

6Pxx Double-Flex Six Bolt Composite Disc Coupling



Installation Instructions For Double-Flex 6Pxx CD® Composite Disc Couplings

TOOLS REQUIRED

- Calibrated torque wrench with sockets for coupling hex nuts and hub set screws or clamp collar screws
 - Open end wrench for coupling hex bolts
 - Shaft alignment tools
 - Cleaning cloth
 - Caliper
- These instructions are for standard series couplings with normal running conditions. Special couplings may have different instructions or drawings.
 - Inspect hub bores, shafts and keyways making sure there are no burrs. Clean hub bores and shafts. Standard CD coupling clamp and set screw hubs are supplied with slight clearance fit (see catalog). Install hubs on shafts. Place one of the hubs flush with end of shaft. Tighten hub to shaft: If hub is set screw style (Figure 1), see Table 2 on page 3 for proper tightening torque. If installing clamp hub (Figure 2) or QD bushing hub (Figure 4) see assembly details on page 3.
 - Adjust hub separation to dimension “C” specified in the Table 1 on page 2. If possible, the shafts should not extend beyond the inside hub face. If the shaft extends past the hub face verify there is enough clearance to install the disc pack and also verify the shaft will not contact the disc pack during operation. Tighten second hub to the shaft.
 - Align the shafts within the limits for parallel and angular misalignment specified in Table 1 on page 2. See diagrams 2 and 3 for recommended measurement and alignment methods. For best alignment results, use a laser alignment tool or dial indicator (always rotate the hub on which the indicator is mounted). If not available, a straight edge and feeler gauge can be used.

- Install the intermediate member, disc packs, long and short bolts with nuts between the hubs; tightening the locknuts finger tight. Tighten the locknuts of one hub to $\frac{1}{2}$ the stated torque value in Table 1 on page 2. Tighten the locknuts of other hub to $\frac{1}{2}$ the stated torque value in Table 1. Tighten the locknuts of the intermediate member to $\frac{1}{2}$ the stated torque value in Table 1. Repeat the process but tightening to the full torque value (see Table 1). **It is also recommended to apply torque on the locknut, not the bolt.**
- Re-check and tighten all fasteners after several hours of operation to ensure proper tightening.

Note: Aligning the shafts as closely as possible at the time of initial installation will reduce noise and allow the coupling extra capacity for misalignments and loads which will occur during operation over the life of the connected equipment. Installing and operating the coupling at higher degrees of misalignment is possible (see catalog), but will reduce the life of the composite disc pack. Contact Zero-Max with additional questions.

Note: Coupling and shaft alignment should be checked periodically due to foundation settling, equipment shifting, etc. Alignment should be re-checked after the first several hours of operation.

⚠ Caution: Rotating equipment is potentially dangerous and should be properly guarded. It is the responsibility of the machine builder, user, or operator to follow all applicable safety codes and provide a suitable guard. Make sure the machine is “locked out” and cannot be accidentally started during installation or maintenance of coupling.

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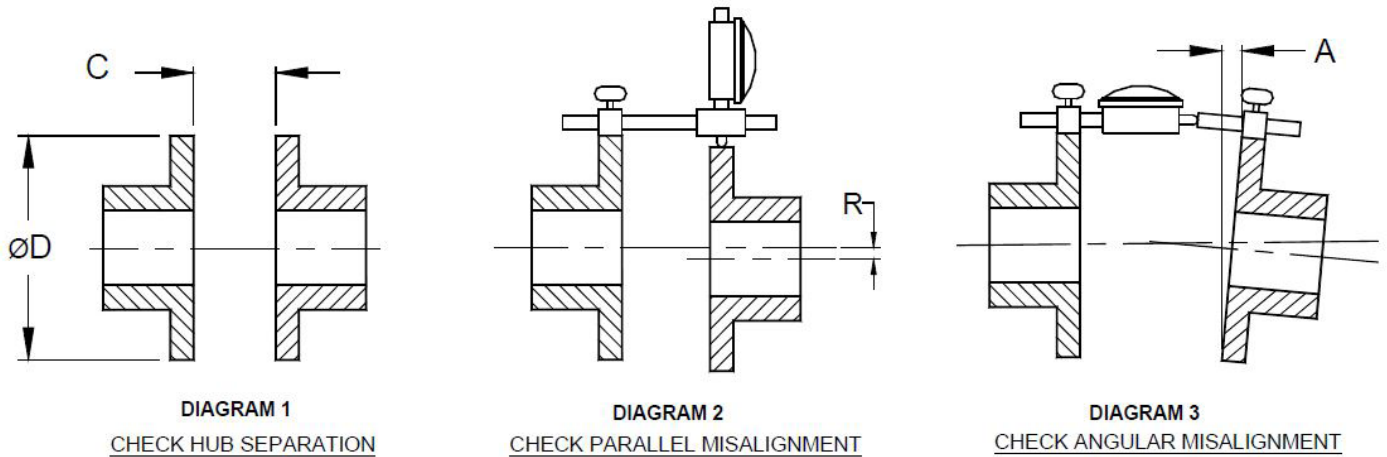


Table 1: Alignment and Assembly Specifications for Double-Flex 6Pxx Couplings.

Model	Separation and Misalignments						Tighten Torque (dry values)			Unit Outside Diameter Ø D	
	C See Diagram 1		R See Diagram 2		A See Diagram 3		Wrench Size			Inch	mm
	Inch	mm	Inch	mm	Inch	mm					
6P18	0.803 ± 0.020	20.4 ± 0.50	0.008	0.20	0.016	0.41	2.5mm	18 in-lb	214 Ncm	1.85	47.0
6P22	0.956 ± 0.024	24.3 ± 0.63	0.009	0.23	0.020	0.50	8mm	50 in-lb	564 Ncm	2.25	57.2
6P26	1.034 ± 0.029	26.3 ± 0.74	0.010	0.25	0.023	0.58	8mm	50 in-lb	564 Ncm	2.59	65.9
6P30	1.420 ± 0.034	36.1 ± 0.86	0.013	0.33	0.026	0.66	10mm	95 in-lb	10.7 Nm	3.00	76.2
6P37	1.669 ± 0.046	42.4 ± 1.1	0.016	0.41	0.033	0.83	13mm	230 in-lb	26 Nm	3.75	95.3
6P45	1.852 ± 0.060	47.0 ± 1.5	0.017	0.43	0.039	1.00	17mm	38 ft-lb	51 Nm	4.50	114.3
6P52	2.105 ± 0.074	53.5 ± 1.8	0.021	0.53	0.046	1.20	17mm	38 ft-lb	51 Nm	5.25	133.4
6P60	2.411 ± 0.086	61.2 ± 2.1	0.023	0.58	0.052	1.30	19mm	65 ft-lb	88 Nm	6.00	152.4
6P67	2.704 ± 0.100	68.7 ± 2.5	0.025	0.64	0.059	1.50	19mm	65 ft-lb	88 Nm	6.75	171.5
6P77	3.154 ± 0.106	80.1 ± 2.7	0.030	0.76	0.068	1.70	24mm	160 ft-lb	217 Nm	7.75	196.9
6P90	3.581 ± 0.120	90.9 ± 3.0	0.034	0.86	0.079	2.00	30mm	310 ft-lb	420 Nm	9.00	228.6
6P105	4.423 ± 0.140	112.3 ± 3.5	0.042	1.07	0.092	2.30	36mm	535 ft-lb	725 Nm	10.50	266.7
6P120	4.822 ± 0.166	122.5 ± 4.2	0.046	1.17	0.105	2.70	36mm	535 ft-lb	725 Nm	12	304.8

Note: The above misalignment specifications are recommended values for installation. They allow for extra capacity from operation over time. Refer to the catalog for maximum allowable misalignment specifications.



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Figure 1: SetScrew Style Hub

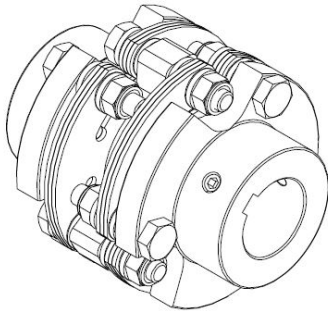


Table 2: Setscrew Torque Table

Screw Size	Wrench Size	Torque (in-lb)	Torque (Nm)
#10-32unf	0.094	36	4.1
1/4-20unc	0.125	87	9.8
3/8-16unc	0.188	290	33
1/2-13unc	0.250	620	70
3/4-10unc	0.375	2400	271
1"-8unc	0.563	5000	564
Metric			
M5 x 0.8	2.5mm	35	4.0
M6 x 1.0	3mm	64	7.2
M8 x 1.25	4mm	150	17
M10 x 1.50	5mm	290	33
M12 x 1.75	6mm	480	54
M20 x 2.50	10mm	2100	237
M24 x 3.00	12mm	3860	440

Figure 2: Clamp Style Hub

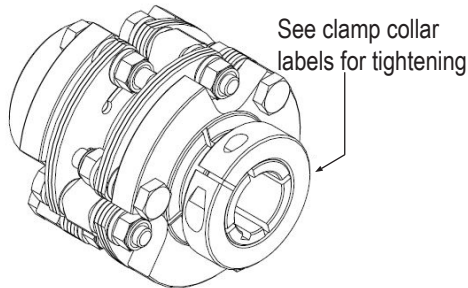
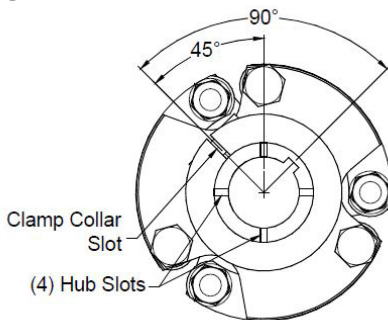


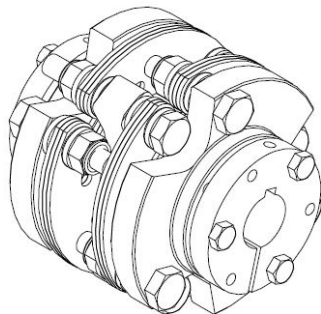
Figure 3: Clamp Slot Location



Clamp Hub Assembly

Before tightening the clamp collar screw(s), orient the clamp collar slot 90 degrees from the keyway centerline (See Figure 3). If there is no keyway, orient the clamp collar slot 45 degrees from one of the hub slots (See Figure 3). Tighten clamp screw(s) to tightening torque shown on clamp collar.

Figure 4: QD Bushing Style Hub



QD Bushing Hub Assembly

When tightening the QD Bushing bolts the Hub will be pulled toward the bushing flange. The amount of movement is generally 0.06 to 0.10 inches (1.5 to 2.5mm) per hub. Install one hub/bushing assembly on the shaft and tighten the QD bushing to specifications. Place the second hub/bushing assembly on the shaft with a hub separation of 0.08 less than the "C" dimension shown in Table 1 on page 2, see diagram 1. Torque the QD bushing bolts to the manufacturer's specification and verify hub separation and misalignment. Loosen bolt and adjust assembly as needed until hub separation and misalignment are within specifications. Consult QD bushing manufacturer's documentation for proper tightening torque and sequence.

