



**MAGNETIC PRODUCTS, INC.**  
ENGINEERED METAL CONTROL SOLUTIONS

# Beltless Magnetic Conveyor

**Series: BLM**



Rugged, reliable and robust, MPI's Beltless Magnetic Conveyors efficiently move ferrous metal, stampings, turnings, chips, fasteners, scrap and more, wherever it needs to go. Powerful permanent magnets, located below a nonmagnetic stainless steel slider bed, transport parts without fail and without downtime, even when faced with the most challenging applications. As the magnets move, objects travel along the conveyor and into a bin for easy removal or transport.

MPI's Beltless Magnetic Conveyors are built for maintenance-free operation. With no external moving components except for the drive motor assembly, the liquid-tight sealed conveyor housing can be totally submerged in machine reservoir tanks. An internal self-adjusting take-up system eliminates the need for time-consuming fine-tuning of mechanics. The conveyor's sealed design prevents scrap from entering and damaging internal components.

MPI offers BLM conveyors in a variety of sizes with many design options, and can be supplied with ancillary components, such as feeders and hoppers, to provide a complete material handling system. MPI offers complete demolition of old equipment and installation services.

- 1** Wear and impact resistant slider bed – Minimum 12 gauge stainless steel slider bed (7 gauge for over 18" wide or manganese option)
- 2** Optimized for minimal magnetic drag – Magnets enclosed in UHMW wrapper, internal stainless magnet supports and welded stainless motor mount
- 3** Automatic chain tensioning – Internal take-up maintains tension for life of unit and is enclosed to keep debris out of moving parts
- 4** Best in class track system – Welded structural steel angle and stainless in convex and concave (high wear areas) – No plastic track or laminated light gauge steel channel
- 5** American made drive packages

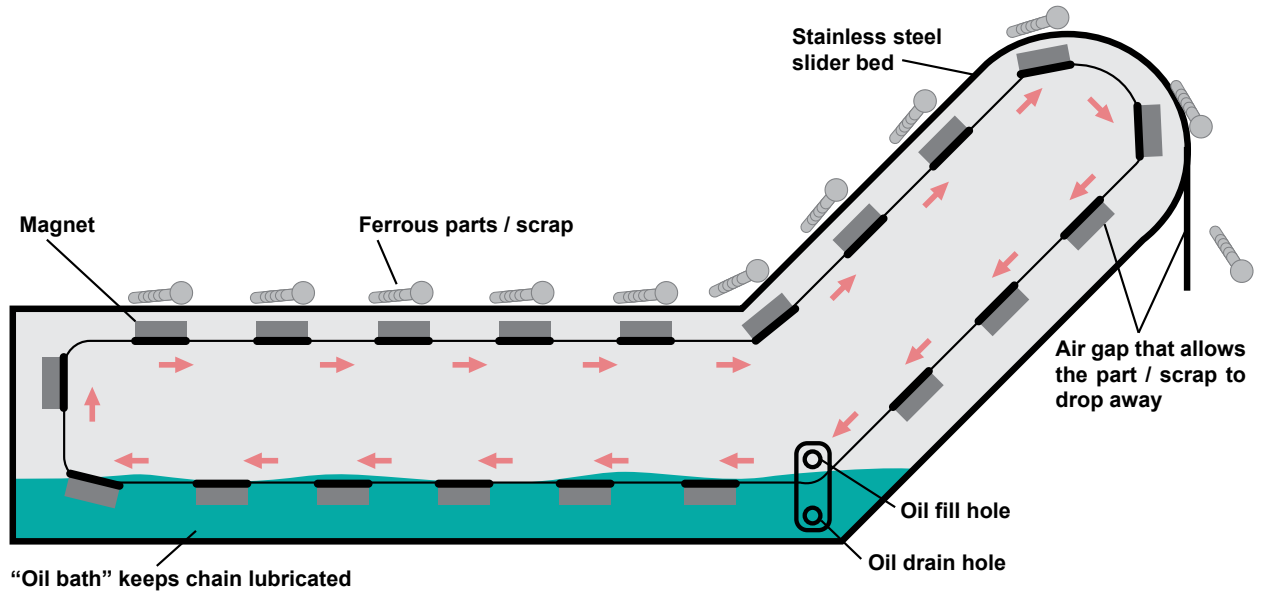
\*Specifications subject to change

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**MPI**

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## BLM How It Works

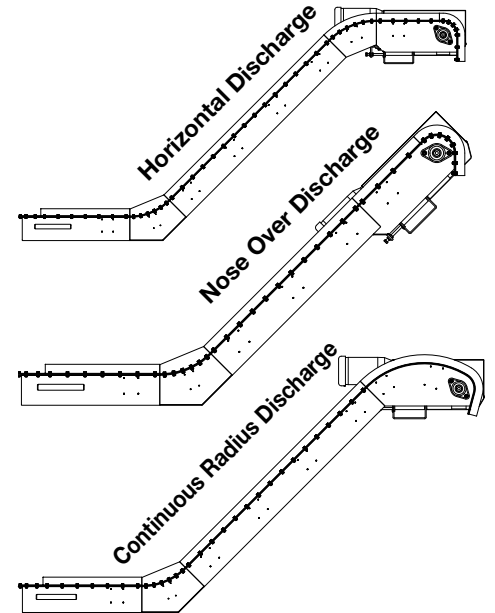


## BLM Selectable Options

	BLM-600	BLM-800	BLM-1200
<b>Body Depth (IN)</b>	6.5	8.5	13.875
<b>Magnetic Strength</b>	•	••	•••
<b>Magnet Centers</b>	5"+	6"+	8"+
<b>Chain</b>	#2052	#2062	#2082
<b>Body Construction</b>	11 Gauge	11 Gauge	7 Gauge
<b>Standard In-feed Length</b>	30"		
<b>Self Adjusting Take-Up</b>	✓	✓	✓
<b>Slider Bed Gauge*</b>	12 Gauge	12 Gauge	7 Gauge
<b>Slider Bed Width</b>	6" - 24"		
<b>Angle of Incline</b>	0 - 90° (15° increments)		
<b>Speed</b>	45 FPM		
<b>Magnet Material</b>	Ceramic (rare earth as required)		

\*Note: All slider beds over 18" wide will be 7 gauge

### Discharge Head Styles



**BLM Series:** MPI offers three series of magnetic conveyors. Each larger series has a larger body to accommodate larger magnetic cartridges and heavier duty internal chain designed to handle more difficult scrap or higher scrap rate capacities. MPI will help you select the correct duty for your application.

- 600 Series - 6.5" body depth
- 800 Series - 8.5" body depth
- 1200 Series - 13.875" body depth

### Shape Configuration:

- Horizontal straight
- Incline straight nose over
- Dogleg horizontal/continuous radius discharge
- Dogleg nose over
- Incline straight horizontal/continuous radius discharge

### Discharge Design:

- **Horizontal (standard)**
- Nose over - recommended for small scrap and compact designs
- Continuous radius - recommended for smooth scrap transfer of long pieces

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## BLM Selectable Options Continued

rigidized material

### Infeed Length:

- Minimum infeed length is 30" to as long as required for customer application

### Angle of Incline:

- 15°
- 30°
- 45°
- 60°
- 75°
- 90°
- Custom

**Discharge Length:** The minimum discharge length depends on the discharge design selected. The discharge lengths can be made as long as required for the application.

- Minimum length for nose over discharge design is body width, the shortest design available
- Minimum length for horizontal discharge design is 22"
- Minimum length for continuous radius discharge design depends on the angle of incline, at least 22"

**Infeed Height:** Floor installation is standard. This will result in the infeed height being the body depth specified by the series selected. Legs can be added for raised infeed heights.

- **Body depth (standard)**
- As specified for the application (legs added)

### Discharge Height:

- No standard - as specified for the application

### Overall Length:

- Calculated based on configured dimensions and options specified above

**Slider Bed Width:** Minimum widths are based on series selected. Standard widths are available in increments of 2" from the minimum to a maximum of 24". Overall body width of the conveyor is the slider bed width plus 4".

- 600 series - minimum 6"
- 800 series - minimum 8"
- 1200 series - minimum 12"
- Special - compact design where overall body width of the conveyor is the slider bed width plus 2"

### Slider Bed Material:

- Under 18" wide - 12 gauge stainless (standard)
- 18" wide and larger - 7 gauge stainless (standard)
- 7 gauge manganese impact plate for specified length
- 7 gauge manganese impact plate through infeed
- 7 gauge manganese impact plate whole length
- 16 gauge laminated rigidized material on top of standard slider bed to reduce part friction
- 7 gauge manganese impact plate dimpled to simulate

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**Magnet Material:** Standard magnets are ceramic and will work for most applications. Testing will determine if rare earth magnets are required to achieve required rate.

### • Ceramic (standard)

- Ceramic with REN rare earth sweepers to break potential surges
- High capacity REN rare earth with stainless steel body to reduce drag

**Magnet Centers:** Magnet centers are based on the maximum part length. For proper function of BLM the general rule is the centers will be 1.5 times the parts / scrap maximum length.

- 600 series - increments of 5" centers
- 800 series - increments of 6" centers
- 1200 series - increments of 8" centers

### Side Guides:

- **2" tall, 90° from slider bed (standard)**
- Custom
- Zero radius guides for thin conveyed material

### Drive Package:

- **US Manufactured Baldor TEFC (standard)**
- Customer specified

### Drive Package Location:

- **Offset drive (standard)**
- Underhead chain drive
- Overhead chain drive

### Motor Location (looking in direction of product travel):

- **Right (standard)**
- Left

### Power Input:

- **230/460/3 Phase / 60 Hz (standard)**
- 115 / 230 1 Phase
- 575 / 3 Phase

### Conveyor Speed:

- **Gear reducer for 45 FPM constant speed (standard)**
- Customer speed as specified based on testing

### Paint:

- **MPI green (standard)**
- MPI light gray
- Customer specified

### Oil Fill and Drain Location:

- **Located on the same side as the drive package (standard)**
- Extended oil fill options available for submerged tank applications

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### Support Legs:

- **Fixed position (standard)**
- Adjustable position

### Infeed Casters:

- **Not included (standard)**
- "V" wheel
- 5" rigid
- 5" rigid with brake
- 5" swivel
- 5" swivel locking with brake

### Discharge Casters:

- **Not included (standard)**
- "V" wheel
- 5" rigid
- 5" rigid with brake
- 5" swivel
- 5" swivel locking with brake (recommended)

### Controls:

- **Not included (standard)**
- Included as specified

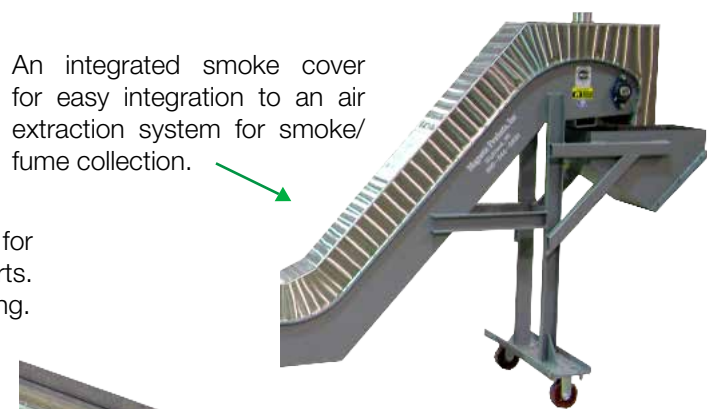
### Other Options Include:

- Submerged tank design for filtration or heat treat applications
- Smoke covers for containing smoke generated from hot parts
- Body inspection doors
- Lanes for transferring different parts on the same conveyor or keeping parts and scrap separate
- Coolant collection (or oil) discharge port on infeed
- Liquid tight side guides to contain oil

## Custom Options to Consider



An integrated hopper for even loading of parts. Eliminates surge loading.



A manganese impact plate or slider bed prevents wear on the conveyor surface, even with high-volume applications or abrasive parts.



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