This is the Original Document in English Language

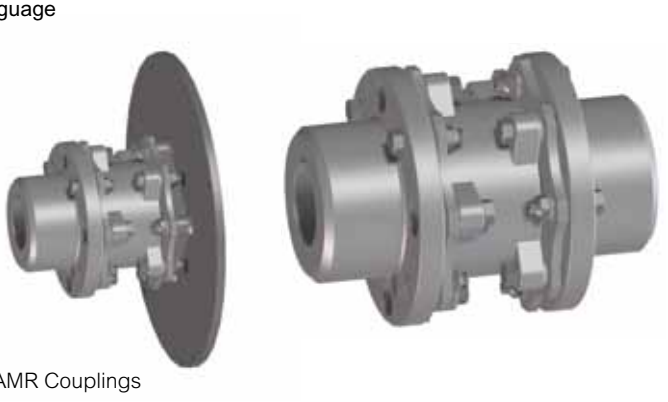

Figure 1 - Thomas CMR and AMR Couplings

1. General Information

1.1. Thomas CMR and AMR Couplings with Tpacks 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 install and maintain your Thomas CMR and AMR Tpack couplings. Please read these instructions prior to installing the coupling, and prior to maintenance on 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:

STOP Danger of injury to persons.

Damages on the machine possible.

Pointing to important items.

Hints concerning explosion protection.

2. Safety and Advice Hints

STOP 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.

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.

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. For ATEX requirements the guard must have a minimum of 12.7 mm (1/2 inch) radial clearance to the coupling ouutside 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 fasteners.

2.11. The coupling may only be used in accordance with the technical data provided in the Thomas catalog for Type CMA and AMR Tpack couplings. 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

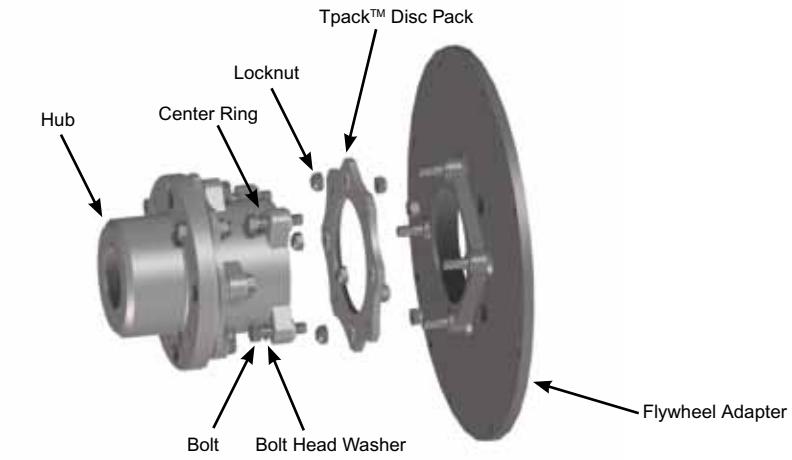

Figure 2 - Thomas Series CMR TPack Coupling Components (AMR Coupling uses a Hub at each end, with no Flywheel Adapter)

Thomas CMR and AMR Tpack couplings may be delivered from the factory assembled (for shipment only) or not assembled. If assembled, the locknuts are not fully tightened. Examine the parts to assure there is no visible damage. If the coupling is assembled, remove the locknuts, bolts, and bolt head washers that attach the hub(s) to the disc packs. Remove the hub(s). Leave the disc packs attached to the center ring and the flywheel adapter (when used). Prior to operation the disc pack locknuts will be tightened to the specifications shown in Table 4.

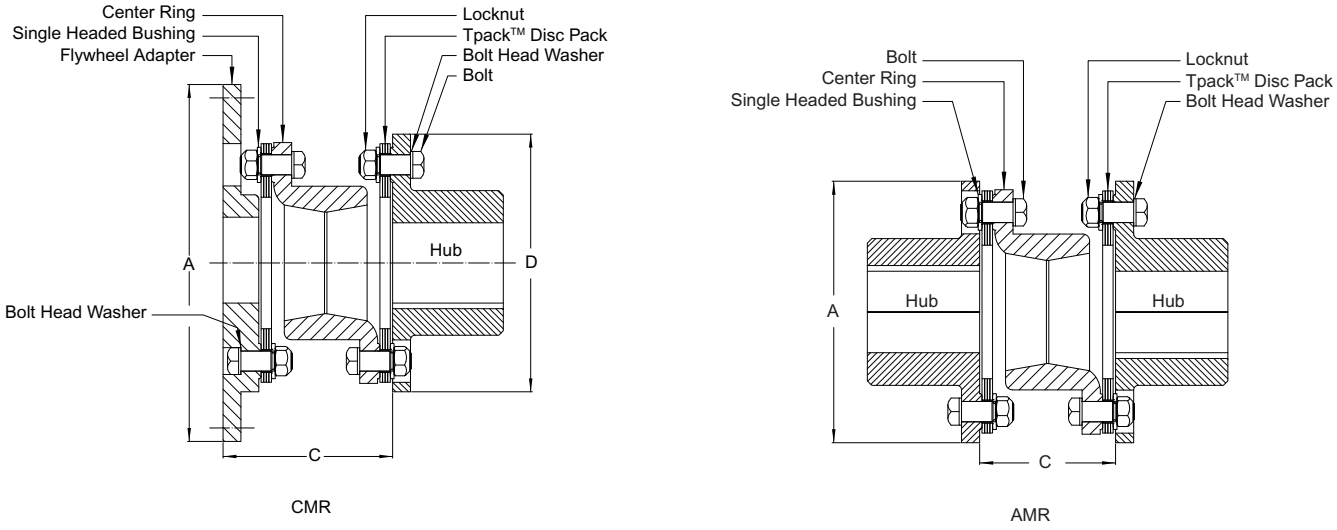

Figure 3 - Thomas CMR and AMR TPack Cross Sectional View of Components

Table 1 - Parts Numbers and Quantity Required

Size of AMR/CMR Coupling	Flywheel Adapter	Hub Rough Bored	Center Ring (1 per Coupling)	Tpack™ Disc Pack Tomaloy		Parts Kit – Consists of Tpacks, Locknuts and Washers for One Coupling**			
		Part No.	Part No.	Part No.	Qty.	Parts Kit Part No.	Bolts Qty.	Locknuts Qty.	Washers Qty.
225	One per coupling. Made to customer's specifications.	622050	320960	586056	2	588014	16	16	16
262		322047	720826	586058	2	588015	16	16*	16
312		021395	720752	585913	2	588016	16	16*	16
350		721392	820897	586059	2	588017	16	16	16
375		921797	921373	586060	2	588018	16	16	16
425		221838	321377	586062	2	588019	16	16	16
450		122088	121376	586063	2	588020	16	16*	16
500		321936	920941	586065	2	588021	16	16*	16
550		021647	930642	586066	2	588022	16	16*	16
600		120943	937205	586067	2	588023	16	16*	16
700		621073	830400	586068	2	588024	16	16*	16
750		622262	130597	586069	2	588025	16	16*	16

* These locknuts are cadmium plated.
**Use this kit when replacing original Thomas round, non-unitized disc packs (non-Tpack) with a Tpack disc pack. It includes the special bolt head washers as shown in Figures 2, 3, 9 and 10.

4. Hub Mounting

DANGER!

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

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 both the hub and shaft, with a slight clearance over the top of the key.

CAUTION: When heating hubs is required, use of 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 (crayon marker) applied to the hub surface will help determine the hub temperature.

DANGER!

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

5. Straight Bore with Clearance/Slip Fit –

CAUTION: Clearance/Slip Fits are not recommended for use with AMR/CMR couplings when the application includes reversing torque loads, in which AMR/CMR couplings are generally applied.

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 and/or the bore. If needed, loosen 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.

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

Table 2 - Set Screw Tightening Torque

Set Screw Thread Size				Internal Hex Size		Set Screw Thread Size				Internal Hex 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

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.

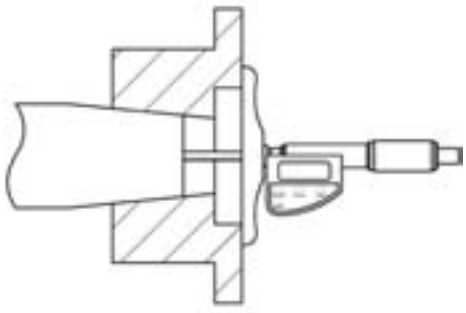

Figure 4 - Shaft end to hub face measurement example.

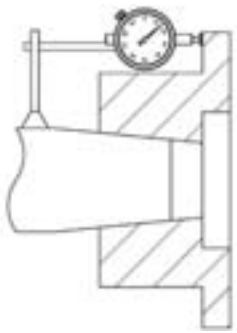

Figure 5 - Dial indicator placement for axial draw measurement example.

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 the 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.

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 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.

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 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 hub bore indicating surface. 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.

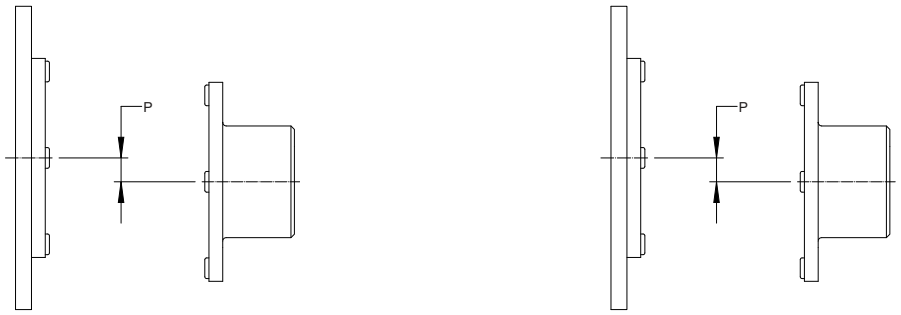

Figure 6 - Parallel Misalignment "P"

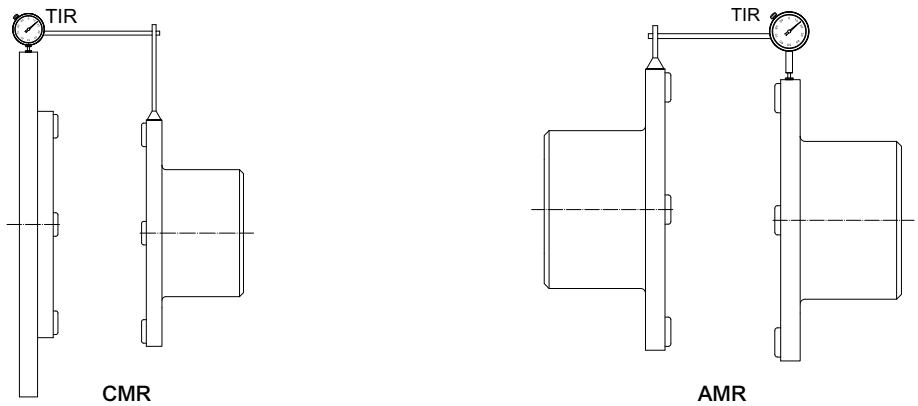

Figure 7 - Parallel Misalignment "TIR" (Total Indicated Reading)

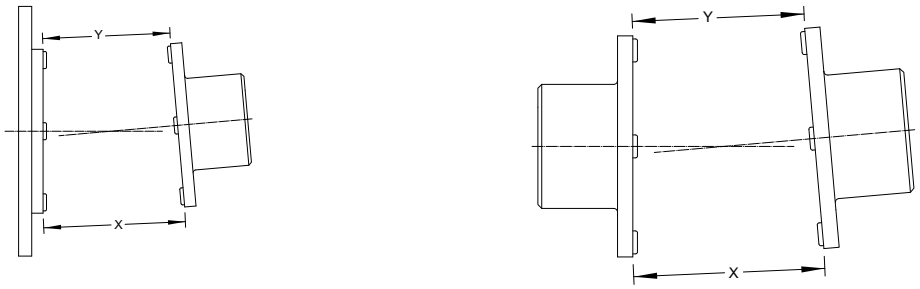

Figure 8 - Angular Misalignment "X-Y"

ATTENTION! If the driver or driven equipment alignment tolerances are more stringent than our recommendations, the driver or driven equipment tolerances should be used. Also, be sure to compensate for thermal movement in the equipment. The coupling is capable of approximately four times the shaft misalignment tolerances shown in Table 3. However, close alignment at installation will provide longer service with smoother operation.

Table 3 - Installation Alignment Values

Thomas AMR/CMR Coupling Size	Hub Flange Diameter CMR = "D" AMR = "A"		Dimension "C"				Recommended Installation Limits****									
							Maximum Coupling Parallel Misalignment AMR and CMR Maximum Measurement Between Hubs Defined in one of two ways				Angular Misalignment Between Hubs Maximum (X-Y) ***				"C" Dimension Tolerance +/-	
							Parallel Alignment Total Indictor Reading (TIR)*		Parallel Offset "P" **							
			CMR		AMR						AMR		CMR			
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
225	6.00	152.4	3.87	98.3	2.99	75.9	0.006	0.15	0.0030	0.08	0.012	0.30	.002 inch per Inch of "A Diameter	.002 mm per mm of "A Diameter	0.009	0.23
262	6.88	174.8	4.47	113.5	3.51	89.2	0.007	0.18	0.0035	0.09	0.014	0.36			0.011	0.28
312	8.12	206.2	5.34	135.6	4.14	105.2	0.008	0.20	0.0040	0.10	0.016	0.41			0.013	0.33
350	9.12	231.6	5.89	149.6	4.58	116.3	0.009	0.23	0.0045	0.11	0.018	0.46			0.014	0.36
375	10.06	255.5	6.62	168.1	5.18	131.6	0.010	0.25	0.0050	0.13	0.020	0.51			0.016	0.41
425	11.00	279.4	7.18	182.4	5.55	141.0	0.011	0.28	0.0055	0.14	0.022	0.56			0.017	0.43
450	11.88	301.8	7.68	195.1	5.93	150.6	0.012	0.30	0.0060	0.15	0.024	0.61			0.018	0.46
500	13.44	341.4	8.75	222.3	6.81	173.0	0.014	0.36	0.0070	0.18	0.027	0.69			0.021	0.53
550	15.00	381.0	9.89	251.2	7.70	195.6	0.015	0.38	0.0075	0.19	0.030	0.76			0.023	0.58
600	16.75	425.5	10.89	276.6	8.45	214.6	0.017	0.43	0.0085	0.22	0.033	0.84			0.026	0.66
700	18.94	481.1	12.48	317.0	9.66	245.4	0.019	0.48	0.0095	0.24	0.038	0.97			0.029	0.74
750	20.62	523.7	13.54	343.9	10.54	267.7	0.021	0.53	0.0105	0.27	0.041	1.04			0.031	0.79

* Parallel misalignment measured by rotating the hubs with a dial indicator on the outside hub diameter.
** Parallel offest "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 1/3°per disc pack.
Refer to Rexnord Bulletin 538-214 "Coupling Alignment Fundamentals" for more details regarding alignment methods and procedures.

9. Final Assembly –

DANGER!

When handling the coupling, components may sometimes slip and fall.
To prevent loss of fingers or injury avoid inserting fingers into any fastener holes.

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

ATTENTION! With the coupling in good alignment, the bolts should fit through the holes in the flanges and the disc packs. See Figure 1.

CMR – WHEN THE FLYWHEEL ADAPTER IS USED WITH ONE HUB

9.1. If the coupling arrived assembled (for shipment only), the Tpack disc packs, center ring, hub, and flyweel adapter are still attached. Remove the locknuts, bolts, and bolt head washers that attach the Tpack disc packs. Remove the locknuts and Tpack disc packs from the center ring, but do not remove the bolts and bolt head washers.

9.2. Place the center ring on a workbench.

9.3. If the coupling is not preassembled, place a bolt head washer on each bolt and install eight bolts with a bolt head washer through all eight bolt holes in the radial extensions in the center ring, as shown in Figure 9.

9.4. Slide a Tpack disc pack over the four bolts on the end that will mate to the flywheel adapter so that the single headed bushings in the Tpack are opposite the center ring bosses as shown in Figure 9. Use caution to ensure that bolt head washer and Tpack disc pack are not assembled incorrectly as shown in the incorrect methods in Figure 9.

ATTENTION! When assembling bolts through the Tpack disc pack, make sure the single headed bushing in the Tpack engages the body ground diameter of the bolt.

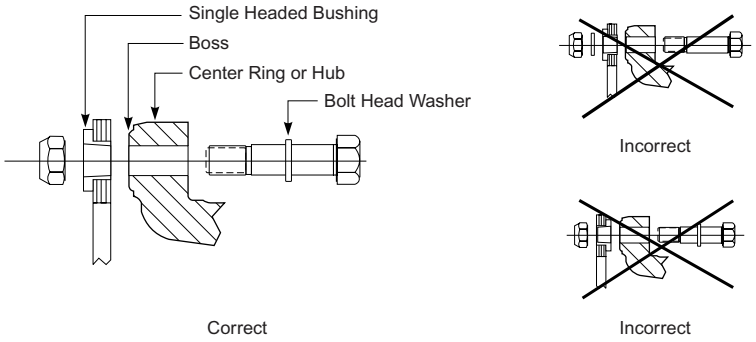

Figure 9 - Correct and Incorrect Assembly of the Bolt and Bolt Head Washer with the Center Ring and the TPack Disc Pack Bushing.

DANGER!

The bolt head washer must be placed under the bolt head so that it is between the bolt head and the flange, as shown in the correct method of Figure 9. If it is placed on the bolt after the single headed bushing, it could become trapped between the locknut and the bolt body. This could prevent the locknut from fully clamping the disc pack which could result in looseness and fracture of the bolted joint.

9.5. Lubricate the bolt threads with clean motor oil. Install four locknuts, and slightly tighten them using an alternating progressive pattern 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 4, using an incremental torque in a progressive alternating pattern.

9.6. Make sure that the bolts and bolt head washers in the other end of the center ring do not fall out before mounting the flywheel adapter.

9.7. Mount the flywheel adapter to the disc pack, by inserting four bolts with bolt head washers through the holes in the back side of the flywheel adapter, as shown in Figure 10. Seat the bolt heads and washers in the slots provided and then install the bolts through the remaining four single headed bushings in the disc pack.

Table 4 - Locknut Tightening Torques

Series 52 Coupling Size	Hub Flange Diameter CMR = "D" AMR = "A"		Tightening Torque for Steel Locknut (For Stainless Steel see Note 3)				Bolt Head
			Thread Size	Torque		Wrench Hex Size Inch	Wrench Hex Size Inch
	Inch	mm	Inch	Ft-Lb*	Nm		
225	5.69	144.5	5/16-24 UNF	25	34	1/2	1/2
262	6.63	168.4	3/8-24 UNF	30*	41*	9/16	5/8
312	7.81	198.4	7/16-20 UNF	40*	54*	11/16	11/16
350	8.69	220.7	1/2-20 UNF	95	129	3/4	13/16
375	9.69	246.1	9/16-18 UNF	130	176	7/8	15/16
425	10.50	266.7	5/8-18UNF	175	237	15/16	1-1/16
450	11.31	287.3	11/16-16 UNF	150*	203*	1-1/8	1-1/8
500	12.88	327.2	3/4-16 UNF	190*	258*	1-1/4	1-1/4
550	14.44	366.8	7/8-14 UNF	255*	346*	1-7/16	1-7/16
600	16.00	406.4	1-14 UNS	335*	454*	1-5/8	1-5/8
700	18.25	463.6	1-1/8-12 UNF	425*	576*	1-13/16	1-13/16
750	19.81	503.2	1-1/4-12 UNF	560*	759*	2	2

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

1. These torque values are approximate for 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. Air driven wrenches for fastener assembly are not permitted (heat build up may lead to thread damage during assembly).

☞ **ATTENTION!** On sizes 225 through 750 the bolt heads will protrude from the back side of the adapter, as shown in Figure 10. If this interferes with the mounting of the adpater to the flywheel, contact Rexnord for bolts with modified bolt heads. Table 5 shows the amount of bolt head protrusion as well as the circumscribed diameter over the bolt heads.

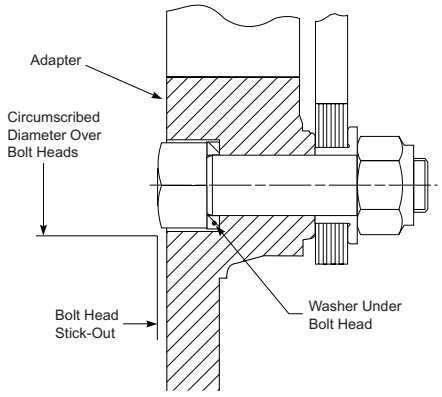

Table 5 - Bolt Head Protrusion and Circumscribed Diameter Over Bolt Heads

Size of AMR/CMR Coupling	Bolt Head Protrusion		Circumscribed Diameter Over Bolt Heads	
	Inch	mm	Inch	mm
225	0.030	0.76	5.33	135.4
262	0.060	1.52	6.15	156.2
312	0.080	2.03	7.22	183.4
350	0.100	2.54	8.19	208.0
375	0.110	2.79	9.09	230.9
425	0.140	3.56	9.85	250.2
450	0.150	3.81	10.55	268.0
500	0.190	4.83	11.95	303.5
550	0.230	5.84	13.41	340.6
600	0.270	6.86	14.88	378.0
700	0.310	7.87	16.84	427.7
750	0.350	8.89	18.31	465.1

Figure 10 - Bolt assembly into adapter

9.8. Lubricate the bolt threads with clean motor oil. Install four locknuts, and slightly tighten them using an alternating progressive pattern 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 4, using an incremental torque in a progressive alternating pattern.

9.9. The disc pack, when installed, should look flat and parallel with the mating adapter and the center ring bosses (located around the bolt holes on the radial extensions of the center ring).

9.10. With the hub mounted and the "C" length set per the allowable dimension and tolerance range shown in Table 3, put the subassembly (flywheel adapter, disc pack, and center ring) into place between the equipment flywheel and hub.

9.11. Push the end of the four bolts on the hub end, so that they do not extend beyond the bosses on the face of the center ring. This will provide clearance during assembly.

9.12. Bolt the adapter to the flywheel in the manner prescribed by the manufacturer.

9.13. Prepare to install the remaining Tpack disc pack by rotating the hub or center ring so that the hub bolt holes are centered between the radial extensions from the center ring.

☞ **ATTENTION!** It may help with the installation of the second Tpack disc pack to compress the Tpack disc pack on the flywheel adapter side. Use clamps to squeeze the center ring toward the flywheel adapter or a pry bar on the first end to push the center ring toward the flywheel adapter.

9.14. Install the remaining Tpack discpack between the center ring and hub.

9.15. Align the Tpack disc pack with the bolt holes in the radial extensions of the center ring so that the single headed bushings in the Tpack are opposite the center ring bosses as shown in Figure 9. Use caution to ensure that bolt head washer and Tpack disc pack are not assembled incorrectly as shown in the incorrect methods in Figure 9.

9.16. Push the four bolts in the center ring through the Tpack single headed bushings and the clearance holes in the hub. It may be helpful to align and push one bolt first, and then pivot the Tpack disc pack to align and push the other bolts.

9.17. Place a bolt head washer on each of four bolts, and insert one bolt with the bolt head washer through each of the four bolt holes in the hub, and through the single headed bushing in the Tpack disc pack, as shown in Figures 2 and 3.

9.18. Remove any clamps or pry bars used to compress the disc pack assembly.

9.19. Lubricate the threads on all eight bolts with clean motor oil.

9.20. Install locknuts onto the bolts and slightly tighten all eight locknuts using an alternating progressive pattern making sure the disc pack is not distorted and all the bolts are fully seated.

9.21. Make the final coupling alignment check at this time.

9.22. Tighten all eight locknuts to the appropriate torque value shown in Table 4, using an incremental torque in a progressive alternating pattern.

9.23. It is recommended that all locknuts have their tightening torque checked after several hours of operation, per Table 4.

AMR – WHEN TWO HUBS ARE USED

9.24. If the coupling arrived assembled, the Tpack disc packs are still attached to the center ring. Remove the locknuts and Tpack disc packs from the center ring, but do not remove the bolts and bolt head washers.

9.25. Push the end of the eight bolts, so that they do not extend beyond the bosses on the face of the center ring. This will provide clearance during assembly.

9.26. With the hubs mounted and the span length “C” set, position the center ring between the two hubs. Care should be taken when handling the center ring.

9.27. Support the center ring on wood blocks, with nylon straps from a hoist, or some other convenient way. It may help to support the end that is not being worked on, by pushing the bolts through the center ring bolt holes and into the hub flange bolt holes. This will hold the parts in line at that end.

9.28. Rotate the hub or center ring so that the hub bolt holes are centered between the bolt holes in the radial extensions from the center ring. (This will position the clearance holes in the hub with the radial extension and bolt holes of the center ring.)

9.29. If not already preassembled, place a bolt head washer on each bolt and install eight bolts with a bolt head washer into all eight bolt holes in the radial extensions in the center ring, as shown in Figure 9. To provide clearance during assembly, the bolt threads should not extend beyond the bosses on the face of the center ring,

9.30. Slide a Tpack disc pack between the center ring and the hub so that the single headed bushings in the Tpack are opposite the center ring bosses as shown in Figure 9.

9.31. Push four bolts with the bolt head washer through the bolt hole in the center ring, through the Tpack disc pack single headed bushing, and through the clearance hole in the hub. It may be helpful to align and push one bolt first, and then pivot the Tpack disc pack to align and push the other bolts.

STOP **DANGER!**

The bolt head washer must be placed under the bolt head so that it is between the bolt head and the flange, as shown in Figure 9. If it is placed on the bolt after the single headed bushing, it could become trapped between the locknut and the bolt body. This could prevent the locknut from fully clamping the disc pack which could result in looseness and fracture of the bolted joint.

9.32. Place a bolt head washer on each of four bolts, and insert one bolt with the bolt head washer through each of the four bolt holes in the hub, and through the single headed bushing in the Tpack disc pack, as shown in Figures 2 and 3. Lubricate the threads on all eight bolts with clean motor oil.

9.33. Install locknuts onto the bolts and slightly tighten all eight locknuts using an alternating progressive pattern making sure the disc pack is not distorted and all the bolts are fully seated.

9.34. Use caution to ensure that bolt head washers and Tpack disc pack are not assembled incorrectly as shown in the incorrect methods in Figure 9.

9.35. Tighten all eight locknuts to the appropriate torque value shown in Table 4, using an incremental torque in a progressive alternating pattern.

9.36. Proceed to the other end to install the remaining Tpack disc pack. Support the center ring and retract the support bolts, if used.

9.37. Rotate the hub or center ring so that the hub bolt holes are centered between the bolt holes in the radial extensions from the center ring. (This will position the clearance holes in the hub with the radial extension and bolt holes of the center ring.)

☞ **ATTENTION!** It may help with the installation of the second Tpack disc pack to compress the first installed Tpack using clamps to squeeze the center ring toward the first Tpack and hub flange, or use a pry bar on the first end to push the center ring toward the hub flange.

9.38. Install the remaining Tpack discpack between the center ring and hub.

9.39. Align the Tpack disc pack with the bolt holes in the radial extensions of the center ring so that the single headed bushings in the Tpack are opposite the center ring bosses as shown in Figure 9. Use caution to ensure that bolt head washer and Tpack disc pack are not assembled incorrectly as shown in the incorrect methods in Figure 9.

9.40. Push the four bolts in the center ring through the Tpack single headed bushings and the clearance holes in the hub. It may be helpful to align and push one bolt first, and then pivot the Tpack disc pack to align and bush the other bolts.

9.41. Place a bolt head washer on each of four bolts, and insert one bolt with the bolt head washer through each of the four bolt holes in the hub, and through the single headed bushing in the Tpack disc pack, as shown in Figures 2 and 3.

9.42. Remove any clamps or pry bars, if they were used to compress the disc pack assembly.

9.43. Lubricate the threads on all eight bolts with clean motor oil.

9.44. Install locknuts onto the bolts and slightly tighten all eight locknuts using an alternating progressive pattern making sure the disc pack is not distorted and all the bolts are fully seated.

9.45. Make the final coupling alignment check at this time.

9.46. Tighten all eight locknuts to the appropriate torque value shown in Table 4, using an incremental torque in a progressive alternating pattern.

9.47. It is recommended that all locknuts have their tightening torque checked after several hours of operation, per Table 4.

9.48. For further help with the installation or alignment, consult Rexnord.

10. Disc Pack Replacement –

⚠ **CAUTION: CMR/AMR Sizes 225 through 750 use the Tpack™ unitized disc pack. If original Thomas round nonunitized (not a Tpack) disc packs are being replaced by the Tpack disc packs, the original thick beveled washers must be discarded. Use of the thick beveled washers with the Tpack disc pack could cause insufficient thread engagement, preventing the locknut from fully clamping the disc pack which could result in looseness and fracture of the bolted joint.**

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

10.2. Support the center ring at the hub end of the coupling, remove all locknuts on this end.

10.3. Back out and remove all but one bolt. It may be necessary to tap the ends of the bolts with a soft hammer to start them out.

10.4. Pivot the disc pack to move it from the center of the coupling assembly.

10.5. Remove the last bolt and slide the disc pack out.

FOR THE CMR COUPLING

10.6. Remove the bolts that hold the flywheel adapter to the flywheel. Be sure to support the center ring assembly when taking out the last bolts.

10.7. Remove the adapter, disc pack, and center ring assembly and put it on a bench.

10.8. Remove all the locknuts, washers, and bolts that hold the center ring to the disc pack. Remove the center ring.

10.9. Remove the remainder of the locknuts, washers, and bolts.

10.10. Replace parts as necessary. Recheck alignment using the procedure defined in Section 8.0, Shaft Alignment.

10.11. Reassemble using the procedure described in Section 9.0, Final Assembly.

FOR THE AMR COUPLING

10.12. Disassemble the other end, by repeating the disassembly procedure at the beginning of this section.

10.13. Be sure to support the center ring when taking out the last bolts.

10.14. Remove the center ring.

10.15. Replace parts as necessary. Recheck alignment using the procedure defined in Section 8.0, Shaft Alignment.

10.16. Reassemble using the procedure described in Section 9.0, Final Assembly.

10.17. It is recommended that all locknuts have their tightening torque checked after several hours of operation, per Table 4.

10.18. For spare replacement part numbers, see Table 1.