

RAMP META

# **Drum Separators**

Ideal For High Volume Ferrous Metal Separation

## **BENEFITS**:

- Improve Product Purity
- Protect Processing Equipment from Ferrous Metal Damage

## **INTRODUCTION:**

IMI's Drum Separators provide ferrous metal removal from dry, bulk products in free-flowing processing systems.

Due to the nature of their design, Drum Separators are continuously self-cleaning units. These separators can be provided as a complete assembly with the housing and the drive package

included or as the magnetic drum only.

# **OPERATION:**

Material to be processed enters the top of the housing and flows across the surface of the drum. As the drum shell rotates around the stationary magnetic field, all non-ferrous product which is unaffected by the magnet, falls free from the drum into the cleaned material flow.

Any ferrous tramp metal is captured by the magnetic field and is held on the drum's surface. As the drum rotates, the metal is carried past the diverter and released outside of the magnetic field.





## FEATURES:

- Powerful Ceramic or Rare Earth Permanent Magnet Material
- Over 180° of Magnetic Arc Protection
- Manually adjustable magnetic arc position
- Drum diameters from 12" to 24" available
- Drum Widths Available from 12" to 60"
- Inlet and Discharge Mounting Flanges
- · Inlet transition to direct product flow
- Fixed diverter to separate cleaned product and collected tramp metal.
- Flex Seal to Prevent Product from Flowing Around the Backside of the Drum
- · Access Doors for Inspection and Drum Removal
- Sealed Bearings for Drum Support and Drive
- Direct Drive Mounting with Worm Speed Gear Reducer

## SPECIAL CONSIDERATIONS:

Smooth, uniform and consistent presentation of the product to the drum's surface has a direct effect on the separators ability to efficiently separate tramp metal from the product flow. For the best separation results a vibratory feeder is often recommended to introduce a uniform product flow across the entire surface width of the drum

## Key Markets

Mid-stream magnets for dry, free flow powders to granular products; i.e. food, feed, grain, plastics, chemical

#### Related Products

Large Tube Housings, Extractor/Split-Flow Magnets, Plate Magnets, Hump Magnets

### Standard Models and Specifications

## SPECIFICATIONS:

- 45 MgOe Rare Earth or Ceramic 8 Magnetic Circuit
- · 304 Stainless Steel Drum Shell
- Three (3), 1/2" Wiper Strips
- · Sealed Ball Bearings for Shell Rotation
- Fixed TG & P Mild Steel Shaft
- 240/480V AC Motor
- Direct Drive Worm Gear Speed Reducer
- · Industrial Welded Housings: Mild Steel for Ceramic Drums 304 Stainless Steel for Rare Earth Drums

## DRUM SEPARATOR DIMENSIONS:

## **OPTIONS:**

- Custom Diameters and Widths
- Stainless Steel Drum Shaft
- Adjustable Inlet Opening
- Special Magnetic Circuits for Reach Out or Holding
- Stainless Steel Housings for Ceramic Drums
- · Special Inlet for Vibratory Feeder Interface
- Multiple Drum Assemblies
- · Fine Particle Discharge
- Custom Inlet and Discharge Transitions
- · Special Voltage Motors and Drive Packages
- Abrasion Resistant Facing
- · Zero Speed Switch



Note: All dimensions are stated in inches. Add "C" for Ceramic or "A" for Rare Earth magnet material. Example: MDS1212B for a Rare Earth Drum Separator

<b>12" DIAMETER DRUM</b> (1-1/2" Standard Inlet Opening) 45 RPM									15" DIAMETER DRUM (2" Standard Inlet Opening) 40 RPM										
Model	A	в	С	D	Е	F	G	н	Weight	HP	Model	Α	В	С	D	Е	F	G	н
MDS1212	12	16¼	22	26	9	8½	3	10½	280	1⁄3	MDS1512	12	16¼	25	30	9	10	3	12
MDS1214	14	18¼	22	26	9	8½	3	10½	320	1⁄3	MDS1514	14	18¼	25	30	9	10	3	12
MDS1216	16	201⁄4	22	26	9	8½	3	10½	390	1⁄3	MDS1516	16	201⁄4	25	30	9	10	3	12
MDS1218	18	221⁄4	22	26	9	8½	3	10½	460	1⁄3	MDS1518	18	221⁄4	25	30	9	10	3	12
MDS1220	20	24¼	22	26	9	8½	3	10½	510	1⁄3	MDS1520	20	24¼	25	30	9	10	3	12
MDS1224	24	28¼	22	26	9	8½	3	10½	560	1⁄3	MDS1524	24	28¼	25	30	9	10	3	12
MDS1230	30	34¼	22	26	9	8½	3	10½	600	1⁄3	MDS1530	30	34¼	25	30	9	10	3	12
MDS1236	36	40¼	22	26	9	8½	3	10½	660	1/2	MDS1536	36	40¼	25	30	9	10	3	12
MDS1242	42	46¼	22	26	9	8½	3	10½	700	1/2	MDS1542	42	46¼	25	30	9	10	3	12
				-	-		-				MDS1548	48	521/4	25	30	9	10	3	12

		18"	DIA	ME.	TER		JM				
(2-1/2" Standard Inlet Opening) 35 RPM											
Model	Α	В	С	D	Е	F	G	Н	Weight	HP	
MDS1812	12	16¼	28	36	9	11½	3	13½	435	⅓	
MDS1814	14	18¼	28	36	9	11½	3	13½	470	1⁄3	
MDS1816	16	20¼	28	36	9	11½	3	13½	510	1⁄3	
MDS1818	18	221⁄4	28	36	9	11½	3	13½	550	1/2	
MDS1820	20	24¼	28	36	9	11½	3	13½	590	1/2	
MDS1824	24	28¼	28	36	9	11½	3	13½	750	1/2	
MDS1830	30	34¼	28	36	9	11½	3	13½	860	3⁄4	
MDS1836	36	40¼	28	36	9	11½	3	13½	970	3⁄4	
MDS1842	42	46¼	28	36	9	11½	3	13½	1080	3⁄4	
MDS1848	48	51¼	28	36	9	11½	3	13½	1200	3⁄4	

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24" DIAMETER DRUM										
	(S Stanuaru Iniel Opening) SU REM									
Model	Α	в	С	D	Е	F	G	н	Weight	HP
MDS2418	18	25	38	48	12	13½	5	<b>19</b> ½	1265	3⁄4
MDS2420	20	27	38	48	12	13½	5	19½	1300	3⁄4
MDS2424	24	31	38	48	12	13½	5	19½	1375	3⁄4
MDS2430	30	37	38	48	12	13½	5	19½	1470	1
MDS2436	36	43	38	48	12	13½	5	19½	1800	1
MDS2442	42	49	38	48	12	13½	5	19½	2055	1½
MDS2448	48	55	38	48	12	13½	5	19½	2300	1½
MDS2454	54	61	38	48	12	13½	5	19½	2540	1½
MDS2460	60	67	38	48	12	13½	5	<b>19</b> ½	2885	1½

Weight

350

400

490

585

650

700

750

825

875

940

HP

1⁄3

1⁄3

⅓

⅓

1⁄3

1/3

1⁄2

1/2

3⁄4

3⁄4

For Flow Rate Capacities, Refer to Tech Sheet 10B.