

# MAG-3

## Magnetic Separator



Paramagnetic minerals separation

3 separation stages

No dust casing

## MAG-3 Magnetic separator

### *High field magnetic separator*

#### Paramagnetic minerals separation

MAG-3 magnetic separators are ideal devices to deironing a wide range of sand materials. Paramagnetic minerals (hematite, biotite, ilmenite, ecc...) are simply captured by MAG-3's powerful magnets. MAG-3 magnetic separators are particularly indicated for the iron removal of fine particle size products (typically from 0,1 to 1,8 mm).

#### Effective separation: example

Incoming material: feldspar sand glass grade with 1'450 ppm of iron; separated material: 850 ppm of iron;  
REDUCTION: 41%.

The effectiveness of the separation depends on the particle size, moisture, initial iron concentration and magnetic behavior of the material.

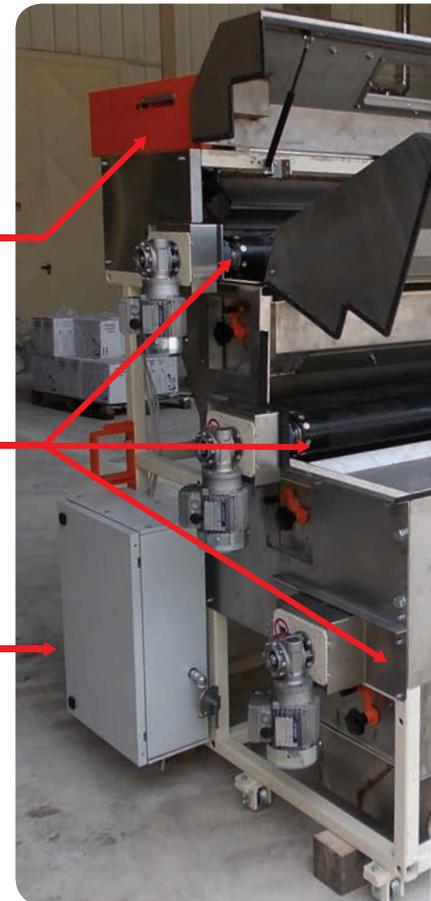
#### 3 separation stages

Three neodymium magnetic drums that drag the same number of belts: three successive stages of separation for effective iron removal. The first stage is fed from the hopper integrated on the machine: the magnetic component of the material is retained in correspondence of the magnetic drum; the remaining material part continues its trajectory on the second and later on the third stage, completing the refining cycle.

Feeding hopper

Separation stages

Air valve box



#### Waste control

Paramagnetic material release area is well separated from the deironed material trajectory: according to the desired refining degree, a series of adjustable bulkheads conveys the magnetic waste outside the machine.

#### Automatic cleaning

Magnetic and driven drums are kept clean by an internal air blow: a light over-pressure prevents dust collection under the belts.

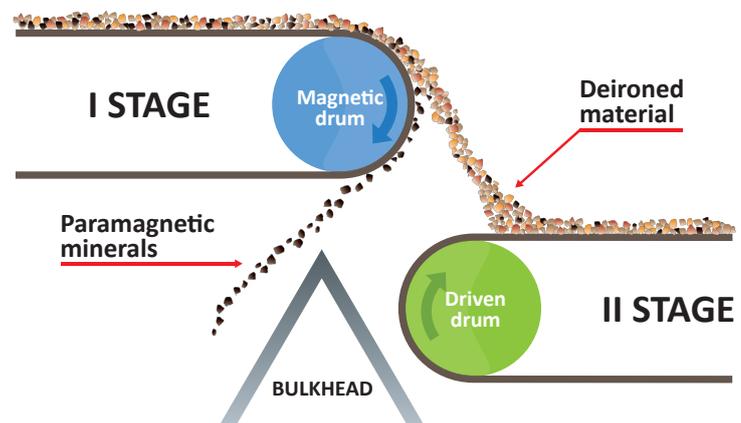
### Technical data-sheet

Single belt area	200 x 1'500 mm
Magnetic area width	1'500 mm
Maximum belt speed	43 m/min
Installed electric power	0,3 kW
Air consumption	0,9 dm <sup>3</sup> /h a 6 bar
Weight	800 kg
Dimensions	2'160 x 1'350 x 1'800 mm
Maximum production rate*	8 t/h
Field intensity	20'000 Gauss

\* the production rate depends on the kind of treated sand.



Dust protection cover and access door



### Belt's adjustable speed

Magnetic separation is much more effective if the transitioning material layer is thin. For this reason MAG-3 separators motorization is controlled via VSD, reaching belt's speeds up to 43 m/min and a maximum production rate up to 8 t/h.

*Effective separation thanks to the 20'000 Gauss neodymium magnets and the real-time belt speed control*

### No dust-casing

MAG-3 magnetic separators do not release dust outside, being enclosed in a special under-pressure casing. The machine is mounted on rails, to allow the perfect alignment with the external feeding source and to permit simply maintenance.

**Safety**

Minerali Industriali's machines are designed and realized according to the best available standards, ensuring the highest degree of safety for the operators. All machines are CE certified.

**Laboratory tests**

Minerali Industriali, as raw materials manufacturer for glass and ceramic industry, makes available its laboratories and experimental equipments for analysis and industrial simulations.

**Industrial trials**

Minerali Industriali's plants are available to the customers for industrial trials.

**Efficiency warranty**

Minerali Industriali equipment performances depend on the material to be treated. Based on the outcome of the industrial trial, Minerali Industriali declares and warrants the machine's production rate.

**Refunded trials**

Minerali industriali asks to the interested customers to cover only the execution tests cost in its laboratories or plants. In case of machine purchase, this amount will be entirely refunded.

**Turnkey solutions**

Minerali Industriali offer involves design, installation assistance, start-up and personnel training.

**Customer care**

Minerali Industriali technical office is available for spare parts supply and for any assistance the customer may need.

**Payments facilities**

Minerali Industriali collaborates with the leading credit institutions and it is available to study financial dedicated solutions with the customer.



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