

This is the Original Document in English Language



Figure 1 - Thomas Series 71 Coupling

1. General Information

- 1.1. Thomas Series 71 Couplings are designed to provide a mechanical connection between the rotating shafts of mechanical equipment, using flexible disc elements to accommodate inherent misalignment while transmitting the power and torque between the connected shafts.
- 1.2. These instructions are intended to help you to install and maintain your THOMAS Spacer Type Series 71 coupling. Please read these instructions prior to installing the coupling, and prior to maintenance of the coupling and connected equipment. Keep these instructions near the coupling installation and available for review by maintenance personnel. For special engineered couplings, Rexnord may provide an engineering drawing containing installation instructions that take precedence over this document.
- 1.3. Rexnord Industries, LLC owns the copyright of this material. These Installation and Maintenance instructions may not be reproduced in whole or in part for competitive purposes
- 1.4. Symbol descriptions:



Danger of injury to persons.



Damages on the machine possible.



Pointing to important items.



Hints concerning explosion protection.

2. Safety and Advice Hints



DANGER!

- 2.1. Safety should be a primary concern in all aspects of coupling installation, operation, and maintenance.
 - 2.2. Proper lockout-tag out procedures must be followed to safeguard against unintentional starting of the equipment.
 - 2.3. Because of the possible danger to person(s) or property from accidents which may result from improper use or installation of these products, it is extremely important to follow the proper selection, installation, maintenance and operational procedures.
- PRECAUTION!** For this coupling to meet the ATEX requirements, you must precisely follow these installation and maintenance instructions, and the supplement form 0005-08-49-01. This supplement outlines the ATEX requirements. If the operator does not follow these instructions, the coupling will immediately be considered non-conforming to ATEX.
- 2.4. All personnel involved in the installation, service, operation, maintenance, and repair of this coupling and the connected equipment must read, understand, and comply with these Installation and Maintenance instructions.
 - 2.5. All rotating power transmission products are potentially dangerous and can cause serious injury. They must be properly guarded in compliance with OSHA, ANSI, ATEX, European machine safety standards and other local standards. It is the responsibility of the user to provide proper guarding.
 - 2.6. For ATEX requirements the guard must have a minimum of 12.7 mm (1/2 inch) radial clearance to the coupling outside diameter "A" (see Figure 3 and Table 3) and allow for proper ventilation.
 - 2.7. Make sure to disengage the electrical power and any other sources of potential energy before you perform work on the coupling.
 - 2.8. Do not make contact with the coupling when it is rotating and/or in operation.
 - 2.9. All work on the coupling must be performed when the coupling is at rest with no load.

- 2.10. Do not start or jog the motor, engine, or drive system without securing the coupling components. If the equipment is started with only a hub attached, the hub must be properly mounted and ready for operation, with the key and set screw (if included) fastened. When the full coupling assembly is started, all fasteners and hardware must be completely and properly secured. Do not run the coupling with loose fasteners.
- 2.11. The coupling may only be used in accordance with the technical data provided in the Thomas catalog for the Series 71 coupling. Customer modifications and alterations to the coupling are not permissible.

⚠ CAUTION: Air driven wrenches for assembly are not permitted to avoid the potential of excessive speed and heat build up that may lead to thread damage during assembly.

- 2.12. All spare parts for service or replacement must originate from or be approved by Rexnord Industries, LLC.

3. Components and Part Numbers

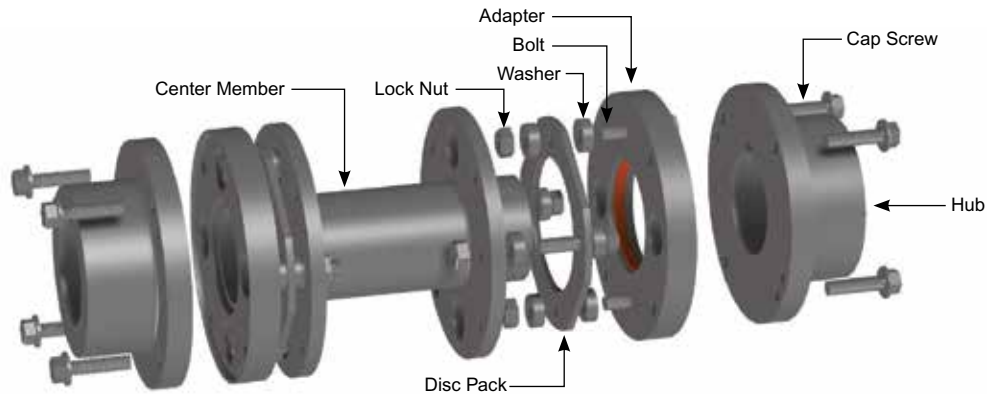


Figure 2 - Thomas Series 71 Coupling Components

Thomas Series 71 couplings are delivered from the factory with a fully assembled center member consisting of a center spool, two adapters, disc packs, bolts, washers and locknuts that have already been tightened at the factory to the torque specified in Table 6. The center member assembly is ready for field installation and it is recommended that you do not disassemble it unless you are replacing the disc packs. Cap screws will need to be installed and tightened during installation

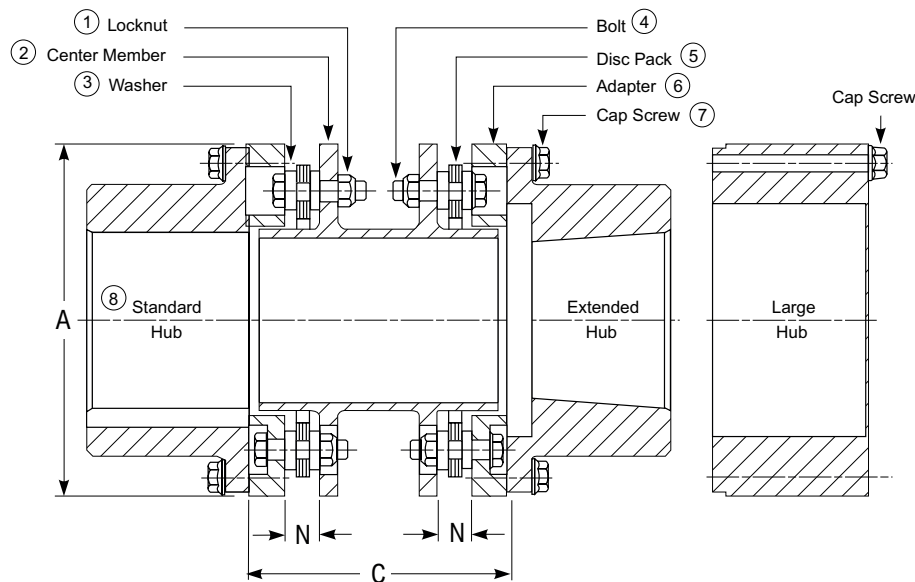


Figure 3 - Thomas Series 71 Cross Sectional View of Components

This view shows all three styles of hubs that are available to suit specific requirements. A standard configuration includes only two hubs.

Table 1 - Part Numbers and Quantity Required

Size of Series 71 Coupling	Hubs			Center Member ⁽²⁾ (1 per Coupling)				Stainless Disc Pack ⁽⁵⁾ 2 per Coupling	Parts Kit – Consists of Bolts, Locknuts, Washers, and Cap Screws for One Coupling				
	Standard ⁽⁸⁾	Extended ⁽⁹⁾	Block ⁽¹⁰⁾	“C” Dimension		“C” Dimension			Parts Kit	Bolts ⁽⁴⁾	Locknuts ⁽¹⁾	Washers ⁽³⁾	Cap Screws ⁽⁷⁾
	Part No.	Part No.	Part No.	Part No.	inch	Part No.	mm	Part No.	Part No.	Quantity	Quantity	Quantity	Quantity
150	019899	019898	019926	018743	3.50	605103	100	020860	918484	8	8	16	8
				018744	4.38	605104	140						
				018745	5.00	605106	180						
175	529376	829597	012205	738217	3.50	604678	100	417769	918484	8	8	16	8
				838217	4.38	605109	140						
				938216	4.00	605111	180						
				938217	5.00	605113	250						
				003188	3.50	605117	140						
225	029319	929598	012206	038218	5.00	605114	180	529287	018484	12	12	24	6
				138218	5.50	605119	250						
				238218	7.00	605118	300						
				338219	5.00	605116	140						
300	729380	029599	012207	438219	5.50	605115	180	729288	118484	12	12	24	12
				538219	7.00	044092	250						
				007653	5.00	605112	180						
350	007634	007432	018831	007654	5.50	044093	250	007208	007416	12	12	24	12
				007204	7.00								
				638220	5.00	605110	180						
375	229322	129600	012208	738220	5.50	605108	250	929289	218484	12	12	24	12
				838220	7.00								
				938221	7.00	605107	250						
412	029394	229601	570392	238222	7.00			129290	318484	12	12	24	12
462	429326	329602	589831	003236	7.50	580443	250	529292	418484	12	12	24	12
				438222	8.00								
				638223	7.00	605105	250						
512	129403	429603	---	003249	8.00			729293	518484	12	12	24	12
				003255	8.00	---	---						
562	329406	529604	---	003268	8.00	---	---	329291	618484	12	12*	24	12
600	529417	003263	---	---	9.38	---	---	929294	718484	12	12*	24	12
712	017490	---	---	---	10.88	---	---	620735	---	16	16*	32	16**
800	017493	---	---	---	12.00	---	---	310962	---	16	16*	32	16**
875	017495	---	---	---	---	---	---	910959	---	16	16*	32	16**
1038	017497	---	---	---	---	---	---	420803	---	16	16*	32	16**

* These locknuts are cadmium plated.

** Capscrews are provided to compress the disc packs during assembly, per Table 1A

Table 1A - Cap Screws for Disc Pack Compression Only

Coupling Size	Part No.	Quantity	Description
712	018108	8	5/16-18 UNC x 2.00 Lg HHCS
800	031326	8	3/8-16 UNC x 2.50 Lg HHCS
875	031326	8	3/8-16 UNC x 2.50 Lg HHCS
1038	031327	8	1/2-13 UNC x 3.00 Lg HHCS

4. Hub Mounting



Be sure to disengage the electrical power and any other sources of potential energy before you perform work on the hub and coupling assembly.

CAUTION: When disc type couplings are installed on “sleeve bearing” motor drives, some precautions are necessary. It is important that the coupling be installed as close to its free state (neutral) axial position as possible and that the motor shaft is on its “magnetic center” (normally defined by a scribed line on the shaft). Disc type couplings, with their flexing element(s) comprised of multiple laminated discs or sheets, will act as a spring in the axial direction (exhibiting non-linear restoring forces) and serve to hold the motor rotor on magnetic center during operation and away from the motor’s internal thrust stops. The coupling span ordered for the equipment must consider the motor rotor as being positioned on its magnetic center.

- 4.1. Examine the coupling assembly to insure there is no visible damage.
- 4.2. Clean the hub bores and shafts using lint free cloth. Remove any nicks or burrs.
- 4.3. When assembled, the key(s) should have a close side-to-side fit in the keyway in the hub and shaft, with a slight clearance over the top of the key.
- 4.4. Remove the cap screws that attach the hubs to the adapters, and remove both hubs.

CAUTION: When heating hubs is required, an oven is preferred and an open flame is not recommended. If flame heating is considered mandatory, it is important to provide uniform heating to avoid distortion and excessive temperature. A thermal stick applied to the hub surface will help determine the hub temperature.



Touching hot hubs causes burns. Wear safety gloves to avoid contact with hot surfaces.

5. Straight Bore with Clearance/Slip Fit –

- 5.1. Install the key(s) in the shaft.
- 5.2. Check to be sure that the set screw(s) in the hub does not protrude into the keyway or the bore. Remove or back out the set screw to provide clearance during assembly.
- 5.3. Slide the hub up the shaft to the desired axial position.
- 5.4. Assemble and tighten the set screw(s) using a calibrated torque wrench to the values shown in Table 2

Table 2 - Set Screw Tightening Torque

Set Screw Thread Size					Wrench Size				
Inch	In-lb	ft-lb	Nm	inch	Inch	In-lb	ft-lb	Nm	inch
1/4-20	66	6	7	1/8	3/8-16	240	20	27	3/16
1/4-28	76	6	9	1/8	3/8-24	276	23	31	3/16
5/16-18	132	11	15	5/32	1/2-13	600	50	68	1/4
5/16-24	144	12	16	5/32	1/2-20	660	55	75	1/4

ATTENTION! Never use two set screws with one on top of the other in the same tapped hole.

6. Straight Bore with Interference Fit –

- 6.1. Accurately measure the bore and shaft diameters to assure proper fit.
- 6.2. Install the key(s) in the shaft.

- 6.3. Heat the hub in an oven until the bore is sufficiently larger than the shaft.
- 6.4. 350°F (177°C) is usually sufficient for carbon steel hubs. Do not exceed 500°F (260°C).
- 6.5. Higher temperatures may be required for higher interference fit levels where alloy steel hubs may be encountered. A general rule to consider is that for every 160°F increase in temperature, steel will expand 0.001 inch for every inch of shaft diameter (or .029 mm/100°C). When calculating temperatures, also consider additional expansion to provide clearance and allow for a loss of heat and subsequent shrinkage during the handling process.
- 6.6. With the hub expanded, install it quickly on the shaft to the desired axial position. A pre-set axial stop device can be helpful.

7. Taper Bore –

- 7.1. Check for acceptable contact pattern between the hub and the shaft.
- 7.2. Put the hub on the shaft, keeping the keyways (if existing) aligned.
- 7.3. Lightly tap the face of the hub with a soft mallet. The resultant position will provide a starting point for the hub axial draw up.
- 7.4. Use a depth micrometer to measure the distance from the shaft end to the hub face, as shown in Figure 4. Record the dimension.

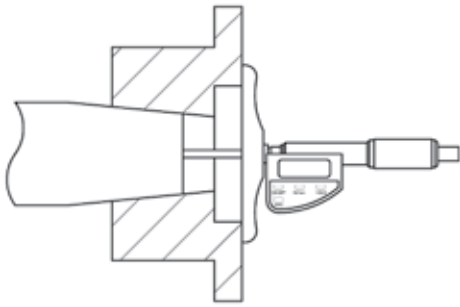


Figure 4 - Shaft end to hub face measurement example.

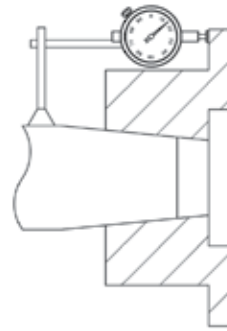


Figure 5 - Dial indicator placement for axial draw measurement example.

- 7.5. Mount a dial indicator to read axial hub advancement, as shown in Figure 5. Alternatively, the indicator can be positioned to contact the end of the hub. Set the indicator to “zero”.
- 7.6. Remove the hub and install the key(s) in the shaft.
- 7.7. Heat the hub in an oven until the bore is sufficiently larger than the shaft.
- 7.8. 350°F (177°C) is usually sufficient for carbon steel hubs. Do not exceed 500°F (260°C).
- 7.9. Higher temperatures may be required for higher interference fit levels where alloy steel hubs may be encountered. A general rule to consider is that for every 160°F increase in temperature, steel will expand 0.001 inch for every inch of shaft diameter (or .029 mm/100°C). When calculating temperatures, also consider additional expansion to provide clearance and allow for a loss of heat and subsequent shrinkage during the handling process.
- 7.10. With the hub expanded, install it quickly on the shaft to the “zero” set point. Continue to advance the hub up the taper to the desired axial position, as defined by Rexnord’s customer. Use the indicator as a guide only. A pre-set axial stop device can be helpful.
- 7.11. Inspect the assembly to verify that the hub is properly positioned. Consult Rexnord if necessary.
- 7.12. Install any hub axial retention device (if any) in accordance with the equipment manufacturer’s specifications.

8. Shaft Alignment –

8.1. Move the equipment into place.

ATTENTION! Soft Foot – The equipment must rest flat on its base. If one or more feet of the machine are shorter, longer, or angled in some way to prevent uniform contact (a condition commonly known as “soft foot”) it must now be corrected.

ATTENTION! To improve the life of the coupling, the shafts must be aligned to minimize deflection of the flexing elements. Shaft alignment is required in the axial, parallel, and angular directions, with each of these values not to exceed the recommended installation limits shown in Table 3. Shaft alignment can be measured using various established methods, including Laser Alignment, Reverse Dial Indicator, and Rim and Face. Refer to Rexnord bulletin 538-214 “Coupling Alignment Fundamentals” for instructions regarding shaft alignment.

8.2. Move the connected equipment to achieve acceptable alignment. When properly aligned, the disc packs will be centered and approximately parallel to their mating flange faces and the flexing elements will have little visible waviness when viewed from the side.

8.3. Table 3 shows recommended installation limits for Parallel, Angular, and Axial alignment.

8.4. The “Parallel Misalignment” value (P) is the offset between the centers of the hubs, as shown in Figure 6.

8.5. When Parallel Offset is measured by rotating the hubs in unison with dial indicators as shown in Figure 7, the total indicated reading (TIR) should be divided by (2) to calculate “P”.

8.6. It should be noted that parallel offset measured on the hub surfaces includes misalignment of the equipment shafting plus any variation (TIR) in the hubs. This may be helpful to consider during problem solving for alignment difficulties.

8.7. The “Angular Misalignment” value is the maximum difference between the measurements X and Y taken at opposite ends of the hub flanges, as shown in Figure 8.

8.8. These dimensions are suggested for initial installation. Additional capacity is available to compensate for thermal and structural equipment movement.

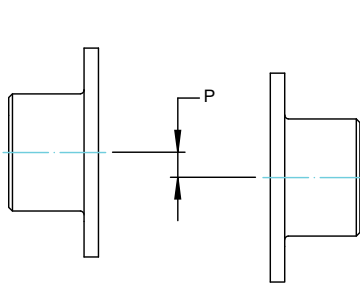


Figure 6 - Parallel Offset Misalignment.

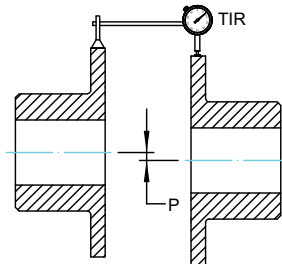


Figure 7 - Parallel Offset (TIR) Measurement.

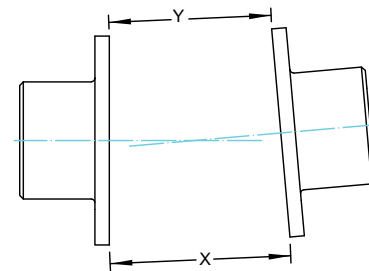


Figure 8 - Angular Misalignment.

Table 3 - Installation Alignment Values

Series 71 Coupling	"A" Dimension		"C" Dimension		Recommended Installation Limits ****							
					Maximum Coupling Parallel Misalignment				Angular Misalignment Between Hubs Maximum (X-Y) ***	Axial Hub Gap Tolerance from "C" Dimension +/-		
					Maximum Measurement Between Hubs Defined in one of two ways							
Size	inch	mm	inch	mm	Parallel Alignment Total Indicator Reading (TIR)*		Parallel Offset "P" **		inch	mm	inch	mm
150	3.95	100.3	3.50	88.9	0.0042	0.11	0.0021	0.05	0.007	0.18	0.025	0.64
			4.38	111.3	0.0053	0.13	0.0026	0.07				
			5.00	127.0	0.0060	0.15	0.0030	0.08				
			5.51	140.0	0.0066	0.17	0.0033	0.08				
175	4.16	105.7	3.50	88.9	0.0042	0.11	0.0021	0.05	0.008	0.20	0.035	0.89
			4.38	111.3	0.0053	0.13	0.0026	0.07				
			5.00	127.0	0.0060	0.15	0.0030	0.08				
			5.51	140.0	0.0066	0.17	0.0033	0.08				
225	4.94	125.5	3.50	88.9	0.0042	0.11	0.0021	0.05	0.01	0.25	0.038	0.95
			5.00	127.0	0.0060	0.15	0.0030	0.08				
			5.50	139.7	0.0066	0.17	0.0033	0.08				
			5.51	140.0	0.0066	0.17	0.0033	0.08				
			7.00	177.8	0.0084	0.21	0.0042	0.11				
			7.09	180.0	0.0085	0.22	0.0043	0.11				
			9.84	250.0	0.0118	0.30	0.0059	0.15				
300	5.97	151.6	5.00	127.0	0.0060	0.15	0.0030	0.08	0.012	0.30	0.043	1.08
			5.50	139.7	0.0066	0.17	0.0033	0.08				
			7.00	177.8	0.0084	0.21	0.0042	0.11				
			7.09	180.0	0.0085	0.22	0.0043	0.11				
			9.84	250.0	0.0118	0.30	0.0059	0.15				
350	6.75	171.5	5.00	127.0	0.0060	0.15	0.0030	0.08	0.014	0.36	0.045	1.14
			5.50	139.7	0.0066	0.17	0.0033	0.08				
			7.00	177.8	0.0084	0.21	0.0042	0.11				
			7.09	180.0	0.0085	0.22	0.0043	0.11				
375	7.62	193.5	5.00	127.0	0.0060	0.15	0.0030	0.08	0.015	0.38	0.048	1.21
			5.50	139.7	0.0066	0.17	0.0033	0.08				
			7.00	177.8	0.0084	0.21	0.0042	0.11				
			7.09	180.0	0.0085	0.22	0.0043	0.11				
412	8.00	203.2	7.00	177.8	0.0084	0.21	0.0042	0.11	0.016	0.41	0.055	1.40
			9.84	250.0	0.0118	0.30	0.0059	0.15				
			7.00	177.8	0.0084	0.21	0.0042	0.11				
462	9.00	228.6	7.50	190.5	0.0090	0.23	0.0045	0.11	0.018	0.46	0.060	1.52
			8.00	203.2	0.0096	0.24	0.0048	0.12				
			9.84	250.0	0.0118	0.30	0.0059	0.15				
			7.00	177.8	0.0084	0.21	0.0042	0.11				
512	10.03	254.8	7.00	177.8	0.0084	0.21	0.0042	0.11	0.02	0.51	0.065	1.65
			8.00	203.2	0.0096	0.24	0.0048	0.12				
			9.84	250.0	0.0118	0.30	0.0059	0.15				
562	10.97	278.6	8.00	203.2	0.0096	0.24	0.0048	0.12	0.022	0.56	0.073	1.84
600	11.72	297.7	8.00	203.2	0.0096	0.24	0.0048	0.12	0.024	0.61	0.080	2.03
712	13.88	352.6	9.38	238.3	0.0113	0.29	0.0056	0.14	0.028	0.71	0.041	1.04
800	15.56	395.2	10.88	276.4	0.0131	0.33	0.0065	0.17	0.031	0.79	0.046	1.17
875	17.12	434.8	12.00	304.8	0.0144	0.37	0.0072	0.18	0.034	0.86	0.051	1.30
1038	19.75	501.7	14.00	355.6	0.0168	0.43	0.0084	0.21	0.039	0.99	0.058	1.46

* Parallel misalignment measured by rotating the hubs with a dial indicator on the outside hub diameter will result in a maximum Total-Indicated-Reading of 0.0012 inch per inch of "C" dimension (or 0.0012 mm per mm of "C" dimension). For non-standard "C" dimensions, multiply "C" x 0.0012 to calculate the TIR.

** Parallel offset "P" is equivalent to one-half of the TIR measurement using dial indicators.

*** Subtract Measurement Y from Measurement X to obtain Angular Misalignment dimension.

**** During installation and/or operation, do not exceed the maximum misalignment capacity of 1/2° per disc pack for sizes 150 to 600 and 1/3° for sizes 712 to 1038.

Refer to Rexnord Bulletin 538-214 "Coupling Alignment Fundamentals" for more details regarding alignment methods and procedures.

9. Final Assembly –

ATTENTION! Series 71 couplings are delivered from the factory with a fully assembled center member subassembly with locknuts tightened at the factory to the torque specified in Table 6. The center member subassembly is ready for field installation, and we recommend that you do not disassemble it (unless you are replacing the disc packs).

9.1. Verify that the hubs have been mounted to provide the correct “C” dimension shown in Figure 9 and defined in Table 1. The “C” dimension is the distance measured between the faces of the two hub flanges.

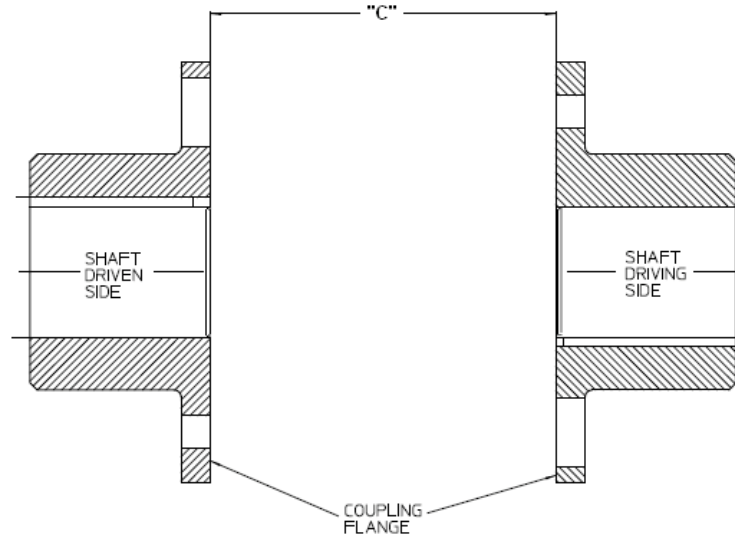


Figure 9 - Mounting Hubs on Shafts

9.2. The free length of the center member subassembly (including the two end adapter pilot protrusions) will be greater than the dimension “C”. The center member subassembly must be compressed to allow it to be installed between the two end hubs.

9.3. On sizes 150 through 600, use the cap screws (provided in the coupling hubs) to compress the center member assembly by inserting them through the holes in the flanges of the center spool and threading them into the adapter tapped holes as shown in Figure 10. On sizes 712 through 1038, cap screws (defined in Table 1A) are provided to compress the center member subassembly. These cap screws may be used to compress the center member subassembly, but they are not used to fasten the center member subassembly to the end hubs.

CAUTION! Tighten the cap screws equally to compress both ends only enough to allow the center member subassembly to fit between the hubs. (Do not tighten more than necessary to provide clearance for assembly.)

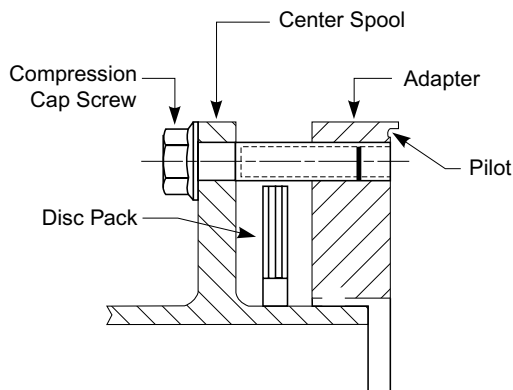


Figure 10 - Compression positioning.

9.4. Make sure that the adapter pilots and the hub flange faces are free from foreign material, nicks and burrs to allow for proper pilot seating.

- 9.5. Place the compressed center member between the coupling hubs, lining up the tapped holes in the adapter with the cap screw clearance holes in the hub. If the coupling was balanced, also align any match marks.
- 9.6. Remove the center member compression cap screws, allowing the adapter pilots to make contact with the outside diameter of the hub flange.

ATTENTION! All bolts and cap screw threads must be lubricated prior to assembly. A clean motor oil is recommended. Do not use lubricants containing molybdenum disulfide or greases.

- 9.7. Lubricate the cap screw threads and insert the cap screws through the hub flange clearance holes and into the mating threaded holes in the adapter. Tighten each cap screw to the torque as listed in Table 4.

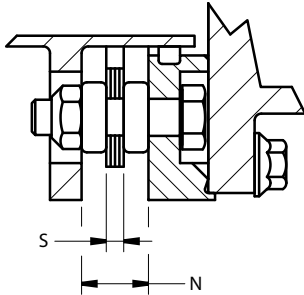


Figure 11 - Alignment confirmation values.

Table 4 - Cap Screw Tightening Torque

S71 Coupling Size	"A" Dimension		Cap Screw			Wrench Size Inch
			Thread Size	Torque		
	Inch	mm	Inch	Ft-Lb*	Nm	
150	3.95	100.3	1/4-20 UNC	(108)*	12	3/8
175	4.16	105.7	1/4-20 UNC	(108)*	12	3/8
225	4.94	125.5	1/4-20 UNC	(108)*	12	3/8
300	5.97	151.6	1/4-20 UNC	(108)*	12	3/8
350	6.75	171.5	5/16-18 UNC	18	24	1/2
375	7.62	193.5	5/16-18 UNC	18	24	1/2
412	8.00	203.2	5/16-18 UNC	18	24	1/2
462	9.00	228.6	3/8-16 UNC	33	45	9/16
512	10.03	254.8	7/16-14 UNC	52	71	5/8
562	10.97	278.6	1/2-13 UNC	80	108	3/4
600	11.72	297.7	1/2-13 UNC	80	108	3/4
712	13.88	352.6	5/8-18 UNF	95	129	15/16
800	15.56	395.2	3/4-16 UNF	165	224	1-1/8
875	17.12	434.8	7/8-14 UNF	270	366	1-5/16
1038	19.75	501.7	7/8-14 UNF	270	366	1-5/16

Note: 1. These torque values are for Cap screws with oil lubricated threads
 * Torque values shown in parenthesis are defined in (In-lb). Otherwise use Ft-lb.

- 9.8. As an assembly and alignment check, measure the distance "N" between the flanges of the hub and the center spool at each end, as shown in Figure 9 and Figure 11. Dimension "N" should be measured at four (4) positions equally spaced around the circumference of the disc pack gap (at top, bottom, and side positions) at each end.
- Calculate the " N_{average} " value at each end by adding the measurements and dividing by 4.
 - $N_{\text{average}} = (N1 + N2 + N3 + N4) / 4$
 - N_{average} should be between the minimum and maximum values shown in Table 5.
 - If the N_{average} value is outside of these specifications, use a more precise measurement method to verify an acceptable gap, by first measuring the thickness of the disc pack "S" as shown in Figure 11. The discs should be tightly compressed during the measurement. Calculate "G" by subtracting "S" from N_{average} .
 - $G = N_{\text{average}} - S$
 - G should be between the minimum and maximum values shown in Table 5 for allowable G values.

- Calculate the Angular Misalignment at each end by subtracting the smallest (minimum) N value from the largest (maximum) N value. The Angular Misalignment should be less than the maximum value shown in Table 5.

- Angular Misalignment = $(N_{\text{maximum}} - N_{\text{minimum}})$

9.9. If the “N average,” and “G” values are outside of these specifications, or the angular misalignment exceeds the maximum

Table 5 - Alignment Check Values

Series 71 Coupling Size	“A” Dimension		Dimension “N”				Maximum Allowable Coupling Angular Misalignment at Each End		Precision Alignment Check			
			Allowable Range for “N average” *				(N maximum) - (N minimum) **		Allowable Range for G = (N average) - S***			
	inch	mm	Min. inch	Max. inch	Min. mm	Max. mm	Maximum Capacity		Min. inch	Max inch	Min. mm	Max. mm
150	3.95	100.3	0.466	0.491	11.84	12.47	0.034	0.88	0.362	0.387	9.19	9.83
175	4.16	105.7	0.476	0.511	12.09	12.98	0.036	0.92	0.357	0.392	9.07	9.96
225	4.94	125.5	0.460	0.497	11.68	12.62	0.043	1.10	0.355	0.393	9.02	9.98
300	5.97	151.6	0.575	0.618	14.61	15.70	0.052	1.32	0.416	0.459	10.57	11.66
350	6.75	171.5	0.648	0.693	16.46	17.60	0.059	1.50	0.415	0.460	10.54	11.68
375	7.62	193.5	0.664	0.712	16.87	18.08	0.066	1.69	0.414	0.461	10.52	11.71
412	8.00	203.2	0.821	0.876	20.85	22.25	0.070	1.77	0.535	0.590	13.59	14.99
462	9.00	228.6	0.891	0.951	22.63	24.16	0.079	1.99	0.533	0.593	13.54	15.06
512	10.03	254.8	0.897	0.962	22.78	24.43	0.088	2.22	0.468	0.533	11.89	13.54
562	10.97	278.6	0.983	1.055	24.97	26.80	0.096	2.43	0.464	0.536	11.79	13.61
600	11.72	297.7	1.173	1.253	29.79	31.83	0.102	2.60	0.582	0.662	14.78	16.81
712	13.88	352.6	0.753	0.794	19.13	20.17	0.081	2.05	0.292	0.333	7.42	8.46
800	15.56	395.2	0.890	0.936	22.61	23.77	0.091	2.30	0.353	0.399	8.97	10.13
875	17.12	434.8	0.959	1.010	24.36	25.65	0.100	2.53	0.351	0.402	8.92	10.21
1038	19.75	501.7	1.171	1.228	29.74	31.19	0.115	2.92	0.471	0.529	11.96	13.44

* “N average” is the average of four dimensions measuring the gap at four positions equally spaced around the circumference of the disc pack (at top, bottom, and side positions, or otherwise stated as 0°, 90°, 180°, and 270°).

** At each end, subtract the minimum N measurement from the maximum N measurement. The calculated value allows the maximum angular misalignment capacity at each end, 1/2° for sizes 150 to 600 and 1/3° for sizes 712 to 1038.

*** G = (N average) - S, where S = measured thickness of stack of disc pack laminates (when tightly compressed).

Refer to Rexnord Bulletin 538-214 “Coupling Alignment Fundamentals” for more details and procedures regarding alignment methods and procedures.

capacity, it is suggested that the alignment is rechecked and improved. Dimensional measurements should also be made to verify the set up is accurate.

9.10. For further help with the installation or alignment consult Rexnord.

10. Disc Pack Replacement –

10.1. If it becomes necessary to replace the disc packs, it can be done as follows.

ATTENTION! The Series 71 center member subassemblies have their locknuts factory tightened. On center member subassemblies where the spacer length is short and wrench access is limited, special wrenches are used to tighten the locknuts. Consult Rexnord for assistance in obtaining these special wrenches.

10.2. Remove the center member subassembly by removing all cap screws, compressing the center member subassembly (using the cap screws as defined in the final assembly procedure) and dropping it out from between the hubs. There are jacking screw tapped holes in each end hub to disengage the pilots between the hubs and adapters.

10.3. Remove all locknuts, bolts, washers, and disc packs. Special wrenches may be required. Clean the two adapters and the center member, removing any nicks and burrs. See Figure 9. Install the new disc packs to the adapters first.

ATTENTION! Match marks (if applied at balance) must be in-line to maintain balance integrity



DANGER!

When handling the coupling, components may sometimes slip and fall, to prevent loss of fingers or injury do not insert fingers into any fastener holes.


- 10.4. Make sure to keep the discs flat and parallel to the mating flange while installing the bolts through the adapter, washer, disc pack and washer.
- 10.5. Make sure the parts engage the body diameter of the bolt.
- 10.6. The last bolt may be tight and require light tapping, with a small mallet, on the head of the bolt to engage the bolt through the disc pack assembly and center member.
-  **ATTENTION!** All bolt threads must be lubricated prior to assembly. A clean motor oil is recommended. Do not use lubricants containing molybdenum disulfide or grease.
- 10.7. Slightly tighten all locknuts using an alternating progressive pattern making sure the pack is not distorted and all the bolts are fully seated. Now tighten each locknut to the appropriate torque value shown in Table 6, using an incremental torque in a progressive alternating pattern.
- 10.8. Proceed to install the center member subassembly as outlined in Section 9.0, Final Assembly.
- 10.9. When possible, it is recommended that all locknuts have their tightening torque checked after several hours of initial operation.
- 10.10. For spare replacement parts, see Table 1.

Table 6 - Locknut Tightening Torques

S71 Coupling Size	"A" Dimension		Locknut			Wrench Size Inch
			Thread Size	Torque		
	Inch	mm	Inch	Ft-Lb**	Nm	
150	3.59	100.3	1/4-28 UNF	(156)**	18	7/16
175	4.16	105.7	1/4-28 UNF	(156)**	18	7/16
225	4.94	125.5	1/4-28 UNF	(156)**	18	7/16
300	5.97	151.6	5/16-24 UNF	25	34	1/2
350	6.75	171.5	3/8-24 UNF	34	46	9/16
375	7.62	193.5	7/16-20 UNF	60	81	5/8
412	8.00	203.2	1/2-20 UNF	95	129	3/4
462	9.00	228.6	9/16-18 UNF	130	176	7/8
512	10.03	254.8	5/8-18UNF	175	237	15/16
562	10.97	278.6	3/4-16 UNF	190*	258*	1-1/4
600	11.72	297.7	3/4-16 UNF	190*	258*	1-1/4
712	13.88	352.6	3/4-16 UNF	190*	258*	1-1/4
800	15.56	395.2	7/8-14 UNF	255*	346*	1-7/16
875	17.12	434.8	1-14 UNS	335*	454*	1-5/8
1038	19.75	501.7	1-1/8-12 UNF	425*	576*	1-13/16

* These locknuts are cadmium plated (for steel). Do not use any lubricant other than clean motor oil.

** Torque values shown in parenthesis are defined in (in-lb). Otherwise use (ft-lb).

1. These torque values are approximate for steel bolts with threads lubricated with clean motor oil. The locknuts are prevailing torque type and some resistance will be felt. If thread galling is suspected, immediately stop and contact Rexnord.
2. Bolts should be held stationary while the locknuts are tightened to the values shown. Do not tighten the fastener by rotating the bolt.
3. The use of Stainless Steel bolts and locknuts requires the tightening torque to be reduced to 60% of the values shown. Stainless steel bolt and locknut threads must also be liberally coated with molybdenum disulfide grease (do not use motor oil).
4. Air driven wrenches for fastener assembly are not permitted (heat build up may lead to thread damage during assembly).