Type XTSR52
Sizes 494-5258

Figure 1 – Thomas XTSR52 Coupling without Adapter and with Adapter and Large Hub

1. General Information

1.1 Rexnord Thomas Couplings are designed to provide a mechanical connection between the rotating shafts of mechanical equipment, using flexible discs 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 Rexnord Thomas 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.

1.4 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 Do not make contact with the coupling when it is rotating and/or in operation.

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.

2.4 Installation should be carried out by skilled personnel only. 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. The Installation and Maintenance instructions and assembly drawing, if provided, must be at hand at the installation site.

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.

2.5 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 The coupling should be stored in a dry corrosion protected environment, free from external loads (for example by stacking) to prevent damage which may cause a hazard when the coupling is put into service.

2.7 For ATEX requirements the guard must have a minimum of 12.7 mm (1/2 in) radial clearance to the coupling outside diameter and allow for proper ventilation.

2.8 All conductive parts of the equipment should be connected in such a way that hazardous electrical potential differences cannot occur. In case insulated metal parts could be charged thus becoming a potential ignition source, earth connections must be provided.

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

2.10 Packaging material can generate electrostatic charges. It may then become an explosive hazard. It must be removed from the coupling outside any hazardous areas.

2.11 Proper lockout-tag out procedures must be followed to safeguard against unintentional starting of the equipment.

2.12 All work on the coupling must be performed when the coupling is at rest with no load.

2.13 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.

2.14 Use explosive environment appropriate tools only, for more information see DIN EN 1127-1:2008:02, Annex A.

2.15 The coupling may only be used in accordance with the technical data provided in the Thomas disc coupling catalog. Customer modifications and alterations to the coupling are not permissible.

2.16 All spare parts for service or replacement must originate from or be approved by Rexnord.

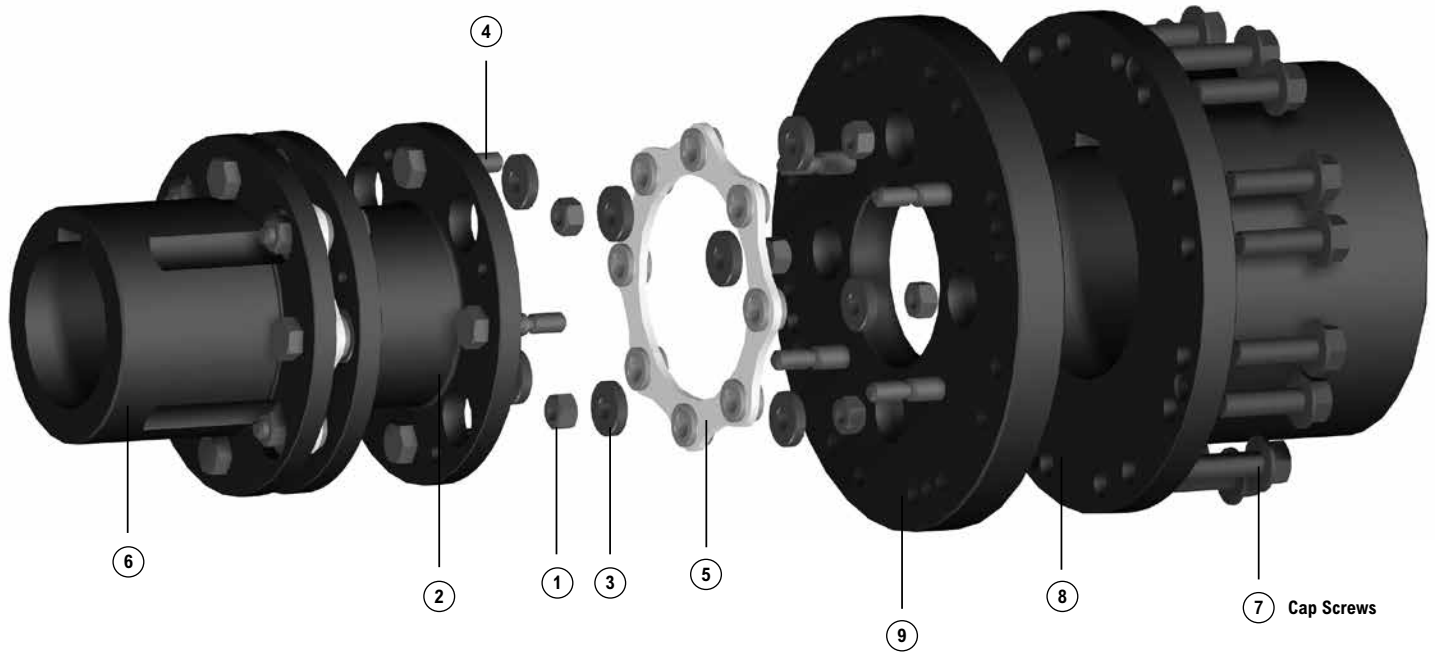


Figure 2 – Rexnord Thomas XTSR52 Coupling Components

Note: Coupling component numbers above correspond to the component numbers in the column headers of Tables 1 and 2.

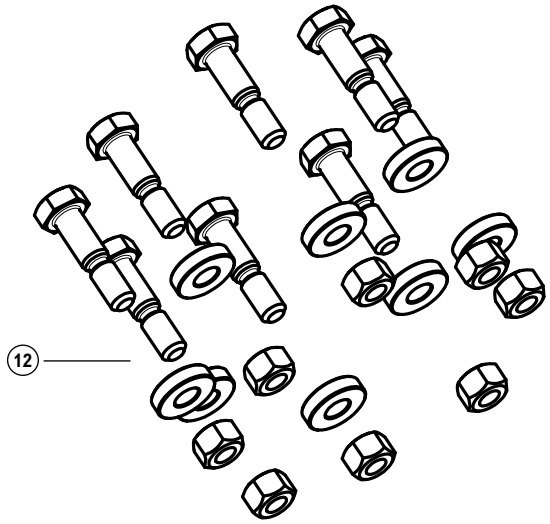


Figure 3 – Disc Pack Hardware Kit
Consisting of ① , ③ and ④ above.

Table 1 – Rexnord Thomas XTSR52 Coupling Component Part Numbers

Note: the circled numbers identified in the column headers below, correspond to the coupling component numbers in Figure 2.

XTSR52 Coupling Size	Hubs**	LH Hub + Cap Screw Kit	Center Member (1 per Coupling) ②				Adapted Center Members	
	Standard Part No. ⑥	Part No. ⑧	Part No. (in)	"C" Length (in)	Part No. (mm)	"C" Length (mm)	Part No. (mm)	"C" Length (mm)
494	10003201	10611141	10003219	3.50	10003222	100	10003225	100
			10003220	3.75	10003223	140	10003226	140
			10003221	5.00	---	---	---	---
644	10003202	10611142	10003227	3.50	10003230	100	10003233	100
			10003228	3.75	10003231	140	10003234	140
			10003229	5.00	---	---	---	---
726	10001191	---	10000921	3.50	10000831	100	10399144	100
			10467168	3.75	10000910	140	10397159	120
			10000922	5.00	---	---	---	---
826	10001192	10001612	10000923	3.50	10000832	100	---	---
			10467167	3.75	10000911	140	10397201	120
			10000924	5.00	---	---	10397202	140
996	10001193	10001613	10000925	4.38	10000912	100	---	---
			10000926	5.00	10000833	140	10399148	140
			---	---	10000913	180	10397204	180
1088	10001194	10001614	10000927	4.38	10000834	140	10399150	140
			10000928	5.00	10000914	180	10397205	180
1298	10001195	10001615	10000929	4.38	10000835	140	---	---
			10000930	5.00	10000915	180	10397206	180
1548	10001196	10001616	10000931	5.00	10000916	140	---	---
			10000932	7.50	10000836	180	1039155	180
			10000933	8.00	10000917	250	---	---
1698	10001197	10001617	10000934	7.50	10000837	180	---	---
			10000935	8.00	10000918	250	10397207	250
1928	10001198	10001618	10000936	7.50	10000838	180	---	---
			10000937	8.00	10000919	250	10397208	250
			10000938	9.00	---	---	---	---
2068	10001199	10001619	10000939	7.50	10000920	180	---	---
			10000940	8.00	10000839	250	10397211	250
			10000941	9.00	---	---	---	---
2278	10001200	10001620	10000942	8.00	10000840	250	---	---
			10000943	9.00	---	---	---	---
2468	10001201	10001621	10000944	9.00	10000841	250	---	---
2698	10001202	10001622	10000945	9.00	10000842	250	---	---
2888	10001203	10001623	10000946	10.00	10000843	250	---	---
3058	10001204	10001624	10000947	10.00	10000844	250	---	---
3358	10001205	10001631	10000948	10.00	10000845	250	---	---
3668	10001206	10001625	10000949	18.00	10000846	460	---	---
3908	10001207	10001626	10000950	18.00	10000847	460	---	---
4178	10001208	10001627	10000951	18.00	10000848	460	---	---
4588	10001209	10001628	10000952	18.00	10000849	460	---	---
4918	10001210	10001629	10000953	17.89	10000850	460	---	---
5258	10001211	10001630	10000954	18	10000851	460	---	---

**All hub part numbers are non bored.

Table 2 – Rexnord Thomas XTSR52 Coupling Component Part Numbers

Note: the circled numbers identified in the column headers below, correspond to the coupling component numbers in Figures 2 and 3.

XTSR52 Coupling Size	Adapters ⑨			Disc Pack Part No. (2 per Coupling) ⑤	Hardware Kit Bolts, Locknuts, and Overload Bushings for One Disc Pack ⑫			
	LH Part No.	XL Part No.	XXL Part No.		Hardware Kit *	Bolts Quantity ④	Locknuts Quantity ①	Bushings Quantity ③
494	10003209	10003210	10003211	10003753	10611144	4	4	4
644	10003212	---	10003214	10002803	10611145	4	4	4
726	---	10001161	10002621	10000091	10001561	6	6	6
826	10000242	10001162	10002622	10000092	10001562	6	6	6
996	10000243	10001163	10002623	10000093	10001563	6	6	6
1088	10000244	10001164	10002624	10000094	10001564	8	8	8
1298	10000245	10001165	10002625	10000095	10001565	8	8	8
1548	10000246	10001166	10002626	10000096	10001566	8	8	8
1698	10000247	10001167	10002627	10000097	10001567	8	8	8
1928	10000248	10001168	10002628	10000098	10001568	8	8	8
2068	10000249	10001169	10002629	10000099	10001569	8	8	8
2278	10000250	10001170	10002630	10000100	10001570	8	8	8
2468	10000251	10001171	10002631	10000101	10001571	8	8	8
2698	10000252	10001172	10002632	10000102	10001572	8	8	8
2888	10000253	10001173	10002633	10000103	10001573	8	8	8
3058	10000254	10001174	10002634	10000104	10001574	8	8	8
3358	10000255	10001175	10002635	10000105	10001575	8	8	8
3668	10000256	10001176	10002636	10000106	10001576	8	8	8
3908	10000257	10001177	10002637	10000107	10001577	8	8	8
4178	10000258	10001178	10002638	10000108	10001578	8	8	8
4588	10000259	10001179	10002639	10000109	10001579	8	8	8
4918	10000260	10001180	---	10000110	10001580	8	8	8
5258	10000261	---	---	10000111	10001581	8	8	8

*Disc pack hardware sold as kits only.

3. Hub Mounting

DANGER!

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

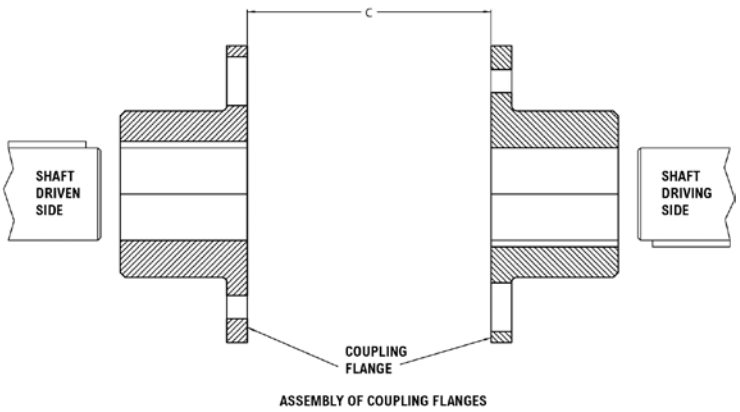


Figure 4 – Mounting Hubs on Shafts

3.1 Examine the coupling assembly to assure there is no visible damage.

3.2 Clean the hub bores and shafts using lint free cloth. Remove any nicks or burrs..

3.3 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 when assembled

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.

DANGER!

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

4. Straight Bore with Clearance/Slip Fit

4.1 Install the key(s) in the shaft.

4.2 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.

4.3 Slide the hub up the shaft to the desired axial position.

4.4 If used; assemble and tighten the set screw(s) using a calibrated torque wrench to the values shown in Table 3.

Table 3 – Set Screw Tightening Torque

Set Screw Size		1/4-20	1/4-28	5/16-18	5/16-24	3/8-16	3/8-24	1/2-13	1/2-20
Hex Head Key Size		1/8	1/8	5/32	5/32	3/16	3/16	1/4	1/4
Tightening Torque	(Nm)	7	9	15	16	27	31	68	75
	(lb-in)	66	76	132	144	240	276	600	660

Set Screw Size		M6	M8	M10	M12	M16	1/4	3/8
Hex Head Key Size		3	4	5	6	8	1/8	3/16
Tightening Torque	(Nm)	6	12	25	50	100	8	25
	(lb-in)	55	110	220	440	880	70	220

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

5. Straight Bore with Interference Fit

5.1 Accurately measure the bore and shaft diameters to assure proper fit.

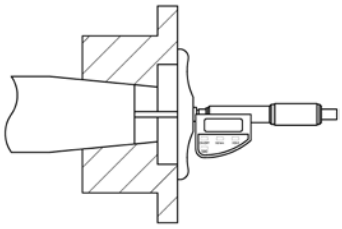
5.2 Install the key(s) in the shaft.

5.3 Heat the hub in an oven until the bore is sufficiently larger than the shaft.

5.4 275°F (135°C) is usually sufficient for carbon steel hubs. Do not exceed 400°F (205°C).

5.5 With the hub expanded, install it quickly on the shaft to the desired axial position. A pre-set axial stop device can be helpful.

Figure 5 – Shaft end to hub face measurement example.



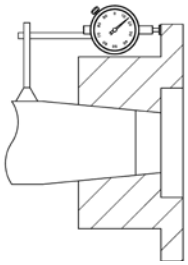


Figure 6 – Dial indicator placement for axial draw measurement example.

6. Taper Bore

6.1 Check for acceptable contact pattern between the hub and the shaft.

6.2 Put the hub on the shaft, keeping the keyways (if existing) aligned.

6.3 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.

6.4 Use a depth micrometer to measure the distance from the shaft end to the hub face, as shown in Figure 5. Record the dimension.

6.5 Mount a dial indicator to read axial hub advancement, as shown in Figure 6. Alternatively, the indicator can be positioned to contact the end of the hub. Set the indicator to "zero."

6.6 Remove the hub and install the key(s) in the shaft.

6.7 Heat the hub in an oven until the bore is sufficiently larger than the shaft.

6.8 350°F (177°C) is usually sufficient for carbon steel hubs. Do not exceed 500°F (260°C).

6.9 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 0.029 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.

6.10 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.

6.11 Inspect the assembly to verify that the hub is properly positioned. Consult Rexnord if necessary.

6.12 Install hub axial retention device (if any) in accordance with the equipment manufacturer's specifications.

7. Shaft Alignment

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 distortion 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 ratings for the coupling and the alignment values shown in Table 4. Shaft alignment can be measured using various established methods, including Laser Alignment, Reverse Dial Indicator, and Rim and Face.

7.1 Move the connected equipment to achieve acceptable alignment. When well 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.

As a guide, the maximum and minimum values for dimension "N" shown in Figure 7 are given in Table 4. These dimensions are suggested for initial installation. Additional capacity is available to compensate for thermal and structural equipment movement. Maximum axial capacity values for these couplings are also given in Table 4.

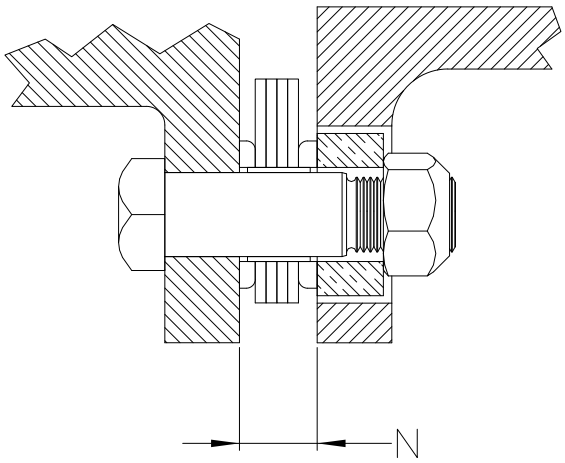


Figure 7 – Disc Gap

Table 4 shows installation limits for Angular and Parallel Alignment. The Parallel Alignment value "P" is the offset between the centers of the hubs, as shown in Figure 8. If parallel offset is measured by rotating the hubs with a dial indicator on the outside diameter, as shown in Figure 9 the total indicated reading should be divided by (2) to calculate "P". The Angular Alignment Total Indicator Reading value is the maximum difference between the measurements (X-Y) taken at opposite ends of the hub flange, and spacer flange as shown in Figure 10.

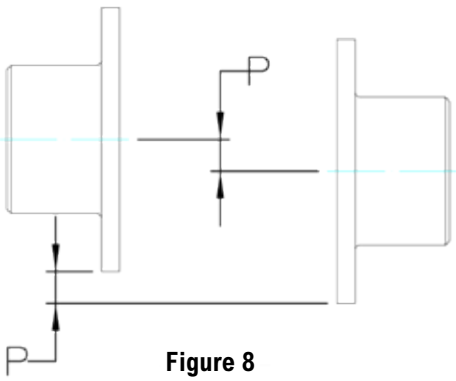


Figure 8

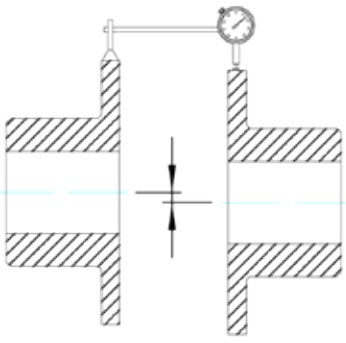


Figure 9

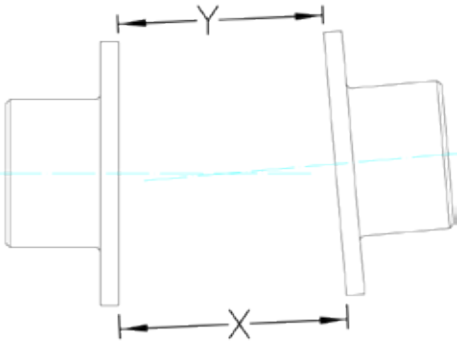


Figure 10

Table 4 – Alignment Values

XTSR52 Coupling Size	"A" Dimension		"N" Dimension				"C" Standard Lengths (distance between hub flanges)		Installation Axial Limits +/-		Axial Capacity +/-		Recommended Installation Limits ****					
													Maximum Coupling Parallel Misalignment				Max Angular Misalignment Between Hubs (X-Y)	
	Std Hub		Min.	Max.	Min.	Max.							Parallel Alignment Total Indictor Reading (TIR)*		(P) Installation Limit Parallel Offset **			
	(in)	(mm)	(in)	(in)	(mm)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
494	2.76	70.0	0.33	0.35	8.3	8.8	3.50	88.9	0.012	0.30	0.024	0.6	0.011	0.27	0.005	0.13	0.004	0.10
							3.75	95.3					0.011	0.29	0.006	0.14		
							3.94	100.0					0.012	0.30	0.006	0.15		
							5.00	127.0					0.015	0.38	0.008	0.19		
							5.51	140.0					0.017	0.42	0.008	0.21		
644	3.35	85.0	0.33	0.35	8.3	8.8	3.50	88.9	0.017	0.43	0.033	0.9	0.011	0.27	0.005	0.13	0.004	0.10
							3.75	95.3					0.011	0.29	0.006	0.14		
							3.94	100.0					0.012	0.30	0.006	0.15		
							5.00	127.0					0.015	0.38	0.008	0.19		
							5.51	140.0					0.017	0.42	0.008	0.21		
726	3.74	95.0	0.33	0.35	8.3	8.8	3.50	88.9	0.026	0.65	0.051	1.3	0.009	0.23	0.005	0.12	0.005	0.13
							3.75	95.3					0.010	0.25	0.005	0.12		
							5.00	127.0					0.013	0.33	0.007	0.17		
							3.94	100.0					0.010	0.26	0.005	0.13		
							5.51	140.0					0.014	0.36	0.007	0.18		
826	4.25	108.0	0.36	0.38	9.1	9.6	3.50	88.9	0.030	0.75	0.059	1.5	0.009	0.23	0.005	0.12	0.006	0.15
							3.75	95.3					0.010	0.25	0.005	0.12		
							5.00	127.0					0.013	0.33	0.007	0.17		
							3.94	100.0					0.010	0.26	0.005	0.13		
							5.51	140.0					0.014	0.36	0.007	0.18		
996	5.08	129.0	0.37	0.39	9.3	9.9	4.38	111.3	0.035	0.89	0.070	1.8	0.011	0.29	0.006	0.14	0.007	0.18
							5.00	127.0					0.013	0.33	0.007	0.17		
							3.94	100.0					0.010	0.26	0.005	0.13		
							5.51	140.0					0.014	0.36	0.007	0.18		
							7.09	180.0					0.018	0.47	0.009	0.23		
1088	5.51	140.0	0.40	0.42	10.1	10.7	4.38	111.3	0.025	0.65	0.051	1.3	0.007	0.19	0.004	0.09	0.005	0.13
							4.72	120.0					0.008	0.20	0.004	0.10		
							5.00	127.0					0.009	0.22	0.004	0.11		
							5.51	140.0					0.009	0.24	0.005	0.12		
							7.09	180.0					0.012	0.31	0.006	0.15		
1298	6.54	166.0	0.50	0.52	12.6	13.3	4.72	120.0	0.031	0.77	0.061	1.6	0.008	0.20	0.004	0.10	0.006	0.15
							5.00	127.0					0.009	0.22	0.004	0.11		
							5.51	140.0					0.009	0.24	0.005	0.12		
							7.09	180.0					0.012	0.31	0.006	0.15		
1548	7.76	197.0	0.57	0.59	14.4	15.1	5.00	127.0	0.037	0.93	0.073	1.8	0.009	0.22	0.004	0.11	0.007	0.18
							7.50	190.5					0.013	0.32	0.006	0.16		
							8.00	203.2					0.014	0.35	0.007	0.17		
							5.51	140.0					0.009	0.24	0.005	0.12		
							7.09	180.0					0.012	0.31	0.006	0.15		
							9.84	250.0					0.017	0.43	0.008	0.21		
1698	8.58	218.0	0.61	0.64	15.4	16.2	7.50	190.5	0.040	1.02	0.080	2.0	0.013	0.32	0.006	0.16	0.008	0.20
							8.00	203.2					0.014	0.35	0.007	0.17		
							7.09	180.0					0.012	0.31	0.006	0.15		
							9.84	250.0					0.017	0.43	0.008	0.21		
1928	9.66	245.4	0.66	0.69	16.7	17.4	7.50	190.5	0.046	1.16	0.091	2.3	0.013	0.32	0.006	0.16	0.009	0.23
							8.00	203.2					0.014	0.35	0.007	0.17		
							9.00	228.6					0.015	0.39	0.008	0.19		
							7.09	180.0					0.012	0.31	0.006	0.15		
							9.84	250.0					0.017	0.43	0.008	0.21		
2068	10.39	264.0	0.71	0.74	18.0	18.8	7.50	190.5	0.049	1.23	0.097	2.5	0.013	0.32	0.006	0.16	0.010	0.25
							8.00	203.2					0.014	0.35	0.007	0.17		
							9.00	228.6					0.015	0.39	0.008	0.19		
							7.09	180.0					0.012	0.31	0.006	0.15		
							9.84	250.0					0.017	0.43	0.008	0.21		
2278	11.44	290.5	0.74	0.77	18.8	19.5	9.00	228.6	0.054	1.36	0.107	2.7	0.015	0.39	0.008	0.19	0.011	0.28
							9.84	250.0					0.017	0.43	0.008	0.21		
2468	12.32	313.0	0.79	0.82	20.1	20.8	9.00	228.6	0.058	1.47	0.116	3.0	0.015	0.39	0.008	0.19	0.012	0.30
							9.84	250.0					0.017	0.43	0.008	0.21		
2698	13.50	343.0	0.91	0.94	23.0	23.9	9.84	250.0	0.064	1.61	0.127	3.2	0.017	0.42	0.008	0.21	0.013	0.33
2888	14.61	371.0	0.97	1.01	24.7	25.6	9.84	250.0	0.068	1.73	0.136	3.5	0.017	0.43	0.008	0.21	0.014	0.36
3058	15.55	395.0	0.97	1.01	24.7	25.6	9.84	250.0	0.072	1.83	0.144	3.7	0.017	0.43	0.008	0.21	0.015	0.38
3358	16.81	427.0	1.06	1.09	27.0	27.7	9.84	250.0	0.079	2.01	0.158	4.0	0.017	0.43	0.008	0.21	0.016	0.41
3668	18.35	466.0	1.18	1.21	29.9	30.8	15.00	381.0	0.087	2.20	0.173	4.4	0.026	0.65	0.013	0.32	0.018	0.46
3908	19.29	490.0	1.18	1.21	29.9	30.8	15.00	381.0	0.092	2.34	0.184	4.7	0.026	0.65	0.013	0.32	0.019	0.48
4178	20.63	524.0	1.25	1.30	31.9	33.0	15.00	381.0	0.099	2.50	0.197	5.0	0.026	0.65	0.013	0.32	0.020	0.51
4588	23.11	587.0	1.40	1.43	35.5	36.4	18.00	457.2	0.108	2.74	0.216	5.5	0.031	0.78	0.015	0.39	0.022	0.56
4918	24.80	630.0	1.48	1.52	37.6	38.6	18.00	457.2	0.116	2.95	0.232	5.9	0.031	0.78	0.015	0.39	0.024	0.61
5258	26.46	672.0	1.56	1.61	39.7	40.8	18.00	457.2	0.124	3.15	0.248	6.3	0.031	0.78	0.015	0.39	0.025	0.64

*Parallel Misalignment measured by rotating the hubs with a dial indicator on the outside hub diameter will result in a maximum TIR.
For sizes 494-644 use 0.003 inch per inch of "C" dimension (or 0.010 mm per mm of "C" dimension) for non-standard "C" dimensions. Multiply "C" x 0.003 to calculate the TIR.
For sizes 726-996 use 0.0026 inch per inch of "C" dimension (or 0.008 mm per mm of "C" dimension) for non-standard "C" dimensions. Multiply "C" x 0.0026 to calculate the TIR.
For sizes 1088-5258 use 0.0017 inch per inch of "C" dimension (or 0.004 mm per mm of "C" dimension) for non-standard "C" dimensions. Multiply "C" x 0.0017 to calculate the TIR.

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

**** During installation and/or operation, do not exceed the maximum misalignment capacity of coupling.
For sizes 494-644 maximum misalignment capacity of coupling is 2/3º per disc pack.
For sizes 726-996 maximum misalignment capacity of coupling is 1/2º per disc pack.
For sizes 1088-5258 maximum misalignment capacity of coupling is 1/3º per disc pack.

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

⚠
a. 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 10.
b. The Parallel Misalignment value "P" is the offset between the centers of the hubs, as shown in Figure 8.

8. Final Assembly

8.1 Verify that the hubs have been mounted as shown in Figure 4 to provide the correct "C" length as defined in Table 1. The "C" length is the distance measured between the faces of the two mounted hub flanges.

If your coupling assembly has a non-standard "C" length refer to assembly drawing of coupling to obtain the appropriate "C" length.

Any disc packs fastened with correct torques between an adapter and a center member should stay fastened.

8.2 If any disc packs are still fastened to the center member and a hub without an adapter, remove the locknuts, overload bushings, and bolts.

8.3 Due to the hub-to-adapter piloting feature when using an oversize hub option, the center member subassembly must be compressed to allow it to be slipped between the two end hubs. Use the hub-to-adapter cap screws (provided) as defined in Table 2 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 11B.

8.4 With the hubs mounted, put the center member into place between the two hubs. Hubs with adapters are assembled to the adapters with the cap screws, lining up the tapped holes in the adapter with the cap screw clearance holes in the hub. If the coupling was assembly balanced, also align any match marks.

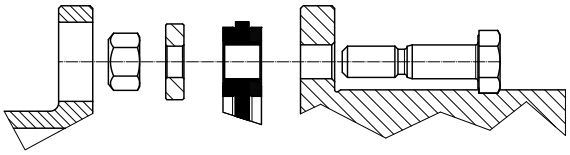


Figure 11 – Disc Pack Bolt Configuration if no adapter

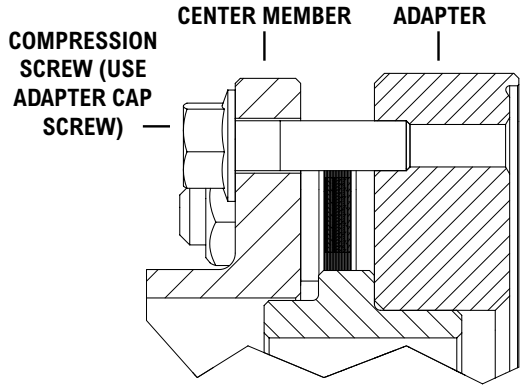


Figure 11B - Using Cap Screws for compression if adapter

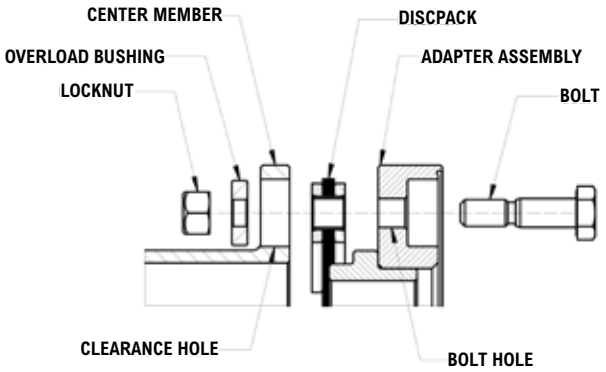


Figure 11C – Disc Pack Bolt Configuration if adapter

Tighten the cap screws equally to compress the disc pack only enough to allow the center member subassembly to fit between the hubs (do not tighten more than necessary to provide clearance for assembly).

All bolt threads must be lubricated prior to assembly. A clean motor oil is recommended. Do not use lubricants containing molybdenum disulfide or greases.

8.5 Place disc pack between the flange of the adapter (or hub if no adapter) and the flange of the spacer and align the bolt holes of the disc pack to the holes in the adapter (or hub if no adapter) and spacer.

8.6 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 5.

8.7 Remove the cap screws from the spacer flange to adapter, allowing the hub outside diameter to make contact with the pilot diameter of the adapter.

When aligning bolt holes ensure that at each bolt hole position one of the bolt holes in the flanges is the small fitted bolt hole and the other one in the opposing flange is the large clearance hole as shown in Figure 11.

8.8 Push bolt through small diameter bolt hole and through disc pack until body of bolt is in contact with disc pack bushing.

8.9 Place overload bushing on threaded side of bolt through large diameter flange hole.

8.10 Apply a clean motor oil to the bolt threads and screw a locknut onto each bolt until hand tight.

8.11 Repeat steps 8.6 through 8.10 until all cap screws, bolts, overload bushings, and locknuts are in place.

8.12 Proceed to the other end of the coupling. Remove the support bolts, if used, and continue to support the center member. Repeat steps 8.5 through 8.10 to install the second disc pack.

8.13 Slightly tighten all locknuts using an alternating progressive pattern on each disc pack as shown in Figures 13 and 14 making sure the disc pack is not distorted and all the bolts are fully seated. Tighten each locknut to the appropriate torque value shown in Table 6, using an incremental torque in a progressive alternating pattern as shown in Figures 13 and 14.

As a guide, measure the distance between flanges known as dimension "N" shown in Figure 7 and given in Table 4.

PRECAUTION

Remove any dust deposits from the coupling components and the coupling elements in an appropriate way for explosive environments.

If your coupling utilizes a short center member with scalloped flanges (clearance hole area removed) follow these supplemental instructions to aid in assembly.

8.14 In the event the coupling utilizes a scalloped version center member you will need to pre assemble the disc packs to the center member before installing it between the mounted hubs as shown in Figure 12.

8.15 Place Disc against the scalloped flange of center member and align the bolt holes of the disc pack to the holes in the spacer flange as shown in Figure 14.

8.16 Start bolt through bolt hole in spacer flange until body of bolt is in contact with disc pack washer. The threaded portion of the bolt is not exposed on other end of disc pack.

8.17 Repeat on other side of spacer for remaining bolt holes.

8.18 Place center member between mount hubs and push pre-installed bolts through disc pack and into clearance holes of mounted hubs.

8.19 Continue spacer installation by following instructions 8.6 through 8.12.

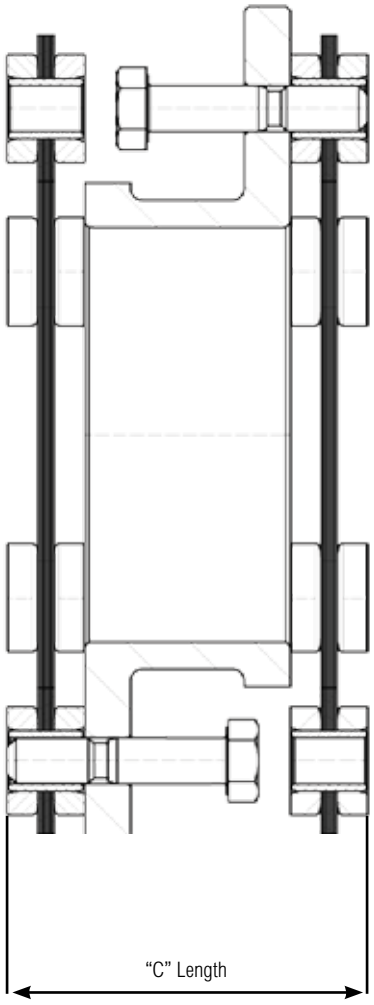


Figure 12 - Short "C" Length Scalloped Center Member

Table 5 – Flange Hex Head Cap Screw Tightening Torques

XTSR52 Coupling Size	"A" Dimension LH Hub		Cap Screw for LH Hub				"A" Dimension XL Hub		Cap Screw for XL Hub				"A" Dimension XXL Hub		Cap Screw for XXL Hub			
	(in)	(mm)	Size (mm)	Torque (lb-ft)	Torque (Nm)	Wrench Size (mm)	(in)	(mm)	Size (mm)	Torque (lb-ft)	Torque (Nm)	Wrench Size (mm)	(in)	(mm)	Size (mm)	Torque (lb-ft)	Torque (Nm)	Wrench Size (mm)
494	2.77	70	M5x20	6.3	8.5	8	3.36	85	M5x20	6.3	8.5	8	---	---	---	---	---	---
644	3.36	85	M5x20	6.3	9	8	---	---	---	---	---	---	4.25	108	M6x20	12.3	17	10
726	---	---	---	---	---	---	4.25	108	M6x20	12.3	16.7	10	5.08	129	M8x25	27	36	13
826	4.25	108	M6x20	12.3	16.7	10	5.08	129	M8x25	27	36	13	5.51	140	M6x25	12.3	16.7	10
996	5.08	129	M8x25	27	36	13	5.51	140	M6x25	12.3	16.7	10	6.54	166	M8x30	27	36	13
1088	5.51	140	M6x25	12.3	16.7	10	6.54	166	M8x30	27	36	13	7.83	199	M10x35	51	69	15
1298	6.54	166	M8x30	27	36	13	7.83	199	M10x35	51	69	15	8.66	220	M10x40	51	69	15
1548	7.83	199	M10x35	51	69	15	8.66	220	M10x40	51	69	15	9.66	245	M12x40	92	124	16
1698	8.66	220	M10x40	51	69	15	9.66	245	M12x40	92	124	16	10.39	264	M12x40	92	124	16
1928	9.66	245	M12x40	92	124	16	10.39	264	M12x40	92	124	16	11.44	291	M12x50	92	124	16
2068	10.39	264	M12x40	92	124	16	11.44	291	M12x50	92	124	16	12.32	313	M14x50	142	193	18
2278	11.44	291	M12x50	92	124	16	12.32	313	M14x50	142	193	18	13.58	345	M12x60	92	124	16
2468	12.32	313	M14x50	142	193	18	13.58	345	M12x60	92	124	16	15.00	381	M14x70	142	193	18
2698	13.58	345	M12x60	92	124	16	15.00	381	M14x70	142	193	18	15.94	405	M14x70	142	193	18
2888	15.00	381	M14x70	142	193	18	15.94	405	M14x70	142	193	18	17.20	437	M16x70	218	295	21
3058	15.94	405	M14x70	142	193	18	17.20	437	M16x70	218	295	21	18.98	482	M16x80	218	295	21
3358	17.20	437	M16x70	218	295	21	18.98	482	M16x80	218	295	21	19.80	503	M16x80	218	295	21
3668	18.98	482	M16x80	218	295	21	19.80	503	M16x80	218	295	21	20.83	529	M16x80	218	295	21
3908	19.80	503	M16x80	218	295	21	20.83	529	M16x80	218	295	21	23.94	608	M20x90	427	579	27
4178	20.83	529	M16x80	218	295	21	23.94	608	M20x90	427	579	27	25.51	648	M20x100	427	579	27
4588	23.94	608	M20x90	427	579	27	25.51	648	M20x100	427	579	27	26.69	678	M20x110	427	579	27
4918	25.51	648	M20x100	427	579	27	26.69	678	M20x100	427	579	27	---	---	---	---	---	---
5258	26.69	678	M20x110	427	579	27	---	---	---	---	---	---	---	---	---	---	---	---

Note: These torque values are approximate for Cap screws with lubricated threads.

9. Disc Pack Replacement

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

Note: Center member subassemblies with adapters 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 special wrenches.

9.1 Remove the center member subassembly by removing all cap screws from 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 11B and dropping the center member assembly out from between the hubs. There are jacking screw tapped holes in each end hub to disengage the pilots between the hubs and adapters, using the hub to adapter cap screws as defined in Table 5.

9.2 Remove all locknuts, bolts, bushings, and disc packs. Special wrenches may be required. Clean the two adapters and the center spool, removing any nicks and burrs.

9.3 Install the disc packs to the adapter first so that the washer heads of the disc pack line up with the bolt holes in the adapter as shown in Figure 11C. Insert the bolts through the adapter bolt holes and disc pack. Match marks (if applied at assembly balance) must be in-line to maintain balance.

9.4 Proceed to install the center member subassembly as outlined in the Final Assembly section 8.

When possible, it is recommended that all locknuts have their tightening torque checked after several hours of initial operation.

For spare replacement parts, see Tables 1 and 2.

Table 6 – Lock Nut Tightening Torque

XTSR52 Coupling Size	"A" Dimension Std Hub		Locknut			
			Bolt Size (mm)	Torque		Wrench Size (in)
	(in)	(mm)		(ft-lb)	(Nm)	
494	2.76	70.0	M5	4.7	6.4	8
644	3.35	85.0	M5	4.7	6.4	8
726	3.74	95.0	M5	4.7	6.4	8
826	4.25	108.0	M6	8.1	11	11
996	5.08	129.0	M8	18	24	14
1088	5.51	140.0	M8	18	24	15
1298	6.54	166.0	M10	39	53	18
1548	7.76	197.0	M12	66	90	21
1698	8.58	218.0	M14	110	150	22
1928	9.66	245.4	M16	162	220	24
2068	10.39	264.0	M18	236	320	27
2278	11.44	290.5	M20	266	360	30
2468	12.32	313.0	M22	384	520	32
2698	13.50	343.0	M24	575	780	36
2888	14.61	371.0	M27	885	1200	41
3058	15.55	395.0	M27	885	1200	41
3358	16.81	427.0	M30	1200	1600	46
3668	18.35	466.0	M33	1500	2000	50
3908	19.29	490.0	M33	1500	2000	50
4178	20.63	524.0	M36	2100	2800	55
4588	23.11	587.0	M42	3200	4400	65
4918	24.80	630.0	M45	4100	5600	70
5258	26.46	672.0	M48	4900	6700	75

Notes:

1. These torque values are approximate for steel bolts with lubricated threads.
2. Bolts should be held from rotating while the locknuts are tightened to the values shown. Do not tighten the fastener by rotating the bolt head.

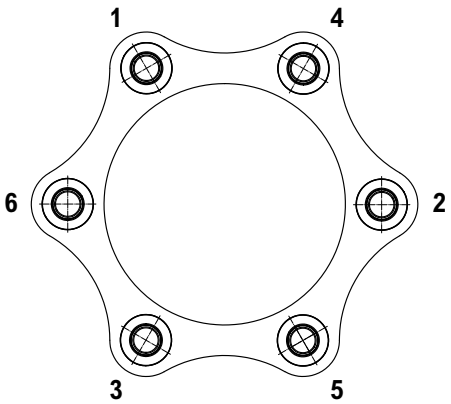


Figure 13

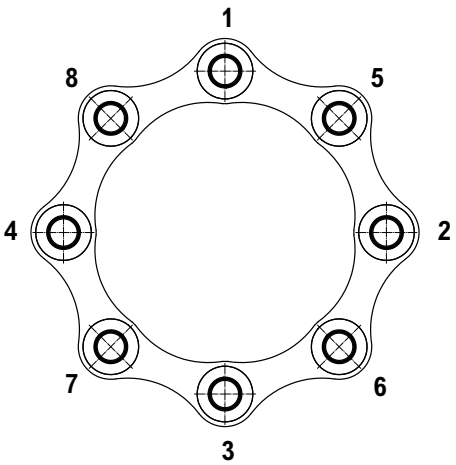


Figure 14