

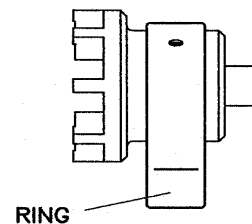
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| INSTALLATION INSTRUCTIONS | JOHN CRANE FLEXIBOX 2407 ALBRIGHT HOUSTON, TX 77017 713-944-6690 | CI - 23 |
| SUBJECT: POWERSTREAM COUPLINGS TYPE A | | ISSUE: 03 DATE: 12/02 |

PREPARATION

Powerstream couplings are available in many sizes and types. Check prior to any installation that the correct parts are on hand and as ordered. Type A couplings include two hubs, flexible insert, retaining ring and setscrews. Inspect all components and remove any protective coatings from the bores, etc. Remove any burrs or dirt from the shafts or bores.

1. INSTALL THE HUBS

Determine the fit required for your application (i.e. clearance or interference). Interference fits require steel or ductile iron hubs while cast iron hubs are only appropriate for clearance fits. For 'interference fits' we recommend heating the hubs in oil or oven and quickly positioning on shafts (do not use spot heat or exceed 350°F as this may cause hub distortion). Shaft ends should be flush with the hub face at bottom of lug extensions. Tighten setscrews when clearance fits are used or tighten screws when using intermediate bushings. Prior to installation of the second hub make sure that the retaining ring is on one of the shafts.



2. ALIGNMENT

GOOD ALIGNMENT IS THE KEY TO TROUBLE FREE RUNNING AND CARE AT THE INSTALLATION STAGE WILL BE AMPLY REPAID.

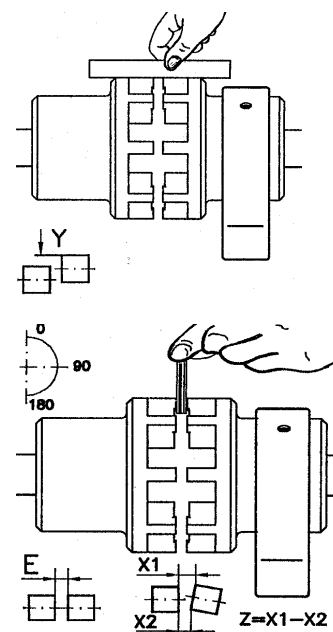
The instructions in CA-300, "Coupling Alignment – Graphical Method" are recommended as a standard alignment procedure. Your local John Crane Flexibox representative can offer the alignment equipment packages and any additional worksheets upon request. Generally, shaft alignment should be within one quarter if the maximum allowable misalignments specified in Table 1. The following procedures are an alternate method to obtain the alignment requirements.

Radial or Offset

Align the shafts so that a straight edge rests squarely and parallel with the lugs on each hub. Check with feeler gauges insuring that any clearance does not exceed the offset limits specified above.

Axial and Angular

Set hub gap 'E' as specified in Table 1. Using a spacer bar and feeler gauge measure the clearance between the hubs at 0, 90, 180, and 270 degrees. The difference in measurements must not exceed values given for angular tolerance above.

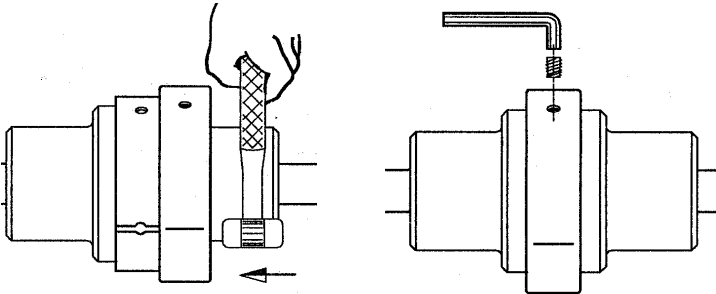
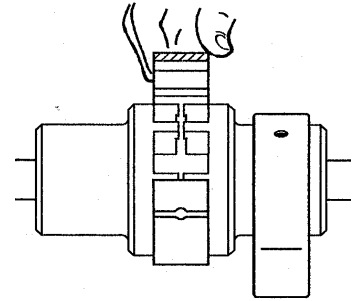


Tighten foundation bolts and recheck alignment. Equipment should be doweled after alignment.

| Table 1 | Maximum Allowable Misalignment (Inches) | | | | | | | | |
|------------------|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | A000 | A010 | A020 | A030 | A040 | A050 | A060 | A070 | A080 |
| Between Hubs (E) | 0.050 0.070 | 0.050 0.070 | 0.050 0.070 | 0.110 0.130 | 0.110 1.130 | 0.110 0.130 | 0.110 0.130 | 0.110 0.130 | 0.110 0.130 |
| Offset (Y) | 0.020 | 0.040 | 0.040 | 0.040 | 0.058 | 0.058 | 0.058 | 0.058 | 0.058 |
| Angular (Z) | 0.071 | 0.089 | 0.118 | 0.159 | 0.134 | 0.169 | 0.208 | 0.183 | 0.223 |

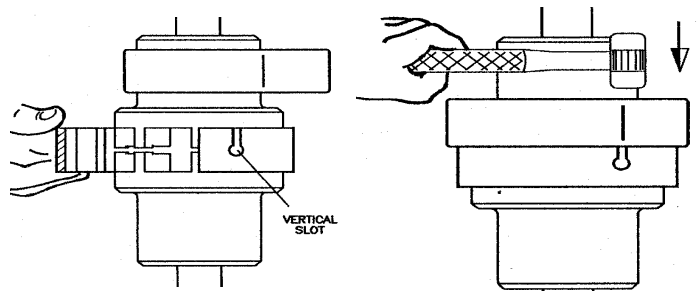
3. INSTALL THE INSERT

Once the equipment is aligned, the insert can then be installed. Align the lugs of each hub so they are facing one another. Wrap the insert around the hubs, pressing the insert into the space between the lugs. It may be necessary to tap the insert into place.



4. INSTALL THE RING

Move the ring over the inert, ensuring the pins in the ring are in line with the appropriate slots in the insert (through slot for horizontal and half slot for vertical applications). Tap gently into place with a soft headed mallet until the pins engage the center hole in each slot and tighten setscrews (refer to Table 2 for correct size).

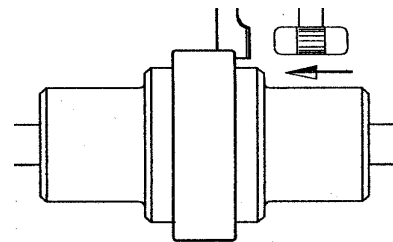


5. VERTICAL APPLICATION

Insure the half slots are open at the top and that the pins are inline with the slots.

DISASSEMBLY

Loosen setscrews and remove the ring with a soft-headed mallet, which prevents any damage to the ring. The insert can now be easily removed and replaced.



| Table 2 | | Retaining Ring Setscrew Sizes (Cup Point) | | | |
|-------------|------|---|-------|-------------|-------|
| A000 | 5 mm | A030 | 10 mm | A060 | 10 mm |
| A010 | 6 mm | A040 | 10 mm | A070 | 10 mm |
| A020 | 8 mm | A050 | 10 mm | A080 | 10 mm |

WARNING

All rotating power transmission products are potentially dangerous. They should be used according to the manufacturer's recommendations and covered with a guard in compliance with the prevailing safety standards and regulations. It is the responsibility of the user to comply with any such standards.