

SMART PROCESSING UNITS



Customer driven solutions for:

- Wool top units
- Defelting, blending and recombining units
- Worsted spinning preparation units
- Tow to top units
- Semi-worsted units
- Hard fibres units

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N. Schlumberger: experts in long staple fibre processing

Manufacturer of textile machinery and complete fibre-to-yarn lines, N. Schlumberger is a global player in combing/recombing, spinning preparation, tow to top and semi-worsted processing long staple fibres. Present in more than 60 countries on every continent, N. Schlumberger is recognised around the world for its technological mastery of complete long-staple fibre lines.

Its know-how allows to provide its customers with solutions of the highest quality and best productivity.

N. Schlumberger leverages its efficient R&D programmes to design industrial solutions that anticipate its customers' needs for quality, ROI, safety and environmental protection. N. Schlumberger's strategy is based on an HR policy that emphasises initiative, teamwork and respect for others.

The Design and Engineering Department at N. Schlumberger is staffed by technicians and engineers with expert skills in the fields of mechanical, textile, electrical and electronic engineering.

N. Schlumberger's machining, heat treatment, sheet metal, paint and assembly shops and its support services (logistics, methods, quality, shipping, environment, safety, etc.) are located on its site in Guebwiller, in Alsace, France.

Thanks to the skills of its staff in all these areas, N. Schlumberger's production facility is fully geared to turn out the machines of tomorrow.

N. Schlumberger is triple certified for its Quality, Safety and Environmental management systems (ISO 9001, OHSAS 18001 and ISO 14001).

Carrying on 200 years of tradition, it passes on to new employees the high standards that have made the company's reputation.

Our goal

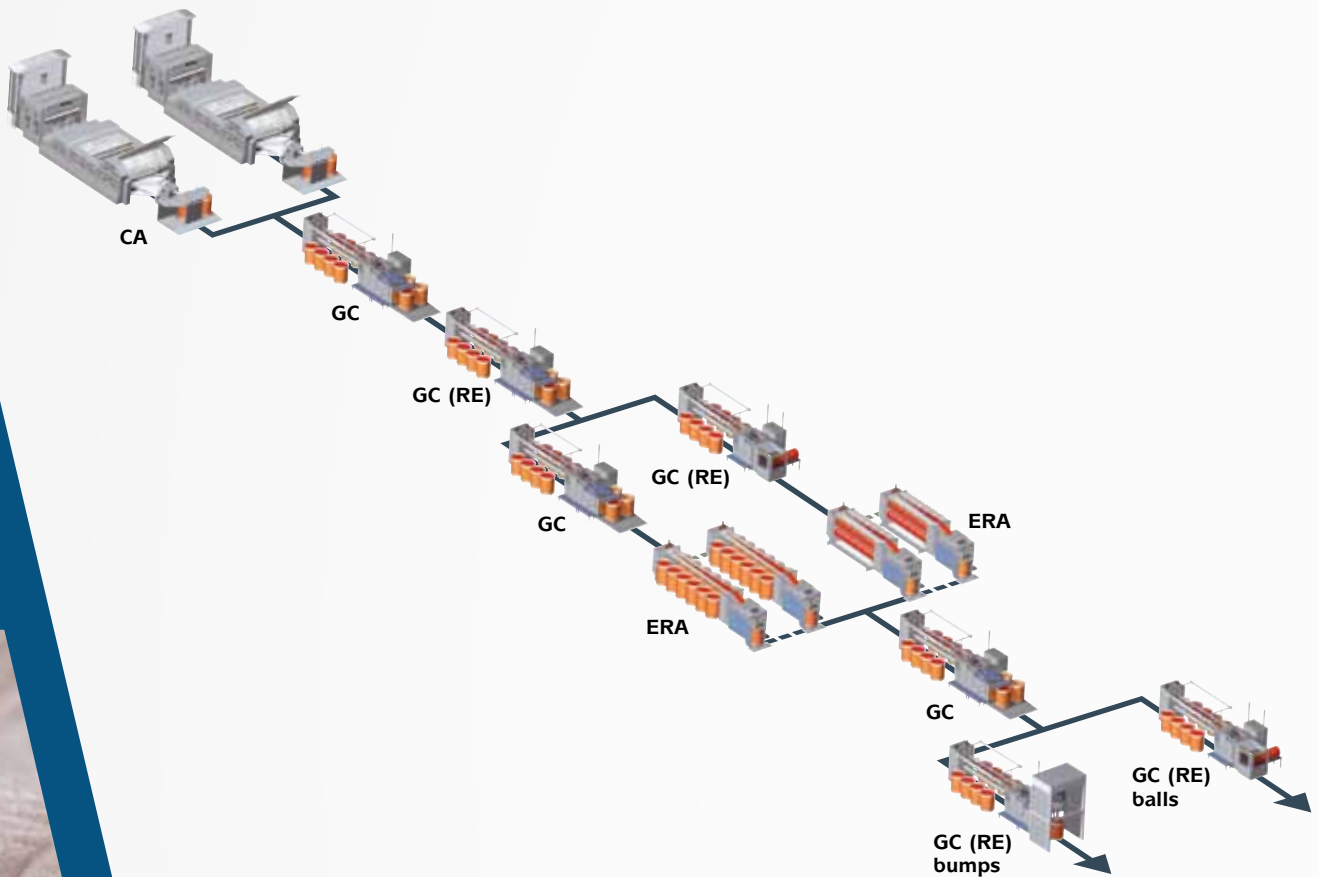
Keep your equipment running reliably so that it continues to meet your safety, quality and production requirements

We bring our experience to your expertise

Provide you with the advice and recommendations of our specialists to optimise your productivity

Wool top units

High quality top making



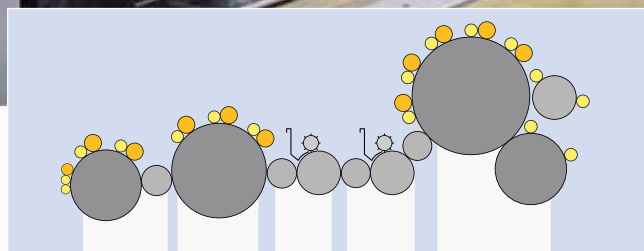
Machines used in wool top units:

- Opening and blending lines in cooperation with partners
- Worsted cards
- ERA40 combing machine
- GC40 chain gills
- GC40 chain gills coupled to a bump press.

Worsted cards

The innovation in carding

The worsted cards are designed to process wool or wool like fibres.



- 2 different working widths of 2.50 and 3.50 m
- Continuous flow volumetric hopper feeder
- Double doffer with doffing combs
- Increased main cylinder surface speed and fibre load
- 2 morels for the processing of wools containing up to 4 % vegetable matter of scoured wool
- Drafting head ensuring an optimum textile control
- New delivery concept
- Integrated centralized suction system
- Centralized readout and control of the different production parameters from the operator console
- In option: in-feed autoleveller.

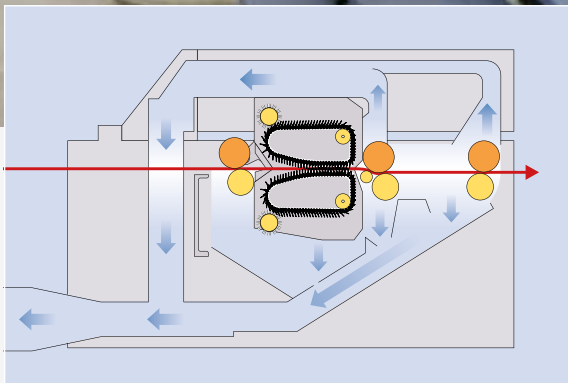
All the N. Schlumberger cards offers the user multiple advantages:

- Mechanical simplicity, sturdy construction ensuring a dependable long term operation and minimized downtime for maintenance
- Safety and ease of use with centralized adjustment of measured parameters from the operator's desk
- Excellent quality of the output sliver
- High production level, achieved by high cylinder speeds and optimized use of the cylinder surface.

GC40 chain gills

High performances with a universal head

N. Schlumberger developed a new GC40 chain gills, with an universal head combined with a full multi motor drive.



The GC40 is the latest chain gills model created by N. Schlumberger:

- New drafting head
- Optimal textile control
- Delivery speed up to 600 m/min.

The GC40 is equipped with a cleaning system with preprogrammed cycles ensuring a constant and durable textile quality.

The GC40 chain gills is:

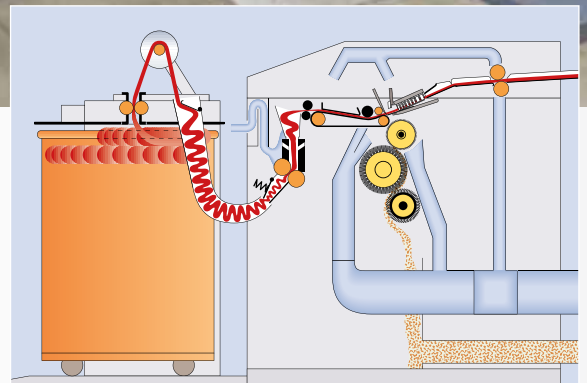
- User friendly
- Highly automated
- Energy efficient
- Has low operational and maintenance costs and is therefore more cost effective
- Optional TEXGATE sliver control
- Possibility of telediagnostic and of machines connection to network (optional).

The GC40 offers numerous optional feed and delivery equipments (large can dimensions, autoleveller, pneumatic threading, automatic ball and can changing, coupled press, can compactors, ...)

ERA40 combing machine

Excellence and high production

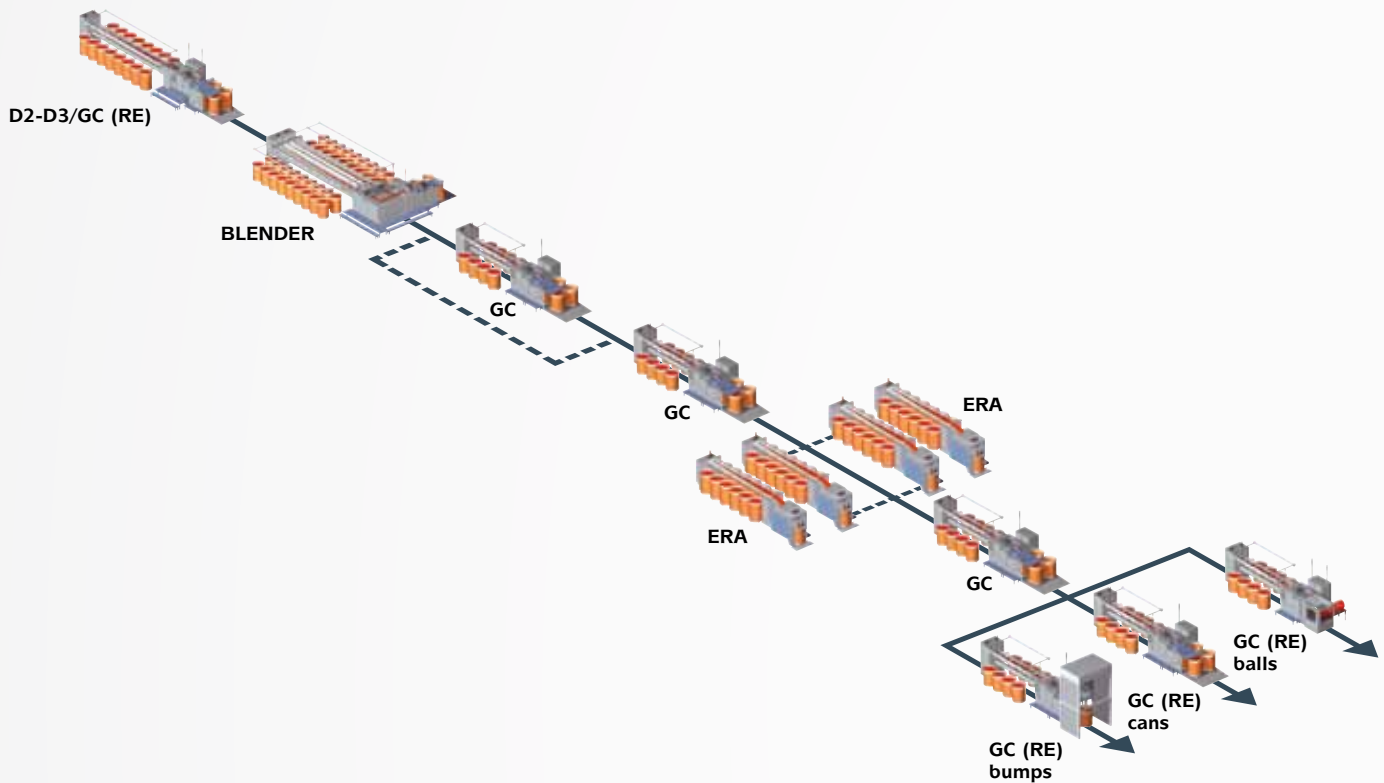
The ERA40 combing machine built by N. Schlumberger stands out by its high performances and its ease of maintenance and operation.



- Intended to process wool and particularly adapted to process delicate, fine and short fibres such as cashmere, silk or fibres with low cohesion
- Combing principle very gentle to the fibres
- Automatic adjustments of settings from the touch screen for constant high levels of cleanliness
- Recordable recipes for quick lot changes
- Powerful suction system to guarantee a high quality of combing
- High production level : up to 50 kg/h for a 21/22 μ wool.

Defelting, blending and recombining units

Especially for dyed fibres, for medium and fine yarn counts



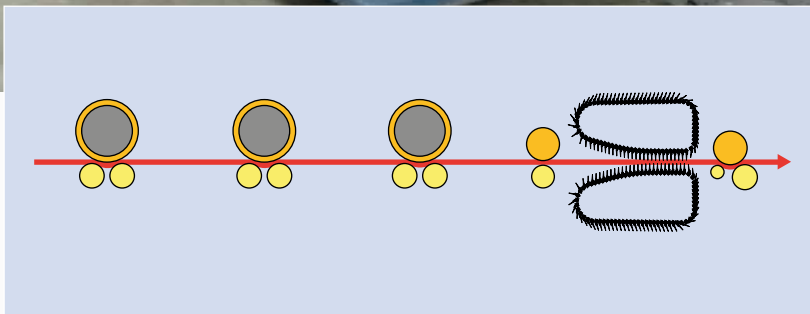
Machines used in defelting, blending and recombining units:

- D3/GC40 – GN8 defelters
- Blenders
- GC40 chain gills or GN8 intersecting
- ERA40 combing machine
- GC40 coupled to a bump press.

D3 defelters

The compact gills for defelting and blending

After the dyeing process, a defelting with powerful pre-draft system with 3 cylinders (D3) combined with the GC40 chain gills or GN8 intersecting is an absolute must.



The D3/GC40 and D3/GN8 defelters are especially recommended to carry out in a single operation the defelting of slivers of wool, chemical fibres or blends, after dyeing or backwashing.

For these operations, the defelters organize and individualize the fibres sparing them perfectly.

- Machine with electronic draft
- Electronic autoleveller in option
- Suction system with automatic cycles of cleaning
- High delivery speed on GC40
- Control by touch type screen.

Recombing

The quality assurance

The recombining operation is a must for the preparation of medium and fine yarn counts and in particular for blends.



The ERA40 combing machines ensure the recombining operation for removing eventual impurities, residual of short fibres or neps.

- High production capacity in recombining up to 3 kg/h per micron for undyed wool
- Besides, thanks to the ERA concepts, this performance is combined with a constant quality of cleanliness of the recombined slivers.

GC40 chain gills coupled to a bump press

High production level of bumps

The GC40 chain gills coupled or linked to an automatic bump press is a solution as finisher for wool top units as well as stretch breaking and cut converting units.



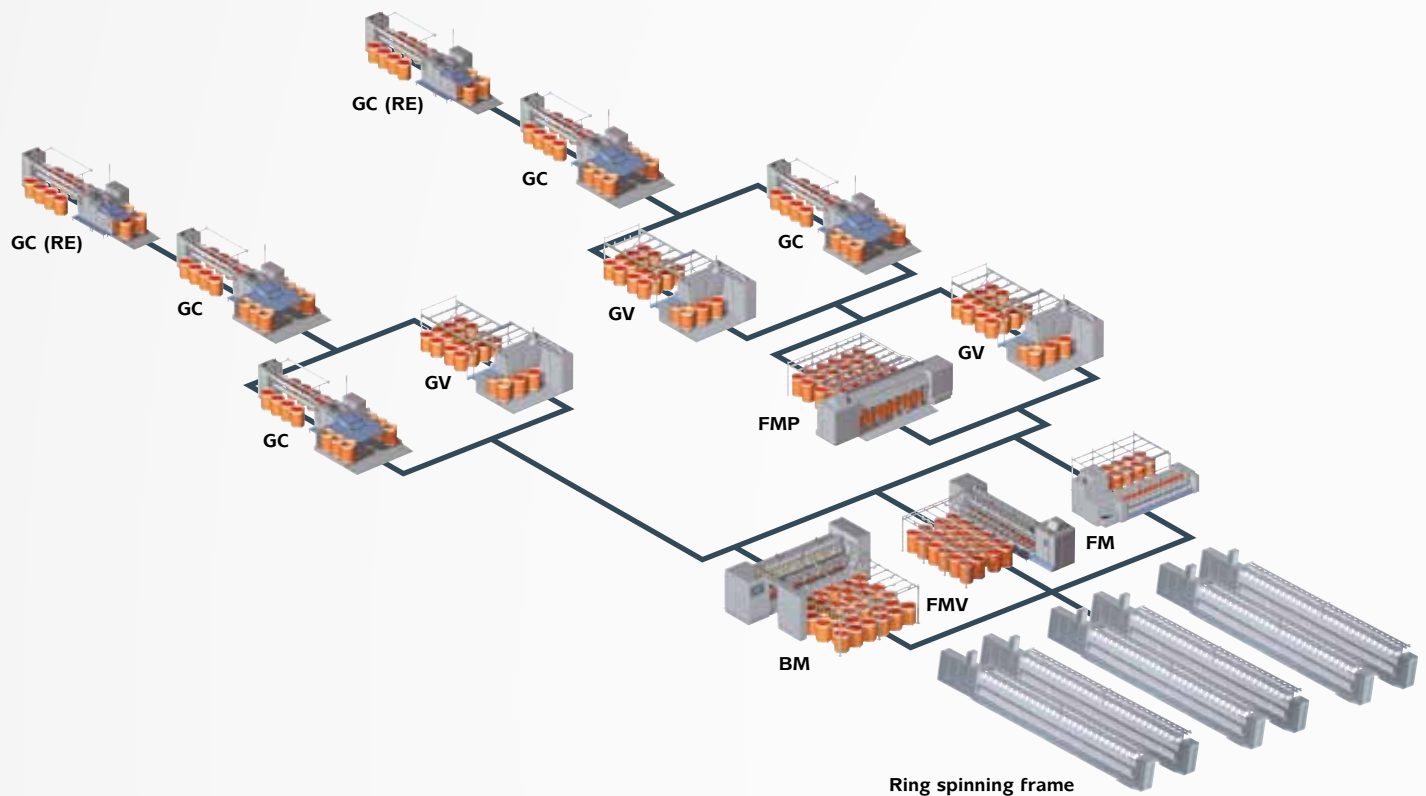
- The GC40 chain gills can be proposed coupled or linked to an automatic bump press of diameter 400 mm, 600 mm or 800 mm for respectively 10 kg, 25 kg or 40 kg bumps
- The bumps are tied either by string or strap
- In case of 10 kg bumps, the GC40 chain gills can produce more than 40 bumps per hour (*)
- The GC40 chain gills can be connected to an automatic palletizing unit.

(*) Production achieved in optimal material, machine and environment conditions.



Worsted spinning preparation units

For fine and super fine yarn counts



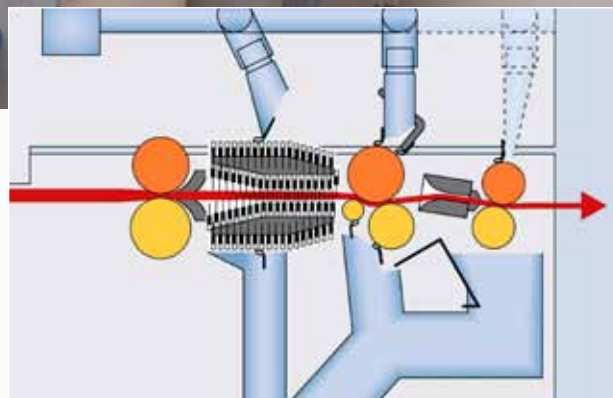
Machines in worsted spinning preparation units:

- GC40 chain gills or GN8 intersecting
- GV20 vertical gills
- FM20 horizontal rubbing frame
- FM20P horizontal rubbing frame with can delivery
- FMV40 vertical rubbing frame
- BM20 flyer rover.

GN8 intersecting

Universal drafting machine

The GN8 is a new intersecting based on the latest design of the chain gills drive combined with the universal head of GN series.



The GN8 intersecting is designed to process wool and any kind of wool like fibres. It is particularly adapted to process delicate, fine and short fibres such cashmere, silk or fibres with low cohesion.

The GN8 intersecting head consists of a double pinned field with fallers driven by double threaded screws allowing a mechanical speed up to 2,000 drops per minute.

The GN8 intersecting can be adapted with a electronic autoleveller RE type.

Feeding of the GN8 can be either by balls or cans with or without detour rollers and delivering onto balls or cans.

The draft adjustment is achieved through individual motors controlled by frequency inverter, with settings on touch screen.

GV20 vertical gills

The essential element of the fine yarn preparation units

The GV20 vertical gills is a high speed vertical drafting machine up to 500 m/min designed to produce light slivers to feed in a rational way the finisher before fine yarn spinning.



The GV20 vertical gills is proposed with two or four heads with a pinned or apron control drafting system. With 4 heads on double end cans of diameter 700 or 800 mm at the delivery, the GV20 has a high production level and balances perfectly the fine and very fine yarn spinning lines.



The GV20 is available with manual or automatic delivery: 2 cans single end (2 heads) or double end (4 heads).

The GV20 produces light slivers down to 2 ktex at high speed up to 500 m/min, perfectly adapted to the third and fourth passage of preparation line.

The vertical arrangement of the working elements above the delivery, the short and rectilinear path of the slivers at the delivery, the ease of access to the creel and the automatic delivery give the GV20 high speed drafter a coherence of use.

In option: online sliver checking control Texgate.

FM20P horizontal rubbing frame with can delivery

Performances for the fore-finishing passage

The FM20P horizontal rubbing frames process under the best conditions wool and long staple chemical fibres in the count range Nm 0.4 to 2 and can reach speeds over 220 m/min.



Like the other rubbing frames of our range, the FM20P stand out by their high reliability, their operational flexibility and their high productivity.

The FM20P horizontal rubbing frames with can delivery are very efficient:

- As fore-finishers in the preparation units for fine count yarns
- As finishers to feed fancy yarn machines.

The FM20P is equipped with a double apron drafting system.

The man/machine dialogue is achieved by a touch type screen terminal giving access to the functions of counting, tachometry, display, adjustment and assistance for diagnosis.

The FM20P is available with 4, 6 or 8 cans Ø 500 x 100 mm with two or four ends.

FM20 horizontal rubbing frame

The finishing passage of flexible units

The FM20 horizontal rubbing frame s are preparation finishers intended to produce rubbed roving in the count range Nm 0.66 to 5.5 or finer.

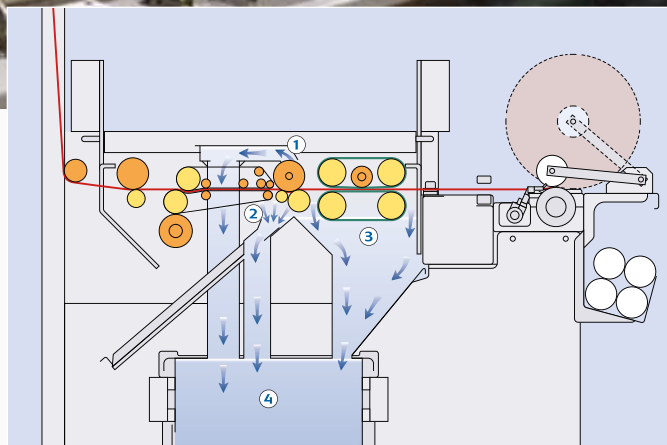


Model FM20L

- Tube length: 300 mm
- Max bobbin weight: 4,7 kg of material

Model FM20S

- Tube length: 243 mm
- Max bobbin weight: 3,8 kg of material



Especially appreciated in production units for small lots, the FM20 horizontal rubbing frames reach a speed of 220 m/min with a rubbing speed up to 1200 cycles/min.

The elaborated design and the precise adjustment of the drafting, rubbing and winding-up elements as well as an efficient suction ensure attractive operational costs and products of excellent quality.

The man/machine dialogue is achieved by a touch type screen terminal giving access to production counter, speed and machine faults diagnosis.

The FM20 horizontal rubbing frame is available with 12, 16, 20 or 24 heads with manual doffing.

FMV40 vertical rubbing frames

The high speed finishers respectful of the fine fibres

The vertical rubbing frames are spinning preparation finishers intended to produce rubbed rovings in the count range Nm 0.66 to 6.



Model FMV41

- Tube length: 300 mm
- Max bobbin weight: 4,5 kg of material

Model FMV42

- Tube length: 330 mm
- Max bobbin weight: 5 to 6 kg of material



Type A



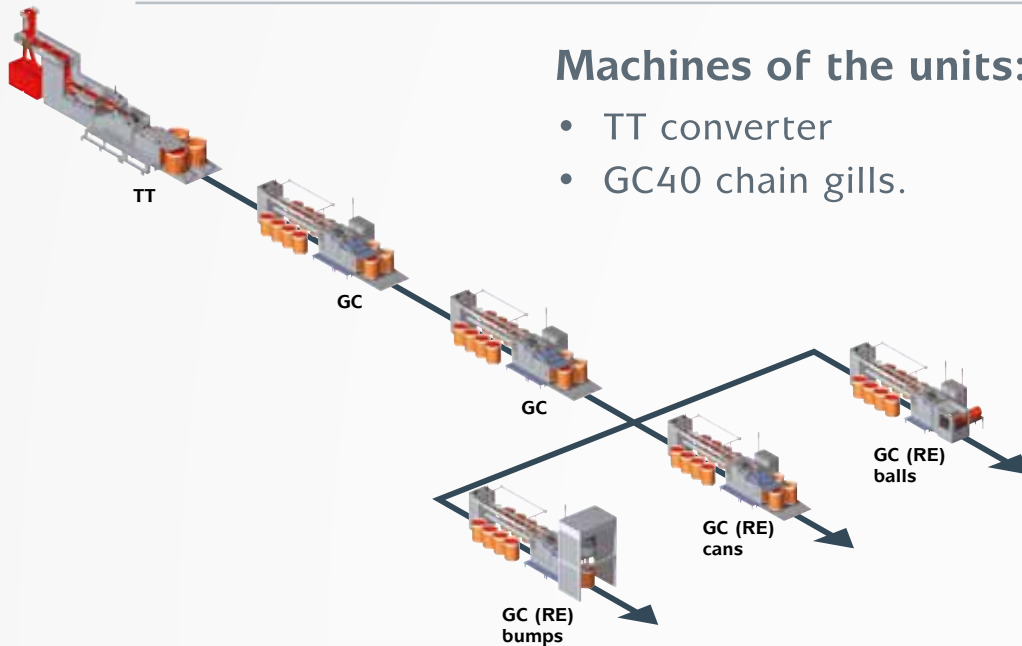
Type B



Type C

- Entirely automatic bobbin doffing
- 3 interchangeable types of drafting
 - Type A: Long drafting system with control barrels on wide apron
 - Type B: Short drafting system with double apron
 - Type C: Short drafting system with control barrels on apron
- Delivery seep up to 275 m/min with only one rubbing level
- Rubbing speed up to 1500 cycles/min
- The man/machine dialogue is achieved by a touch type screen terminal giving access to production counter, speed and machine faults diagnosis
- The FMV40 is available with 12, 16, 20 or 24 heads with automatic doffing.

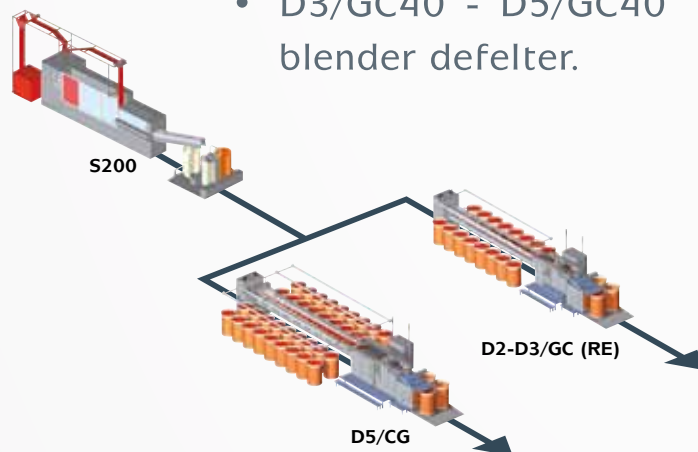
Cut converting units



Machines of the units:

- TT converter
- GC40 chain gills.

Stretch breaking units



Machines of the units:

- S200 stretch breaker
- D3/GC40 - D5/GC40 blender defelter.

TT converter

The mastery chemical filaments crush cutting converter

The TT converter is used for converting polyester tows, polyamide or polypropylene into staple slivers with a diagram close to the wool one.



- High input load capacity up to 2 x 120 ktex
- Tow checking with metal detectors and tension limiters
- Systems of filament separation zone with automatic adjustable tensioning and relaxation before cutting
- Adjustable cutting angle acting on the diagram CV
- Wide range of cutting diagrams adaptable: cutting lengths 75-88-105 mm
- Crimping box for high sliver cohesion
- High delivery speed up to 350 m/min
- Perfect sliver evenness and cleanliness.

S200 – FB20 stretch breaker

The competitive stretch breaking of the man-made fibres

In the tow to top line of NSC fibre to yarn the S200 converts tows of man-made fibres into long staple slivers with a “wool type” diagram.



Those slivers are used for the preparation of knitting, hand-knitting, blankets and carpet yarns. The main processed fibres are acrylic (PAN) some specific polyester (PES), polypropylene (PP) or viscose (CV).

- Feeding up to 2 tows (2 x 100 ktex) with safety in case of overloading and overtension
- Man-machine dialogue at the control panel via a touch screen
- The breaking on three heads with:
 - Pneumatic pressure on cylinders
 - Transmission by timing belts
- High power heating plates for higher shrinkage
- Delivery speed up to 400 m/min according to the tows.

The model FB20 is a short process of in-line breaking consisting of one pre-stretching block followed with 3 identical breaking heads.

The FB20 stretch breaker is especially designed to convert technical fibres (aramid, HDPE, stainless steel, carbon).

D5/GC40 – D3/GC40 blenders defelters

The homogeneity and evenness of the sliver

The D5/GC40 blender defelter is composed of a pre-draft element of 4 drafting zones (5 sets of cylinders) followed by a GC40 chain gills.



The D3/GC40 defelter is a simple and compact solution perfectly adapted to stretch breaking lines for fine fibres which do not require high doublings.

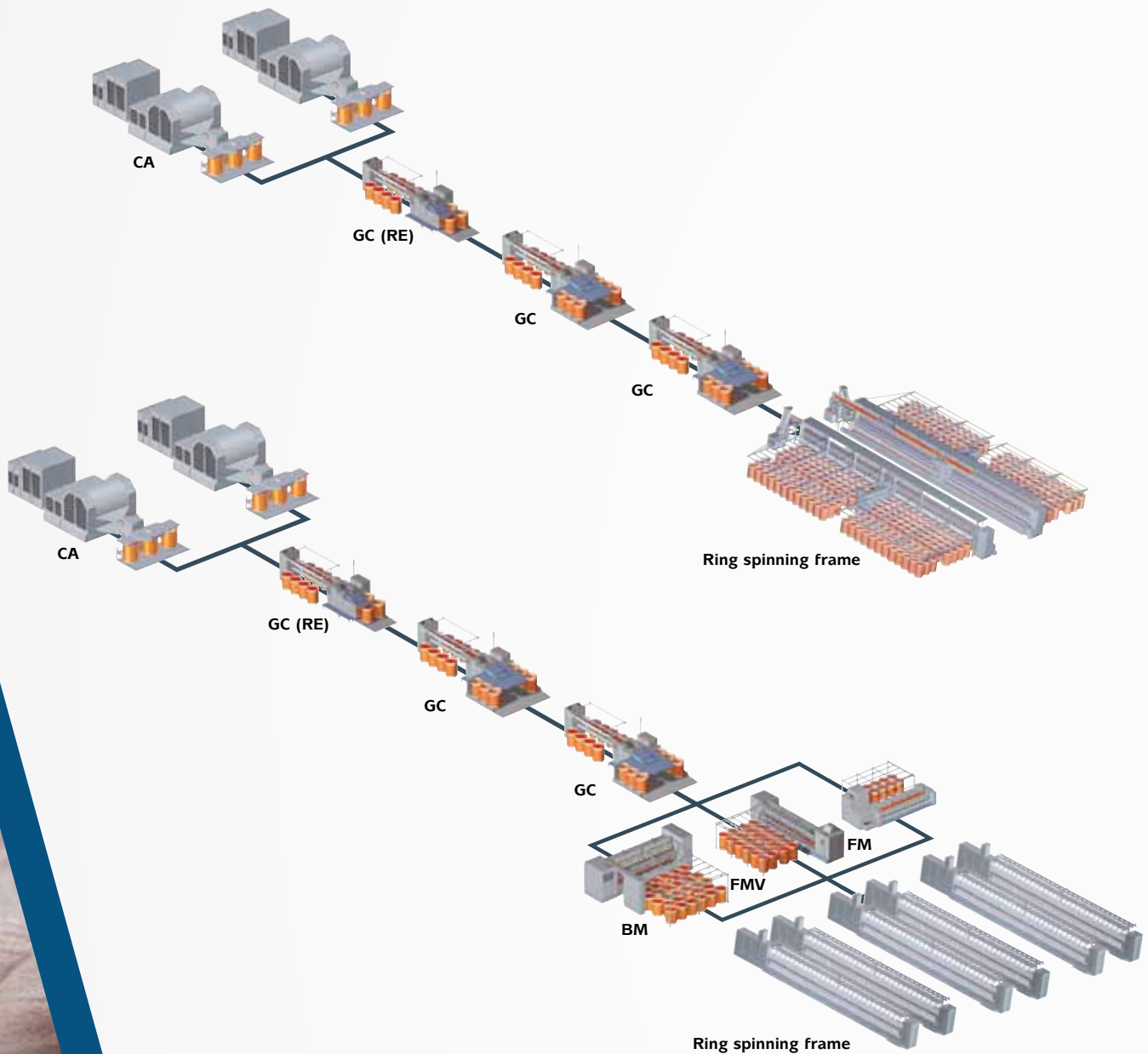
The 5 sets of cylinders permit a high doubling up to 40 slivers and a input load up to 2 x 500 ktex. The drafting zone comprises an efficient suction system. The blender defelter can be equipped with a spray device and an electronic autoleveller.

Main characteristics:

- Progressive defelting action
- Automated cleaning cycles
- Electronic draft adjustments
- Possibility of high delivery speed with can or ball
- Centralized adjustments by touch screen
- Possibility of deliveries coupled to bump press.

Semi-worsted units

For carpets, rugs, hosiery, upholstery and hand-knitting yarns



Machines in semi-worsted units:

- Opening and blending lines in cooperation with partners
- SW35PP semi-worsted cards
- GC40 chain gills
- FMV40 or FM20 rubbing frames
- BM20 flyer rover.

SW35PP semi-worsted cards

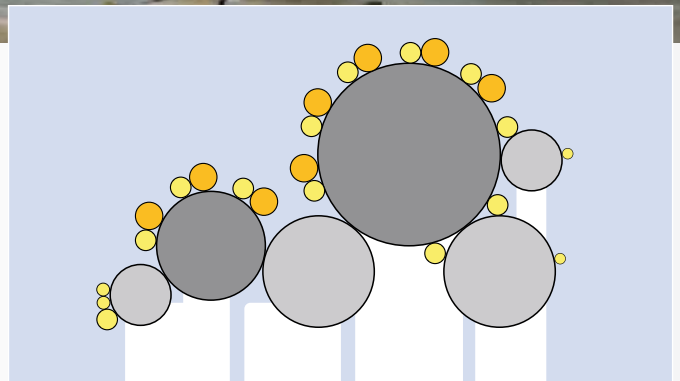
Flexibility and productivity in semi-worsted cards

The semi-worsted cards of N. Schlumberger process manmade fibres for coarse, medium and fine count yarns.



The semi-worsted cards with 2.50 m or 3.50 m working width are equipped with:

- A volumetric hopper feeder
- Double doffer
- A reducing head
- A delivery with automatic can changing
- A integrated efficient suction system
- Centralized control panel
- In option: in-feed autoleveller.



Productive, the delivery speed of the semi-worsted card can reach up to 350 m/min.

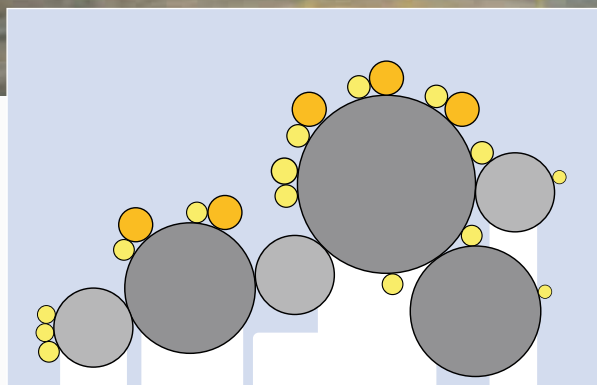
To process flax, hemp, jute



Flax cards

A innovation ahead

These cards, designed by N. Schlumberger, are specially adapted to the process of flax tow and bast fibres.



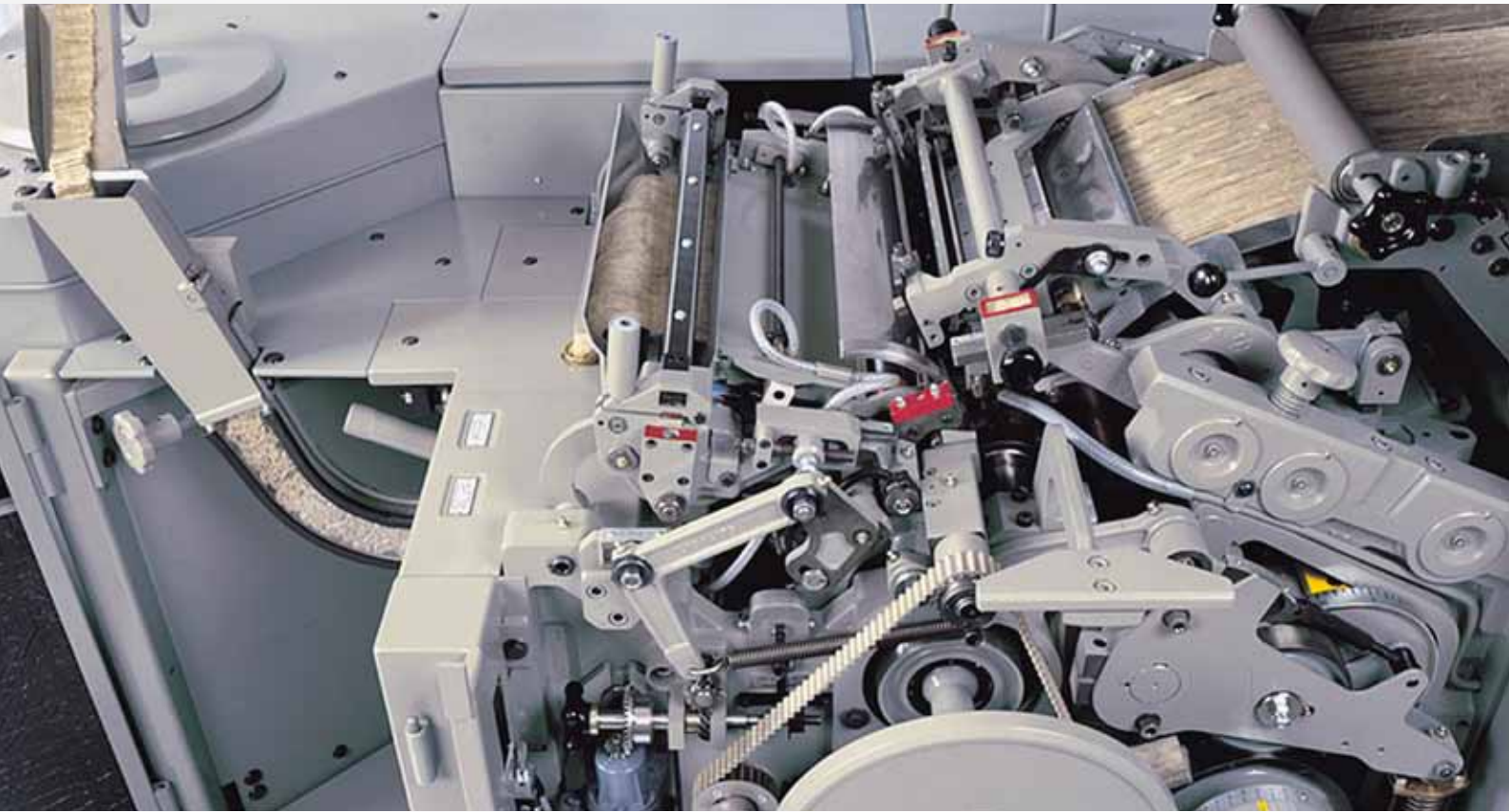
They are equipped with:

- A bale opener, especially adapted to bast fibres and linked to the volumetric hopper feeder
- A double doffer delivery, fitted with a drafting head
- A high capacity automatic coiler
- A centralized piloting from a control panel
- A integrated suction network with several dust extractor nozzles to preserve environmental air quality objectives in the mill and assure a high quality of the delivery slivers.

The flax cards are a major innovation in flax and hard fibres industries.

ALFA combing machine for flax tow

The integration of the progress in combing for flax tow processing



Well established combing machine with:

- High feeding length
- High Input load
- Adapted to the hard fibres specific process
- Mechanical sword and counter sword
- Ø 33 / 33 mm drawing-off cylinders
- Monobloc circular brush with lateral insertion and automatic forward motion
- Crimper box
- High production of constant quality
- Speed up to 165 cycles/min.



NSC fibre to yarn

Understanding your needs



User friendly and productive

The machines of N. Schlumberger range are all fitted with a new electronic control reducing the operational and maintenance costs, with:

- Drastic wiring simplification
- One tactile control screen per machine
- Ease of consultation/modification of the work and automation parameters
- Troubleshooting
- Recordable recipes for quick lot changes
- Possibility of placing the machines in remote-overlooking and adjustment networks
- Possibility of internet connection for tele-diagnostic and adjustments loading.

Customer service

- Trial centre equipped with a research laboratory and machines available for customers to carry out trials and research under industrial conditions
- Quick assistance
- Team of professionals for the fitting or for technical advices
- After-sale service
- Various training courses in-house or in the customers' premises
- Specific program of assistance:
 - Audits on existing machines
 - Kits for machines renewal or eventual updating
 - Maintenance program
 - Tele-assistance.

All machines are adapted to be in conformity with the new standards of energy saving.



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