

Power Transmission Engineering, Inc. Disc Coupling Installation Instructions

SqueezeTorqueCouplings™ are supplied ready to be tightened.

Installation:

1. Clean OD of shaft and ID of couplings with clean mineral spirits. Remove all lubricant from both the shaft OD and ID of the coupling. Failure to properly clean these areas can result in torque capacity being significantly reduced.
2. Snug all screws to outer collars
3. Set torque wrench at 50% of final torque and begin to evenly tighten screws in a clockwise sequence. Do not tighten any screw more than a ¼ turn at any one time.
4. Set torque wrench at final torque plus 5% to obtain “Over-torque Value” and begin to evenly tighten screws in a clockwise sequence. Do not tighten any screw more than a ¼ turn at any one time.
5. Continue to make complete passes at the “Over-torque Value” around the STC until the torque wrench turns less than 1/8 turn or less.
6. Set torque wrench at “Final-torque” specification and check that no screw is loose. If any screw moves more than 1/16 of a revolution, repeat step 5 and 6.

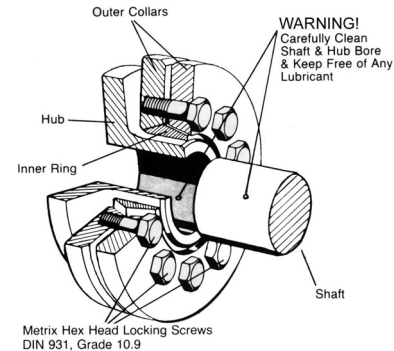
Removal:

1. With a star pattern, loosen screws ¼ turn for five (5) complete passes or until all screws are loose.

Reinstallation of couplings or STC units:

Note: It is recommended that PTE inspect couplings prior to re-installation.

To obtain proper fastener stretch, we do not recommend that any fastener be reused. Contact PTE for replacement fasteners!



Close Coupled – Non-Spacer Type Coupling Only

Table I, “G” = Flange to Flange Gap Dimension – Inches

Coupling Size	4B05-2.6	4B10-3.1	4B15-3.6	4B20-4.0	4B25-4.9	4B30-5.6	4B35-6.6	4B40-7.6	4B45-8.4	4B50-9.5
“G” gap	0.240	0.270	0.320	0.340	0.450	0.470	0.550	0.600	0.850	0.940
+/-	0.010	0.010	0.010	0.010	0.015	0.015	0.015	0.015	0.020	0.020

Table II, Disc Pack Fastener Tightening Torque lbs-ft

Coupling Size	4B05-2.6	4B10-3.1	4B15-3.6	4B20-4.0	4B25-4.9	4B30-5.6	4B35-6.6	4B40-7.6	4B45-8.4	4B50-9.5
Bolt	1/4-28	1/4-28	5/16-24	5/16-24	7/16-20	1/2-20	1/2-20	5/8-18	5/8-18	3/4-16
Bolt Head	7/16	7/16	1/2	1/2	5/8	3/4	3/4	15/16	15/16	1-1/8
Torque lbs-ft	8	8	17	17	40	58	58	115	115	160

Table III, Total Indicator Reading, Maximum – Inches

Coupling Size	4B05-2.6	4B10-3.1	4B15-3.6	4B20-4.0	4B25-4.9	4B30-5.6	4B35-6.6	4B40-7.6	4B45-8.4	4B50-9.5
T.I.R.	0.020	0.024	0.026	0.032	0.038	0.044	0.052	0.060	0.066	0.076

Table IV, STC-20 Tightening Torque lbs-ft (grade 10.9 only)

STC20 Size	24 to 30	36 to 68	75 to 100	110 to 125	140 to 155	165 to 220	240 to 350	360 to 460
Screw Size, 10.9	M5	M6	M8	M10	M12	M16	M20	M24
Screw Head, mm	8	10	13	17	19	24	30	36
Torque lbs-ft	3.6	8.7	22	44	74	185	362	620

WARNING

These Torque Values Do No Apply for Overload Coupling with Bronze Bushing!

Refer to Drawing for these Specific Torque Values to avoid damaging equipment or coupling!

Power Transmission Engineering, Inc.

480 South Irmen Drive – Addison Illinois 60101 USA
Phone: 630.628.9799 Fax: 630.628.9794 info@PTEcoupling.com

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 foundations, etc., all tend to alter initial alignment. To ensure long life, re-check alignment after a short period of actual running.

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

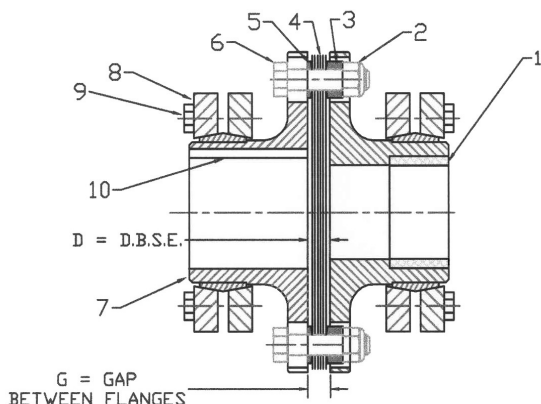
INSTALLATION

1. Inspect shafts and hubs and make sure they are free from burrs. Check for the proper fit of the keys to the shafts and hub.
2. Fit the coupling hubs so that the shaft ends are flush with the face of the flange. If the hub is bored for an interference fit the hubs should be heated in oil @ 200-250°F and then quickly positioned on the shaft. DO NOT spot heat as it may cause distortion.
3. Move the equipment to be connected into position. Set the gap between the hub faces to be required, Distance between Shaft Ends, D dimension. Set the average gap between flanges, dimension “G” in table 1, for the proper size coupling.
4. Assemble the disc packs to the spacer as shown in figure 2. and verify that the washers are in the proper orientation Tighten these nuts to the proper torques as indicated Table II

ALIGNMENT

1. After preliminary alignment and complete assembly, secure a dial indicator to one hub as shown in fig. 3 and indicate the face of the other hub as shown. The method of mounting the indicator is optional.
2. Rotate the coupling to find the minimum indicator reading. Set the indicator for zero reading.
3. Again rotate the coupling 360 degrees to check the misalignment.
4. Adjust the connected equipment until the indicator reading is within the maximum T.I.R. shown in table III.

NOTE: The closer the T.I.R. readings are to zero, the longer the service life of the coupling.



Item	Description
1.	BRONZE BUSHING, OPTIONAL
2.	LOCK NUT, DISK PACK
3.	THICK WASSHER, DISK PACK
4.	DISK PACK-FLEXING ELEMENT
5.	THIN WASHER, DISK PACK
6.	BOLT, DISK PACK
7.	COUPLING HUB
8.	SqueezeTorqueCoupling ASSEMBLY
9.	SCREWS, SqueezeTorqueCoupling
10.	KEYWAY, OPTIONAL

