MATERIA.ZERO Resin preparation system

Processing unit for 200 or 1000-liter drums





In large containers such as **200-liter** (GAR.200) or **1000-liter** (GAR.1000) drums, resins tend to settle, especially those with a high specific weight. Our resin treatment system is designed to effectively homogenize resins in these containers, preventing sedimentation and ensuring a consistent density and temperature for precise dispensing.

Key features include:

- Multiple stirrers with special blades and variable sections.
- Cylindrical screw for moving resin from the bottom upward.
- Resin preheating through the screw's own heating.
- Support rollers for the drum and a transfer cart for easy handling, even in confined spaces with a single operator.
- Inclined roller bed for complete drum emptying.
- PLC and safety sensors for process control.
- Capability to feed various dosing machines through diaphragm pumps.



Our system provides effective resin prepa-

ration, even with a high filler density, before extraction from the drum. It is designed to be simple and robust, ensuring excellent results.



The system is ideal for polyurethane, epoxy, and silicone materials, both single-component (1C) and two-component (2C). It accommodates materials with a wide range of

viscosities, from low to medium, including

self-leveling ones (non-abrasive).

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The unit has been successfully adopted by major industry-leading companies in the automotive, aerospace, solar/photovoltaic, and medical sectors internationally.



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Description	Value
Structure materials	Anodized Aluminum Painted Stainless Steel Painted Steel
Painting	Epoxy, RAL 3002
Base dimension in mm (L x H x D)	1400 × 1700/2600 × 600
Base weight (kg)	from 250
Tanks (L)	200/1000
Power consumption	1,4 kW - 230 V - 50 Hz
Compressed air	6 bar/ dryed filtered
Replenishment Air Drying Filter	Silica gel
Safe base (It.)	200/1000
Lifting unit	Manual Control Electromechanical

1000 lt. version

System features

The configuration of our system is flexible and can be customized based on the specific technical data of the resin to be used. Here are some basic features:

- Resin heating: PID digital control to maintain the temperature in the desired range (adjustable between +35 and +45°C).
- Resin agitation: variable-speed gearmotor (from 40 to 200 g/m) with a multiple-blade impeller.
- Adjustable-speed screw auger for lifting the resin from bottom to top.
- Motorized lifting column to facilitate drum changes.
- Electromagnet-based locking system for operational safety.
- Process control: PLC and safety sensors for reliable process control.
- Drum level control.

Optionals

Accessories usable in different configurations:

- Resin temperature control unit. (1000/1500W - 230 V).
- Replenishment air dryer unit.
- Cart for drum retrieval, transfer, and loading.
- Inline outlet filter (300 micron).
- Transfer and optional recirculation pump (25 L/min 6 bar).
- Quick-closure thermal protection and insulation for drums.
- Cone units for laminar flow control.



Control unit



With diaphragm pump



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Handling cart

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