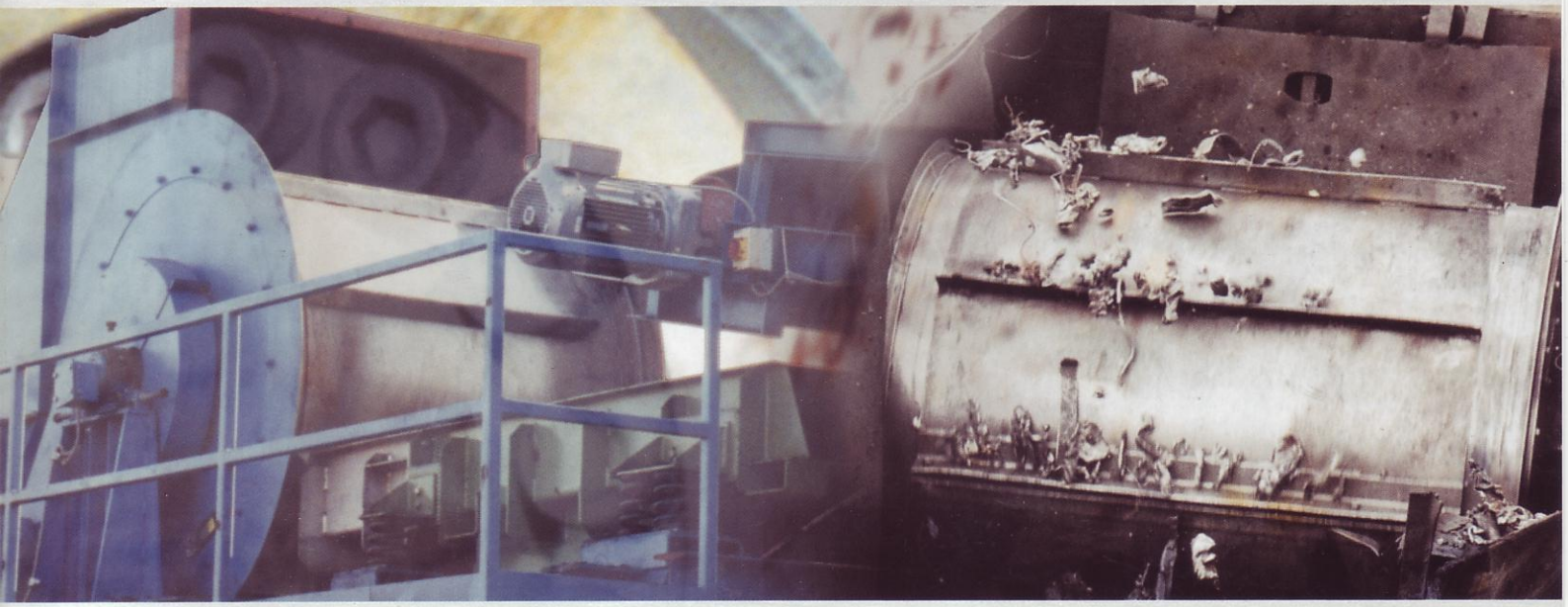
MASTERMAG

MASTER MAGNETS



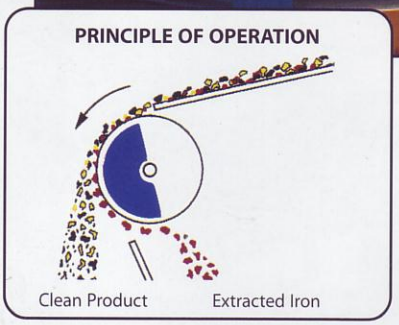
PERMANENT AND ELECTRO DRUM SEPARATORS

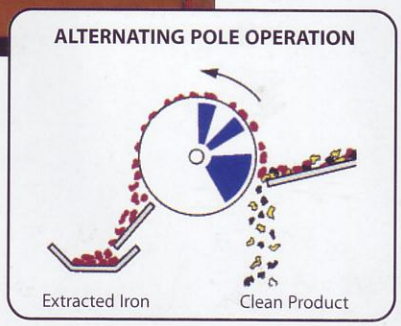
MAGNETIC DRUM SEPARATORS

Magnetic Drum separators are designed for the continuous extraction of iron from material being fed uniformly on to the face of the drum.

Principle of Operation

Magnetic Drums are constructed having a 180° stationary magnet system, around which a cover revolves, being driven at a predetermined speed. The principle of operation is for the material to be fed on to the drum cover at the leading point of the magnetic section. Non-magnetic materials will fall forward following their normal trajectory, while magnetics will adhere to the drum cover as it revolves around the magnet system. The magnetics will be discharged behind the normal trajectory as they leave the magnet system assisted by the axial wiper bars.





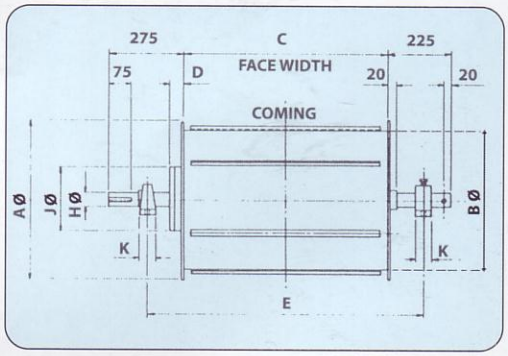
PERMANENT MAGNETIC DRUMS

Permanent Drums are built in fully stabilised non-deteriorating strontium ferrite permanent magnets, specifically designed to concentrate all flux at the peak of separation. This provides a separator that is virtually maintenance free, and always at top efficiency being completely unaffected by atmospheric conditions.

Permanent Drums require no power supply and are suitable for installation where a power supply would be expensive or impractical.

In most size ranges permanent and electro drums have comparable performance and can provide the same levels of separation. Permanent drums are generally available at lower cost than electro models.

Permanent Magnetic Drums for the recovery of ferrous swarf are available. Swarf Separator drums are supplied as complete units with variable speed vibratory feeder.



TYPE	A	B	C	D	E	H	J	K
12 PD 2	370	300	300	52	560	40	190	51
12 PD 3	370	300	450	52	710	40	190	51
12 PD 4	370	300	600	52	860	40	190	51
12 PD 5	370	300	750	52	1010	40	190	51
12 PD 6	370	300	900	52	1160	40	190	51
14 PD 3	420	350	450	52	710	40	190	51
14 PD 4	420	350	600	52	860	40	190	51
14 PD 5	420	350	750	52	1010	40	190	51
14 PD 6	420	350	900	52	1160	40	190	51
16 PD 3	470	400	450	52	710	50	230	55
16 PD 4	470	400	600	52	860	50	230	55
16 PD 5	470	400	750	52	1010	50	230	55
16 PD 6	470	400	900	52	1160	50	230	55
16 PD 7	470	400	1050	52	1310	50	230	55
18 PD 3	520	450	450	52	710	50	230	55
18 PD 4	520	450	600	52	860	50	230	55
18 PD 5	520	450	750	52	1010	50	230	55
18 PD 6	520	450	900	52	1160	50	230	55
18 PD 7	520	450	1050	52	1310	50	230	55
20 PD 3	570	500	450	52	710	50	230	55
20 PD 4	570	500	600	52	860	50	230	55
20 PD 5	570	500	750	52	1010	50	230	55
20 PD 6	570	500	900	52	1160	50	230	55
20 PD 7	570	500	1050	52	1310	50	230	55
20 PD 8	570	500	1200	52	1460	50	230	55
24 PD 3	670	600	450	57	710	50	280	55
24 PD 4	670	600	600	57	860	50	280	55
24 PD 5	670	600	750	57	1010	50	280	55
24 PD 6	670	600	900	57	1160	50	280	55
24 PD 7	670	600	1050	57	1310	50	280	55
24 PD 8	670	600	1200	57	1460	50	280	55
24 PD 9	670	600	1350	57	1610	50	280	55

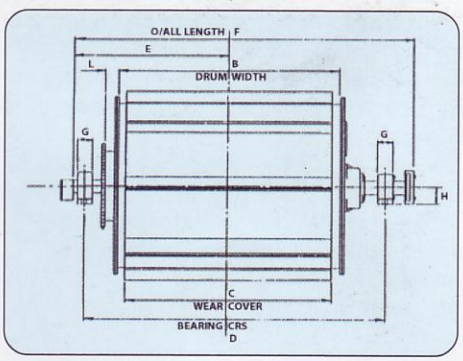
ELECTRO MAGNETIC DRUMS

With larger drums, the magnet unit is usually electro type with the coil being wound with insulated aluminium wire. Electro Drums are available in diameter sizes of up to 72 inches (1830mm).

For the large scale processing of material, Master Magnets manufacture a range of electro fragmentiser and slag drums for special applications.

Fragmentiser Drums are heavy duty alternating pole drums suitable for the reclamation of fragmentised metals in applications such as municipal refuse and vehicle recycling stations. The alternating pole design allows entrapped metals to gambol on the face of the drum resulting in cleaner separated product.

Slag Drums are powerful radial pole drums suitable for the reclamation of slag in the production of steel. The pole design allows the maximum entrapment of metals and the highest levels of separation.



TYPE	DIA	B	C	D	E	F	G	H	L
36 FED 36	935	902	800	1350	745	1585	75	115	85
36 FED 42	935	1052	950	1500	820	1735	75	115	85
36 FED 48	935	1207	1655	1655	900	1895	75	115	85
36 FED 60	935	1500	1960	1960	1050	2195	75	115	85
36 FED 72	935	1807	2265	2265	1205	2505	75	115	85
42 FED 48	1085	1207	1555	1565	900	1895	100	125	85
42 FED 54	1085	1357	1805	1805	975	2045	100	125	85
42 FED 60	1085	1500	1960	1960	1050	2195	100	125	85
48 FED 42	1240	1052	1500	1500	820	1735	100	125	85
48 FED 48	1240	1207	1655	1655	900	1895	100	125	85
48 FED 54	1240	1357	1805	1805	975	2045	100	125	85
48 FED 60	1240	1500	1960	1960	1050	2195	100	125	85
48 FED 72	1240	1817	2265	2265	1205	2505	100	125	85
48 FED 84	1240	2122	2570	2570	1355	2815	100	125	85
60 FED 54	1550	1357	1115	1905	1025	2145	100	125	120
60 FED 60	1550	1500	1250	2060	1100	2295	100	125	120
60 FED 72	1550	1817	1575	2365	1255	2505	100	125	120
60 FED 84	1550	2122	1880	2670	1405	2915	100	125	120
60 FED 96	1550	2427	2190	2975	1560	3215	100	125	120
60 FED 120	1550	2987	2750	3535	1840	3780	100	125	120
72 FED 72	1830	1817	1575	2365	1255	2505	100	125	120
72 FED 84	1830	2122	1880	2670	1405	2915	100	125	120
72 FED 96	1830	2427	2190	2975	1560	3215	100	125	120
72 FED 120	1830	2987	2750	3535	1840	3780	100	125	120

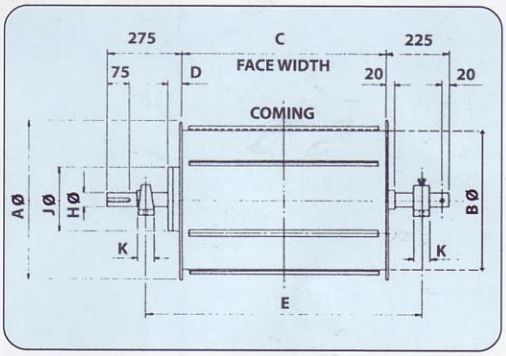
RARE EARTH MAGNETIC DRUMS

Constructed with a core of Neodymium Iron Boron, Rare Earth Drums are used where extremely high intensities are required on the face of the drum.

Rare Earth drums are suitable for the treating of fine ferromagnetic and paramagnetic materials. Magnetic lines of flux are concentrated in each internal pole, creating an extremely high-gradient magnetic field.

Rare Earth magnetic drums are often fitted into totally enclosed surroundings (see over).

As well as standard sizes, drums are available bespoke to suit customer requirements.



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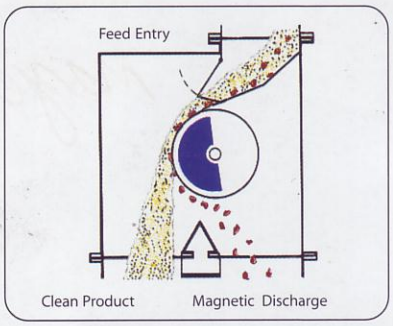
24 PDRE 9	670	600	1350	57	1610	50	280	55

TOTALLY ENCLOSED DRUMS

Where product needs to be kept free from external contamination or where any dust given off needs to be kept within the system, drums can be supplied with totally enclosed housings.

Housings can be manufactured in robust mild steel or stainless steel. Inspection covers, aspirators and divider plates are provided as standard.



HIGH SPEED MAGNETIC DRUMS

Suitable for the dry separation of highly magnetic ores such as iron ores, nickel ores (magnetite), roasted ilmenite and similar in a dry state.

High speed permanent drums are designed to suit specific application requirements. Magnetic pole configuration, magnetic intensity, magnet arc, number of poles and drum shell peripheral speed are specified to suit application.

The drum is installed within a robust mild steel totally enclosed housing. As standard, the enclosure is provided with inspection covers, feed hopper, product divider plates and aspirators for dust extraction.

Range incorporates magnetic drums of 36" (915mm), 42" (1067mm) and 48" (1219mm) diameters, varying from 36" (915mm) to 120" (3048mm) effective magnetic widths.

APPLICATIONS OF MAGNETIC DRUMS

Magnetic Drums have cross industry applications and are generally regarded as one of the most effective forms of magnetic separation.

During operation material is fed directly onto the face of the magnet. The proximity of the material to the magnet means that separation is carried out in optimum conditions.

Drums also have the advantage of longer service life than other types of separator. Drum wear covers are constructed from manganese or stainless steel, are replaceable, and have a longer life than other wear parts such as belting when handling abrasive materials.

Drums are suited to any continuous processing of material from the separation of paramagnetics from minerals and powders to the recovery of ferrous metals from fragmentised end of life vehicles and refuse reclamation.

Fragmentiser drum in operation.

Master Magnets have over twenty five years experience providing innovative magnetic solutions to industries involved in recycling, demolition and reclamation, mining and quarrying, food processing, ceramics production and powders and minerals processing. The MasterMag range of systems are known for high performance and reliable operations including magnetic separators for metals reclamation, tramp metal protection and high intensity mineral separation.

Visit our website at www.mastermagnets.co.uk for the entire range of MasterMag magnetic separators

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