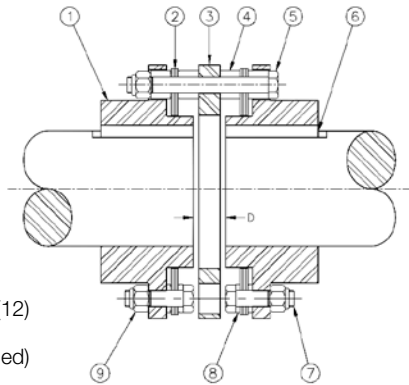


Form-Flex® Double Flex Coupling Type BY, All Sizes and Classes

Installation & Maintenance Instructions

P-5008-TBW
Form 1178



Parts List

1. Hub (2)
2. Flex Disc (2)
3. Spacer (1)
4. Thick Washer (12)
5. Long Bolt (3)
6. Key (not included)
7. Short Bolt (6)
8. Thin Washer (12)
9. Nut (9)

Figure 1

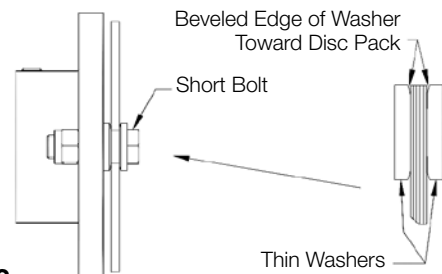


Figure 2

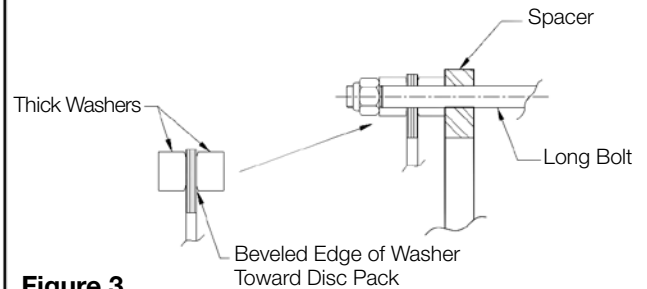


Figure 3

Proper care in installing and aligning will permit couplings to operate to full capacity, compensate for angular misalignment, and provide very good service life.

Shafts may become misaligned as a result of many natural and unavoidable causes. Heat, vibration, bearing wear, settling of foundations, etc., all tend to alter after initial alignment. To ensure longer life, re-check alignment after a short period of actual running.

In general, coupling life is increased when shafts are aligned carefully. If this is not done and a coupling is heavily stressed by torque or other forces, it will have little reserve left with which to accommodate misalignment stresses: and it might not provide the length of service intended. The closer the alignment TIR is to zero, the better the service life of the coupling.

Assembly

1. A complete coupling should consist of the components shown in the Bill of Materials in Figure 1. Examine the coupling to be sure that no components are missing or damaged.
2. Inspect shafts and hubs to make sure they are free from burrs. Check for proper fit of the keys to the shafts and hubs. Check for proper fit of the keys to the hub and shaft keyways. Keys should fit snugly side to side and about .010-.020" loose top and bottom.
3. Install coupling hubs with the flanged end flush to the shaft end. Position each hub so that the small diameter end of the hub is away from the end of the shaft. Installing Interference Fitted Hubs
 - a. Measure hub and shaft bores. The interference (hub bore - shaft diameter) should not exceed .001"/inch of shaft diameter.
 - b. Heat the hub uniformly. Use an oven, oil bath or similar process to provide uniform heating. Do not spot heat. Do not heat the hub above 600°F or distortion may occur. The temperature difference between the hub and shaft should be 160-180°F for each .001"/inch of interference.
 - c. After heating, quickly position the hub on the shaft with the key in place to assure proper alignment of the keyways. CAUTION: Take proper safety precautions when handling heated hubs to avoid burning or other injuries.
 - d. Allow the hub to cool to a safe handling temperature before proceeding with the installation.
4. Assemble the coupling using figure 1 and 2 as a guide. Torque the fasteners to the values in Table 1. The curved face of the element washer should face the flex disc as shown in Figures 2 & 3.

Table 1 - Nut Tightening Torque (Lightly Oiled Threads on Stainless Fasteners)

Size	33	38	43	48	53	58	63	68
FT-LB*	8	17	40	40	60	120	120	200

Alignment

1. Bring the equipment into an approximate good alignment well enough to assemble the spacer and its bolts, washers and nuts. See Figure 3 for proper washer positions.
2. Tighten the nuts to approximately 20 percent of the value in Table 1.
3. Attach a dial indicator to one of the hubs. Indicate a point on the nearest spacer face as close to the edge as possible. See Figure 4.
4. Rotate the coupling 360° to locate the minimum reading on the dial, then rotate the body or face of the indicator so that the zero reading lines up with the pointer.
5. Rotate the coupling 360° while watching the indicator for misalignment readings. The driver and driven equipment will be aligned when the maximum indicator readings are within the allowable limits as shown in Table 2. Adjust the equipment as necessary to comply with the limits. TIR should be as close to zero as possible. Readings should not exceed those shown in Table 3. **Repeat for both ends of coupling.**

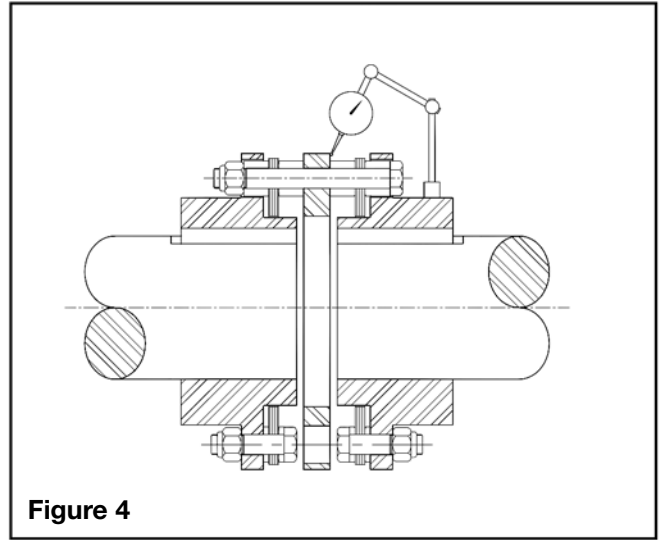


Figure 4

Notes: When the equipment is properly aligned, it is advisable to dowel a right angle gear box to its base. Experience has shown that right angle gear boxes tend to creep in a counter rotational direction. Recheck alignment after doweling.

6. After alignment is proper, tighten the spacer nuts to the value indicated in Table 1.
7. With equipment aligned and coupling assembled make sure all bolts and washers are in the proper orientation. The curved face of the washer must face the flex disc as shown in Figures 2 and 3.

Important: To ensure long life re-check alignment after a short period (one to two hours) of actual running. At this time also re-torque the nuts to values in Table 1.

Table 2 - Total Indicator Readings (Inches)

Size	33	38	43	48	53	58	63	68
T.I.R.*	.024	.030	.034	.039	.041	.046	.052	.056

* Equivalent to 3 deg per flex element. Lower T.I.R. readings will provide better alignment of shafts and longer service life.

IMPORTANT: To insure long life, re-check alignment after a short period of actual running. At this time, re-torque bolts & nuts to values in Table 1.

REPLACEMENT PARTS

To order replacement parts it is necessary to furnish the complete part number(s) and the required part(s). Order must be placed with your distributor.

▲ WARNING

ROTATING EQUIPMENT IS POTENTIALLY DANGEROUS AND MUST BE PROPERLY GUARDED. THE USER SHOULD COMPLY WITH APPLICABLE SAFETY CODES IN ACCORDANCE TO OSHA STANDARDS.



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