Installation & Maintenance: Magnetic Separation Pulley

Kinder Australia Product:	Magnetic Separation Pulley and Take Off Rail
Product Category:	Conveyor Hardware
Issue Date:	19/06/2025
Revision:	1

A magnetic separation pulley is a specialised type of conveyor pulley used in bulk material handling systems to automatically remove ferrous contaminants (like iron or steel) from the conveyed material. Magnetic separation pulleys can be installed in place of a standard non-magnetic discharge pulley.

Warning!

Please exercise extreme care when handling magnets.

The magnets will be strongly attracted to each other, steel tools and other magnetic material and could cause damage or injury.

People with pacemakers or ferromagnetic implants should not handle the magnets.

Installation

Isolate/Lock out tag out

Before beginning installation or maintenance of any conveyor component, make sure to isolate, lock and danger tag the conveyor at the main positive isolator (in accordance with the appropriate occupational health and safety regulations) to prevent unauthorised starting.

WARNING: NEVER OPERATE, ADJUST, OR INSTALL EQUIPMENT ON A MOVING CONVEYOR!

Kinder Australia Pty Ltd
ABN 28 006 489 238
P: +61 3 8587 9111 | F: +61 3 8587 9101
conveyorsolutions@kinder.com.au
kinder.com.au

Installation & Maintenance: Magnetic Separation Pulley

Lifting

Only use fabric slings or specially designed lifting frames. Always ensure sling will not press against the edge of the pulley shell or lagging. Lifting of the pulley should never take place from the shaft extensions or any part of the bearing housings.

DO NOT USE CHAINS OR WIRE SLINGS.

Alignment

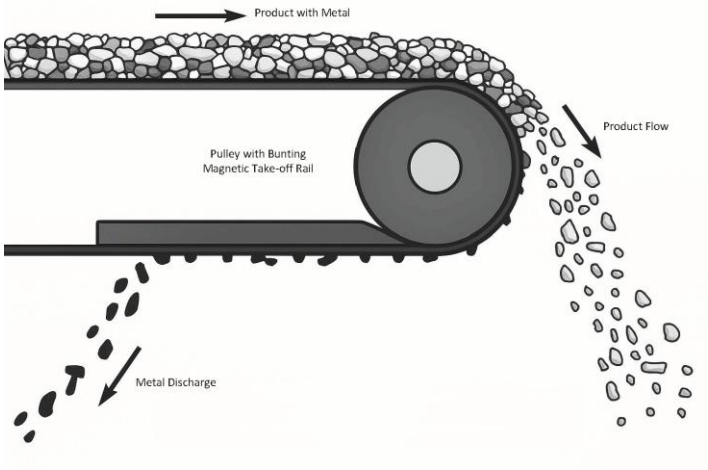
Mount the pulley into position. When assembling the pulley to the structure the pulley must be:

- Central about the conveyor centre line.
- Horizontal and level across the pulley face.
- The axis of the shaft **MUST BE** at 90 degrees to the conveyor centre line.

Install Take Off Rail

The take off rail has 6 off 8.5mm holes in the 40x40x3mm stainless steel angles on the top of the rail. Use these holes for mounting to conveyor structure or other convenient location.

The point of the take off rail should be positioned as close as possible to the magnetic separation pulley. The closer the point of the rail is to the pulley the more easily ferrous will transfer from the pulley to the rail.



Final Inspection

1. Remove any protective coverings.
2. Check bearings and seals run smoothly.
3. Cover external surfaces of compression hubs or locking assemblies with approved long life anti-corrosive protective.
4. Touch up any damaged paint surfaces and apply anti-corrosive coating to any exposed Shaft.

Kinder Australia Pty Ltd
ABN 28 006 489 238
P: +61 3 8587 9111 | F: +61 3 8587 9101
conveyorsolutions@kinder.com.au
kinder.com.au

KINDER
EXPERIENCE INNOVATION PRODUCTIVITY

Installation & Maintenance: Magnetic Separation Pulley

Maintenance

Shaft Replacement

1. The 304 stainless steel shaft can be replaced.
2. Before loosening the taper lock bushes, mark them so that they can be returned to the same weld on hub. This is because the position of the keyway can vary from bush to bush. If bushes are exchanged, they may not match the keyway positions on the shaft.
3. Remove screws from bush.
4. Insert one screw into the hole in the bush that did not have a screw in it. This is the removal hole.
5. Tighten screw to remove bush.
6. Repeat for the bush on the other side.
7. Remove shaft and replace with new shaft.
8. Position bushes and tighten.

Bearing

Refer to bearing manufacturers recommendations for maintenance requirements for bearings, housings and seals.

Packing for Sea Freight

When packing the Magnetic Separation Pulley and Take Off Rail for sea freight shipping, leave approximately 100mm from the OD of the pulley and the magnetic face of the rail to the outside of the crate. This will keep most of the magnetism inside the crate.

Storage

If the pulley is not to be installed on delivery, careful storage must be undertaken to ensure the assembly is not degraded.

Pulleys should be stored protected from the elements and not exposed to UV light for extended periods of time.

Kinder supplies pulleys with all exposed steel surfaces protected with a rust inhibitor (either petroleum tape or hard oil coating). Effectiveness of these rust inhibitors should be checked every 3 months and new rush inhibitor applied if required.

Pulleys with roller or ball bearings should be isolated from ANY vibration. Storage in machinery rooms or on concrete slabs, which extend into vibrating areas, will lead to brinelling of the bearings and early failure in service. Frequent rotation of bearing or pulley if pulley is supported by the bearings will minimise the risk of brinelling.

Recommended storage is by the shaft with the bearing free to rotate.

Kinder Australia Pty Ltd
ABN 28 006 489 238
P: +61 3 8587 9111 | F: +61 3 8587 9101
conveyorsolutions@kinder.com.au
kinder.com.au