



FLINGER DISC

Operating Manual



P/N 36950 36951 36952 36953

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◆ Introduction

Thank you for purchasing the Trico Mfg. Corp. Flinger Disc. The Flinger Disc is an alternative to "Slinger"/Oil ring lubrication typically found in API centrifugal pumps power frames. The purpose of either a Flinger Disc or Oil Ring is to lubricate and cool the bearings and prevent stratification of the oil (hot/cold). Other Lubricating Discs products have been made from non-flexible metallic material that is limited to the same diameter of the bearing housing. Trico's Flinger Disc is made of Viton® allowing flexibility during installation while maintaining similar submersion into the oil bath as the traditional oil ring. The Flinger Disc should submerge in the oil bath the same amount as the current Oil Ring which is typically .250 to .50 inches. The Flinger Disc has a stainless steel hub to maintain concentricity and is positively secured to the shaft with set screws. For maximum versatility and minimum stocking requirements, Trico offers two Flinger Discs that cover a variety of bore diameter size ranges that can be machined by the customer or Trico to meet the application needs.

Mounting hub bore diameter size ranges offered: **1.5" to 2.5"** **2.5" to 4"**. Raised rings are molded on .25 inch intervals to adapt to various application requirements. The end user trims the disc to the required diameter to achieve the proper level of submersion into the oil.

Please read this manual carefully to learn how to correctly modify and install the Flinger Disc. Reading this manual will help you and others avoid personal injury, damage to the product and equipment it is installed on. After reading the manual it should be kept in a safe place for future reference.

◆ Customer Satisfaction

Trico Mfg. Corp. is proud of it's commitment to quality. This product is guaranteed against defects in workmanship and materials for one year from date of purchase. Under this guarantee, Trico will replace or repair product that is determined to be defective. Normal wear and tear, misuse or improper installation is not covered under this warranty. This warranty is limited to the repair or replacement of defective parts only. Trico is not responsible for incidental or consequential damage.

To reach Customer Service call 800-558-7008 (USA only) or 262-691-9336. Customer Service is available Monday through Friday 7:30 am 5:00 pm, central time. Customer Service can also be reached by fax, 262-691-2576, or write to:

Customer Service
Trico Mfg. Corp.
1235 Hickory Street
Pewaukee, WI 53072
custserv@tricomfg.com
www.tricomfg.com

◆ Important Safeguards

1. Read Instructions Thoroughly

If you are unsure on the instructions contact Trico Customer Service.

2. Retain Instructions

Safety and operating instructions should be retained for future reference.

3. Heed Warnings

All warnings on this product and in these instructions should be adhered to.

4. Follow Instructions

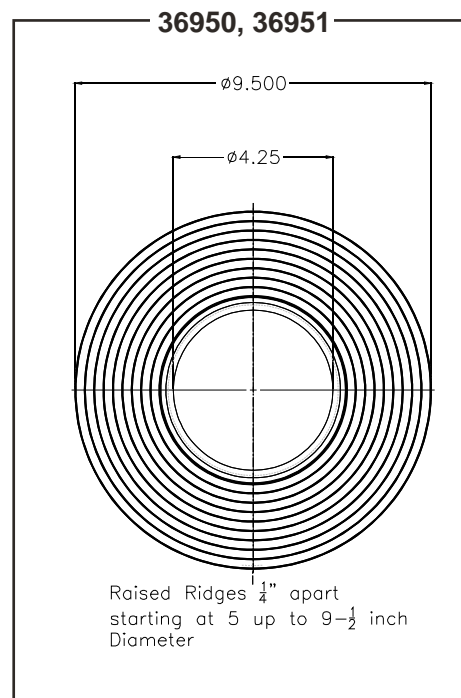
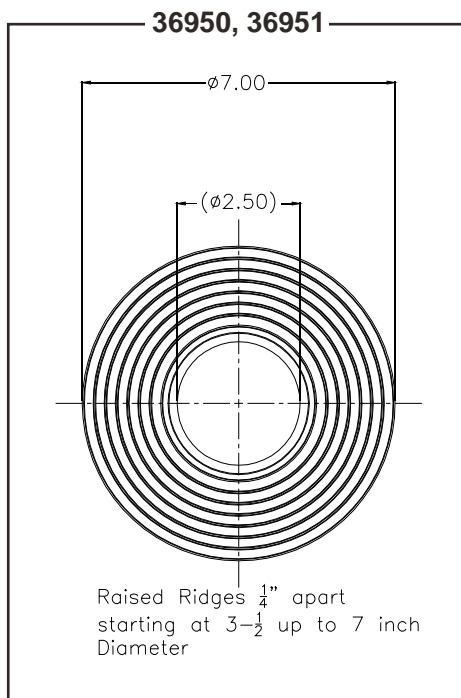
All installation, mounting, and operating instructions should be followed.

◆ Customer Satisfaction

- 36950 Flinger disc 1.5 - 2.5" ID, 3.5 - 7" OD
Customer Machines bore to proper diameter
- 36951 Flinger disc-customer specified ID, 3.5 - 7" OD
Customer supplies bore diameter to Trico for machining
- 36952 Flinger disc 2.5" ID, 5 - 9.5" OD
Customer Machines bore to proper diameter
- 36953 Flinger disc-customer specified ID, 5 - 9.5" OD
Customer supplies bore diameter to Trico for machining

| | 36950, 36951 | 36952, 36953 |
|-------------------------------|----------------------|----------------------|
| MAXIMUM OPERATING TEMP | 350°F | 350°F |
| HUB MATERIAL | 304 Stainless Steel | 304 Stainless Steel |
| FLINGER MATERIAL | Viton® | Viton® |
| SHAFT CONNECTION | (2) 10-32 Set Screws | (2) 10-32 Set Screws |
| OUTSIDE DIAMETER | 3.5 - 7.0 inches | 5.0 - 9.5 inches |
| INSIDE DIAMETER | 1.5 - 2.5 inches | 2.5 - 4.0 inches |

⚠ Caution: Maximum Operating Speed = 3,600 rpm.



◆ Installation

⚠ Caution: Prior to installing the Flinger Disc, insure Viton® is compatible with oil.

In order to properly install the Flinger disc four pieces of data need to be determined:

- Number of Flinger Discs required
- Mounting location on the shaft
- Shaft diameter where disc is being installed
- Outside diameter of disc

Number of Discs Required:

The number of discs required is dependent on the number of Oil Rings currently installed on the shaft. If the specific shaft has two Oil Rings then two Flinger Discs are required. If there is only one Oil Ring then one Flinger Disc is sufficient.

Mounting Location on the Shaft:

The Flinger Disc should be mounted in close proximity to existing Oil Ring. If a groove exists in the shaft, mount Disc next to either side of the groove depending on shaft configuration.

Shaft Diameter where disc is being installed:

The required Flinger Disc bore dimension will be determined based on the shaft diameter at the desired mounting location. Once the mounting location is determined, the shaft diameter should be verified using a micrometer. The Flinger Disc bore should be machined to allow for a slip fit during installation.

Recommendation: Flinger Disc Bore = Shaft Diameter (D) + .005"

Outside Diameter of Disc:

The Flinger Disc should submerge into the oil the same amount as existing Oil Rings which is typically between .25" and .5". The required outside diameter can be calculated using three different formulas based on dimensions obtained from the Pump OEM or dimensional data obtained by using a micrometer to measure the shaft and a new Oil Ring. The different formulas for known dimensions are as follows. (Refer to Figure 1 and 2)

Outside Diameter = [(F) + (A)] x 2

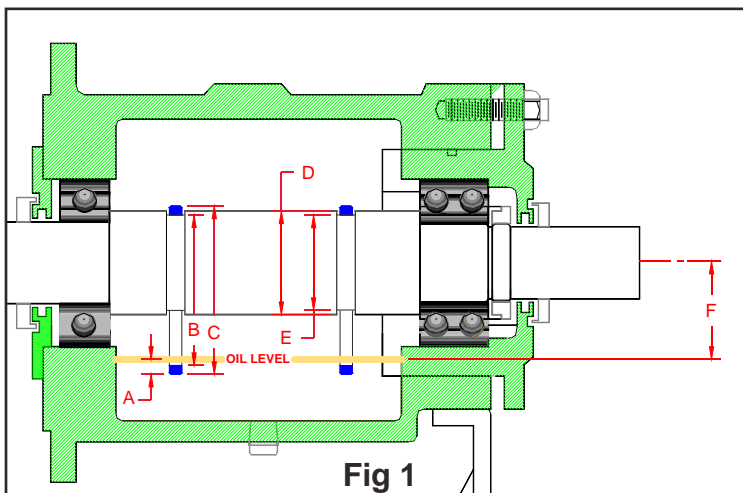
Outside Diameter = [(B - E) + (E/2) + (C - B)/2] x 2

Outside Diameter = [(B - D) + (D/2) + (C - B)/2] x 2

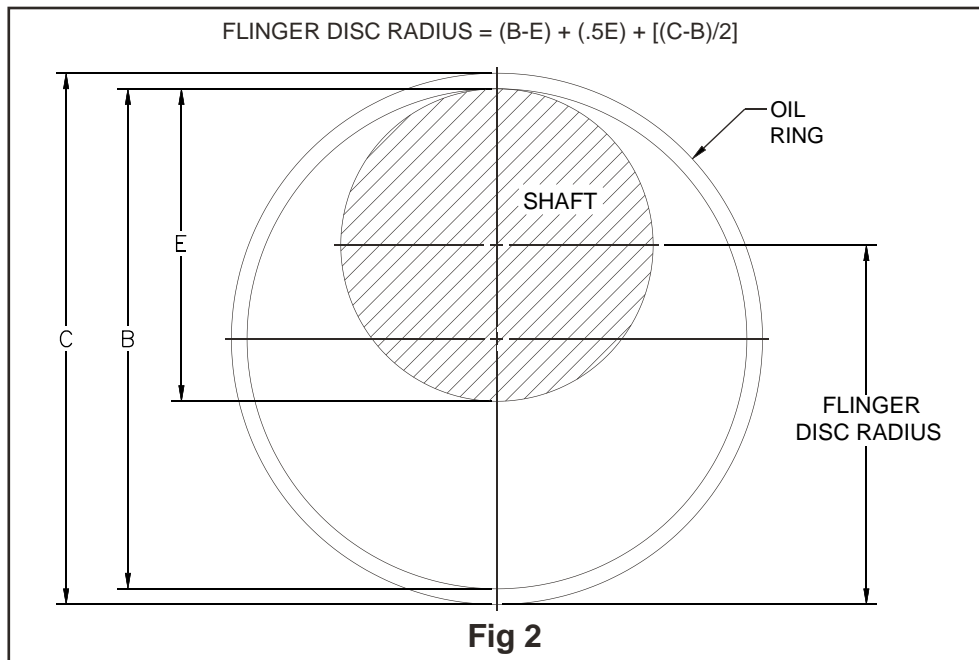
Submersion Level Known

Groove exists in Shaft for Ring

No Groove in Shaft



| DIM | DESCRIPTION | INCHES |
|-----|-------------------------|--------|
| A | Ring Submerged in Oil | |
| B | Ring Diameter (Inner) | |
| C | Ring Diameter (Outer) | |
| D | Shaft Diameter | |
| E | Diameter of Ring Groove | |
| F | Shaft CL to Oil Level | |



! Consult Pump OEM for these dimensions if not accurately available

- ! Caution: Incorrect Flinger Disc outside diameter may cause:**
1. Insufficient lubrication if diameter is too small to dip into oil
 2. High operating temperatures if diameter is too large causing excessive churning of the oil.

! Caution: Only a new Oil Ring should be used to obtain dimensional data. A used Oil Ring may have worn resulting in incorrect dimensional data.

! Caution: After calculating proper outer diameter of Flinger Disc, measure existing housing bore in area where disc would rotate. Ensure proper clearance exists to avoid any contact of Flinger Disc with the housing.

Trimming Disc:

After determining the proper diameter for the Flinger Disc, the disc can be cut to using industrial grade scissors, utility knife, or gasket cutters. The cutting should occur in a continuous process to avoid sharp edges. Use the ridges as guidelines for cutting to ensure a symmetric disc.

The disc should be cut on either the inside or outside of the ridge. After the Disc is cut to the correct diameter use a fine grit (400) sandpaper to clean up any loose edges. Prior to installing disc on shaft, it should be cleaned with a mild cleaner (compatible with Viton) to remove any particles.

Installing Disc:

After machining the bore of the disc and trimming the outer diameter to the correct dimensions, the disc can be installed on the shaft. Ensure shaft is free of any burrs prior to installing the disc. Locate disc on shaft in close proximity to previous Oil Ring location. Once in position, torque the two 10-32 set screws provided to 36 in-lbs (not lubricated) or 22 in-lbs (lubricated). Application of a thread locking product such as Loctite 222 is recommended to be applied.

◆ Unit Operation

The Flinger Disc provides splash type oil mist lubrication to the bearings. The proper amount of oil per the OEM recommendations should be added to the housing and verified by a bullseye sight gauge if applicable. The Flinger Disc will provide the proper lubrication as long as the correct outside diameter was calculated based on either the:

- OEM dimensions - Shaft Centerline to Oil level and Existing Oil Ring Submersion,
- Formulas above relating to shaft diameter, Oil Ring outer and inner diameter and Oil ring submersion.

Monitoring the bearing operating temperatures with a temperature gun after starting the pump is recommended. If the temperatures are higher than standard operating temperatures recommended by the OEM, the bearing housing should be inspected to ensure the Flinger Disc is properly submersed into the oil.

◆ Replacement Parts

- 36950 Flinger disc 1.5 2.5" ID, 3.5 - 7" OD
- 36951 Flinger disc-customer specified ID, 3.5 - 7" OD
- 36952 Flinger disc 2.5 - 4" ID, 5 - 9.5" OD
- 36953 Flinger disc-customer specified ID, 5 - 9.5" OD

