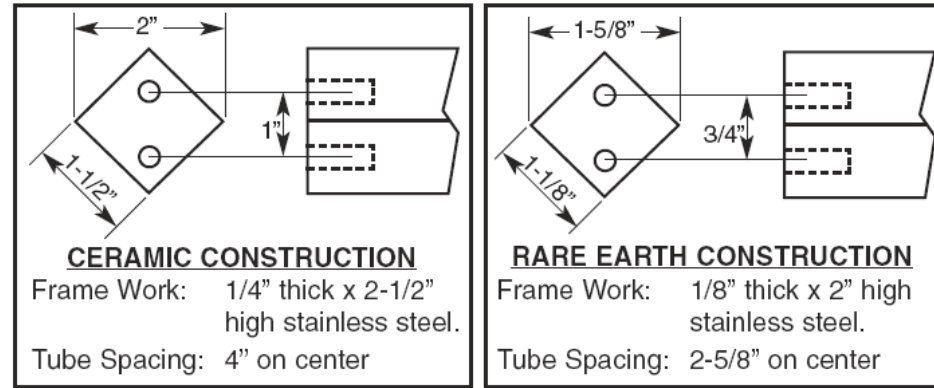


SQUARE TUBE MAGNET GRATE ASSEMBLIES

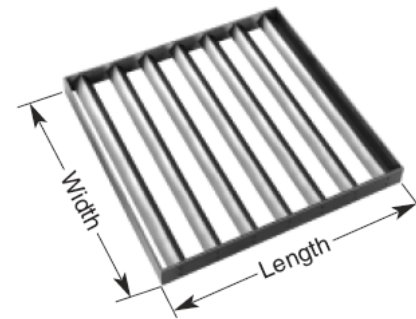
Square tube magnetic grates are available in 66 standard sizes with widths and lengths from 8" to 48" in 4" increments. Special sizes are also available.

Square tube magnetic grates are ideal for point-of-entry receiving areas and heavy duty applications where high product volume is involved. These powerful square tubes are installed with the leading edge toward the material flow. This positioning helps eliminate material bridging and provides a protected collecting area along the bottom of the magnet where ferrous tramp metal remains out of the material flow.

Constructed from 304 stainless steel, and mounted in a 4" thick x 2-2" high stainless steel bar framing, EAGLE square tube magnet grates deliver heavy duty performance and long service life.



- OPTIONS:**
- Custom sizes and designs
 - Sanitary construction
 - Custom tube spacing
 - Special Coating for abrasive products



| Flow Chart for Square Tube (S) Rectangular Magnetic Grates | | | | | | | |
|--|---------------|-----------|----------|--|------------|------------|------------|
| Size W x L | Square Inches | CuFt/ Hr. | Wt. Lbs. | Flow Capacity By Bulk Density (lbs./ft³) | | | |
| | | | | 40 lb./ft³ | 50 lb./ft³ | 60 lb./ft³ | 70 lb./ft³ |
| S08W08L | 64 | 800 | 12.3 | 32,000 | 40,000 | 48,000 | 56,000 |
| S10W10L | 100 | 1,250 | 15.5 | 50,000 | 62,500 | 75,000 | 87,500 |
| S12W12L | 144 | 1,800 | 23.9 | 72,000 | 90,000 | 108,000 | 126,000 |
| S14W14L | 196 | 2,450 | 28.0 | 98,000 | 122,500 | 147,000 | 171,500 |
| S16W16L | 256 | 3,200 | 39.1 | 128,000 | 160,000 | 192,000 | 224,000 |
| S18W18L | 324 | 4,050 | 44.1 | 162,000 | 202,500 | 243,000 | 283,500 |
| S20W20L | 400 | 5,000 | 57.9 | 200,000 | 250,000 | 300,000 | 350,000 |
| S22W22L | 484 | 6,050 | 63.8 | 242,000 | 302,500 | 363,000 | 423,500 |
| S24W24L | 576 | 7,200 | 80.3 | 288,000 | 360,000 | 432,000 | 504,000 |
| S26W26L | 676 | 8,450 | 87.1 | 338,000 | 422,500 | 507,000 | 591,500 |
| S28W28L | 784 | 9,800 | 106.3 | 392,000 | 490,000 | 588,000 | 686,000 |
| S30W30L | 900 | 11,250 | 114.0 | 450,000 | 562,500 | 675,000 | 787,500 |
| S32W32L | 1,024 | 12,800 | 135.9 | 512,000 | 640,000 | 768,000 | 896,000 |
| S34W34L | 1,156 | 14,450 | 144.5 | 578,000 | 722,500 | 867,000 | 1,011,500 |
| S36W36L | 1,296 | 16,200 | 169.1 | 648,000 | 810,000 | 972,000 | 1,134,000 |
| S40W40L | 1,600 | 20,000 | 206.0 | 800,000 | 1,000,000 | 1,200,000 | 1,400,000 |
| S44W44L | 1,936 | 24,200 | 246.3 | 968,000 | 1,210,000 | 1,452,000 | 1,694,000 |
| S48W48L | 2,304 | 28,800 | 290.3 | 1,152,000 | 1,440,000 | 1,728,000 | 2,016,000 |

Rectangular Grate Specification Guide:

- To order a rectangular square tube grate (S) list the 2 digit width followed by a "W" and then list a 2 digit length followed by a "L".
- Also, add "C" for Ceramic or "R" for Rare Earth to the end of the part number.

Example: The part number for a 8" wide by 12" long Ceramic (C) grate would be S08W12LC.

Notes: For flow capacities of product bulk densities (lb./ft³) not listed, divide or multiply one of the given product density flow results to calculate the estimated flow capacity.

CUSTOM GRATE MAGNET SEPERATION SOLUTIONS



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EAGLE

Magnetic Tubes & Grates

ROUND & SQUARE TUBES & TUBE ASSEMBLIES

Round or Square Magnetic Grate Tubes:

EAGLE's round or square style 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. Users can arrange these tubes in a configuration that works best for your magnetic separation needs.

These tubes are constructed from 304 stainless steel and are available in Ceramic and Rare Earth (UHI-50).

Magnet Materials for Grate Tubes and Grate Assemblies:

Ceramic: Used for small to larger ferrous particle separation such as: nails, bolts, washers, etc.

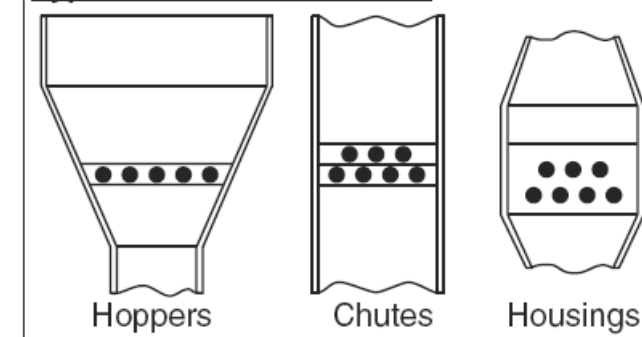
Rare Earth UHI-50™ (50 MgOe Circuit): Extremely powerful magnet is used for "fine particle" separation such as; metal filings, shavings, metal wear residue, work hardened stainless steel, etc.

Alnico (Custom Designs): High heat applications up to 1100° F. Particle size and separation performance is the same as ceramic.

Round Tube Magnetic Grate Assemblies:

Ideal for ferrous metal separation in (square, rectangular, or round) bins,

Typical Grate Installations



chutes, drawers, bag dumps and hoppers. IMI grates are constructed with one inch diameter magnetic tubes placed on 2" centers in a heavy duty 304 stainless steel framing. Magnetic grates are available in a variety of round, square and rectangular configurations (see charts on page 3). Special sizes, shapes and configurations are available upon request.

Square Tube Magnetic Grate Assemblies:

Square tube grates are used for heavy duty applications where high product volume is involved. The powerful square tubes are installed with the leading edge toward the flow to eliminate material bridging and protect against wash-off of collected metal. Over 50 standard sizes available. Custom designs requirements are welcome.

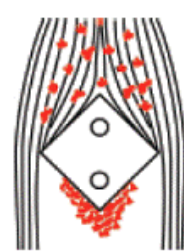
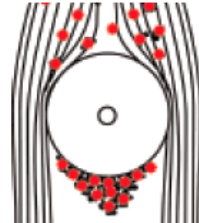
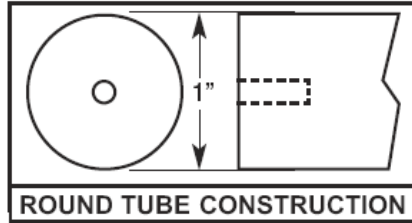
THE EAGLE GROUP LTD.

Round and Square Tube Magnetic Grate Selection Factors

Product consistency, density and moisture content, which influence flow characteristics, are important factors in grate magnet applications. In order to choose the correct magnetic grate to ensure positive flow, it is important to recognize materials that have tendencies to bridge between the magnetic tubes. While diverter systems are helpful in directing the material flow to the magnets, be aware they tend to increase bridging and reduce uniform product flow.

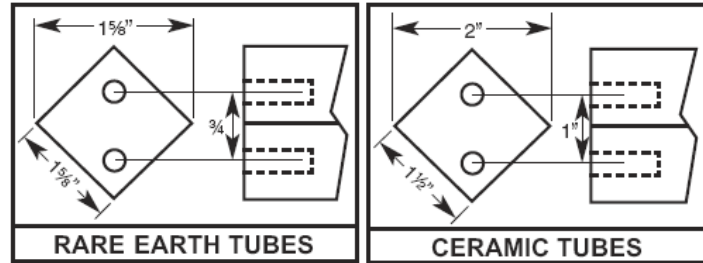
Round Grate Tube (GT) Specifications:

- Available in Standard Lengths from 4" to 36" in Two Inch Increments
- Round Grate Tubes Weigh 0.15 Pounds Per Inch of Length
- One Inch Diameter Stainless Steel Tubes
- Rolled Ends with Solid Stainless Steel Plugs
- 1/4-20 Tapped Mounting Holes in End Plugs



Round Grate Tube Ordering Guide: GT 00

Round Grate Tube = GT
 2 Digit Tube Length (i.e. 04 for 4 inches)
 Magnet Material "C" for Ceramic or "R" for Rare Earth
Example: GT0800R = 8" Long, Rare Earth Grate Tube



Square Grate Tube Ordering Guide: ST 00

Square Grate Tube = ST
 2 Digit Tube Length (i.e. 04 for 4 inches)
 Magnet Material "C" for Ceramic or "R" for Rare Earth
Example: ST1200C = 12" Long, ceramic Grate Tube

Square Tube (ST) Specifications:

- 1-1/2" Square Stainless Steel Tube (Ceramic)
- 1-1/8" Square Stainless Steel Tube (Rare Earth)
- Welded Ends with Solid Stainless Steel Plugs
- Two, 1/4-20 Tapped Mounting Holes in End Plugs
- Standard Lengths from 4" to 48" in Two Inch Increments
- Square Tubes Weigh 0.4 Pounds Per Inch of Length

GT & ST Grate Tube Options:

- Welded Ends
- Custom Lengths
- Special Coating for Abrasive Products

ROUND TUBE MAGNET GRATE ASSEMBLIES

EAGLE's round tube magnetic grates deliver ferrous tramp metal separation in round or square bins, chutes, drawers, hoppers and enclosures. These grates can be equipped with diverters (see diverter styles on page 3).

Features:

- 1/8" thick by 2" wide stainless steel stringers
- 1" diameter stainless steel magnetic tube
- Tubes on 2" centers

Options:

- Custom sizes and designs available
- Sanitary or food grade construction
- Three styles of diverters available
- Customer specified tube spacing
- Special Coating for Abrasive Products

Standard Models listed with the prefix "N" are without diverters.

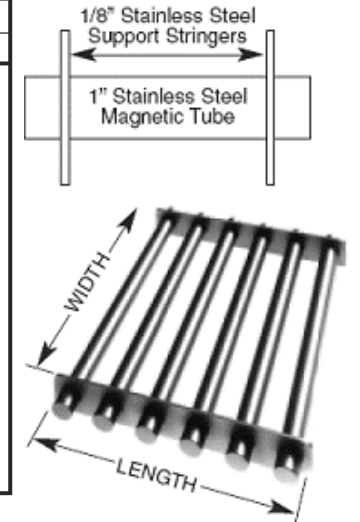
When ordering grates with diverters, replace the prefix N with the diverter style letter (A, B or C).

**Round magnetic grates are available in 30 standard diameters ranging from 4" to 36".
 Special sizes are also available.**

Round Grate Specification Guide:

- To order a round grate with a diverter replace the "N" in the part number with the letter for the desired diverter type.
 - Also, add "C" for Ceramic or "R" for Rare Earth to the end of the part number.
- Example Part Number: A 6" dia. Rare Earth (R) grate with 60° diverter (style B) would be B06DR.
Notes: • For 20 lbs/cu.ft., divide the number in the 40 lbs/cu.ft. column by 2.

| Size and Flow Chart for Round Shaped (Round Tube Grates) | | | | | | | | | |
|--|------------|--------------|---------------|-----------|----------|--|------------|------------|------------|
| Part No. | 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 |
| N20D | 20" | 10 | 314 | 5,000 | 31.4 | 200,000 | 250,000 | 300,000 | 350,000 |
| N22D | 22" | 11 | 380 | 6,050 | 38.0 | 242,000 | 302,500 | 363,000 | 423,500 |
| N24D | 24" | 12 | 452 | 7,200 | 45.2 | 288,000 | 360,000 | 432,000 | 504,000 |
| N26D | 26" | 13 | 530 | 8,450 | 53.0 | 338,000 | 422,500 | 507,000 | 591,500 |
| N28D | 28" | 14 | 615 | 9,800 | 61.5 | 392,000 | 490,000 | 588,000 | 686,000 |
| N30D | 30" | 15 | 706 | 11,250 | 70.6 | 450,000 | 562,500 | 675,000 | 787,500 |
| N32D | 32" | 16 | 804 | 12,800 | 80.4 | 512,000 | 640,000 | 768,000 | 896,000 |
| N34D | 34" | 17 | 907 | 14,450 | 90.7 | 578,000 | 722,500 | 867,000 | 1,011,500 |
| N36D | 36" | 18 | 1,017 | 16,200 | 101.7 | 648,000 | 810,000 | 972,000 | 1,134,000 |



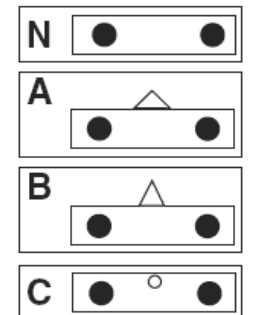
Rectangular magnetic grates are available with standard widths and lengths from 4" to 36" in 2" increments. Special sizes are also available.

| Flow Chart for Rectangular (Round Tube Grates) | | | | | | | | | |
|--|------------|---------------|-----------|----------|--|------------|------------|------------|--|
| Size W x L | # 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 | |
| 04W04L | 2 | 16 | 200 | 1.6 | 8,000 | 10,000 | 12,000 | 14,000 | |
| 06W06L | 3 | 36 | 450 | 3.3 | 18,000 | 22,500 | 27,000 | 31,500 | |
| 08W08L | 4 | 64 | 800 | 5.5 | 32,000 | 40,000 | 48,000 | 56,000 | |
| 10W10L | 5 | 100 | 1,250 | 8.4 | 50,000 | 62,500 | 75,000 | 87,500 | |
| 12W12L | 6 | 144 | 1,800 | 11.4 | 72,000 | 90,000 | 108,000 | 126,000 | |
| 14W14L | 7 | 196 | 2,450 | 15.8 | 98,000 | 122,500 | 147,000 | 171,500 | |
| 16W16L | 8 | 256 | 3,200 | 20.0 | 128,000 | 160,000 | 192,000 | 224,000 | |
| 18W18L | 9 | 324 | 4,050 | 25.2 | 162,000 | 202,500 | 243,000 | 283,500 | |
| 20W20L | 10 | 400 | 5,000 | 30.3 | 200,000 | 250,000 | 300,000 | 350,000 | |
| 22W22L | 11 | 484 | 6,050 | 36.7 | 242,000 | 302,500 | 363,000 | 423,500 | |
| 24W24L | 12 | 576 | 7,200 | 43.1 | 288,000 | 360,000 | 432,000 | 504,000 | |
| 26W26L | 13 | 676 | 8,450 | 50.5 | 338,000 | 422,500 | 507,000 | 591,500 | |
| 28W28L | 14 | 784 | 9,800 | 58.2 | 392,000 | 490,000 | 588,000 | 686,000 | |
| 30W30L | 15 | 900 | 11,250 | 66.5 | 450,000 | 562,500 | 675,000 | 787,500 | |
| 32W32L | 16 | 1,024 | 12,800 | 75.3 | 512,000 | 640,000 | 768,000 | 896,000 | |
| 34W34L | 17 | 1,156 | 14,450 | 84.7 | 578,000 | 722,500 | 867,000 | 1,011,500 | |
| 36W36L | 18 | 1,296 | 16,200 | 94.6 | 648,000 | 810,000 | 972,000 | 1,134,000 | |

Rectangular Grate Specification Guide:

- To order a rectangular grate list the 2 digit width followed by a "W" and then list a 2 digit length followed by a "L". If a diverter is desired replace the "N" at the beginning of the part number with the letter for the desired diverter type.
 - Also, add "C" for Ceramic or "R" for Rare Earth to the end of the part number.
- Example: The part number for a 6" wide by 10" long Ceramic (C) grate with a 90° diverter (style A) would be A06W10LC.

Notes: • For 20 lbs/cu.ft., divide the number in the 40 lbs/cu.ft. column by 2.



Diverter Style Specifications:

- "N" = Standard Grate with No Diverters
- "A" = The popular 90° angle gives optimum direction of material to the magnet. Ideal for capturing fines. Peak is 1-5/8" (4.127cm) from the center of the magnet.
- "B" = Ideal for medium or soft materials, 60° angle allows material to flow freely but doesn't force as much material contact with the magnet.
- "C" = For coarse materials with minimum flow restriction. 3/8" (.9525cm) dia. stainless rod.

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