Stearns

Magnetic Separation Equipment

OHIO MAGNETICS

SUBSIDIARY OF HBD INDUSTRIES, INC.

Stearns

MAGNET EXPERTS SINCE 1917
…Ohio Magnetics!

For nearly one hundred years, the Stearns™ brand of magnetic separation and detection equipment has been manufactured and used by thousands of customers worldwide. Ohio Magnetics, Inc. is recognized as a world leader in the development of lifting magnets systems and magnetic separation equipment for steel production, metal fabrication, scrap, recycling, mining, utility, foundry, waste recovery, textile, paper/pulp and rail industries.

Ohio Magnetics, Inc. manufactures standard and specialized circular, bi-polar and rectangular lifting magnets as well as power supplies, including rectifiers, power take-off, hydraulic driven generators and magnet controls.

The Stearns™ brand of magnetic separation equipment includes electric magnetic drums for auto shredders, electric or permanent over-the-belt magnets, magnetic pulleys, specialized wet and dry magnetic separators and other specialized magnetic detection products.

Our customers know they can rely on our wealth of practical experience and manufacturing expertise to assist them develop new ways to improve magnetic system productivity. Our long-term customers know and our newest ones quickly discover that Ohio Magnetics is a company highly attuned to their needs regarding price, delivery and aftermarket services.

When you do business with Ohio Magnetics, you get the products you want that provide top performance and maximum efficiency from job start-up to finish. For value added products that offer long-term service, exceptional performance and low maintenance costs…choose Stearns and Ohio Magnetics, Inc.

Ohio Magnetics, Inc.
Maple Heights, Ohio

Ohio Magnetics, Inc. is a subsidiary company of **HBD Industries, Inc.** HBD companies manufacture quality custom-designed and standard industrial products serving many diverse industries and markets. Products manufactured by HBD Industries, Inc. include: AC/DC/BLDC electric motors, aerospace precision components, budding strips, cemented tungsten carbide parts, closed die forgings, coated rubber fabrics, conveyor belting, drives, ducting, gear reducers, hose (automotive, aviation, hand-built, industrial, marine and petroleum), material handling equipment (metal separators/detectors and electromagnetic lifting equipment), power transmission belts, rubber bands, rubber roll coverings and ventilation equipment (fans and blowers). For complete details on all the products available from HBD Industries, Inc. companies, visit our website at **www.hbdindustries.com.**

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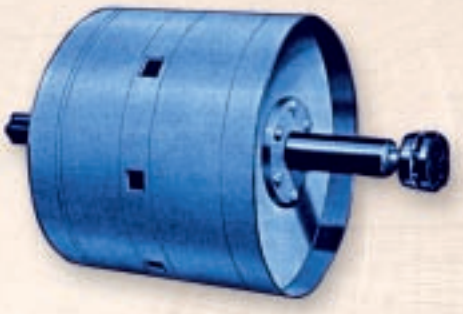
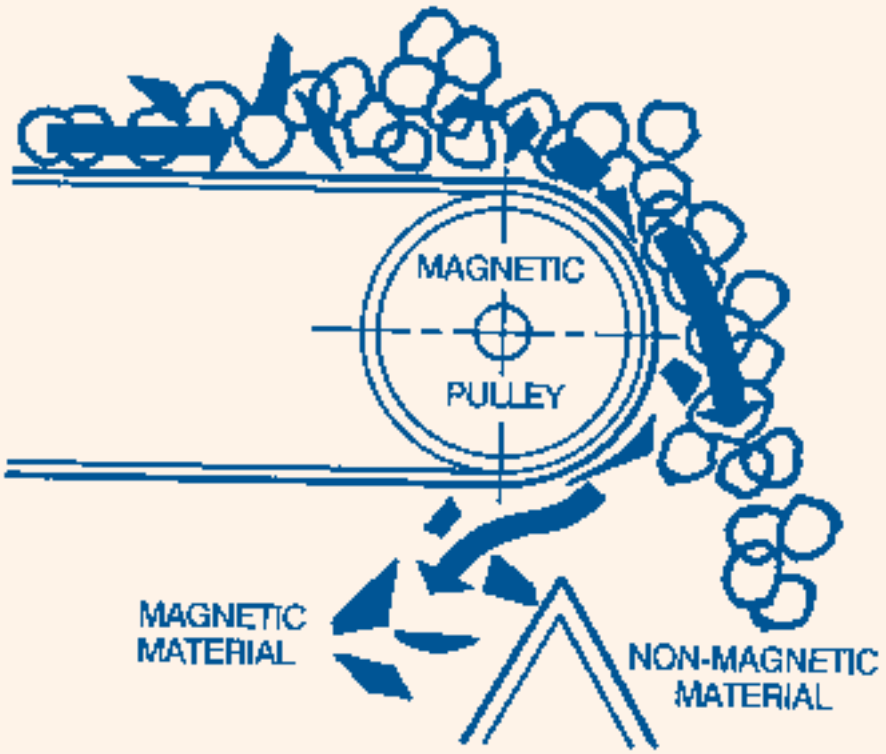
STEARNS ELECTROMAGNETIC PULLEYS...guard product purity and protect your plant

REMOVES TRAMP IRON, EVEN ON FAST CONVEYORS!

Nearly one hundred years of expertise and leadership in the design and development of magnetic equipment is behind every Stearns electromagnetic pulley. Now, more than ever, with the very growing emphasis on production efficiency and reduced operation cost in industry, Stearns experience in pulley design is important to simple, effective means of magnetic separation and protection in normal material handling conveyor processes –without altering the present system. You can select a pulley that will assure positive separation of ferrous materials at belt speeds as high as 500 FPM. Stearns Pulleys feature:



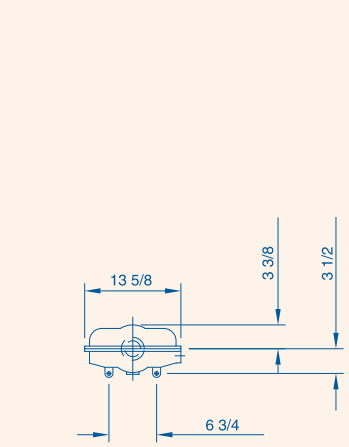
- **Rugged Heavy Duty Designs**
- **Deep Field Penetration**
- **Can be used for Specialized Sizing and Magnetic Separation with an Ohio Magnetics/Stearns Variable Voltage Rectifier**



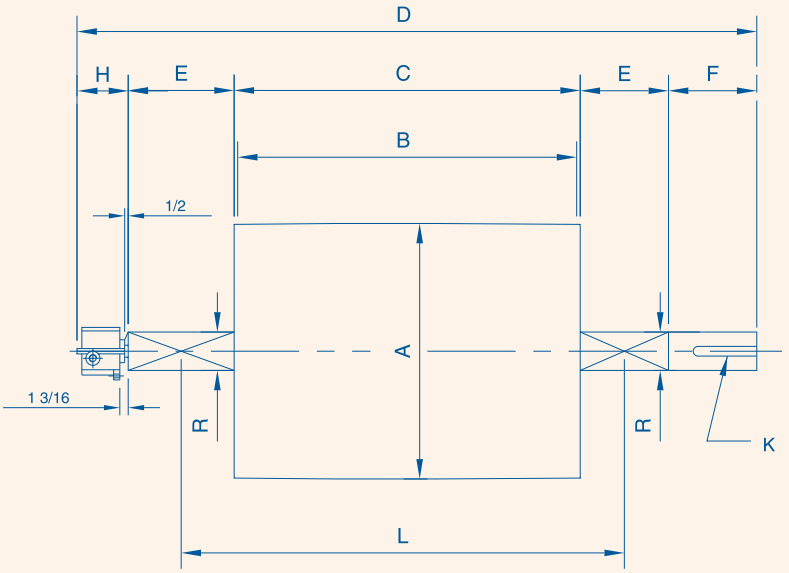
Principle of Operation

For purification and tramp iron protection, the magnetic pulley is installed as a head pulley in the belt conveyor handling bulk materials. Ferrous material is attracted toward the face of the pulley, then carried around past the influence of the magnet for discharge, non-magnetic material passes over pulley in normal trajectory, providing continuous automatic separation.

ELECTROMAGNETIC PULLEY



END VIEW
ELECTRICAL ENCLOSURE



DIMENSIONS (INCHES)

TECHNICAL SPECIFICATIONS AND DIMENSIONS (INCHES)

MODEL	A DIA.	B BELT WIDTH	WATTS CU	WATTS AL	WEIGHT CU	WEIGHT AL	C	D	E	F	R DIA.	K	H	L
24 INCH WIDTH BELT														
1824	18	24	1025	1275	1265	981	25	54-1/2	9	5	2-15/16	3/4 X 3/8	6-1/4	36
2424	24	24	1640	1600	2210	1650	25	57-1/4	10	6	3-7/16	7/8 X 7/16	6-1/4	37
3024	30	24	1735	1800	3080	2410	25	60-1/4	11	7	3-15/16	1 X 1/2	6-1/4	38
3624	36	24	2055	2130	4000	3100	25	63-1/4	12	8	4-7/16	1-1/8 X 9/16	6-1/4	39
30 INCH WIDTH BELT														
1830	18	30	1470	1550	1610	1110	31	60-1/4	9	5	2-15/16	3/4 X 3/8	6-1/4	42
2430	24	30	1770	1830	2460	1800	31	66-1/4	11	7	3-15/16	1 X 1/2	6-1/4	44
3030	30	30	2210	2320	3580	2740	31	69-1/4	12	8	4-7/16	1-1/8 X 9/16	6-1/4	45
3630	36	30	2700	2580	4390	3300	31	69-1/4	12	8	4-7/16	1-1/8 X 9/16	6-1/4	45
36 INCH WIDTH BELT														
1836	18	36	1675	1765	1890	1290	37	69-1/4	10	6	3-7/16	7/8 X 7/16	6-1/4	49
2436	24	36	2215	2270	2830	2000	37	72-1/4	11	7	3-15/16	1 X 1/2	6-1/4	50
3036	30	36	2390	2430	4370	3150	37	75-1/4	12	8	4-7/16	1-1/8 X 9/16	6-1/4	51
3636	36	36	3200	3520	5605	3790	37	79-1/2	13	9	4-15/16	1-1/4 X 5/8	6-1/4	52
42 INCH WIDTH BELT														
3642	36	42	3610	4030	6430	4305	43	85-1/2	13	9	4-15/16	1-1/4 X 5/8	6-1/4	58
48 INCH WIDTH BELT														
2448	24	48	3435	3470	4180	2800	49	87-1/4	12	8	4-7/16	1-1/8 X 9/16	6-1/4	63
3048	30	48	3775	3700	5935	4025	49	91-1/2	13	9	4-15/16	1-1/4 X 5/8	6-1/4	64
3648	36	48	4660	4630	7480	5085	49	69-1/2	15	10	5-7/16	1-3/8 X 11/16	6-1/4	66

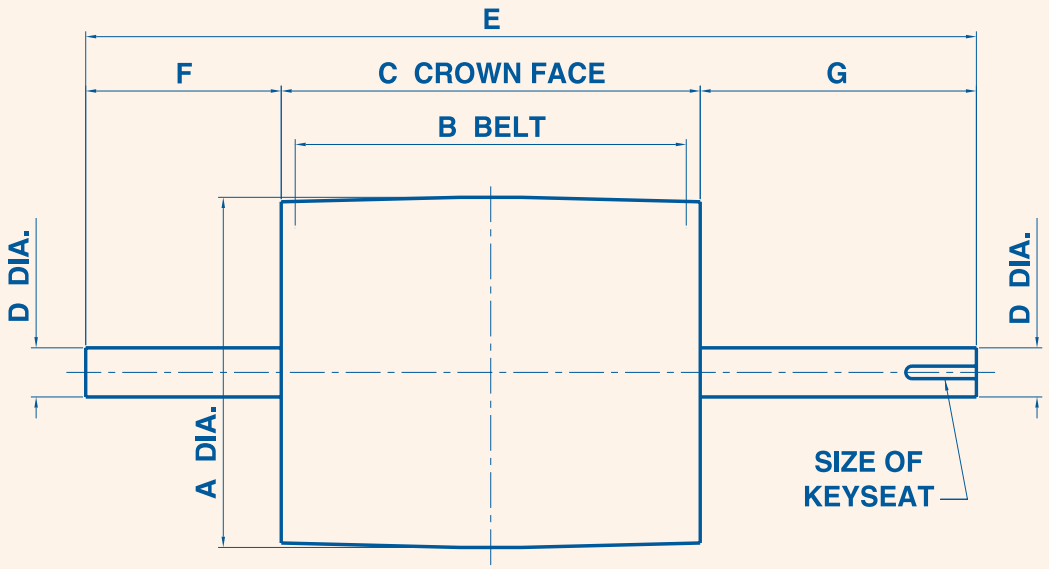
STEARNS PERMANENT MAGNET PULLEYS
...install it once and it serves forever!

These permanent magnet pulleys are application-engineered to give you exceptional performance and reliable, long-term service. These pulley products provide:

- Quality Heavy Duty Design
- Deep Field Penetration
- No DC Power Required
- Economic, Automatic Separation

Stearns' exclusive, patented continuous **"Radial Pole"** design incorporates the use of unique, wedge-shaped magnets that permit packing more magnetic material into the pulley pockets. **Result:** Stearns pulleys provide more lines of flux and a magnetic field of maximum intensity.

PERMANENT MAGNET PULLEY



Need an even stronger magnetic field for those tough applications?
ASK FOR *STEARNS* SUPER 710 MODEL MAGNETIC PULLEYS!

STEARNS SUPER 710 MODEL MAGNETIC PULLEYS...

Begin at a 24-inch diameter and incorporate a double stack of our exclusive, wedge shaped magnets. A non-magnetic stainless steel shaft is standard to produce the maximum magnetic attraction force.

TECHNICAL SPECIFICATIONS AND DIMENSIONS (INCHES)*

PULLEY MODEL	A DIA.	B BELT WIDTH	C CROWNED FACE	CAPACITY Cu. ft./hr. SERIES 710	APPROX. WT. (lbs.) SERIES 710	D DIA.	E	F	G	KEY SEAT
1212	12	12	14	1,100	222	1-15/16	29-1/2	6	9-1/2	1/2 x 1/4 x 3-3/4
1214	12	14	16	1,200	249	1-15/16	31-1/2	6	9-1/2	1/2 x 1/4 x 3-3/4
1216	12	16	18	1,425	274	1-15/16	33-1/2	6	9-1/2	1/2 x 1/4 x 3-3/4
1218	12	18	20	1,850	299	1-15/16	35-1/2	6	9-1/2	1/2 x 1/4 x 3-3/4
1220	12	20	22	2,300	348	1-15/16	37-1/2	6	9-1/2	1/2 x 1/4 x 3-3/4
1224	12	24	26	3,500	408	2-3/16	42-1/2	6-1/2	10	1/2 x 1/4 x 3-3/4
1512	15	12	14	1,350	295	2-3/16	30-1/2	6-1/2	10	1/2 x 1/4 x 3-3/4
1514	15	14	16	1,475	361	2-3/16	32-1/2	6-1/2	10	1/2 x 1/4 x 3-3/4
1516	15	16	18	1,750	365	2-3/16	34-1/2	6-1/2	10	1/2 x 1/4 x 3-3/4
1518	15	18	20	1,850	398	2-3/16	36-1/2	6-1/2	10	1/2 x 1/4 x 3-3/4
1520	15	20	22	2,700	479	2-7/16	38-1/2	6-1/2	10	5/8 x 5/16 x 3-3/4
1524	15	24	24	4,000	560	2-11/16	44-1/2	7-1/2	11	5/8 x 5/16 x 3-3/4
1530	15	30	26	6,250	731	2-15/16	51-1/2	8	11-1/2	3/4 x 3/8 x 3-3/4
1816	18	16	18	2,225	512	2-7/16	35-1/2	7	10-1/2	5/8 x 5/16 x 3-3/4
1818	18	18	20	2,800	559	2-7/16	37-1/2	7	10-1/2	5/8 x 5/16 x 3-3/4
1820	18	20	22	3,500	672	2-11/16	40-1/2	7-1/2	11	5/8 x 5/16 x 3-3/4
1824	18	24	26	4,500	800	2-15/16	45-1/2	8	11-1/2	3/4 x 3/8 x 3-3/4
1830	18	30	32	7,100	1,024	2-15/16	51-1/2	8	11-1/2	3/4 x 3/8 x 3-3/4
1836	18	36	38	11,000	1,260	3-7/16	60-1/2	9	13-1/2	7/8 x 7/16 x 4-3/4
1842	18	42	44	14,950	2,010	3-15/16	68-1/2	10	14-1/2	1 x 1/2 x 4-3/4
1848	18	48	50	20,000	2,317	3-15/16	74-1/2	10	14-1/2	1 x 1/2 x 4-3/4
2018	20	18	20	3,200	634	2-7/16	37-1/2	7	10-1/2	5/8 x 5/16 x 3-3/4
2020	20	20	22	3,900	762	2-11/16	40-1/2	7-1/2	11	5/8 x 5/16 x 3-3/4
2024	20	24	26	5,000	909	2-15/16	45-1/2	8	11-1/2	3/4 x 3/8 x 3-3/4
2030	20	30	32	8,000	1,218	3-7/16	54-1/2	9	13-1/2	7/8 x 7/16 x 4-3/4
2036	20	36	38	11,750	1,475	3-7/16	60-1/2	9	13-1/2	7/8 x 7/16 x 4-3/4
2042	20	42	44	17,000	2,108	3-15/16	68-1/2	10	14-1/2	1 x 1/2 x 4-3/4
2048	20	48	50	23,000	2,415	3-15/16	74-1/2	10	14-1/2	1 x 1/2 x 4-3/4
2418	24	18	20	3,850	807	2-15/16	39-1/2	8	11-1/2	3/4 x 3/8 x 3-3/4
2420	24	20	22	4,700	952	2-15/16	41-1/2	8	11-1/2	3/4 x 3/8 x 3-3/4
2424	24	24	26	5,800	1,165	3-7/16	48-1/2	9	13-1/2	7/8 x 7/16 x 4-3/4
2430	24	30	32	9,000	1,529	3-15/16	56-1/2	10	14-1/2	1 x 1/2 x 4-3/4
2436	24	36	38	13,250	1,800	3-15/16	62-1/2	10	14-1/2	1 x 1/2 x 4-3/4
2442	24	42	44	19,000	2,742	4-7/16	71-1/2	11	16-1/2	1-1/8 x 9/16 x 5-3/4
2448	24	48	50	26,000	3,150	4-7/16	77-1/2	11	16-1/2	1-1/8 x 9/16 x 5-3/4
3024	30	24	26	6,600	1,515	3-15/16	50-1/2	10	14-1/2	1 x 1/2 x 4-3/4
3030	30	30	32	10,500	2,040	4-7/16	59-1/2	11	16-1/2	1-1/8 x 9/16 x 5-3/4
3036	30	36	38	15,500	3,440	4-7/16	69-1/2	11	16-1/2	1-1/8 x 9/16 x 5-3/4
3042	30	42	44	21,000	4,100	4-15/16	75-1/2	12	19-1/2	1-1/4 x 5/8 x 7-3/4
3048	30	48	50	30,500	4,700	4-15/16	81-1/2	12	19-1/2	1-1/4 x 5/8 x 7-3/4
3624	30	24	26	7,500	1,990	4-7/16	53-1/2	11	16-1/2	1-1/8 x 9/16 x 5-3/4
3630	30	30	32	11,500	2,510	4-7/16	59-1/2	11	16-1/2	1-1/8 x 9/16 x 5-3/4
3636	30	36	38	17,000	4,400	4-15/16	69-1/2	12	19-1/2	1-1/4 x 5/8 x 7-3/4
3642	30	42	44	24,500	5,200	4-15/16	75-1/2	12	19-1/2	1-1/4 x 5/8 x 7-3/4
3648	30	48	50	32,750	5,950	5-7/16	84-1/2	13	21-1/2	1-3/8 x 11/16 x 8-3/4
4230	42	30	32	13,500	3,055	4-15/16	63-1/2	12	19-1/2	1-1/4 x 5/8 x 7-3/4
4236	42	36	38	18,750	5,490	5-7/16	72-1/2	13	21-1/2	1-3/8 x 11/16 x 8-3/4
4242	42	42	44	26,750	6,300	5-15/16	81-1/2	14	23-1/2	1-1/2 x 3/4 x 9-3/4
4248	42	48	50	37,000	7,280	6-7/16	91-1/2	16	25-1/2	1-5/8 x 13/16 x 9-3/4
4830	48	30	32	13,500	3,580	5-7/16	66-1/2	13	21-1/2	1-3/8 x 11/16 x 8-3/4
4836	48	36	38	20,500	6,700	5-15/16	75-1/2	14	23-1/2	1-1/2 x 3/4 x 9-3/4
4842	48	42	44	29,000	7,400	5-15/16	81-1/2	14	23-1/2	1-1/2 x 3/4 x 9-3/4
4848	48	48	50	40,000	8,460	6-15/16	91-1/2	16	25-1/2	1-3/4 x 7/8 x 9-3/4

PULLEY SERIES 710 - DESIRED MAXIMUM CONVEYOR BELT SPEED IN FEET PER MINUTE

Pulley Diameter	12"	15"	18"	20"	24"	30"	36"	42"	48"
Maximum Speed	175	200	225	250	285	330	365	400	435

* FOR SIZES NOT SHOWN, CONTACT FACTORY.

STEARNS OVER-THE-BELT PERMANENT SUSPENDED MAGNETS WITH POWER

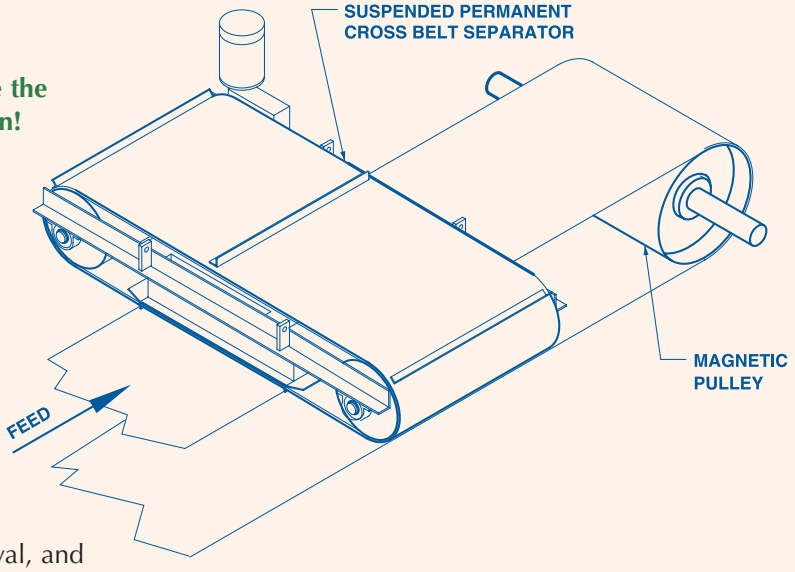
Powerful Stearns permanent magnets give you all the tramp iron removal ability without the use of DC power. Our new, exclusive magnetic circuit design maximizes magnetic penetration, provides positive and economic, tramp iron removal. This product assists you by:

- **Eliminating DC power costs**
- **Eliminating coils, oil tanks and wiring**
- **Guarantees to remain energized at 99% efficiency for the next 100 years**
- **Offers fast, easy installation at sharply reduced costs**

The Stearns magnet design produces a magnetic field that is not only deep enough for full penetration at the center of the conveyor, but also extends outward for complete tramp iron removal at the edges of the burden. Units are complete with a manually operated discharge arm for tramp iron removal. Also available in self-cleaning models.

Stearns Combination Units Provide the Ultimate in Removal and Protection!

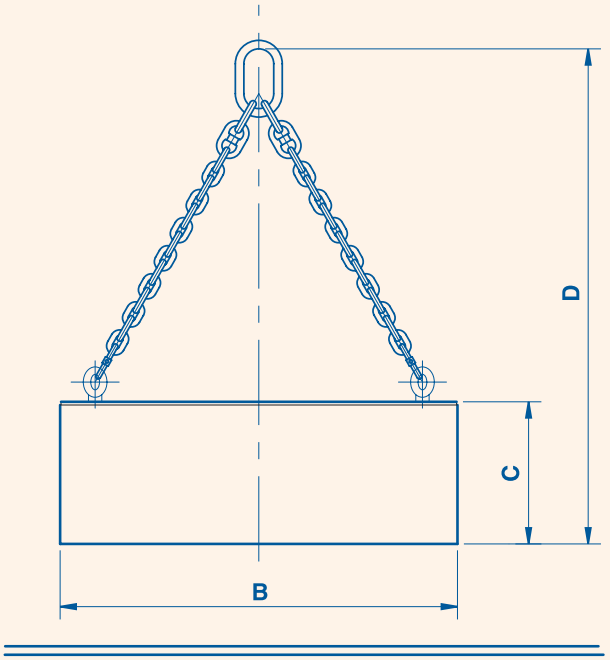
For an extra measure of protection from tramp iron, or for increased product cleaning, combination magnetic units are frequently installed. This is especially the case in foundry sand cleaning systems.

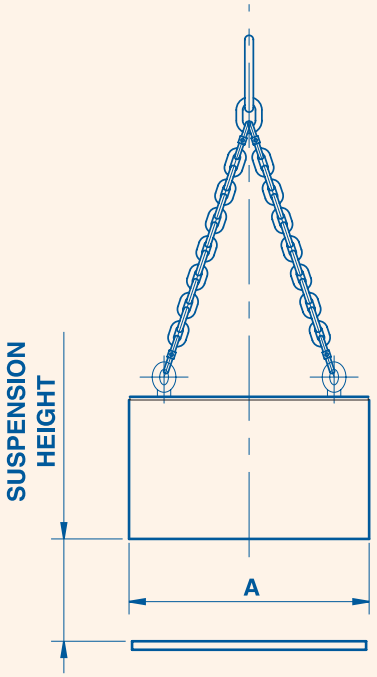


A typical double pass system **(see illustration)** would incorporate a cross-belt separator, which would provide the initial tramp iron removal, and a magnetic pulley at the head of the conveyor belt to remove any fine splatter and shot.

Another type of dual protection system utilizes a parallel-mounted magnet or cross-belt separator and a Stearns high sensitivity Metal Detector. This is used primarily in mining operations where some of the "tramp" is non-magnetic, but is just as damaging. The magnet will remove the iron and steel objects, and farther up the conveyor line the Stearns Metal Detector will unerringly detect the presence of non-ferrous metals such as manganese steel, stainless steel and brass.

PERMANENT SUSPENDED MAGNET

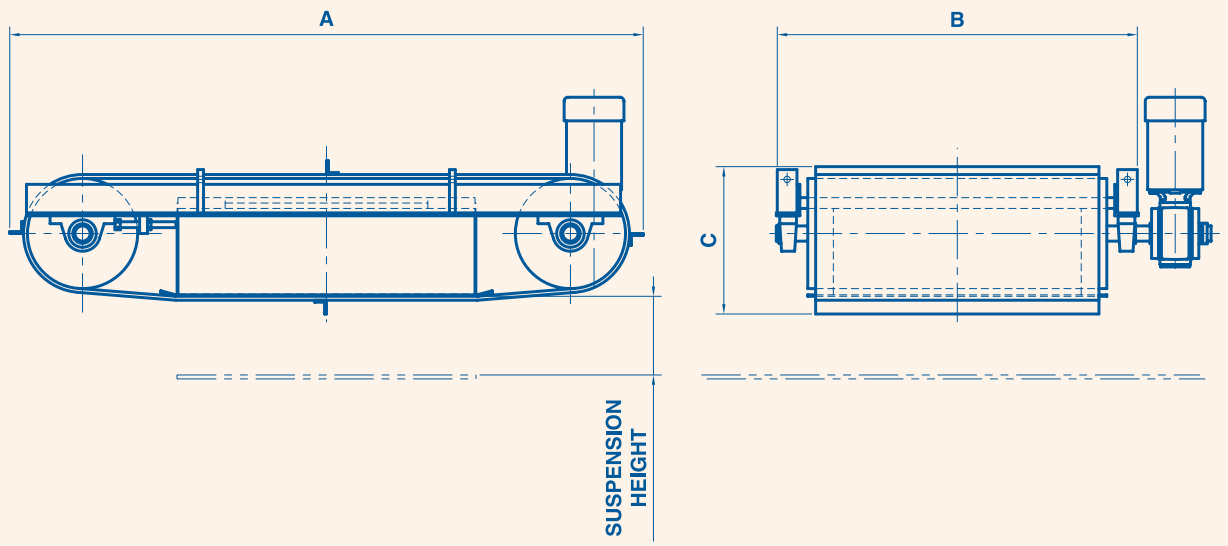




TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)				APPROX. WT. (lbs.)
	A	B	C	D	
18-720P	18-3/4	25-3/8	9-1/2	38	900
24-720P	24-3/4	25-3/8	9-1/2	38	1,250
30-720P	30-3/4	25-3/8	9-1/2	38	1,600
36-720P	36-3/4	25-3/8	9-1/2	38	2,000
18-900P	18-3/4	31-1/2	11-3/4	45	1,300
24-900P	24-3/4	31-1/2	11-3/4	45	1,700
30-900P	30-3/4	31-1/2	11-3/4	45	2,200
36-900P	36-3/4	31-1/2	11-3/4	45	2,700
18-1170P	18-3/4	39-7/8	14	54	2,100
24-1170P	24-3/4	39-7/8	14	54	2,800
30-1170P	30-3/4	39-7/8	14	54	3,500
36-1170P	36-3/4	39-7/8	14	54	4,500
42-1170P	42-3/4	39-7/8	14	54	5,400
48-1170P	48-3/4	39-7/8	14	54	6,600
18-1350P	18-3/4	46-7/8	16-1/2	61	2,700
24-1350P	24-3/4	46-7/8	16-1/2	61	3,200
30-1350P	30-3/4	46-7/8	16-1/2	61	4,000
36-1350P	36-3/4	46-7/8	16-1/2	61	5,100
42-1350P	42-3/4	46-7/8	16-1/2	61	6,200
48-1350P	48-3/4	46-7/8	16-1/2	61	7,000

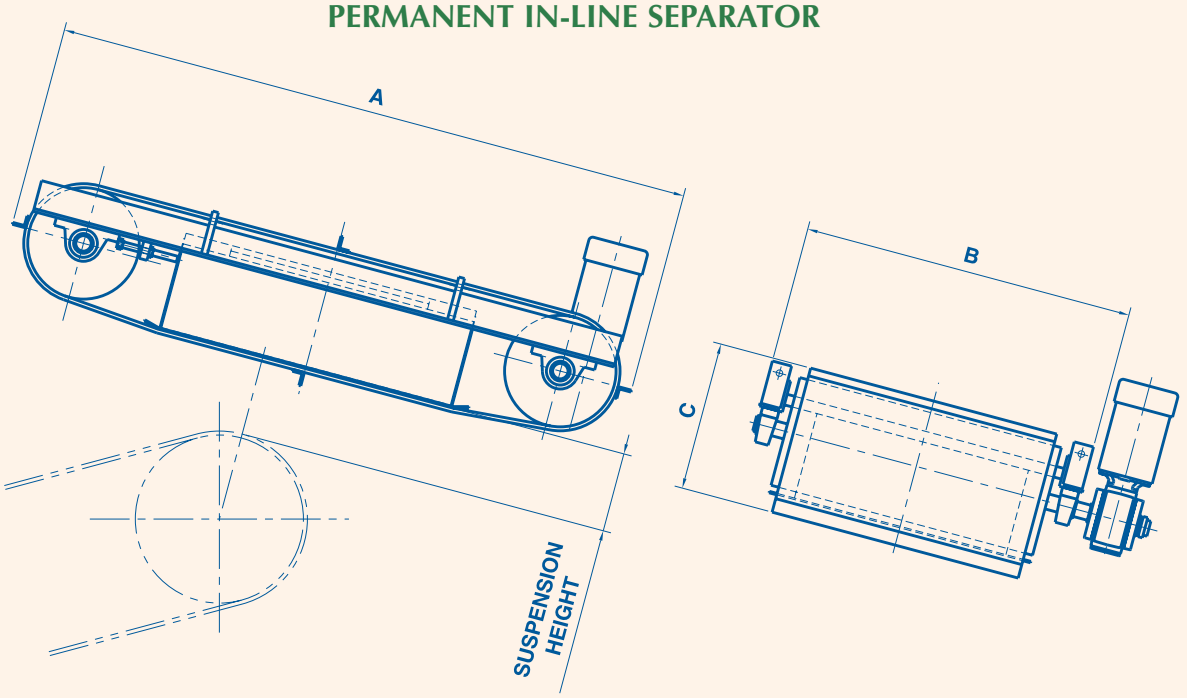
PERMANENT CROSS-BELT SEPARATOR



TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)			BELT WIDTH (in.)	DRIVE, HP	APPROX. WT. (lbs.)
	A	B	C			
18-720P	56	42	15	32	1-1/2	1,700
24-720P	62	42	15	32	1-1/2	1,800
30-720P	68	42	15	32	1-1/2	2,000
36-720P	74	42	15	32	1-1/2	2,300
18-900P	60	46	19	36	1-1/2	2,000
24-900P	66	46	19	36	1-1/2	2,400
30-900P	72	46	19	36	1-1/2	2,900
36-900P	78	46	19	36	1-1/2	3,400
18-1170P	68	57	20	47	3	3,300
24-1170P	74	57	20	47	3	4,200
30-1170P	80	57	20	47	3	5,100
36-1170P	86	57	20	47	3	6,000
42-1170P	92	57	20	47	3	7,000
48-1170P	98	57	20	47	3	7,900
18-1350P	71	65	22	54	5	4,200
24-1350P	77	65	22	54	5	5,300
30-1350P	83	65	22	54	5	6,400
36-1350P	89	65	22	54	5	7,500
42-1350P	95	65	22	54	5	8,100
48-1350P	101	65	22	54	5	8,600

PERMANENT IN-LINE SEPARATOR



TECHNICAL SPECIFICATIONS

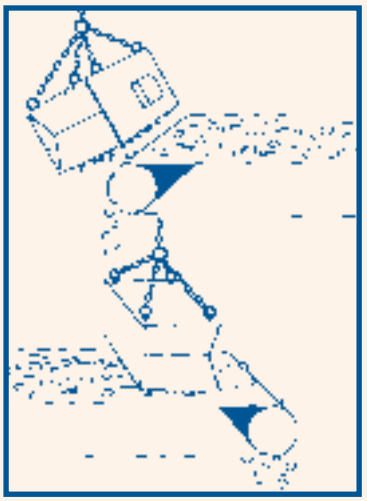
MODEL	DIMENSIONS (INCHES)			BELT WIDTH (in.)	DRIVE, HP	APPROX. WT. (lbs.)
	A	B	C			
18-720P	63	35	15	24	1	1,700
24-720P	63	41	15	30	1-1/2	1,800
30-720P	63	47	15	36	1-1/2	2,000
36-720P	63	53	15	42	1-1/2	2,200
18-900P	72-1/2	33-1/2	19	24	1	2,100
24-900P	72-1/2	39-1/2	19	30	1	2,500
30-900P	72-1/2	45-1/2	19	36	1-1/2	2,900
36-900P	72-1/2	51-1/2	19	42	1-1/2	3,500
18-1170P	89	36	20	24	2	3,200
24-1170P	89	42	20	30	2	4,100
30-1170P	89	48	20	36	2	5,000
36-1170P	89	54	20	42	2	5,700
42-1170P	89	60	20	48	2	6,600
48-1170P	89	66	20	54	2	7,500
18-1350P	99	37	22	24	3	4,000
24-1350P	99	43	22	30	3	5,000
30-1350P	99	49	22	36	3	6,000
36-1350P	99	55	22	42	3	7,100
42-1350P	99	61	22	48	3	8,000
48-1350P	99	67	22	54	3	9,000

STEARNS POWERFUL ELECTROMAGNETIC SUSPENDED SEPARATION MAGNETS

...provide the BIG PULL for fast moving burdens

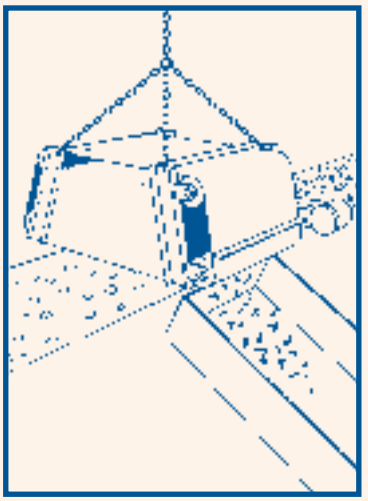
*Stearns compact **4-Pulley Over-The-Belt Magnet** with Armor-Clad Flex-Tuff Belt option.*

1. Offers **PROTECTION** for crushers, pulverizers, conveyor belts, screens and other processing equipment by removing tramp iron.
2. Provides **PURIFICATION** of coal, foundry sand, glass cullet, aggregate, grain, food products, chemicals and other products/ingredients for high quality end product by removing tramp iron in process.
3. Provides **RECLAMATION** of ferrous from non-ferrous materials in open hearth and blast furnace, slag, incinerator and garbage plant products, etc.



STANDARD OVER-THE-BELT MAGNET

Unwanted tramp iron is easily removed – when the magnet is suspended in the "in-line" or "cross-belt" position.



CROSS-BELT SELF-CLEANING MAGNET

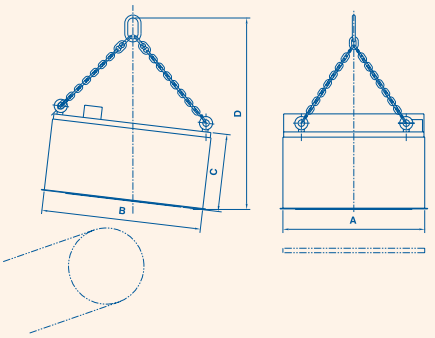
Unwanted tramp iron is automatically discharged to either side – when the magnet is positioned at a right angle or "across" the direction of main product conveyor belt travel.

IN-LINE SELF-CLEANING MAGNET

Unwanted tramp iron is automatically discharged to the front – when the magnet is positioned to or "in-line" with the direction of the main product conveyor belt travel.

RECTANGULAR ELECTRO SUSPENDED MAGNET IN-LINE POSITION

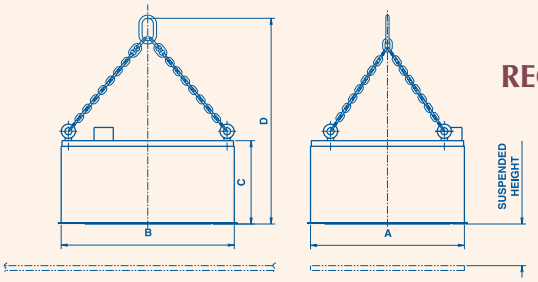
NOTE: SUSPENSION HEIGHT TO BE DEFINED ON CUSTOMER APPROVAL DRAWING



TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)				STANDARD VOLTS DC	APPROX. WATTS	APPROX. WT. (lbs.)
	A	B	C	D			
25A	25	34	22-1/8	45	115	2,320	2,000
30A	30	34	23-3/8	47-1/2	115	2,750	2,560
36A	36	38	18-9/16	50-3/4	115	4,290	2,600
38A	38	43	25-7/16	55-1/2	115	4,120	4,430
43A	43	48	26-5/16	60	115	5,060	5,680
48/54M	48	54	26	64-1/4	115	6,200	6,500
48A	48	54	28-1/16	65-3/4	115	6,200	7,740
54A	54	60	29-1/2	71-1/2	230	7,560	10,580
61A	61	68	30-3/4	77-1/4	230	9,260	13,930
68A	68	77	32-3/4	85	230	11,200	19,000
72A	72	78	47	105	230	13,900	26,000
80A	80	86	41-1/4	103	230	15,930	29,000
90A	90	90	45	104	230	33,500	37,000
100A	106	112	45-1/2	107	230	44,720	49,250

OTHER MODELS AVAILABLE PER CUSTOMER REQUEST



RECTANGULAR ELECTRO SUSPENDED MAGNET CROSS-BELT POSITION

NOTE: SUSPENSION HEIGHT TO BE DEFINED ON CUSTOMER APPROVAL DRAWING

TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)				STANDARD VOLTS DC	APPROX. WATTS	APPROX. WT. (lbs.)
	A	B	C	D			
25A	25	34	22-1/8	45	115	2,320	2,000
30A	30	34	23-3/8	47-1/2	115	2,750	2,560
36A	36	38	18-9/16	50-3/4	115	4,290	2,600
38A	38	43	25-7/16	55-1/2	115	4,120	4,430
43A	43	48	26-5/16	60	115	5,060	5,680
48/54M	48	54	26	64-1/4	115	6,200	6,100
48A	48	54	28-1/16	65-3/4	115	6,200	7,740
54A	54	60	29-1/2	71-1/2	230	7,560	10,580
61A	61	68	30-3/4	77-1/4	230	9,260	13,930
68A	68	77	32-3/4	85	230	11,200	19,000
72A	72	78	47	105	230	13,900	26,000
80A	80	86	41-1/4	103	230	15,930	29,000
90A	90	90	45	104	230	33,500	37,000
100A	106	112	45-1/2	107	230	44,720	49,250

OTHER MODELS AVAILABLE PER CUSTOMER REQUEST

STEARNS POWERFUL OVER-THE-BELT MAGNETS MEET YOUR FERROUS REMOVAL DEMANDS

These heavy duty electro-magnets meet the challenge for reliable tramp iron removal. Strong, deep field magnet designs remove large pieces of ferrous metals from fast moving conveyors dependably with little or no maintenance. Optimum cross section coil construction and efficient oil cooling design provide a broad deep magnetic field and long magnet life. Stearns **Over-The-Belt** Electro-Magnets withstand the most rugged and toughest ferrous metal removal applications such as extreme heat, outdoor and high dust environments.

4 PULLEY SPACE SAVING, SELF CLEANING MAGNETS

Stearns 4 Pulley design includes a rubber tramp iron discharge belt complete with stainless steel cleats that easily carry away large tramp metal from fast moving conveyors. Its very compact design and heavy channel-beam frame construction make this a versatile electro-magnet for many over-the-belt applications. It provides you with:

- **Very Low Maintenance with its Self-Cleaning Design**
- **Its Compact Design Fits Easily into Most Applications**
- **Choice of Oil Cooled or Air Cooled Models**

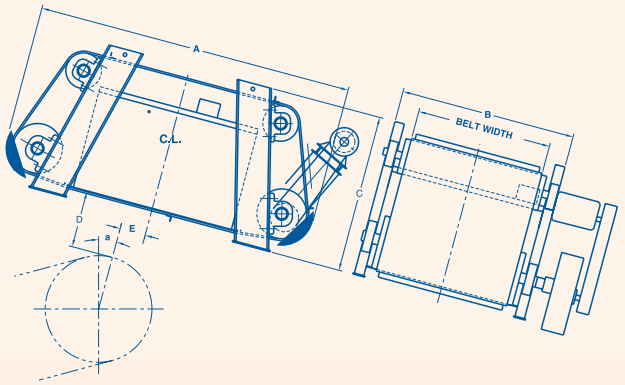
Standard Features

- High Strength, Concentrated Deep Magnetic Field
- Rugged 100% Duty-Cycle Design
- Operates in Hazardous Environments
- Heavy Duty Welded Steel Construction
- Low Maintenance and Operating Costs
- Used in Cross-Belt, In-Line or Chain Hung Applications
- Air Cooled Models for Most Applications

Optional Features

- Zero Speed Switches
- Belt Alignment Switches
- Stearns DC Power Supplies
- Permanent Magnet Extension
- Undercurrent Relay
- Fire Resistant Coolants for Hazardous Applications
- Explosion Proof Outlet Boxes
- Explosion Proof Motors
- Custom Painting
- Armor-Clad Belt
- Direct Drive
- Dust Housing

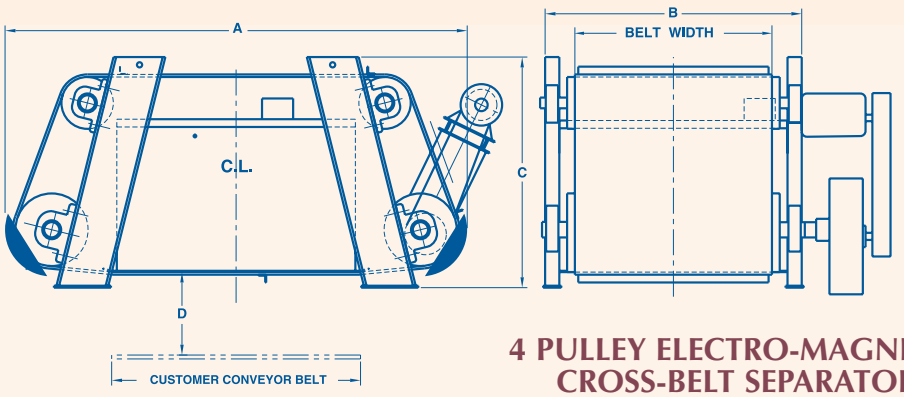
4 PULLEY ELECTRO-MAGNETIC IN-LINE SEPARATOR



TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)			STANDARD VOLTS DC	APPROX. WATTS	BELT WIDTH (in.)	DRIVE H.P.	APPROX. WT. (lbs.)
	A	B	C					
25A	72	30-1/4	37-1/8	115	2,320	20	1-1/2	2,710
30A	82-1/2	35-1/2	38-3/8	115	2,752	24	2	3,330
36A	78-3/8	41-1/2	38-3/8	115	4,290	30	3	4,500
38A	82-1/2	43-1/4	40-1/2	115	4,120	30	3	5,410
43A	89	48-1/2	41-3/8	115	5,060	36	3	6,760
48/54M	97	53-1/2	41-1/8	115	6,200	42	3	8,700
48A	97	53-1/2	43-1/8	115	6,200	42	3	8,990
54A	103-1/4	59-1/2	44-1/2	230	7,560	48	5	12,160
61A	111	66-3/4	45-3/4	230	9,260	54	5	15,660
68A	120-3/8	73-3/4	47-3/4	230	11,200	60	7-1/2	20,880
72A	120-3/4	78	57	230	13,900	66	10	28,500

DIMENSIONS "D", "E" & ANGLE α WILL BE DEFINED ON CUSTOMER APPROVAL DRAWING



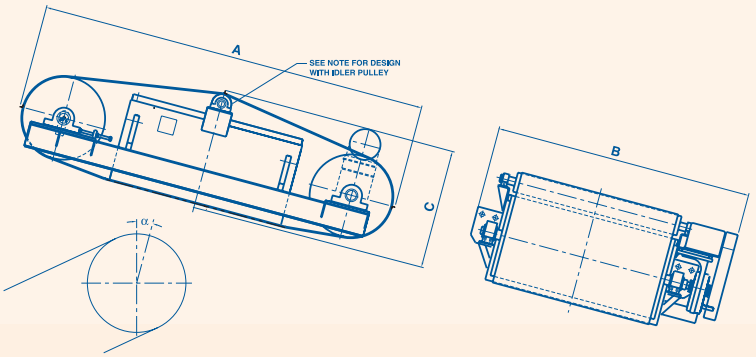
4 PULLEY ELECTRO-MAGNETIC CROSS-BELT SEPARATOR

TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)			STANDARD VOLTS DC	APPROX. WATTS	BELT WIDTH (in.)	DRIVE H.P.	APPROX. WT. (lbs.)
	A	B	C					
25A	63	39-1/4	37-1/8	115	2,320	30	2	2,860
30A	68	39-1/4	38-3/8	115	2,752	30	2	3,430
36A	76-3/8	43-1/2	38-3/8	115	4,290	32	3	4,600
38A	78	48-1/2	40-1/2	115	4,120	36	3	5,500
43A	84-1/2	53-1/2	41-3/8	115	5,060	42	3	6,900
48/54M	91	59-1/2	41-1/8	115	6,200	48	3	8,900
48A	91	59-1/2	43-1/8	115	6,200	48	5	9,170
54A	96	65-1/2	44-1/2	230	7,560	54	5	12,270
61A	103-3/4	73-3/4	45-3/4	230	9,260	60	5	15,770
68A	111-3/8	82-3/4	47-3/4	230	11,200	70	7-1/2	21,310
72A	128	84	57	230	13,900	72	10	28,500

DIMENSION "D" WILL BE DEFINED ON CUSTOMER APPROVAL DRAWING

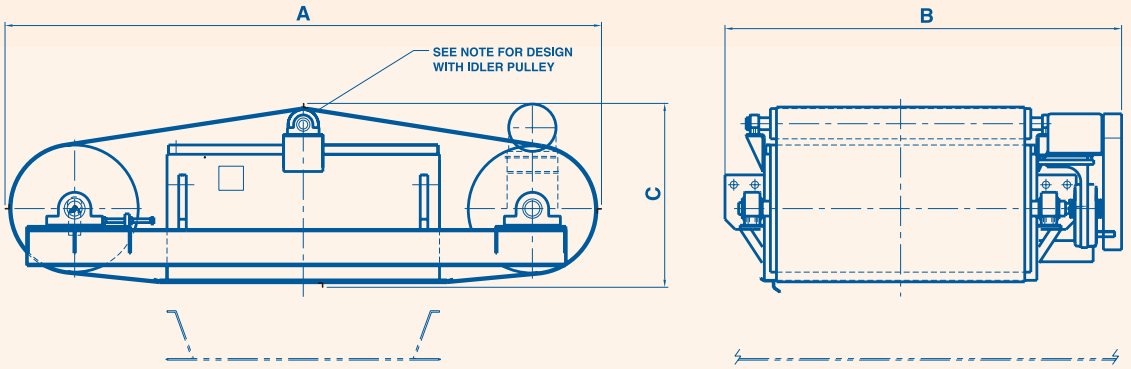
2 PULLEY ELECTRO-MAGNET IN-LINE SEPARATOR



TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)			VOLTS DC	WATTS DC	BELT WIDTH (in.)	DRIVE H.P.	APPROX. WT. (lbs.)
	A	B	C					
25A	89-1/2	50	31-1/2	115	2,320	20	1-1/2	3,200
30A	95	56	31-1/2	115	2,752	24	2	4,000
36A	94	57-3/4	25-3/4	115	4,290	30	3	4,200
38A	114	65	34-1/2	115	4,120	30	3	5,500
43A	120	68	36	115	5,060	36	3	8,400
48/54M	126	79	36	115	6,200	42	3	9,800
48A	126	79	38	115	6,200	42	5	10,000
54A	148	85	39-1/2	230	7,560	48	5	12,800
61A	145	92	36	230	9,260	54	5	16,000
68A	165	101	39-1/2	230	11,200	60	7-1/2	23,000
*72A	190	112	62	230	14,000	66	10	32,000
*80A	198	120	56	230	15,900	72	10	38,000
*90A	200	135	59	230	33,500	82	20	48,200

1) MODELS WITH * ARE THREE (3) PULLEY DESIGN • 2) ANGLE α IS DEFINED ON CUSTOMER APPROVAL DRAWING



2 PULLEY ELECTRO-MAGNET CROSS-BELT SEPARATOR

TECHNICAL SPECIFICATIONS

MODEL	DIMENSIONS (INCHES)			VOLTS DC	WATTS DC	BELT WIDTH (in.)	DRIVE H.P.	APPROX. WT. (lbs.)
	A	B	C					
25A	86-1/2	58-1/4	31-1/2	115	2,320	30	2	3,100
30A	91	59-1/2	31-1/2	115	2,752	30	2	3,900
36A	92	63-1/2	25-3/4	115	4,290	32	3	4,100
38A	109	70	34-1/2	115	4,120	36	3	5,400
43A	115	73	36	115	5,060	42	3	8,300
48/54M	120	85	36	115	6,200	42	3	9,700
48A	120	85	38	115	6,200	48	5	9,900
54A	142	91-1/2	39-1/2	230	7,560	54	5	12,700
61A	138	98	36	230	9,260	60	5	15,850
68A	156	110	39-1/2	230	11,200	70	7-1/2	22,800
*72A	184	118	62	230	14,000	72	10	31,800
*80A	192	126	56	230	15,900	78	10	37,800
*90A	200	135	59	230	33,500	82	20	48,200

1) MODELS WITH * ARE THREE (3) PULLEY DESIGN

STEARNS MAGNETIC TYPE "LD" DRUMS

Our Magnetic LD Drums are the answer for your heavy industrial applications, including:

- Scrap Shredding
- Slag Reclamation
- Tramp Iron Removal
- Ore Cobbing

Stearns' **Patented Coil Design** develops deep magnetic field with minimum DC power cost. Our electro-magnet drum opens the way to new efficiency in handling large volumes of large size material encountered in today's scrap processing and mineral concentration applications. Our patented coil construction produces a concentrated deep magnetic field to maximize ferrous recovery.

The drum consists of an electro-magnet assembly mounted inside an outer rotating drum assembly. The magnet assembly position, although stationary during operation, may be adjusted within certain limits to meet varying feed arrangements. These versatile products offer you:

Exceptional Construction Features

- Superior Deep Field Design
- Heavy Duty Manganese Steel Cylinders with Knock-Offs
- Rugged Weather Proof Construction
- Radial or Alternating Pole Designs

Available Options

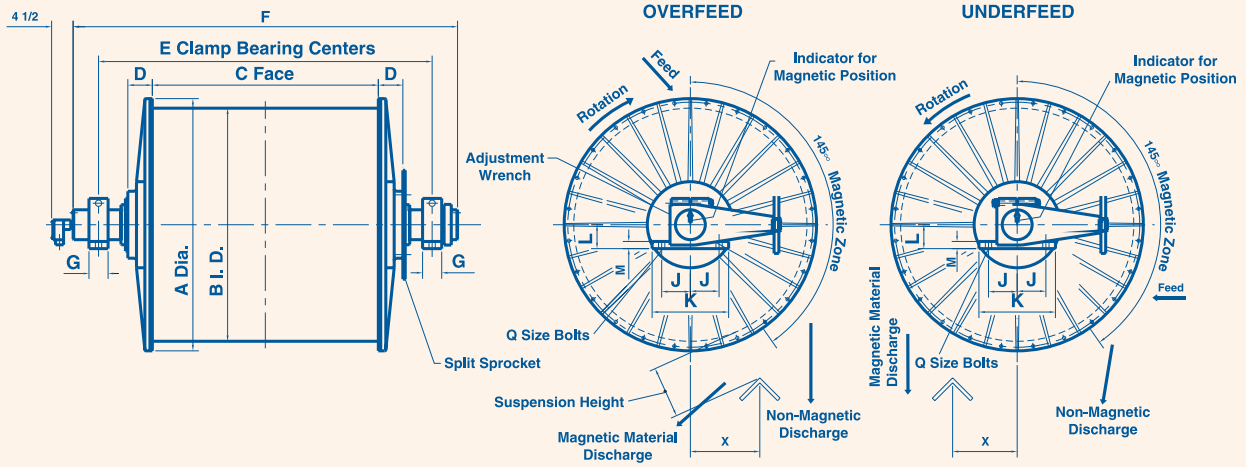
- 6"-8" High Side Shields Bolted to the Drum Heads
- 2 Piece, Heavy Duty Split-Wear Covers
- Your Choice of Knock-Off Patterns
- Permanent Magnet Designs

STEARNS MAGNETIC AXIAL POLE DRUMS

Our Electro-Magnetic Alternating Pole LDA Drum Separators offers the industry a perfect complement to the well-established Stearns **Radial Pole "LD" Drum.** This high performance design offers a uniform, magnetic field across the full working width of the drum for maximum efficiency, less cylinder wear and less down time. Opposing north and south poles create a vigorous agitation for superior liberation of non-ferrous waste and a clean, less contaminated product that provides you additional value.

ELECTROMAGNETIC DRUMS LD-RADIAL DESIGN

DIMENSION "X" TO BE DEFINED ON CUSTOMER APPROVAL DRAWING

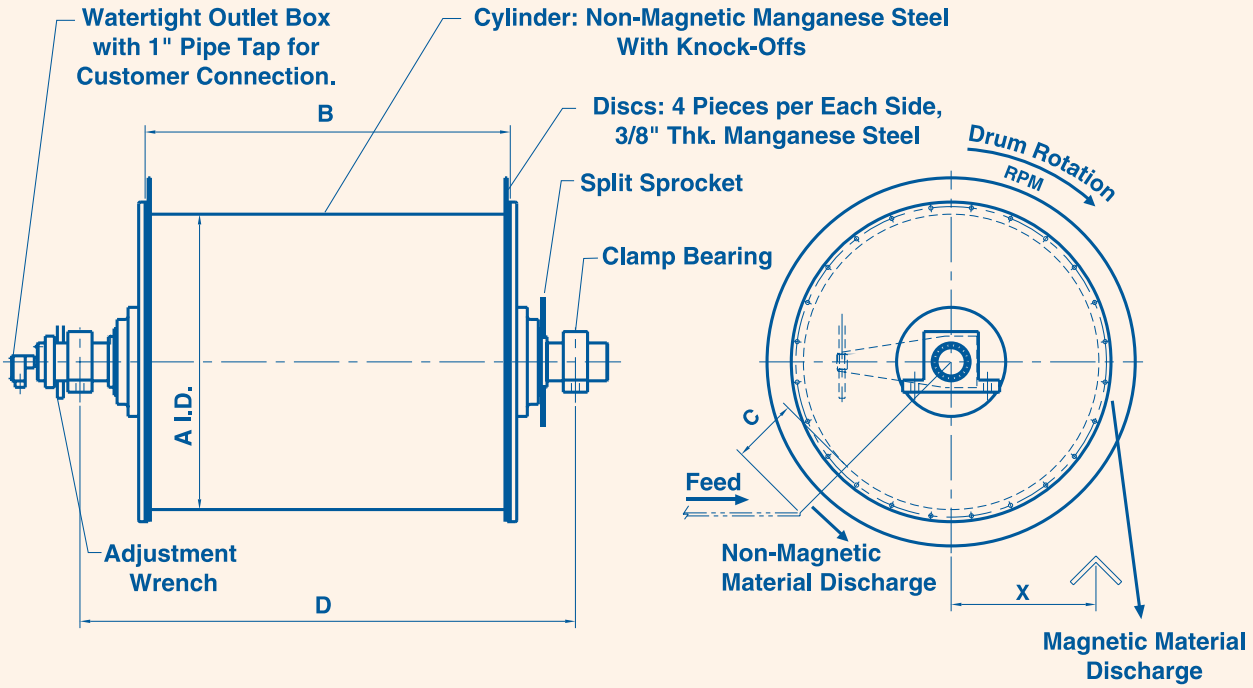


TECHNICAL SPECIFICATIONS AND DIMENSIONS (INCHES)

SIZE	WATTS	SHIP. WT. (lbs.)	DIMENSIONS (INCHES)											DRUM SPEED (RPM) FEED	
			A	B	C	E	F	G	J	K	L	M	Q	UNDER	OVER
3036	1800	4400	33	30	35-1/4	54-3/4	66-3/4	3-1/2	4-1/2	11	3-1/2	1-1/4	3/4	35	30
3048	1825	5000	33	30	47-1/4	66-3/4	78-3/4	3-1/2	4-1/2	11	3-1/2	1-1/4	3/4	35	30
3060	2970	7100	33	30	59-1/4	78-3/4	90-3/4	3-1/2	4-1/2	11	3-1/2	1-1/4	3/4	35	30
3636	3200	4000	41-1/2	36	35-1/2	52-1/2	61-1/2	3-1/2	5-1/2	15	4-1/2	1-1/4	1	35	25
3642	3400	4520	41-1/2	36	41-1/2	58-1/2	67-1/2	3-1/2	5-1/2	15	4-1/2	1-1/4	1	35	25
3648	3800	5200	41-1/2	36	47-1/2	64-1/2	73-1/2	3-1/2	5-1/2	15	4-1/2	1-1/4	1	35	25
3654	4100	5800	41-1/2	36	53-1/2	70-1/2	49-1/2	3-1/2	5-1/2	15	4-1/2	1-1/4	1	35	25
3660	4400	6300	41-1/2	36	59-1/2	76-1/2	85-1/2	3-1/2	5-1/2	15	4-1/2	1-1/4	1	35	25
3672	5200	7600	41-1/2	36	71-1/2	88-1/2	97-1/2	3-1/2	5-1/2	15	4-1/2	1-1/4	1	35	25
4248	4600	6600	46-3/4	42	47-1/2	69-1/2	80	4	6	16	5	1-1/2	1-1/4	35	25
4254	5000	7300	46-3/4	42	53-1/2	75-1/2	86	4	6	16	5	1-1/2	1-1/4	35	25
4260	5400	8200	46-3/4	42	59-1/2	81-1/2	92	4	6	16	5	1-1/2	1-1/4	35	25
4272	6400	10,000	46-3/4	42	71-1/2	93-1/2	104	4	6	16	5	1-1/2	1-1/4	35	25
4848	5500	9300	52-3/4	48	47-1/2	69-1/2	80	4	6	16	5	1-1/2	1-1/4	30	23
4854	5800	9200	52-3/4	48	53-1/2	75-1/2	86	4	6	16	5	1-1/2	1-1/4	30	23
4860	6300	10,500	52-3/4	48	59-1/2	81-1/2	92	4	6	16	5	1-1/2	1-1/4	30	23
4872	7300	13,000	52-3/4	48	71-1/2	93-1/2	104	4	6	16	5	1-1/2	1-1/4	30	23
4884	7500	14,000	52-3/4	48	84	106	116	4	6	16	5	1-1/2	1-1/4	30	23
4896	9100	15,000	52-3/4	48	96	118	128	4	6	16	5	1-1/2	1-1/4	30	23
5454	6900	10,500	58-3/4	54	53-1/2	75-1/2	86	4	7-1/2	19	6	2	1-1/4	30	22
5460	7400	11,500	58-3/4	54	59-1/2	81-1/2	92	4	7-1/2	19	6	2	1-1/4	30	22
5472	8500	16,500	58-3/4	54	71-1/2	93-1/2	104	4	7-1/2	19	6	2	1-1/4	30	22
5484	8200	17,000	58-3/4	54	83-1/2	104	117	4	7-1/2	19	6	2	1-1/4	30	22
5496	8200	17,700	58-3/4	54	95-1/2	116	129	4	7-1/2	19	6	2	1-1/4	30	22
6060	8700	18,000	64-3/4	60	59-1/2	81-1/2	92	4	7-1/2	19	6	2	1-1/4	30	21
6072	9500	19,600	64-3/4	60	71-1/2	93-1/2	104	4	7-1/2	19	6	2	1-1/4	30	21
6084	9700	25,000	64-3/4	60	83-1/2	104	116	4	7-1/2	19	6	2	1-1/4	30	21

ELECTROMAGNETIC DRUMS LDA-AXIAL DESIGN

DIMENSION "X" TO BE DEFINED ON CUSTOMER APPROVAL DRAWING



TECHNICAL SPECIFICATIONS AND DIMENSIONS (INCHES)

SIZE	WATTS		SHIP. WT. (lbs.)		DIMENSIONS (INCHES)				DRUM SPEED (RPM)
	STANDARD	SUPER	STANDARD	SUPER	A	B	C	D	
4860	6,200	6,200	10,000	10,500	48	60	9-10	82	20-25
4872	8,200	8,550	12,000	13,800	48	72	9-10	93-1/4	20-25
4884	10,000	10,300	13,700	16,000	48	84	9-10	105-1/4	20-25
4896	12,500	12,500	15,200	17,200	48	96	9-10	115-1/4	20-25
5472	10,500	10,450	14,000	19,500	54	72	10-11	93-1/4	20
5484	11,500	10,100	16,000	21,500	54	84	10-11	105-1/4	20
5496	12,500	12,500	18,000	18,000	54	96	10-11	115-1/4	20
6060	9,200	9,200	13,500	15,500	60	60	10-12	80	17-20
6072	12,500	11,500	16,000	22,000	60	72	10-12	93-1/4	17-20
6084	13,500	12,450	18,500	24,300	60	84	10-12	105-1/4	17-20
6096	14,000	13,400	22,000	26,600	60	96	10-12	115-1/4	17-20
7296		18,000		33,000	72	96	14	115-1/4	17
72110		20,000		37,000	72	110	14	130	17

STEARNS CERAMIC 8 PERMANENT MAGNETIC DRUM SEPARATORS

These separators provide automatic and continuous removal of tramp iron in process industries, including: ceramics, chemicals, foods, grain, minerals, plastics, rubber and tobacco. The **Ceramic 8 Separator** offers positive protection and low cost, lifetime dependability. Inspired by the design advantages of the **Ceramic 8,** Stearns engineers pioneered a new era in the development of efficient magnetic separation equipment. In the **Ceramic 8,** the exclusive ceramic magnet assembly produces a uniform magnetic field…**to 40% more powerful** than in ordinary permanent magnet systems.

IDEAL FOR SPOUT SYSTEMS!

Here is a unit that is ideal for process industries wherever granular or pulverized materials are conveyed in closed chutes and spouts. The **Ceramic 8 Drum Separator** continuously and automatically removes tramp iron, carries it out of the material flow and returns a clean product to the production process.

WORKING PRINCIPLE IS SIMPLE

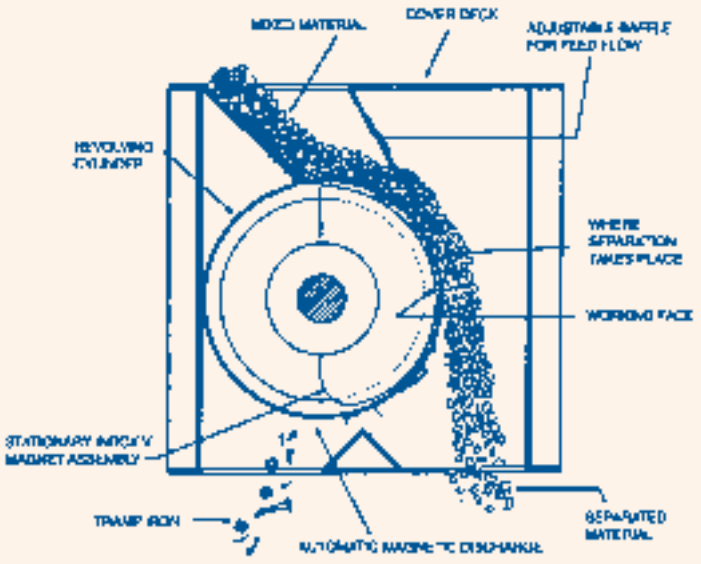
In operation, the **Ceramic 8 Drum Separator** consists of a revolving non-magnetic cylinder inside a steel welded housing. Material is fed onto the cylinder at the top and is carried over the stationary magnet assembly (**see illustration**). The deep uniform field attracts and holds tramp iron particles beyond the discharge of the clean, non-magnetic product. Tramp iron is released into a separate discharge as it passes out of the magnetic field.

IMPORTANT FEATURES…deliver superior performance

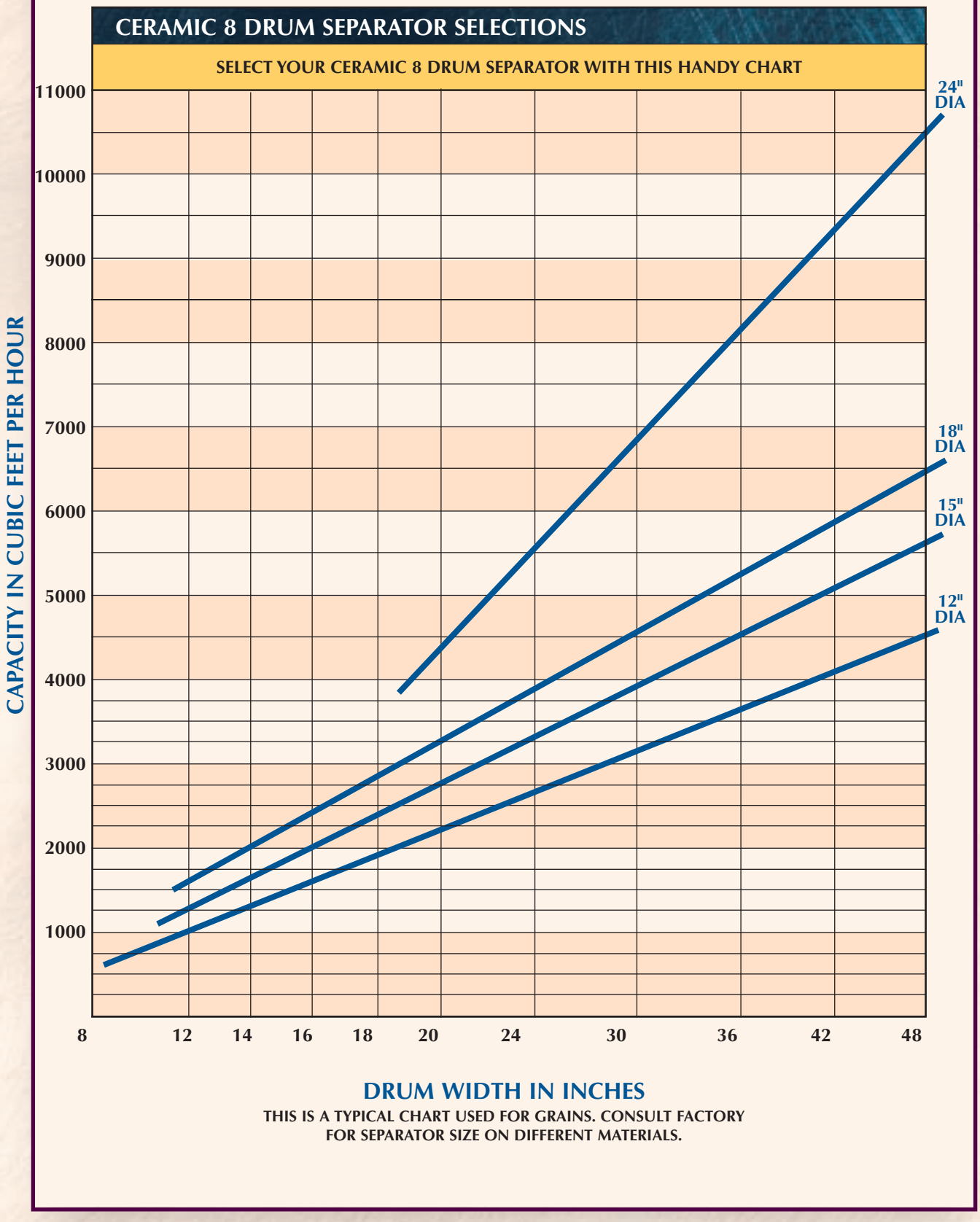
There are numerous important features built into the Stearns **Ceramic 8 Drum Separator** and all are designed to provide superior performance and service, including:

- **Reliable Holding Power at drum surface assures positive attraction and transportation of tramp iron particles**
- **Factory Sealed Bearings**
- **Optional Spouting Arrangements**
- **Direct Gear-Motor Drive eliminates belts, chains or sprockets**
- **Flanged Housing mounts easily in any spouting system**
- **Totally Enclosed with dust protective housing**
- **Ceramic 8 Magnet Assembly is lightweight and provides resistance to demagnetization**
- **Rare Earth Magnetic Field Models are available on request**

CERAMIC 8 DRUM SEPARATOR



STEARNS CERAMIC 8 PERMANENT MAGNETIC DRUM SEPARATORS



THIS IS A TYPICAL CHART USED FOR GRAINS. CONSULT FACTORY FOR SEPARATOR SIZE ON DIFFERENT MATERIALS.

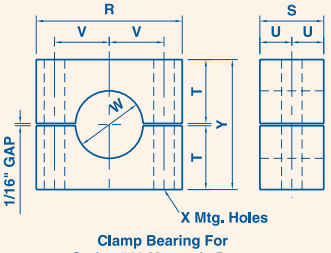
SERIES 510

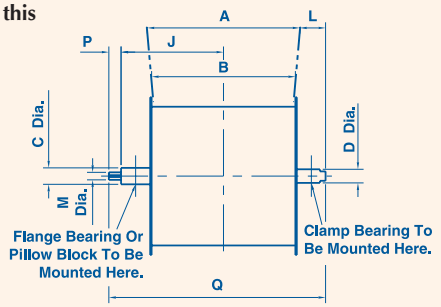
TECHNICAL SPECIFICATIONS AND DIMENSIONS (INCHES)

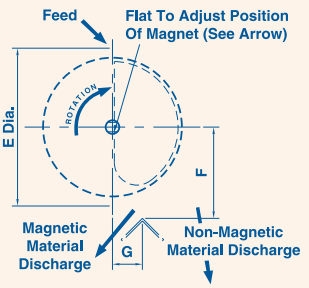
A	B	C*	D*	E*	F*	G*	J	L*	M	P*	Q	Mech. H.P. Req'd	Approx. R.P.M. Req'd	Ship.Wt. (lbs)
12-INCH DIAMETER														
8	7	1-15/16	1-9/16	13-1/8	7-1/4	2-1/4	7-1/4	3-1/4	1	1-1/8	15-5/8	1/4	58	120
12	11	↓	↓	↓	↓	↓	9-1/4	↓	↓	↓	19-5/8	1/4	↓	135
14	13	↓	↓	↓	↓	↓	10-1/4	↓	↓	↓	21-5/8	1/4	↓	150
16	15	↓	↓	↓	↓	↓	11-1/4	↓	↓	↓	23-5/8	1/4	↓	175
18	17	↓	↓	↓	↓	↓	12-1/4	↓	↓	↓	25-5/8	1/3	↓	185
20	19	↓	↓	↓	↓	↓	13-1/4	↓	↓	↓	27-5/8	1/3	↓	195
24	23	↓	↓	↓	↓	↓	15-1/4	↓	↓	↓	31-5/8	1/3	↓	215
30	29	↓	↓	↓	↓	↓	18-1/4	↓	↓	↓	37-5/8	1/3	↓	255
36	35	↓	↓	↓	↓	↓	21-1/4	↓	↓	↓	43-5/8	1/2	↓	285
42	41	↓	↓	↓	↓	↓	24-1/4	↓	↓	↓	49-5/8	1/2	↓	335
48	47	↓	↓	↓	↓	↓	27-1/4	↓	↓	↓	55-5/8	1/2	↓	350
15-INCH DIAMETER														
12	11	1-15/16	1-9/16	17	9-1/4	2-1/4	9-1/4	3-1/4	1	1-5/8	20-1/8	1/4	58	260
14	13	↓	↓	↓	↓	↓	10-1/4	↓	1	↓	22-1/8	1/4	↓	320
16	15	↓	↓	↓	↓	↓	11-1/4	↓	1	↓	24-1/8	1/3	↓	335
18	17	↓	↓	↓	↓	↓	12-1/4	↓	1	↓	26-1/8	1/3	↓	350
20	19	↓	↓	↓	↓	↓	13-1/4	↓	1	↓	28-1/8	1/3	↓	370
24	23	↓	↓	↓	↓	↓	15-1/4	↓	1	↓	32-1/8	1/2	↓	435
30	29	↓	↓	↓	↓	↓	18-1/4	↓	1	↓	38-1/8	1/2	↓	480
36	35	↓	↓	↓	↓	↓	21-1/4	↓	1	↓	44-1/8	1/2	↓	550
42	41	↓	↓	↓	↓	↓	24-1/4	↓	1-1/4	↓	50-1/8	3/4	↓	610
48	47	↓	↓	↓	↓	↓	27-1/4	↓	1-1/4	↓	56-1/8	3/4	↓	685
18-INCH DIAMETER														
12	11	2-3/16	1-3/16	21	12-3/4	3-1/2	9-5/8	3-1/2	1	1-5/8	20-3/4	1/3	43	360
14	13	↓	↓	↓	↓	↓	10-5/8	↓	1	↓	22-3/4	1/3	↓	410
16	15	↓	↓	↓	↓	↓	11-5/8	↓	1	↓	24-3/4	1/3	↓	455
18	17	↓	↓	↓	↓	↓	12-5/8	↓	1	↓	26-3/4	1/2	↓	490
20	19	↓	↓	↓	↓	↓	13-5/8	↓	1	↓	28-3/4	1/2	↓	530
24	23	↓	↓	↓	↓	↓	15-5/8	↓	1	↓	32-3/4	1/2	↓	590
30	29	↓	↓	↓	↓	↓	18-5/8	↓	1-1/4	↓	38-3/4	3/4	↓	725
36	35	↓	↓	↓	↓	↓	21-5/8	↓	1-1/4	↓	44-3/4	3/4	↓	755
42	41	↓	↓	↓	↓	↓	24-5/8	↓	1-1/4	↓	50-3/4	1	↓	1075
48	47	↓	↓	↓	↓	↓	27-5/8	↓	1-1/4	↓	56-3/4	1	↓	1330
24-INCH DIAMETER														
18	17	2-7/16	2-1/16	27-1/4	17-1/8	4-1/2	13	4	1-1/4	1-3/4	27-3/4	3/4	43	885
20	19	↓	↓	↓	↓	↓	14	↓	1-1/4	↓	29-3/4	3/4	↓	930
24	23	↓	↓	↓	↓	↓	16	↓	1-1/4	↓	33-3/4	3/4	↓	1050
30	29	↓	↓	↓	↓	↓	19	↓	1-1/2	↓	39-3/4	1	↓	1400
36	35	↓	↓	↓	↓	↓	22	↓	1-1/2	↓	45-3/4	1	↓	1600
42	41	↓	↓	↓	↓	↓	25	↓	1-1/2	↓	51-3/4	1-1/2	↓	1740
48	47	↓	↓	↓	↓	↓	28	↓	1-1/2	↓	57-3/4	1-1/2	↓	2130

* Where only one dimension appears in the column, this dimension is the same for all separators in group.

Stearns **Series 510 Ceramic 8 Drum (Only)** *is supplied without housing. Can be installed directly in spout system or equipped with special enclosure to meet your needs.*







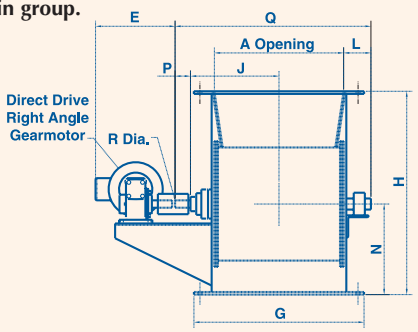
SIZE DRUM DIA.	R	S	T	V	U	W	X	Y	WEIGHT (lbs)
12	3-1/4	1-1/2	1-1/2	1-3/8	3/4	1-19/32	9/16	3-1/16	3.50
15	3-1/4	1-1/2	1-1/2	1-3/8	3/4	1-19/32	9/16	3-1/16	3.50
18	4	1-3/4	1-1/4	1-1/2	7/8	1-27/32	9/16	3-9/16	5.25
24	4-1/4	2	2	1-3/4	1	2-3/32	11/16	4-1/16	8.00

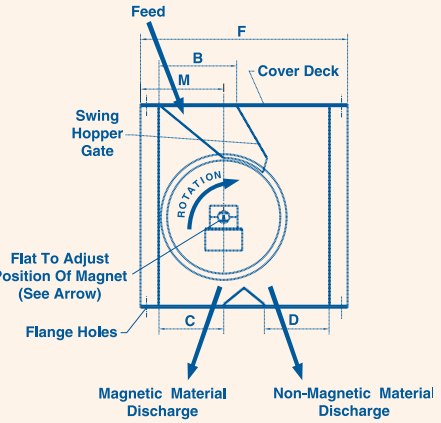
SERIES 520

TECHNICAL SPECIFICATIONS AND DIMENSIONS (INCHES)

A	B*	C*	D*	E	F	G	H*	J	L*	M*	N*	P*	Q	R	Flange Holes	Mech. H.P. Req'd	Approx. R.P.M. Req'd	Ship.Wt. (lbs)
12-INCH DIAMETER																		
8	8-1/2	7	7	11-3/16	21-1/2	11-1/2	22	7-1/4	3-1/4	8-1/2	9-1/2	1-1/8	15-5/8	1	11/32	1/4	58	170
12	↓	↓	↓	11-3/16	↓	15-1/2	↓	9-1/4	↓	↓	↓	↓	19-5/8	↓	↓	1/4	↓	195
14	↓	↓	↓	11-3/16	↓	17-1/2	↓	10-1/4	↓	↓	↓	↓	21-5/8	↓	↓	1/4	↓	215
16	↓	↓	↓	11-3/16	↓	19-1/2	↓	11-1/4	↓	↓	↓	↓	23-5/8	↓	↓	1/4	↓	245
18	↓	↓	↓	11-3/16	↓	21-1/2	↓	12-1/4	↓	↓	↓	↓	25-5/8	↓	↓	1/3	↓	260
20	↓	↓	↓	11-3/16	↓	23-1/2	↓	13-1/4	↓	↓	↓	↓	27-5/8	↓	↓	1/3	↓	275
24	↓	↓	↓	11-3/16	↓	27-1/2	↓	15-1/4	↓	↓	↓	↓	31-5/8	↓	↓	1/3	↓	305
30	↓	↓	↓	11-3/16	↓	33-1/2	↓	18-1/4	↓	↓	↓	↓	37-5/8	↓	↓	1/3	↓	360
36	↓	↓	↓	12-3/16	↓	39-1/2	↓	21-1/4	↓	↓	↓	↓	43-5/8	↓	↓	1/2	↓	405
42	↓	↓	↓	12-3/16	↓	45-1/2	↓	24-1/4	↓	↓	↓	↓	49-5/8	↓	↓	1/2	↓	470
48	↓	↓	↓	12-3/16	↓	51-1/2	↓	27-1/4	↓	↓	↓	↓	55-5/8	↓	↓	1/2	↓	500
15-INCH DIAMETER																		
12	10-1/2	8-3/4	8-3/4	11-3/16	28	17	27-1/2	9-1/4	3-1/4	11-1/4	12-1/4	1-5/8	20-1/8	1	11/32	1/4	58	315
14	↓	↓	↓	11-3/16	↓	19-1/2	↓	10-1/4	↓	↓	↓	↓	22-1/8	1	↓	1/4	↓	380
16	↓	↓	↓	11-3/16	↓	21-1/2	↓	11-1/4	↓	↓	↓	↓	24-1/8	1	↓	1/3	↓	400
18	↓	↓	↓	11-3/16	↓	23-1/2	↓	12-1/4	↓	↓	↓	↓	26-1/8	1	↓	1/3	↓	420
20	↓	↓	↓	11-3/16	↓	25	↓	13-1/4	↓	↓	↓	↓	28-1/8	1	↓	1/3	↓	450
24	↓	↓	↓	12-3/16	↓	29	↓	15-1/4	↓	↓	↓	↓	32-1/8	1	↓	1/2	↓	530
30	↓	↓	↓	12-3/16	↓	35	↓	18-1/4	↓	↓	↓	↓	38-1/8	1	↓	1/2	↓	600
36	↓	↓	↓	12-3/16	↓	41	↓	21-1/4	↓	↓	↓	↓	44-1/8	1	↓	1/2	↓	670
42	↓	↓	↓	12-3/16	↓	47	↓	24-1/4	↓	↓	↓	↓	50-1/8	1-1/4	↓	3/4	↓	750
48	↓	↓	↓	12-3/16	↓	53	↓	27	↓	↓	↓	↓	56-1/8	1-1/4	↓	3/4	↓	830
18-INCH DIAMETER																		
12	14	12	12	11-3/16	35	17	35	9-1/8	3-1/2	14	16	1-5/8	20-3/4	1	13/32	1/3	43	425
14	↓	↓	↓	11-3/16	↓	19	↓	10-5/8	↓	↓	↓	↓	22-3/4	1	↓	1/3	↓	470
16	↓	↓	↓	11-3/16	↓	21	↓	11-5/8	↓	↓	↓	↓	24-3/4	1	↓	1/3	↓	510
18	↓	↓	↓	12-3/16	↓	23	↓	12-5/8	↓	↓	↓	↓	26-3/4	1	↓	1/2	↓	550
20	↓	↓	↓	12-3/16	↓	25	↓	13-5/8	↓	↓	↓	↓	28-3/4	1	↓	1/2	↓	595
24	↓	↓	↓	12-3/16	↓	29	↓	15-5/8	↓	↓	↓	↓	32-3/4	1	↓	1/2	↓	660
30	↓	↓	↓	12-3/16	↓	35	↓	18-5/8	↓	↓	↓	↓	38-3/4	1-1/4	↓	3/4	↓	800
36	↓	↓	↓	12-3/16	↓	41	↓	21-5/8	↓	↓	↓	↓	44-3/4	1-1/4	↓	3/4	↓	940
42	↓	↓	↓	12-3/16	↓	47	↓	24-5/8	↓	↓	↓	↓	50-3/4	1-1/4	↓	1	↓	1175
48	↓	↓	↓	12-3/16	↓	53	↓	27-5/8	↓	↓	↓	↓	56-3/4	1-1/4	↓	1	↓	1445
24-INCH DIAMETER																		
18	19-1/2	17	17	12-3/16	48	24	48	13	4	19-1/2	21-1/2	1-3/4	27-3/4	1-1/4	9/16	3/4	43	945
20	↓	↓	↓	12-3/16	↓	26	↓	14	↓	↓	↓	↓	29-3/4	1-1/4	↓	3/4	↓	1000
24	↓	↓	↓	12-3/16	↓	30	↓	16	↓	↓	↓	↓	33-3/4	1-1/4	↓	3/4	↓	1140
30	↓	↓	↓	13-3/8	↓	36	↓	19	↓	↓	↓	↓	39-3/4	1-1/2	↓	1	↓	1520
36	↓	↓	↓	13-3/8	↓	42	↓	22	↓	↓	↓	↓	45-3/4	1-1/2	↓	1	↓	1750
42	↓	↓	↓	14-5/16	↓	48	↓	25	↓	↓	↓	↓	51-3/4	1-1/2	↓	1-1/2	↓	1920
48	↓	↓	↓	14-5/16	↓	54	↓	28	↓	↓	↓	↓	57-3/4	1-1/2	↓	1-1/2	↓	2340

* Where only one dimension appears in the column, this dimension is the same for all separators in group.





Stearns **Series 520 Ceramic 8 Drum Separator,** *for vertical spouting systems, provides openings for discharge of tramp iron and clean product in an integral housing*

STEARNS "WPD" WET MAGNETIC DRUM SEPARATORS

APPLICATION

Wet drum separators are used in magnetic media recovery, purification of solids carried in liquid suspension and in iron ore concentration. Stearns has developed a specific line of separators for handling slurries developed in heavy media plants. These heavy media plants require:

1. Magnetic separators which recover magnetics contained in feed slurries as efficiently as possible, to reduce the per ton/media consumption of treated product to a minimum.
2. Recovery of magnetic solids in as clean a magnetic concentrate as possible, to keep the separating bath at a low viscosity, and to eliminate a misplaced product.
3. A high gravity magnetic discharge to eliminate, in many instances, the need for a densifier. A high gravity concentrate simplifies plant operation.
4. Trouble-free operation with minimum down time, minimum operator attention and minimum cost.

Available Features

- 30", 36" and 48" Diameters
- Drum Widths Up to 120"
- Con-Current or Counter-current Models
- Standard or High Gauss Magnet Assemblies
- Single or Double Drum Units
- Stainless Steel Wear Covers
- Direct Drive
- High Volume Models
- Self-Leveling Design

FACTORS INFLUENCING SEPARATOR SELECTIONS

Five basic factors influence proper selection of a magnetic separator in terms of drum diameter, magnetic width, and type of wet drum separator for use in a specific application. These are:

1. Volume of Slurry to be Handled
2. Percent of Solids in Rinse Slurry
3. Percent of Magnetics in Feed Solids of the Rinse Slurry
4. Required Magnetics Recovery Efficiency
5. Cleanliness Required in the Magnetic Concentrate Products

One of the features of Stearns magnetic separator is its ability to handle widely fluctuating fluids. Thus, applications can be found lying outside the service limits indicated. However, the limits outlined below are basic guide lines which assure efficient magnetic separator performance. These guide lines will indicate changes that can be made in existing plants to improve media recovery efficiency. Each factor must be considered jointly for each individual application. FEED VOLUME*...Feed volume should not exceed 75 gpm/ft. of magnet width on a 30 in. diameter single drum separator. If feed volumes up to 90 gpm/ft. must be handled, a double-drum separator (rougher-scavenger model), in which the primary drum tailing and overflow product are sent to the secondary drum, should be applied. Efficient magnetic recovery cannot be excepted at rates beyond 90 gpm/ft. PERCENT SOLIDS in FEED*...The ratio of magnetic solids to non-magnetic solids cannot be efficiently insolated from total percent solids in evaluating magnetic recovery. As a general rule, the limiting recommended feed solids in a media recovery circuit is 50%. Variations of the ratio of magnetics to non-magnetics solids within this solids range can produce many potential feed flurries. The recommended maximum percent of solids for a single drum separator is 15% for con-current separators, 20% solids maximum can be tolerated without losing magnetic efficiency. Beyond 20% solids double-drum separators (rougher-scavenger) are recommended. In cases where the feed slurry goes above 30% solids, which sometimes occurs when a cyclone is being used to thicken a dilute rinse slurry product, sufficient water should be added in the feed box of the primary separator to bring it down to the 30% solids figure. % OF MAGNETICS IN FEED SOLIDS OF THE RINSE SLURRY*...The ratio to non-magnetic solids will influence the purity of the concentrated obtained. The non-magnetic content tends to deter magnetic cleaning when the non-magnetic to magnetic ratio exceeds 40% by weight. If the feed pulp is sufficiently diluted (below 20% solids), purity of the magnetic concentrate will not be seriously affected at the 40% figure. When the total solids figure exceeds 20%, and when the non-magnetic to magnetic solids ratio exceeds 40%, it is difficult to obtain a high purity concentrate. This lopsided condition usually occurs in plants using reclaimed water and is alleviated by pulp dilution; or by running the media through the magnetic separator while the plant is not running, thus further rejecting non-magnetics. A primary limitation in magnetic separator selection, influenced by percent magnetics in the solids, is the magnetic discharge loading on the magnetic separator. Single-drum 30 in. diameter con-current separators should be limited to 3 tph of magnetic discharge per ft. of magnet width. These magnetic discharge limits are suggested in line with good magnetic cleaning at good magnetic recovery efficiencies. Counter-current separators can retain magnetic recovery at a sacrifice in magnetic cleaning at a discharge rate 30% higher than the above figures. A double-drum magnetic separator will permit the magnetic discharge rate to increase to as much as 30% above the indicated single-drum rate. Optimum magnetic cleaning and recovery at this increased rate can be obtained with a double-drum separator with con-current primary drum and a counter-current secondary drum as indicated on Page 26 in Figure #4. The counter-current separator is selected when feed characteristics are variable as to tonnage of magnetic solids and feed volumes. Efficient washing of the drum must be provided at the magnetic discharge point to prevent carry over of the magnetics on the drum. DOUBLE DRUM TYPE WPD SEPARATORS...Double Drum separators are available in two basic types, depending on tank configuration use: 1. Double con-current tank arrangement shown on Page 26 in Figure #3. 2. Con-current primary with counter-current secondary shown on Page 26 in Figure #4. Double drum separators will either: Give a higher magnetic recovery as compared to single drum units when operated at recommended 75 gpm/ft. 30" diameter or 95 gpm/ft. for 36" diameter volume; or will permit higher feed volumes while obtaining the same recovery as can be reached at lower rates on single drum separators.
* NOTE: Add 20% to the above volume on magnetic discharge rate for 36" diameter models.

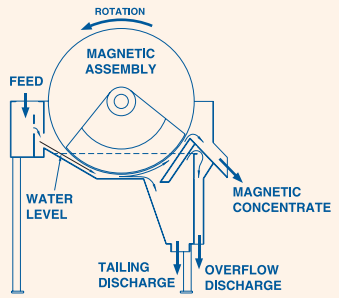
STEARNS "WPD" WET MAGNETIC DRUM SEPARATORS

CON-CURRENT SINGLE DRUM TYPE WPD

The con-current tank arrangement is shown in **Figure 1.** This separator is probably the most commonly used type in heavy media today. It gives:

1. Minimum wear on the cylinder, since it introduces the feed slurry in the same direction as the drum is traveling.
2. Maximum cleaning of magnetic solids since all recovered magnetics must traverse the full magnet arc and be subjected to numerous changes in magnet polarity.
3. Material passing wash spray is automatically returned to feed point, possibly of magnetic loss reduced.
4. Highest magnetic solids discharge since it produces best squeezing action at magnetic discharge point and can be operated with a minimum wash spray or with a drum wiper, if necessary.

Fig. 1 *The con-current drum separator is one of the basic types used today*



CON-CURRENT STYLE MODEL MI

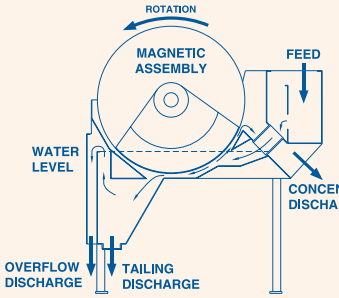


Fig. 2 *Feed and rotation are in opposite direction in the counter-current*

COUNTER-CURRENT STYLE MODEL MIC

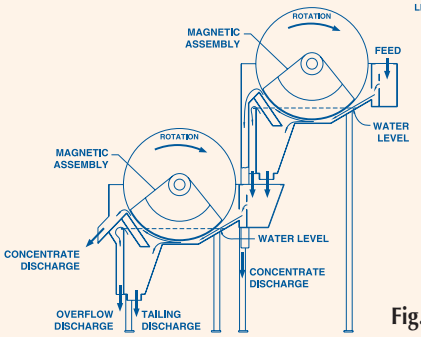
COUNTER-CURRENT SINGLE DRUM TYPE WPD

The counter-current tank arrangement is shown in **Figure 2.** The counter-current separator's advantages include:

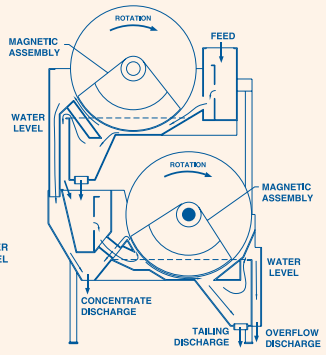
1. Maximum Magnetic Recovery, since the magnetics are recovered and transported a short distance into the magnetic discharge chute. Magnetics missed in the initial pick-up are scavenged out by the remaining poles of the magnet assembly. However, the short recovery zone does reduce the cleanliness of the magnetic concentrate.
2. Heavy Magnetic Loads can be handled without serious reduction of high magnetic recovery, due to the short transportation and scavenging features.
3. Less susceptibility to loss of magnetic efficiency at high feed volumes. Feeds as high as 80 gpm/ft. can be handled efficiently on this counter-current separator.
4. Magnetic discharge on feed side of separator. This sometimes makes plant layout easier.

OPTIONAL CONFIGURATIONS OF *STEARNS* WET MAGNETIC SEPARATORS

Fig. 3 *Principles of operation of the double drum con-current wet type separator for magnetic media*



MODEL MI/MI



MODEL MI/MIC

Fig. 4 *Principles of operation of concurrent primary counter-current secondary double drum wet permanent separator*

STEARNS HIGH VOLUME WET PERMANENT MAGNETIC DRUM SEPARATOR

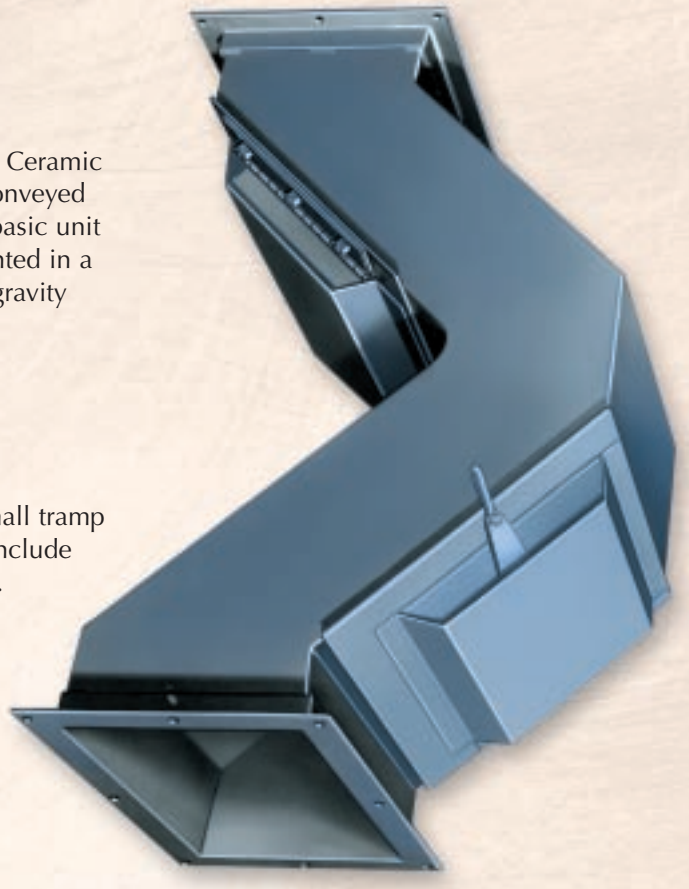
Stearns' "HV"-High Volume, Wet Permanent Magnetic Separator is designed to handle the demands of increased production rates without adding additional drums to your circuit. The drum utilizes a wider arc magnet to increase retention time for maximum magnetic recovery. The interpole magnet arrangement allows for numerous polarity changes to improve the cleaning of recovered magnetics.

This high volume separator provides you with these features:

- Increased Capacity
- Maximum Magnetic Recovery
- Heavy-Duty Stainless Steel Construction on tank and feed box
- Low Maintenance

STEARNS CERAMIC 2-STAGE MAGNETIC SEPARATOR

For handling a heavy flow at high speeds, the efficient Ceramic Magnetic Hump removes tramp iron from materials conveyed pneumatically or in free-flowing gravity systems. The basic unit consists of two 350-A permanent plate magnets mounted in a welded steel housing. Installation may be vertical for gravity systems or horizontal for pneumatic lines.

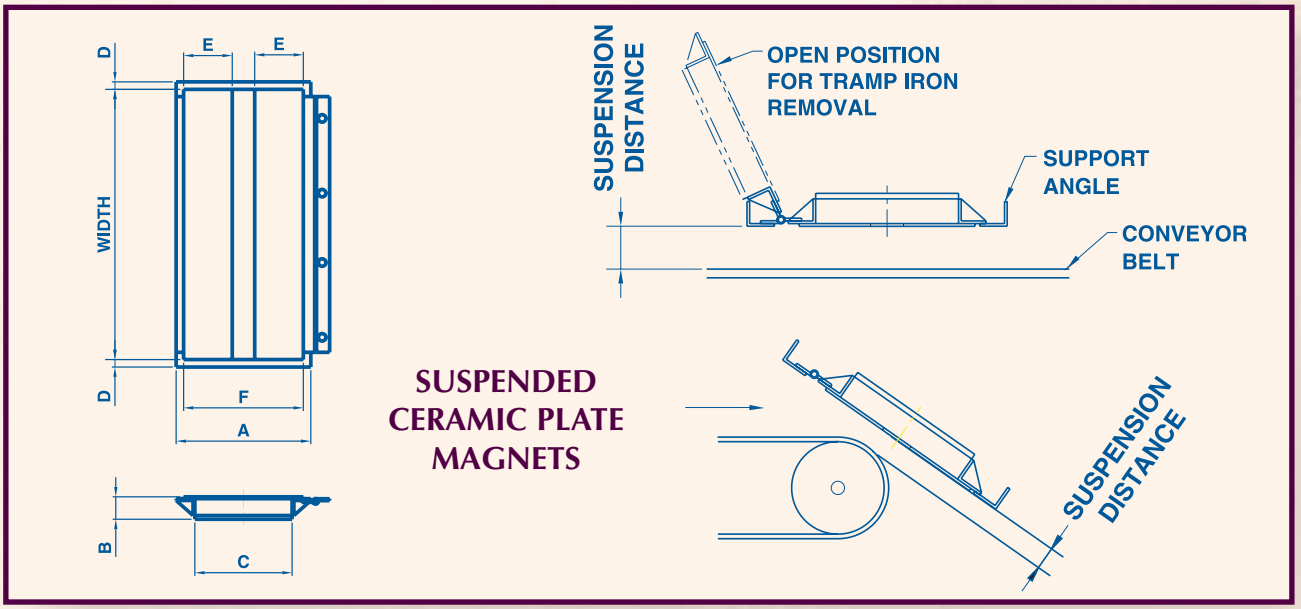


STEARNS SUSPENDED CERAMIC PLATE MAGNETS

Stearns powerful plate magnets are used to remove small tramp iron from free flowing products. Typical applications include use in chutes, or ducts and suspended over conveyors.

Standard Features

- Stainless Steel Construction
- Welded Hinge
- Mounting Holes
- Widths Starting at 6"
- Single or Double Gap Magnets



TECHNICAL SPECIFICATIONS

MODEL	SUSPENSION DISTANCE	DIMENSIONS (INCHES)					
		A	B	C	D	E	F
150A	2	7	1-1/2	5	1/2	2	6
250A	3	9	1-1/2	7	1/2	3	8
350A	4	9	2-5/8	7	1/2	3	8
450A	5	11-1/2	3-13/16	9-1/2	1/2	4	10-1/2
650A	6-7	16-7/8	6-5/8	14-1/2	3/4	6-3/8	15-1/4

STEARNS POWERFUL PERMANENT ROAD SWEEPER...provides fast and effective clean-up of Ferrous Tramp Metal

MAGNETIC SWEEPERS

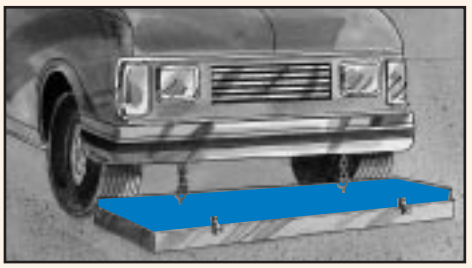
Model YSI

Save costly tire damage and maintenance with Stearns Permanent Magnet Yard sweepers. Collect hazardous tramp metal while you work. These magnetic yard sweepers attach to any vehicle bumper in seconds and are equipped with eye bolts for easy mounting. Standard Sizes: 48" through 96".

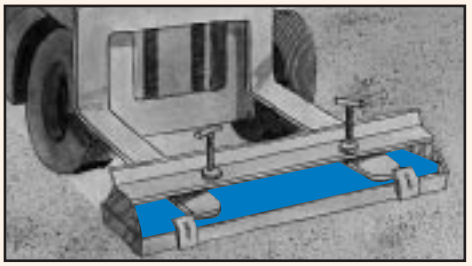
Model FLS

This clamp-on permanent magnet readily adapts to any forklift to become a magnetic floor sweeper in seconds. The magnet can then maneuver around machines and under overhanging obstacles. Use indoors or outdoors and unit is easily installed by one person. Standard Sizes: 36" through 96".

MAGNETIC SWEEPERS

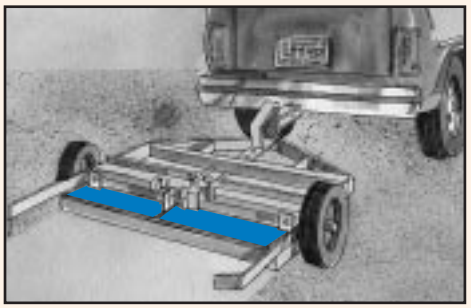


MODEL YSI

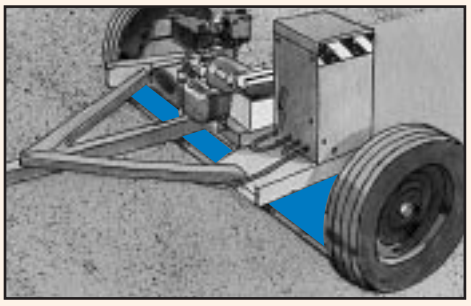


MODEL FLS

SELF-CONTAINED ROAD SWEEPERS



MODEL MRS



MODEL ERS-96

SELF-CONTAINED ROAD SWEEPERS

Model MRS

Keep your rolling equipment maintenance costs down with these simple to operate and cost-effective road sweepers. Easily towed behind vehicles, these permanent magnet road sweepers keep loading dock areas, paved or unpaved roadways free of nails and other harmful tramp iron. Features include:

- Adjustable 2"-6" Clearance
- Self-Contained Debris Carrying Pans
- Adjustable Tow-Bar
- All Weather Resistant Construction
- Standard Sizes: 72" and 96"

Model ERS-96

Ideal for large surfaces, these extra-large 96" powerful electro-magnets remove all sizes of harmful tramp metals. Completely self-contained, powered by either a gas or diesel generator, this unit can be towed in and around a plant or other area to clean floor surfaces that can't be cleaned by smaller road sweeper designs. Made to operate in all weather conditions and easy to maintain, Stearns electro-magnetic road sweepers feature:

- Remote Controls allow operator to energize or de-energize magnet without stopping tow vehicle.
- Compact Design with its low center of gravity makes this unit ideal for use at airports, shipyards, warehouses and plant floors.

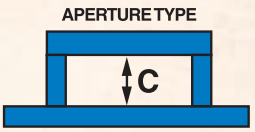
STEARNS VERSATILE, SENSITIVE APERTURE-TYPE METAL DETECTORS

Stearns Metal Detectors are ideal for use in numerous industrial and manufacturing applications including: aggregate, coal, food, pharmaceutical, rubber, textiles, tobacco and wood/pulp processing.

Mount our metal detectors in any position and change aperture size anytime. Stearns inspection heads can be mounted in any position, even at an angle on a steel frame or other support, without loss of sensitivity. Our unique spacer blocks separating upper and lower plates permit you to change aperture opening size to accommodate various product sizes or changes in application. Over 350 size variations meet any inspection need.

Heads are solid 1-1/2" thick, corrosion-resistant aluminum plate construction. Larger units are 2" and 2-1/2" thick aluminum plate. All inspection heads are of waterproof construction for sanitary cleaning. Temperature and humidity have little or no effect on efficiency.

STEARNS SOLID STATE DESIGN GUARANTEES RELIABLE PERFORMANCE AND HIGH SENSITIVITY



Presence of a metal particle in material conveyed through the inspection aperture causes distortion of the electromagnetic field induced by the lower transmitting head to the upper receiving head. This signal change is amplified in the control cabinet to activate any function:

1. An audible and/or visual warning device
2. Automatic rejection equipment
3. A marking device
4. Shut down equipment operation

Everything for calibrating or monitoring the detector is built into the NEMA 4 control cabinet. Once calibrated, with its digital meters, the detector needs no further adjustment. Non-technical personnel can verify proper unit operation. These stainless steel cabinets utilize plug-in printed circuits for maximum stability and are replaceable in seconds. Self-compensating circuitry automatically adjusts for normal temperature fluctuations.

DIMENSIONAL DATA

For dimensional data on inspection heads and control cabinets for all Stearns metal detectors, contact a field sales representative, or Ohio Magnetics, Inc. at ***800/486-6446*** *for the required specification information. Standard NEMA 4 Control Cabinet with standard built-in digital display meters are outlined on Specification Sheet 110-C-1a.*

Inclined conveyor system with metal detector for monitoring a bulk bagged product, including bell alarm with belt stop reject system.

ELECTRICAL SPECIFICATIONS:

Input Requirements
100 or 220 volts AC (specify voltage desired)
50/60 Hz, Single phase. Approx. 35 watts

Indicator Lamps
1. Green – Indicates ready condition of detector in normal operation.
2. Red – Indicated upon detection of metal.

Protective Provisions
1. Amber Lamp – Indicates when proper polarity input voltage is being applied to the equipment and that the unit is properly grounded.
2. Input voltage is fused for overload protection.

Control Relays
The detectors have a built-in control relay – A S.P.D.T. design with the following:
1-Set of Normally Open Circuits
1-Set of Normally Closed Circuits
Contacts are rated at 10 AMPS and are for pilot duty only. Power must be applied to these contacts through the provisions of a built-in terminal block in the unit for operating reject devices, external alarms, or equipment shut down upon detection of metal.

STEARNS SENTINEL II CHUTE SYSTEM METAL SEPARATORS

SENTINEL II...is a highly sensitive electronic separator for all ferrous and non-ferrous metals

***Stearns* Sentinel II™ Chute System Metal Separators** can help guard your processing line against tramp metal contamination and costly down time. This compact, self-contained unit monitors your free flowing material and rejects the contaminated product when detected through a discharge chute. Standard features include:

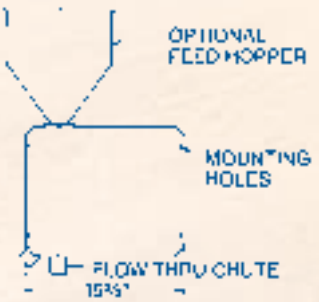
- **High Sensitivity to unwanted tramp metal**
- **Reliable Solid State Circuitry for trouble-free operation**
- **Rapid Discharge for contaminated product**
- **Simple Operation with little or no maintenance**
- **Adaptable to processing lines**
- **Variety of Uses with pellets, powder flakes and granulates material**

TECHNICAL SPECIFICATIONS

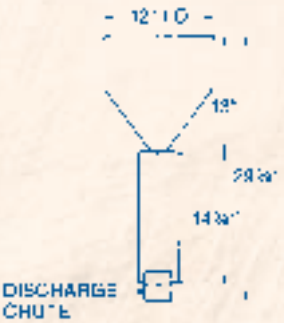
MODEL NUMBER	THRUPUT RATING	SENSITIVITY	THROAT OPENING	OVERALL DIMENSIONS
MS-2	1,200 lb./hr.	.020	2"	16-3/4" x 14-3/4" x 6-5/8"
MS-3	2,500 lb./hr.	.035	3"	16-3/4" x 14-3/4" x 6-5/8"

SENTINEL II helps increase productivity with reliable electronic separation of all ferrous and non-ferrous metals

The Sentinel II Metal Separator reduces costly machine maintenance and production down time in your processing operation. Harmful tramp metal is rapidly detected and rejected before it can cause damage to your equipment and/or product reputation. Several models are available for your processing requirements. Capabilities range from 1,200 to 2,500 lbs. per hour with tramp metal sensitivity as small as .020 inches.



Simple to operate, the Stearns Sentinel II can be easily connected within your processing system. A minimum of controls indicates proper operation and detection of tramp metal. Adjustable sensitivity within the controls allows for effective metal removal with minimal loss. Display counter shows total number of reject cycles of contaminated material. An optional spun aluminum feed hopper is available. Contact the sales department at Ohio Magnetics, Inc. **800/486-6446** or e-mail us at **sales@ohiomagnetics.com** for further assistance with your chute metal separator applications.



STEARNS RECTIFIERS

Stearns' DC Power supplies for electro separation magnets are available in both fixed voltage outputs (usually 230 VDC or 115 VDC) and available variable voltage output (usually 0-115 or 0-230 VDC). Fixed voltage output type DC power supplies are used in most general magnet applications. Variable voltage supplies are used in applications of flux reduction or constant flux regulation. Voltage outputs are set via potentiometers for voltage limit-current regulation. Because the cold current of a magnet is 25% to 30% greater than the operating current, the power supply must be sized for the cold rating of the magnet at 25°C.

MAGNET DC POWER SUPPLY SPECIFICATIONS

- **Full Load Efficiency: 90-96%**
- **Power Factor: 92-95%**
- **Voltage Regulation: 6% or less**
- **Full Wave Output Ripple: 4.6%**
- **Power Ratings:**
  - **100% continuous @ 60°C Ambient**
  - **125% for 2 hrs.**

DC POWER SUPPLY DATA FOR FIXED AND VARIABLE DC POWER SUPPLIES

KW[1]	AMPS@230V	AMPS@115V	ENCLOSURE SIZE HxWxD (in/mm)	WEIGHT/MASS (lbs./kg)
4	17.2	33.3	30 x 20 x 10 915 x 760 x 305	265/120
6.5	28.0	54.2	30 x 20 x 10 915 x 760 x 305	310/140
10	43.1	83.3	36 x 30 x 12 915 x 760 x 305	355/160
15	64.7	125.0	48 x 36 x 16 1220 x 915 x 405	545/250
20	86.2	166.6	48 x 36 x 16 1220 x 915 x 405	595/270
25	109.0	208.0	48 x 36 x 16 1220 x 915 x 405	640/290
35	151.0	N/A	60 x 36 x 20 1525 x 915 x 510	800/360

Standard Features

- IP65 (NEMA) 12 Enclosure Convection Cooled (vented)
- 480 or 230V; 3 Phase, 60Hz Input (other voltage options upon request)
- 230 VDC or 115 VDC Output Voltage
- Manual Line Starter with 3 Phase Overload Protection (may be eliminated if controlled externally)
- Adjustable Taps (±10% on transformer to match input line variations)
- DC Output Fuses for Short Circuit Protection
- DC Power on Indicator (neon light)
- Wall Mounted Enclosure Up to 10kw (floor mounting kit optional)
- Input and Output Power Terminal Blocks
- Modular Diodes for Easy Replacement
- Convection Cooled Diode Bridge

Optional Features

- Local or Remote Volt and Amp Meters
- Local/Remote Start/Stop
- Under-Current Alarm
- Circuit Breaker
- NEMA 3R, 4 and 4X Enclosures

For Pricing Information, Please Supply

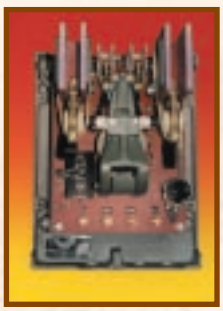
- Input Voltage and Frequency
- DC Output Voltage
- Magnet Cold Current Rating @ 25°C
- Additional Options

MAGNET REPAIR, REBUILDING AND REPLACEMENT

For all your Stearns products…Ohio Magnetics, Inc. is the expert source. Our engineering and sales staff can assist you in any and all phases of magnet repair, refurbishment and replacement. Magnets are given a general inspection and a cost analysis is done to determine the cost-efficiency of either repair or replacement. If repair-worthy, the magnetic equipment is disassembled and all parts are checked for potential reuse. If necessary, design changes are made to enhance refurbished magnet performance. Our replacement parts are among the best in the business.

When it comes to maintaining your magnets, Ohio Magnetics, Inc. has the cost-efficient answer.

OHIO MAGNETICS' REPAIR PROGRAM WILL REBUILD ANY MANUFACTURER'S ELECTRO-LIFTING EQUIPMENT, SUPPLYING YOU WITH THE EQUIVALENT OF A NEW UNIT.



ALWAYS ATTRACTIVE...Ohio Magnetics, Inc.

Our products deliver top performance and maximum efficiency from job start-up to finish. Ohio Magnetics, Inc. products, like the Stearns' brand of magnetic separators and detection equipment, are in use and trusted by customers around the world to provide them with reliable, long-term service at maximum efficiency. Ohio Magnetics' products are used with confidence by thousands of customers in steel production, foundry operations, scrap processing, utilities, rail yards, textiles, mining, waste processing, industrial plants, pulp/paper processing and more. ***When you need magnetic equipment…rely on the experts, Ohio Magnetics, Inc.***

Stearns

OHIO MAGNETICS, INC. ISO 9001 2000 CERTIFIED

OHIO MAGNETICS

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