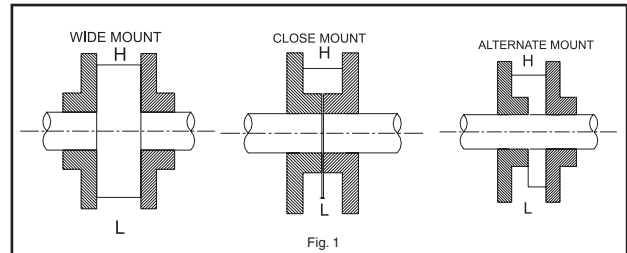
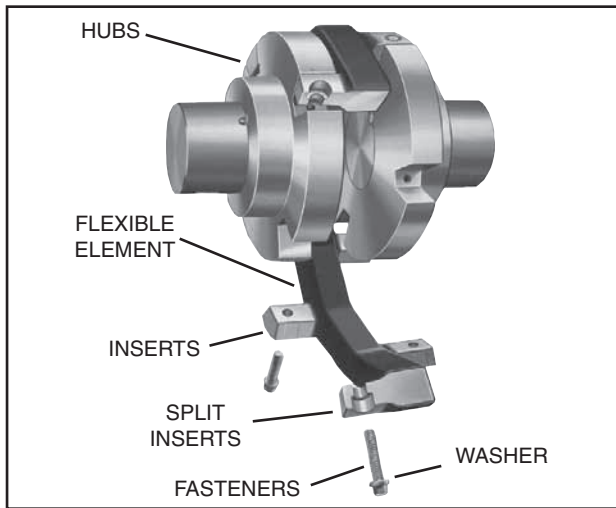


**⚠ WARNING**

- Read and follow all instructions carefully.
- Disconnect and lock-out power before installation and maintenance. Working on or near energized equipment can result in severe injury or death.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.

**⚠ CAUTION**

- Periodic inspections should be performed. Failure to perform proper maintenance can result in premature product failure and personal injury.
- All electrical work should be performed by qualified personnel and compliant with local and national electrical codes.



**INSTALLATION**

These Instructions apply to standard Elastomeric Couplings. For modifications and variations of these couplings, this sheet may be supplemented by special instructions packed with the coupling. Always use caution when working on rotating equipment. Be sure to lock out the starting switch of the prime mover so the equipment cannot be started until work is complete, checked, and personnel are safely away.

**REQUIRED TOOLS**

No special tools or equipment are required. Standard tools... socket and allen-key wrenches, torque wrench, straight edge, calipers, and feeler gauges... are the only tools needed.

**PREPARATION**

1. Inspect all parts for any damage and check that all components are as ordered.
2. Clean the shafts, keyways, and hub bores. Remove any burrs. Check key for proper fit in keyways. Keys should have a snug side-to-side fit, and slight clearance top to bottom.

**MOUNTING of HUBS**

1. Determine the hub mounting arrangement based on equipment shaft separation. Note that one or both of the Elastomeric hubs may be mounted with the hub body inboard or outboard as shown in Figure 1. Flange separation "H" must be maintained regardless of mounting position. See Table 1 for mounting dimensions.

Normally, the hubs are set flush with the shaft ends, but shaft end stick-out is allowable, provided enough shaft keyway length is available. Use of tapered bushings may require such a stick-out.

A hub overhang on the shaft is not recommended.

2. **CLEARANCE FITS.** Place the hub into desired position on the shaft and securely tighten the set-screw(s) over the key and keyway.

3. **INTERFERENCE FITS.** Heat hubs in an oven until the bores are larger than the shaft diameters. For most interference fits this will require a temperature of approximately 200°F.

**DO NOT USE AN OPEN FLAME ON THE COUPLING HUBS.** For safety... any use of an open flame should be avoided during coupling installation.

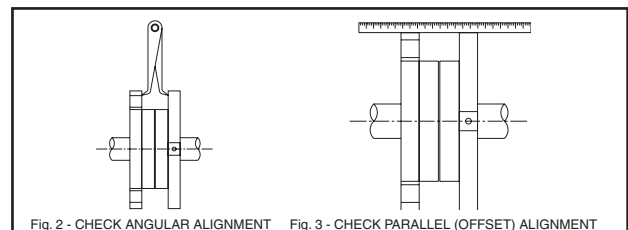
4. **Taper-lock® AND Q-D® BUSHINGS.** Maintain coupling flange separation "H" regardless of hub/shaft separation. Follow bushing manufacturer's instructions to mount the bushing.

Listed below are the manufacturer's recommended torque values for tightening bushing into the coupling hub. Do not exceed these values. Over tightening can cause the coupling hub to split.

		Bushing Tightening torques								
Coupling Size		30	40	50	60	70	80	90	100	
Q-D® Bushing Size		JA	JA	SH	SDS	SK	SF	E	F	
T O R Q U E	Normal Applications	Lb-in	36	36	72	72	120	240	480	600
	Severe Applications	Lb-in	60	60	108	108	180	360	720	900
T-L Bushing Size			1108	1215	1615	2012	2517	3020	3535	3535
Torque		Lb-in	55	175	175	280	430	800	1000	1000

**Coupling and Machine Alignment**

1. Position machines so that the Coupling flange separating "H" is obtained, and tighten the foundation bolts to hold the equipment while alignment is corrected.
2. Check angular misalignment by measuring flange separation "H" at four places around the hubs. (See Fig. 2.) Adjust or shim the equipment until equal readings are obtained.



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3. Check offset misalignment by placing a straightedge across the coupling flanges (see Fig. 3). Shim equipment until the best possible alignment is obtained.

**Recheck** flange separation “H” angular and offset alignment and securely tighten foundation bolts.

The Kop-Flex® brand Elastomeric coupling will operate best when carefully and accurately installed. The generous misalignment capacity of the coupling is intended to compensate for foundation settling, thermal growth, etc. through proper initial alignment.

**INSTALL FLEXIBLE ELEMENT**

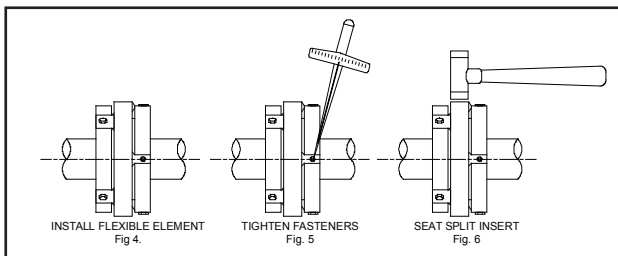
**Do not be concerned that the flexible element initially appears larger than the coupling flanges. When assembly is completed, the flexible element will be round and only slightly larger than the coupling flanges.**

- Note:** Place a few drops of machine oil into the tapped hole at the base of each hub slot.
- Place the flexible element into position with inserts in line with slots in the hub flanges. Put a fastener and washer into each of the two solid inserts **next to** the split insert and tighten two or three turns. Put washers and fasteners into all the solid inserts, and work progressively around the coupling element (see Fig. 4). Place the fastener and washer in the split insert last. The element is now ready to be compressed.
- Begin at the split insert and tighten all fasteners to about half the required distance to seat the insert in the slot.
- Begin final assembly by tightening the fasteners in the split insert to the torque value show in Table I. **Do not exceed this torque value.**

Move sequentially around the flange, tightening all fasteners to the proper torque value (see Fig. 5). NOTE: The inserts will not bottom out in the slot.

If the any of the inserts do not seat properly (parallel to the axis of the shaft), tap the element with a soft hammer in the area near the split insert as shown in Fig. 6. It is important that all inserts are seated parallel to the axis of the shaft or bolt breakage will result.

**5. Retorque all radial bolts after 24 hours of operation.**



**ELEMENT REMOVAL**

To remove the flexible element, back out the radial fasteners 2 or 3 turns at a time. Do not completely remove each fastener before proceeding to the next. If the inserts hang up in the slots after the fastener is removed, gently pry up the insert, allowing the insert to follow the fastener as it is withdrawn.

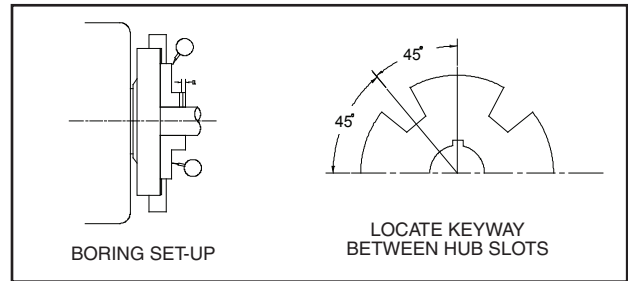
**BORE SIZES and FITS**

Elastomeric coupling hubs are normally bored for clearance fits with a single setscrew over the keyway. They may be bored for a light interference fit based on a suggested nominal interference of 0.0005 inch/inch of shaft diameter. Do not exceed the maximum recommended bore or interference fit listed in KIP-04 Catalog.

**RECOMMENDED SETUP METHOD for BORING**

The flange diameter of the hub should be chucked in the boring lathe. The best method is to use a chuck whose number of jaws equals the number of slots in the hub, gripping the hub flange halfway between the slots. The hub should be dial indicated as shown to minimize runout.

The hub material is cast aluminum alloy 355; lathe feeds, speeds and cutter angles should be set accordingly.



**KEYWAYS**

**Keyways MUST be located BETWEEN the slots in the hub flanges** (see illustration).

Keyways should be cut to give a tight side-to-side fit, with slight clearance top-to-bottom. Keyways should not have sharp corners. Refer to published AGMA standards for specific dimensioning of coupling bores and keyways.

**SETSCREWS**

5/16 — 18 NC setscrews are required for clearance fit bores. They should be centered over the keyway, and positioned “Q” distance from the hub end as shown in Table I.

**Important Safety Instructions**

**Before start-up . . .** for reasons of safety and to extend shaft coupling life, follow these requirements.

- Coupling guards protect personnel. **ALL COUPLINGS MUST BE COVERED WITH A GUARD AS PER OSHA REQUIREMENTS.**
- Recheck alignment after all foundation bolts and mechanical connections are tightened.
- Make sure all fasteners are properly installed and tightened.
- Take the time to double check your work.
- Only authorized Kop-Flex replacement parts are to be used.
- Call Kop-Flex for any clarification or questions.

Table I.

		20	30	40	50	60	70	80	90	100
<b>COUPLING SIZE</b>										
FLANGE SEP. “H”	IN.	1	1 1/2	1 5/8	2 1/8	2 1/8	2 3/8	3	4 1/8	4 1/8
HUB SEP. “L” - CLOSE MOUNT	IN.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
HUB SEP. “L” - WIDE MOUNT	IN.	1	1 1/2	1 5/8	2 1/8	2 1/8	2 3/8	3	4 1/8	4 1/8
HUB SEP. “L” - ALTERNATE MOUNT	IN.	9/16	13/16	7/8	1 1/8	1 1/8	1 1/4	1 9/16	2 1/8	2 1/8
FASTENER BOLT TORQUE	LB. IN.	48	48	120	255	255	500	880	1500	2000
AXIAL SET SCREW POSITION “Q”	IN.	7/32	11/32	5/16	5/16	5/16	5/16	3/8	3/8	3/8
MAX SPEED RATING	RPM	4100	4100	4100	4100	4100	3600	2800	2000	1800

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