B A S® HIGH FIELD INTENSITY PERM ROLL MAGNETIC SEPARATORS

HIGH MAGNETIC FIELD INTENSITY

B A S® High field intensity Perm-Roll separators sustain a magnetic field intensity of 13,000 gauss on the band with optimal magnetism fraction and number of levels to provide absolute ore enrichment.

Perm-roll separators consist of ;

- Feeding Bunker
- Material supply unit (Feedroll or Vibrofeeder)
- Infinite band where the material is spilled
- High field intensity magnetic roll
- Scraper Flap
- Full stainless chassis

Properties

- All stainless steel structure
- Magnetics manufactured under 14400 Gauss N52
- Right magnetic roll design for your ore in B A S® laboratories.
- 0.40mm Infinite Kevlar Band for extended life and high speed operation *(Thinner band options are possible)*
- Easy to replace band-mechanism (in under 5 minutes by a single operator)

The spectacular combination of all these components is collected in B A S®Perm-Roll separators. *Main fields of application could be listed as thin grain-sized quartz, silica, albit, felspat, magneteite, manganese, magnetite, chromite, hematite mines.*

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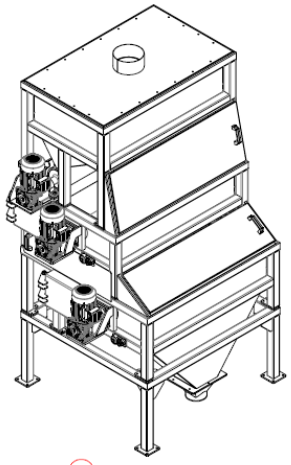
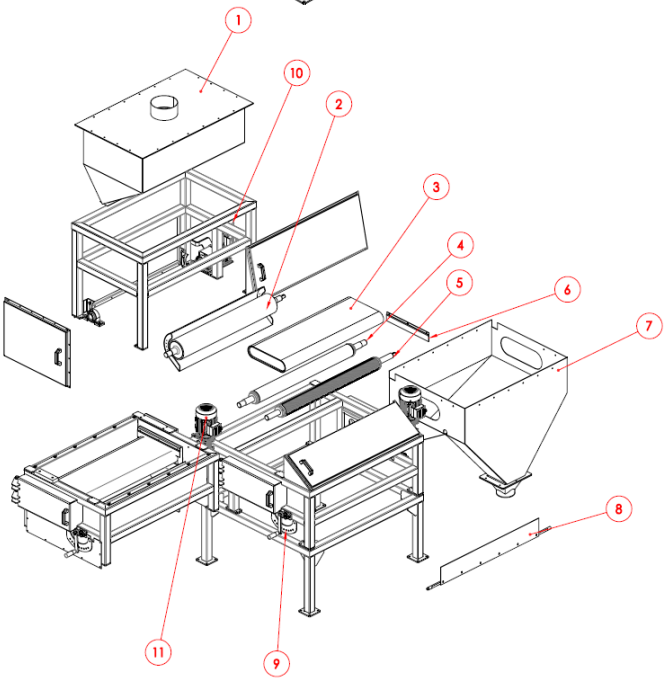
High Field Intensity dry magnetic roll separators are used for Mn, Fe2O3, etc. enrichment and the removal of paramagnetic and ferromagnetic impurities where low magnetic susceptibility is present in raw materials.



Principle

In roll magnetic separators; homogeneous distribution of the material is achieved on the tape on the separator with the help of the high surface-sensitive feed drum or sensitive vibro or electromagnetic feeders. The carrier band moves on two rolls (magnetic and non-magnetic).

When the material advancing on the conveyor belt comes upon magnetic roll, the non-magnetic or lesser susceptible material is swerved with the help of centrifugal force to the non-magnetic chute as the other material continues to move on the band with the magnetic attraction force of the magnetic roll and transferred to the magnetic chute and the materials are separated.



Enrichment

High Field Intensity perm-roll separators are used especially for enriching ores with weak magnetic properties. Perm-roll magnetic separators are used for magnetic enrichment of materials with a wide range of grain size of 60 microns to 40mm.

B A S® High field Intensity Perm-Roll separators are produced for different magnetic field intensity and fraction operations depending on the ore's response. Traditionally, roll magnetic separators have a between 1 and 3 levels. The correct combination of magnetic field for the best outcome will be determined by B A S® laboratories.

Equipment

1. Feeding Chamber
2. Feed Drum (Feedroll)
3. Infinite Band
4. Tension Drum
5. Permanent Magnetic Roll
6. Sealed Brush
7. Non-Magnetic Output Chute
8. Scraper Flap
9. Flap Adjustment Handle
10. Feedroll Drum Motor
11. Perm-Roll Drum Motor

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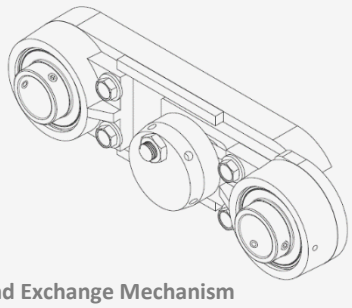
Capacity

Permroll Serisi	BESLEME	TANE BOYUTU	MANYETİZMA	MANYETİK ALAN ŞİDDETİ (BANT ÜSTÜ)	kW Tüketim
D100X1000X1	Feedroll - Vibrofeeder	63 mikron - 2mm	N52 14.400Gauss	1.000 - 13.000 Gauss	1,5 kW
D100X1000X2					2,2 kW
D100X1000X3					3,0 kW
D100X1500X1					1,5 kW
D100X1500X2					2,2 kW
D100X1500X3					3,0 kW
D150X1000X1		63 mikron - 40mm		1.000 - 16.000 Gauss	3,0 kW
D150X1000X2					4,4 kW
D150X1000X3					6,0 kW
D150X1500X1					3,0 kW
D150X1500X2					4,4 kW
D150X1500X3					6,0 kW

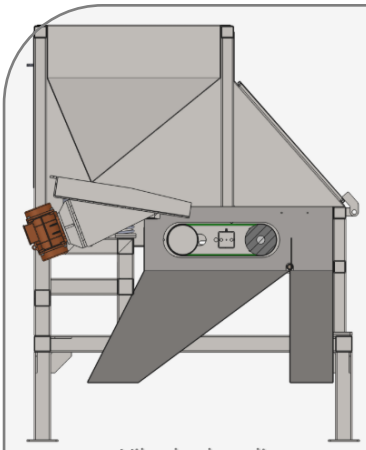
For different magnetic field intensity and resolution demands, please Contact B A S ® team.



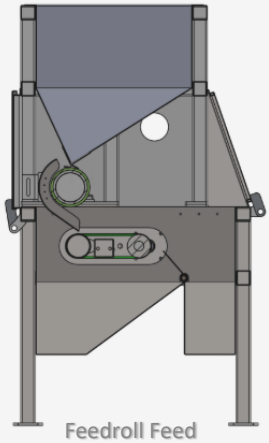
Band Exchange Mechanism

Thanks to the next generation band replacement mechanism, the bands can be easily changed in 5min with a single operator. Consisting of a knob and two fixed beds, the structure also allows the bands to be adjusted faster.

Feed



Vibrobeslemeli HIRS Separator



Feedroll Feed HIRS Separator

Roll magnetic separators are divided into two according to feed types.

a) Vibro feeders are mostly preferred for large grains and high capacities. Vibrofed equipment can be supplied in two types, electromagnetic and pendulum. Electromagnetic feeders allow 0-100% proportional capacity control.

b) Feedroll feed separators offer more suitable and lesser volume-covering solutions in fine-grained applications. The capacity is adjusted with feedroll drum speed and flap clearance on it.

Control and Performance

Roll magnetic separators vary in the number of levels and magnetic fraction depending on the structure of the ore and the final product expectation.

The essentials for material separation are:

- Accurate magnetic field
- Correct magnetic fraction
- Right rpm
- Automation and SCADA for uninterrupted production.

B A S ® equipments make monitoring desired automation output possible with PLC monitoring.

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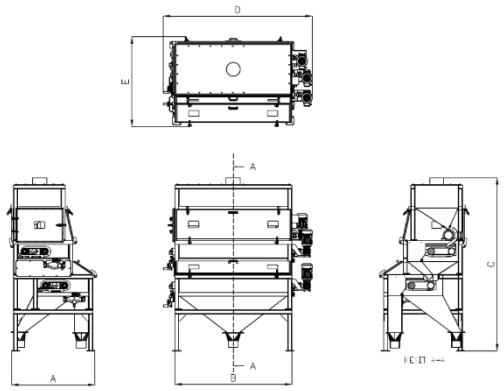
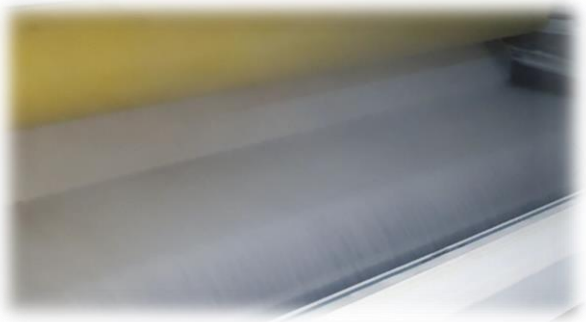
Dimensions

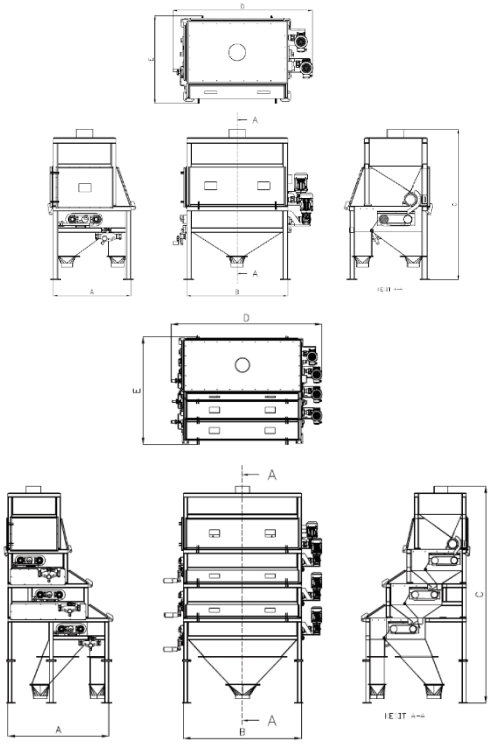
Permroll Serisi ölçülendirme	A [MM]	B [MM]	C [MM]	D [MM]	E [MM]
D100X1000X1	940	1220	1815	1690	1060
D100X1000X2	1220	1220	2550	1690	1320
D100X1000X3	1470	1220	3170	1690	1575
D100X1500X1	940	1720	1815	2190	1060
D100X1500X2	1220	1720	2550	2190	1320
D100X1500X3	1470	1720	3170	2190	1575
D150X1000X1	1040	1320	1915	1790	1160
D150X1000X2	1320	1320	2650	1790	1420
D150X1000X3	1570	1320	3270	1790	1675
D150X1500X1	1040	1820	1915	2290	1160
D150X1500X2	1320	1820	2650	2290	1420
D150X1500X3	1570	1820	3270	2290	1675



Application



-400 micron quartz and feldspar enrichment stages; material release and enrichment at various levels.



-2mm magnesite enrichment results with ferromagnetic-paramagnetic impurities and enriched magnetite (right side)

Quality

2006/42 EC Machinery Safety Directive Annex-1

EN-ISO 12100:2010,

EN ISO 13850:2015, EN ISO 14120:2015, EN6024-1:2018

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