



Electrostatic High Tension Roll Separator (270dia.)



Overview

The improved mineral technologies Electrostatic High Tension Roll Separators provides improved separation efficiencies and ease of operability.

PRODUCTION 1800mm x 270mm Dia.

Features

- 1800mm long x 270mm dia. separation roller dynamically balanced and fitted with individual geared-motor (0.75kW) drives mounted externally
- Adjustable position corona electrode incorporating high-performance secondary separation plate providing improved separation of coarse non-conductors and fine conductors
- Each horizontal pair of rolls are independently speed-controlled
- Dual brass separation roll brushing on each separation stage
- Adjustable splitter design which accommodates middling, non-conductor or conductor retreat without chute changes
- Positive and robust splitter locking mechanism with positioning scale for accurate setup of parallel separators
- Ability to set splitter for super non-conductor product stream (ultra clean non-conductors)
- Individual separation module inspection doors for operator convenience and reduction of heat loss during on-line inspection.
- Operator protection guarding to IP20 behind inspection doors for enhanced operator safety
- Local control station incorporating E/Stop with an additional E/stop at the rear of the separator
- Discharge launder c/w conductor, mids & non-conductor outlets
- Fully enclosed separator for containment of dust, with provision for dust extraction system connection (by others)
- Labyrinth sealed bearings for extended life
- Removable separation roll "cassettes" to allow ease of maintenance
- Fluted feedroller with geared motor (0.37kW) and variable frequency drive for precise feed control and automated operation
or
- Electro / Pneumatic feed gate control in conjunction with calibrated feed slides for feed rate control

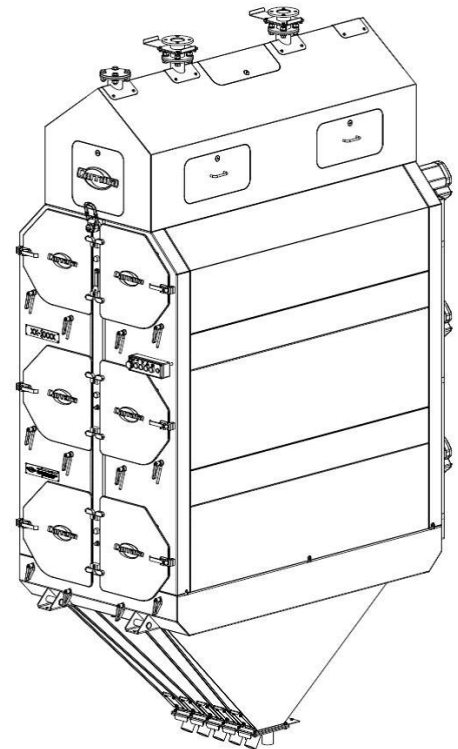


Image opposite depicts a production HTR 2x3x1800x270dia. with integrated sampling launder option



Control Panel

- Incorporating 40kv 15mA Glassman HT power supply (positive or negative)
- Emergency Stop, Local Main Isolator, Fault Reset and Remote / Local Selector
- HT termination point for plant connection
- Integration with plant PLC systems available
- Power supply 240v 50hz

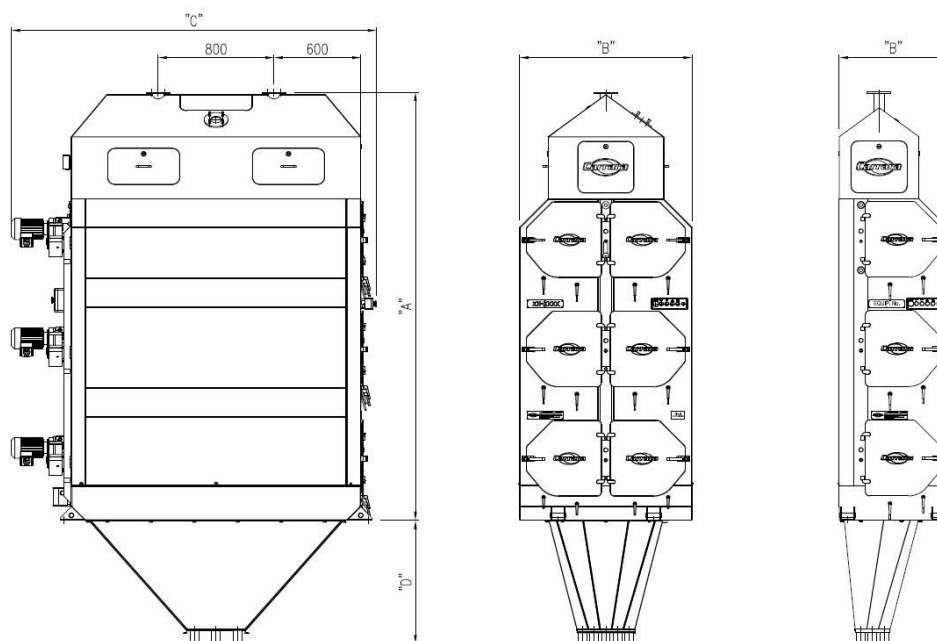
Options Available

- Electrode – Glassless and Glass Composite (*for more information refer MT-DS-020 Electrode datasheet*)
- Discharge Launderers – Standard and Integrated Sampling

Applications

Separation of dry granular materials with differing electrical conductivities, eg: mineral sands, hard rock ilmenite and rutile, cassiterite, tantalite, wolframite, iron ore

Design Data and Configuration Details



	2 x 3 (6 Roll)	2 x 2 (4 Roll)	1 x 3 (3 Roll)	
Equipment No.	HTR9000	HTR9005	HTR9004	
Separator Nett Weight (kg)	2600	2400	1700	
Typical (tph) Subject to testwork	Upto 8	Upto 6	Upto 4	
Material Content:	Dry, Free-Flowing			
Material Size Range	40 microns to 800 microns			
Feed Temperature:	Up to 120°C			
Dimension	"A" Height Above Floor (mm)	2990	2300	2900
	"B" Width (mm)	1200	1200	750
	"C" Length (mm)	2550	2550	2550
	"D" Depth Below Floor (mm)	850	850	850
Outlet Connection	50NB Pipe (2 x Conductor, 2 x Mids, 1 x Non-Conductor)		50NB Pipe (1 x Conductor, 1 x Mids, 1 x Non-Conductor)	
Feed Connection	2 x 65NB table D Flanges (800mm Centres)			
Dust Connection	1 x 65NB table D Flanges			
Control Panel Equipment No.	HTR9400-3	HTR9400-2	HTR9440-3	
Control Panel Size	800mm x 1905mm x 400mm			
Control Panel Weight (kg)	210			
Control Panel Protection Rating	IP 54			
High Tension Power Supply	15mA	15mA	15mA	
Power Consumption (kW)	5.5	4	3	

Laboratory 1 x 1 x 300mm x 270mm Dia. Separator

Features

- 300mm long x 270mm dia. separation roll dynamically balanced and fitted with variable frequency geared-motor drive
- Heated separation roll and feedbin with thermostatic control to simulate plant conditions and ensure separation at the correct temperature
- Chromed separation roll supplied as standard to prevent corrosion of surface (a burnished steel roll is available as an option)
- Adjustable position corona electrode incorporating high-performance secondary separation plate providing improved separation of coarse non-conductors and fine conductors
- Single brass non-conductor wiper brush
- Three adjustable splitters giving 4 product streams to assist in assessing separation performance
- Ability to set splitter for super non-conductor product stream (ultra clean non-conductors)
- Drain free product chute comprising 4 outlets: Conductors, two x Middlings, and Non-Conductors
- Feed roll with geared motor and variable frequency drive for precise feed rate setting. Feed rate is directly proportional to roll speed for rapid adjustment



Integral HT Control Panel

- Incorporating 40kv 1.8mA Glassman HT power Supply [negative as standard, positive available at client's request]
- Local main Isolator
- Heating controls for feed bin and separation roll
- Digital readouts for kV, mA, rpm and temperature
- HT power supply 240v 50hz

Design Data

Capacity:	Up to 350 kg/hr	Separator Dimensions:	1100 wide x 900 deep x 1750 high
Moisture Content:	Dry, Free-Flowing	Separator Weight:	265
Size Range:	40 microns to 800 microns	Power Consumption (kW)	0.8
Feed Temperature:	Up to 120°C		