



TUBES AND GRATES FOR GRAVITY FLOW

MAGNETIC GRATE TUBES & GRATES

Magnetic Grate Tubes:

Our magnetic tubes are ideal for custom installations that require magnetic separation, but lack the space for a housing or grate assembly. Tapped mounting holes located in each end of the tube allow for easy bolt-in installation.

Our Opti® Series of Rare Earth magnetic circuits were specifically designed to address the standards for magnet separators set forth in schemas such as FSMA, HACCP, GFSI, BRC, FSSC and SQF, and meet a minimum and measurable threshold of repeatable magnet performance. These circuit options have been designed to optimize values which have been identified as critical measurements for the specification, purchase, audit, verification and validation requirements for magnetic separation equipment. A highly durable Ceramic magnet configuration is also available and is recommended for placement early in the processing stream to capture both small and larger tramp metal pieces, such as nails, bolts, washers, etc. that can damage other equipment.



Standard Magnetic Tube (Rolled & Staked with 1/4-20 Tapped Mounting Holes in End Plugs)

HACCP International Certified and USDA AMS Accepted Equipment.



Our **Opti-H™ Grate Tube and Grate designs** are certified by HACCP International and fully conform to HACCP International's Food Safety Standard (0909MAGSEP 1-2010) for direct contact with food product.



Our **Sanitary Grade Magnetic Tubes and Grates** are USDA AMS accepted Dairy, Meat and Poultry magnetic separator processing equipment.

Magnetic Opti® Tube Configurations

- » Opti-B™ Balanced Rare Earth circuit ideal for abrasive applications, featuring a high-performance blend of 9,500 gauss and 16.7 pounds of pull strength on a 1/2" ball
- » Opti-G™ Rare Earth Circuit which optimizes magnetic field at 12,000 gauss
- » Opti-H™ HACCP International Food Safety Programme Certification-approved Rare Earth circuit averaging over 11,000 gauss and 106 oz. of pull strength on a 1/4" ball
- » Opti-M™ Mid-Tube (2" Diameter) Rare Earth Circuit for products prone to have flowability, bridging tendencies; Over 13,500 Gauss
- » Opti-L™ Large Tube (3" Diameter) Rare Earth Circuit for products prone to have flowability, bridging tendencies; Over 12,000 Gauss
- » Opti-P™ Rare Earth Circuit which boasts 119 oz. of pull strength on a 1/4" ball
- » Opti-T™ High Temperature Rare Earth Circuit with high durability and heat tolerance up to 356°F
- » Opti-V™ Durable Tube with a Ceramic Circuit for larger tramp metal removal applications

FEATURES:

- » Standard lengths, 4" - 36" in 2" increments
- » 1" Diameter stainless steel tubes
- » Rolled ends with stainless steel plugs
- » 1/4-20 tapped end plug mounting holes

OPTIONS:

- » Welded ends
- » Custom lengths
- » Special coating for abrasive products

MAGNETIC GRATE TUBES DESIGNS, APPLICATIONS AND SPECIFICATIONS						
CONFIGURATION	APPLICATION	MAGNET	1/4" BALL PULL VALUES	1/2" BALL PULL VALUES	GAUSS	DURABILITY
Opti-B™	Balanced	UHI-52™ Rare Earth	95.8 oz. (5.99 lbs.)	267.2 oz. (16.7 lbs.)	9475	★★★★★
Opti-G™	High Gauss	UHI-55™ Rare Earth	108.3 oz. (6.77 lbs.)	265.6 oz. (16.6 lbs.)	12000	★★★★
Opti-H™	HACCP	UHI-55™ Rare Earth	106 oz. (6.63 lbs.)	260.8 oz. (16.3 lbs.)	11175	★★★★★
Opti-L™	Large Tube	UHI-52™ Rare Earth	106.8 oz. (6.68 lbs.)	448 oz. (28 lbs.)	12385	★★★★★
Opti-M™	Mid-Tube	UHI-52™ Rare Earth	128 oz. (8 lbs.)	448 oz. (28 lbs.)	13800	★★★★★
Opti-P™	High Pull	UHI-55™ Rare Earth	119.1 oz. (7.44 lbs.)	316.8 oz. (19.8 lbs.)	10539	★★★★
Opti-T™	High Temperature	Hi-Temp Rare Earth	60.5 oz (3.78 lbs)	188.3 oz (11.78 lbs)	7240	★★★★★
Opti-V™	Value	Ceramic	0.5 oz. (0.03 lbs.)	24 oz. (1.5 lbs.)	2320	★★★★★

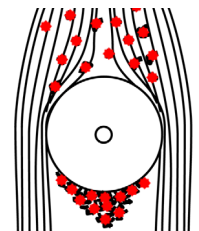


Diagram of product flow and metal contamination collection

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Magnetic Grate Assemblies:

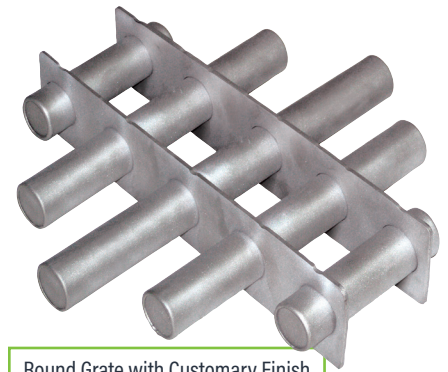
Ideal for ferrous metal separation in (square, rectangular, or round) bins, chutes, drawers, bag dumps and hoppers. Standard grates are constructed with 1 inch diameter magnetic tubes placed on 2 inch centers in a heavy duty stainless steel framing. Magnetic grates are available in a variety of round, square and rectangular configurations. Special sizes, shapes and configurations are available upon request. Custom solutions are available for difficult product applications.

FEATURES:

- » Standard 1" diameter stainless steel Tubes on 2" centers
- » 2GA thick by 2" wide stainless steel support stringers
- » Standard sizes 6" - 18" are staked and rolled. Above 18" are welded

OPTIONS:

- » Custom sizes and designs
- » Sanitary or food grade construction
- » Product diverter options
- » Custom tube spacing
- » Coatings for Abrasive Products



Round Grate with Customary Finish (Rolled & Staked)



Rectangular Grate with Food Grade Construction (Fully Seam Welded and Polished)

Size and Flow Chart for Round Shaped Magnetic Grates

BASE MODEL	GRATE DIA.	NO. OF TUBES	SQUARE INCHES	CUFT/HR.	WT. (LBS.)	FLOW CAPACITY BY BULK DENSITY (LBS./HR.)			
						40 LB./FT3	50 LB./FT3	60 LB./FT3	70 LB./FT3
N06D	6	3	28	353	2.8	14,130	17,663	21,195	24,728
N08D	8	4	50	800	5.0	32,000	40,000	48,000	56,000
N10D	10	5	78	1,250	7.9	50,000	62,500	75,000	87,500
N12D	12	6	113	1,800	11.3	72,000	90,000	108,000	126,000
N14D	14	7	153	2,450	15.4	98,000	122,500	147,500	171,500
N16D	16	8	201	3,200	20.1	128,000	160,000	192,000	224,000
N18D	18	9	254	4,050	25.5	162,000	202,500	243,500	283,500
N20DW	20	10	314	5,000	31.4	200,000	250,000	300,000	350,000
N22DW	22	11	380	6,050	38.0	242,000	302,500	363,000	423,500
N24DW	24	12	452	7,200	45.2	288,000	360,000	432,000	504,000
N26DW	26	13	530	8,450	53.0	338,000	422,500	507,000	591,500
N28DW	28	14	615	9,800	61.5	392,000	490,000	588,000	686,000
N30DW	30	15	706	11,250	70.6	450,000	562,500	675,000	787,500
N32DW	32	16	804	12,800	80.4	512,000	640,000	768,000	896,000
N34DW	34	17	907	14,450	90.7	578,000	722,500	867,000	1,011,500
N36DW	36	18	1,017	16,200	101.7	648,000	810,000	972,000	1,134,000

Size and Flow Chart for Rectangular Shaped Magnetic Grates

BASE MODEL	WIDTH	LENGTH	NO. OF TUBES	SQUARE INCHES	CUFT/HR.	WT. (LBS.)	FLOW CAPACITY BY BULK DENSITY (LBS./HR.)			
							40 LB./FT3	50 LB./FT3	60 LB./FT3	70 LB./FT3
N04W04L	4	4	2	16	200	1.6	8,000	10,000	12,000	14,000
N06W06L	6	6	3	36	450	3.3	18,000	22,500	27,000	31,500
N08W08L	8	8	4	64	800	5.5	32,000	40,000	48,000	56,000
N10W10L	10	10	5	100	1,250	8.4	50,000	62,500	75,000	87,500
N12W12L	12	12	6	144	1,800	11.4	72,000	90,000	108,000	126,000
N14W14L	14	14	7	196	2,450	15.8	98,000	122,500	147,000	171,500
N16W16L	16	16	8	256	3,200	20.0	128,000	160,000	192,000	224,000
N18W18L	18	18	9	324	4,050	25.2	162,000	202,500	243,000	283,500
N20W20LW	20	20	10	400	5,000	30.3	200,000	250,000	300,000	350,000
N22W22LW	22	22	11	484	6,050	36.7	242,000	302,500	363,000	423,500
N24W24LW	24	24	12	576	7,200	43.1	288,000	360,000	432,000	504,000
N26W26LW	26	26	13	676	8,450	50.5	338,000	422,500	507,000	591,500
N28W28LW	28	28	14	784	9,800	58.2	392,000	490,000	588,000	686,000
N30W30LW	30	30	15	900	11,250	66.5	450,000	562,500	675,000	787,500
N32W32LW	32	32	16	1,024	12,800	75.3	512,000	640,000	768,000	896,000
N34W34LW	34	34	17	1,156	14,450	84.7	578,000	722,500	867,000	1,011,500
N36W36LW	36	36	18	1,296	16,200	94.6	648,000	810,000	972,000	1,134,000

