



ATEX: In order for this coupling to meet the ATEX requirements, it is mandatory to precisely follow these installation instructions along with the included supplement form 0005-08-49-01. This supplement outlines the ATEX requirements. If the operator does not

adhere to these instructions, conformity is immediately invalidated.

WARNING: Because of the possible danger to person(s) or property from accidents which may result from improper use or installations of products, it is extremely important to follow the proper selection, installation, maintenance and operational procedures.

All rotating power transmission products are potentially dangerous and can cause serious injury. They must be properly guarded in compliance with OSHA, ANSI and any other local standards for the speeds and applications in which they are used. It is the responsibility of the user to provide proper guarding.

For ATEX requirements the guard must have a minimum of 1/2 inch (12.7 mm) radial clearance to the coupling major diameter "A" and allow for good ventilation.

- Purpose** — These instructions are intended to help you to install, align, and maintain your THOMAS coupling.
- Scope** — Covered here will be general information, hub mounting, alignment, assembly, bearing assembly, locknut torquing, disc pack replacement, and part numbers.
- General Information** — The coupling, as received, may or may not be assembled. If assembled, the locknuts are not fully tightened. Examine the parts to assure there is no visible damage. If coupling is assembled, remove the bolts that attach the hub to the disc pack. Remove the hub. Leave the disc pack attached to the center member assembly. The coupling may be installed vertically or horizontally. See Figure 2.

NOTE: The center spool of the center member assembly can be made of thin wall stainless steel or steel and may be easily damaged. Use care when handling.

The SF Coupling usually is used in conjunction with th SN or SV Coupling. Also refer to the installation instructions for the type SN or SBV Coupling.

4. Hub Mounting:

A. General — Clean hub bores and shafts. Remove any nicks or burrs. If bore is tapered, check for good contact pattern. If the bore is straight, measure the bore and shaft diameters to assure proper fit. The key(s) should have a snug side-to-side fit with a small clearance over the top, and the corners must be chamfered.

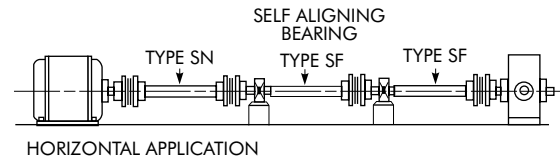
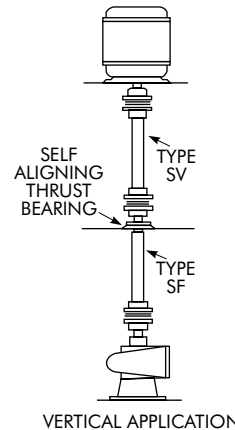


Figure 2

B. Straight Bore — Install key(s) in the shaft. If the hub is an interference fit, heat the hub in an oil bath or oven until bore is sufficiently larger than the shaft. 350°F is usually sufficient. An open flame is not recommended. However, if flame heating is necessary use a very large rose bud tip to give even heat distribution. A thermal heat stick will help determine hub temperature. **DO NOT SPOT HEAT THE HUB OR DISTORTION MAY OCCUR.** With the hub expanded, slide it quickly up the shaft to the desired axial position. A pre-set axial stop device can be helpful.

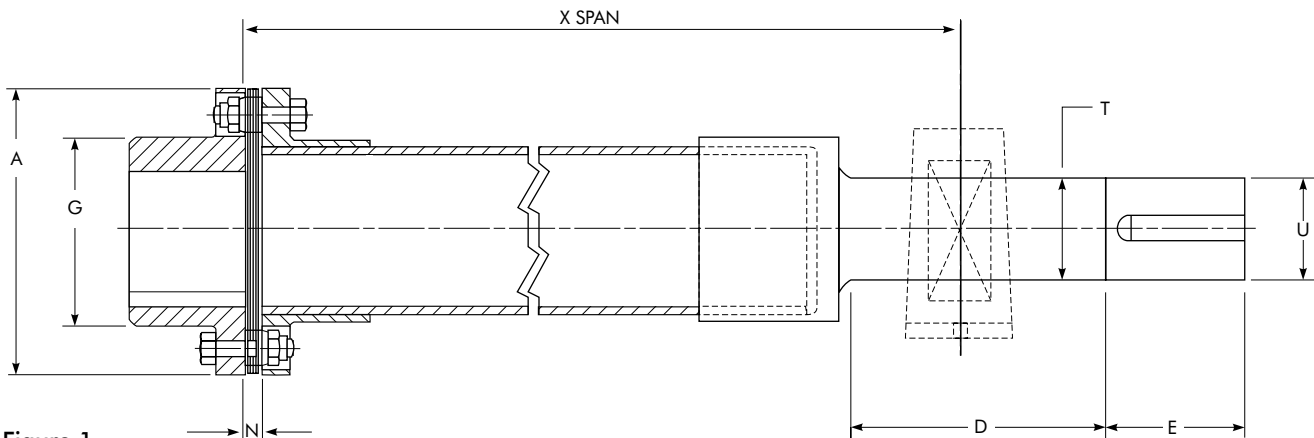


Figure 1

C. **Taper Bore** — Put the hub on the shaft without the key(s) in place. Lightly tap the hub on the shaft with a soft hammer. This will assure a metal-to-metal fit between shaft and hub. This is the starting point for the axial draw. Record the position between shaft end and hub face with a depth micrometer. Mount a dial indicator to read axial hub movement. Set the indicator to “0”. Remove the hub and install the key(s). Heat the hub in an oil bath or oven until the bore is sufficiently larger than the shaft. 350°F is usually sufficient. An open flame is not recommended. However, if flame heating is necessary, use a very large rose bud tip to give even heat distribution. A thermal heat stick will help determine the hub temperature. **DO NOT SPOT HEAT THE HUB OR DISTORTION MAY OCCUR.** With the hub expanded, slide it quickly up the shaft to the “0” set point. Continue to advance the hub up the taper to the desired axial position. Use the indicator as a guide only. A preset axial stop device can be helpful. Check the final results with a depth micrometer. Install the hub retention device to hold the hub in place.

5. **Shaft Alignment** — Move equipment into place.
 A. **Soft Foot** — The equipment must sit flat on its base. Any soft foot must now be corrected.

B. **Axial Spacing** — The axial spacing of the shafts should be positioned so that the disc packs (flexing elements) are not distorted when the equipment is running under normal operating conditions. This means there is a minimal amount of waviness in the disc pack when viewed from the side. This will result in a flexing element that is centered and parallel to its mating flange faces. Move the connected equipment to accomplish the above. Refer to the assembly drawing and the connected equipment installation procedures for specific axial spacing requirements.

NOTE: The disc pack is designed to an optimal thickness and is not to be used for axial adjustments by removing or adding individual discs.

As a guide maximum and minimum values for dimension “N” are given. These dimensions are suggested for initial installation. Additional capacity is available to compensate for thermal and structural movement. Maximum axial capacity values for these couplings are also given. See Table 1 and Figure 1.

C. **Angular Alignment** — As the SF coupling is usually quite long, it is suggested to use the “Across the disc pack” procedure to correct the angular misalignments. See Figures 3 and 4.

NOTE: In order to use this procedure, the coupling must be fully assembled. See Section 6, Final Assembly.

If the coupling is being mounted vertically, it may be helpful if the driver is rough aligned to the driven equipment first by using a plumb line. See Figure 5. Adjust the equipment or support bearing by shimming and/or moving so that the gap variation is within .002 inch per inch of diameter “A”.

D. When final alignment check is made on the total drive shaft arrangement, it would be more accurate

to use set-up shown in Figure 6.

NOTE: If the driver or driven equipment alignment specifications are tighter than these recommendations, those specifications should be used. Also, be sure to compensate for thermal movement in the equipment.

The coupling is capable of approximately three times the above shaft misalignment tolerances. However, close alignment at installation will provide longer service with smoother operation.

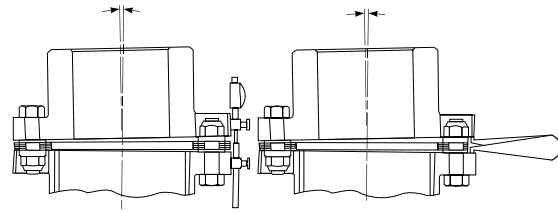


Figure 3

Figure 4

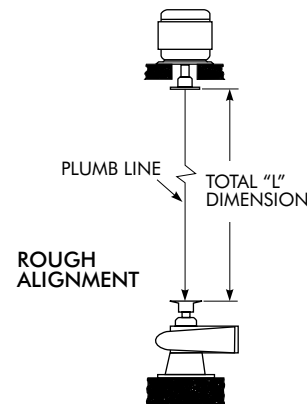


Figure 5

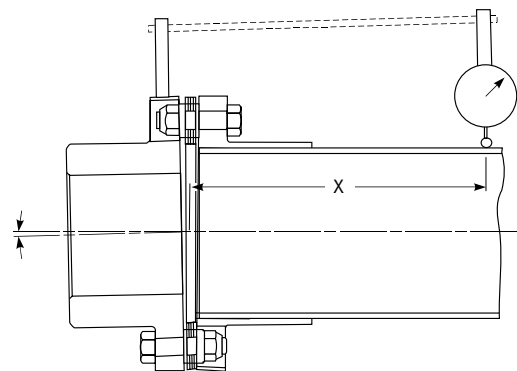


Figure 6

6. Final Assembly

- A. If the coupling arrived assembled, the disc pack is still attached to the center member assembly. Before taking the disc pack off, first install one hub bolt through the disc pack and secure with a locknut. This will help when the pack is reinstalled later. (If the coupling was shipped disassembled, the bolt through the pack is not required as the discs in the pack are factory-taped together.)
- B. The support bearing and housing is now mounted on the stub shaft. See Figure 1. Make sure it is positioned axially to give the desired “X” span. For mounting details, consult the bearing manufacturer’s installation instruction.
- C. With the hub and support bearing mounted and the span length “X” set, proceed to put the center member into place. Care should be taken when handling the center member as the tube can be damaged.
Support the center member at both ends on wood blocks, with nylon straps from a hoist, or some other convenient way.
- D. Now install the disc pack. Rotate the hub or center member so that the hub bolt holes line up with the center member flange clearance holes. Start a bolt through the bolt hole in the hub flange and just through a thin washer (on Size 262 and larger). **The radius side of the washer should always be against the disc pack.** Hold the disc pack in one hand, slip it down between the two flanges until one hole in the pack lines up with the bolt. Slide the bolt through this hole and add a washer and locknut.

NOTE: All bolt threads should be lubricated. A clean motor oil is recommended. See notes below Table 1 for stainless steel fasteners.

Do not tighten any locknuts at this time. Remove the disc pack alignment bolt if used. Now pivot the pack around until it lines up with the rest of the bolt holes in the hub. Install the rest of the bolts through the hub bolt holes, thin washer (if called for), disc pack, washer, into the clearance hole of the center member flange, and add a locknut.

NOTE: When installing the thin washer, it may be helpful to use a stiff wire with one end bent into a hook to put around the O.D. of the washer. This will help to line up the washer with the hole. The remaining bolts for this end can be put through the center member flange bolt holes, thin washer (if called for), disc pack, washer, into the clearance hole in the hub flange, and add a locknut. The locknuts can be slightly tightened at this time making sure that the washers are positioned on the ground body of the bolts. The disc pack when installed should look flat and parallel with the mating flanges.

- E. Make the final coupling alignment check at this time.
F. Fully tighten the locknuts. See Table 1 for torque values.

NOTE: With the coupling in good alignment, the bolts will fit more easily through the holes in the flanges and the disc pack. It is recommended that all locknuts be retightened after several hours of initial operation.

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

TABLE 1 — Locknut Tightening Torques and Suggested Maximum Alignment Values

COUPLING SIZE	“A” Diameter	“U” Diameter	“T” Diameter	Dimension “N”		Axial Capacity Inch	Thread Size	Torque Ft-Lb (In-Lb)	Angular Alignment Values
				Min	Max				
100	3.22	.88	.94	.46	.47	± .038	#12-28	(96)	.007
125	3.84	1.13	1.19	.53	.54	± .046	1/4-28	(156)	.008
162	4.34	1.38	1.44	.55	.56	± .036	1/4-28	(156)	.009
200	5.44	1.63	1.69	.58	.59	± .036	5/16-24	25	.010
226	5.81	1.88	1.94	.59	.60	± .036	5/16-24	25	.011
262	6.63	2.13	2.19	.48	.49	± .043	3/8-24	34	.013
312	7.81	2.38	2.44	.51	.52	± .051	7/16-20	60	.015
350	8.69	2.88	2.94	.55	.56	± .056	1/2-20	95	.017
375	9.69	3.38	3.44	.60	.62	± .062	9/16-18	130	.019
425	10.50	3.63	3.69	.63	.65	± .067	5/8-18	175	.021

NOTE: 1. These torque values are approximate for steel bolts with lubricated threads. Modification will be necessary for stainless steel. For stainless steel, the tightening torque must be reduced to 60% of the values shown. Bolt and locknut threads must also be liberally coated with molybdenum disulfide grease.
2. Bolts should be held from rotating while the locknuts are tightened to the values shown.



7. **Disc Pack Replacement** — If it becomes necessary to replace the disc pack, it can be done as follows:

- A. At the disc pack end of the coupling, remove all locknuts and washers. 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. Pivot the disc pack out. Put one of the coupling bolts through the pack. Put the locknut on.

This will keep the discs together and maintain the disc orientation for later reinstallation. Remove the last bolt and slide the pack out while supporting the center member at this end.

- B. Replace parts as necessary. Recheck alignment per Section 5. Reassemble per Section 6.

8. **For Replacement Parts** — See Table 2.

TABLE 2 — Part Numbers and Quantity Required

COUPLING SIZE	Hub (No Bore)			Disc Pack (One per Coupling)		Thin Washers			Quantity
	Steel	Zinc Plate	Stainless	Stainless	Tomaloy	Steel	Zinc Plate	Stainless	
	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	
100	216105	416105	716242	310619	810619	Hub is supplied with bushings pressed in place on these sizes			
125	816107	016107	616282	310618	910618				
162	216132	416132	316132	310663	710663				
200	816132	016133	916133	010664	610664				
226	416134	616134	516134	610984	210984				
262	526624	726624	626624	210985	010985	014762	511399	411399	8
312	426630	626630	526630	210957	010957	017142	211674	111674	8
350	526636	626636	004968	010952	810952	019099	111767	011767	8
375	026642	126642	003320	610943	410943	019101	511677	411677	8
425	266648	326648	003325	010986	810986	019102	003752	811850	8

COUPLING SIZE	Bevel Washers				Bolts				Locknuts			
	Steel	Zinc Plate	Stainless	Quantity	Steel	Zinc Plate	Stainless	Quantity	Steel	Zinc Plate	Stainless	Quantity
	Part No.	Part No.	Part No.		Part No.	Part No.	Part No.		Part No.	Part No.	Part No.	
100	511192	711192	611192	4	411161	611161	511161	4	516503	716503	616503	4
125	002161	002163	002162	4	510728	710728	610728	4	916504	116504	016504	4
162	002161	002163	002162	6	510728	710728	610728	6	916504	116504	016504	6
200	002170	002171	211205	6	210721	410721	310721	6	316505	516505	416505	6
226	002170	002171	211205	8	210721	410721	310721	8	316505	516505	416505	8
262	002167	002169	002168	8	110717★	110717	010717	8	716506	916506	816506	8
312	002165	002166	002565	8	910966★	910966	002607	8	116507	316507	216507	8
350	019098	210967	110967	8	310968	510968	410968	8	516508	716508	616508	8
375	019100	010853	910853	8	210924	410924	310924	8	916509	116509	016509	8
425	910928	110928	010928	8	210929	410929	310929	8	316510	516510	416510	8

★ Stocked only in zinc plate.