

# Installation, Operation and Maintenance Instructions



## 9B-DP FINISHING MILL UNLOADER

**ERIEZ MAGNETICS** HEADQUARTERS: 2200 ASBURY ROAD, ERIE, PA 16506-1402 U.S.A.  
*WORLD AUTHORITY IN SEPARATION TECHNOLOGIES*

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## Introduction

This manual details the proper steps for installing, operating and maintaining the Eriez 9B-DP Finishing Mill Unloader.

Careful attention to these requirements will assure the most efficient and dependable performance of this equipment.

If there are any questions or comments about the manual, please call Eriez at 814-835-6000 for Finishing Mill Unloader assistance.



### **CAUTION**

**Safety labels must be affixed to this product.  
Should the safety label(s) be damaged, dislodged  
or removed, contact Eriez for replacement.**

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## Description

9B-DP Finishing Mill Unloaders are designed to remove ferrous parts from finishing mills. The unloader consists of a 12" (305mm) diameter magnetic drum, which can be lowered into the media. Next to this is an 8" (203mm) diameter magnetic head pulley revolving along with a horizontal conveyor belt. The belt passes over a flat demagnetizer and around the drive pulley. These parts are contained in a heavy-duty housing, which is mounted on a hydraulic base for raising and lowering the unit. The unloader is driven by a shaft-mounted motor/reducer.

## Installation

The 9B-DP Finishing Mill Unloader can be quickly and easily wheeled into position beside the mill. It can then be hydraulically lowered into position from 2" (50mm) beneath to 2" (50mm) above the surface of the media, depending on part size. When lowering the unit, pump up the hydraulic pressure in the elevator before releasing the latch. This will take up the slack in the system and prevent a sudden drop in the unit when the latch is released. When the unloader is in the proper position, close the latch to lock the unit in place.

### Electrical Connections

Check the specifications of the power line to be certain that they are the same as those shown on the nameplate of the unloader.

## Operation

### Motor

**Starting:** The motor should start quickly and run smoothly with little noise. If the motor should fail to start, it may be that the load is too great for the motor, the applied voltage is low, or the motor has been improperly wired. In any case, immediately shut off the power and investigate the cause.

**Overload Protection:** Motors supplied with thermal protectors are furnished either as manual or destructive overheating. If the protector trips, proceed as follows:

#### For manual reset type:

1. Wait several minutes
2. Push in reset plunger until it catches
3. Restart motor

#### For automatic reset type:

This type will reset itself when the motor cools sufficiently. If the thermal protector continues to trip, some abnormal condition exists. This condition must be corrected before the motor will operate normally.



**WARNING**  
**AUTOMATIC RESET THERMAL PROTECTOR**  
A motor which can restart automatically after the thermal shutdown should not be installed because this may result in injury to persons.

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## Lubrication & Maintenance

### Shaft Bearings

Lubricate the shaft bearings every 1500 hours or six months with a good grade of ball-bearing grease when changing gear lubricant. **DO NOT OVER-LUBRICATE GREASE PACKED BEARINGS.**

### Gearmotors & Reducers

Gearmotors and gear reducers are accurately adjusted and tested at the factory. Care must be taken when the gear case is disassembled and reassembled. This should be done by an authorized service center as damage to internal parts may result if done improperly. Whenever the motor unit is assembled to the reducer, the spline must be lubricated with moly sulfide lubricant, preferably Mobil Temp No. 78.

Motors are warranted by the motor manufacturer.

### Gear Case

After initial operation of your reducer for 100 hours, the housing should be thoroughly drained while the oil is warm, then new oil added to fill the housing to the proper oil level. During the initial break-in period of operation, higher than normal operating temperature may be seen. This is due to the initial break-in of the gear set.

After initial break-in, oil should be changed every six months or 2500 hours (whichever comes first) under Class I service. Refer to factory for class of service guidelines.



**CAUTION**  
Oil should be changed more often if reducer is used in a higher class of service, i.e., Class II or III or in a severe environment, i.e., dusty or humid. The precision made gears in the mill unloader reducers require high-grade lubricants to maintain trouble-free performance. For best results, use only recommended lubricants.

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## Lubrication & Maintenance (cont.)

Lubrication is extremely important for satisfactory operation. Proper oil level must be maintained in the gear case at all times. The correct level is indicated by the red plug. Frequent inspections with the unit not running (preferably when warm) should be made by removing this plug to see that level is being maintained. If low, without replacing oil level plug, add lubricant through the oil fill hole until it comes out of the oil level hole. Replace the oil level plug securely.

### Recommended Gear-Case Lubricants

AGMA	Ambient Temperature Range	Gulf	Mobil	Shell
7 Comp	15° to 600°F (-10° to 16°C)	Senate 460	6Y00 W Super	Valvauta J-460
8 Comp	50° to 140°F (10° to 60°C)	Senate 680D	Extra Heela Super	Valvanta J-680

### Motor

#### Lubrication of Ball Bearings

The ball bearings are deep grooved, double-shielded bearings with sufficient lubricant packed into the bearings by the manufacturer for "life lubrication." The initial lubricant is supplemented by a supply packed into larger reservoirs in the end shield at the time of assembly. No grease fittings are provided as the initial lubrication is adequate for up to five years of operation under normal conditions.

#### Lubrication of Sleeve Bearings

The bearing sleeve is steel on the outside for strength with tin base babbit lining on the inside for low friction and long wear. A storage space around the bearing is filled with Permawick, a commercial composition of special cellulose fiber highly saturated with oil. The initial factory lubrication is normally adequate for approximately two years under normal operation. Thereafter, lubricate about every six months. This requires about three to four squirts from an oil can. Use only light mineral oil (similar to SAE-LOW) having viscosity of 210 seconds at 100°F (40°C).

#### Hydraulic Elevator

The hydraulic system on the elevator is a closed system. No special maintenance is required.

### Gap Adjustment

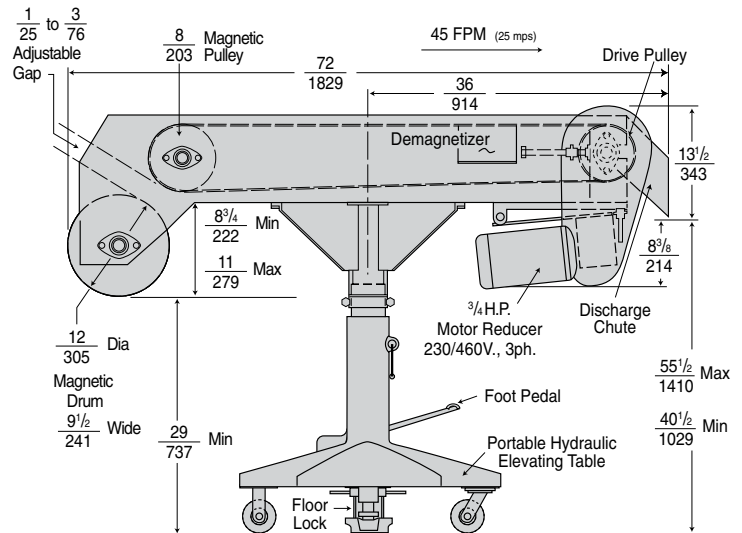
The gap between the pick-up drum and the magnetic pulley can be adjusted from 1" to 3". To change the gap, loosen the bolts holding the bearing and collar clamp. Slide the drum toward or away from the magnetic pulley. When the desired gap is obtained, tighten the bolts to secure the drum in place. After the drum is secure, loosen the bolt holding the tensioning sprocket and move in the direction that will give the proper drive chain tension. Tighten the bolt to secure the sprocket in place and replace the chain guard.

### Conveyor Belt Adjustment

The conveyor belt tension can be adjusted with the take-up frames on the drive pulley. By turning the nut on the end of the threaded bolt, the drive pulley can be moved in or out changing the tension on the belt. The tension on the belt should be such that the belt will not slip on the pulleys.

### Drum Element Adjustment

On the end of the stationary shaft is an arrow which indicates the center of the magnetic elements. To change the position of the elements, loosen the set screws in the collar clamp and rotate the shaft to the desired position using the arrow as a guide. When the desired position is reached, tighten the set screws in the collar clamp.



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