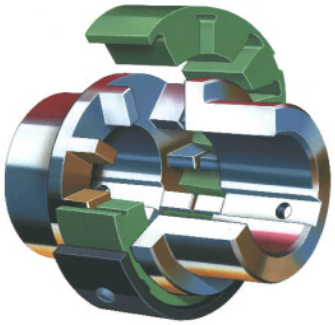
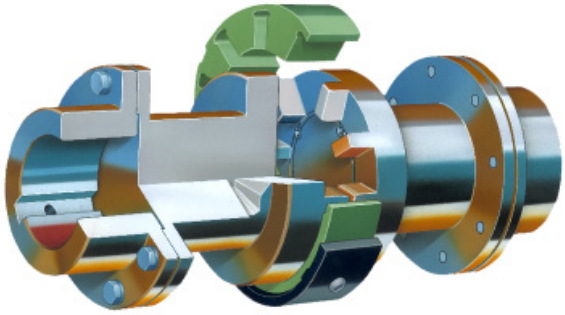
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Figure 1 - Wrapflex coupling range

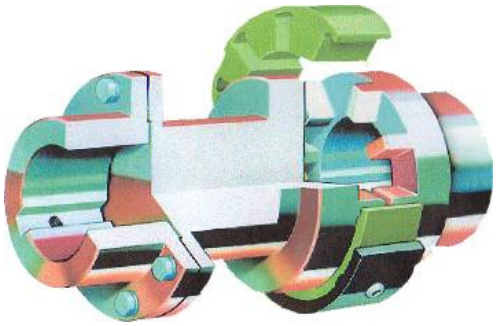
Type 10R



Type 31R



Type 35R



1. General Information

1.1. Falk Wrapflex 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 shaft.

1.2. These instructions are intended to help you to install and maintain your Falk Wrapflex 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:

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

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

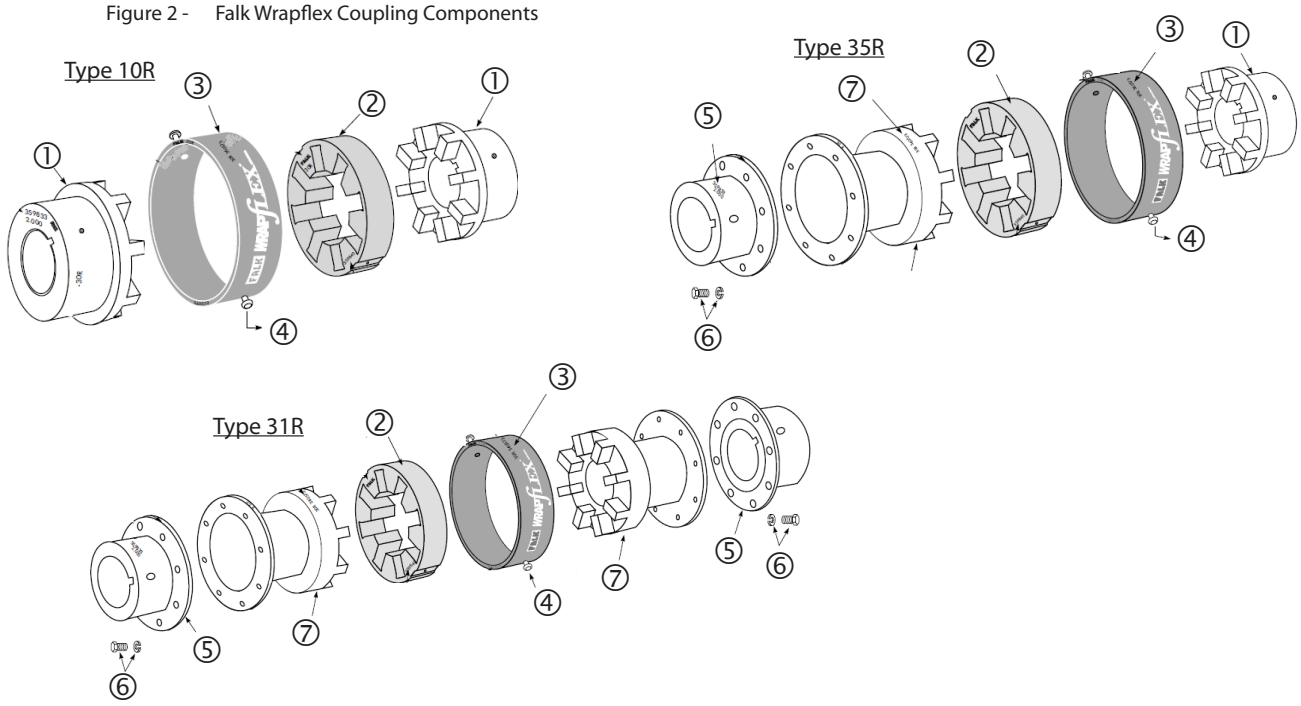
2.10. Do not start or jog the motor, engine, or drive system without securing the coupling components. If the equipment is started with only a hub attached, the hub must be properly mounted and ready for operation, with the key and set screw (if included) fastened. When the full coupling assembly is 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 Falk Wrapflex coupling catalog. Customer modifications and alterations to the coupling are not permissible.

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 - Falk Wrapflex Coupling Components



Rexnord Industries, LLC, 5555 S. Moorland Rd., New Berlin, WI 53151-7953
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Table 1 - Falk Wrapflex Coupling Component part numbers

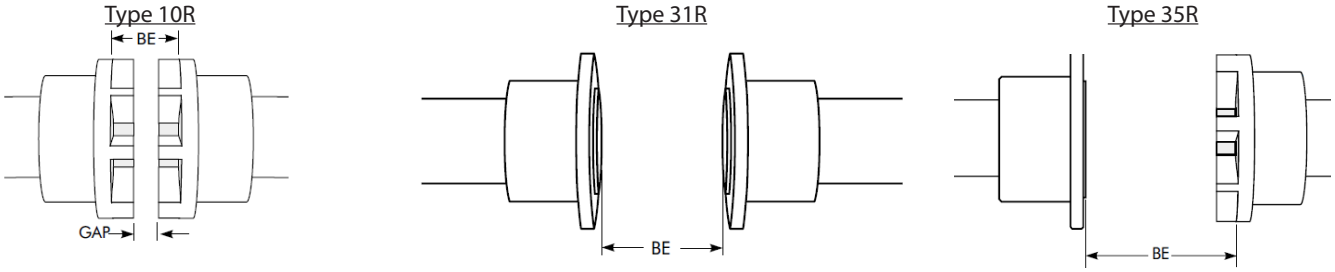
Size	Hub			Flex Element with fasteners	Cover			T-hub	Flange fasteners	Spacer hub
	Rough bore	Taper Lock	Rough bore stainless steel		Nylon	Steel	Cover fastener			
	1.1	1.2	1.3	2	3.1	3.2	4	5	6	7
2R	3302297	-	-	3701853	3701853	-	2927918	-	-	-
3R	3302298	-	-	3701854	3701854	-	2927918	-	-	-
4R	3302299	-	-	3701855	3701855	-	2927924	-	-	-
5R	0359831	3400346	3301249	0789006	0360571	0359845	2919837	0251670A	Part of T-hub delivery	For Spacer hub part numbers contact Rexnord
10R	0359832	3400347	3301250	0789007	0360572	0359846	2919838	0251671A		
20R	0359833	3400348	3301251	0789008	0360573	0359847	2919842	0251672A		
30R	0359834	3400349	3301252	0789009	0436990	0359848	2919842	0251673A		
40R	0359835	3400350	3301253	0789010	0436991	0359849	2921012	0258639A		
50R	0359836	3400351	3301254	0789011	0436992	0359850	2921014	0258640A		
60R	3301259			3700220		3301262	2921227	0258641A		
70R	3301260			3700221		3301263	2921227	0265854A		
80R	3301261			3700222		3301264	2921227	0266172A		

STOP 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.

4. Hub mounting

Figure 3 -



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.

STOP DANGER!

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

Screw Size		M6	M8	M10	M12	M16	1/4"	3/8"
Hex Head Key Size		M3	M4	M5	M6	M8	1/8"	3/16"
Standard hubs	Tightening torque (Nm)	6	12	25	50	100	8	25
	Tightening torque (lb-in)	55	110	220	440	880	70	220
Stainless steel hubs	Tightening torque (Nm)	4	7	12	25	50	4	12
	Tightening torque (lb-in)	30	60	110	220	550	35	110

⚠ CAUTION: 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.

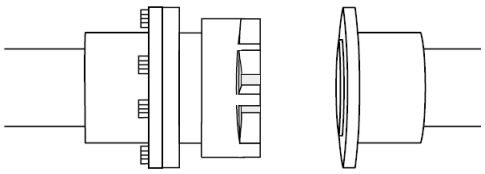
6.3. Heat the hub in an oven until the bore is sufficiently larger than the shaft.

6.4. 350°F (177°C) is usually sufficient for carbon steel hubs. Do not exceed 500°F (260°C).

6.5. 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. Install Spacer hub(s) - types R31 and R35 only

Figure 4 -



7.1. Carefully position spacer hub(s) on register of shaft hub and fasten parts together. Torque flange fasteners to specification in Table 3.

Table 3 - Flange fasteners tightening torque

R31/R35 Flange Fastener	M6	M8	M10	M12	M16
Wrench size	10	13	17	19	24
Tightening torque (Nm)	15	35	68	125	200
Tightening torque (lb-in)	130	310	600	1100	1800

8. Shaft alignment

8.1. Place element cover over the hub

8.2. 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 4. 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.

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8.3. Move the connected equipment to achieve acceptable alignment. When properly aligned, the hubs will be centered and approximately parallel.

8.4. Table 4 shows recommended installation limits for Parallel, Angular, and Axial alignment.

8.5. The "Parallel Misalignment" value (P) is the offset between the centers of the hubs, as shown in Figure 5.

8.6. When Parallel Offset is measured by rotating the hubs in unison with dial indicators the total indicated reading (TIR) should be divided by (2) to calculate "P".

8.7. 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.

8.8. 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 5.

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

ATTENTION! Falk's Type R10, R31, and R35 Wrapflex couplings are not appropriate for limited end-float applications

Figure 5 -

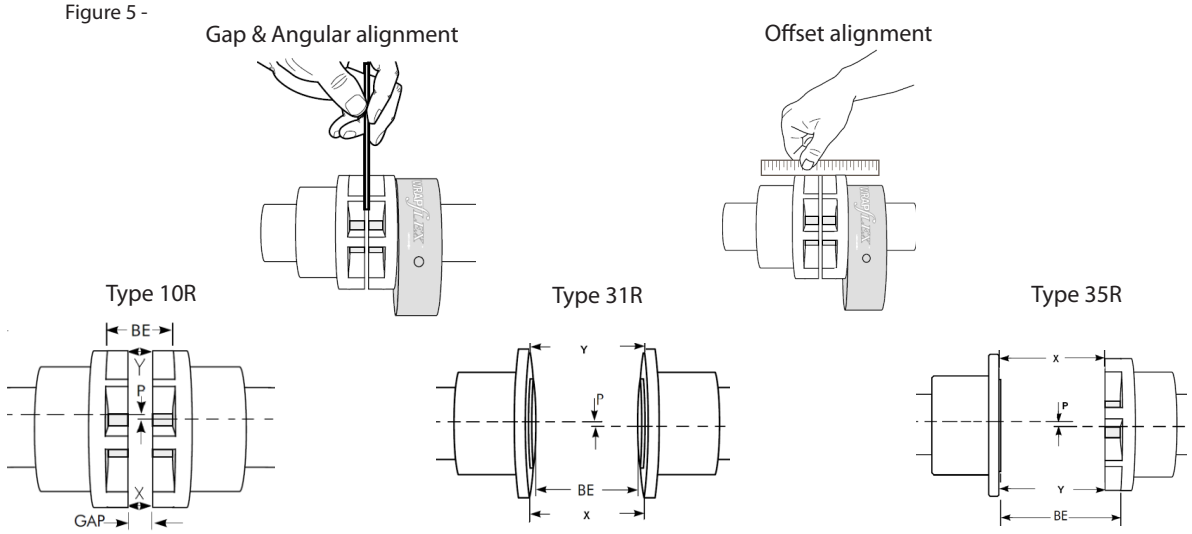


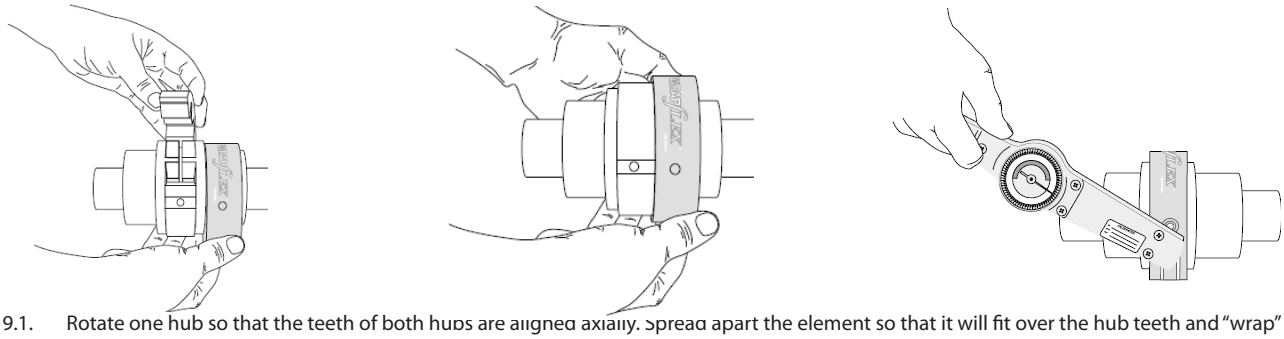
Table 4 - Installation limits

Size	BE *		Parallel offset - P		Angular (X-Y)			Gap* (±10%)		Parallel offset - P		Max Angular (X-Y)			Gap* (±10%)		Allowable speed
	mm	inch	mm	inch	degree	mm	inch	mm	inch	mm	inch	degree	mm	inch	mm	in	n-min
2R	16.5	0.65	0.25	0.01	0.25	0.17	0.007	1.50	0.062	0.50	0.062	1	0.68	0.027	1.50	0.062	4500
3R	18.5	0.73	0.25	0.01	0.25	0.22	0.009	1.50	0.062	0.50	0.062	1	0.89	0.035	1.50	0.062	4500
4R	19.5	0.77	0.25	0.01	0.25	0.25	0.01	1.50	0.062	0.50	0.062	1	1.01	0.04	1.50	0.062	4500
5R	20.0	0.77	0.5	0.02	0.25	0.28	0.011	2.0	0.062	1.0	0.04	1	1.12	0.044	2.0	0.062	4500
10R	24.0	0.93	1.0	0.04	0.25	0.33	0.013	2.0	0.062	2.0	0.08	1	1.33	0.052	2.0	0.062	4500
20R	32.0	1.24	1.0	0.04	0.25	0.45	0.018	2.0	0.062	2.0	0.08	1	1.78	0.07	2.0	0.062	4500
30R	36.0	1.4	1.0	0.04	0.25	0.51	0.02	2.0	0.062	2.0	0.08	1	2.06	0.081	2.0	0.062	4500
40R	47.0	1.84	1.5	0.06	0.25	0.65	0.026	5.0	0.188	3.0	0.12	1	2.62	0.103	5.0	0.188	3600
50R	61.0	2.39	1.5	0.06	0.25	0.83	0.033	5.0	0.188	3.0	0.12	1	3.32	0.131	5.0	0.188	3000
60R	75.4	2.96	1.5	0.06	0.25	0.99	0.039	5.0	0.188	3.0	0.12	1	3.98	0.157	5.0	0.188	2500
70R	84.4	3.31	1.5	0.06	0.25	1.18	0.046	5.0	0.188	3.0	0.12	1	4.71	0.186	5.0	0.188	2100
80R	96.8	3.82	1.5	0.06	0.25	1.43	0.056	6.0	0.25	3.0	0.12	1	5.73	0.225	6.0	0.25	1800

* "BE" dimension tolerance is ±10% of "Gap" listed. Hubs can be mounted for shorter than standard BE lengths as long as shaft ends do not extend into "Gap" and keys extend key on barrel of hub into tooth space. Stake key(s) in place for an interference fit without setscrew. Overhanging hubs is not recommended.

9. Final Assembly - Element and cover installation

Figure 6 -



9.1. Rotate one hub so that the teeth of both hubs are aligned axially. Spread apart the element so that it will fit over the hub teeth and "wrap" the element between the two hubs. As shown on Figure 6.

9.2. Move the cover alongside the element with the fastener hole of the cover approximately aligned with the locating slot on the element as shown in figure 6. A soft mallet may be needed to install the cover on larger size couplings. If using a nylon cover, the cover's locating key will engage the slot in the element when cover and element are properly aligned — this will aid in blind assembly.

9.3. Push or tap the cover onto the element until it is centered axially on the element. If using a steel cover, push or tap the cover onto the element and center the cover axially while making sure that the fastener holes on the cover and element are aligned. For the 5R-50R steel covers, use the flats on the O. D. of the steel cover as avisual aid to align the cover's threaded hole with the slot and clearance hole of the element.

9.4. Install and tighten cover fasteners to the specified torque in Table 5, as shown in figure 6.

☞ DO NOT over tighten

Table 5 - Cover fasteners tightening torque

Coupling size	2	3	4	5	10	20	30	40	50	60	70	80
Screw size	M3	M3	M4	M4	M4	M6	M6	M8	M8	M10	M10	M10
Hex Head Key size	M2	M2	M2.5	M2.5	M2.5	M4	M4	M5	M5	M6	M6	M6
Tightening torque (Nm)	0.2	0.2	0.5	0.5	0.5	2.5	2.5	5	5	15	15	15
Tightening torque (lb-in)	2	2	5	5	5	22	22	45	45	135	135	135

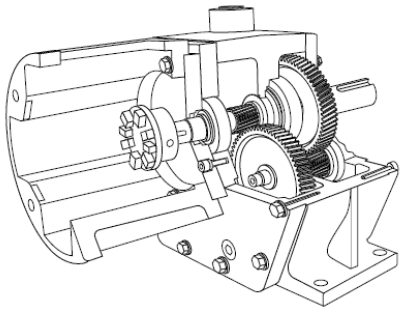
STOP DANGER!

Do not operate the coupling without the cover fasteners installed.

10. Blind Assembly

The term blind assembly refers to the ability to complete the assembly or connection of the coupling components without being able to actually see the coupling. Wrapflex couplings may be blind or axially assembled within motor adapters or bell housings.

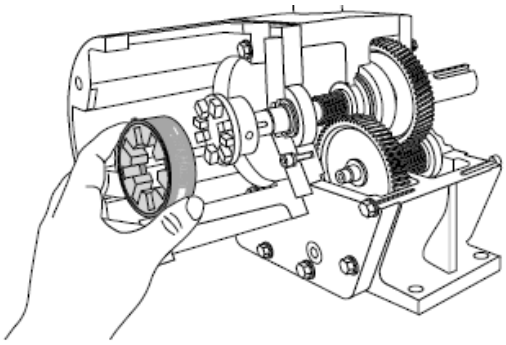
Figure 7 -



10.1. Mount both hubs on their respective shafts with the shaft ends flush with the end of the hub faces, unless instructed otherwise. Double-check the spacing of the assembly to be sure the required coupling hub face gap will be achieved when assembled.

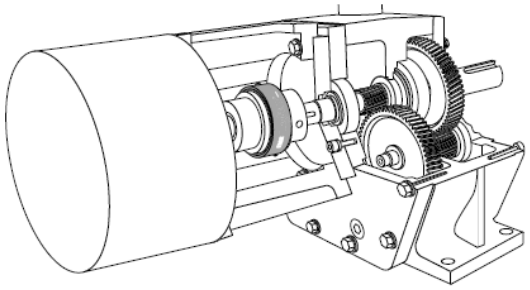
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Figure 8 -



10.2. Mount the cover onto the flexible element, making certain to tighten both cover fasteners to the specified torque in Table 5. Make certain the element split is not overlapping, and position the assembled cover/element assembly onto the lower of the two hubs if a vertical assembly, or on the hub within the bell housing or motor adapter for horizontal arrangements.

Figure 9 -



10.3. Bring the motor shaft hub axially into engagement with the element until the teeth seat within the element and the motor or bell housing adapter pilot is properly seated. Wrapflex hubs have a slightly tapered lead to facilitate this engagement. Complete the assembly by torquing the motor to the bell housing or motor adapter with the proper fasteners.

11. Preventive Maintenance & Element Replacement

STOP DANGER!

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

A periodic visual inspection of the element should be performed. Without removing the cover, check for element wear debris or cracks in the side of the element just underneath the cover. If wear debris or cracks are noted, the following maintenance procedure should be performed.

11.1. Remove the cover and element and inspect the element for wear. Replace the element if wear exceeds 10 % of the tooth thickness or cracks have appeared with one of the following characteristics:

- One or more cracks have broken through to the O.D. of the element, such that splitting or separation of the element web is imminent.
- One or more cracks extend the full thickness of a tooth.

11.2. Check the alignment before re-installing or replacing the element. Excessive or rapid element wear is generally an indication of coupling misalignment. If alignment is not within the limits specified in Table 4, re-align the coupling according to the alignment instructions.