

# Dura-Flex® Couplings

## Installation Instructions

P-7891-TBW



 **TB Wood's®**  
Incorporated  
An **Altra Industrial Motion** Company

**▲ 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](http://www.TBWoods.com)

Further component information available:

Specification sheets, 3D models  
**[ecatalog.TBWoods.com](http://ecatalog.TBWoods.com)**

Coupling Selection Program  
**[www.TBWoods.com/Select](http://www.TBWoods.com/Select)**

## Installation / Alignment

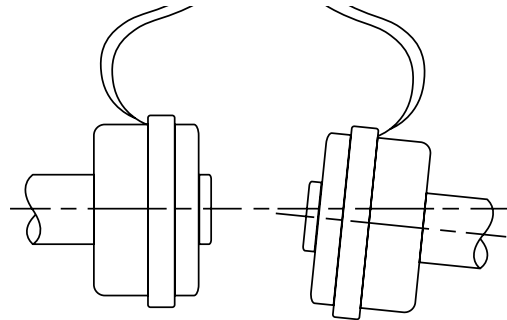
### Installation / Alignment Tools

- 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.

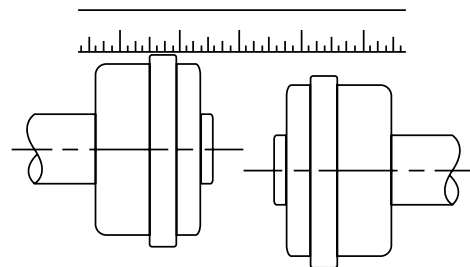
4. Hold one half element on the hubs to determine the appropriate hub spacing. If using spacer elements with high speed rings, hold both half elements on hubs to make sure that the hubs do not interfere with the rings. The hub may be installed with the hub extension facing in or out. Make sure that the 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**

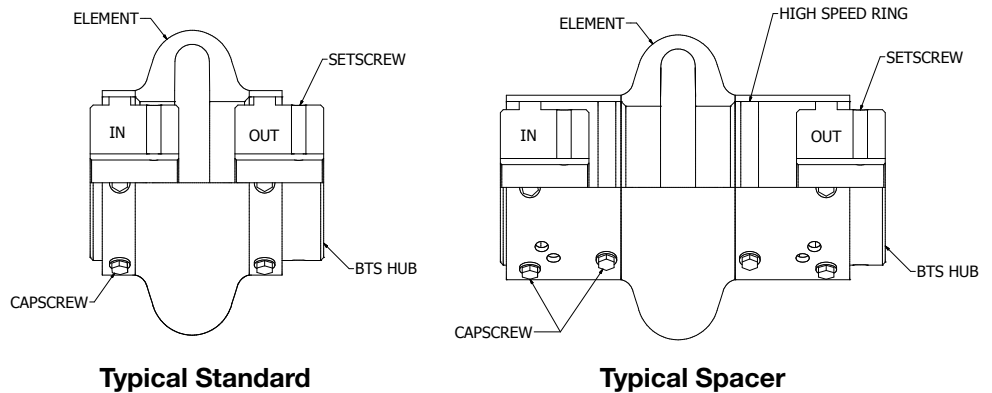
Coupling Size	Maximum RPM		Element & Ring Cap Screws				BTS Hubs Set Screws			
			Imperial Elements		Metric Elements**		Imperial Hubs		Metric Hubs**	
	Standard	Spacer* (HS Rings)	Screw Size	ft-lb	Screw Size	Nm	Screw Size	ft-lb	Scw Size	Nm
WE2/WES2	<b>7500</b>	<b>7500</b>	1/4-20	17	M6-1	23	1/4-20	7	M6-1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

\*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.

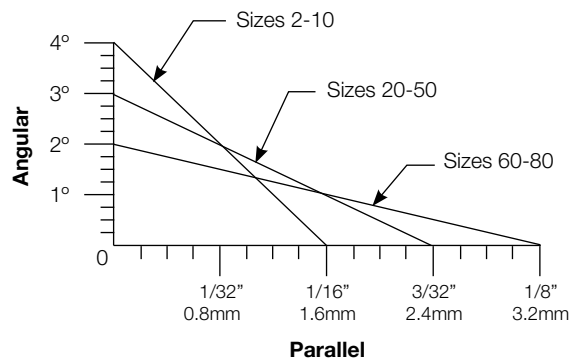
\*\*Metric elements and hubs use metric hardware and are denoted by "M" in the part number, e.g. WE2M, WES2M, WE2HM28MM.

**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**



All Customer Service phone numbers shown in bold

## Belted Drives and Sheaves

### TB Wood's

*Belted Drives*

Chambersburg, PA - USA  
**1-888-829-6637** – Press #5

*For application assistance:*  
**1-888-829-6637** – Press #7

## Couplings

### Ameridrives Couplings

*Mill Spindles, Ameriflex,  
 Ameridisc*

Erie, PA - USA  
**1-814-480-5000**

*Gear Couplings*

San Marcos, TX - USA  
**1-800-458-0887**

### Ameridrives Power Transmission

*Universal Joints, Drive Shafts,  
 Mill Gear Couplings*

Green Bay, WI - USA  
**1-920-593-2444**

### Bibby Turboflex

*Disc, Gear, Grid Couplings,  
 Overload Clutches*

Dewsbury, England  
**+44 (0) 1924 460801**

Boksburg, South Africa  
**+27(0) 11 918 4270**

### Guardian Couplings

*Engineered Flywheel Couplings,  
 Engine Housings and Pump Mounts,  
 Flexible Shaft Couplings*

Michigan City, IN - USA  
**1-219-874-5248**

### Huco Dynatork

*Precision Couplings and  
 Air Motors*

Hertford, England  
**+44 (0) 1992 501900**

Chambersburg, PA - USA  
**1-888-829-6637**

## Couplings Cont.

### Lamiflex Couplings

*Flexible Couplings, Bearing  
 Isolators, and Coupling Guards*

Cotia, SP - Brasil  
**+55 (11) 4615-6300**

### TB Wood's

*Elastomeric Couplings*

Chambersburg, PA - USA  
**1-888-829-6637** – Press #5

*For application assistance:*  
**1-888-829-6637** – Press #7

*General Purpose Disc Couplings*

San Marcos, TX - USA  
**1-888-449-9439**

## Electromagnetic Clutches and Brakes

### Inertia Dynamics

*Spring Set Brakes; Power On and  
 Wrap Spring Clutch/Brakes*

New Hartford, CT - USA  
**1-800-800-6445**

### Matrix International

*Electromagnetic Clutches  
 and Brakes, Pressure Operated  
 Clutches and Brakes*

Brechin, Scotland  
**+44 (0) 1356 602000**

New Hartford, CT - USA  
**1-800-825-6544**

### Warner Electric

*Electromagnetic Clutches  
 and Brakes*

New Hartford, CT - USA  
**1-800-825-6544**

*For application assistance:*  
**1-800-825-9050**

Saint Barthélemy d'Anjou, France  
**+33 (0)2 41 21 24 24**

*Precision Electric Coils and  
 Electromagnetic Clutches and  
 Brakes*

Columbia City, IN - USA  
**1-260-244-6183**

## Engineered Bearing Assemblies

### Kilian Manufacturing

*Engineered Bearing  
 Assemblies*

Syracuse, NY - USA  
**1-315-432-0700**

## Gearing

### Bauer Gear Motor

*Gearred Motors*

Esslingen, Germany  
**+49 (711) 3518-0**

Somerset, NJ - USA  
**1-732-469-8770**

### Boston Gear

*Enclosed and Open Gearing,  
 Electrical and Mechanical  
 P.T. Components*

Charlotte, NC - USA  
**1-800-825-6544**

*For application assistance:*  
**1-800-816-5608**

### Nuttall Gear and Delroyd Worm Gear

*Worm Gear and  
 Helical Speed Reducers*

Niagara Falls, NY - USA  
**1-716-298-4100**

## Heavy Duty Clutches and Brakes

### Industrial Clutch

*Pneumatic and Oil Immersed  
 Clutches and Brakes*

Waukesha, WI - USA  
**1-262-547-3357**

### Svendborg Brakes

*Industrial Brakes and  
 Brake Systems*

Vejstrup, Denmark  
**+45 63 255 255**

### Twiflex Limited

*Caliper Brakes and Thrusters*

Wichita Falls, TX - USA  
**1-844-723-3483**

Twickenham, England  
**+44 (0) 20 8894 1161**

## Heavy Duty Clutches and Brakes Cont.

### Wichita Clutch

*Pneumatic Clutches  
 and Brakes*

Wichita Falls, TX - USA  
**1-800-964-3262**

Bedford, England  
**+44 (0) 1234 350311**

## Linear Products

### Warner Linear

*Linear Actuators*

Belvidere, IL - USA  
**1-800-825-6544**

*For application assistance:*  
**1-800-825-9050**

Saint Barthélemy d'Anjou,  
 France  
**+33 (0)2 41 21 24 24**

## Overrunning Clutches

### Formsprag Clutch

*Overrunning Clutches  
 and Holdbacks*

Warren, MI - USA  
**1-800-348-0881** – Press #1

*For application assistance:*  
**1-800-348-0881** – Press #2

### Marland Clutch

*Roller Ramp and Sprag Type  
 Overrunning Clutches  
 and Backstops*

South Beloit, IL - USA  
**1-800-216-3515**

### Stieber Clutch

*Overrunning Clutches  
 and Holdbacks*

Heidelberg, Germany  
**+49 (0) 6221-30470**

For information concerning our sales offices in Asia Pacific check our website [www.altramotion.com.cn](http://www.altramotion.com.cn)



[www.tbwoods.com](http://www.tbwoods.com)

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