QUALITY
SAFETY
PRODUCTIVITY
SCOURING SYSTEM

Scouring is the process of washing wool or other fibers in hot water and detergent to remove soil, vegetable impurities, grease, suint and other contaminants. Freedom from entanglement is to be considered the most important objective as long as dirt and grease removal is achieved. Ramella can offer a flexible and affordable solution to wash and dry your fibers.

- **A customized industrial washing machine** to scour raw fibers avoiding felting.
- Maximum flexibility with **many customizable programs** to wash different fiber types.
- **Fully automated cycles**: soak, wash, rinse and spin.
- **Temperature management, water level optimization** and detergent control to reduce costs.
- **Heat exchanger** to lower energy costs by reusing the heat from the waste water of the previous cycle.
- **Drying cabinet** to expedite the drying of fibers.
DEHAIRER

Some fibers need to be dehaired to remove the guard hairs (strong coarse hair) that make the product too coarse to wear. Ramella has used its expertise in carding machines to create a dehairer that effectively separates the desired, quality fibers from the strong, coarse guard hairs.

- An extremely solid and stable structure that reduces vibrations and allows rollers to rotate at high speed.
- The components machined for maximum precision and quality in the final product.
- The rollers driven independently by 4 motors with electronic speed control.
- A durable, rigid card clothing that allows quick cleaning.
- An external safety structure that fully protects you and the machine.
- An optional air blower and a transparent room to store the fibers directly into ventilated big bags.
- A double exit that separately collects the dehaired fibers and the guard hairs.
Fiber opening improves the efficiency of carding, allowing for the production of a more regular sliver, and begins the blending process for mixed fiber types or colors. In addition, opening the fiber tufts helps to remove impurities such as dust and vegetable matter.

Ramella picker is characterized by:

- A **solid and stable structure** that allows the pinned roller to rotate at high speed.
- A pinned roller equipped with **thousands of pins** of hardened steel.
- A **long feeding table** with side borders for a regular insertion of fibers.
- **Multiple systems to remove impurities**: the slotted grid under the pinned roller, the centrifugal fan, the ventilated big bag.
- Allows direct storage of fibers in easily removable **ventilated big bags**.
- All **motors controlled by inverters** to optimize the opening speed for various fiber types.
- A **double protective structure** to contain the dust and to make the machine totally safe.
The carder is the heart of the spinning mill and the quality of the final product depends heavily on how the fibers are processed with this machine. Ramella carder can offer:

- An extremely **solid and stable structure** made to last.
- The **components machined** for maximum precision and quality in the final product.
- The cylinders **driven independently** by 4 motors with electronic speed control.
- A durable, **rigid card clothing** that allows quick cleaning.
- The **sliver strengthener** to work with alpaca and other low cohesion fibers.
- An **external safety structure** that fully protects you and the machine.
- Only **sealed ball bearings** for a long lasting performance.
- **Multiple outputs options** (sliver, batt, rug yarn) connected to the machine or mounted on trolleys.
- **Different sizes** available to match desired productivity: 80cm or 100cm (32” or 40”).
- Optional **automatic feeder** to save labor time.
The can coiler winds the sliver into a continuous coil, which facilitates transport of the fiber stack from one machine to the next and allows uninterrupted feeding of the sliver into the drafter or spinner. The Ramella coiler was designed to be compact, easy to use, and to work with low cohesion fibers:

- **Size, speed, coiling mechanism** suitable for most small commercial mill carders and pin drafters.
- **Thin rotary head** to minimize the risk of clogging.
- Built-in **meter counter** to measure the amount of sliver stored in the can.
- **Additional transport rollers** to work with alpaca and low cohesion fibers.
- **Variable speed motor** and independent control panel.
- Buzzer and **signal tower light** alert when it is time to change the can.
- **Different can sizes**: 35cm or 50cm (13.5” or 20”).
PIN DRAFTER

Drafting blends together different fiber types or colors, creates a uniform sliver to produce an even yarn without thick and thin defects, and can be used to produce a sliver of any desired thickness.

Drafting considerably influences the final product, as it is the final step in which any sliver irregularities are corrected prior to spinning.

The Ramella pin drafter offers:

- **Chain driven pin field** is faster, produces less noise, lowers energy consumption, and is easier to maintain compared to screw driven systems.
- **Independent motors and electronic control** allow choice of drafting ratios from 1 to 10 in 0.1 increments.
- **Driven creel** which allows the positioning of 8 cans.
- **Transparent safety cover** for a quick access and monitoring of the working area.
- **Sliver presence photoelectric sensor** and suction system to clean the pin field.
SPINNING FRAME - PLYER

Spinning is the process of adding twist to drafted roving, and plying two or more strands together creates a strong, balanced yarn. The Ramella spinner-plyer can achieve both goals and has the following characteristics:

- **Double drafting unit** that allows perfect control of the fibers and the production of a wide range of yarn weights.
- The **high-speed spindles** accommodate modern tube bobbins, which are more economical than old wooden style bobbins.
- An **independent brake for each spindle** allows broken yarns to be rejoined without having to stop the machine.
- An electronic control with an **intuitive touch screen** for the complete management of the machine.
- **Multiple drive belts** prevents the loss of torsion in the central spindles.
- **Centralized vacuum system** with an adjustable nozzle for each yarn.
- **Spin fingers** minimize the tension in the yarn and reduce breakages.
BALL WINDER

Winding is the process of transferring yarn or thread from one type of package to another in order to facilitate subsequent processing. A yarn ball is a convenient package for the retail sale of yarn to hand knitters. By partnering with a leading Italian manufacturer, Ramella can offer a ball winder perfectly sized for small commercial mills and test laboratories:

- Maximum flexibility with the **programmable control panel**.
- **Multiple patterns**: classic ball (2 to 20 points), donut, honeycomb.
- **Fully automated cycles**.
- **Automatic opening and closing** of the mandrels.
- **Automatic cutting** of the yarn with automatic clamping of the tails for the next cycle.
- **Beam movement** controlled by pneumatic cylinder.
SKEIN WINDER

The skein/hank is one of the forms in which yarn is put up for sale and is the most common form used for subsequent dyeing or hand painting of the yarn. The skein is made by creating a continuous coil of yarn that has been wound around a revolving frame of a known circumference, resulting in a skein of known length.

Ramella offers a skein winder specifically designed for small commercial mills and test laboratories:

- **Easy to use control panel** to set the desired skein length.
- **Automatic opening and closing** of the reeling frame.
- **Mobile thread guide** to evenly distribute the yarn.
- **Transparent safety cover** with 2 doors for quick access and easy monitoring of the process.
- **Customizable creel** with an adjustable number of positions that can be used with cones or tubes.
CONE WINDER

Yarn cones are a favorite packaging choice for weavers and allow the storage of a large amount of material in a small space. Collaborating with Italian suppliers, Ramella is able to provide a compact cone winder with 1, 2, 4, 8, or more heads depending on the required productivity.

- **The ideal machine based on your needs**: with mobile thread guide for bulky yarn, with grooved roller for fine yarn.
- **Independent motors** controlled electronically.
- **Automatic stop of the machine** in case of yarn breakage or final dimension reached.
- Yarn tensioner and **waxing device**.