

CHIP & SLUDGE CONVEYANCE EQUIPMENT

Model FMS SUPER MAGCLEAN*



FMS-240



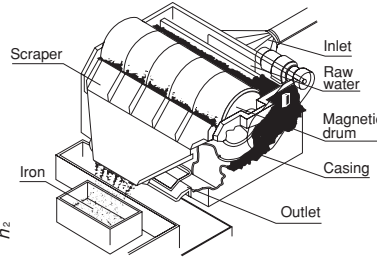
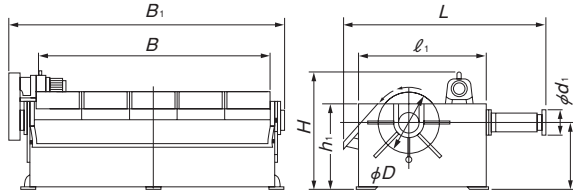
[Application]

Suitable for removing iron from waste water in ironworks and cooling water for steel rolling. This model is also used to remove/collect iron from washing water from blast furnaces, sintering furnaces, dust collectors and other industrial waste water.

[Features]

- A large capacity ranging from 60 t/h to 360 t/h and a wide variety of types. Highly economical.
- A high rate of collection of iron from waste water for economical operations. A collection rate of 94.5% from waste water of 5% concentration (mixture ratio) of rolled scales of 0.02 to 2 mm in grain size.
- The simple mechanism is likely to cause less trouble. The magnetic effect is unchanging and lasts long.
- Smooth inflow and outflow of raw water. As a secondary effect, part of oily substances is also removed.

[mm (in)]



Model	Processing Capacity	Power Source	Motor	Drum Revolution	Dimensions								Mass	
					D	B	B ₁	L	l ₁	h ₂	d ₁	H		h ₁
FMS-60	60t/h	3-phase 200 VAC/ 220 VAC, 50/60 Hz	0.4 kW	4.1/4.8rpm (50/60Hz)	800 (31.5)	650 (25.5)	1130 (44.4)	2020 (79.5)	1700 (66.9)	900 (35.4)	280 (11.0)	1450 (57.1)	1150 (45.2)	2100kg/ 4630 lb
FMS-120	120t/h		0.75kW	4.2/5.0rpm (50/60Hz)		1300 (51.2)	1780 (70.0)	2300 (90.5)			305 (12.0)	1530 (60.2)		3500kg/ 7716 lb
FMS-180	180t/h		1950 (76.7)	2470 (97.2)		330 (12.9)	5300kg/11685 lb							
FMS-240	240t/h		1.5 kW	4.3/5.2rpm (50/60Hz)	1800 (70.9)	2600 (102.4)	3140 (123.6)	2600 (102.4)	350 (13.7)	1591 (62.6)	7350kg/16204 lb			
FMS-300	300t/h		2.2 kW	3.9/4.7rpm (50/60Hz)		3250 (128.0)	3820 (150.4)	2800 (110.2)			9450kg/20834 lb			
FMS-360	360t/h		3900 (153.5)	4490 (176.8)	2900 (114.2)	11300kg/24912 lb								

Examples of data

Liquid to Process	Iron Scale Grain Size (mm)	Super Magclean	Amount of Processing Water	Raw Water Concentration	Processing Water Concentration	Collection Rate
Rolling cooling water	0.04 -5	FMS-240 (4000L/min)	3000L/min	20000P.P.M.	909P.P.M.	95.5%
Continuous casting cooling water	0.04 -0.3	FMS-180 (3000L/min)	1500L/min	14800P.P.M.	784P.P.M.	94.7%
Sand filter backwash water	0.005-0.04	FMS-120 (2000L/min)	200L/min	41600P.P.M.	1780P.P.M.	95.7%

*The collection rate varies according to the concentration of raw water and grain size distribution.

Model KSC-W SPIRAL MAGNETIC CONVEYOR



A guide for selection of models

Machine Tool	Drilling machine		Lathe		Milling machine		Gear cutting machine		Broaching machine	Special machine		Grinding machine
Shape of Chips	Ribbon shaped	Tangled	Flat and helical	Skew and helical	Long cylindrical and helical	Short cylindrical and helical	Spiral and helical	Spiral	Curled	Crushed	Fine iron powder	
Magnetic Chip Conveyor MCO · MCOL	○	○	○	○	○	○	○	○	○	○	○	
Spiral Magnetic Conveyor KSC · KSCT							○	○	○	○		
Magclean MS-F · MS-BS											○	
Chip Magclean CMS						○	○	○	○	○		

*Applicable range: Chips longer than 60 mm cannot be handled regardless of their shapes. * For selection, sample tests are required.

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 POWERFUL MAGNETIC MEASURING TOOLS
 MAGNETIC MEASURING INSTRUMENTS MATERIALS

[Application]

Widely used as a means to transfer chips produced from machining by machine tools to a point of collection. If oil is sticking to chips, they can be degreased by letting oil drop naturally when chips are being transferred. In particular, this model is suitable for transferring chips from gear cutting machines, end milling machines and milling machines.

This model can also be used for continuous transfer of granular parts.

[Features]

■ Superb durability and safety

Simple construction and practically no maintenance required. Since the mechanically moving (rotating) parts are housed in the enclosed cylinder, there is no fear of accidents due to collision.

■ Economical functions

High processing capacity and high transfer efficiency. As chips are carried by the spiral slide movement, their movement causes sticking oil to drop off effectively. There is no place where oil stays and therefore oil natural drop is ideal to improve the efficiency of collection of liquid.

■ Low running cost

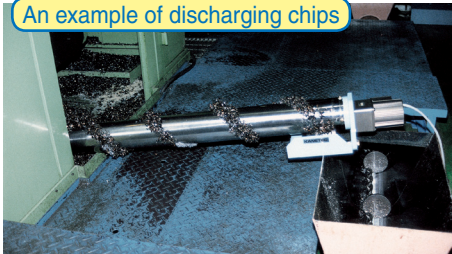
Only a slight amount of power is required to drive the rotation. Most of the work is handled by the permanent magnets.

※For other special lengths, please contact us. The length can be increased in units of 100 mm.

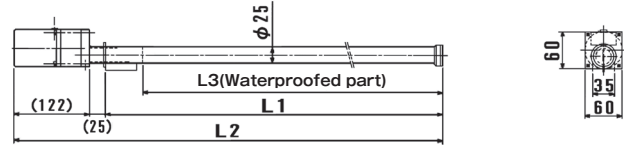
■ The waterproof feature enables collection of chips in liquid.

※The motor is not waterproofed. Keep it away from water.

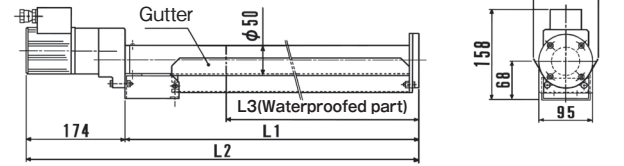
An example of discharging chips



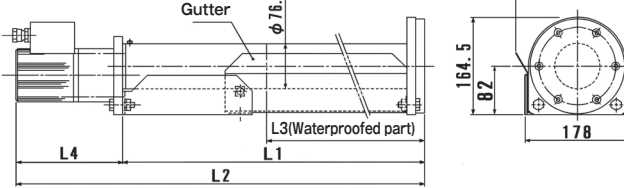
<Super Small Size Series>



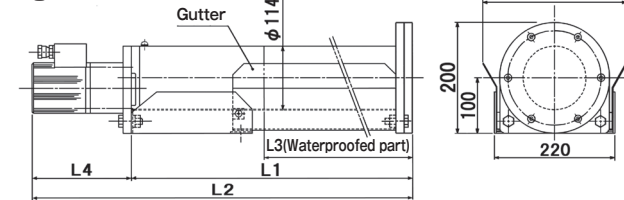
<Small Size Series>



<Medium Size Series>



<Large Size Series>



<Construction>

The spiral magnetic conveyor motor slowly rotates the internal shaft with spirally arranged magnets inside the nonmagnetic stainless steel cylinder. Magnetic chips/pieces attracted on the outside of the cylinder are transferred in a sliding motion.

■ Super Small Size Series

Model	Nominal Size	Dimensions			Processing Capacity	Power Source	Motor	Revolution	Mass
		L ₁	L ₂	L ₃					
KSC -W0340	φ25 (1.96) × 400 (15.7)	400 (15.7)	547 (21.5)	315 (12.4)	2kg/h	100 VAC (50/60Hz)	6W	10/12rpm (50/60Hz)	Approx. 3.0kg/ 6.61 lb
KSC -W0360	φ25 (1.96) × 600 (23.6)	600 (23.6)	747 (29.4)	515 (20.2)					Approx. 3.5kg/ 7.71 lb
KSC -W0380	φ25 (1.96) × 800 (31.5)	800 (31.5)	947 (37.2)	715 (28.1)					Approx. 4.0kg/ 8.82 lb

■ Small Size Series

Model	Type	Nominal Size	Dimensions			Processing Capacity	Power Source	Motor	Revolution	Mass
			L ₁	L ₂	L ₃					
KSC -W0505	Standard	φ50 (1.96) × 500 (19.6)	551 (21.6)	725 (28.5)	350 (13.7)	60kg/h	3-phase 200/220 VAC	25W	30/36rpm (50/60Hz)	Approx. 6.0kg/ 13.2 lb
KSCT -W0505	Gutter included									Approx. 7.0kg/ 15.4 lb
KSC -W0510	Standard	φ50 (1.96) × 1000 (39.4)	1041 (40.9)	1215 (47.8)	840 (33.0)					Approx. 10.0kg/ 22.0 lb
KSCT -W0510	Gutter included									Approx. 11.0kg/ 24.2 lb
KSC -W0515	Standard	φ50 (1.96) × 1500 (59.0)	1531 (60.2)	1705 (67.1)	1330 (52.3)					Approx. 14.0kg/ 30.8 lb
KSCT -W0515	Gutter included									Approx. 16.0kg/ 35.2 lb

■ Medium Size Series

Model	Type	Nominal Size	Dimensions				Processing Capacity	Power Source	Motor	Revolution	Mass
			L ₁	L ₂	L ₃	L ₄					
KSC -W0705	Standard	φ76.3 (3.00) × 500 (19.6)	514 (20.2)	656 (25.8)	270 (10.6)	90kg/h	3-phase 200/220 VAC	25W	30/36rpm (50/60Hz)	Approx. 15.0kg/ 33.0 lb	
KSCT -W0705	Gutter included									Approx. 17.0kg/ 37.4 lb	
KSC -W0710	Standard	φ76.3 (3.00) × 1000 (39.4)	1014 (39.9)	1156 (45.5)	770 (30.3)					142 (5.59)	Approx. 21.0kg/ 46.3 lb
KSCT -W0710	Gutter included										Approx. 26.0kg/ 57.3 lb
KSC -W0715	Standard	φ76.3 (3.00) × 1500 (59.0)	1514 (59.6)	1694 (66.6)	1270 (49.9)					180 (7.08)	Approx. 25.0kg/ 55.0 lb
KSCT -W0715	Gutter included										Approx. 33.0kg/ 72.7 lb
KSC -W0720	Standard	φ76.3 (3.00) × 2000 (78.7)	2014 (79.2)	2194 (86.3)	1770 (69.6)	Approx. 30.0kg/ 66.1 lb					
KSCT -W0720	Gutter included					Approx. 41.0kg/ 90.4 lb					

■ Large Size Series

Model	Type	Nominal Size	Dimensions				Processing Capacity	Power Source	Motor	Revolution	Mass
			L ₁	L ₂	L ₃	L ₄					
KSC -W1110	Standard	φ114.3 (4.49) × 1000 (39.4)	1021 (40.1)	1201 (47.2)	770 (30.3)	250kg/h	3-phase 200/220 VAC	40W	30/36rpm (50/60Hz)	Approx. 35.0kg/ 77.1 lb	
KSCT -W1110	Gutter included									Approx. 40.0kg/ 88.2 lb	
KSC -W1115	Standard	φ114.3 (4.49) × 1500 (59.0)	1516 (59.6)	1696 (66.7)	1270 (49.9)					180 (7.08)	Approx. 46.0kg/ 101.4 lb
KSCT -W1115	Gutter included										Approx. 54.0kg/ 119.0 lb
KSC -W1120	Standard	φ114.3 (4.49) × 2000 (78.7)	2011 (79.1)	2191 (86.2)	1770 (69.6)					202 (7.95)	Approx. 56.0kg/ 123.4 lb
KSCT -W1120	Gutter included										Approx. 67.0kg/ 147.7 lb
KSC -W1125	Standard	φ114.3 (4.49) × 2500 (98.4)	2506 (98.6)	2708 (106.6)	2260 (88.9)	202 (7.95)	Approx. 81.0kg/ 178.6 lb				
KSCT -W1125	Gutter included						Approx. 78.0kg/ 171.9 lb				
KSC -W1130	Standard	φ114.3 (4.49) × 3000 (118.1)	3001 (118.1)	3203 (126.1)	2760 (108.6)	202 (7.95)	Approx. 95.0kg/ 209.4 lb				
KSCT -W1130	Gutter included										

※The processing capacity is a value measured in conveying SS400 chips from a gear cutting machine in a horizontal posture.

※The drive posture is allowed up to an inclination of 60 degrees with the motor on top. (However, the capacity drops as the inclination angle increases.)

※Model KSCT is equipped with a gutter to receive oil that drops from chips during conveyance. ※For other special lengths, please contact us. The length can be increased in units of 100 mm.

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