2720                    | •        | -          |
|         |            | 11             | 3440                    | •        | -          |

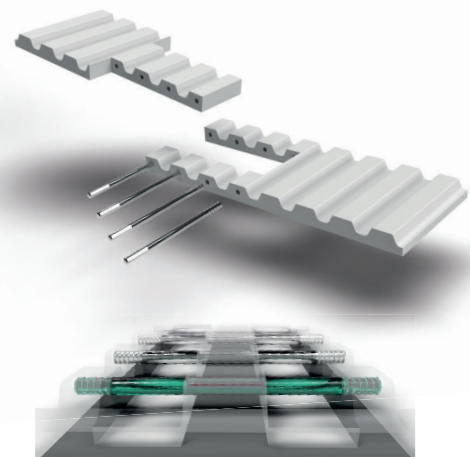
| Profile | Width [mm] | Number of pins | Max working tension [N] | SAFELOCK | Carbon pin |
|---------|------------|----------------|-------------------------|----------|------------|
| AT 20   | 25         | 4              | 800                     | •        | -          |
|         |            | 11             | 1760                    | •        | -          |
|         | 32         | 4              | 1200                    | •        | -          |
|         |            | 6              | 1520                    | •        | -          |
|         | 50         | 4              | 1600                    | •        | -          |
|         |            | 11             | 4400                    | •        | -          |
|         | 75         | 4              | 1920                    | •        | -          |
|         |            | 11             | 6080                    | •        | -          |
|         | 100        | 4              | 2700                    | •        | -          |
|         |            | 11             | 7700                    | •        | -          |
| HT 5    | 10         | 5              | 120                     | -        | -          |
|         |            | 5              | 168                     | -        | -          |
|         |            | 8              | 240                     | -        | -          |
|         | 20         | 5              | 224                     | •        | -          |
|         |            | 8              | 296                     | •        | -          |
|         |            | 5              | 280                     | •        | •          |
|         | 25         | 8              | 376                     | •        | •          |
|         |            | 5              | 320                     | •        | •          |
|         |            | 8              | 510                     | •        | •          |
|         | 32         | 5              | 480                     | •        | •          |
|         |            | 8              | 640                     | •        | •          |
|         |            | 4              | 728                     | •        | -          |
|         | 50         | 8              | 1096                    | •        | -          |
|         |            | 5              | 800                     | •        | -          |
|         |            | 8              | 1520                    | •        | -          |
| HT 8    | 15         | 5              | 256                     | -        | -          |
|         |            | 5              | 360                     | •        | -          |
|         |            | 5              | 376                     | •        | •          |
|         | 20         | 10             | 784                     | •        | •          |
|         |            | 14             | 960                     | •        | •          |
|         |            | 5              | 400                     | •        | -          |
|         | 30         | 11             | 960                     | •        | -          |
|         |            | 10             | 1440                    | •        | •          |
|         |            | 14             | 2080                    | •        | •          |
|         | 50         | 22             | 2300                    | •        | •          |
|         |            | 5              | 1320                    | •        | -          |
|         |            | 10             | 2400                    | •        | -          |
|         | 75         | 14             | 2880                    | •        | -          |
|         |            | 9              | 2320                    | •        | -          |
|         |            | 5              | 1760                    | •        | -          |
| HT 14   | 40         | 5              | 1120                    | •        | -          |
|         |            | 5              | 1600                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         | 55         | 5              | 1600                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         | 85         | 5              | 1600                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         | 100        | 5              | 1600                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |

| Profile | Width [mm] | Number of pins | Max working tension [N] | SAFELOCK | Carbon pin |
|---------|------------|----------------|-------------------------|----------|------------|
| RP 5    | 10         | 5              | 120                     | -        | -          |
|         |            | 5              | 168                     | -        | -          |
|         | 15         | 8              | 240                     | -        | -          |
|         |            | 5              | 224                     | •        | -          |
|         | 20         | 8              | 296                     | •        | -          |
|         |            | 5              | 280                     | •        | •          |
|         | 25         | 8              | 376                     | •        | •          |
|         |            | 5              | 320                     | •        | •          |
|         | 32         | 8              | 510                     | •        | •          |
|         |            | 5              | 480                     | •        | •          |
| RP 8    | 50         | 8              | 640                     | •        | •          |
|         |            | 4              | 728                     | •        | -          |
|         | 75         | 8              | 1096                    | •        | -          |
|         |            | 5              | 800                     | •        | -          |
|         | 100        | 8              | 1520                    | •        | -          |
|         |            | 5              | 800                     | •        | -          |
|         | 15         | 5              | 256                     | -        | -          |
|         |            | 5              | 360                     | •        | -          |
|         | 20         | 5              | 376                     | •        | -          |
|         |            | 5              | 376                     | •        | •          |
| RP 14   | 25         | 10             | 784                     | •        | •          |
|         |            | 14             | 960                     | •        | •          |
|         | 30         | 11             | 960                     | •        | -          |
|         |            | 5              | 800                     | •        | •          |
|         | 50         | 10             | 1440                    | •        | •          |
|         |            | 14             | 2080                    | •        | •          |
|         | 75         | 22             | 2300                    | •        | •          |
|         |            | 5              | 1320                    | •        | -          |
|         | 85         | 10             | 2400                    | •        | -          |
|         |            | 14             | 2880                    | •        | -          |

| Profile | Width [mm] | Number of pins | Max working tension [N] | SAFELOCK | Carbon pin |
|---------|------------|----------------|-------------------------|----------|------------|
| ST 5    | 10         | 5              | 120                     | -        | -          |
|         |            | 5              | 168                     | -        | -          |
|         | 15         | 8              | 240                     | -        | -          |
|         |            | 5              | 224                     | •        | -          |
|         | 20         | 8              | 296                     | •        | -          |
|         |            | 5              | 280                     | •        | •          |
|         | 25         | 8              | 376                     | •        | •          |
|         |            | 5              | 320                     | •        | •          |
|         | 32         | 8              | 510                     | •        | •          |
|         |            | 5              | 480                     | •        | •          |
| ST 8    | 50         | 8              | 640                     | •        | •          |
|         |            | 4              | 728                     | •        | -          |
|         | 75         | 8              | 1096                    | •        | -          |
|         |            | 5              | 800                     | •        | -          |
|         | 100        | 8              | 1520                    | •        | -          |
|         |            | 5              | 800                     | •        | -          |
|         | 15         | 5              | 256                     | -        | -          |
|         |            | 5              | 360                     | •        | -          |
|         | 20         | 5              | 376                     | •        | -          |
|         |            | 5              | 376                     | •        | •          |
| ST 14   | 25         | 10             | 784                     | •        | •          |
|         |            | 14             | 960                     | •        | •          |
|         | 30         | 5              | 400                     | •        | -          |
|         |            | 11             | 960                     | •        | -          |
|         | 50         | 5              | 800                     | •        | •          |
|         |            | 10             | 1440                    | •        | •          |
|         | 75         | 14             | 2080                    | •        | •          |
|         |            | 22             | 2300                    | •        | •          |
|         | 85         | 5              | 1320                    | •        | -          |
|         |            | 10             | 2400                    | •        | -          |
| L       | 40         | 5              | 1120                    | •        | -          |
|         |            | 5              | 1600                    | •        | -          |
|         | 55         | 5              | 1600                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         | 85         | 5              | 1600                    | •        | -          |
|         |            | 5              | 2400                    | •        | -          |
|         | 12,7       | 4              | 144                     | -        | -          |
|         |            | 5              | 256                     | •        | -          |
|         | 19,05      | 5              | 288                     | •        | •          |
|         |            | 5              | 480                     | •        | •          |
| H       | 25,4       | 5              | 560                     | •        | •          |
|         |            | 5              | 1000                    | •        | -          |
|         | 38,1       | 5              | 1200                    | •        | -          |
|         |            | 5              | 1200                    | •        | -          |
|         | 50,8       | 4              | 160                     | -        | -          |
|         |            | 4              | 240                     | •        | -          |
|         | 76,2       | 4              | 304                     | •        | •          |
|         |            | 4              | 520                     | •        | -          |
|         | 101,6      | 4              | 640                     | •        | •          |
|         |            | 4              | 880                     | •        | -          |
| XH      | 50,8       | 4              | 1120                    | •        | -          |
|         |            | 10             | 3060                    | •        | -          |

### SAFELOCK - EMF PIN MODULE (PATENT PENDING)

- Better adhesion due to the pin with milled edges
- Available for all the EMF standard range
- Made in stainless steel
- Excluded: pitch T5 and AT5
- Excluded: < 16mm width (all profiles)

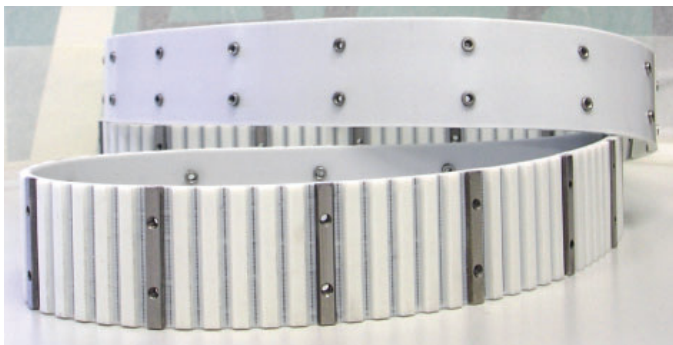


# ELATECH® EFT – False Tooth System

EFT is ELATECH mechanical profile application system specially designed for fastening cleats that cannot be welded onto polyurethane timing belts. Zinc-coated or stainless steel teeth are available, either with our embedded tooth or total tooth design.

With the total tooth design, the EFT replaces the entire tooth of the belt and is safely secured by means of two threaded holes. The embedded tooth design prevents any metal-to-metal contact, ensuring more silent operation.

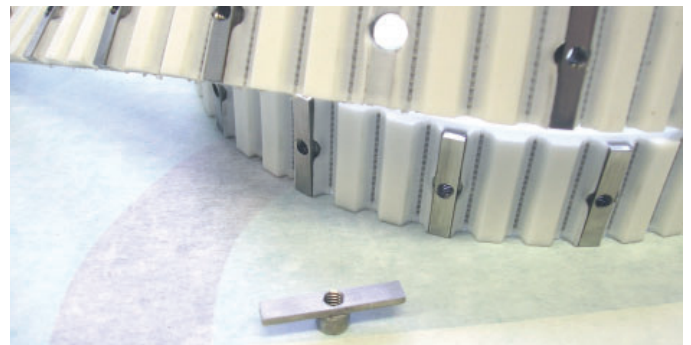
## Total tooth design



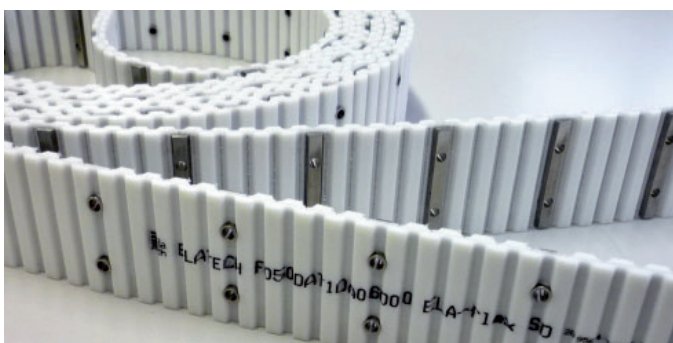
Many are the advantages offered by ELATECH® EFT:

- EFT allows to apply cleats that cannot be welded onto polyurethane timing belts because of their overall dimension and/or material (such as steel, stainless steel, plastic, urethane, wood etc.)
- EFT is in stock in stainless suitable for food and pharmaceutical industry and humid environments.
- EFT design has a self-centering effect on profile positioning, which makes it more precise than welded profiles.
- EFT can handle much higher loads than welded profiles, making it a strong solution.
- EFT is the precise solution eliminating any welded profile positioning tolerances. The profile positioning tolerance for EFT mirrors the ELATECH® timing belt tooth pitch tolerance.

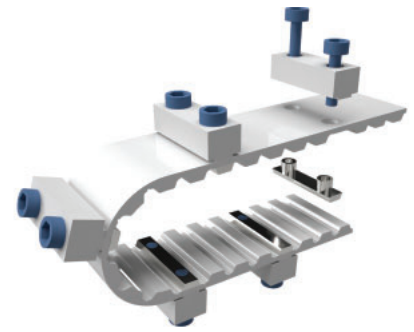
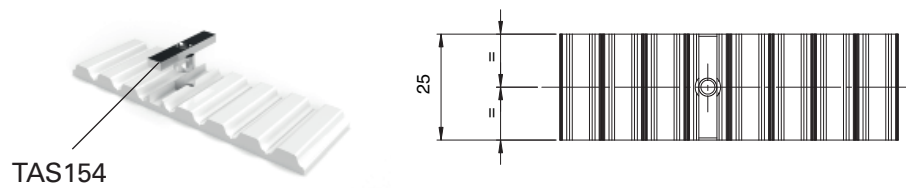
## Embedded tooth design



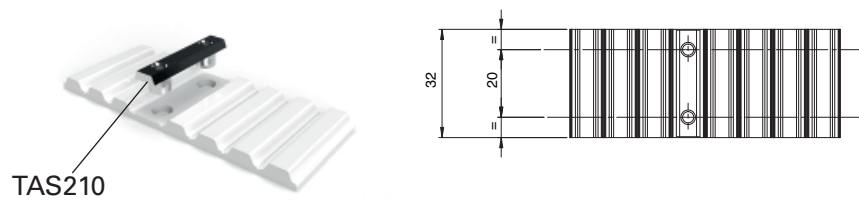
- EFT is flexible, allowing customers to reposition cleats for regularly scheduled application changes
- EFT is economical because customers can replace worn profiles without having to replace the entire belt.
- EFT is available in any of the following profiles: AT10, AT20, H, XH with or without self-tracking guide.
- EFT allows to use basic belts in all their possible executions: Flex, welded, with PAZ or PAR, FDA PU, steel, aramid or stainless steel cord.



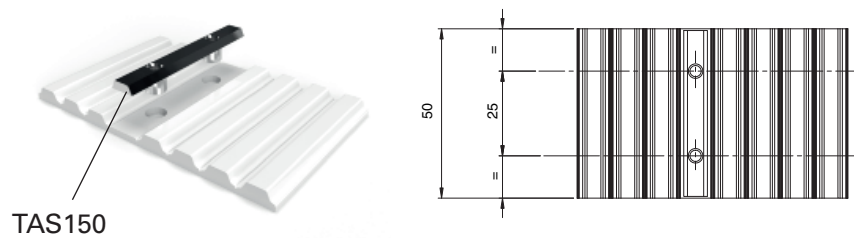
**TAS154** - suitable for AT10 and H profile 25 mm wide, one pin



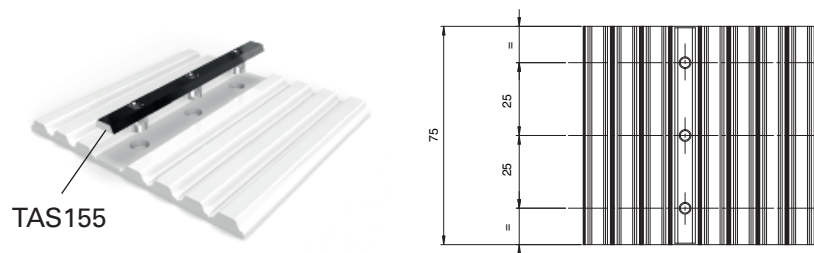
**TAS210** - suitable for AT10 profile 32 mm wide, two pins at 20 mm centre distance



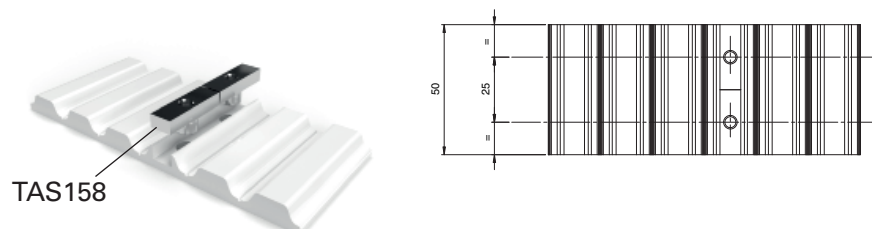
**TAS150** - suitable for AT10 profile, 50 mm wide, two pins at 25 mm centre distance



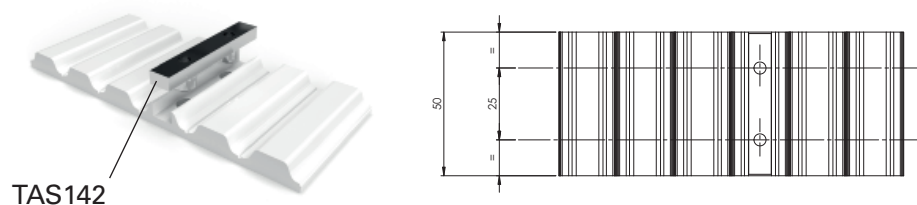
**TAS155** - suitable for AT10 profile, 75 mm wide, three pins at 25 mm centre distance



**TAS158** - suitable for AT20 and XH profile, 25-50-75-100 mm wide, number of pins multiple of 25 mm centre distance



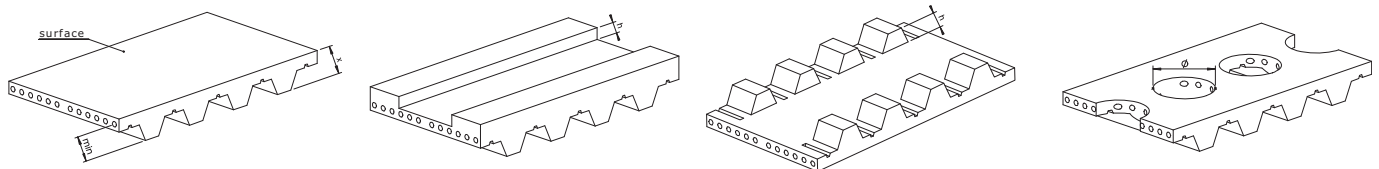
**TAS142** - suitable for AT20 and XH profile, 50 mm wide, two pins at 25 mm centre distance



# Mechanical processing

Thanks to top quality, state of the art machinery and techniques such as water jet cutting, ELATECH® timing belts can be mechanically processed to perform special and complex tasks. The extremely precise machining and finishing operations guarantee the respect of the strictest tolerance requirements and the maximum reliability of ELATECH® timing belts in all the most complex and demanding industrial applications.

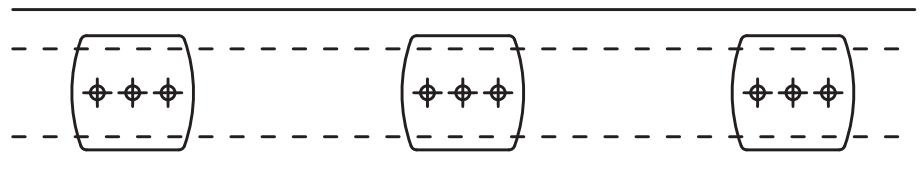
Depending on the application requirements, mechanical processing may include longitudinal milling of the teeth and/or of the back, back and side grinding, teeth removal, belt surface perforation and/or engraving, as well as surface preparation for the application of special profiles.



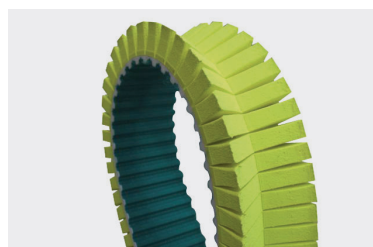
The great precision and the versatility of water jet cutting technology allow the creation of holes of any dimensions and shapes, from the smallest to the largest, from perfectly circular to oval or square.



Special backings can also be machined to optimize the performance of the belts in special applications. A typical example is the hollow milling of the backing to create a “vacuum cup effect” and maximize the suction provided by water jet cut bores. In this case, perfect suction is also granted by the absence of any tension members within the vacuum areas.

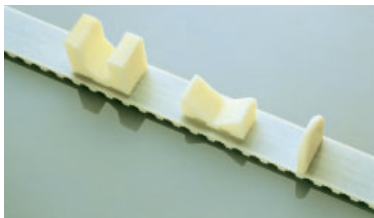


In another application, the thick V-shaped yellow PU backing on a belt used for transporting aluminium bars is slitted transversely to enhance the flexibility of the belt itself and to improve its revolution around smaller pulleys.



# ELATECH<sup>®</sup> polyurethane belts with profiles

It is possible to attach profiles on all ELATECH<sup>®</sup> M and V, ELA-flex SD<sup>®</sup> and iSync<sup>®</sup> polyurethane belts for conveying, handling and positioning applications. The cleats are produced in the same material of the belts in order to guarantee the maximum strength.



## Pitch

It is recommended to choose the pitch of the profile corresponding to the belt profile or multiple. This allows to minimize the effects of the belt overall length tolerance on profile spacing.

## Position

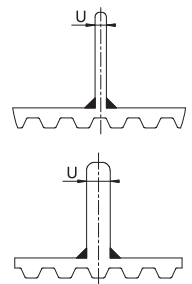
Profile position may be over the tooth or not over the tooth. Belt flexibility is maximized when the profiles are applied over the tooth (Fig.1).



The belts with profiles allow a synchronised translation of the products at very high speeds and low noise. A very wide range of profiles is available. If the required profile is not shown in the following pages, please contact our technical office.

## Arc of contact

It is to be noted that the belt's arc of contact may be restricted by the jointed profile. It is therefore recommended to select profiles with the minimum allowable thickness "U".



## Tolerances

The tolerance of position of the profiles is +/- 0,5 mm. If required it is possible to reduce the tolerance down to +/- 0,2 mm with an extra machining. During the welding process a bead of polyurethane of about 0,5-1 mm develops at the meeting point between the profile and the belt. Should it be necessary for the application, it is possible to remove the bead with mechanical machining.

| Belt type | Profile thickness "U" [mm]                   |    |    |    |    |    |    |    |    |    |    |     |    |     |     |    |     |     |     |     |     |     |     |     |
|-----------|----------------------------------------------|----|----|----|----|----|----|----|----|----|----|-----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|
|           | 2                                            |    | 3  |    | 5  |    | 6  |    | 8  |    | 10 |     | 12 |     | 14  |    | 16  |     | 20  |     | 25  |     | 30  |     |
|           | Recommended minimum pulley number of teeth z |    |    |    |    |    |    |    |    |    |    |     |    |     |     |    |     |     |     |     |     |     |     |     |
| T5        | 14                                           | 20 | 14 | 30 | 20 | 45 | 25 | 50 | 40 | 60 | 60 | 100 | 80 | -   | 100 | -  | -   | -   | -   | -   | -   | -   | -   | -   |
| T10       | 16                                           | 20 | 16 | 20 | 16 | 30 | 16 | 40 | 20 | 50 | 25 | 50  | 35 | 60  | 50  | 70 | 80  | 80  | 100 | 100 | 120 | 120 | -   | -   |
| T20       | 20                                           | 20 | 18 | 20 | 18 | 25 | 18 | 40 | 18 | 50 | 20 | 50  | 25 | 50  | 30  | 60 | 40  | 60  | 50  | 60  | 70  | 80  | -   | -   |
| AT5       | 12                                           | 20 | 12 | 30 | 20 | 45 | 25 | 50 | 40 | 60 | 60 | 100 | -  | -   | 100 | -  | -   | -   | -   | -   | -   | -   | -   | -   |
| AT10      | 18                                           | 20 | 18 | 20 | 18 | 30 | 18 | 40 | 20 | 50 | 25 | 50  | 35 | 60  | 50  | 70 | 80  | 80  | 100 | 100 | 120 | 120 | -   | -   |
| AT20      | 20                                           | 20 | 20 | 20 | 20 | 25 | 20 | 40 | 20 | 50 | 20 | 50  | 25 | 50  | 40  | 40 | 50  | 50  | 50  | 60  | 70  | 80  | 100 | 100 |
| XL        | 10                                           | 20 | 10 | 30 | 20 | 45 | 25 | 50 | 40 | 60 | 50 | 100 | 60 | 100 | -   | -  | -   | -   | -   | -   | -   | -   | -   | -   |
| L         | 12                                           | 16 | 12 | 20 | 12 | 40 | 20 | 50 | 30 | 60 | 40 | 60  | 50 | 70  | 60  | 80 | 100 | 100 | -   | -   | -   | -   | -   | -   |
| H         | 14                                           | 16 | 14 | 16 | 14 | 25 | 14 | 30 | 20 | 50 | 25 | 50  | 40 | 60  | 50  | 70 | 80  | 80  | 100 | 100 | 120 | 120 | -   | -   |
| XH        | 18                                           | 18 | 18 | 20 | 18 | 20 | 18 | 30 | 18 | 40 | 20 | 50  | 20 | 50  | 25  | 55 | 35  | 60  | 50  | 60  | 70  | 80  | -   | -   |
| HTD5M     | 12                                           | 20 | 12 | 30 | 20 | 45 | 25 | 50 | 40 | 60 | 60 | 100 | 80 | -   | 100 | -  | -   | -   | -   | -   | -   | -   | -   | -   |
| HTD8M     | 18                                           | 18 | 18 | 18 | 18 | 24 | 18 | 32 | 18 | 40 | 20 | 40  | 28 | 48  | 40  | 56 | 64  | 64  | 80  | 80  | 100 | 100 | -   | -   |
| HTD14M    | 28                                           | 28 | 28 | 28 | 28 | 28 | 28 | 40 | 28 | 50 | 28 | 50  | 28 | 50  | 30  | 60 | 40  | 50  | 50  | 60  | 100 | 100 | 110 | 110 |
| STD5M     | 12                                           | 20 | 12 | 30 | 20 | 45 | 25 | 50 | 40 | 60 | 60 | 100 | 80 | -   | 100 | -  | -   | -   | -   | -   | -   | -   | -   | -   |
| STD8M     | 18                                           | 18 | 18 | 18 | 18 | 24 | 18 | 32 | 18 | 40 | 20 | 40  | 28 | 48  | 40  | 56 | 64  | 64  | 80  | 80  | 100 | 100 | -   | -   |

Minimum number of teeth when the profile is welded on tooth gap (fig. 2)

Minimum number of teeth when the profile is welded on tooth (fig. 1)

## Ordering

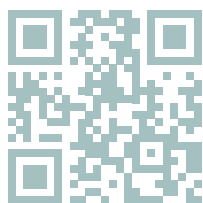
When ordering it is necessary to indicate: type of belt (width, profile, pitch, length), the belt length in number of teeth, the belt and profile drawing with the number and the pitch of the requested profiles.



# ELACLEATS

download in CAD or PDF format  
the most suitable cleat

Elatech online cleat selection  
support at ↓



elatech.com

ELATECH® offers a wide variety of custom-made and standard cleats specially designed for different applications in many industries. ELACLEATS is a web-based tool for quickly selecting among ELATECH® standard cleats by shape, size and features. 2D and 3D drawings can be easily downloaded for the selected cleats.

## ALWAYS UP TO DATE

ELACLEATS online version is always up to date with new types and sizes.

› RELIABLE  
SOLUTIONS!

## FAST AND EASY

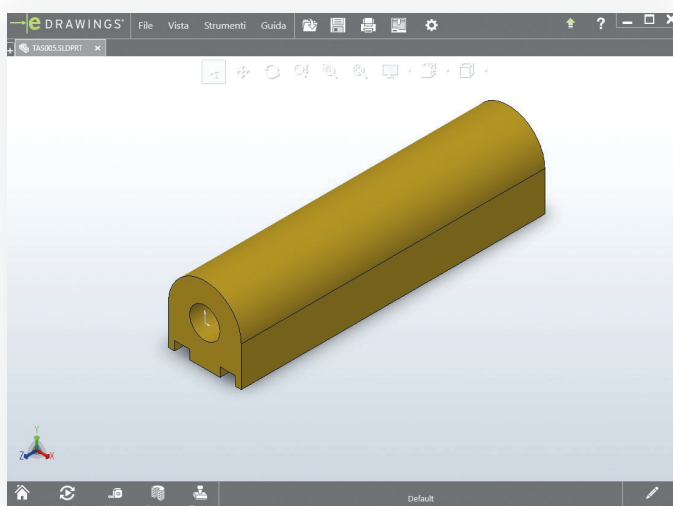
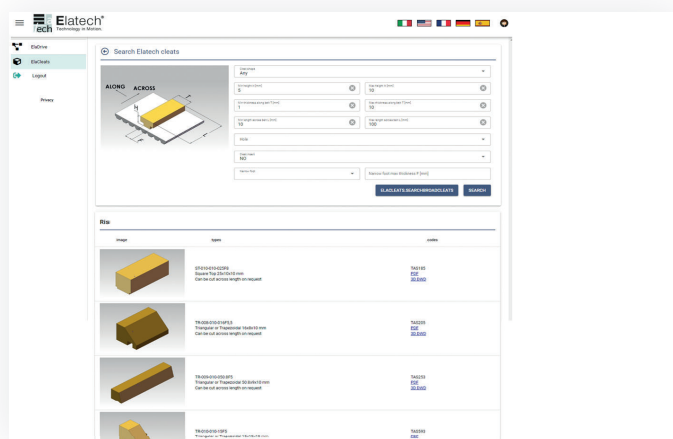
ELACLEATS offers an intelligent search for a quick selection of most suitable cleat with an easy to follow menu for fastest navigation.

› SAVE  
YOUR TIME!

## COMPREHENSIVE RANGE

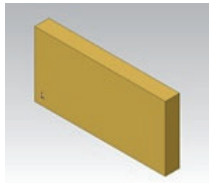
ELACLEATS offers widest range of cleats to optimize your conveying application.

› IMPROVE  
EFFICIENCY!

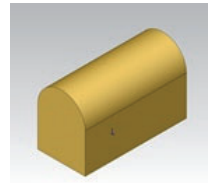
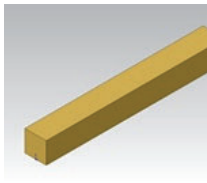




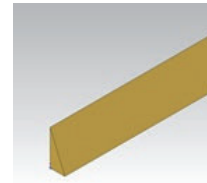
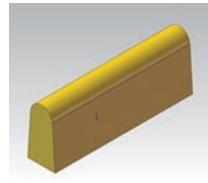
# › HUNDREDS OF CLEATS AVAILABLE FOR ALL APPLICATIONS!



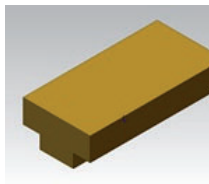
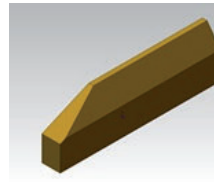
**ST** = Square Top: flat faces at right angles to each other



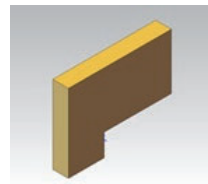
**RT** = Round Top: the upper part of the cleat has a rounded shape



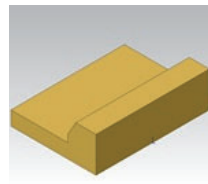
**TR** = Triangular or Trapezoidal: flat faces, some of which are not at right angles to other faces; cross-sections can be triangular, trapezoidal, pentagonal, etc.



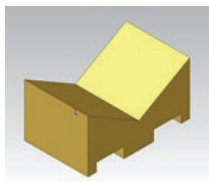
**TT** = "T" Shaped: a portion of the cleat (usually the upper one) is wider than the rest, so that a cross-section resembles the shape of a capital "T"



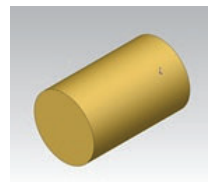
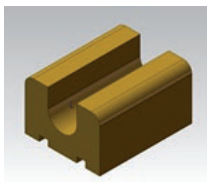
**AN** = Angular Shape: two portions of the cleat are set at an angle to each other



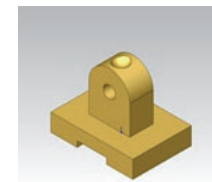
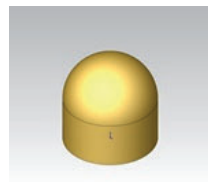
**GB** = Gusset Back: having a fin on one side that is not attached to the belt but rests on it and increases rigidity when the cleat is pushed in one direction



**CR** = Cradle Shape: "U" or "V" shaped so that an object can rest in the seat created by the sides of the cleat

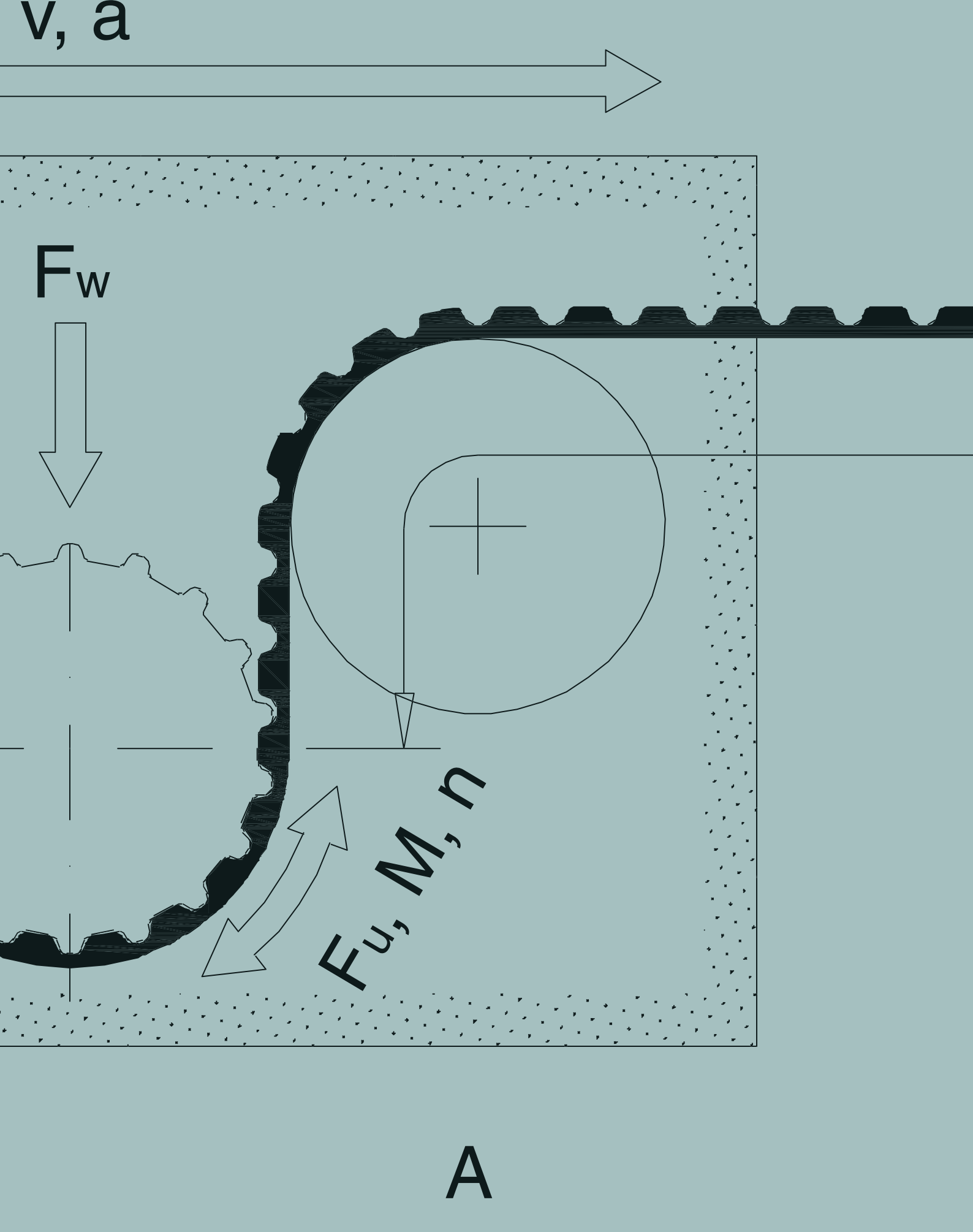


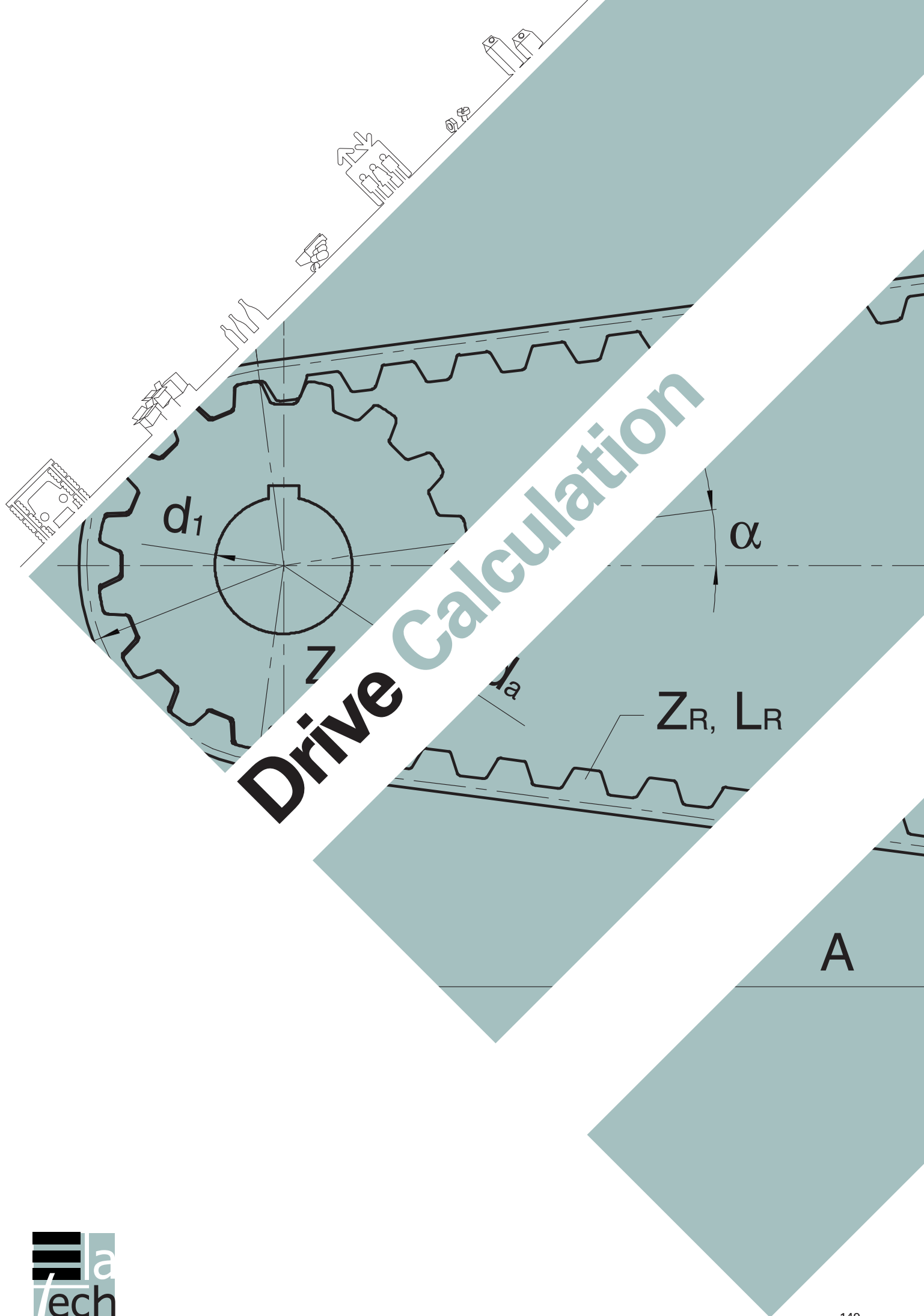
**CY** = Cylindrical Shape: a cylinder with vertical or horizontal axis



**SP** = Special Shape: any other shape, usually a structure especially designed for a specific use







# Drive calculation

## GUIDELINES

### Pulleys

It is recommended to use pulleys with the maximum diameter allowed by the application in order to maximise the number of teeth in mesh and increase the belt peripheral speed. For applications where high positioning precision is required, it might be useful to use zero backlash pulleys.

In order to guarantee a reliable drive, it is recommended to use superior quality pulleys.

### Minimum pulley diameter

Minimum pulley diameter depends on belt construction but also on the load and the configuration of the drive. The values reported in the catalogue have been calculated and proven for drives with maximum allowable load and standard configurations. For drives where smaller pulleys are needed, please apply to ELATECH® technical department.

### Clamping plates

In case of use of clamping plates, they must have the belt profile, be rigid and guarantee a uniform clamping force on all the surface. It is recommended to have a minimum of 7 teeth in clamp to guarantee catalogue performances. In case of belts with HPL cords, the recommended number of teeth in clamp is 12.

### Machine structure

For a trouble free drive, it is recommended that the structure of application of the timing belt drive is as rigid as possible. That will guarantee high work repeatability.

### Angular drives

Elatech belts can be used in angular drives as a "Twisted" drive. In such an application, it is recommended to keep a span length

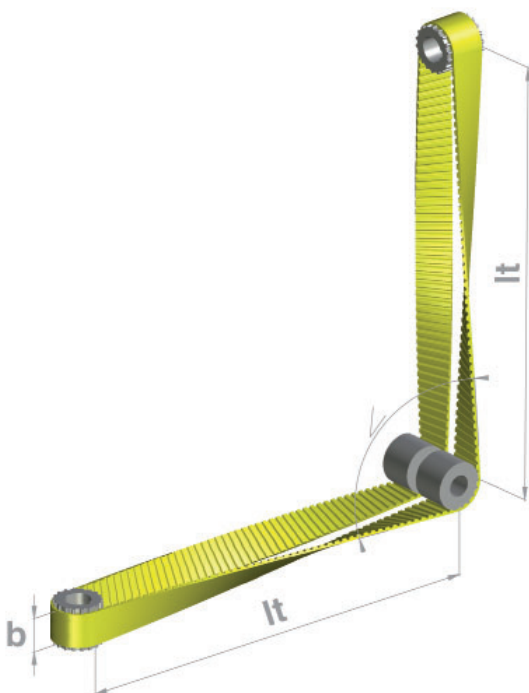
$l_t > 20 \cdot b$  (belt width) for 90° twist.

### Omega drive

In case of omega drive application it is recommended to keep a span length between driver pulleys and idlers  $> 3 \cdot b$  (belt width)

### Belt life

Due to the wide application range and considering the fact that belts are one component of complex equipment, the loads in the belt itself are very seldom precisely predictable. This fact makes it impossible to confirm a precise belt service life. In order to optimize belt life of the belts, it is important to follow the catalogue technical specifications related to pulley geometry and belt storage and installation. When all catalogues specifications are followed, a belt life of 3 million reverse bending cycles occurring over 10 years can be expected. This value was measured in tests under laboratory conditions.



## BELT INSTALLATION

### Drive installation

When installing belts on pulleys, before tensioning the drive, check that the belt teeth and pulley grooves correctly match.

### Breaking load

Belt breaking load is highly dependent on several factors including pulley alignment, clamping system and others. The data given in the catalogue are average values tested in our laboratory. It is recommended to use adequate safety factors and ask the ELATECH® technical department for minimum guaranteed breaking load in applications where it is needed.

### Belt drive tension

Correct belt drive tension and alignment are very important to optimize belt life and minimize noise level. In fact, improper tension in the belt drive will affect belt fit in the pulley grooves while correct tension minimizes belt pulley interference reducing the noise in the drive.

### Drive Alignment

Pulley misalignment will result in an unequal tension, edge wear and reduction of belt life. Also, misaligned drives are much noisier than correctly aligned drives due to the amount of interference that is created between the belt teeth and the pulley grooves. Proper pulley alignment should be checked with a straight edge or by using a laser alignment tool.

|                                   |      |      |         |
|-----------------------------------|------|------|---------|
| Belt width b [mm]                 | 10   | 16   | 32 over |
| Allowable pulley misalignment [°] | 0,28 | 0,16 | 0,10    |

### Idlers

Idlers are often a means to apply tension to the drive when the centre distance is fixed but also to increase the number of teeth in mesh of the small pulley. A toothed idler on the inside of the belt on the slack side is recommended with respect to a back side idler. Drives with inside flat idlers are not recommended as noise and abnormal belt wear may occur.

- Idler location is on the slack side span of the belt drive
- Diameter for inside toothed idler must be  $\geq$  of the diameter of the small pulley in the drive
- Idler must be mounted on a rigid support
- Idlers both flat and toothed, should be uncrowned with a minimum arc of contact.
- Idler should be positioned respecting:  
 $2 \bullet (d_{wk} + d_{wg}) < A$
- Idler width should be  $\geq$  of pulley width b

Backside idlers, however, increase the teeth in mesh on both pulleys in the drive and force a counter flexure of the belt and thus contributes to premature belt failure. In case an idler is needed, It is recommended to keep a span length between driver pulleys and idlers  $> 3 \bullet b$  (belt width) in order to maximise the number of teeth in mesh of the small pulley.

## BELT HANDLING AND STORAGE

Proper storage is important in order to avoid damaging the belts which may cause premature belt failure. Do not store belts on the floor unless in a protective container to avoid damages which may be accidentally caused by people or machine traffic. Belts should be stored in order to prevent direct sunlight and in a dry and cool environment without presence of chemicals in the atmosphere.

Avoid belt storage near windows (to avoid sunlight and moisture), near electric motors or devices which generate ozone, near direct airflow of heating/cooling systems.

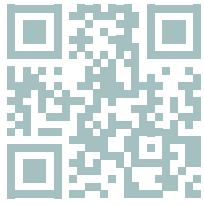
**Do not crimp belts** while handling or when stored to avoid damage to tensile cords. Belts must not be hung on small

pins to avoid bending to a small diameter. Handle belts with care while moving and installing. On installation, never force the belt over the pulley flange.

# ELADRIVE

online calculation software  
for quick and reliable drive  
calculation

Elatech online drive calculation  
support at ↓



elatech.com

ELATECH's ELADRIVE is a drive calculation program  
allowing efficient and time saving drive calculation with  
improved performances.

## ALWAYS UP TO DATE

ELADRIVE online version is always up to date.

› RELIABLE  
SOLUTIONS!

## FAST AND EASY

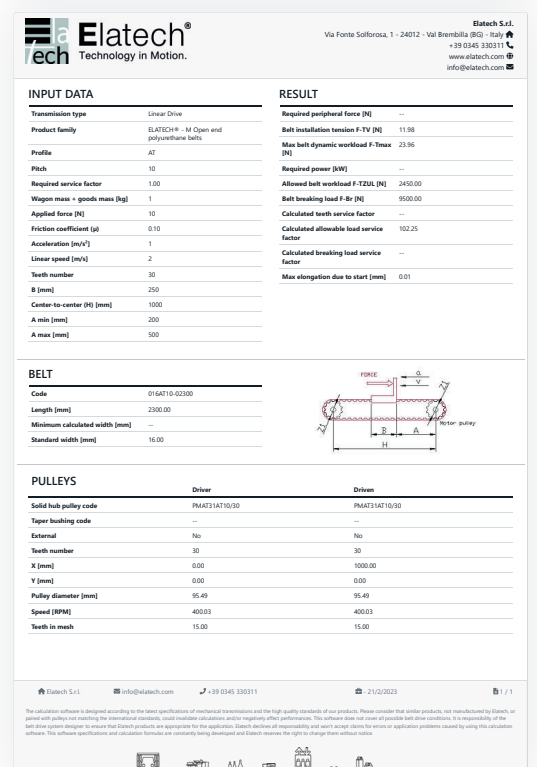
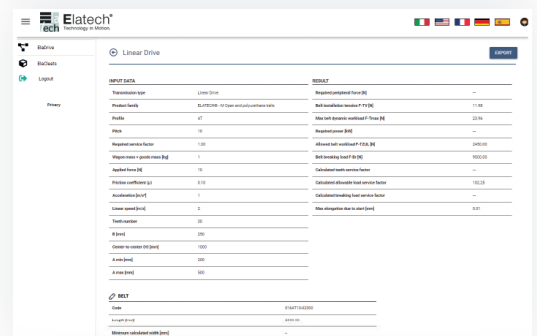
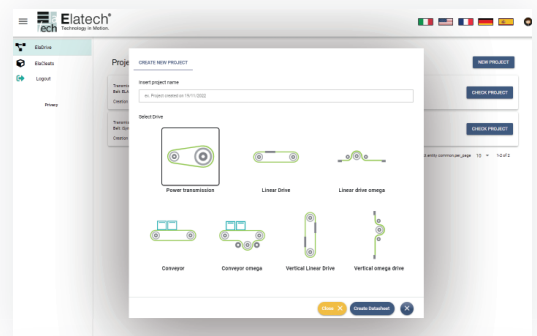
ELADRIVE offers a step by step drive calculation by an  
easy to follow menu with improved screen layouts for  
quicker navigation.

› SAVE  
YOUR TIME!

## COMPREHENSIVE APPLICATION RANGE

ELADRIVE offers a drive calculation for all application  
technology fields: power transmission, linear, transport.  
Two pulley drives are calculated and multiple drive design  
solutions are generated.

› IMPROVE  
EFFICIENCY!



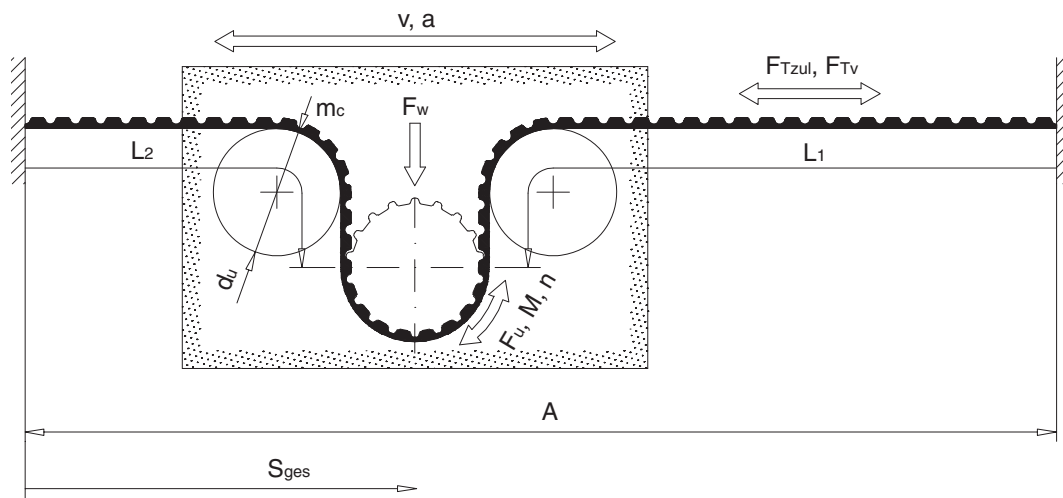


# LINEAR drives calculation

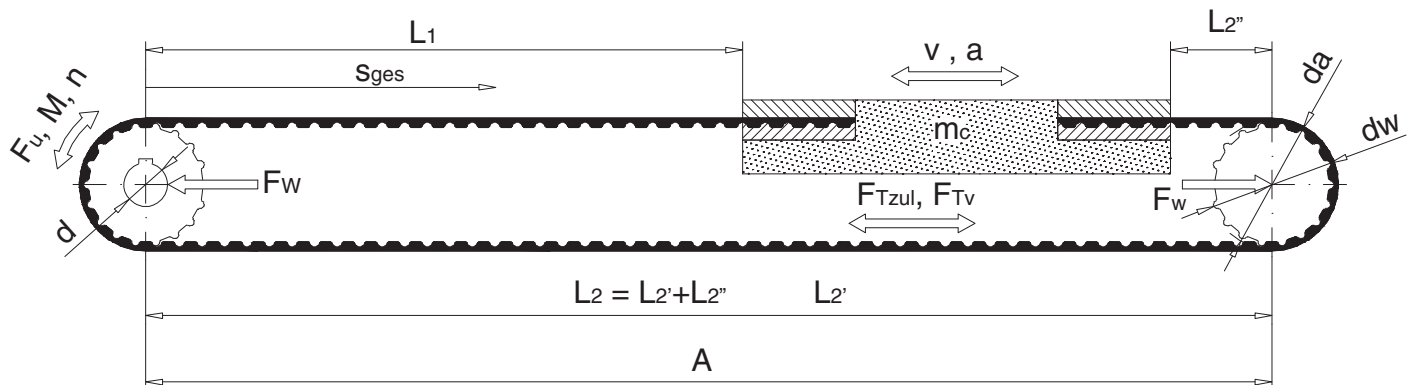
## Definitions and transmission cycle

In most cases linear drives may be taken back to one of the two layouts shown, where a specific system of forces acts.

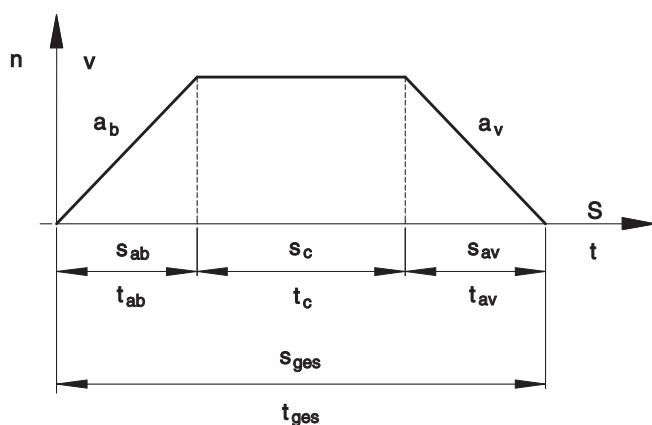
### "OMEGA" drive



### LINEAR drive



### Transmission cycle (rpm/time)



## Definitions and abbreviations

|             |                     |                                                        |            |                       |                                      |
|-------------|---------------------|--------------------------------------------------------|------------|-----------------------|--------------------------------------|
| $a_b$       | [m/s <sup>2</sup> ] | Acceleration                                           | $\rho$     | [kg/dm <sup>3</sup> ] | Specific weight                      |
| $a_v$       | [m/s <sup>2</sup> ] | Deceleration                                           | $m$        | [kg]                  | Total mass                           |
| $B$         | [mm]                | Pulley width                                           | $m_R$      | [kg]                  | Mass of belt                         |
| $b$         | [cm]                | Belt width                                             | $m_c$      | [kg]                  | Mass of carriage / slide             |
| $b_{min}$   | [cm]                | Belt minimum width                                     | $m_S$      | [kg]                  | Pulley mass                          |
| $t$         | [mm]                | Belt pitch                                             | $m_{Sred}$ | [kg]                  | Pulley reduced mass                  |
| $C$         | [N/mm]              | Belt modulus / spring rate                             | $m_U$      | [kg]                  | Idler mass                           |
| $C_{spez}$  | [N]                 | Specific spring rate                                   | $m_{Ured}$ | [kg]                  | Idler reduced mass                   |
| $A$         | [mm]                | Centre distance                                        | $n$        | [min <sup>-1</sup> ]  | Rpm                                  |
| $A_{eff}$   | [mm]                | Effective centre distance                              | $n_1$      | [min <sup>-1</sup> ]  | Rpm driver pulley                    |
| $d$         | [mm]                | Bore diameter                                          | $\Delta_n$ | [min <sup>-1</sup> ]  | Rpm variation                        |
| $d_a$       | [mm]                | Outside pulley diameter                                | $c_1$      | -                     | Service factor                       |
| $d_w$       | [mm]                | Pitch circle diameter                                  | $P$        | [kW]                  | Power                                |
| $d_U$       | [mm]                | Idler pulley diameter                                  | $s_{ges}$  | [mm]                  | Total travel                         |
| $F_{wdyn}$  | [N]                 | Dynamic shaft load                                     | $s_{ab}$   | [mm]                  | Travel during acceleration           |
| $F_{wsta}$  | [N]                 | Static shaft load                                      | $s_{av}$   | [mm]                  | Travel during deceleration / braking |
| $F_{Tmax}$  | [N]                 | Maximum span force                                     | $s_c$      | [mm]                  | Travel at constant speed             |
| $F_R$       | [N]                 | Resisting force of friction                            | $t_{ges}$  | [sec]                 | Total time of travel                 |
| $F_{Uspez}$ | [N/cm]              | Specific tooth shear strength                          | $t_{ab}$   | [sec]                 | Acceleration time                    |
| $F_{TV}$    | [N]                 | Pretension force for belt side                         | $t_{av}$   | [sec]                 | Deceleration time / braking time     |
| $F_{Tzul}$  | [N]                 | Allowable tensile load                                 | $t_c$      | [sec]                 | Time at constant speed               |
| $F_U$       | [N]                 | Peripheral force                                       | $v$        | [m/s]                 | Peripheral speed                     |
| $F_H$       | [N]                 | Vertical lifting force                                 | $z$        | -                     | No. of teeth of pulley               |
| $F_{ab}$    | [N]                 | Acceleration force                                     | $z_k$      | -                     | No. of teeth of small pulley         |
| $F_{av}$    | [N]                 | Deceleration force                                     | $z_g$      | -                     | No. of teeth of big pulley           |
| $g$         | [m/s <sup>2</sup> ] | Acceleration due to gravity (= 9,81 m/s <sup>2</sup> ) | $z_R$      | -                     | No. of teeth of belt                 |
| $\Delta l$  | [mm]                | Elongation                                             | $z_e$      | -                     | No. of teeth in mesh                 |
| $\Delta s$  | [mm]                | Difference of position due to force                    | $i$        | -                     | Drive ratio                          |
| $L_1, L_2$  | [mm]                | Length of tight and slack side                         | $\omega$   | [s <sup>-1</sup> ]    | Angular velocity                     |
| $L_R$       | [mm]                | Belt length                                            | $\mu$      | -                     | Coefficient of friction              |
| $M$         | [Nm]                | Torque                                                 | $c_1$      | -                     | Safety factor                        |
| $M_{ab}$    | [Nm]                | Torque during acceleration                             |            |                       |                                      |
| $M_{av}$    | [Nm]                | Braking torque                                         |            |                       |                                      |

## Calculation formula

### Torque

$$M = \frac{F_U \cdot d_W}{2000} = \frac{P \cdot 9550}{n}$$

### Power

$$P = \frac{M \cdot n}{9550} = \frac{F_U \cdot v}{1000}$$

### Peripheral force

$$F_U = \frac{2000 \cdot M}{d_W} = \frac{P \cdot 1000}{v}$$

### Linear speed

$$v = \frac{d_W \cdot n}{19100} = \frac{n \cdot z \cdot t}{60000}$$

### Angular velocity

$$\omega = \frac{\pi \cdot n}{30}$$

### Rpm

$$n = \frac{19100 \cdot v}{d_W} = \frac{60000 \cdot v}{z \cdot t}$$

### Acceleration time

$$t_{ab} = \frac{v}{a_b} = \sqrt{\frac{2 \cdot s_{ab}}{a_b \cdot 1000}}$$

### Acceleration travel

$$s_{ab} = \frac{a_b \cdot t_{ab}^2 \cdot 1000}{2} = \frac{v^2 \cdot 1000}{2 \cdot a_b}$$

### Braking time

$$t_{av} = \frac{v}{a_v} = \sqrt{\frac{2 \cdot s_{av}}{a_v \cdot 1000}}$$

### Braking travel

$$s_{av} = \frac{a_v \cdot t_{av}^2 \cdot 1000}{2} = \frac{v^2 \cdot 1000}{2 \cdot a_v}$$

### Total time

$$t_{ges} = t_{ab} + t_c + t_{av}$$

### Total travel

$$s_{ges} = s_{ab} + s_c + s_{av}$$

### Time at constant speed

$$t_c = \frac{s_c}{v \cdot 1000}$$

### Travel at constant speed

$$s_c = v \cdot t_c \cdot 1000$$

### Safety factor

ELATECH® belts do not need any safety factor. However if there are unknown peaks or shock loads or swings in the peripheral force unknown at design time, which therefore can not be included in the calculation parameters, a suitable safety factor should be considered by the designer.

Steady load  $c_1 = 1,0$

Peak or fluctuating loads:

Light  $c_1 = 1,4$

Medium  $c_1 = 1,7$

Heavy  $c_1 = 2,0$

## Calculation

Linear drives are correctly dimensioned when the total peripheral force, necessary for the requested work, satisfies the 3 technical parameters of the selected belt:

- **tooth shear strength**
- **allowable tensile load**
- **flexibility**

The necessary data for the calculation are: the mass to be moved, the transmission cycle, the drive layout with the related forces, the resisting force of friction. Friction force is generally determined by the linear bearing manufacturer.

In case of conveying applications, it is resulting from the weight of the conveyed goods and the coefficient of friction between slider bed and belt surface. In case of accumulating conveyors the friction between the conveyed goods and the backside of the belt must be considered additionally.

### Select belts and pulleys

For the choice of the pulleys it is recommended to use pulleys with the largest possible diameter. That will reduce the belt width and optimise drive performances.

### Calculate total mass in motion (m)

$$m = m_c + m_R + m_{Sred} + m_{Ured}$$

With:

$$m_{Sred} = \frac{m_s}{2} \cdot \left(1 + \frac{d^2}{d_a^2}\right) \quad \text{inertia of the idler timing pulley}$$

$$m_{Ured} = \frac{m_u}{2} \cdot \left(1 + \frac{d^2}{d_u^2}\right) \quad \text{inertia of the idler tensioning pulley}$$

### Calculate the necessary total peripheral force $F_U$ and torque $M$

$$F_U = F_{ab} + F_H + F_R$$

$$F_U = m \cdot a_b + m \cdot g \cdot \sin \alpha + m \cdot g \cdot \mu \cdot \cos \alpha$$

Where  $\alpha$  is the angle of incline of the drive ( $0^\circ$  = horizontal ;  $90^\circ$  = vertical).

$$M = \frac{F_U \cdot d_w}{2000}$$

### Determine the belt width

$$b_{min} = \frac{F_U \cdot c_1}{F_{Uspez} \cdot z_e} \quad b \geq b_{min}$$

with  $F_{Uspez}$  depending on the rpm of the small pulley (see technical data on tooth shear strength for the selected belt type).

Note:  $z_{emax} = 12$  for belts ELATECH® M  
 $z_{emax} = 6$  for belts ELATECH® V

The belt width should also be verified to ensure that it can withstand the maximum working load.

### Determine installation pretension $F_{TV}$

Linear motion drives are correctly tensioned when in the slack side a minimum tension is guaranteed in all working conditions and for every value of  $F_{Tmax}$  (acceleration, deceleration).

It is recommended a pretension of:

$$F_{TV} \geq F_U$$

### Verify of allowable tensile load

The maximum load on the belt will appear when both the pretension  $F_{TV}$  and the working load  $F_U$  will act at the same time:

$$F_{Tmax} = F_{TV} + F_U$$

The maximum allowable tensile load of the belt  $F_{tzul}$  (see technical tables of corresponding selected belt) must be greater than the maximum work load:

$$F_{Tzul} > F_{Tmax} \cdot c_1$$

### Verify flexibility

The diameter of the chosen pulleys, must be greater or equal to the minimum recommended diameter for the specific belt profile chosen (see technical data).

### Calculate shaft load

The shaft load under static conditions is:

$$F_{Wsta} = 2 \cdot F_{TV}$$

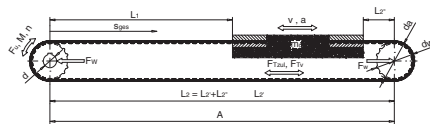
The shaft load under dynamic conditions is:

$$F_{Wdyn} = 2 \cdot F_{TV} + F_U$$

### Calculate necessary static elongation

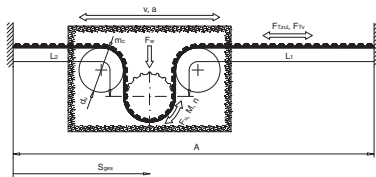
Installation tension generates a belt elongation “ $\Delta l$ ” between the shafts (for linear drives) or the clamping plates (for “Omega” drives).

Linear drive



$$\Delta l = \frac{F_{TV} \cdot L_R}{2 \cdot C_{spez}}$$

Omega” drive



$$\Delta l = \frac{F_{TV} \cdot L_R}{C_{spez}}$$

If the resulting elongation is not acceptable for the application, it is possible to reduce it by increasing the belt width or by increasing belt rigidity (HPL cords).

### Determine the positioning accuracy

The stiffness coefficient of linear drives depends on the length of slack and tight side in the drive. Every position of the system has its own stiffness coefficient calculated with the formula:

$$C = \frac{L_R}{L_1 \cdot L_2} \cdot C_{spez} \quad L_R = L_1 + L_2$$

For  $C_{spez}$  value see technical data of selected belt type.

Stiffness coefficient will be minimum when slack and tight side will have the same length during the working cycle.

$$C_{min} = \frac{4 \cdot C_{spez}}{L_R}$$

With  $L_R$  equal to the belt length free to elongate (excluding contact length on timing pulleys).

Being  $F_U$  the resulting force on the slide, the positioning deviation generated by belt elongation is:

$$\Delta_s = \frac{F_U}{C}$$

The positioning accuracy is also depending on other parameters and therefore for an accurate calculation, please consult our technical department. When positioning is reached from both directions the actual position is affected by an error caused by backlash between belt and pulley. The use of zero backlash pulleys helps reduce the positioning error.

### Installation and drive pre-tensioning:

In order to pretension a drive it is possible to use one of the following methods:

#### 1. Measuring elongation

ELATECH® timing belts with steel cords have a constant elongation to the maximum allowable load  $F_{TZUL}$ . Therefore the correct pretension can be set by measuring the belt elongation with a gauge and using as a reference the graph load/elongation of the selected belt type. This is a simple method but requires good accessibility of the drive.

#### 2. Using span deflection

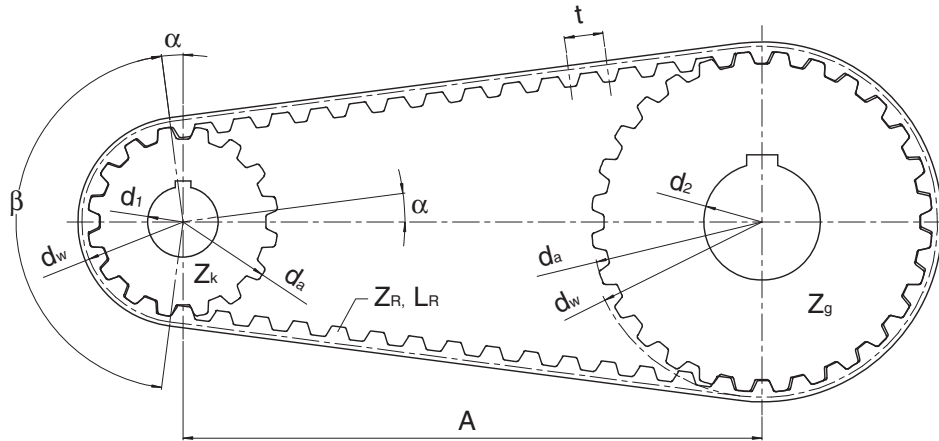
The pretension is checked by applying a force in the centre of the span length and measuring the span deflection

#### 3. Measuring frequency

The tension of the belt is calculated from the natural frequency of vibration of the belt span which is measured by means of a special belt tension meter. This is the most accurate and easiest method.

A suitable belt tension meter is available from ELATECH®

# Power transmission drives ELA-flex SD<sup>®</sup> and iSync<sup>®</sup>



## Definitions

|                   |      |                                    |                                                  |                       |                                     |
|-------------------|------|------------------------------------|--------------------------------------------------|-----------------------|-------------------------------------|
| b                 | [cm] | Belt width                         | M <sub>spez</sub>                                | [Nm]                  | Specific Torque                     |
| b <sub>min</sub>  | [cm] | Belt minimum width                 | P                                                | [kW]                  | Power                               |
| L <sub>R</sub>    | [mm] | Belt length                        | P <sub>spez</sub>                                | [kW]                  | Specific Power                      |
| z <sub>R</sub>    | -    | Number of teeth of the belt        | t <sub>ab</sub>                                  | [s]                   | Acceleration time                   |
| B                 | [mm] | Pulley width                       | t <sub>av</sub>                                  | [s]                   | Deceleration time                   |
| A                 | [mm] | Center distance                    | v                                                | [m/s]                 | Peripheral speed                    |
| A <sub>eff</sub>  | [mm] | Effective center distance          | z <sub>e</sub>                                   | -                     | N. of teeth in mesh                 |
| d                 | [mm] | Pulley bore diameter               | z <sub>k</sub>                                   | -                     | Number of teeth of the small pulley |
| d <sub>a</sub>    | [mm] | Pulley outside diameter            | z <sub>g</sub>                                   | -                     | Number of teeth of the large pulley |
| d <sub>ak</sub>   | [mm] | Small pulley outside diameter      | i                                                | -                     | Drive ratio [ n1 : n2 ]             |
| d <sub>ag</sub>   | [mm] | Large pulley outside diameter      | ρ                                                | [kg/dm <sup>3</sup> ] | Specific weight                     |
| d <sub>w</sub>    | [mm] | Pulley pitch diameter              | J                                                | [kgm <sup>2</sup> ]   | Moment of inertia                   |
| d <sub>wk</sub>   | [mm] | Small pulley pitch circle diameter | t                                                | [mm]                  | Pitch                               |
| d <sub>wg</sub>   | [mm] | Large pulley pitch circle diameter | n                                                | [min <sup>-1</sup> ]  | Rpm                                 |
| F <sub>Wsta</sub> | [N]  | Static shafts load                 | n <sub>1</sub>                                   | [min <sup>-1</sup> ]  | Rpm of driver pulley                |
| F <sub>TV</sub>   | [N]  | Pretension force per belt side     | ω                                                | [s <sup>-1</sup> ]    | Angular speed                       |
| F <sub>Tzul</sub> | [N]  | Allowable tensile load             | β                                                | [°]                   | Wrap angle                          |
| F <sub>U</sub>    | [N]  | Peripheral force                   | c <sub>0</sub> / c <sub>1</sub> / c <sub>2</sub> | -                     | Safety factor                       |
| M                 | [Nm] | Torque                             |                                                  |                       |                                     |

## Calculation formula

### Power

$$P = \frac{M \cdot n}{9550}$$

$$P = \frac{F_u \cdot d_w \cdot n}{19100 \cdot 10^3}$$

### Angular speed

$$\omega = \frac{\pi \cdot n}{30}$$

### Peripheral force

$$F_u = \frac{19100 \cdot P \cdot 10^3}{n \cdot d_w}$$

$$F_u = \frac{2000 \cdot M}{d_w}$$

### Peripheral speed

$$v = \frac{d_w \cdot n}{19100}$$

### Torque

$$M = \frac{F_u \cdot d_w}{2000}$$

$$M = \frac{9550 \cdot P}{n}$$

### Acceleration torque

$$M_{ab} = \frac{J \cdot \Delta n}{9,55 \cdot t_{ab}}$$

### Moment of inertia

$$J = 98,2 \cdot 10^{-15} \cdot B \cdot \rho \cdot (d_a^4 - d^4)$$

### Rpm

$$n = \frac{19100 \cdot v}{d_w}$$



## Torque

Belt selection is made according to a constant working load. For start up torque and in case of peak loads and vibrations a safety factor  $c_1$  must be considered.

Transmission with steady load  $c_1 = 1,0$

Transmission with peak or fluctuating loads:

Light  $c_1 = 1,4$

Medium  $c_1 = 1,7$

Heavy  $c_1 = 2,0$

For speed up driver factor  $c_2$  must be considered:

$i = \text{from } 0,66 \text{ to } 1$   $c_2 = 1,1$

$i = \text{from } 0,40 \text{ to } 0,66$   $c_2 = 1,2$

$i < 0,40$   $c_2 = 1,3$

The resulting total safety factor is:

$$c_0 = c_1 \cdot c_2$$

## Drive calculation

The necessary data for drive calculation are:

|                                  |          |                      |
|----------------------------------|----------|----------------------|
| • Power to be transmitted        | P        | [kW]                 |
| • Driver rpm                     | $n_1$    | [min <sup>-1</sup> ] |
| • Motor starting torque          | $M_{ab}$ | [Nm]                 |
| • Required center distance       | A        | [mm]                 |
| • Maximum driver pulley diameter | $d_{w1}$ | [mm]                 |

### Select type of belt

For the initial drive selection, use the selection graphs illustrated in the relative ELA-flex SD® catalog section. For initial pulley choice, it is recommended to use the driver pulley with maximum diameter allowable in the application.

### Calculate drive ratio

$$i = \frac{n_{\text{driver}}}{n_{\text{driven}}}$$

### Calculate belt length

Belt length for drive with ratio  $i \neq 1$

$$L_R \approx \frac{t}{2} \cdot (z_g + z_k) + 2A + \frac{1}{4A} \cdot \left[ \frac{(z_g - z_k) \cdot t}{\pi} \right]^2$$

and more precisely:

$$L_R = 2A \cdot \sin \frac{\beta}{2} + \frac{t}{2} \cdot \left[ z_g + z_k + \left( 1 - \frac{\beta}{180} \right) \cdot (z_g - z_k) \right]$$

Belt length for drive with ratio  $i = 1$

$$L_R = 2 \cdot A + \pi \cdot d_w = 2 \cdot A + z \cdot t$$

### Calculate teeth in mesh

$$z_e = \frac{\beta}{360} \cdot z_k$$

with  $\beta$  [°] = wrap angle

$$\beta = 2 \cdot \arccos \left[ \frac{t \cdot (z_g - z_k)}{2 \cdot \pi \cdot A} \right]$$

### Determine belt width

$$b_{\min} = \frac{P \cdot 1000 \cdot c_0}{z_k \cdot z_e \cdot P_{\text{spez}}} \quad b_{\min} = \frac{100 \cdot M}{z_k \cdot z_e \cdot M_{\text{spez}}} \quad b \geq b_{\min}$$

Note:  $z_{\text{emax}} = 12$  for belts ELA-Flex SD® or iSync®  
 $z_{\text{emax}} = 6$  for belts ELATECH® V

The belt width should also be verified to ensure that it can withstand the maximum working load.

### Determine the total power "P" and the total torque "M" transmitted

The total power "P" and the total torque "M" transmitted by the belt, are calculated with the following formulas:

$$P = P_{\text{spez}} \cdot z_e \cdot z_k \cdot b / 1000$$

$$M = M_{\text{spez}} \cdot z_e \cdot z_k \cdot b / 100$$

### Determine installation pretension

The drive is correctly tensioned when the belt slack side is tensioned in all working conditions. It is also important to use the minimum necessary tension to minimize shaft loads. Belt tension is dependent also on belt length  $L_R$  and its number of teeth  $Z_R$ . According to belt number of teeth, following tension is suggested:

#### 2 shafts drive

$$Z_R < 75 \quad F_{TV} = 1/3 F_U$$

$$75 < Z_R < 150 \quad F_{TV} = 1/2 F_U$$

$$Z_R > 150 \quad F_{TV} = 2/3 F_U$$

#### More than 2 shafts drive

$$F_{TV} > F_U$$

### Verify of allowable tensile load

The allowable tensile load of the belt must be higher than the total corrected peripheral force.

$$F_{Tzul} \geq \left[ F_{TV} + \frac{1}{2} \cdot F_U \right] \cdot c_0 \quad \text{with} \quad F_U = \frac{2000 \cdot M}{d_w}$$

### Calculate shaft load

$$F_{Wsta} = 2 \cdot F_{TV} \cdot \sin(\beta/2)$$

$$F_{Wsta} = 2 \cdot F_{TV} \quad (\text{for } i = 1)$$

In order to ensure the correct drive installation tension, it is recommended to use the special belt tension meter available from ELATECH®.

# Timing pulleys

## T2,5

| z                   | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 11,44 | 12,23 | 13,03 | 13,82 | 14,62 | 15,42 | 16,21 | 17,01 | 17,80 | 18,60 | 19,39 | 20,19 | 20,99 | 21,78 | 22,58 | 23,37 | 24,17 | 24,97 |
| d <sub>w</sub> [mm] | 11,94 | 12,73 | 13,53 | 14,32 | 15,12 | 15,92 | 16,71 | 17,51 | 18,30 | 19,10 | 19,89 | 20,69 | 21,49 | 22,28 | 23,08 | 23,87 | 24,67 | 25,47 |

| z                   | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 25,76 | 26,56 | 27,35 | 28,15 | 28,94 | 29,74 | 30,54 | 31,33 | 32,13 | 32,92 | 33,72 | 34,52 | 35,31 | 36,11 | 36,90 | 37,70 | 38,49 | 39,29 |
| d <sub>w</sub> [mm] | 26,26 | 27,06 | 27,85 | 28,65 | 29,44 | 30,24 | 31,04 | 31,83 | 32,63 | 33,42 | 34,22 | 35,02 | 35,81 | 36,61 | 37,40 | 38,20 | 38,99 | 39,79 |

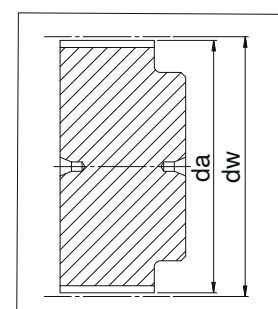
| z                   | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63    | 64    | 65    | 66    | 67    | 68    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 40,09 | 40,88 | 41,68 | 42,47 | 43,27 | 44,06 | 44,86 | 45,66 | 46,45 | 47,25 | 48,04 | 48,84 | 49,64 | 50,43 | 51,23 | 52,02 | 52,82 | 53,61 |
| d <sub>w</sub> [mm] | 40,59 | 41,38 | 42,18 | 42,97 | 43,77 | 44,56 | 45,36 | 46,16 | 46,95 | 47,75 | 48,54 | 49,34 | 50,14 | 50,93 | 51,73 | 52,52 | 53,32 | 54,11 |

| z                   | 69    | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    | 86    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 54,41 | 55,21 | 56,00 | 56,80 | 57,59 | 58,39 | 59,18 | 59,98 | 60,78 | 61,57 | 62,37 | 63,16 | 63,96 | 64,76 | 65,55 | 66,35 | 67,14 | 67,94 |
| d <sub>w</sub> [mm] | 54,91 | 55,71 | 56,50 | 57,30 | 58,09 | 58,89 | 59,68 | 60,48 | 61,28 | 62,07 | 62,87 | 63,66 | 64,46 | 65,26 | 66,05 | 66,85 | 67,64 | 68,44 |

| z                   | 87    | 88    | 89    | 90    | 91    | 92    | 93    | 94    | 95    | 96    | 97    | 98    | 99    | 100   | 101   | 102   | 103   | 104   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 68,73 | 69,53 | 70,33 | 71,12 | 71,92 | 72,71 | 73,51 | 74,31 | 75,10 | 75,90 | 76,69 | 77,49 | 78,28 | 79,08 | 79,88 | 80,67 | 81,47 | 82,26 |
| d <sub>w</sub> [mm] | 69,23 | 70,03 | 70,83 | 71,62 | 72,42 | 73,21 | 74,01 | 74,81 | 75,60 | 76,40 | 77,19 | 77,99 | 78,78 | 79,58 | 80,38 | 81,17 | 81,97 | 82,76 |

| z                   | 105   | 106   | 107   | 108   | 109   | 110   | 111   | 112   | 113   | 114   | 115   | 116   | 117   | 118   | 119   | 120   | 121   | 122   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 83,06 | 83,85 | 84,65 | 85,45 | 86,24 | 87,04 | 87,83 | 88,63 | 89,43 | 90,22 | 91,02 | 91,81 | 92,61 | 93,40 | 94,20 | 95,00 | 95,79 | 96,59 |
| d <sub>w</sub> [mm] | 83,56 | 84,35 | 85,15 | 85,95 | 86,74 | 87,54 | 88,33 | 89,13 | 89,93 | 90,72 | 91,52 | 92,31 | 93,11 | 93,90 | 94,70 | 95,50 | 96,29 | 97,09 |

| z                   | 123   | 124   | 125   | 126    | 127    | 128    | 129    | 130    | 131    | 132    | 133    | 134    | 135    | 136    | 137    | 138    | 139    | 140    |
|---------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 97,38 | 98,18 | 98,97 | 99,77  | 100,57 | 101,36 | 102,16 | 102,95 | 103,75 | 104,55 | 105,34 | 106,14 | 106,93 | 107,73 | 108,52 | 109,32 | 110,12 | 110,91 |
| d <sub>w</sub> [mm] | 97,88 | 98,68 | 99,47 | 100,27 | 101,07 | 101,86 | 102,66 | 103,45 | 104,25 | 105,05 | 105,84 | 106,64 | 107,43 | 108,23 | 109,02 | 109,82 | 110,62 | 111,41 |



# Timing pulleys

## T5

| z                   | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 15,05 | 16,65 | 18,25 | 19,85 | 21,45 | 23,05 | 24,60 | 26,20 | 27,80 | 29,40 | 31,00 | 32,70 | 34,25 | 35,85 | 37,40 | 39,00 | 40,60 | 42,20 |
| d <sub>w</sub> [mm] | 15,92 | 17,51 | 19,10 | 20,70 | 22,29 | 23,88 | 25,47 | 27,06 | 28,65 | 30,25 | 31,83 | 33,43 | 35,02 | 36,62 | 38,21 | 39,80 | 41,39 | 42,98 |

| z                   | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 43,75 | 45,35 | 46,95 | 48,55 | 50,10 | 51,70 | 53,25 | 54,85 | 56,45 | 58,05 | 59,65 | 61,25 | 62,85 | 64,40 | 66,00 | 67,70 | 69,20 | 70,80 |
| d <sub>w</sub> [mm] | 44,58 | 46,17 | 47,76 | 49,35 | 50,94 | 52,54 | 54,13 | 55,72 | 57,31 | 58,90 | 60,50 | 62,09 | 63,66 | 65,27 | 66,86 | 68,46 | 70,05 | 71,64 |

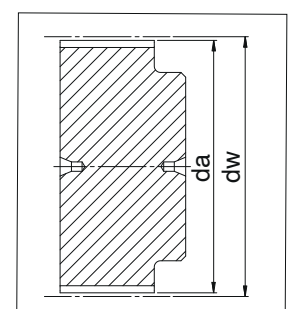
| z                   | 46    | 47    | 48    | 49    | 50    | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| d <sub>a</sub> [mm] | 72,40 | 73,95 | 75,55 | 77,15 | 78,75 | 80,35 | 81,95 | 83,50 | 85,10 | 86,70 | 88,30 | 89,90 | 91,50 | 93,05 | 94,65 | 96,25 | 97,85 | 99,45  |
| d <sub>w</sub> [mm] | 73,23 | 74,82 | 76,42 | 78,01 | 79,60 | 81,19 | 82,78 | 84,38 | 85,97 | 87,54 | 89,15 | 90,74 | 92,34 | 93,93 | 95,52 | 97,11 | 98,70 | 100,30 |

| z                   | 64     | 65     | 66     | 67      | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     |
|---------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 101,05 | 102,65 | 104,20 | 105,800 | 107,40 | 109,00 | 110,60 | 112,20 | 113,75 | 115,35 | 116,95 | 118,55 | 120,15 | 121,75 | 123,30 | 124,90 | 126,50 | 128,10 |
| d <sub>w</sub> [mm] | 101,89 | 103,48 | 105,07 | 106,66  | 108,26 | 109,85 | 111,44 | 113,03 | 114,62 | 116,22 | 117,81 | 119,40 | 120,99 | 122,58 | 124,18 | 125,77 | 127,36 | 128,95 |

| z                   | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 129,70 | 131,30 | 132,85 | 134,45 | 136,05 | 137,65 | 139,25 | 140,85 | 142,45 | 144,00 | 145,60 | 147,20 | 148,80 | 150,40 | 152,00 | 153,55 | 155,15 | 156,75 |
| d <sub>w</sub> [mm] | 130,54 | 132,14 | 133,73 | 135,32 | 136,91 | 138,50 | 140,10 | 141,69 | 143,28 | 144,87 | 146,46 | 148,06 | 149,65 | 151,24 | 152,83 | 154,42 | 156,02 | 157,61 |

| z                   | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 158,35 | 159,95 | 161,55 | 163,10 | 164,70 | 166,30 | 167,90 | 169,50 | 171,10 | 172,65 | 174,25 | 175,85 | 177,45 | 179,05 | 180,65 | 182,23 | 183,82 | 185,42 |
| d <sub>w</sub> [mm] | 159,20 | 160,79 | 162,38 | 163,97 | 165,57 | 167,16 | 168,75 | 170,34 | 171,94 | 173,53 | 175,12 | 176,71 | 178,30 | 179,84 | 181,49 | 183,08 | 184,67 | 186,26 |

| z                   | 118    | 119    | 120    |
|---------------------|--------|--------|--------|
| d <sub>a</sub> [mm] | 187,01 | 188,61 | 190,21 |
| d <sub>w</sub> [mm] | 187,86 | 189,45 | 191,04 |



# Timing pulleys

## T10

| z                   | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 36,35 | 39,50 | 42,70 | 45,90 | 49,05 | 52,25 | 55,45 | 58,65 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 |
| d <sub>w</sub> [mm] | 38,20 | 41,38 | 44,56 | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 |

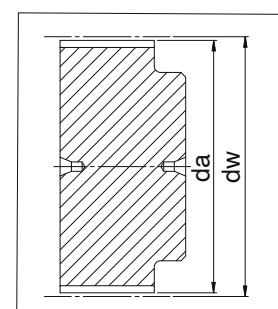
| z                   | 30    | 31    | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 44     | 45     | 46     | 47     | 48     |
|---------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 93,65 | 96,85 | 100,00 | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 138,20 | 141,40 | 144,60 | 147,75 | 150,95 |
| d <sub>w</sub> [mm] | 95,49 | 98,67 | 101,86 | 105,04 | 108,22 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 |

| z                   | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 154,10 | 157,30 | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 |
| d <sub>w</sub> [mm] | 155,97 | 159,15 | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 |

| z                   | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 211,40 | 214,60 | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 256,00 | 259,15 | 262,30 | 265,50 |
| d <sub>w</sub> [mm] | 213,26 | 216,44 | 219,63 | 222,81 | 225,99 | 229,18 | 232,36 | 235,54 | 238,72 | 241,94 | 245,09 | 248,27 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 |

| z                   | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 268,70 | 271,90 | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,75 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 |
| d <sub>w</sub> [mm] | 270,55 | 273,74 | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 |

| z                   | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 326,00 | 329,20 | 332,35 | 335,55 | 338,75 | 341,95 | 345,15 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,76 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 327,85 | 331,03 | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## T20

| z                   | 15    | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     |
|---------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 92,65 | 99,00  | 105,40 | 111,75 | 118,10 | 124,50 | 130,75 | 137,20 | 143,55 | 149,95 | 156,30 | 162,65 | 169,00 | 175,40 | 181,75 | 188,10 | 194,50 | 200,85 |
| d <sub>w</sub> [mm] | 95,49 | 101,86 | 108,22 | 114,59 | 120,96 | 127,32 | 133,69 | 140,06 | 146,43 | 152,78 | 159,15 | 165,52 | 171,89 | 178,25 | 184,62 | 190,99 | 197,35 | 203,72 |

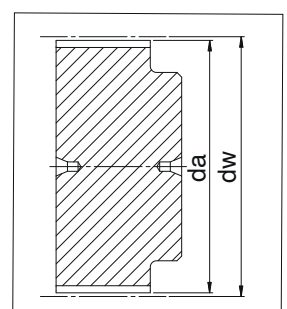
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 207,20 | 213,60 | 219,95 | 226,35 | 232,70 | 239,05 | 245,40 | 251,75 | 258,15 | 264,50 | 270,85 | 277,25 | 283,60 | 289,95 | 296,35 | 302,70 | 309,10 | 315,45 |
| d <sub>w</sub> [mm] | 210,09 | 216,44 | 222,81 | 229,18 | 235,54 | 241,91 | 248,28 | 254,65 | 261,02 | 267,37 | 273,74 | 280,10 | 286,47 | 292,84 | 299,21 | 305,58 | 311,93 | 318,30 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 321,80 | 328,15 | 334,50 | 340,90 | 347,25 | 353,60 | 360,00 | 366,35 | 372,75 | 379,10 | 385,45 | 391,85 | 398,20 | 404,55 | 410,95 | 417,30 | 423,65 | 430,05 |
| d <sub>w</sub> [mm] | 324,67 | 331,03 | 337,40 | 343,76 | 350,13 | 356,50 | 362,86 | 369,23 | 375,59 | 381,96 | 388,33 | 394,70 | 401,06 | 407,43 | 413,80 | 420,17 | 426,52 | 432,89 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 436,40 | 442,80 | 449,15 | 455,50 | 461,85 | 468,25 | 474,60 | 480,95 | 487,35 | 493,70 | 500,05 | 506,45 | 512,80 | 519,15 | 525,55 | 531,90 | 538,25 | 544,60 |
| d <sub>w</sub> [mm] | 439,26 | 445,63 | 451,99 | 458,36 | 464,73 | 471,08 | 477,45 | 483,82 | 490,19 | 496,56 | 502,91 | 509,28 | 515,65 | 522,02 | 528,39 | 534,74 | 541,11 | 547,48 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 551,00 | 557,35 | 563,70 | 570,10 | 576,45 | 582,85 | 589,20 | 595,55 | 601,90 | 608,30 | 614,65 | 621,00 | 627,35 | 633,75 | 640,10 | 646,50 | 652,85 | 659,20 |
| d <sub>w</sub> [mm] | 553,85 | 560,22 | 566,57 | 572,94 | 579,31 | 585,67 | 592,04 | 598,41 | 604,77 | 611,14 | 617,51 | 623,88 | 630,25 | 636,60 | 642,97 | 649,34 | 655,71 | 662,06 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 665,60 | 671,95 | 678,30 | 684,70 | 691,05 | 697,40 | 703,80 | 710,15 | 716,50 | 722,90 | 729,24 | 735,61 | 741,96 | 748,34 | 754,70 | 761,07 |
| d <sub>w</sub> [mm] | 668,43 | 674,80 | 681,17 | 687,54 | 693,89 | 700,26 | 706,63 | 712,99 | 719,36 | 725,73 | 732,09 | 738,46 | 744,83 | 751,19 | 757,56 | 763,93 |



# Timing pulleys

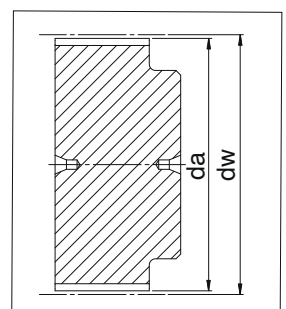
## AT3

| z          | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 13,92 | 14,87 | 15,82 | 16,78 | 17,73 | 18,69 | 19,64 | 20,60 | 21,55 | 22,51 | 23,46 | 24,42 | 25,37 | 26,33 | 27,28 | 28,24 | 29,19 | 30,15 |
| $d_w$ [mm] | 14,32 | 15,28 | 16,23 | 17,19 | 18,14 | 19,10 | 20,05 | 21,01 | 21,96 | 22,92 | 23,87 | 24,83 | 25,78 | 26,74 | 27,69 | 28,65 | 29,60 | 30,56 |

| z          | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 31,10 | 32,06 | 33,01 | 33,97 | 34,92 | 35,88 | 36,83 | 37,79 | 38,74 | 39,70 | 40,65 | 41,61 | 42,56 | 43,52 | 44,47 | 45,43 | 46,38 | 47,34 |
| $d_w$ [mm] | 31,51 | 32,47 | 33,42 | 34,38 | 35,33 | 36,29 | 37,24 | 38,20 | 39,15 | 40,11 | 41,06 | 42,02 | 42,97 | 43,93 | 44,88 | 45,84 | 46,79 | 47,75 |

| z          | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63    | 64    | 65    | 66    | 67    | 68    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 48,29 | 49,25 | 50,20 | 51,16 | 52,11 | 53,07 | 54,02 | 54,98 | 55,93 | 56,89 | 57,84 | 58,80 | 59,75 | 60,71 | 61,66 | 62,62 | 63,57 | 64,53 |
| $d_w$ [mm] | 48,70 | 49,66 | 50,61 | 51,57 | 52,52 | 53,48 | 54,43 | 55,39 | 56,34 | 57,30 | 58,25 | 59,21 | 60,16 | 61,12 | 62,07 | 63,03 | 63,98 | 64,94 |

| z          | 69    | 70    | 71    | 72    |
|------------|-------|-------|-------|-------|
| $d_a$ [mm] | 65,48 | 66,44 | 67,39 | 68,35 |
| $d_w$ [mm] | 65,89 | 66,85 | 67,80 | 68,75 |





# Timing pulleys

## AT5

| z                   | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 22,65 | 24,20 | 25,80 | 27,40 | 29,00 | 30,60 | 32,20 | 33,80 | 35,40 | 37,00 | 38,60 | 40,20 | 41,80 | 43,35 | 44,95 | 46,55 | 48,15 | 49,70 |
| d <sub>w</sub> [mm] | 23,88 | 25,47 | 27,06 | 28,65 | 30,25 | 31,83 | 33,43 | 35,02 | 36,62 | 38,21 | 39,80 | 41,39 | 42,98 | 44,58 | 46,17 | 47,76 | 49,35 | 50,94 |

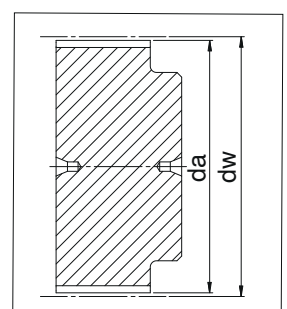
| z                   | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 51,30 | 52,85 | 54,45 | 56,05 | 57,65 | 59,25 | 60,85 | 62,45 | 64,00 | 65,60 | 67,30 | 68,80 | 70,40 | 72,00 | 73,55 | 75,15 | 76,75 | 78,35 |
| d <sub>w</sub> [mm] | 52,54 | 54,13 | 55,72 | 57,31 | 58,90 | 60,50 | 62,09 | 63,66 | 65,27 | 66,86 | 68,46 | 70,05 | 71,64 | 73,23 | 74,82 | 76,42 | 78,01 | 79,60 |

| z                   | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 79,95 | 81,55 | 83,10 | 84,70 | 86,30 | 87,90 | 89,50 | 91,10 | 92,65 | 94,25 | 95,85 | 97,45 | 99,05  | 100,65 | 102,25 | 103,80 | 105,40 | 107,00 |
| d <sub>w</sub> [mm] | 81,19 | 82,78 | 84,38 | 85,97 | 87,54 | 89,15 | 90,74 | 92,34 | 93,93 | 95,52 | 97,11 | 98,70 | 100,30 | 101,89 | 103,48 | 105,07 | 106,66 | 108,26 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 108,60 | 110,20 | 111,80 | 113,35 | 114,95 | 116,55 | 118,15 | 119,75 | 121,35 | 122,90 | 124,50 | 126,10 | 127,70 | 129,30 | 130,90 | 132,45 | 134,05 | 135,65 |
| d <sub>w</sub> [mm] | 109,85 | 111,44 | 113,03 | 114,62 | 116,22 | 117,81 | 119,40 | 120,99 | 122,58 | 124,18 | 125,77 | 127,36 | 128,95 | 130,54 | 132,14 | 133,73 | 135,32 | 136,91 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 137,25 | 138,85 | 140,45 | 142,05 | 143,60 | 145,20 | 146,80 | 148,40 | 150,00 | 151,60 | 153,15 | 154,75 | 156,35 | 157,95 | 159,55 | 161,15 | 162,70 | 164,30 |
| d <sub>w</sub> [mm] | 138,50 | 140,10 | 141,69 | 143,28 | 144,87 | 146,46 | 148,06 | 149,65 | 151,24 | 152,83 | 154,42 | 156,02 | 157,61 | 159,20 | 160,79 | 162,38 | 163,97 | 165,57 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 165,90 | 167,50 | 169,10 | 170,70 | 172,25 | 173,85 | 175,45 | 177,05 | 178,65 | 180,25 | 181,85 | 183,45 | 185,00 | 186,60 | 188,20 | 189,80 |
| d <sub>w</sub> [mm] | 167,16 | 168,75 | 170,34 | 171,94 | 173,53 | 175,12 | 176,71 | 178,30 | 179,84 | 181,49 | 183,08 | 184,67 | 186,26 | 187,86 | 189,45 | 191,04 |



# Timing pulleys

## AT10

| z                   | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| d <sub>a</sub> [mm] | 45,70 | 49,05 | 52,25 | 55,45 | 58,60 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 | 93,65 | 96,80 | 100,00 |
| d <sub>w</sub> [mm] | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 |

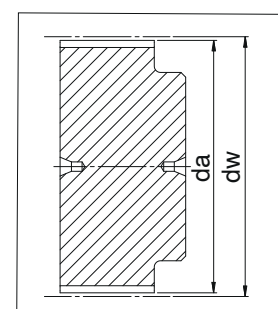
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 135,00 | 138,20 | 141,40 | 144,55 | 147,75 | 150,95 | 154,10 | 157,30 |
| d <sub>w</sub> [mm] | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 | 211,40 | 214,60 |
| d <sub>w</sub> [mm] | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 255,95 | 259,15 | 262,30 | 265,50 | 268,70 | 271,90 |
| d <sub>w</sub> [mm] | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,52 | 273,74 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,70 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 | 326,00 | 329,20 |
| d <sub>w</sub> [mm] | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 332,35 | 335,55 | 338,75 | 341,90 | 345,10 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## ATF10

| z          | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| $d_a$ [mm] | 45,70 | 49,05 | 52,25 | 55,45 | 58,60 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 | 93,65 | 96,80 | 100,00 |
| $d_w$ [mm] | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 |

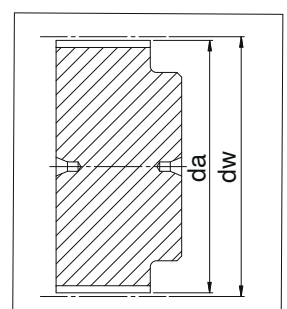
| z          | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 135,00 | 138,20 | 141,40 | 144,55 | 147,75 | 150,95 | 154,10 | 157,30 |
| $d_w$ [mm] | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 |

| z          | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 | 211,40 | 214,60 |
| $d_w$ [mm] | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 |

| z          | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 255,95 | 259,15 | 262,30 | 265,50 | 268,70 | 271,90 |
| $d_w$ [mm] | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,52 | 273,74 |

| z          | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,70 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 | 326,00 | 329,20 |
| $d_w$ [mm] | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 |

| z          | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 332,35 | 335,55 | 338,75 | 341,90 | 345,10 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 | 380,11 |
| $d_w$ [mm] | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## SAT10

| z                   | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| d <sub>a</sub> [mm] | 45,70 | 49,05 | 52,25 | 55,45 | 58,60 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 | 93,65 | 96,80 | 100,00 |
| d <sub>w</sub> [mm] | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 |

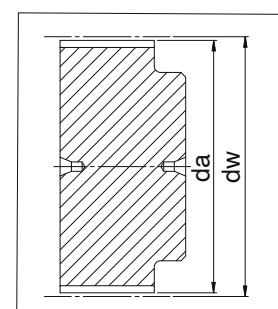
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 135,00 | 138,20 | 141,40 | 144,55 | 147,75 | 150,95 | 154,10 | 157,30 |
| d <sub>w</sub> [mm] | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 | 211,40 | 214,60 |
| d <sub>w</sub> [mm] | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 255,95 | 259,15 | 262,30 | 265,50 | 268,70 | 271,90 |
| d <sub>w</sub> [mm] | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,52 | 273,74 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,70 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 | 326,00 | 329,20 |
| d <sub>w</sub> [mm] | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 332,35 | 335,55 | 338,75 | 341,90 | 345,10 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## AT20

| z          | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 111,75 | 118,10 | 124,50 | 130,75 | 137,20 | 143,55 | 149,95 | 156,30 | 162,65 | 169,05 | 175,40 | 181,75 | 188,15 | 194,50 | 200,85 | 207,20 | 213,60 | 219,95 |
| $d_w$ [mm] | 114,59 | 120,95 | 127,32 | 133,69 | 140,05 | 146,42 | 152,78 | 159,15 | 165,52 | 171,88 | 178,25 | 184,62 | 190,99 | 197,35 | 203,72 | 210,09 | 216,44 | 222,81 |

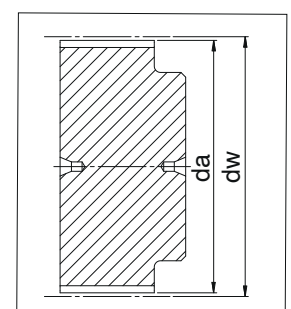
| z          | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 226,35 | 232,70 | 239,05 | 245,45 | 251,80 | 258,15 | 264,50 | 270,90 | 277,25 | 283,60 | 290,00 | 296,35 | 302,70 | 309,10 | 315,45 | 321,80 | 328,20 | 334,55 |
| $d_w$ [mm] | 229,18 | 235,54 | 241,91 | 248,27 | 254,64 | 261,01 | 267,37 | 273,74 | 280,10 | 286,47 | 292,84 | 299,21 | 305,58 | 311,93 | 318,30 | 324,67 | 331,03 | 337,40 |

| z          | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 340,90 | 347,30 | 353,65 | 360,00 | 366,40 | 372,75 | 379,10 | 385,45 | 391,85 | 398,20 | 404,55 | 410,95 | 417,30 | 423,65 | 430,05 | 436,40 | 442,80 | 449,15 |
| $d_w$ [mm] | 343,76 | 350,13 | 356,50 | 362,86 | 369,23 | 375,59 | 381,96 | 388,33 | 394,69 | 401,06 | 407,43 | 413,79 | 420,16 | 426,52 | 432,89 | 439,26 | 445,63 | 451,99 |

| z          | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 455,50 | 461,85 | 468,25 | 474,60 | 480,95 | 487,35 | 493,70 | 500,05 | 506,45 | 512,80 | 519,15 | 525,55 | 531,90 | 538,25 | 544,60 | 551,00 | 557,35 | 563,70 |
| $d_w$ [mm] | 458,36 | 464,73 | 471,08 | 477,45 | 483,82 | 490,19 | 496,56 | 502,91 | 509,28 | 515,65 | 522,02 | 528,39 | 534,74 | 541,11 | 547,48 | 553,85 | 560,22 | 566,57 |

| z          | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 570,10 | 576,45 | 582,85 | 589,20 | 595,55 | 601,90 | 608,30 | 614,65 | 621,00 | 627,35 | 633,75 | 640,10 | 646,50 | 652,85 | 659,20 | 665,60 | 671,95 | 678,30 |
| $d_w$ [mm] | 572,94 | 579,31 | 585,67 | 592,04 | 598,40 | 604,77 | 611,14 | 617,50 | 623,87 | 630,24 | 636,60 | 642,97 | 649,34 | 655,71 | 662,06 | 668,43 | 674,80 | 681,17 |

| z          | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 684,70 | 691,05 | 697,40 | 703,80 | 710,15 | 716,50 | 722,90 | 729,24 | 735,61 | 741,96 | 748,34 | 754,70 | 761,07 |
| $d_w$ [mm] | 687,54 | 693,89 | 700,26 | 706,63 | 712,99 | 719,36 | 725,72 | 732,09 | 738,46 | 744,83 | 751,19 | 757,56 | 763,93 |



# Timing pulleys

## ATF20

| z                   | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 111,75 | 118,10 | 124,50 | 130,75 | 137,20 | 143,55 | 149,95 | 156,30 | 162,65 | 169,05 | 175,40 | 181,75 | 188,15 | 194,50 | 200,85 | 207,20 | 213,60 | 219,95 |
| d <sub>w</sub> [mm] | 114,59 | 120,95 | 127,32 | 133,69 | 140,05 | 146,42 | 152,78 | 159,15 | 165,52 | 171,88 | 178,25 | 184,62 | 190,99 | 197,35 | 203,72 | 210,09 | 216,44 | 222,81 |

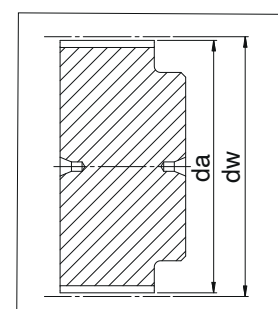
| z                   | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 226,35 | 232,70 | 239,05 | 245,45 | 251,80 | 258,15 | 264,50 | 270,90 | 277,25 | 283,60 | 290,00 | 296,35 | 302,70 | 309,10 | 315,45 | 321,80 | 328,20 | 334,55 |
| d <sub>w</sub> [mm] | 229,18 | 235,54 | 241,91 | 248,27 | 254,64 | 261,01 | 267,37 | 273,74 | 280,10 | 286,47 | 292,84 | 299,21 | 305,58 | 311,93 | 318,30 | 324,67 | 331,03 | 337,40 |

| z                   | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 340,90 | 347,30 | 353,65 | 360,00 | 366,40 | 372,75 | 379,10 | 385,45 | 391,85 | 398,20 | 404,55 | 410,95 | 417,30 | 423,65 | 430,05 | 436,40 | 442,80 | 449,15 |
| d <sub>w</sub> [mm] | 343,76 | 350,13 | 356,50 | 362,86 | 369,23 | 375,59 | 381,96 | 388,33 | 394,69 | 401,06 | 407,43 | 413,79 | 420,16 | 426,52 | 432,89 | 439,26 | 445,63 | 451,99 |

| z                   | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 455,50 | 461,85 | 468,25 | 474,60 | 480,95 | 487,35 | 493,70 | 500,05 | 506,45 | 512,80 | 519,15 | 525,55 | 531,90 | 538,25 | 544,60 | 551,00 | 557,35 | 563,70 |
| d <sub>w</sub> [mm] | 458,36 | 464,73 | 471,08 | 477,45 | 483,82 | 490,19 | 496,56 | 502,91 | 509,28 | 515,65 | 522,02 | 528,39 | 534,74 | 541,11 | 547,48 | 553,85 | 560,22 | 566,57 |

| z                   | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 570,10 | 576,45 | 582,85 | 589,20 | 595,55 | 601,90 | 608,30 | 614,65 | 621,00 | 627,35 | 633,75 | 640,10 | 646,50 | 652,85 | 659,20 | 665,60 | 671,95 | 678,30 |
| d <sub>w</sub> [mm] | 572,94 | 579,31 | 585,67 | 592,04 | 598,40 | 604,77 | 611,14 | 617,50 | 623,87 | 630,24 | 636,60 | 642,97 | 649,34 | 655,71 | 662,06 | 668,43 | 674,80 | 681,17 |

| z                   | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 684,70 | 691,05 | 697,40 | 703,80 | 710,15 | 716,50 | 722,90 | 729,24 | 735,61 | 741,96 | 748,34 | 754,70 | 761,07 |
| d <sub>w</sub> [mm] | 687,54 | 693,89 | 700,26 | 706,63 | 712,99 | 719,36 | 725,72 | 732,09 | 738,46 | 744,83 | 751,19 | 757,56 | 763,93 |





# Timing pulleys

## ATL5

| z                   | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 38,60 | 40,20 | 41,80 | 43,35 | 44,95 | 46,55 | 48,15 | 49,70 | 51,30 | 52,85 | 54,45 | 56,05 | 57,65 | 59,25 | 60,85 | 62,45 | 64,00 | 65,60 |
| d <sub>w</sub> [mm] | 39,80 | 41,39 | 42,98 | 44,58 | 46,17 | 47,76 | 49,35 | 50,94 | 52,54 | 54,13 | 55,72 | 57,31 | 58,90 | 60,50 | 62,09 | 63,66 | 65,27 | 66,86 |

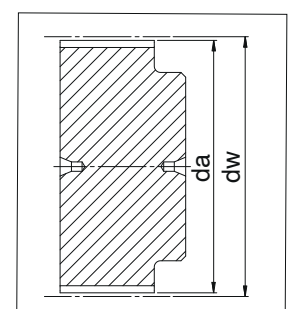
| z                   | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 67,30 | 68,80 | 70,40 | 72,00 | 73,55 | 75,15 | 76,75 | 78,35 | 79,95 | 81,55 | 83,10 | 84,70 | 86,30 | 87,90 | 89,50 | 91,10 | 92,65 | 94,25 |
| d <sub>w</sub> [mm] | 68,46 | 70,05 | 71,64 | 73,23 | 74,82 | 76,42 | 78,01 | 79,60 | 81,19 | 82,78 | 84,38 | 85,97 | 87,54 | 89,15 | 90,74 | 92,34 | 93,93 | 95,52 |

| z                   | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     |
|---------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 95,85 | 97,45 | 99,05  | 100,65 | 102,25 | 103,80 | 105,40 | 107,00 | 108,60 | 110,20 | 111,80 | 113,35 | 114,95 | 116,55 | 118,15 | 119,75 | 121,35 | 122,90 |
| d <sub>w</sub> [mm] | 97,11 | 98,70 | 100,30 | 101,89 | 103,48 | 105,07 | 106,66 | 108,26 | 109,85 | 111,44 | 113,03 | 114,62 | 116,22 | 117,81 | 119,40 | 120,99 | 122,58 | 124,18 |

| z                   | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 124,50 | 126,10 | 127,70 | 129,30 | 130,90 | 132,45 | 134,05 | 135,65 | 137,25 | 138,85 | 140,45 | 142,05 | 143,60 | 145,20 | 146,80 | 148,40 | 150,00 | 151,60 |
| d <sub>w</sub> [mm] | 125,77 | 127,36 | 128,95 | 130,54 | 132,14 | 133,73 | 135,32 | 136,91 | 138,50 | 140,10 | 141,69 | 143,28 | 144,87 | 146,46 | 148,06 | 149,65 | 151,24 | 152,83 |

| z                   | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 153,15 | 154,75 | 156,35 | 157,95 | 159,55 | 161,15 | 162,70 | 164,30 | 165,90 | 167,50 | 169,10 | 170,70 | 172,25 | 173,85 | 175,45 | 177,05 | 178,65 | 180,25 |
| d <sub>w</sub> [mm] | 154,42 | 156,02 | 157,61 | 159,20 | 160,79 | 162,38 | 163,97 | 165,57 | 167,16 | 168,75 | 170,34 | 171,94 | 173,53 | 175,12 | 176,71 | 178,30 | 179,84 | 181,49 |

| z                   | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 181,85 | 183,45 | 185,00 | 186,60 | 188,20 | 189,80 |
| d <sub>w</sub> [mm] | 183,08 | 184,67 | 186,26 | 187,86 | 189,45 | 191,04 |



# Timing pulleys

## ATL10

| z                   | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 77,7  | 80,9  | 84,1  | 87,25 | 90,45 | 93,65 | 96,8  | 100    | 103,2  | 106,4  | 109,55 | 112,75 | 115,9  | 119,1  | 122,3  | 125,45 | 128,65 | 131,85 |
| d <sub>w</sub> [mm] | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,5  | 133,69 |

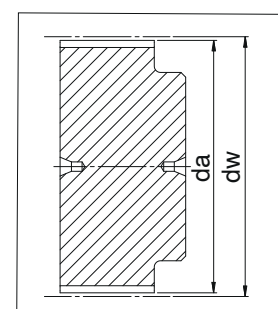
| z                   | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 135    | 138,2  | 141,4  | 144,55 | 147,75 | 150,95 | 154,1  | 157,3  | 160,5  | 163,65 | 166,85 | 170,05 | 173,2  | 176,4  | 179,6  | 182,75 | 185,95 | 189,1  |
| d <sub>w</sub> [mm] | 136,87 | 140,05 | 143,24 | 146,42 | 149,6  | 152,78 | 155,97 | 159,15 | 162,33 | 165,52 | 168,7  | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,8  | 190,98 |

| z                   | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 192,3  | 195,5  | 198,65 | 201,85 | 205,05 | 208,2  | 211,4  | 214,6  | 217,75 | 220,95 | 224,15 | 227,3  | 230,5  | 233,7  | 236,9  | 240,05 | 243,25 | 246,4  |
| d <sub>w</sub> [mm] | 194,16 | 197,35 | 200,53 | 203,71 | 206,9  | 210,08 | 213,26 | 216,44 | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 |

| z                   | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 249,6  | 252,8  | 255,95 | 259,15 | 262,3  | 265,5  | 268,7  | 271,9  | 275,05 | 278,25 | 281,45 | 284,6  | 287,8  | 291    | 294,2  | 297,35 | 300,55 | 303,7  |
| d <sub>w</sub> [mm] | 251,46 | 254,64 | 257,82 | 261    | 264,19 | 267,37 | 270,52 | 273,74 | 276,92 | 280,1  | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,2  | 302,39 | 305,57 |

| z                   | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 306,9  | 310,1  | 313,25 | 316,45 | 319,65 | 322,8  | 326    | 329,2  | 332,35 | 335,55 | 338,75 | 341,9  | 345,1  | 348,3  | 351,45 | 354,65 | 357,8  | 361    |
| d <sub>w</sub> [mm] | 308,75 | 311,93 | 315,12 | 318,3  | 321,48 | 324,66 | 327,85 | 331,03 | 334,21 | 337,4  | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,5  | 359,68 | 362,86 |

| z                   | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## ATL20

| z          | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 156,30 | 162,65 | 169,05 | 175,40 | 181,75 | 188,15 | 194,50 | 200,85 | 207,20 | 213,60 | 219,95 | 226,35 | 232,70 | 239,05 | 245,45 | 251,80 | 258,15 | 264,50 |
| $d_w$ [mm] | 159,15 | 165,52 | 171,88 | 178,25 | 184,62 | 190,99 | 197,35 | 203,72 | 210,09 | 216,44 | 222,81 | 229,18 | 235,54 | 241,91 | 248,27 | 254,64 | 261,01 | 267,37 |

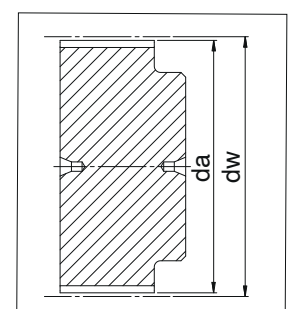
| z          | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 270,90 | 277,25 | 283,60 | 290,00 | 296,35 | 302,70 | 309,10 | 315,45 | 321,80 | 328,20 | 334,55 | 340,90 | 347,30 | 353,65 | 360,00 | 366,40 | 372,75 | 379,10 |
| $d_w$ [mm] | 273,74 | 280,10 | 286,47 | 292,84 | 299,21 | 305,58 | 311,93 | 318,30 | 324,67 | 331,03 | 337,40 | 343,76 | 350,13 | 356,50 | 362,86 | 369,23 | 375,59 | 381,96 |

| z          | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 385,45 | 391,85 | 398,20 | 404,55 | 410,95 | 417,30 | 423,65 | 430,05 | 436,40 | 442,80 | 449,15 | 455,50 | 461,85 | 468,25 | 474,60 | 480,95 | 487,35 | 493,70 |
| $d_w$ [mm] | 388,33 | 394,69 | 401,06 | 407,43 | 413,79 | 420,16 | 426,52 | 432,89 | 439,26 | 445,63 | 451,99 | 458,36 | 464,73 | 471,08 | 477,45 | 483,82 | 490,19 | 496,56 |

| z          | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 500,05 | 506,45 | 512,80 | 519,15 | 525,55 | 531,90 | 538,25 | 544,60 | 551,00 | 557,35 | 563,70 | 570,10 | 576,45 | 582,85 | 589,20 | 595,55 | 601,90 | 608,30 |
| $d_w$ [mm] | 502,91 | 509,28 | 515,65 | 522,02 | 528,39 | 534,74 | 541,11 | 547,48 | 553,85 | 560,22 | 566,57 | 572,94 | 579,31 | 585,67 | 592,04 | 598,40 | 604,77 | 611,14 |

| z          | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 614,65 | 621,00 | 627,35 | 633,75 | 640,10 | 646,50 | 652,85 | 659,20 | 665,60 | 671,95 | 678,30 | 684,70 | 691,05 | 697,40 | 703,80 | 710,15 | 716,50 | 722,90 |
| $d_w$ [mm] | 617,50 | 623,87 | 630,24 | 636,60 | 642,97 | 649,34 | 655,71 | 662,06 | 668,43 | 674,80 | 681,17 | 687,54 | 693,89 | 700,26 | 706,63 | 712,99 | 719,36 | 725,72 |

| z          | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 729,24 | 735,61 | 741,96 | 748,34 | 754,70 | 761,07 |
| $d_w$ [mm] | 732,09 | 738,46 | 744,83 | 751,19 | 757,56 | 763,93 |



# Timing pulleys

## MXL

| z                   | 12   | 13   | 14   | 15   | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    |
|---------------------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 7,25 | 7,90 | 8,55 | 9,19 | 9,84  | 10,49 | 11,13 | 11,78 | 12,43 | 13,07 | 13,72 | 14,37 | 15,01 | 15,66 | 16,31 | 16,95 | 17,60 | 18,25 |
| d <sub>w</sub> [mm] | 7,76 | 8,41 | 9,06 | 9,70 | 10,35 | 11,00 | 11,64 | 12,29 | 12,94 | 13,58 | 14,23 | 14,88 | 15,52 | 16,17 | 16,82 | 17,46 | 18,11 | 18,76 |

| z                   | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 18,89 | 19,54 | 20,19 | 20,83 | 21,48 | 22,13 | 22,78 | 23,42 | 24,07 | 24,72 | 25,36 | 26,01 | 26,66 | 27,30 | 27,95 | 28,60 | 29,24 | 29,89 |
| d <sub>w</sub> [mm] | 19,40 | 20,05 | 20,70 | 21,34 | 21,99 | 22,64 | 23,29 | 23,93 | 24,58 | 25,23 | 25,87 | 26,52 | 27,17 | 27,81 | 28,46 | 29,11 | 29,75 | 30,40 |

| z                   | 48    | 49    | 50    | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63    | 64    | 65    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 30,54 | 31,18 | 31,83 | 32,48 | 33,12 | 33,77 | 34,42 | 35,06 | 35,71 | 36,36 | 37,00 | 37,65 | 38,30 | 38,95 | 39,59 | 40,24 | 40,89 | 41,53 |
| d <sub>w</sub> [mm] | 31,05 | 31,69 | 32,34 | 32,99 | 33,63 | 34,28 | 34,93 | 35,57 | 36,22 | 36,87 | 37,51 | 38,16 | 38,81 | 39,46 | 40,10 | 40,75 | 41,40 | 42,04 |

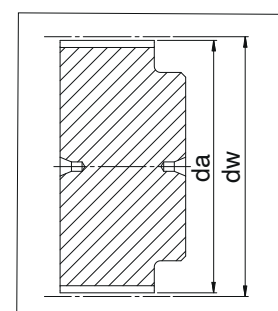
| z                   | 66    | 67    | 68    | 69    | 70    | 71    | 72    | 73    | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 42,18 | 42,83 | 43,47 | 44,12 | 44,77 | 45,41 | 46,06 | 46,71 | 47,35 | 48,00 | 48,65 | 49,20 | 49,94 | 50,59 | 51,23 | 51,88 | 52,53 | 53,17 |
| d <sub>w</sub> [mm] | 42,69 | 43,34 | 43,98 | 44,63 | 45,28 | 45,92 | 46,57 | 47,22 | 47,86 | 48,51 | 49,16 | 49,80 | 50,45 | 51,10 | 51,74 | 52,39 | 53,04 | 53,68 |

| z                   | 84    | 85    | 86    | 87    | 88    | 89    | 90    | 91    | 92    | 93    | 94    | 95    | 96    | 97    | 98    | 99    | 100   | 101   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 53,82 | 54,47 | 55,12 | 55,76 | 56,41 | 57,06 | 57,70 | 58,36 | 59,00 | 59,64 | 60,29 | 60,94 | 61,58 | 62,23 | 62,88 | 63,52 | 64,17 | 64,82 |
| d <sub>w</sub> [mm] | 54,33 | 54,98 | 55,63 | 56,27 | 56,92 | 57,57 | 58,21 | 58,86 | 59,51 | 60,15 | 60,80 | 61,45 | 62,09 | 62,74 | 63,39 | 64,03 | 64,68 | 65,33 |

| z                   | 102   | 103   | 104   | 105   | 106   | 107   | 108   | 109   | 110   | 111   | 112   | 113   | 114   | 115   | 116   | 117   | 118   | 119   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 65,46 | 66,11 | 66,76 | 67,40 | 68,05 | 68,70 | 69,34 | 69,99 | 70,64 | 71,29 | 71,93 | 72,58 | 73,23 | 73,87 | 74,52 | 75,17 | 75,81 | 76,46 |
| d <sub>w</sub> [mm] | 65,97 | 66,62 | 67,27 | 67,91 | 68,56 | 69,21 | 69,85 | 70,50 | 71,15 | 71,80 | 72,44 | 73,09 | 73,74 | 74,38 | 75,03 | 75,68 | 76,32 | 76,97 |

| z                   | 120   | 121   | 122   | 123   | 124   | 125   | 126   | 127   | 128   | 129   | 130   | 131   | 132   | 133   | 134   | 135   | 136   | 137   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 77,11 | 77,75 | 78,40 | 79,05 | 79,69 | 80,34 | 80,99 | 81,63 | 82,28 | 82,93 | 83,57 | 84,22 | 84,87 | 85,51 | 86,16 | 86,81 | 87,46 | 88,10 |
| d <sub>w</sub> [mm] | 77,62 | 78,26 | 78,91 | 79,56 | 80,20 | 80,85 | 81,50 | 82,14 | 82,79 | 83,44 | 84,08 | 84,73 | 85,38 | 86,02 | 86,67 | 87,32 | 87,97 | 88,61 |

| z                   | 138   | 139   | 140   |
|---------------------|-------|-------|-------|
| d <sub>a</sub> [mm] | 88,75 | 89,40 | 90,04 |
| d <sub>w</sub> [mm] | 89,26 | 89,91 | 90,55 |



# Timing pulleys

## XL

| z                   | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 15,66 | 17,28 | 18,89 | 20,51 | 22,13 | 23,74 | 25,36 | 26,98 | 28,60 | 30,21 | 31,83 | 33,45 | 35,06 | 36,68 | 38,30 | 39,92 | 41,53 | 43,15 |
| d <sub>w</sub> [mm] | 16,17 | 17,79 | 19,40 | 21,02 | 22,64 | 24,25 | 25,87 | 27,49 | 29,11 | 30,72 | 32,34 | 33,96 | 35,57 | 37,19 | 38,81 | 40,43 | 42,04 | 43,66 |

| z                   | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 44,77 | 46,38 | 48,00 | 49,62 | 51,23 | 52,85 | 54,47 | 56,09 | 57,70 | 59,32 | 60,94 | 62,55 | 64,17 | 65,79 | 67,40 | 69,02 | 70,64 | 72,26 |
| d <sub>w</sub> [mm] | 45,28 | 46,89 | 48,51 | 50,13 | 51,74 | 53,36 | 54,98 | 56,60 | 58,21 | 59,83 | 61,45 | 63,06 | 64,68 | 66,30 | 67,91 | 69,53 | 71,15 | 72,77 |

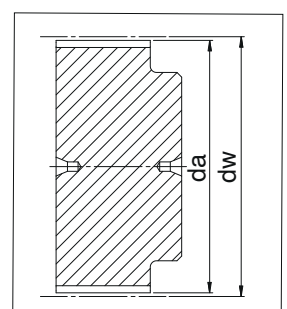
| z                   | 46    | 47    | 48    | 49    | 50    | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62     | 63     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| d <sub>a</sub> [mm] | 73,87 | 75,49 | 77,11 | 78,72 | 80,34 | 81,96 | 83,57 | 85,19 | 86,81 | 88,42 | 90,04 | 91,66 | 93,28 | 94,89 | 96,51 | 98,13 | 99,74  | 101,36 |
| d <sub>w</sub> [mm] | 74,38 | 76,00 | 77,62 | 79,23 | 80,85 | 82,47 | 84,08 | 85,70 | 87,32 | 88,93 | 90,55 | 92,17 | 93,79 | 95,40 | 97,02 | 98,64 | 100,25 | 101,87 |

| z                   | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 102,98 | 104,60 | 106,21 | 107,83 | 109,45 | 111,06 | 112,68 | 114,30 | 115,92 | 117,53 | 119,15 | 120,77 | 122,38 | 124,00 | 125,62 | 127,23 | 128,85 | 130,47 |
| d <sub>w</sub> [mm] | 103,49 | 105,11 | 106,72 | 108,34 | 109,96 | 111,57 | 113,19 | 114,81 | 116,43 | 118,04 | 119,66 | 121,28 | 122,89 | 124,51 | 126,13 | 127,74 | 129,36 | 130,98 |

| z                   | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 132,08 | 133,70 | 135,32 | 136,93 | 138,55 | 140,17 | 141,75 | 143,36 | 145,02 | 146,64 | 148,25 | 149,87 | 151,49 | 153,11 | 154,72 | 156,34 | 157,96 | 159,57 |
| d <sub>w</sub> [mm] | 132,59 | 134,21 | 135,83 | 137,44 | 139,06 | 140,68 | 142,30 | 143,91 | 145,53 | 147,15 | 148,76 | 150,38 | 152,00 | 153,62 | 155,23 | 156,85 | 158,47 | 160,08 |

| z                   | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 161,19 | 162,81 | 164,42 | 166,04 | 167,66 | 169,28 | 170,89 | 172,51 | 174,13 | 175,74 | 177,36 | 178,98 | 180,59 | 182,21 | 183,83 | 185,44 | 187,06 | 188,68 |
| d <sub>w</sub> [mm] | 161,70 | 163,32 | 164,93 | 166,55 | 168,17 | 169,79 | 171,40 | 173,02 | 174,64 | 176,25 | 177,87 | 179,49 | 181,10 | 182,72 | 184,34 | 185,95 | 187,57 | 189,19 |

| z                   | 118    | 119    | 120    |
|---------------------|--------|--------|--------|
| d <sub>a</sub> [mm] | 190,30 | 191,91 | 193,53 |
| d <sub>w</sub> [mm] | 190,81 | 192,42 | 194,04 |



# Timing pulleys

L

| z                   | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 44,71 | 47,74 | 50,77 | 53,80 | 56,83 | 59,88 | 62,91 | 65,94 | 68,97 | 72,00 | 75,03 | 78,06 | 81,09 | 84,12 | 87,15 | 90,20 | 93,23 | 96,26 |
| d <sub>w</sub> [mm] | 45,47 | 48,50 | 51,53 | 54,56 | 57,61 | 60,64 | 63,67 | 66,70 | 69,73 | 72,76 | 75,80 | 78,83 | 81,86 | 84,89 | 87,92 | 90,95 | 93,98 | 97,01 |

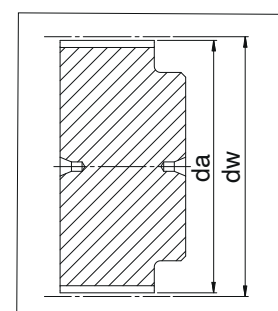
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 99,29  | 102,32 | 105,35 | 108,38 | 111,41 | 114,44 | 117,47 | 120,52 | 123,55 | 126,58 | 129,61 | 132,64 | 135,67 | 138,70 | 141,73 | 144,76 | 147,80 | 150,83 |
| d <sub>w</sub> [mm] | 100,04 | 103,07 | 106,12 | 109,15 | 112,18 | 115,21 | 118,24 | 121,27 | 124,30 | 127,33 | 130,36 | 133,39 | 136,44 | 139,47 | 142,50 | 145,53 | 148,56 | 151,59 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 153,86 | 156,89 | 159,92 | 162,95 | 166,00 | 169,03 | 172,06 | 175,09 | 178,12 | 181,15 | 184,18 | 187,21 | 190,24 | 193,27 | 196,30 | 199,33 | 202,38 | 205,41 |
| d <sub>w</sub> [mm] | 154,62 | 157,65 | 160,68 | 163,71 | 166,76 | 169,79 | 172,82 | 175,85 | 178,88 | 181,91 | 184,94 | 187,97 | 191,00 | 194,03 | 197,06 | 200,11 | 203,14 | 206,17 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 208,44 | 211,47 | 214,50 | 217,53 | 220,56 | 223,59 | 226,62 | 229,65 | 232,70 | 235,73 | 238,76 | 241,79 | 244,82 | 247,85 | 250,88 | 253,91 | 256,94 | 259,97 |
| d <sub>w</sub> [mm] | 209,20 | 212,23 | 215,26 | 218,29 | 221,32 | 224,35 | 227,38 | 230,41 | 233,46 | 236,49 | 239,52 | 242,55 | 245,58 | 248,61 | 251,64 | 254,67 | 257,70 | 260,73 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 263,02 | 266,05 | 269,08 | 272,11 | 275,14 | 278,17 | 281,20 | 284,23 | 287,26 | 290,30 | 293,33 | 296,36 | 299,40 | 302,43 | 305,46 | 308,49 | 311,52 | 314,55 |
| d <sub>w</sub> [mm] | 263,78 | 266,81 | 269,84 | 272,87 | 275,90 | 278,93 | 281,96 | 285,00 | 288,03 | 291,06 | 294,09 | 297,12 | 300,15 | 303,18 | 306,21 | 309,24 | 312,29 | 315,32 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 317,58 | 320,61 | 323,64 | 326,69 | 329,72 | 332,75 | 335,78 | 338,81 | 341,84 | 344,87 | 347,90 | 350,93 | 353,96 | 357,00 | 360,03 | 363,07 |
| d <sub>w</sub> [mm] | 318,35 | 321,38 | 324,41 | 327,44 | 330,47 | 333,50 | 336,53 | 339,56 | 342,61 | 345,64 | 348,67 | 351,70 | 354,73 | 357,76 | 360,79 | 363,82 |





# Timing pulleys

## H

| z          | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25     | 26     | 27     | 28     | 29     | 30     | 31     |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 55,23 | 59,27 | 63,31 | 67,35 | 71,40 | 75,44 | 79,48 | 83,52 | 87,57 | 91,61 | 95,65 | 99,69  | 103,73 | 107,77 | 111,81 | 115,85 | 119,91 | 123,95 |
| $d_w$ [mm] | 56,60 | 60,64 | 64,68 | 68,72 | 72,76 | 76,80 | 80,84 | 84,88 | 88,94 | 92,98 | 97,02 | 101,06 | 105,10 | 109,14 | 113,18 | 117,22 | 121,28 | 125,32 |

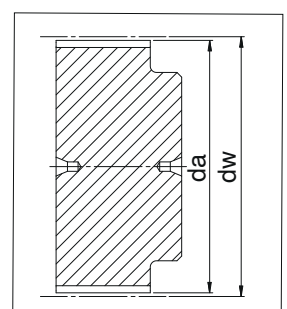
| z          | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 127,99 | 132,03 | 136,07 | 140,11 | 144,15 | 148,20 | 152,24 | 156,28 | 160,32 | 164,36 | 168,42 | 172,46 | 176,50 | 180,54 | 184,58 | 188,62 | 192,67 | 196,71 |
| $d_w$ [mm] | 129,36 | 133,40 | 137,44 | 141,48 | 145,52 | 149,56 | 153,62 | 157,66 | 161,70 | 165,74 | 169,78 | 173,82 | 177,86 | 181,90 | 185,96 | 190,00 | 194,04 | 198,08 |

| z          | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 200,75 | 204,80 | 208,84 | 212,88 | 216,92 | 220,96 | 225,00 | 229,04 | 233,10 | 237,14 | 241,18 | 245,22 | 249,26 | 253,30 | 257,34 | 261,38 | 265,44 | 269,48 |
| $d_w$ [mm] | 202,13 | 206,17 | 210,21 | 214,25 | 218,29 | 222,33 | 226,37 | 230,41 | 234,47 | 238,51 | 242,55 | 246,59 | 250,63 | 254,67 | 258,71 | 262,75 | 266,81 | 270,85 |

| z          | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 273,52 | 277,56 | 281,60 | 285,64 | 289,68 | 293,72 | 297,78 | 301,82 | 305,86 | 309,90 | 313,94 | 317,98 | 322,02 | 326,06 | 330,12 | 334,16 | 338,20 | 342,24 |
| $d_w$ [mm] | 274,89 | 278,93 | 282,97 | 287,01 | 291,05 | 295,10 | 299,14 | 303,18 | 307,22 | 311,26 | 315,32 | 319,36 | 323,40 | 327,44 | 331,48 | 335,52 | 339,56 | 343,60 |

| z          | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 346,28 | 350,33 | 354,37 | 358,41 | 362,45 | 366,50 | 370,54 | 374,58 | 378,62 | 382,66 | 386,70 | 390,74 | 394,80 | 398,84 | 402,88 | 406,92 | 410,96 | 415,00 |
| $d_w$ [mm] | 347,66 | 351,70 | 355,74 | 359,78 | 363,82 | 367,86 | 371,90 | 375,94 | 380,00 | 384,04 | 388,08 | 392,12 | 396,16 | 400,20 | 404,24 | 408,28 | 412,34 | 416,38 |

| z          | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 419,04 | 423,08 | 427,14 | 431,18 | 435,22 | 439,26 | 443,30 | 447,34 | 451,38 | 455,42 | 459,48 | 463,52 | 467,56 | 471,60 | 475,64 | 479,68 | 483,72 |
| $d_w$ [mm] | 420,42 | 424,46 | 428,50 | 432,54 | 436,58 | 440,62 | 444,68 | 448,72 | 452,76 | 456,80 | 460,84 | 464,88 | 468,92 | 472,96 | 477,02 | 481,06 | 485,10 |



# Timing pulleys

## XH

| z                   | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 124,55 | 131,62 | 138,68 | 145,76 | 152,84 | 159,91 | 167,00 | 174,07 | 181,13 | 188,20 | 195,27 | 202,37 | 209,44 | 216,51 | 223,58 | 230,66 | 237,73 | 244,80 |
| d <sub>w</sub> [mm] | 127,34 | 134,41 | 141,48 | 148,55 | 155,64 | 162,71 | 169,78 | 176,85 | 183,94 | 191,01 | 198,08 | 205,15 | 212,22 | 219,31 | 226,38 | 233,45 | 240,52 | 247,59 |

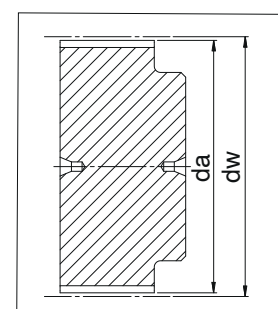
| z                   | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 251,87 | 258,94 | 266,02 | 273,11 | 280,18 | 287,25 | 294,33 | 301,40 | 308,47 | 315,54 | 322,61 | 329,70 | 336,77 | 343,87 | 350,93 | 358,00 | 365,07 | 372,14 |
| d <sub>w</sub> [mm] | 254,68 | 261,75 | 268,82 | 275,89 | 282,98 | 290,05 | 297,12 | 304,19 | 311,26 | 318,35 | 325,42 | 332,49 | 339,57 | 346,66 | 353,73 | 360,80 | 367,87 | 374,94 |

| z                   | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 379,21 | 386,30 | 393,37 | 400,44 | 407,51 | 414,58 | 421,68 | 428,75 | 435,90 | 442,90 | 449,97 | 457,05 | 464,10 | 471,20 | 478,25 | 485,32 | 492,39 | 499,48 |
| d <sub>w</sub> [mm] | 382,01 | 389,08 | 396,17 | 403,24 | 410,31 | 417,38 | 424,47 | 431,54 | 438,61 | 445,68 | 452,75 | 459,84 | 466,91 | 473,98 | 481,05 | 488,12 | 495,21 | 502,28 |

| z                   | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 506,57 | 513,63 | 520,70 | 527,77 | 534,84 | 541,93 | 549,00 | 556,07 | 563,15 | 570,22 | 577,29 | 584,36 | 591,43 | 598,60 | 605,61 | 612,68 | 619,75 | 626,82 |
| d <sub>w</sub> [mm] | 509,35 | 516,42 | 523,51 | 530,58 | 537,65 | 544,72 | 551,79 | 558,88 | 565,95 | 573,02 | 580,09 | 587,18 | 594,25 | 601,32 | 608,39 | 615,46 | 622,55 | 629,62 |

| z                   | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 633,89 | 640,96 | 648,04 | 655,11 | 662,18 | 669,25 | 676,33 | 683,40 | 690,47 | 697,55 | 704,62 | 711,70 | 718,77 | 725,85 | 732,92 | 740,01 | 747,08 | 754,15 |
| d <sub>w</sub> [mm] | 636,69 | 643,76 | 650,85 | 657,92 | 664,99 | 672,06 | 679,13 | 686,22 | 693,29 | 700,36 | 707,43 | 714,50 | 721,59 | 728,66 | 735,73 | 742,80 | 749,87 | 756,96 |

| z                   | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 761,22 | 768,30 | 775,37 | 782,44 | 789,51 | 796,60 | 803,67 | 810,74 | 817,81 | 824,88 | 831,95 | 839,03 | 846,12 |
| d <sub>w</sub> [mm] | 764,03 | 771,10 | 778,17 | 785,26 | 792,33 | 799,40 | 806,47 | 813,54 | 820,63 | 827,70 | 834,77 | 841,84 | 848,93 |



# Timing pulleys

## HTD3M

| z                   | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 18,34 | 19,29 | 20,25 | 21,20 | 22,16 | 23,11 | 24,07 | 25,02 | 25,98 | 26,93 | 27,89 | 28,84 | 29,80 | 30,75 | 31,71 | 32,66 | 33,62 | 34,57 |
| d <sub>w</sub> [mm] | 19,10 | 20,05 | 21,01 | 21,96 | 22,92 | 23,87 | 24,83 | 25,78 | 26,74 | 27,69 | 28,65 | 29,60 | 30,56 | 31,51 | 32,47 | 33,42 | 34,38 | 35,33 |

| z                   | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | 52    | 53    | 54    | 55    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 35,53 | 36,48 | 37,44 | 38,39 | 39,35 | 40,30 | 41,26 | 42,21 | 43,17 | 44,12 | 45,08 | 46,03 | 46,99 | 47,94 | 48,90 | 49,85 | 50,81 | 51,76 |
| d <sub>w</sub> [mm] | 36,29 | 37,24 | 38,20 | 39,15 | 40,11 | 41,06 | 42,02 | 42,97 | 43,93 | 44,88 | 45,84 | 46,79 | 47,75 | 48,70 | 49,66 | 50,61 | 51,57 | 52,52 |

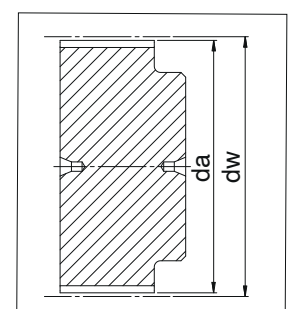
| z                   | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63    | 64    | 65    | 66    | 67    | 68    | 69    | 70    | 71    | 72    | 73    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 52,72 | 53,67 | 54,63 | 55,58 | 56,54 | 57,49 | 58,45 | 59,40 | 60,36 | 61,31 | 62,27 | 63,22 | 64,18 | 65,13 | 66,09 | 67,04 | 68,00 | 68,95 |
| d <sub>w</sub> [mm] | 53,48 | 54,43 | 55,39 | 56,34 | 57,30 | 58,25 | 59,21 | 60,16 | 61,12 | 62,07 | 63,03 | 63,98 | 64,94 | 65,89 | 66,85 | 67,80 | 68,76 | 69,71 |

| z                   | 74    | 75    | 76    | 77    | 78    | 79    | 80    | 81    | 82    | 83    | 84    | 85    | 86    | 87    | 88    | 89    | 90    | 91    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 69,91 | 70,86 | 71,82 | 72,77 | 73,73 | 74,68 | 75,64 | 76,59 | 77,55 | 78,50 | 79,46 | 80,41 | 81,37 | 82,32 | 83,28 | 84,23 | 85,19 | 86,14 |
| d <sub>w</sub> [mm] | 70,67 | 71,62 | 72,58 | 73,53 | 74,49 | 75,44 | 76,40 | 77,35 | 78,31 | 79,26 | 80,22 | 81,17 | 82,13 | 83,08 | 84,04 | 84,99 | 85,95 | 86,90 |

| z                   | 92    | 93    | 94    | 95    | 96    | 97    | 98    | 99    | 100   | 101   | 102   | 103   | 104   | 105    | 106    | 107    | 108    | 109    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 87,10 | 88,05 | 89,01 | 89,96 | 90,92 | 91,87 | 92,83 | 93,78 | 94,74 | 95,69 | 96,65 | 97,60 | 98,56 | 99,51  | 100,47 | 101,42 | 102,38 | 103,33 |
| d <sub>w</sub> [mm] | 87,86 | 88,81 | 89,77 | 90,72 | 91,68 | 92,63 | 93,59 | 94,54 | 95,50 | 96,45 | 97,41 | 98,36 | 99,32 | 100,27 | 101,23 | 102,18 | 103,14 | 104,09 |

| z                   | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    | 121    | 122    | 123    | 124    | 125    | 126    | 127    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 104,29 | 105,24 | 106,20 | 107,15 | 108,11 | 109,06 | 110,02 | 110,97 | 111,93 | 112,88 | 113,83 | 114,79 | 115,74 | 116,70 | 117,65 | 118,61 | 119,56 | 120,52 |
| d <sub>w</sub> [mm] | 105,05 | 106,00 | 106,96 | 107,91 | 108,87 | 109,82 | 110,78 | 111,73 | 112,69 | 113,64 | 114,59 | 115,55 | 116,50 | 117,46 | 118,41 | 119,37 | 120,32 | 121,28 |

| z                   | 128    | 129    | 130    | 131    | 132    | 133    | 134    | 135    | 136    | 137    | 138    | 139    | 140    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 121,47 | 122,43 | 123,38 | 124,34 | 125,29 | 126,25 | 127,20 | 128,16 | 129,11 | 130,07 | 131,02 | 131,98 | 132,93 |
| d <sub>w</sub> [mm] | 122,23 | 123,19 | 124,14 | 125,10 | 126,05 | 127,01 | 127,96 | 128,92 | 129,87 | 130,83 | 131,78 | 132,74 | 133,69 |



# Timing pulleys

## HTD5M

| z                   | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 24,32 | 25,91 | 27,51 | 29,09 | 30,69 | 32,28 | 33,87 | 35,46 | 37,06 | 38,64 | 40,24 | 41,83 | 43,42 | 45,01 | 46,61 | 48,19 | 49,79 | 51,38 |
| d <sub>w</sub> [mm] | 25,46 | 27,05 | 28,65 | 30,23 | 31,83 | 33,42 | 35,01 | 36,60 | 38,20 | 39,78 | 41,38 | 42,97 | 44,56 | 46,15 | 47,75 | 49,33 | 50,93 | 52,52 |

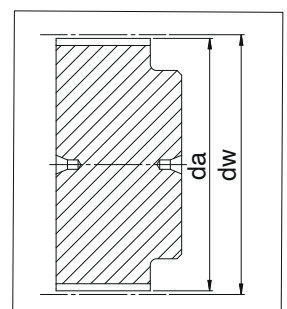
| z                   | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 52,97 | 54,56 | 56,16 | 57,75 | 59,34 | 60,93 | 62,52 | 64,11 | 65,70 | 67,29 | 68,88 | 70,47 | 72,06 | 73,65 | 75,24 | 76,84 | 78,44 | 80,03 |
| d <sub>w</sub> [mm] | 54,11 | 55,70 | 57,30 | 58,89 | 60,48 | 62,07 | 63,66 | 65,25 | 66,84 | 68,43 | 70,02 | 71,61 | 73,20 | 74,79 | 76,38 | 77,98 | 79,58 | 81,17 |

| z                   | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     | 69     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 81,62 | 83,21 | 84,80 | 86,39 | 87,98 | 89,57 | 91,17 | 92,76 | 94,35 | 95,94 | 97,53 | 99,12  | 100,72 | 102,31 | 103,90 | 105,49 | 107,08 | 108,67 |
| d <sub>w</sub> [mm] | 82,76 | 84,35 | 85,94 | 87,53 | 89,12 | 90,71 | 92,31 | 93,90 | 95,49 | 97,08 | 98,67 | 100,26 | 101,86 | 103,45 | 105,04 | 106,63 | 108,22 | 109,81 |

| z                   | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 110,27 | 111,86 | 113,45 | 115,04 | 116,63 | 118,22 | 119,81 | 121,40 | 122,99 | 124,58 | 126,18 | 127,77 | 129,36 | 130,95 | 132,54 | 134,14 | 135,73 | 137,32 |
| d <sub>w</sub> [mm] | 111,41 | 113,00 | 114,59 | 116,18 | 117,77 | 119,36 | 120,95 | 122,54 | 124,13 | 125,72 | 127,32 | 128,91 | 130,50 | 132,09 | 133,68 | 135,28 | 136,87 | 138,46 |

| z                   | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 138,91 | 140,51 | 142,10 | 143,69 | 145,28 | 146,87 | 148,46 | 150,06 | 151,64 | 153,24 | 154,83 | 156,42 | 158,01 | 159,61 | 161,20 | 162,81 | 164,38 | 165,97 |
| d <sub>w</sub> [mm] | 140,05 | 141,65 | 143,24 | 144,83 | 146,42 | 148,01 | 149,60 | 151,20 | 152,78 | 154,38 | 155,97 | 157,56 | 159,15 | 160,75 | 162,34 | 163,95 | 165,52 | 167,11 |

| z                   | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 167,56 | 169,09 | 170,75 | 172,34 | 173,93 | 175,52 | 177,11 | 178,70 | 180,29 | 181,88 | 183,47 | 185,07 | 186,66 | 188,25 | 189,84 |
| d <sub>w</sub> [mm] | 168,70 | 170,23 | 171,89 | 173,48 | 175,07 | 176,66 | 178,25 | 179,84 | 181,43 | 183,02 | 184,61 | 186,21 | 187,80 | 189,39 | 190,98 |



# Timing pulleys

## HTD8M

| z                   | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 44,46 | 47,01 | 49,56 | 52,10 | 54,65 | 57,20 | 59,75 | 62,29 | 64,84 | 67,38 | 70,08 | 72,59 | 75,13 | 77,65 | 80,16 | 82,68 | 85,21 | 87,76 |
| d <sub>w</sub> [mm] | 45,83 | 48,38 | 50,93 | 53,47 | 56,02 | 58,57 | 61,12 | 63,66 | 66,21 | 68,75 | 71,30 | 73,84 | 76,39 | 78,94 | 81,49 | 84,03 | 86,58 | 89,12 |

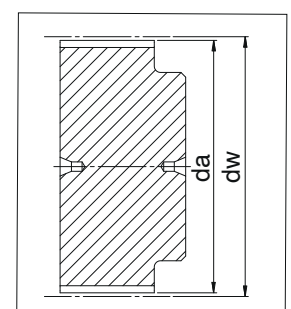
| z                   | 36    | 37    | 38    | 39    | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|---------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 90,30 | 92,85 | 95,40 | 97,94 | 100,49 | 103,04 | 105,58 | 108,13 | 110,68 | 113,22 | 115,77 | 118,31 | 120,86 | 123,40 | 125,95 | 128,50 | 131,05 | 133,59 |
| d <sub>w</sub> [mm] | 91,67 | 94,22 | 96,77 | 99,31 | 101,86 | 104,40 | 106,95 | 109,50 | 112,05 | 114,59 | 117,14 | 119,68 | 122,23 | 124,77 | 127,32 | 129,87 | 132,41 | 134,96 |

| z                   | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 136,14 | 138,68 | 141,23 | 143,78 | 146,32 | 148,87 | 151,42 | 153,96 | 156,52 | 159,06 | 161,60 | 164,15 | 166,69 | 169,24 | 171,79 | 174,33 | 176,88 | 179,43 |
| d <sub>w</sub> [mm] | 137,51 | 140,05 | 142,60 | 145,15 | 147,69 | 150,24 | 152,79 | 155,33 | 157,89 | 160,43 | 162,97 | 165,52 | 168,06 | 170,61 | 173,16 | 175,70 | 178,25 | 180,80 |

| z                   | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 181,98 | 184,52 | 187,07 | 189,61 | 192,16 | 194,71 | 197,25 | 199,80 | 202,35 | 204,89 | 207,44 | 209,98 | 212,53 | 215,08 | 217,63 | 220,17 | 222,72 | 225,26 |
| d <sub>w</sub> [mm] | 183,35 | 185,89 | 188,44 | 190,98 | 193,53 | 196,08 | 198,62 | 201,17 | 203,72 | 206,26 | 208,81 | 211,35 | 213,90 | 216,45 | 219,00 | 221,54 | 224,09 | 226,63 |

| z                   | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 227,81 | 230,35 | 232,90 | 235,45 | 238,00 | 240,54 | 243,09 | 245,63 | 248,18 | 250,73 | 253,28 | 255,82 | 258,37 | 260,91 | 263,46 | 266,01 | 268,55 | 271,10 |
| d <sub>w</sub> [mm] | 229,18 | 231,72 | 234,27 | 236,82 | 239,37 | 241,91 | 244,46 | 247,00 | 249,55 | 252,10 | 254,67 | 257,19 | 259,74 | 262,28 | 264,83 | 267,38 | 269,92 | 272,47 |

| z                   | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 273,64 | 276,19 | 278,74 | 281,29 | 283,84 | 286,38 | 288,93 | 291,47 | 294,02 | 296,57 | 299,11 | 301,66 | 304,20 |
| d <sub>w</sub> [mm] | 275,01 | 277,56 | 280,11 | 282,66 | 285,21 | 287,75 | 290,30 | 292,84 | 295,39 | 297,94 | 300,48 | 303,03 | 305,57 |



# Timing pulleys

## HTD14M

| z                   | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 122,12 | 126,58 | 130,99 | 135,45 | 139,88 | 144,35 | 148,79 | 153,25 | 157,68 | 162,14 | 166,60 | 171,02 | 175,48 | 179,92 | 184,37 | 188,83 | 193,29 | 197,75 |
| d <sub>w</sub> [mm] | 124,77 | 129,22 | 133,69 | 138,14 | 142,59 | 147,06 | 151,51 | 155,96 | 160,41 | 164,88 | 169,34 | 173,79 | 178,24 | 182,71 | 187,16 | 191,61 | 196,08 | 200,53 |

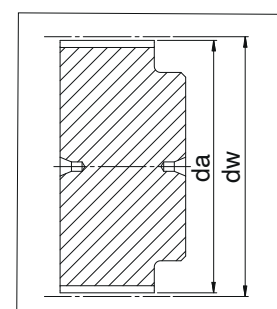
| z                   | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 202,21 | 206,65 | 211,11 | 215,57 | 220,03 | 224,49 | 228,95 | 233,39 | 237,85 | 242,30 | 246,76 | 251,22 | 255,68 | 260,14 | 264,60 | 269,04 | 273,50 | 277,96 |
| d <sub>w</sub> [mm] | 204,98 | 209,43 | 213,90 | 218,35 | 222,80 | 227,27 | 231,72 | 236,18 | 240,64 | 245,09 | 249,55 | 254,01 | 258,46 | 262,91 | 267,38 | 271,83 | 276,28 | 280,75 |

| z                   | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 282,42 | 286,88 | 291,32 | 295,78 | 300,24 | 304,70 | 309,16 | 313,61 | 318,07 | 322,53 | 326,98 | 331,44 | 335,90 | 340,34 | 344,80 | 349,26 | 353,72 | 358,17 |
| d <sub>w</sub> [mm] | 285,20 | 289,65 | 294,11 | 298,56 | 303,03 | 307,48 | 311,93 | 316,40 | 320,85 | 325,30 | 329,77 | 334,22 | 338,67 | 343,12 | 347,59 | 352,04 | 356,49 | 360,96 |

| z                   | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 362,63 | 367,09 | 371,54 | 376,00 | 380,46 | 384,91 | 389,37 | 393,83 | 398,29 | 402,73 | 407,19 | 411,65 | 416,10 | 420,56 | 425,02 | 429,48 | 433,94 | 438,38 |
| d <sub>w</sub> [mm] | 365,41 | 369,86 | 374,33 | 378,78 | 383,23 | 387,70 | 392,15 | 396,60 | 401,07 | 405,52 | 409,97 | 414,44 | 418,89 | 423,35 | 427,80 | 432,25 | 436,72 | 441,17 |

| z                   | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 116    | 117    | 118    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 442,84 | 447,30 | 451,76 | 456,21 | 460,67 | 465,13 | 469,58 | 474,03 | 478,49 | 482,95 | 487,41 | 491,87 | 496,32 | 500,78 | 505,23 | 514,14 | 518,60 | 523,06 |
| d <sub>w</sub> [mm] | 445,62 | 450,09 | 454,54 | 459,00 | 463,45 | 467,90 | 472,37 | 476,82 | 481,28 | 485,74 | 490,19 | 494,64 | 499,10 | 503,55 | 508,02 | 516,93 | 521,38 | 525,83 |

| z                   | 119    | 120    |
|---------------------|--------|--------|
| d <sub>a</sub> [mm] | 527,51 | 531,97 |
| d <sub>w</sub> [mm] | 530,30 | 534,75 |





# Timing pulleys

## HTD14M XHPL

| z                   | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 148,79 | 153,25 | 157,68 | 162,14 | 166,60 | 171,02 | 175,48 | 179,92 | 184,37 | 188,83 | 193,29 | 197,75 | 202,21 | 206,65 | 211,11 | 215,57 | 220,03 | 224,49 |
| d <sub>w</sub> [mm] | 151,51 | 155,96 | 160,41 | 164,88 | 169,34 | 173,79 | 178,24 | 182,71 | 187,16 | 191,61 | 196,08 | 200,53 | 204,98 | 209,43 | 213,90 | 218,35 | 222,80 | 227,27 |

| z                   | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 228,95 | 233,39 | 237,85 | 242,30 | 246,76 | 251,22 | 255,68 | 260,14 | 264,60 | 269,04 | 273,50 | 277,96 | 282,42 | 286,88 | 291,32 | 295,78 | 300,24 | 304,70 |
| d <sub>w</sub> [mm] | 231,72 | 236,18 | 240,64 | 245,09 | 249,55 | 254,01 | 258,46 | 262,91 | 267,38 | 271,83 | 276,28 | 280,75 | 285,20 | 289,65 | 294,11 | 298,56 | 303,03 | 307,48 |

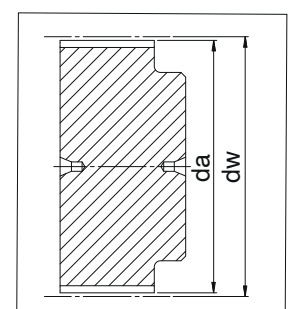
| z                   | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 309,16 | 313,61 | 318,07 | 322,53 | 326,98 | 331,44 | 335,90 | 340,34 | 344,80 | 349,26 | 353,72 | 358,17 | 362,63 | 367,09 | 371,54 | 376,00 | 380,46 | 384,91 |
| d <sub>w</sub> [mm] | 311,93 | 316,40 | 320,85 | 325,30 | 329,77 | 334,22 | 338,67 | 343,12 | 347,59 | 352,04 | 356,49 | 360,96 | 365,41 | 369,86 | 374,33 | 378,78 | 383,23 | 387,70 |

| z                   | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 389,37 | 393,83 | 398,29 | 402,73 | 407,19 | 411,65 | 416,10 | 420,56 | 425,02 | 429,48 | 433,94 | 438,38 | 442,84 | 447,30 | 451,76 | 456,21 | 460,67 | 465,13 |
| d <sub>w</sub> [mm] | 392,15 | 396,60 | 401,07 | 405,52 | 409,97 | 414,44 | 418,89 | 423,35 | 427,80 | 432,25 | 436,72 | 441,17 | 445,62 | 450,09 | 454,54 | 459,00 | 463,45 | 467,90 |

| z                   | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 469,58 | 474,03 | 478,49 | 482,95 | 487,41 | 491,87 | 496,32 | 500,78 | 505,23 | 514,14 | 518,60 | 523,06 | 527,51 | 531,97 |
| d <sub>w</sub> [mm] | 472,37 | 476,82 | 481,28 | 485,74 | 490,19 | 494,64 | 499,10 | 503,55 | 508,02 | 516,93 | 521,38 | 525,83 | 530,30 | 534,75 |

### Note

Special pulley profile required.  
Contact Elatech® technical dept. for details.



# Timing pulleys

## RPD5M

| z                   | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 24,32 | 25,91 | 27,51 | 29,09 | 30,69 | 32,28 | 33,87 | 35,46 | 37,06 | 38,64 | 40,24 | 41,83 | 43,42 | 45,01 | 46,61 | 48,19 | 49,79 | 51,38 |
| d <sub>w</sub> [mm] | 25,46 | 27,05 | 28,65 | 30,23 | 31,83 | 33,42 | 35,01 | 36,60 | 38,20 | 39,78 | 41,38 | 42,97 | 44,56 | 46,15 | 47,75 | 49,33 | 50,93 | 52,52 |

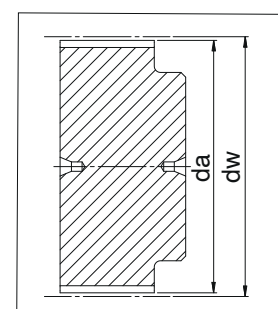
| z                   | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 52,97 | 54,56 | 56,16 | 57,75 | 59,34 | 60,93 | 62,52 | 64,11 | 65,70 | 67,29 | 68,88 | 70,47 | 72,06 | 73,65 | 75,24 | 76,84 | 78,44 | 80,03 |
| d <sub>w</sub> [mm] | 54,11 | 55,70 | 57,30 | 58,89 | 60,48 | 62,07 | 63,66 | 65,25 | 66,84 | 68,43 | 70,02 | 71,61 | 73,20 | 74,79 | 76,38 | 77,98 | 79,58 | 81,17 |

| z                   | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     | 69     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 81,62 | 83,21 | 84,80 | 86,39 | 87,98 | 89,57 | 91,17 | 92,76 | 94,35 | 95,94 | 97,53 | 99,12  | 100,72 | 102,31 | 103,90 | 105,49 | 107,08 | 108,67 |
| d <sub>w</sub> [mm] | 82,76 | 84,35 | 85,94 | 87,53 | 89,12 | 90,71 | 92,31 | 93,90 | 95,49 | 97,08 | 98,67 | 100,26 | 101,86 | 103,45 | 105,04 | 106,63 | 108,22 | 109,81 |

| z                   | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 110,27 | 111,86 | 113,45 | 115,04 | 116,63 | 118,22 | 119,81 | 121,40 | 122,99 | 124,58 | 126,18 | 127,77 | 129,36 | 130,95 | 132,54 | 134,14 | 135,73 | 137,32 |
| d <sub>w</sub> [mm] | 111,41 | 113,00 | 114,59 | 116,18 | 117,77 | 119,36 | 120,95 | 122,54 | 124,13 | 125,72 | 127,32 | 128,91 | 130,50 | 132,09 | 133,68 | 135,28 | 136,87 | 138,46 |

| z                   | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 138,91 | 140,51 | 142,10 | 143,69 | 145,28 | 146,87 | 148,46 | 150,06 | 151,64 | 153,24 | 154,83 | 156,42 | 158,01 | 159,61 | 161,20 | 162,81 | 164,38 | 165,97 |
| d <sub>w</sub> [mm] | 140,05 | 141,65 | 143,24 | 144,83 | 146,42 | 148,01 | 149,60 | 151,20 | 152,78 | 154,38 | 155,97 | 157,56 | 159,15 | 160,75 | 162,34 | 163,95 | 165,52 | 167,11 |

| z                   | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 167,56 | 169,09 | 170,75 | 172,34 | 173,93 | 175,52 | 177,11 | 178,70 | 180,29 | 181,88 | 183,47 | 185,07 | 186,66 | 188,25 | 189,84 |
| d <sub>w</sub> [mm] | 168,70 | 170,23 | 171,89 | 173,48 | 175,07 | 176,66 | 178,25 | 179,84 | 181,43 | 183,02 | 184,61 | 186,21 | 187,80 | 189,39 | 190,98 |



# Timing pulleys

## RPD8M

| z                   | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 44,46 | 47,01 | 49,56 | 52,10 | 54,65 | 57,20 | 59,75 | 62,29 | 64,84 | 67,38 | 70,08 | 72,59 | 75,13 | 77,65 | 80,16 | 82,68 | 85,21 | 87,76 |
| d <sub>w</sub> [mm] | 45,83 | 48,38 | 50,93 | 53,47 | 56,02 | 58,57 | 61,12 | 63,66 | 66,21 | 68,75 | 71,30 | 73,84 | 76,39 | 78,94 | 81,49 | 84,03 | 86,58 | 89,12 |

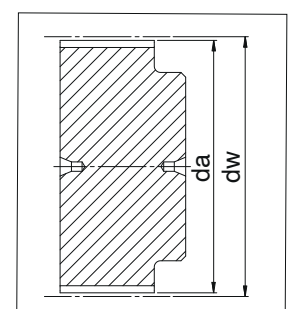
| z                   | 36    | 37    | 38    | 39    | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|---------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 90,30 | 92,85 | 95,40 | 97,94 | 100,49 | 103,04 | 105,58 | 108,13 | 110,68 | 113,22 | 115,77 | 118,31 | 120,86 | 123,40 | 125,95 | 128,50 | 131,05 | 133,59 |
| d <sub>w</sub> [mm] | 91,67 | 94,22 | 96,77 | 99,31 | 101,86 | 104,40 | 106,95 | 109,50 | 112,05 | 114,59 | 117,14 | 119,68 | 122,23 | 124,77 | 127,32 | 129,87 | 132,41 | 134,96 |

| z                   | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 136,14 | 138,68 | 141,23 | 143,78 | 146,32 | 148,87 | 151,42 | 153,96 | 156,52 | 159,06 | 161,60 | 164,15 | 166,69 | 169,24 | 171,79 | 174,33 | 176,88 | 179,43 |
| d <sub>w</sub> [mm] | 137,51 | 140,05 | 142,60 | 145,15 | 147,69 | 150,24 | 152,79 | 155,33 | 157,89 | 160,43 | 162,97 | 165,52 | 168,06 | 170,61 | 173,16 | 175,70 | 178,25 | 180,80 |

| z                   | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 181,98 | 184,52 | 187,07 | 189,61 | 192,16 | 194,71 | 197,25 | 199,80 | 202,35 | 204,89 | 207,44 | 209,98 | 212,53 | 215,08 | 217,63 | 220,17 | 222,72 | 225,26 |
| d <sub>w</sub> [mm] | 183,35 | 185,89 | 188,44 | 190,98 | 193,53 | 196,08 | 198,62 | 201,17 | 203,72 | 206,26 | 208,81 | 211,35 | 213,90 | 216,45 | 219,00 | 221,54 | 224,09 | 226,63 |

| z                   | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 227,81 | 230,35 | 232,90 | 235,45 | 238,00 | 240,54 | 243,09 | 245,63 | 248,18 | 250,73 | 253,28 | 255,82 | 258,37 | 260,91 | 263,46 | 266,01 | 268,55 | 271,10 |
| d <sub>w</sub> [mm] | 229,18 | 231,72 | 234,27 | 236,82 | 239,37 | 241,91 | 244,46 | 247,00 | 249,55 | 252,10 | 254,67 | 257,19 | 259,74 | 262,28 | 264,83 | 267,38 | 269,92 | 272,47 |

| z                   | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 273,64 | 276,19 | 278,74 | 281,29 | 283,84 | 286,38 | 288,93 | 291,47 | 294,02 | 296,57 | 299,11 | 301,66 | 304,20 |
| d <sub>w</sub> [mm] | 275,01 | 277,56 | 280,11 | 282,66 | 285,21 | 287,75 | 290,30 | 292,84 | 295,39 | 297,94 | 300,48 | 303,03 | 305,57 |



# Timing pulleys

## RPD14M

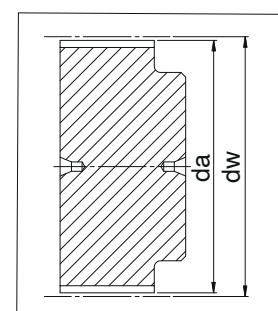
| z                   | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 139,88 | 144,35 | 148,79 | 153,25 | 157,68 | 162,14 | 166,60 | 171,02 | 175,48 | 179,92 | 184,37 | 188,83 | 193,29 | 197,75 | 202,21 | 206,65 | 211,11 | 215,57 |
| d <sub>w</sub> [mm] | 142,59 | 147,06 | 151,51 | 155,96 | 160,41 | 164,88 | 169,34 | 173,79 | 178,24 | 182,71 | 187,16 | 191,61 | 196,08 | 200,53 | 204,98 | 209,43 | 213,90 | 218,35 |

| z                   | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 220,03 | 224,49 | 228,95 | 233,39 | 237,85 | 242,30 | 246,76 | 251,22 | 255,68 | 260,14 | 264,60 | 269,04 | 273,50 | 277,96 | 282,42 | 286,88 | 291,32 | 295,78 |
| d <sub>w</sub> [mm] | 222,80 | 227,27 | 231,72 | 236,18 | 240,64 | 245,09 | 249,55 | 254,01 | 258,46 | 262,91 | 267,38 | 271,83 | 276,28 | 280,75 | 285,20 | 289,65 | 294,11 | 298,56 |

| z                   | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 300,24 | 304,70 | 309,16 | 313,61 | 318,07 | 322,53 | 326,98 | 331,44 | 335,90 | 340,34 | 344,80 | 349,26 | 353,72 | 358,17 | 362,63 | 367,09 | 371,54 | 376,00 |
| d <sub>w</sub> [mm] | 303,03 | 307,48 | 311,93 | 316,40 | 320,85 | 325,30 | 329,77 | 334,22 | 338,67 | 343,12 | 347,59 | 352,04 | 356,49 | 360,96 | 365,41 | 369,86 | 374,33 | 378,78 |

| z                   | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 380,46 | 384,91 | 389,37 | 393,83 | 398,29 | 402,73 | 407,19 | 411,65 | 416,10 | 420,56 | 425,02 | 429,48 | 433,94 | 438,38 | 442,84 | 447,30 | 451,76 | 456,21 |
| d <sub>w</sub> [mm] | 383,23 | 387,70 | 392,15 | 396,60 | 401,07 | 405,52 | 409,97 | 414,44 | 418,89 | 423,35 | 427,80 | 432,25 | 436,72 | 441,17 | 445,62 | 450,09 | 454,54 | 459,00 |

| z                   | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 460,67 | 465,13 | 469,58 | 474,03 | 478,49 | 482,95 | 487,41 | 491,87 | 496,32 | 500,78 | 505,23 | 514,14 | 518,60 | 523,06 | 527,51 | 531,97 |
| d <sub>w</sub> [mm] | 463,45 | 467,90 | 472,37 | 476,82 | 481,28 | 485,74 | 490,19 | 494,64 | 499,10 | 503,55 | 508,02 | 516,93 | 521,38 | 525,83 | 530,30 | 534,75 |



# Timing pulleys

## RPD14M XHPL

| z                   | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 148,79 | 153,25 | 157,68 | 162,14 | 166,60 | 171,02 | 175,48 | 179,92 | 184,37 | 188,83 | 193,29 | 197,75 | 202,21 | 206,65 | 211,11 | 215,57 | 220,03 | 224,49 |
| d <sub>w</sub> [mm] | 151,51 | 155,96 | 160,41 | 164,88 | 169,34 | 173,79 | 178,24 | 182,71 | 187,16 | 191,61 | 196,08 | 200,53 | 204,98 | 209,43 | 213,90 | 218,35 | 222,80 | 227,27 |

| z                   | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 228,95 | 233,39 | 237,85 | 242,30 | 246,76 | 251,22 | 255,68 | 260,14 | 264,60 | 269,04 | 273,50 | 277,96 | 282,42 | 286,88 | 291,32 | 295,78 | 300,24 | 304,70 |
| d <sub>w</sub> [mm] | 231,72 | 236,18 | 240,64 | 245,09 | 249,55 | 254,01 | 258,46 | 262,91 | 267,38 | 271,83 | 276,28 | 280,75 | 285,20 | 289,65 | 294,11 | 298,56 | 303,03 | 307,48 |

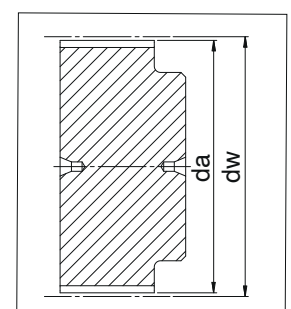
| z                   | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 309,16 | 313,61 | 318,07 | 322,53 | 326,98 | 331,44 | 335,90 | 340,34 | 344,80 | 349,26 | 353,72 | 358,17 | 362,63 | 367,09 | 371,54 | 376,00 | 380,46 | 384,91 |
| d <sub>w</sub> [mm] | 311,93 | 316,40 | 320,85 | 325,30 | 329,77 | 334,22 | 338,67 | 343,12 | 347,59 | 352,04 | 356,49 | 360,96 | 365,41 | 369,86 | 374,33 | 378,78 | 383,23 | 387,70 |

| z                   | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 389,37 | 393,83 | 398,29 | 402,73 | 407,19 | 411,65 | 416,10 | 420,56 | 425,02 | 429,48 | 433,94 | 438,38 | 442,84 | 447,30 | 451,76 | 456,21 | 460,67 | 465,13 |
| d <sub>w</sub> [mm] | 392,15 | 396,60 | 401,07 | 405,52 | 409,97 | 414,44 | 418,89 | 423,35 | 427,80 | 432,25 | 436,72 | 441,17 | 445,62 | 450,09 | 454,54 | 459,00 | 463,45 | 467,90 |

| z                   | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 469,58 | 474,03 | 478,49 | 482,95 | 487,41 | 491,87 | 496,32 | 500,78 | 505,23 | 514,14 | 518,60 | 523,06 | 527,51 | 531,97 |
| d <sub>w</sub> [mm] | 472,37 | 476,82 | 481,28 | 485,74 | 490,19 | 494,64 | 499,10 | 503,55 | 508,02 | 516,93 | 521,38 | 525,83 | 530,30 | 534,75 |

### Note

Special pulley profile required.  
Contact Elatech® technical dept. for details.



# Timing pulleys

## STD5M

| z                   | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 24,51 | 26,10 | 27,69 | 29,27 | 30,87 | 32,46 | 34,05 | 35,65 | 37,23 | 38,83 | 40,42 | 42,01 | 43,60 | 45,19 | 46,79 | 48,38 | 49,97 | 51,56 |
| d <sub>w</sub> [mm] | 25,47 | 27,06 | 28,65 | 30,23 | 31,83 | 33,42 | 35,01 | 36,61 | 38,19 | 39,79 | 41,38 | 42,97 | 44,56 | 46,15 | 47,75 | 49,34 | 50,93 | 52,52 |

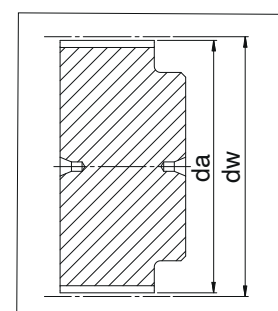
| z                   | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 53,15 | 54,75 | 56,34 | 57,93 | 59,52 | 61,11 | 62,70 | 64,30 | 65,89 | 67,48 | 69,07 | 70,66 | 72,25 | 73,84 | 75,43 | 77,03 | 78,62 | 80,21 |
| d <sub>w</sub> [mm] | 54,11 | 55,71 | 57,30 | 58,89 | 60,48 | 62,07 | 63,66 | 65,26 | 66,85 | 68,44 | 70,03 | 71,62 | 73,21 | 74,80 | 76,39 | 77,99 | 79,58 | 81,17 |

| z                   | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     | 69     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 81,80 | 83,39 | 84,99 | 86,58 | 88,17 | 89,76 | 91,35 | 92,94 | 94,53 | 96,13 | 97,72 | 99,31  | 100,90 | 102,49 | 104,08 | 105,67 | 107,27 | 108,86 |
| d <sub>w</sub> [mm] | 82,76 | 84,35 | 85,95 | 87,54 | 89,13 | 90,72 | 92,31 | 93,90 | 95,49 | 97,09 | 98,68 | 100,27 | 101,86 | 103,45 | 105,04 | 106,63 | 108,23 | 109,82 |

| z                   | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 110,45 | 112,04 | 113,63 | 115,23 | 116,82 | 118,41 | 120,00 | 121,59 | 123,18 | 124,77 | 126,36 | 127,95 | 129,54 | 131,14 | 132,73 | 134,32 | 135,91 | 137,51 |
| d <sub>w</sub> [mm] | 111,41 | 113,00 | 114,59 | 116,19 | 117,78 | 119,37 | 120,96 | 122,55 | 124,14 | 125,73 | 127,32 | 128,91 | 130,50 | 132,10 | 133,69 | 135,28 | 136,87 | 138,47 |

| z                   | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 139,09 | 140,69 | 142,28 | 143,87 | 145,46 | 147,05 | 148,64 | 150,24 | 151,83 | 153,42 | 155,01 | 156,60 | 158,19 | 159,79 | 161,38 | 162,99 | 164,56 | 166,15 |
| d <sub>w</sub> [mm] | 140,05 | 141,65 | 143,24 | 144,83 | 146,42 | 148,01 | 149,60 | 151,20 | 152,71 | 154,38 | 155,97 | 157,56 | 159,15 | 160,75 | 162,34 | 163,95 | 165,52 | 167,11 |

| z                   | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 167,74 | 169,34 | 170,93 | 172,52 | 174,10 | 175,70 | 177,29 | 178,88 | 180,47 | 182,06 | 183,65 | 185,25 | 186,84 | 188,43 | 190,02 |
| d <sub>w</sub> [mm] | 168,70 | 170,30 | 171,89 | 173,48 | 175,06 | 176,66 | 178,25 | 179,84 | 181,43 | 183,02 | 184,61 | 186,21 | 187,80 | 189,39 | 190,98 |



# Timing pulleys

## STD8M

| z                   | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 44,46 | 47,01 | 49,56 | 52,10 | 54,65 | 57,20 | 59,75 | 62,29 | 64,84 | 67,38 | 70,08 | 72,59 | 75,13 | 77,65 | 80,16 | 82,68 | 85,21 | 87,76 |
| d <sub>w</sub> [mm] | 45,83 | 48,38 | 50,93 | 53,47 | 56,02 | 58,57 | 61,12 | 63,66 | 66,21 | 68,75 | 71,30 | 73,84 | 76,39 | 78,94 | 81,49 | 84,03 | 86,58 | 89,12 |

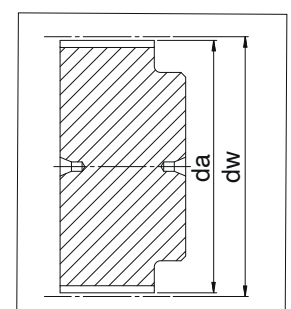
| z                   | 36    | 37    | 38    | 39    | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|---------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 90,30 | 92,85 | 95,40 | 97,94 | 100,49 | 103,04 | 105,58 | 108,13 | 110,68 | 113,22 | 115,77 | 118,31 | 120,86 | 123,40 | 125,95 | 128,50 | 131,05 | 133,59 |
| d <sub>w</sub> [mm] | 91,67 | 94,22 | 96,77 | 99,31 | 101,86 | 104,40 | 106,95 | 109,50 | 112,05 | 114,59 | 117,14 | 119,68 | 122,23 | 124,77 | 127,32 | 129,87 | 132,41 | 134,96 |

| z                   | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 136,14 | 138,68 | 141,23 | 143,78 | 146,32 | 148,87 | 151,42 | 153,96 | 156,52 | 159,06 | 161,60 | 164,15 | 166,69 | 169,24 | 171,79 | 174,33 | 176,88 | 179,43 |
| d <sub>w</sub> [mm] | 137,51 | 140,05 | 142,60 | 145,15 | 147,69 | 150,24 | 152,79 | 155,33 | 157,89 | 160,43 | 162,97 | 165,52 | 168,06 | 170,61 | 173,16 | 175,70 | 178,25 | 180,80 |

| z                   | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 181,98 | 184,52 | 187,07 | 189,61 | 192,16 | 194,71 | 197,25 | 199,80 | 202,35 | 204,89 | 207,44 | 209,98 | 212,53 | 215,08 | 217,63 | 220,17 | 222,72 | 225,26 |
| d <sub>w</sub> [mm] | 183,35 | 185,89 | 188,44 | 190,98 | 193,53 | 196,08 | 198,62 | 201,17 | 203,72 | 206,26 | 208,81 | 211,35 | 213,90 | 216,45 | 219,00 | 221,54 | 224,09 | 226,63 |

| z                   | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 227,81 | 230,35 | 232,90 | 235,45 | 238,00 | 240,54 | 243,09 | 245,63 | 248,18 | 250,73 | 253,28 | 255,82 | 258,37 | 260,91 | 263,46 | 266,01 | 268,55 | 271,10 |
| d <sub>w</sub> [mm] | 229,18 | 231,72 | 234,27 | 236,82 | 239,37 | 241,91 | 244,46 | 247,00 | 249,55 | 252,10 | 254,67 | 257,19 | 259,74 | 262,28 | 264,83 | 267,38 | 269,92 | 272,47 |

| z                   | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 273,64 | 276,19 | 278,74 | 281,29 | 283,84 | 286,38 | 288,93 | 291,47 | 294,02 | 296,57 | 299,11 | 301,66 | 304,20 |
| d <sub>w</sub> [mm] | 275,01 | 277,56 | 280,11 | 282,66 | 285,21 | 287,75 | 290,30 | 292,84 | 295,39 | 297,94 | 300,48 | 303,03 | 305,57 |





# Timing pulleys

## STD14M

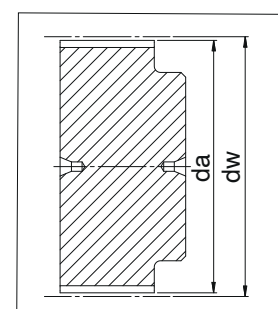
| z                   | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 139,88 | 144,35 | 148,79 | 153,25 | 157,68 | 162,14 | 166,60 | 171,02 | 175,48 | 179,92 | 184,37 | 188,83 | 193,29 | 197,75 | 202,21 | 206,65 | 211,11 | 215,57 |
| d <sub>w</sub> [mm] | 142,59 | 147,06 | 151,51 | 155,96 | 160,41 | 164,88 | 169,34 | 173,79 | 178,24 | 182,71 | 187,16 | 191,61 | 196,08 | 200,53 | 204,98 | 209,43 | 213,90 | 218,35 |

| z                   | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 220,03 | 224,49 | 228,95 | 233,39 | 237,85 | 242,30 | 246,76 | 251,22 | 255,68 | 260,14 | 264,60 | 269,04 | 273,50 | 277,96 | 282,42 | 286,88 | 291,32 | 295,78 |
| d <sub>w</sub> [mm] | 222,80 | 227,27 | 231,72 | 236,18 | 240,64 | 245,09 | 249,55 | 254,01 | 258,46 | 262,91 | 267,38 | 271,83 | 276,28 | 280,75 | 285,20 | 289,65 | 294,11 | 298,56 |

| z                   | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 300,24 | 304,70 | 309,16 | 313,61 | 318,07 | 322,53 | 326,98 | 331,44 | 335,90 | 340,34 | 344,80 | 349,26 | 353,72 | 358,17 | 362,63 | 367,09 | 371,54 | 376,00 |
| d <sub>w</sub> [mm] | 303,03 | 307,48 | 311,93 | 316,40 | 320,85 | 325,30 | 329,77 | 334,22 | 338,67 | 343,12 | 347,59 | 352,04 | 356,49 | 360,96 | 365,41 | 369,86 | 374,33 | 378,78 |

| z                   | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 380,46 | 384,91 | 389,37 | 393,83 | 398,29 | 402,73 | 407,19 | 411,65 | 416,10 | 420,56 | 425,02 | 429,48 | 433,94 | 438,38 | 442,84 | 447,30 | 451,76 | 456,21 |
| d <sub>w</sub> [mm] | 383,23 | 387,70 | 392,15 | 396,60 | 401,07 | 405,52 | 409,97 | 414,44 | 418,89 | 423,35 | 427,80 | 432,25 | 436,72 | 441,17 | 445,62 | 450,09 | 454,54 | 459,00 |

| z                   | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 460,67 | 465,13 | 469,58 | 474,03 | 478,49 | 482,95 | 487,41 | 491,87 | 496,32 | 500,78 | 505,23 | 514,14 | 518,60 | 523,06 | 527,51 | 531,97 |
| d <sub>w</sub> [mm] | 463,45 | 467,90 | 472,37 | 476,82 | 481,28 | 485,74 | 490,19 | 494,64 | 499,10 | 503,55 | 508,02 | 516,93 | 521,38 | 525,83 | 530,30 | 534,75 |



# Timing pulleys

## EAGLE5M

| z          | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 24,51 | 26,10 | 27,69 | 29,27 | 30,87 | 32,46 | 34,05 | 35,65 | 37,23 | 38,83 | 40,42 | 42,01 | 43,60 | 45,19 | 46,79 | 48,38 | 49,97 | 51,56 |
| $d_w$ [mm] | 25,47 | 27,06 | 28,65 | 30,23 | 31,83 | 33,42 | 35,01 | 36,61 | 38,19 | 39,79 | 41,38 | 42,97 | 44,56 | 46,15 | 47,75 | 49,34 | 50,93 | 52,52 |

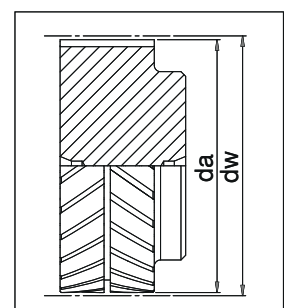
| z          | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 53,15 | 54,75 | 56,34 | 57,93 | 59,52 | 61,11 | 62,70 | 64,30 | 65,89 | 67,48 | 69,07 | 70,66 | 72,25 | 73,84 | 75,43 | 77,03 | 78,62 | 80,21 |
| $d_w$ [mm] | 54,11 | 55,71 | 57,30 | 58,89 | 60,48 | 62,07 | 63,66 | 65,26 | 66,85 | 68,44 | 70,03 | 71,62 | 73,21 | 74,80 | 76,39 | 77,99 | 79,58 | 81,17 |

| z          | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     | 69     |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 81,80 | 83,39 | 84,99 | 86,58 | 88,17 | 89,76 | 91,35 | 92,94 | 94,53 | 96,13 | 97,72 | 99,31  | 100,90 | 102,49 | 104,08 | 105,67 | 107,27 | 108,86 |
| $d_w$ [mm] | 82,76 | 84,35 | 85,95 | 87,54 | 89,13 | 90,72 | 92,31 | 93,90 | 95,49 | 97,09 | 98,68 | 100,27 | 101,86 | 103,45 | 105,04 | 106,63 | 108,23 | 109,82 |

| z          | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 110,45 | 112,04 | 113,63 | 115,23 | 116,82 | 118,41 | 120,00 | 121,59 | 123,18 | 124,77 | 126,36 | 127,95 | 129,54 | 131,14 | 132,73 | 134,32 | 135,91 | 137,51 |
| $d_w$ [mm] | 111,41 | 113,00 | 114,59 | 116,19 | 117,78 | 119,37 | 120,96 | 122,55 | 124,14 | 125,73 | 127,32 | 128,91 | 130,50 | 132,10 | 133,69 | 135,28 | 136,87 | 138,47 |

| z          | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 139,09 | 140,69 | 142,28 | 143,87 | 145,46 | 147,05 | 148,64 | 150,24 | 151,83 | 153,42 | 155,01 | 156,60 | 158,19 | 159,79 | 161,38 | 162,99 | 164,56 | 166,15 |
| $d_w$ [mm] | 140,05 | 141,65 | 143,24 | 144,83 | 146,42 | 148,01 | 149,60 | 151,20 | 152,71 | 154,38 | 155,97 | 157,56 | 159,15 | 160,75 | 162,34 | 163,95 | 165,52 | 167,11 |

| z          | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 167,74 | 169,34 | 170,93 | 172,52 | 174,10 | 175,70 | 177,29 | 178,88 | 180,47 | 182,06 | 183,65 | 185,25 | 186,84 | 188,43 | 190,02 |
| $d_w$ [mm] | 168,70 | 170,30 | 171,89 | 173,48 | 175,06 | 176,66 | 178,25 | 179,84 | 181,43 | 183,02 | 184,61 | 186,21 | 187,80 | 189,39 | 190,98 |



# Timing pulleys

## EAGLE8M

| z                   | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 49,56 | 52,10 | 54,65 | 57,20 | 59,75 | 62,29 | 64,84 | 67,38 | 70,08 | 72,59 | 75,13 | 77,65 | 80,16 | 82,68 | 85,21 | 87,76 | 90,30 | 92,85 |
| d <sub>w</sub> [mm] | 50,93 | 53,47 | 56,02 | 58,57 | 61,12 | 63,66 | 66,21 | 68,75 | 71,30 | 73,84 | 76,39 | 78,94 | 81,49 | 84,03 | 86,58 | 89,12 | 91,67 | 94,22 |

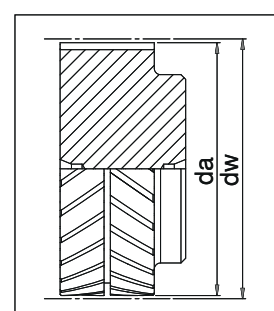
| z                   | 38    | 39    | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     |
|---------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 95,40 | 97,94 | 100,49 | 103,04 | 105,58 | 108,13 | 110,68 | 113,22 | 115,77 | 118,31 | 120,86 | 123,40 | 125,95 | 128,50 | 131,05 | 133,59 | 136,14 | 138,68 |
| d <sub>w</sub> [mm] | 96,77 | 99,31 | 101,86 | 104,40 | 106,95 | 109,50 | 112,05 | 114,59 | 117,14 | 119,68 | 122,23 | 124,77 | 127,32 | 129,87 | 132,41 | 134,96 | 137,51 | 140,05 |

| z                   | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 141,23 | 143,78 | 146,32 | 148,87 | 151,42 | 153,96 | 156,52 | 159,06 | 161,60 | 164,15 | 166,69 | 169,24 | 171,79 | 174,33 | 176,88 | 179,43 | 181,98 | 184,52 |
| d <sub>w</sub> [mm] | 142,60 | 145,15 | 147,69 | 150,24 | 152,79 | 155,33 | 157,89 | 160,43 | 162,97 | 165,52 | 168,06 | 170,61 | 173,16 | 175,70 | 178,25 | 180,80 | 183,35 | 185,89 |

| z                   | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 187,07 | 189,61 | 192,16 | 194,71 | 197,25 | 199,80 | 202,35 | 204,89 | 207,44 | 209,98 | 212,53 | 215,08 | 217,63 | 220,17 | 222,72 | 225,26 | 227,81 | 230,35 |
| d <sub>w</sub> [mm] | 188,44 | 190,98 | 193,53 | 196,08 | 198,62 | 201,17 | 203,72 | 206,26 | 208,81 | 211,35 | 213,90 | 216,45 | 219,00 | 221,54 | 224,09 | 226,63 | 229,18 | 231,72 |

| z                   | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 232,90 | 235,45 | 238    | 240,54 | 243,09 | 245,63 | 248,18 | 250,73 | 253,28 | 255,82 | 258,37 | 260,91 | 263,46 | 266,01 | 268,55 | 271,10 | 273,64 | 276,19 |
| d <sub>w</sub> [mm] | 234,27 | 236,82 | 239,37 | 241,91 | 244,46 | 247,00 | 249,55 | 252,10 | 254,67 | 257,19 | 259,74 | 262,28 | 264,83 | 267,38 | 269,92 | 272,47 | 275,01 | 277,56 |

| z                   | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 278,74 | 281,29 | 283,84 | 286,38 | 288,93 | 291,47 | 294,02 | 296,57 | 299,11 | 301,66 | 304,20 |
| d <sub>w</sub> [mm] | 280,11 | 282,66 | 285,21 | 287,75 | 290,30 | 292,84 | 295,39 | 297,94 | 300,48 | 303,03 | 305,57 |



# Timing pulleys

## EAGLE10M

| z          | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     |
|------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 77,58 | 80,76 | 83,95 | 87,12 | 90,21 | 93,49 | 96,67 | 99,86  | 103,04 | 106,19 | 109,41 | 112,59 | 115,77 | 118,95 | 122,14 | 125,32 | 128,50 | 131,69 |
| $d_w$ [mm] | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 |

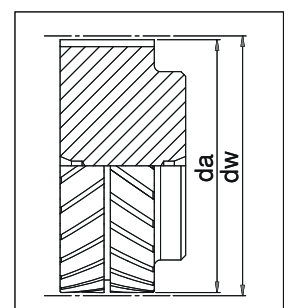
| z          | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 134,87 | 138,05 | 141,24 | 144,42 | 147,60 | 150,78 | 153,97 | 157,15 | 160,33 | 163,52 | 166,70 | 169,88 | 173,06 | 176,25 | 179,43 | 182,61 | 185,80 | 188,98 |
| $d_w$ [mm] | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 |

| z          | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 192,16 | 195,35 | 198,53 | 201,71 | 204,90 | 208,08 | 211,26 | 214,44 | 217,63 | 220,81 | 223,99 | 227,18 | 230,33 | 233,54 | 236,72 | 239,94 | 243,09 | 246,24 |
| $d_w$ [mm] | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 |

| z          | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 249,46 | 252,64 | 255,82 | 259,00 | 262,19 | 265,37 | 268,52 | 271,74 | 274,92 | 278,10 | 281,28 | 284,47 | 287,65 | 290,84 | 294,02 | 297,20 | 300,39 | 303,57 |
| $d_w$ [mm] | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,52 | 273,74 | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 |

| z          | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 306,75 | 309,93 | 313,12 | 316,30 | 319,48 | 322,66 | 325,85 | 329,03 | 332,21 | 335,40 | 338,58 | 341,76 | 344,95 | 348,13 | 351,31 | 354,50 | 357,68 | 360,86 |
| $d_w$ [mm] | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 |

| z          | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 364,04 | 367,23 | 370,41 | 373,59 | 376,78 | 379,96 |
| $d_w$ [mm] | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## EAGLE14M

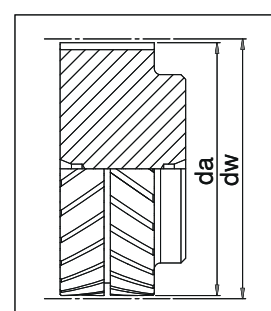
| z                   | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 139,88 | 144,35 | 148,79 | 153,25 | 157,68 | 162,14 | 166,60 | 171,02 | 175,48 | 179,92 | 184,37 | 188,83 | 193,29 | 197,75 | 202,21 | 206,65 | 211,11 | 215,57 |
| d <sub>w</sub> [mm] | 142,59 | 147,06 | 151,51 | 155,96 | 160,41 | 164,88 | 169,34 | 173,79 | 178,24 | 182,71 | 187,16 | 191,61 | 196,08 | 200,53 | 204,98 | 209,43 | 213,90 | 218,35 |

| z                   | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 220,03 | 224,49 | 228,95 | 233,39 | 237,85 | 242,30 | 246,76 | 251,22 | 255,68 | 260,14 | 264,60 | 269,04 | 273,50 | 277,96 | 282,42 | 286,88 | 291,32 | 295,78 |
| d <sub>w</sub> [mm] | 222,80 | 227,27 | 231,72 | 236,18 | 240,64 | 245,09 | 249,55 | 254,01 | 258,46 | 262,91 | 267,38 | 271,83 | 276,28 | 280,75 | 285,20 | 289,65 | 294,11 | 298,56 |

| z                   | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 300,24 | 304,70 | 309,16 | 313,61 | 318,07 | 322,53 | 326,98 | 331,44 | 335,90 | 340,34 | 344,80 | 349,26 | 353,72 | 358,17 | 362,63 | 367,09 | 371,54 | 376,00 |
| d <sub>w</sub> [mm] | 303,03 | 307,48 | 311,93 | 316,40 | 320,85 | 325,30 | 329,77 | 334,22 | 338,67 | 343,12 | 347,59 | 352,04 | 356,49 | 360,96 | 365,41 | 369,86 | 374,33 | 378,78 |

| z                   | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 380,46 | 384,91 | 389,37 | 393,83 | 398,29 | 402,73 | 407,19 | 411,65 | 416,10 | 420,56 | 425,02 | 429,48 | 433,94 | 438,38 | 442,84 | 447,30 | 451,76 | 456,21 |
| d <sub>w</sub> [mm] | 383,23 | 387,70 | 392,15 | 396,60 | 401,07 | 405,52 | 409,97 | 414,44 | 418,89 | 423,35 | 427,80 | 432,25 | 436,72 | 441,17 | 445,62 | 450,09 | 454,54 | 459,00 |

| z                   | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 460,67 | 465,13 | 469,58 | 474,03 | 478,49 | 482,95 | 487,41 | 491,87 | 496,32 | 500,78 | 505,23 | 514,14 | 518,60 | 523,06 | 527,51 | 531,97 |
| d <sub>w</sub> [mm] | 463,45 | 467,90 | 472,37 | 476,82 | 481,28 | 485,74 | 490,19 | 494,64 | 499,10 | 503,55 | 508,02 | 516,93 | 521,38 | 525,83 | 530,30 | 534,75 |



# Timing pulleys

## TK5 K6

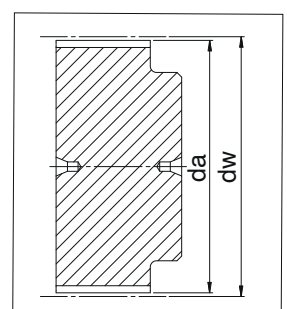
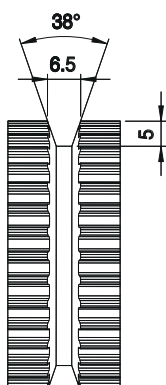
| z          | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 21,45 | 23,05 | 24,6  | 26,20 | 27,80 | 29,40 | 31,00 | 32,70 | 34,25 | 35,85 | 37,40 | 39,00 | 40,60 | 42,20 | 43,75 | 45,35 | 46,95 | 48,55 |
| $d_w$ [mm] | 22,29 | 23,88 | 25,47 | 27,06 | 28,65 | 30,25 | 31,83 | 33,43 | 35,02 | 36,62 | 38,21 | 39,8  | 41,39 | 42,98 | 44,58 | 46,17 | 47,76 | 49,35 |

| z          | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    | 43    | 44    | 45    | 46    | 47    | 48    | 49    |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| $d_a$ [mm] | 50,10 | 51,70 | 53,25 | 54,85 | 56,45 | 58,05 | 59,65 | 61,25 | 62,85 | 64,40 | 66,00 | 67,70 | 69,20 | 70,80 | 72,40 | 73,95 | 75,55 | 77,15 |
| $d_w$ [mm] | 50,94 | 52,54 | 54,13 | 55,72 | 57,31 | 58,90 | 60,50 | 62,09 | 63,66 | 65,27 | 66,86 | 68,46 | 70,05 | 71,64 | 73,23 | 74,82 | 76,42 | 78,01 |

| z          | 50    | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    | 61    | 62    | 63     | 82     | 83     | 84     | 85     |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 78,75 | 80,35 | 81,95 | 83,5  | 85,10 | 86,70 | 88,30 | 89,90 | 91,50 | 93,05 | 94,65 | 96,25 | 97,85 | 99,45  | 129,70 | 131,30 | 132,85 | 134,45 |
| $d_w$ [mm] | 79,60 | 81,19 | 82,78 | 84,38 | 85,97 | 87,54 | 89,15 | 90,74 | 92,34 | 93,93 | 95,52 | 97,11 | 98,70 | 100,30 | 130,54 | 132,14 | 133,73 | 135,32 |

| z          | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 136,05 | 137,65 | 139,25 | 140,85 | 142,45 | 144,00 | 145,60 | 147,20 | 148,80 | 150,40 | 152,00 | 153,55 | 155,15 | 156,75 | 158,35 | 159,95 | 161,55 | 163,10 |
| $d_w$ [mm] | 136,91 | 138,50 | 140,10 | 141,69 | 143,28 | 144,87 | 146,46 | 148,06 | 149,65 | 151,24 | 152,83 | 154,42 | 156,02 | 157,61 | 159,20 | 160,79 | 162,38 | 163,97 |

| z          | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 164,70 | 166,30 | 167,90 | 169,50 | 171,10 | 172,65 | 174,25 | 175,85 | 177,45 | 179,05 | 180,65 | 182,23 | 183,82 | 185,42 | 187,01 | 188,61 | 190,21 |
| $d_w$ [mm] | 165,57 | 167,16 | 168,75 | 170,34 | 171,94 | 173,53 | 175,12 | 176,71 | 178,30 | 179,84 | 181,49 | 183,08 | 184,67 | 186,26 | 187,86 | 189,45 | 191,04 |



# Timing pulleys

## TK10 K6 - K13

| z                   | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 42,70 | 45,90 | 49,05 | 52,25 | 55,45 | 58,65 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 | 93,65 | 96,85 |
| d <sub>w</sub> [mm] | 44,56 | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 |

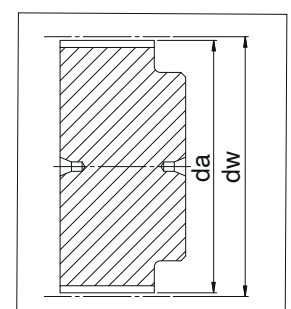
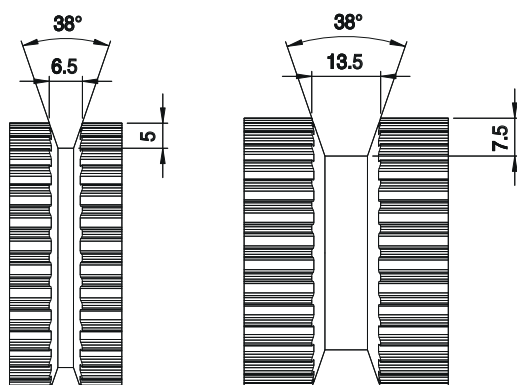
| z                   | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 100,00 | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 138,20 | 141,40 | 144,60 | 147,75 | 150,95 | 154,10 | 157,30 |
| d <sub>w</sub> [mm] | 101,86 | 105,04 | 108,22 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 | 211,40 | 214,60 |
| d <sub>w</sub> [mm] | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 256,00 | 259,15 | 262,30 | 265,50 | 268,70 | 271,90 |
| d <sub>w</sub> [mm] | 219,63 | 222,81 | 225,99 | 229,18 | 232,36 | 235,54 | 238,72 | 241,94 | 245,09 | 248,27 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,55 | 273,74 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,75 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 | 326,00 | 329,20 |
| d <sub>w</sub> [mm] | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 332,35 | 335,55 | 338,75 | 341,95 | 345,15 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,76 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |





# Timing pulleys

## TK20 K13

| z                   | 15    | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     |
|---------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 92,65 | 99,00  | 105,40 | 111,75 | 118,10 | 124,50 | 130,75 | 137,20 | 143,55 | 149,95 | 156,30 | 162,65 | 169,00 | 175,40 | 181,75 | 188,10 | 194,50 | 200,85 |
| d <sub>w</sub> [mm] | 95,49 | 101,86 | 108,22 | 114,59 | 120,96 | 127,32 | 133,69 | 140,06 | 146,43 | 152,78 | 159,15 | 165,52 | 171,89 | 178,25 | 184,62 | 190,99 | 197,35 | 203,72 |

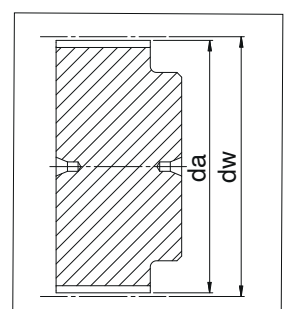
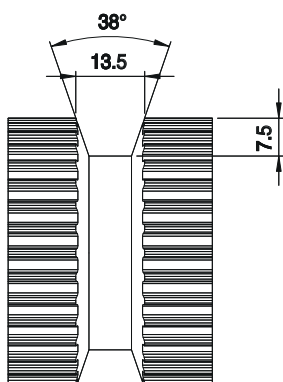
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 207,20 | 213,60 | 219,95 | 226,35 | 232,70 | 239,05 | 245,40 | 251,75 | 258,15 | 264,50 | 270,85 | 277,25 | 283,60 | 289,95 | 296,35 | 302,70 | 309,10 | 315,45 |
| d <sub>w</sub> [mm] | 210,09 | 216,44 | 222,81 | 229,18 | 235,54 | 241,91 | 248,28 | 254,65 | 261,02 | 267,37 | 273,74 | 280,10 | 286,47 | 292,84 | 299,21 | 305,58 | 311,93 | 318,30 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 321,80 | 328,15 | 334,50 | 340,90 | 347,25 | 353,60 | 360,00 | 366,35 | 372,75 | 379,10 | 385,45 | 391,85 | 398,20 | 404,55 | 410,95 | 417,30 | 423,65 | 430,05 |
| d <sub>w</sub> [mm] | 324,67 | 331,03 | 337,40 | 343,76 | 350,13 | 356,50 | 362,86 | 369,23 | 375,59 | 381,96 | 388,33 | 394,70 | 401,06 | 407,43 | 413,80 | 420,17 | 426,52 | 432,89 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 436,40 | 442,80 | 449,15 | 455,50 | 461,85 | 468,25 | 474,60 | 480,95 | 487,35 | 493,70 | 500,05 | 506,45 | 512,80 | 519,15 | 525,55 | 531,90 | 538,25 | 544,60 |
| d <sub>w</sub> [mm] | 439,26 | 445,63 | 451,99 | 458,36 | 464,73 | 471,08 | 477,45 | 483,82 | 490,19 | 496,56 | 502,91 | 509,28 | 515,65 | 522,02 | 528,39 | 534,74 | 541,11 | 547,48 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 551,00 | 557,35 | 563,70 | 570,10 | 576,45 | 582,85 | 589,20 | 595,55 | 601,90 | 608,30 | 614,65 | 621,00 | 627,35 | 633,75 | 640,10 | 646,50 | 652,85 | 659,20 |
| d <sub>w</sub> [mm] | 553,85 | 560,22 | 566,57 | 572,94 | 579,31 | 585,67 | 592,04 | 598,41 | 604,77 | 611,14 | 617,51 | 623,88 | 630,25 | 636,60 | 642,97 | 649,34 | 655,71 | 662,06 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 665,60 | 671,95 | 678,30 | 684,70 | 691,05 | 697,40 | 703,80 | 710,15 | 716,50 | 722,90 | 729,24 | 735,61 | 741,96 | 748,34 | 754,70 | 761,07 |
| d <sub>w</sub> [mm] | 668,43 | 674,80 | 681,17 | 687,54 | 693,89 | 700,26 | 706,63 | 712,99 | 719,36 | 725,73 | 732,09 | 738,46 | 744,83 | 751,19 | 757,56 | 763,93 |



# Timing pulleys

## ATK5 K6

| z                   | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    | 41    | 42    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 38,60 | 40,20 | 41,80 | 43,35 | 44,95 | 46,55 | 48,15 | 49,70 | 51,30 | 52,85 | 54,45 | 56,05 | 57,65 | 59,25 | 60,85 | 62,45 | 64,00 | 65,60 |
| d <sub>w</sub> [mm] | 39,80 | 41,39 | 42,98 | 44,58 | 46,17 | 47,76 | 49,35 | 50,94 | 52,54 | 54,13 | 55,72 | 57,31 | 58,90 | 60,50 | 62,09 | 63,66 | 65,27 | 66,86 |

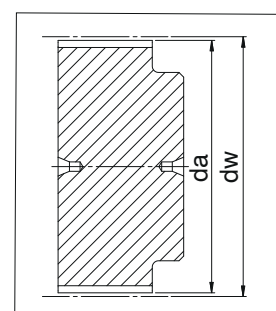
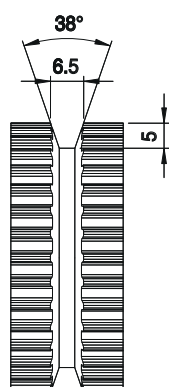
| z                   | 43    | 44    | 45    | 46    | 47    | 48    | 49    | 50    | 51    | 52    | 53    | 54    | 55    | 56    | 57    | 58    | 59    | 60    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 67,30 | 68,80 | 70,40 | 72,00 | 73,55 | 75,15 | 76,75 | 78,35 | 79,95 | 81,55 | 83,10 | 84,70 | 86,30 | 87,90 | 89,50 | 91,10 | 92,65 | 94,25 |
| d <sub>w</sub> [mm] | 68,46 | 70,05 | 71,64 | 73,23 | 74,82 | 76,42 | 78,01 | 79,60 | 81,19 | 82,78 | 84,38 | 85,97 | 87,54 | 89,15 | 90,74 | 92,34 | 93,93 | 95,52 |

| z                   | 61    | 62    | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     |
|---------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 95,85 | 97,45 | 99,05  | 100,65 | 102,25 | 103,80 | 105,40 | 107,00 | 108,60 | 110,20 | 111,80 | 113,35 | 114,95 | 116,55 | 118,15 | 119,75 | 121,35 | 122,90 |
| d <sub>w</sub> [mm] | 97,11 | 98,70 | 100,30 | 101,89 | 103,48 | 105,07 | 106,66 | 108,26 | 109,85 | 111,44 | 113,03 | 114,62 | 116,22 | 117,81 | 119,40 | 120,99 | 122,58 | 124,18 |

| z                   | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 124,50 | 126,10 | 127,70 | 129,30 | 130,90 | 132,45 | 134,05 | 135,65 | 137,25 | 138,85 | 140,45 | 142,05 | 143,60 | 145,20 | 146,80 | 148,40 | 150,00 | 151,60 |
| d <sub>w</sub> [mm] | 125,77 | 127,36 | 128,95 | 130,54 | 132,14 | 133,73 | 135,32 | 136,91 | 138,50 | 140,10 | 141,69 | 143,28 | 144,87 | 146,46 | 148,06 | 149,65 | 151,24 | 152,83 |

| z                   | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 153,15 | 154,75 | 156,35 | 157,95 | 159,55 | 161,15 | 162,70 | 164,30 | 165,90 | 167,50 | 169,10 | 170,70 | 172,25 | 173,85 | 175,45 | 177,05 | 178,65 | 180,25 |
| d <sub>w</sub> [mm] | 154,42 | 156,02 | 157,61 | 159,20 | 160,79 | 162,38 | 163,97 | 165,57 | 167,16 | 168,75 | 170,34 | 171,94 | 173,53 | 175,12 | 176,71 | 178,30 | 179,84 | 181,49 |

| z                   | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 181,85 | 183,45 | 185,00 | 186,60 | 188,20 | 189,80 |
| d <sub>w</sub> [mm] | 183,08 | 184,67 | 186,26 | 187,86 | 189,45 | 191,04 |



# Timing pulleys

## ATK10 K6 - K13

| z          | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| $d_a$ [mm] | 45,70 | 49,05 | 52,25 | 55,45 | 58,60 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 | 93,65 | 96,80 | 100,00 |
| $d_w$ [mm] | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 |

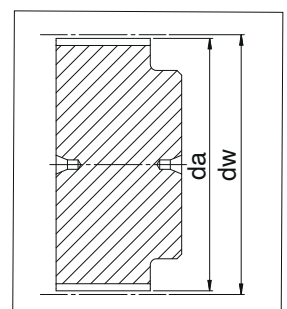
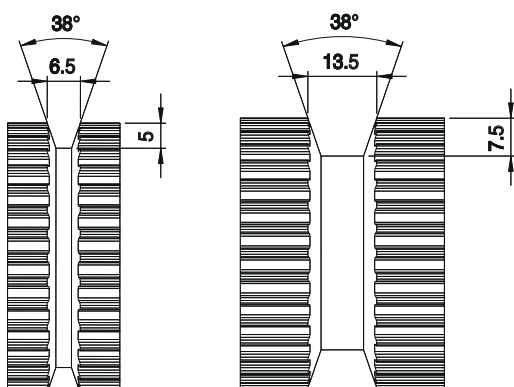
| z          | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 135,00 | 138,20 | 141,40 | 144,55 | 147,75 | 150,95 | 154,10 | 157,30 |
| $d_w$ [mm] | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 |

| z          | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 | 211,40 | 214,60 |
| $d_w$ [mm] | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 |

| z          | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 255,95 | 259,15 | 262,30 | 265,50 | 268,70 | 271,90 |
| $d_w$ [mm] | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,52 | 273,74 |

| z          | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,70 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 | 326,00 | 329,20 |
| $d_w$ [mm] | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 |

| z          | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 332,35 | 335,55 | 338,75 | 341,90 | 345,10 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 | 380,11 |
| $d_w$ [mm] | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## ATK10P K13 SOLID

| z                   | 30    | 31    | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     |
|---------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 93,65 | 96,80 | 100,00 | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 135,00 | 138,20 | 141,40 | 144,55 | 147,75 |
| d <sub>w</sub> [mm] | 95,49 | 98,67 | 101,86 | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 |

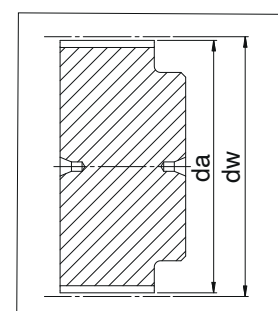
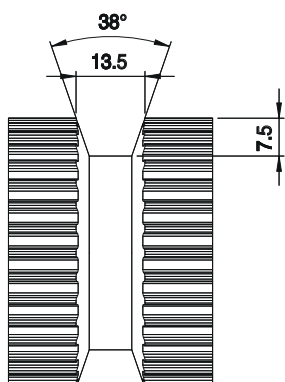
| z                   | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 150,95 | 154,10 | 157,30 | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 |
| d <sub>w</sub> [mm] | 152,78 | 155,97 | 159,15 | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 |

| z                   | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 208,20 | 211,40 | 214,60 | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 255,95 | 259,15 | 262,30 |
| d <sub>w</sub> [mm] | 210,08 | 213,26 | 216,44 | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 |

| z                   | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 265,50 | 268,70 | 271,90 | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,70 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 |
| d <sub>w</sub> [mm] | 267,37 | 270,52 | 273,74 | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 |

| z                   | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 322,80 | 326,00 | 329,20 | 332,35 | 335,55 | 338,75 | 341,90 | 345,10 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 |
| d <sub>w</sub> [mm] | 324,66 | 327,85 | 331,03 | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 |

| z                   | 120    |
|---------------------|--------|
| d <sub>a</sub> [mm] | 380,11 |
| d <sub>w</sub> [mm] | 381,96 |



# Timing pulleys

## H K13

| z          | 20    | 21    | 22    | 23    | 24    | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     | 33     | 34     | 35     | 36     | 37     |
|------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 79,48 | 83,52 | 87,57 | 91,61 | 95,65 | 99,69  | 103,73 | 107,77 | 111,81 | 115,85 | 119,91 | 123,95 | 127,99 | 132,03 | 136,07 | 140,11 | 144,15 | 148,20 |
| $d_w$ [mm] | 80,84 | 84,88 | 88,94 | 92,98 | 97,02 | 101,06 | 105,10 | 109,14 | 113,18 | 117,22 | 121,28 | 125,32 | 129,36 | 133,40 | 137,44 | 141,48 | 145,52 | 149,56 |

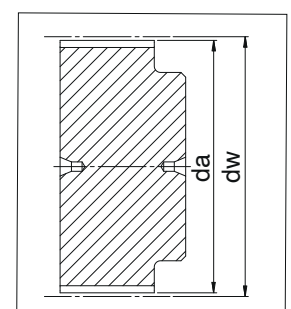
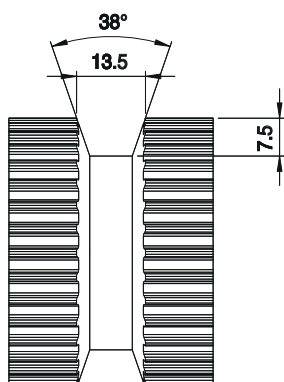
| z          | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     | 54     | 55     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 152,24 | 156,28 | 160,32 | 164,36 | 168,42 | 172,46 | 176,50 | 180,54 | 184,58 | 188,62 | 192,67 | 196,71 | 200,75 | 204,80 | 208,84 | 212,88 | 216,92 | 220,96 |
| $d_w$ [mm] | 153,62 | 157,66 | 161,70 | 165,74 | 169,78 | 173,82 | 177,86 | 181,90 | 185,96 | 190,00 | 194,04 | 198,08 | 202,13 | 206,17 | 210,21 | 214,25 | 218,29 | 222,33 |

| z          | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     | 72     | 73     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 225,00 | 229,04 | 233,10 | 237,14 | 241,18 | 245,22 | 249,26 | 253,30 | 257,34 | 261,38 | 265,44 | 269,48 | 273,52 | 277,56 | 281,60 | 285,64 | 289,68 | 293,72 |
| $d_w$ [mm] | 226,37 | 230,41 | 234,47 | 238,51 | 242,55 | 246,59 | 250,63 | 254,67 | 258,71 | 262,75 | 266,81 | 270,85 | 274,89 | 278,93 | 282,97 | 287,01 | 291,05 | 295,10 |

| z          | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     | 90     | 91     |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 297,78 | 301,82 | 305,86 | 309,90 | 313,94 | 317,98 | 322,02 | 326,06 | 330,12 | 334,16 | 338,20 | 342,24 | 346,28 | 350,33 | 354,37 | 358,41 | 362,45 | 366,50 |
| $d_w$ [mm] | 299,14 | 303,18 | 307,22 | 311,26 | 315,32 | 319,36 | 323,40 | 327,44 | 331,48 | 335,52 | 339,56 | 343,60 | 347,66 | 351,70 | 355,74 | 359,78 | 363,82 | 367,86 |

| z          | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    | 108    | 109    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 370,54 | 374,58 | 378,62 | 382,66 | 386,70 | 390,74 | 394,80 | 398,84 | 402,88 | 406,92 | 410,96 | 415,00 | 419,04 | 423,08 | 427,14 | 431,18 | 435,22 | 439,26 |
| $d_w$ [mm] | 371,90 | 375,94 | 380,00 | 384,04 | 388,08 | 392,12 | 396,16 | 400,20 | 404,24 | 408,28 | 412,34 | 416,38 | 420,42 | 424,46 | 428,50 | 432,54 | 436,58 | 440,62 |

| z          | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| $d_a$ [mm] | 443,30 | 447,34 | 451,38 | 455,42 | 459,48 | 463,52 | 467,56 | 471,60 | 475,64 | 479,68 | 483,72 |
| $d_w$ [mm] | 444,68 | 448,72 | 452,76 | 456,80 | 460,84 | 464,88 | 468,92 | 472,96 | 477,02 | 481,06 | 485,10 |



# Timing pulleys

## T10 TOTAL PROTECTION

| z                   | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 36,35 | 39,50 | 42,70 | 45,90 | 49,05 | 52,25 | 55,45 | 58,65 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 |
| d <sub>w</sub> [mm] | 38,20 | 41,38 | 44,56 | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 |

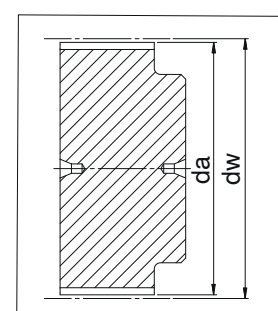
| z                   | 30    | 31    | 32     | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 44     | 45     | 46     | 47     | 48     |
|---------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 93,65 | 96,85 | 100,00 | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 138,20 | 141,40 | 144,60 | 147,75 | 150,95 |
| d <sub>w</sub> [mm] | 95,49 | 98,67 | 101,86 | 105,04 | 108,22 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 |

| z                   | 49     | 50     | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 154,10 | 157,30 | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 |
| d <sub>w</sub> [mm] | 155,97 | 159,15 | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 |

| z                   | 67     | 68     | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 211,40 | 214,60 | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 256,00 | 259,15 | 262,30 | 265,50 |
| d <sub>w</sub> [mm] | 213,26 | 216,44 | 219,63 | 222,81 | 225,99 | 229,18 | 232,36 | 235,54 | 238,72 | 241,94 | 245,09 | 248,27 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 |

| z                   | 85     | 86     | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 268,70 | 271,90 | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,75 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 |
| d <sub>w</sub> [mm] | 270,55 | 273,74 | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 |

| z                   | 103    | 104    | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 326,00 | 329,20 | 332,35 | 335,55 | 338,75 | 341,95 | 345,15 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,76 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 327,85 | 331,03 | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## T20 TOTAL PROTECTION

| z                   | 15    | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27     | 28     | 29     | 30     | 31     | 32     |
|---------------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 92,65 | 99,00  | 105,40 | 111,75 | 118,10 | 124,50 | 130,75 | 137,20 | 143,55 | 149,95 | 156,30 | 162,65 | 169,00 | 175,40 | 181,75 | 188,10 | 194,50 | 200,85 |
| d <sub>w</sub> [mm] | 95,49 | 101,86 | 108,22 | 114,59 | 120,96 | 127,32 | 133,69 | 140,06 | 146,43 | 152,78 | 159,15 | 165,52 | 171,89 | 178,25 | 184,62 | 190,99 | 197,35 | 203,72 |

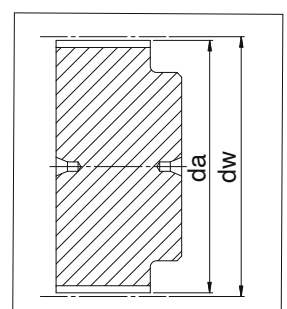
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 207,20 | 213,60 | 219,95 | 226,35 | 232,70 | 239,05 | 245,40 | 251,75 | 258,15 | 264,50 | 270,85 | 277,25 | 283,60 | 289,95 | 296,35 | 302,70 | 309,10 | 315,45 |
| d <sub>w</sub> [mm] | 210,09 | 216,44 | 222,81 | 229,18 | 235,54 | 241,91 | 248,28 | 254,65 | 261,02 | 267,37 | 273,74 | 280,10 | 286,47 | 292,84 | 299,21 | 305,58 | 311,93 | 318,30 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 321,80 | 328,15 | 334,50 | 340,90 | 347,25 | 353,60 | 360,00 | 366,35 | 372,75 | 379,10 | 385,45 | 391,85 | 398,20 | 404,55 | 410,95 | 417,30 | 423,65 | 430,05 |
| d <sub>w</sub> [mm] | 324,67 | 331,03 | 337,40 | 343,76 | 350,13 | 356,50 | 362,86 | 369,23 | 375,59 | 381,96 | 388,33 | 394,70 | 401,06 | 407,43 | 413,80 | 420,17 | 426,52 | 432,89 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 436,40 | 442,80 | 449,15 | 455,50 | 461,85 | 468,25 | 474,60 | 480,95 | 487,35 | 493,70 | 500,05 | 506,45 | 512,80 | 519,15 | 525,55 | 531,90 | 538,25 | 544,60 |
| d <sub>w</sub> [mm] | 439,26 | 445,63 | 451,99 | 458,36 | 464,73 | 471,08 | 477,45 | 483,82 | 490,19 | 496,56 | 502,91 | 509,28 | 515,65 | 522,02 | 528,39 | 534,74 | 541,11 | 547,48 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 551,00 | 557,35 | 563,70 | 570,10 | 576,45 | 582,85 | 589,20 | 595,55 | 601,90 | 608,30 | 614,65 | 621,00 | 627,35 | 633,75 | 640,10 | 646,50 | 652,85 | 659,20 |
| d <sub>w</sub> [mm] | 553,85 | 560,22 | 566,57 | 572,94 | 579,31 | 585,67 | 592,04 | 598,41 | 604,77 | 611,14 | 617,51 | 623,88 | 630,25 | 636,60 | 642,97 | 649,34 | 655,71 | 662,06 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 665,60 | 671,95 | 678,30 | 684,70 | 691,05 | 697,40 | 703,80 | 710,15 | 716,50 | 722,90 | 729,24 | 735,61 | 741,96 | 748,34 | 754,70 | 761,07 |
| d <sub>w</sub> [mm] | 668,43 | 674,80 | 681,17 | 687,54 | 693,89 | 700,26 | 706,63 | 712,99 | 719,36 | 725,73 | 732,09 | 738,46 | 744,83 | 751,19 | 757,56 | 763,93 |





# Timing pulleys

## AT10 TOTAL PROTECTION

| z                   | 15    | 16    | 17    | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32     |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| d <sub>a</sub> [mm] | 45,70 | 49,05 | 52,25 | 55,45 | 58,60 | 61,80 | 65,00 | 68,15 | 71,35 | 74,55 | 77,70 | 80,90 | 84,10 | 87,25 | 90,45 | 93,65 | 96,80 | 100,00 |
| d <sub>w</sub> [mm] | 47,75 | 50,93 | 54,11 | 57,29 | 60,48 | 63,66 | 66,84 | 70,03 | 73,20 | 76,39 | 79,58 | 82,76 | 85,95 | 89,12 | 92,21 | 95,49 | 98,67 | 101,86 |

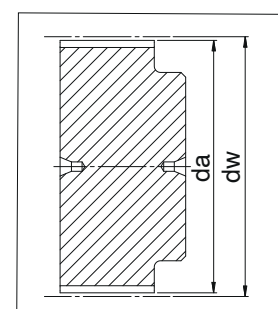
| z                   | 33     | 34     | 35     | 36     | 37     | 38     | 39     | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 103,20 | 106,40 | 109,55 | 112,75 | 115,90 | 119,10 | 122,30 | 125,45 | 128,65 | 131,85 | 135    | 138,20 | 141,40 | 144,55 | 147,75 | 150,95 | 154,10 | 157,30 |
| d <sub>w</sub> [mm] | 105,04 | 108,19 | 111,41 | 114,59 | 117,77 | 120,95 | 124,14 | 127,32 | 130,50 | 133,69 | 136,87 | 140,05 | 143,24 | 146,42 | 149,60 | 152,78 | 155,97 | 159,15 |

| z                   | 51     | 52     | 53     | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 160,50 | 163,65 | 166,85 | 170,05 | 173,20 | 176,40 | 179,60 | 182,75 | 185,95 | 189,10 | 192,30 | 195,50 | 198,65 | 201,85 | 205,05 | 208,20 | 211,40 | 214,60 |
| d <sub>w</sub> [mm] | 162,33 | 165,52 | 168,70 | 171,88 | 175,06 | 178,25 | 181,43 | 184,61 | 187,80 | 190,98 | 194,16 | 197,35 | 200,53 | 203,71 | 206,90 | 210,08 | 213,26 | 216,44 |

| z                   | 69     | 70     | 71     | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 217,75 | 220,95 | 224,15 | 227,30 | 230,50 | 233,70 | 236,90 | 240,05 | 243,25 | 246,40 | 249,60 | 252,80 | 255,95 | 259,15 | 262,30 | 265,50 | 268,70 | 271,90 |
| d <sub>w</sub> [mm] | 219,63 | 222,81 | 225,99 | 229,18 | 232,33 | 235,54 | 238,72 | 241,94 | 245,09 | 248,24 | 251,46 | 254,64 | 257,82 | 261,00 | 264,19 | 267,37 | 270,52 | 273,74 |

| z                   | 87     | 88     | 89     | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 275,05 | 278,25 | 281,45 | 284,60 | 287,80 | 291,00 | 294,20 | 297,35 | 300,55 | 303,70 | 306,90 | 310,10 | 313,25 | 316,45 | 319,65 | 322,80 | 326,00 | 329,20 |
| d <sub>w</sub> [mm] | 276,92 | 280,10 | 283,28 | 286,47 | 289,65 | 292,84 | 296,02 | 299,20 | 302,39 | 305,57 | 308,75 | 311,93 | 315,12 | 318,30 | 321,48 | 324,66 | 327,85 | 331,03 |

| z                   | 105    | 106    | 107    | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 332,35 | 335,55 | 338,75 | 341,90 | 345,10 | 348,30 | 351,45 | 354,65 | 357,80 | 361,00 | 364,19 | 367,39 | 370,56 | 373,74 | 376,93 | 380,11 |
| d <sub>w</sub> [mm] | 334,21 | 337,40 | 340,58 | 343,76 | 346,95 | 350,13 | 353,31 | 356,50 | 359,68 | 362,86 | 366,04 | 369,23 | 372,41 | 375,59 | 378,78 | 381,96 |



# Timing pulleys

## HTD8M TOTAL PROTECTION

| z                   | 18    | 19    | 20    | 21    | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    | 31    | 32    | 33    | 34    | 35    |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| d <sub>a</sub> [mm] | 44,46 | 47,01 | 49,56 | 52,10 | 54,65 | 57,20 | 59,75 | 62,29 | 64,84 | 67,38 | 70,08 | 72,59 | 75,13 | 77,65 | 80,16 | 82,68 | 85,21 | 87,76 |
| d <sub>w</sub> [mm] | 45,83 | 48,38 | 50,93 | 53,47 | 56,02 | 58,57 | 61,12 | 63,66 | 66,21 | 68,75 | 71,30 | 73,84 | 76,39 | 78,94 | 81,49 | 84,03 | 86,58 | 89,12 |

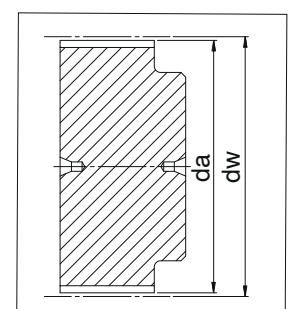
| z                   | 36    | 37    | 38    | 39    | 40     | 41     | 42     | 43     | 44     | 45     | 46     | 47     | 48     | 49     | 50     | 51     | 52     | 53     |
|---------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 90,30 | 92,85 | 95,40 | 97,94 | 100,49 | 103,04 | 105,58 | 108,13 | 110,68 | 113,22 | 115,77 | 118,31 | 120,86 | 123,40 | 125,95 | 128,50 | 131,05 | 133,59 |
| d <sub>w</sub> [mm] | 91,67 | 94,22 | 96,77 | 99,31 | 101,86 | 104,40 | 106,95 | 109,50 | 112,05 | 114,59 | 117,14 | 119,68 | 122,23 | 124,77 | 127,32 | 129,87 | 132,41 | 134,96 |

| z                   | 54     | 55     | 56     | 57     | 58     | 59     | 60     | 61     | 62     | 63     | 64     | 65     | 66     | 67     | 68     | 69     | 70     | 71     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 136,14 | 138,68 | 141,23 | 143,78 | 146,32 | 148,87 | 151,42 | 153,96 | 156,52 | 159,06 | 161,60 | 164,15 | 166,69 | 169,24 | 171,79 | 174,33 | 176,88 | 179,43 |
| d <sub>w</sub> [mm] | 137,51 | 140,05 | 142,60 | 145,15 | 147,69 | 150,24 | 152,79 | 155,33 | 157,89 | 160,43 | 162,97 | 165,52 | 168,06 | 170,61 | 173,16 | 175,70 | 178,25 | 180,80 |

| z                   | 72     | 73     | 74     | 75     | 76     | 77     | 78     | 79     | 80     | 81     | 82     | 83     | 84     | 85     | 86     | 87     | 88     | 89     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 181,98 | 184,52 | 187,07 | 189,61 | 192,16 | 194,71 | 197,25 | 199,80 | 202,35 | 204,89 | 207,44 | 209,98 | 212,53 | 215,08 | 217,63 | 220,17 | 222,72 | 225,26 |
| d <sub>w</sub> [mm] | 183,35 | 185,89 | 188,44 | 190,98 | 193,53 | 196,08 | 198,62 | 201,17 | 203,72 | 206,26 | 208,81 | 211,35 | 213,90 | 216,45 | 219,00 | 221,54 | 224,09 | 226,63 |

| z                   | 90     | 91     | 92     | 93     | 94     | 95     | 96     | 97     | 98     | 99     | 100    | 101    | 102    | 103    | 104    | 105    | 106    | 107    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 227,81 | 230,35 | 232,90 | 235,45 | 238,00 | 240,54 | 243,09 | 245,63 | 248,18 | 250,73 | 253,28 | 255,82 | 258,37 | 260,91 | 263,46 | 266,01 | 268,55 | 271,10 |
| d <sub>w</sub> [mm] | 229,18 | 231,72 | 234,27 | 236,82 | 239,37 | 241,91 | 244,46 | 247,00 | 249,55 | 252,10 | 254,67 | 257,19 | 259,74 | 262,28 | 264,83 | 267,38 | 269,92 | 272,47 |

| z                   | 108    | 109    | 110    | 111    | 112    | 113    | 114    | 115    | 116    | 117    | 118    | 119    | 120    |
|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| d <sub>a</sub> [mm] | 273,64 | 276,19 | 278,74 | 281,29 | 283,84 | 286,38 | 288,93 | 291,47 | 294,02 | 296,57 | 299,11 | 301,66 | 304,20 |
| d <sub>w</sub> [mm] | 275,01 | 277,56 | 280,11 | 282,66 | 285,21 | 287,75 | 290,30 | 292,84 | 295,39 | 297,94 | 300,48 | 303,03 | 305,57 |



# Troubleshooting

| DAMAGE                                 | CAUSE                                                                                                                                                                                                                    | REMEDY                                                                                                                                                                                                                                                                 |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Belt tooth jumping</b>              | Over load (shock on the machine)<br>Overload due to machine accident<br>Shortage of teeth in mesh<br>Lack of initial tension<br>Pulley diameter too small<br>Moment of inertia for start and stop is not considered      | Increase belt size/modify design<br>Prevent recurrence of the accident<br>Increase teeth in mesh by using an idler<br>Correct initial tension<br>Change design<br>Change design                                                                                        |
| <b>Abnormal noise level</b>            | Bad pulley alignment<br>Incorrect pulley tooth shape<br>Belt wider than pulley diameter<br>Over load<br>Belt over-tension                                                                                                | Adjust alignment<br>Change pulley<br>Change design<br>Change design<br>Correct initial tension                                                                                                                                                                         |
| <b>Belt side abrasion</b>              | Bad pulley alignment<br>Poor flange shape<br>Pulley flange roughness                                                                                                                                                     | Adjust alignment<br>Correct flange shape or change flange<br>Change flange to an appropriate one                                                                                                                                                                       |
| <b>Belt tooth abrasion</b>             | Presence of particles between belt and pulley<br>Over load<br>Over tension<br>Belt tooth jumping due to lack of initial tension                                                                                          | Improve environment or apply a protective cover<br>Change design (increase belt size)<br>Correct initial tension<br>Correct initial tension                                                                                                                            |
| <b>Belt tooth bottom abrasion</b>      | Bad pulley profile<br>Over tension                                                                                                                                                                                       | Use correct pulley<br>Correct initial tension                                                                                                                                                                                                                          |
| <b>Belt back abrasion</b>              | Contact with undesired element (i.e. machine frame)                                                                                                                                                                      | Eliminate contact                                                                                                                                                                                                                                                      |
| <b>Belt back cracking</b>              | Running under too low temperature<br>Pulleys too small                                                                                                                                                                   | Increase environment temperature or ask for special compound<br>Observe minimum pulley diameter recommendations                                                                                                                                                        |
| <b>Belt breakage</b>                   | Over load (shock on the machine)<br>Undesired particles in mesh<br>Tension member corrosion<br>Belt run off over pulley flange<br>Not enough belt teeth in clamping plate<br>Clamping plate screws tightened incorrectly | Increase belt size/modify design<br>Improve environment or apply a protective cover<br>Improve environment or use aramid/stainless steel cords<br>Adjust alignment and change pulley flange<br>Use larger clamping plate<br>Apply optimum torque to clamp plate screws |
| <b>Tension member partial tear</b>     | Presence of undesired particles in mesh<br>Improper installation<br>Belt folded or twisted<br>Fatigue on side due to bad alignment                                                                                       | Improve environment or apply a protective cover<br>Exercise care when installing<br>Exercise care in handling<br>Correct alignment                                                                                                                                     |
| <b>Back covering abnormal abrasion</b> | Aggressive environment                                                                                                                                                                                                   | Change belt back cover or improve environment conditions                                                                                                                                                                                                               |
| <b>Pulley tooth abrasion</b>           | Presence of undesired particles in mesh<br>Over load<br>Belt over tension<br>Pulley material not adequate (too soft)                                                                                                     | Improve environment or apply a protective cover<br>Change design<br>Correct initial tension<br>Change pulley material or adopt surface treatment                                                                                                                       |

## Notes:

[illegible]

## This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a guide for writing. The paper itself is a clean, off-white color. There are no margins, text, or other markings present.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.







Italy

**SIT SPA**

Via A. Volta, 2  
20090 Cusago (Milano)  
Italy

Tel: +39 02 89144.1  
E-mail: [info@sitspa.it](mailto:info@sitspa.it)  
Website: [www.sitspa.it](http://www.sitspa.it)

China

**SIT ELATECH (ANHUI) CO.,LTD.**

No.11,Industrial Avenue - Xinfu Town  
Langxi County, Xuancheng City  
Anhui Province - 242100  
China

E-mail: [info@sit-shanghai.com](mailto:info@sit-shanghai.com)  
website: [www.sit-shanghai.com](http://www.sit-shanghai.com)

France

**FOGEX**

215 Rue Henri Barbusse  
95100 – Argenteuil  
France

Tel: +33.01.34344600  
E-mail: [info@fogex.com](mailto:info@fogex.com)  
Website: [www.fogex.com](http://www.fogex.com)

China

**SIT ELATECH (SHANGHAI) CO., LTD.**

Room 804, Building 2, Alley 8666,  
Hunan Highway  
Pudong New District – Shanghai – 201314  
China

E-mail: [info@sit-shanghai.com](mailto:info@sit-shanghai.com)  
website: [www.sit-shanghai.com](http://www.sit-shanghai.com)

Suisse

**SIT (Schweiz) AG**

Lenzbüel 13  
8370 – Sirmach  
Suisse

Tel: +41.071.9661112  
E-mail: [info@sit-antriebstechnik.ch](mailto:info@sit-antriebstechnik.ch)  
Website: [www.sit-antriebstechnik.ch](http://www.sit-antriebstechnik.ch)

India

**S.I.T. PTC INDIA PRIVATE LIMITED**

S. No. 353/A, Gauddara Road  
A/p. Gauddara, Shriram Nagar  
Khed-Shivapur, Tal.:- Haveli,  
Dist.:- Pune - 412205  
India

E-mail: [a.nangre@sitspa.com](mailto:a.nangre@sitspa.com)  
Website: [www.sit-elatech.com](http://www.sit-elatech.com)

Germany

**SIT ANTRIEBSELEMENTE GmbH**

Rieseler Feld 9  
33034 – Brakel  
Deutschland

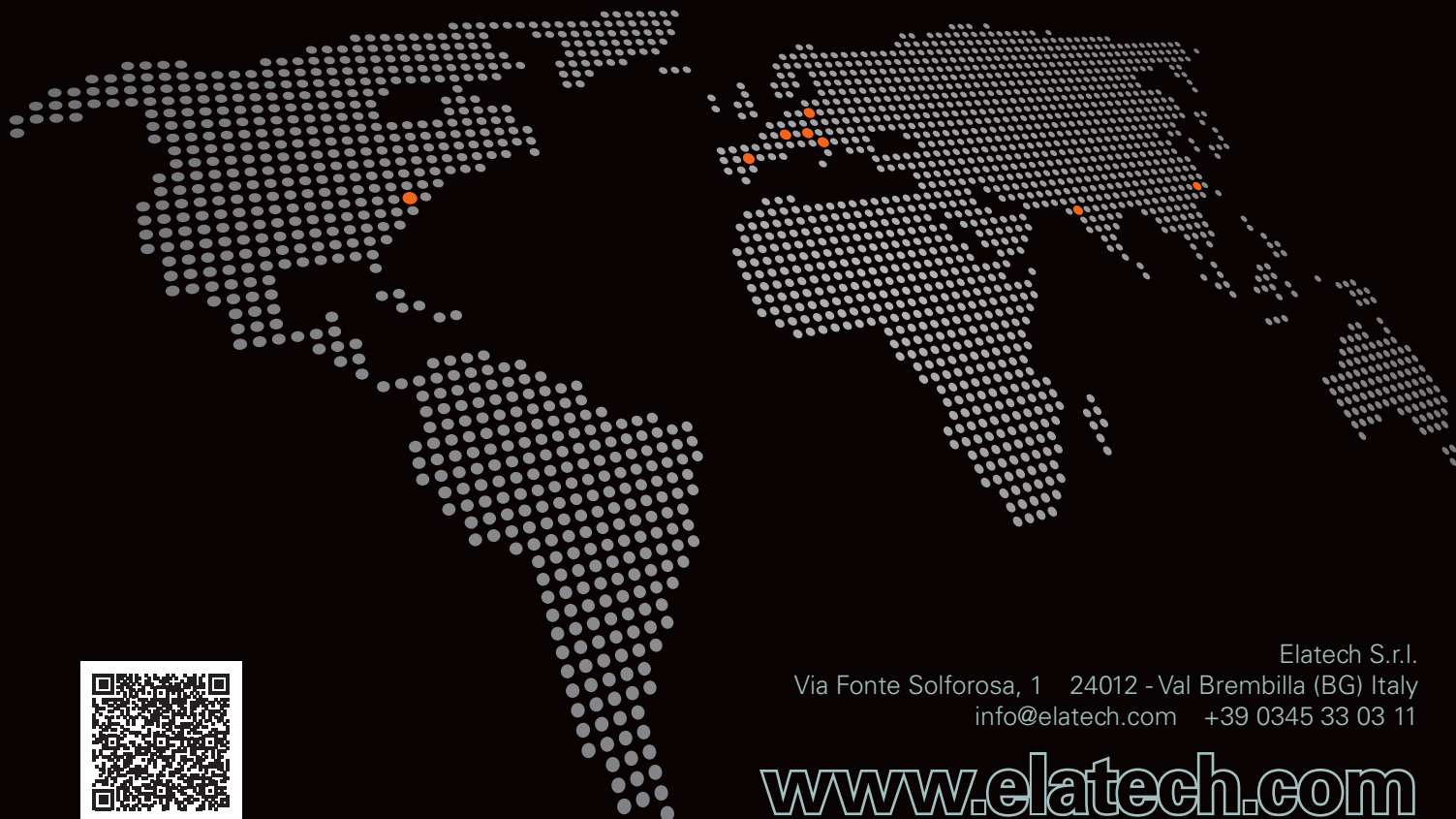
Tel: +49.5272.3928.0  
E-mail: [info@sit-antriebselemente.de](mailto:info@sit-antriebselemente.de)  
Website: [www.sit-antriebselemente.de](http://www.sit-antriebselemente.de)

United States

**S.I.T. ELATECH Inc.**

11540-A Cordage ST.  
Charlotte – NC 28273  
United States

E-mail: [info@sit-indeva.com](mailto:info@sit-indeva.com)  
Website: [www.sit-elatech.com](http://www.sit-elatech.com)



Elatech S.r.l.  
Via Fonte Solforosa, 1 24012 - Val Brembilla (BG) Italy  
[info@elatech.com](mailto:info@elatech.com) +39 0345 33 03 11

[www.elatech.com](http://www.elatech.com)

ELATECH belts are 100% Made in Italy and distributed worldwide thanks to sister companies in Europe, North America, Asia and more than 150 distributors around the world.