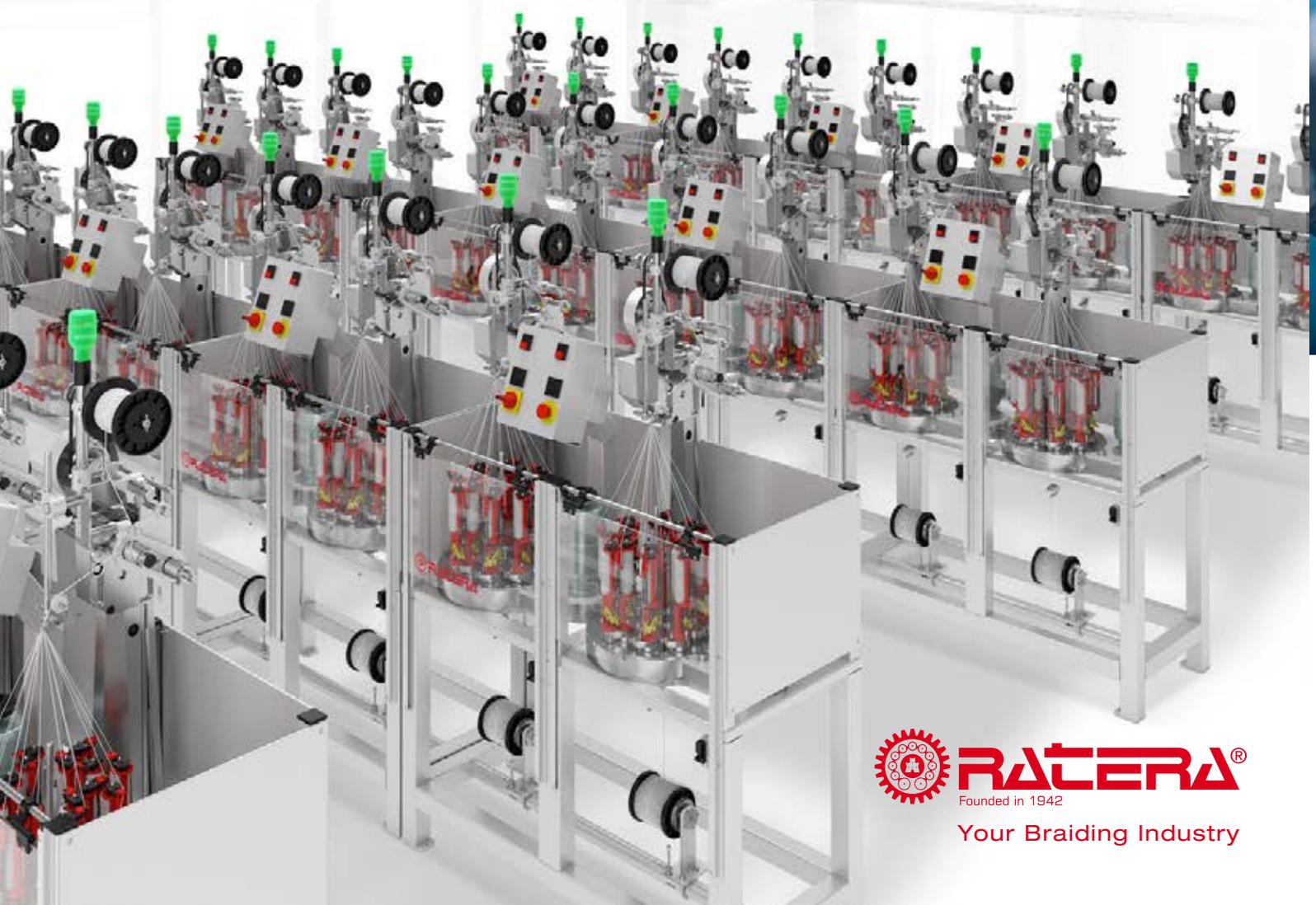


Medical Braiding Machines



Sutures & Medical Braids

Precision and technology
under control



Latest technology in braiding for the medical sector

Suture Braiding Specialists

Ratera machines apply to a broad range of medical applications, specializing in sutures of all kinds to include bio-absorbable and non-absorbable. We are well versed in the finest deniers for precise applications, to the heavier deniers for more robust requirements, such as those found in veterinary medicine.

Ratera machines can make several braided constructions (round, flat, hollow braids, elastic, sleeves) covering a broad range of medical applications.

Reliable Machines

Ratera has been a leading braiding machines manufacturer in the industry since 1942. Since 1985 Ratera has led the suture market in reliability, productivity, and customization of machinery for specific client needs.

Each unit sold is unique to the tailored specifications of our clients.

We are open to industrial partnerships to develop new products, always in the most confidential manner.



Applications

- Suture (Bio-Absorbable, Non-Absorbable, Veterinarian)
- Metallic hose
- Orthopedic tools
- Tendon repair
- Dental floss
- Conduit reinforcement
- Elastic band for mask
- Braids for ligaments
- Cords
- Cable sleeve...

Materials

- Polyethylene (UHMWPE, PET)
- Polyester
- Polypropylene
- Polyamides
- Nylon
- Cotton
- Stainless steel
- Copper
- Alloys
- Fiber glass
- Carbon fiber...

Other applications

Conduit reinforcement

Wire braids

Dental floss

Tendon and ligament repair

Orthopedic applications

Elastic band for mask



1 Medical braiding machines in detail

Take- up

- Standard spools: DIN-100, DIN-125, DIN-160 or Ratera Made.
- Customized to your spool.
- Adjustable tension.

Optional upgrades

- Meter-counter.
- Adjustable speed and pitch.
- Tactile screen, recipes storage, database, alarms, connectivity.

Protection

Options for different H&S and medical requirements:

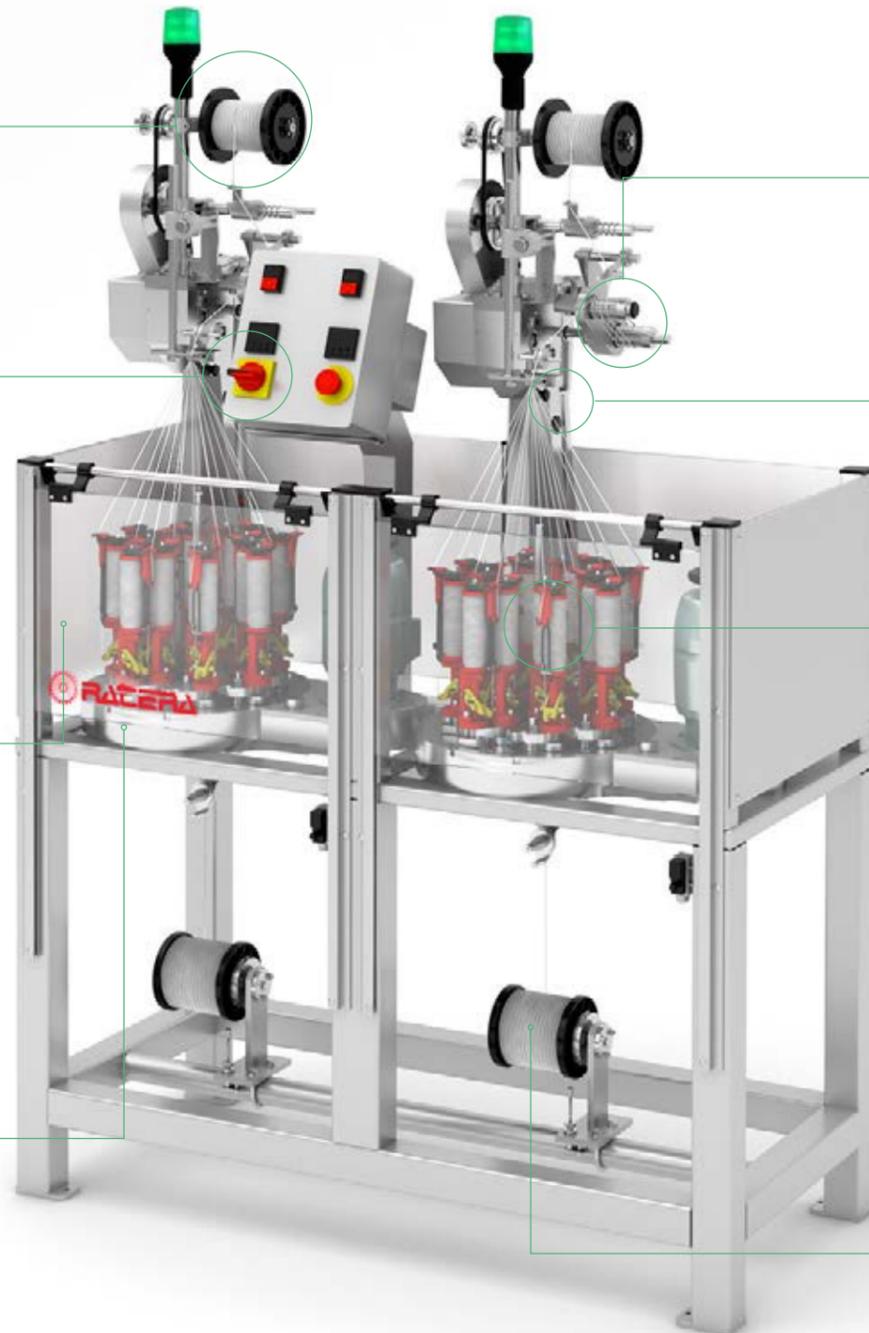
Basic - horngear & feet

Intermediate - carrier top

Integral - cabinet

Trackplate

- Unique design for precision & speed.
- High grade materials for durability.
- Speeds up to 330 RPM.



16B-E80 · for suture

Take- off system

- One-hand threading.
- Stainless steel.

Braiding Point and sensors

- Tension monitoring.
- Yarn break control.
- Anti-tangling switch.

Carriers

- Special designs for each fiber.
- Easy threading.
- Different gauges & bobbin sizes available.

Core feed

- Standard spools: DIN-100, DIN-125 or Ratera Made.
- Customized to your spool.
- Adjustable tension.

2 Customized to your needs

Single or double head machines

- For laboratories or start-ups, 1 head can be enough for reaching production.
- For large scale productions, double-head machine offers space and costs saving as well as redundancy.



16B-E80 · for suture

Single or double motor

- One motor per head for high efficiency and reliability.
- One motor for two heads for cost reduction and space saving.



8D-E80 · for suture

Full protection

- Example of a single head machine with a fully enclosed protection and soundproof.



48B-E80 · Hollow braid

RATEX system

- Progressive stretching of rubber for elastic braids.
- Adjustable elongation with sprockets.



17B-E80 · Elastic Flat Braid

System Integration

- Ratera supports the customer to integrate feeding creels and independent take-ups with the braiding machine.



24B-E115 · conduit reinforcement

3 Highlighted Machines



PATENTED

NEW

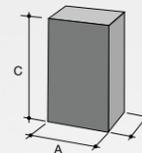
17B-E120 RFR Round-Flat-Round Braids

The 17B-E120 RFR Braider is designed for the manufacture of special products, requiring continuous braiding of alternating round and flat braided sections.

The transitions between sections are smooth, without splicing.

17/120 RFR

- Number of carriers: 17
- Gauge: 120
- Total motor power: 400 W x 4 , 100 W x 3
- Maximum horn gear speed: 100 rpm
- Bobbin capacity: 96,847 cm³
- Bobbin diameter: Ø39 x 110 mm
- Length (A): 1025 mm
- Width (B): 735 mm
- Height (C): 1750 mm
- Weight: 260 kg



4 Winding Machines, the key of a good braid

ML-100

Automatic Winding Machine
4 heads

High efficiency and yield

- Automatic bobbin loading
- For flanged bobbins from Ø 38 mm to Ø 78 mm and 100 mm to 220 mm traverse
- Head speed up to 5,300 rpm
- Yarn speed up to 500 meters per minute
- Electronic control of traverse length and pitch



 **Constant tension feeders**
Self-adaptive electronic technology enables operation at pre-selected constant tension.

 **Low product wastage**
Precise electronic controls minimize the length difference between bobbins, reducing fiber waste.

 **User friendly interface**
Touch Screen product for programmable recipe recall, diagnostic information, alarms database and connectivity.



2PVLU/220

Semi-Automatic Winding Machine
2 heads

For small productions and laboratories

- Manual bobbin loading
- For flanged bobbins from Ø 38 mm to Ø 90 mm and 100 mm to 220 mm traverse
- Run at head speed up to 1500rpm.

Technology

These are the first generation of Ratera Machines fitted with servomotors driving the horn gears, allowing the precise and synchronized movements necessary for this type of braiding.

Control

Outfitted with a touchscreen HMI, parameters (stitches, length, speed) can be set for production of each round or flat braid section. These parameters can then be saved as recipes. The machine also features a manual mode for direct motion control.

Connectivity

Ethernet compatible for ease of software updates as well as remote monitoring of the machine or technical service.

Carriers

The 17-120 RFR machine operates with gauge 80 Ratera carriers. Specially designed for fine products that are mainly used in medical applications. Very easy threading.

Technical Characteristics

Medical Braiding Machines

Number of Carriers*	Type of construction	Horn gear Speed (RPM)**		
		Gauge 80	Gauge 104	Gauge 115
8	Round	280	285	295
9	Flat	311	254	310
12	Round	311	285	330
13	Flat	311	254	330
16	Round	311	285	330
17	Flat	311	254	330
20	Round/Hollow	311	285	310
21	Flat	311	254	310
24	Round/Hollow	311	285	310
25	Flat	311	254	310
32	Round/Hollow	296	285	290
48	Round/Hollow	270	254	270

* The list covers a portion of constructions available. Check with us for any other number of carriers.

** Variable according to raw material.

Carrier Bobbin Sizes

	Gauge 80	Gauge 104	Gauge 115
Suture	Ø 39x142 – 97 cm ³		
Textile	Ø 42x110 – 125 cm ³ Ø 42x152 – 173 cm ³	Ø 54x130 – 257 cm ³ Ø 53x152 – 288 cm ³ Ø 55x170 – 350 cm ³	Ø 63x170 – 471 cm ³ Ø 63x200 – 552 cm ³
Metalic		Ø 55x90 – 180 cm ³	Ø 63x170 – 471 cm ³

Contact our team

Specialist in medical braiding machines. Specific solutions for each application.

For more information, please contact our technical-sales department:

ratera@ratera.com

NOTE: According to machinery directive 89/392 about safety for the European market, machines must be protected. However, in order to allow for a better display some of this catalog's illustrations have been made without the mandatory protections.
The company reserves the right to modify and improve the characteristics of its products without notice.



Braiding Machinery Solutions since 1942

Talleres Ratera SA

Av. dels Dolors, 13 · Apt. Correos (PO Box) 228

08243 Manresa · Barcelona · Spain

Tel. +34 93 878 49 50 · Fax +34 93 877 26 82

e-mail: ratera@ratera.com



06/19

www.ratera.com