

Rare Earth Roll Magnetic Separator

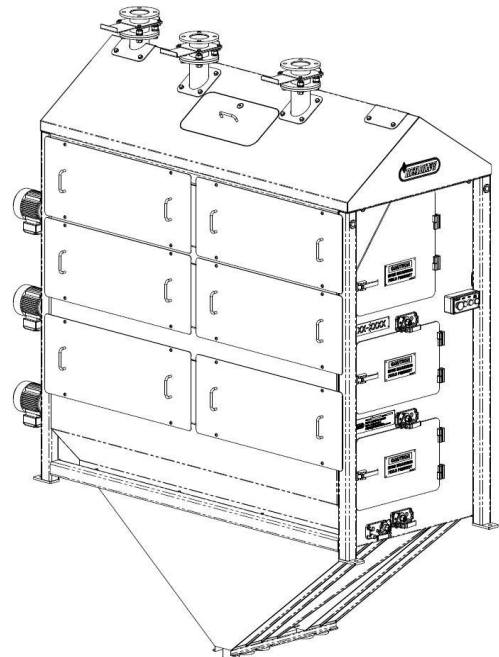


Overview

The Reading Rare Earth Magnetic Roll Separator provides a unique inclined belt feeding system to maximise overall performance and efficiency. The design of the magnetic rolls ensures the optimum combination of magnetic field strength and magnetic gradient to give the most effective separation.

Features

- Separation rolls fitted with individual variable frequency geared-motor drives (0.37kW) mounted externally
- Feed hopper incorporating proprietary fluted feedroll with variable frequency gear-motor drive (0.25kW) for precise feed control and automated operation
- Provision for dust containment and extraction
- Proprietary design 'Taconite' sealed bearing housings
- Motion sensing device for belt failure protection
- Feedlips constructed of stainless steel reduced wear and non-magnetic properties
- Product collection launders to deliver individual magnetic products from each roll along with mids and non-mags
- Individual separation module inspection doors with operator protection guarding behind
- Modular design for easier transportation
- Cantilevered roll assemblies to permit quick exchange of separation belts



Design Data

Capacity:	4.0 to 10.0 tph per metre of roll (depending on application) 10.0 tph per metre material throughput maximum
Moisture Content:	Dry, free-flowing
Size Range:	>45micron to 4.0mm
Feed Temperature:	Refer magnet type in configuration table

Applications

- Capable of processing any minerals over the full range of magnetic susceptibilities
- Production of very pure magnetic concentrates
- Production of ilmenite, chromite, hematite concentrates
- Fractionation of ilmenite into varying TiO₂/Fe₂O₃ products
- Production of silica / glass sands
- Removal of magnetic contaminants from most granular, free flowing feedstocks
- Upgrading fine iron ore

Options – Available on Request

- Integrated product sampling facility and inspection hatched on all discharge launders
- AC ioniser to assist removal of static charge from separation belts

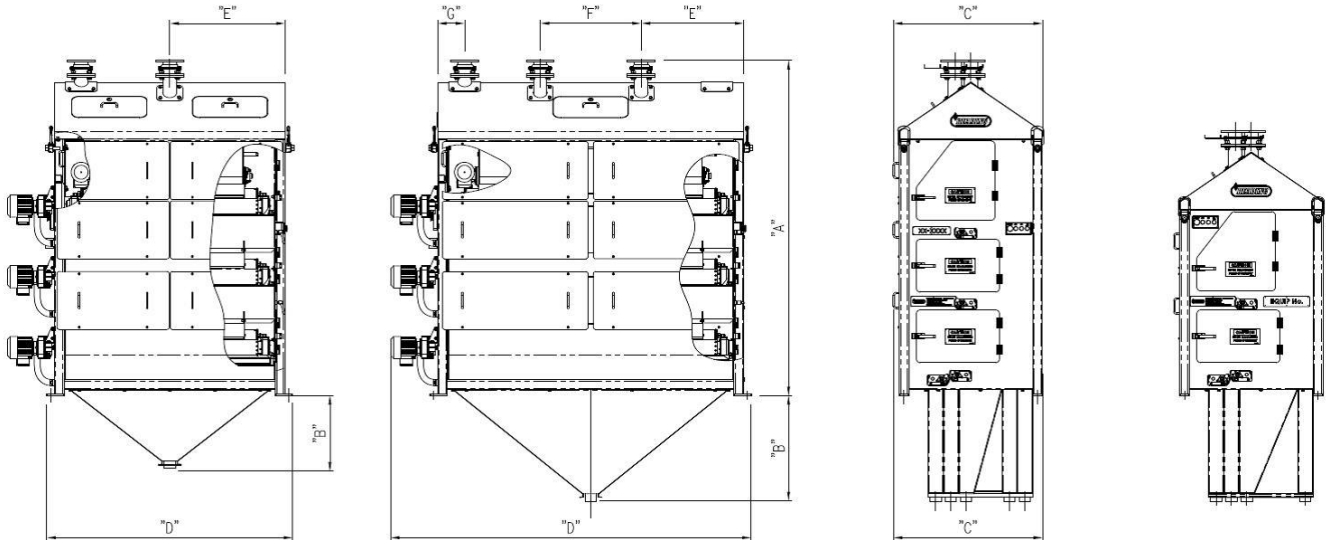
Configurations Available

RER Separators are available with **100mm (standard) and 150mm diameter magnet rolls.**

There are two nominal lengths of separation magnet roll cassette (1 metre and 1.5 metre) each available with one, two or three pass stages.

The standard configuration is non-magnetics retreat on the 2nd and 3rd stages

Below are the general dimensions of the modules available.



		1000mm Long			1500mm Long		
		1x1	1x2	1x3	1x1	1x2	1x3
Equipment No.		REM9009	REM9004	REM9001	REM9010	REM9011	REM9007
Separator Nett Weight (kg)		Refer Equip Eng	950	1110	Refer Equip Eng	1200	1500
Dimension (mm)	"A" (height)	Refer Equip Eng	1850	2300	Refer Equip Eng	1760	2220
	"B" (Underfloor)	500			700		
	"C" (Width)	1000			1000		
	"D" (Length)	1900			2400		
	"E"	765			680		
	"F" (Feed Centres)	Single feed point only 80NB Table D Flange			670mm Centres – 2 x 80NB Table D Flanges		
Magnet Type		Depends on feed temperature (maximum temperature must be within the range of the H and EH Magnet Types)					
Purge Air Connection 50NB		60m ³ /h per module			60m ³ /h per module		
Dust Extraction Requirement		150 m ³ /h			150 m ³ /h		
Dust "G" Location Front or Rear (mm)		180			180		
Power Consumption (kW)		0.65	1.0	1.4	0.65	1.0	1.4
Control Panel Equipment No.		REM9400-1	REM9400-2	REM9400-3	REM9400-1	REM9400-2	REM9400-3
Size: (mm)		800 Wide x 400 Deep x 1300 High					
Weight: (kg)		160					
Protection Rating		IP.54					

Note: Separations Belts are generally only suitable for up to 80°C when using the higher temperature magnets, the number of recommended spares will be higher

Note:

Mineral Technologies reserves the right to alter specifications without prior notice.
For Certified Drawings suitable for Engineering Design purposes please refer to Mineral Technologies

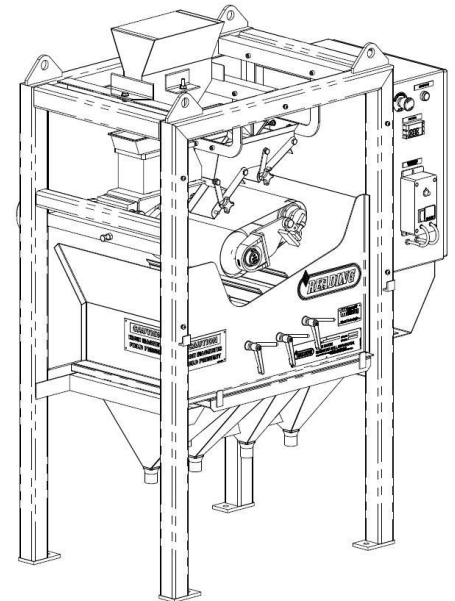
Rare Earth Roll Magnetic Separator



Laboratory 1x1x100x100dia. or 150dia.

Features

- Separation rolls fitted with individual variable frequency geared-motor drives (0.37kW) mounted externally
- Magnetic roll with a 4x2 configuration is supplied as standard with a feed width of 100mm [other configurations are available on request]
- Fully controllable vibratory feeder
- Option for feeding front or rear of belt
- Inclined belt to optimise feed presentation
- Cantilevered roll assembly to permit quick exchange of separation belts
- 3 x separation belts supplied 0.2mm, 0.4mm and 0.6mm
- Adjustable splitters giving magnetics and middlings fractions
- Drain free product collection launders
- Integral control station c/w with local main isolator, separator start & stop available from the VSD touchpad
- Easily relocatable / transportable



Design Data

Equipment No.	REM9102		
Capacity:	Up to 600 kg/h	Separator Dimensions:	1300 wide x 990 deep x 1650 high
Moisture Content:	Dry, Free-Flowing	Separator Weight:	350
Size Range:	>45micron to 4.0mm	Power Consumption (kW)	0.37
Feed Temperature:	100°C		

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