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# MAG-3

## Magnetic Separator



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# 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, etc...) 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

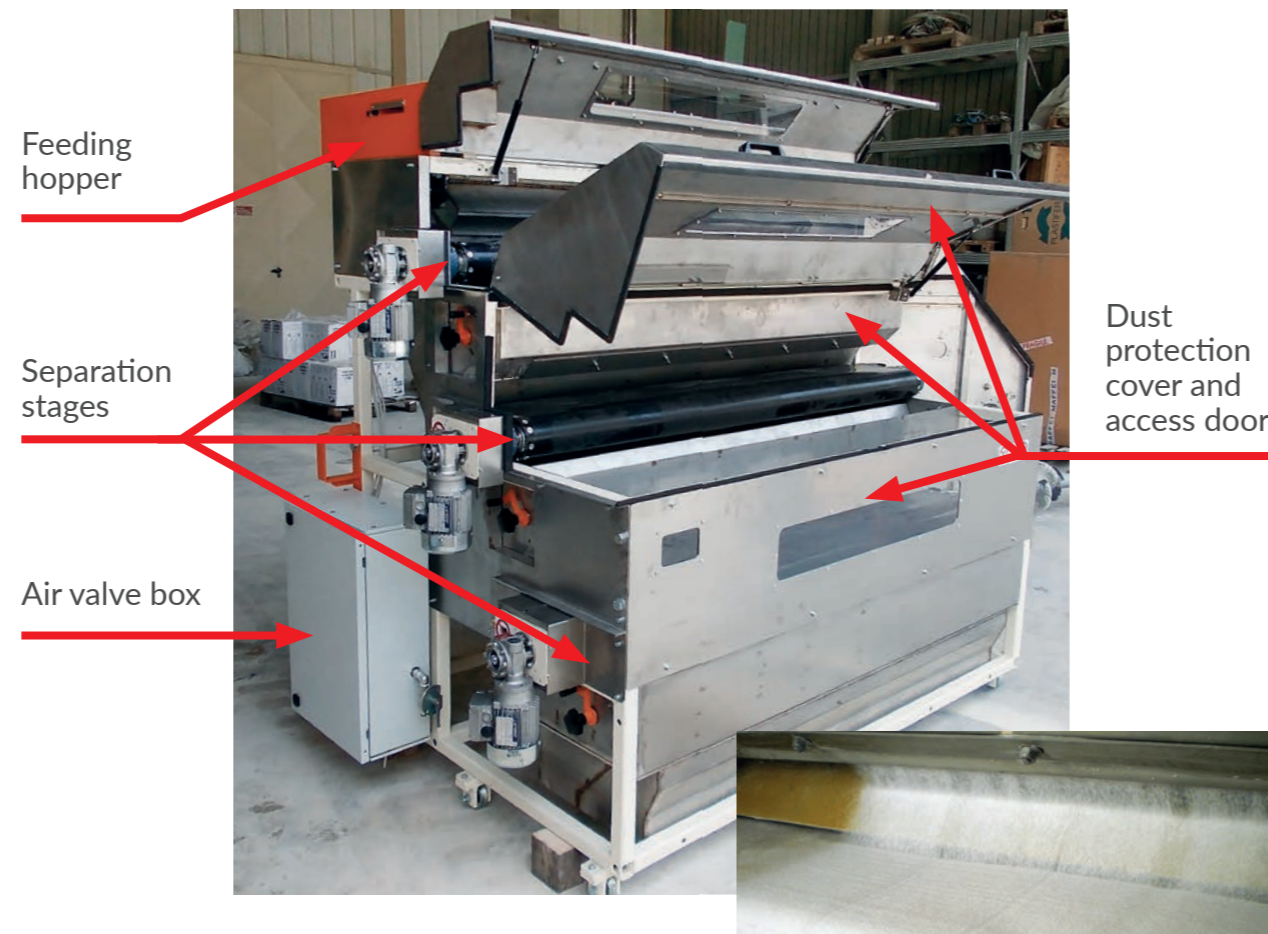
Incoming material: feldspar sand glass grade with 1.450 ppm of iron; separated material: 850 ppm of iron; REDUCTION: 41%. The effectiveness of the separation depends on the particle size, moisture, initial iron concentration and magnetic behavior of the material.

### 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.

### 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.



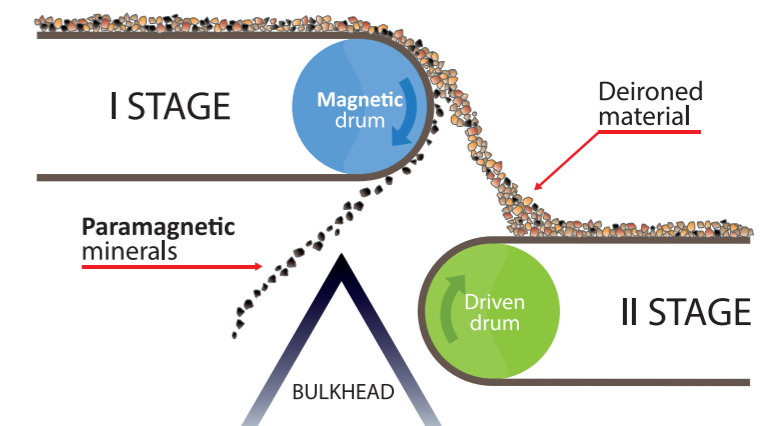
### Automatic cleaning

Magnetic and driven drums are kept clean by an internal air blow: a light overpressure 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.



*Effective separation thanks to the 20.000 Gauss neodymium magnets and the real-time belt speed control*

### 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.

### Automatic cleaning

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