

Dura-Flex® Couplings

Installation Instructions

P-7891-TBW



▲ WARNING Lock out / tag out the power source before proceeding to avoid unexpected starts. Failure to observe these precautions could result in bodily injury.

▲ WARNING Coupling element may be thrown from the assembly with substantial force if subjected to a severe shock load.

▲ CAUTION Check operating speed against Maximum RPM value in Table 1.

For a basic installation overview, scan the QR code below:



Scan to Watch Installation Video
or visit our Dura-Flex product page
at www.TBWoods.com

Further component information available:

Specification sheets, 3D models
ecatalog.TBWoods.com

Coupling Selection Program
www.TBWoods.com/Select

Installation / Alignment

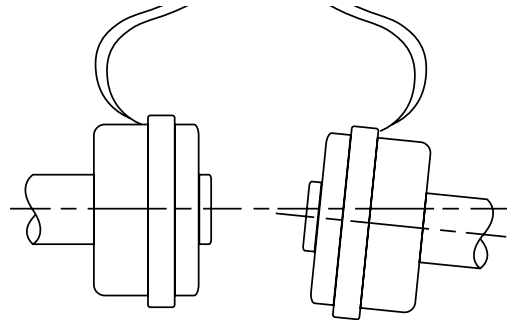
Installation / Alignment Tools

- Hex key set
- Socket set
- Torque wrench
- Straight-edge
- Caliper
- Feeler gauge set

1. Inspect all coupling components and remove any protective coatings, lubricants, paint or rust from bores, mating surfaces and fasteners. Remove any existing burrs, etc. from the shafts.
2. Slide one hub onto each shaft using keys where required. (When using QD or Taper-Lock hubs, follow the instructions furnished with the Sure-Grip or Taper-Lock bushings.)
3. When high speed rings are to be used for spacer couplings, loosely install one ring on each half element.

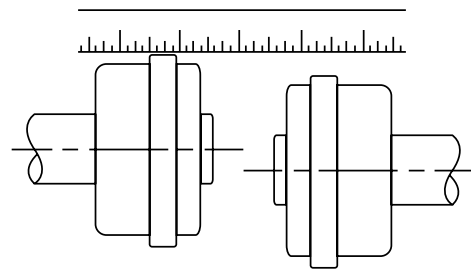
4. Hold one half element on the hubs to determine the appropriate hub spacing. If using spacer elements with high speed rings, hold both half elements on hubs to make sure that the hubs do not interfere with the rings. The hub may be installed with the hub extension facing in or out. Make sure that the shaft extends into the hubs at least .8 times the shaft diameter.
5. Lightly fasten hubs to shafts to prevent them from moving during alignment.

Angular Alignment



6. Angular Alignment: Without rotating the coupling, run a caliper around the hub and set the caliper to the widest point. Find the narrowest point with the caliper and feeler gauges. Reposition equipment until this value is as small as possible; reference Table 2 for maximum value/degree.

Parallel Alignment



7. Parallel Alignment: Using the misalignment value from the previous step, look up the maximum allowable parallel misalignment using Table 2 and Figure 1. Without rotating the shafts, run a straight-edge around the hub and find the maximum offset with feeler gauges. If necessary, realign the shafts. Recheck parallel alignment.

8. Tighten motor and driven equipment fasteners to manufacturer specifications; recheck parallel and angular alignment.
9. When parallel and angular alignment values are within service ratings, verify that all set screws, cap screws and other fasteners are tightened to values in Table 1. Recheck parallel and angular alignment after tightening.

10. Install coupling guard per applicable safety regulations.
11. Periodically check alignment, as settling will often change equipment position.

Table 1 - Maximum RPM and Fastener Torque Values

Coupling Size	Maximum RPM		Element & Ring Cap Screws				BTS Hubs Set Screws							
			Imperial Elements		Metric Elements**		Imperial Hubs		Metric Hubs**					
	Standard	Spacer* (HS Rings)	Screw Size	ft-lb	Screw Size	Nm	Screw Size	ft-lb	Scw Size	Nm				
WE2/WES2	7500	7500	1/4-20	17	M6-1	23	1/4-20	7	M6-1	6				
WE3/WES3							5/16-18	14	M8-1.25	19				
WE4/WES4														
WE5/WES5														
WE10/WES10							6600	4800(6600)	3/8-16	30	M10-1.5	40	3/8-16	23
WE20/WES20	1/2-13	50	M10-1.5	32										
WE30/WES30														
WE40/WES40	5/8-11	100	M12-1.75	100	3/4-10	167							M12-1.75	54
WE50/WES50														
WE60/WES60														
WE70/WES70	3600	2600(3600)	1/2-13	75	M12-1.75	100	3/4-10	167	M12-1.75	54				
WE80/WES80	2000	1800(2000)												

*Maximum spacer element RPM = Maximum standard element RPM if using high speed rings. HS rings come standard with sizes 2-10 and are available as an option for sizes 20-80.

**Metric elements and hubs use metric hardware and are denoted by "M" in the part number, e.g. WE2M, WES2M, WE2HM28MM.

Table 2 - Angular Inch Gap

Hub Size		Degrees			
		1°	2°	3°	4°
WE2	in	0.03	0.07	0.10	0.13
	mm	0.8	1.7	2.5	3.3
WE3	in	0.04	0.08	0.12	0.16
	mm	1.0	2.1	3.1	4.1
WE4	in	0.05	0.09	0.14	0.18
	mm	1.1	2.3	3.5	4.6
WE5	in	0.06	0.11	0.16	0.22
	mm	1.4	2.8	4.2	5.5
WE10	in	0.06	0.13	0.19	0.22
	mm	1.6	3.2	4.9	5.5
WE20	in	0.08	0.16	0.23	
	mm	2.0	4.0	5.9	
WE30	in	0.10	0.19	0.28	
	mm	2.4	4.8	7.2	
WE40	in	0.12	0.23	0.35	
	mm	2.9	5.9	8.8	
WE50	in	0.14	0.28	0.43	
	mm	3.6	7.2	10.8	
WE60	in	0.15	0.31		
	mm	3.9	7.7		
WE70	in	0.16	0.32		
	mm	4.1	8.2		
WE80	in	0.20	0.39		
	mm	5.0	10.0		

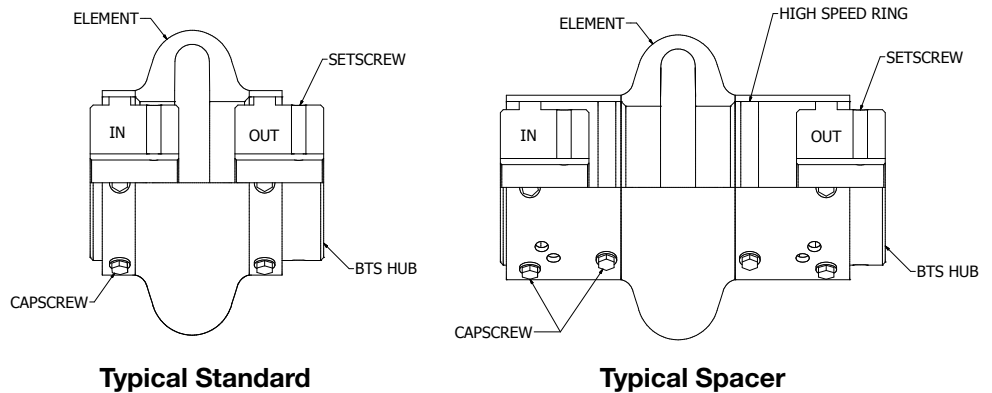
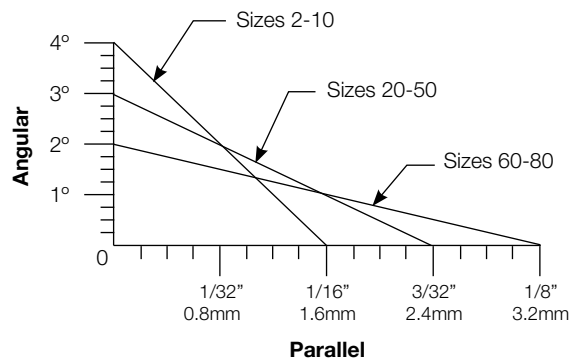


Figure 1 - Parallel Gap



Belted Drives and Sheaves	Couplings Cont.	Gearing	Linear Products
<p>TB Wood's <i>Belted Drives</i> Chambersburg, PA - USA 1-888-829-6637 – Press #5 <i>For application assistance:</i> 1-888-829-6637 – Press #7</p>	<p>TB Wood's <i>Elastomeric Couplings</i> Chambersburg, PA - USA 1-888-829-6637 – Press #5 <i>For application assistance:</i> 1-888-829-6637 – Press #7 <i>General Purpose Disc Couplings</i> San Marcos, TX - USA 1-888-449-9439</p>	<p>Bauer Gear Motor <i>Gearred Motors</i> Esslingen, Germany +49 (711) 3518-0 Middlesex, NJ - USA 1-732-469-8770</p>	<p>Warner Linear <i>Linear Actuators</i> New Hartford, CT - USA 1-800-825-6544 <i>For application assistance:</i> 1-800-825-9050 Saint Barthélemy d'Anjou, France +33 (0)2 41 21 24 24</p>
<p>Couplings</p>	<p>Electromagnetic Clutches and Brakes</p>	<p>Boston Gear <i>Enclosed and Open Gearing, Electrical and Mechanical P.T. Components</i> Charlotte, NC - USA 1-800-825-6544 <i>For application assistance:</i> 1-800-816-5608</p>	<p>Overrunning Clutches</p>
<p>Ameridrives <i>Mill Spindles, Ameriflex, Ameridisc</i> Erie, PA - USA 1-814-480-5000 <i>Gear Couplings</i> San Marcos, TX - USA 1-800-458-0887 <i>Universal Joints, Drive Shafts, Mill Gear Couplings</i> Erie, PA - USA 1-920-593-2444</p>	<p>Inertia Dynamics <i>Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes</i> New Hartford, CT - USA 1-800-800-6445</p>	<p>Nuttall Gear and Delroyd Worm Gear <i>Worm Gear and Helical Speed Reducers</i> Niagara Falls, NY - USA 1-716-298-4100</p>	<p>Formsprag Clutch <i>Overrunning Clutches and Holdbacks</i> Warren, MI - USA 1-800-348-0881 – Press #1 <i>For application assistance:</i> 1-800-348-0881 – Press #2</p>
<p>Bibby Turboflex <i>Disc, Gear, Grid Couplings, Overload Clutches</i> Dewsbury, England +44 (0) 1924 460801 Boksburg, South Africa +27(0) 11 918 4270</p>	<p>Matrix <i>Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes</i> Brechin, Scotland +44 (0) 1356 602000 New Hartford, CT - USA 1-800-825-6544</p>	<p>Heavy Duty Clutches and Brakes</p>	<p>Marland Clutch <i>Roller Ramp and Sprag Type Overrunning Clutches and Backstops</i> Warren, MI - USA 1-800-216-3515</p>
<p>Guardian Couplings <i>Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings</i> Michigan City, IN - USA 1-219-874-5248</p>	<p>Warner Electric <i>Electromagnetic Clutches and Brakes</i> New Hartford, CT - USA 1-800-825-6544 <i>For application assistance:</i> 1-800-825-9050 Saint Barthélemy d'Anjou, France +33 (0)2 41 21 24 24 <i>Precision Electric Coils and Electromagnetic Clutches and Brakes</i> Columbia City, IN - USA 1-260-244-6183</p>	<p>Industrial Clutch <i>Pneumatic and Oil Immersed Clutches and Brakes</i> Waukesha, WI - USA 1-262-547-3357</p>	<p>Stieber Clutch <i>Overrunning Clutches and Holdbacks</i> Heidelberg, Germany +49 (0) 6221-30470</p>
<p>Huco <i>Precision Couplings and Air Motors</i> Hertford, England +44 (0) 1992 501900 Chambersburg, PA - USA 1-888-829-6637</p>	<p>Engineered Bearing Assemblies</p>	<p>Svendborg Brakes <i>Industrial Brakes and Brake Systems</i> Vejrstrup, Denmark +45 63 255 255</p>	<p>Twiflex <i>Caliper Brakes and Thrusters</i> Wichita Falls, TX - USA 1-844-723-3483 Twickenham, England +44 (0) 20 8894 1161</p>
<p>Lamiflex Couplings <i>Flexible Couplings, Bearing Isolators, and Coupling Guards</i> Cotia, SP - Brasil +55 (11) 4615-6300</p>	<p>Kilian <i>Engineered Bearing Assemblies</i> Syracuse, NY - USA 1-315-432-0700</p>	<p>Wichita Clutch <i>Pneumatic Clutches and Brakes</i> Wichita Falls, TX - USA 1-800-964-3262 Bedford, England +44 (0) 1234 350311</p>	<p><i>For information concerning our sales offices in Asia Pacific check our website www.altramotion.com.cn</i></p>



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