



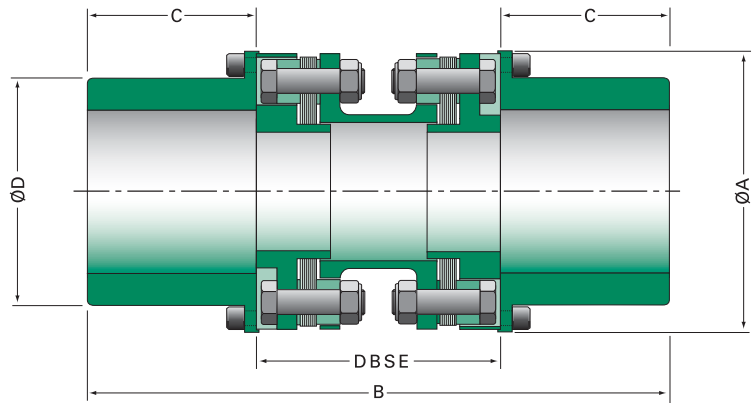
# Torsiflex Disc Couplings for General Purpose Applications



## Torsiflex Coupling Ranges

Specifically designed for the process pump and general industrial markets.

- Plug-in design allows rapid installation and ensures that shaft alignment is always maintained.
- Standard couplings fully compliant with the requirements of API 610 / ISO 14691.
- Compliance with API 671 / ISO 10441 available.
- Incorporates anti-flail feature.
- Large hubs available on first two sizes.



## TF Ratings

Coupling Size TF	kW/ RPM	Rating Nm	MAX SPEED RPM	COUPLING DIMENSIONS					MAX BORE		Mass Transmission Unit (Kg)		Mass Unbored (Solid Hubs (Kg))	
				A mm	B mm	C mm	D mm	Min DBSE mm**	Std Hub mm	Large Hub mm	At min. length	Extra per 10 mm	Std	Large
27	0.028	270	20000	84	150	40	84*	70	40	51	1.34	0.03	0.9	1.69
38	0.040	380	16500	103	160	45	103*	70	51	70	1.95	0.04	1.6	2.84
140	0.147	1400	12000	127	250	75	101	100	73	-	4.6	0.07	4.9	-
260	0.272	2600	10000	149	290	85	117	120	85	-	7.8	0.10	7.5	-
400	0.419	4000	8500	176	350	105	144	140	105	-	12.9	0.14	13.8	-
750	0.785	7500	7500	203	410	120	166	170	120	-	21	0.23	21	-
1310	1.37	13100	6500	241	490	145	199	200	145	-	37	0.27	37	-
1900	1.99	19000	5600	279	500	150	233	200	170	-	46	0.33	52	-
2500	2.62	25000	5200	296	548	164	240	220	175	-	60	0.40	61	-
3300	3.46	33000	4900	326	604	182	270	240	190	-	81	0.49	84	-
6000	6.28	60000	4000	395	720	230	322	260	230	-	125	0.73	151	-
8500	8.90	85000	3600	443	844	262	365	320	260	-	199	0.96	220	-
12000	12.57	120000	3000	493	924	292	410	340	290	-	258	1.19	311	-

\* Large Hub Boss Diameter. \*\* The inclusion of additional features such as packing rings, shims and/or electrical insulation will increase the minimum DBSE (Distance Between Shaft Ends)

## Service Factors

Driver	Driven	Service Factor (SF)
Turbines, Soft start motors	Steady Torque Eg. Centrifugal pumps	1.0
DOL (Direct On line) Start Motors	Fluctuating Torque Pumps, Rotary compressors	1.5

\*For all other applications – please contact Bibby Transmissions

## Selection Procedure

1. Select an appropriate service factor "SF"
2. Calculate rating = Power (kW) x SF/Speed (rpm)
3. Select a coupling with sufficient rating
4. Check hub bore is capable of accommodating shafts
5. Check Speed is within the maximum for the coupling selected
6. Specify required dynamic balance
7. Specify the distance between shaft ends and check this is not less than the minimum for the selected coupling

Eg. 90kW Direct on line electric motor driving a centrifugal pump at 3,000 rpm.  
Distance between shaft end = 140mm  
Rating =  $\frac{90 \times 1.5}{3000} = 0.045\text{kW/rpm}$

### Selection TF0140L140

Max hub bore = 73mm

- TORSIFLEX Couplings consist of 2 hubs and a factory assembled transmission unit. Installation involves fitting the hubs to the machinery shaft ends, introducing the transmission unit, then securing with the attachment screws.
- MAXIMUM SPEEDS shown are for standard materials. When higher speeds are required, please consult Bibby Transmissions.
- PEAK TORQUE of 1.75 and MOMENTARY TORQUE of 2.7 times the stated ratings are accepted.
- SPARK FREE overload protection is provided as a standard feature on all Torsiflex couplings making them suitable for GAS ZONE environments.
- STANDARD SPACER LENGTHS 100, 125, 140, 180, & 250mm provide the most economical solution and are generally available from stock. Other spacer lengths are available to order.
- STANDARD COUPLINGS are designed for general purpose applications and are suitable for the majority of process pump, fan, and compressor applications. SPECIAL versions available include:

- Torque overload protection
- Limited end float
- Electrical insulation
- Bolted adapters suitable for high cyclic torques

## Type TF - Materials

The following standard materials of construction are used in the Torsiflex range. Alternative materials are available for special applications on request.

Hubs: Carbon Steel

Spacers: Carbon Steel

Adapters: Carbon Steel

Discs: Stainless Steel (301)

Bolts: Alloy Steel

Nuts: Alloy steel

Overload Collars: High strength 'non-sparking' material

ATEX  
Approval Certificate  
No. SIRA 03ATEX205



### Misalignment Data

These will be supplied upon request with any order. Guidelines are available for assessment at preliminary stages. The methods of machinery alignment vary accordingly to personal preference. Simple recommended methods are highlighted in our Installation Instructions which are available upon request. The following is a guide to acceptable misalignments at installation.

Note, however, that if machinery growths are known the values may be adjusted in the form of pre-deflection, etc. In addition, please note that the values shown here are **MAXIMUM** values. Reduction in these values will reduce bearing loads and improve the allowance for misalignment due to machinery settlement, etc. thus ensuring greater machinery life and trouble free operation of the coupling.

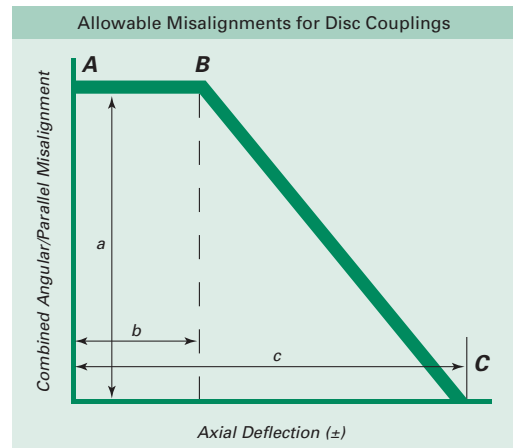
### Installation Alignment

Recommended Installation Alignments shown as % of the Maximum Permitted values for the Couplings	
Allowable Angular / Radial Misalignment	Allowable Axial Misalignment
20% Maximum	10% Maximum

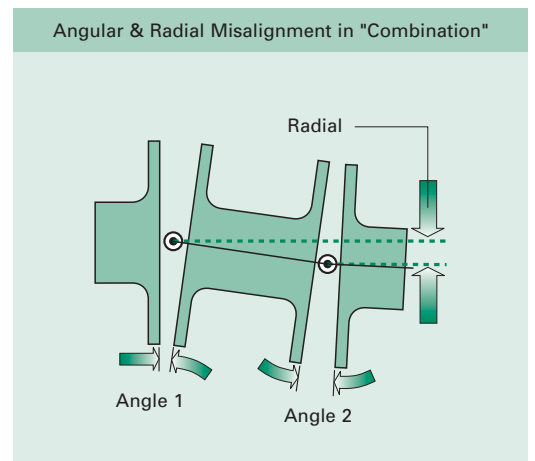
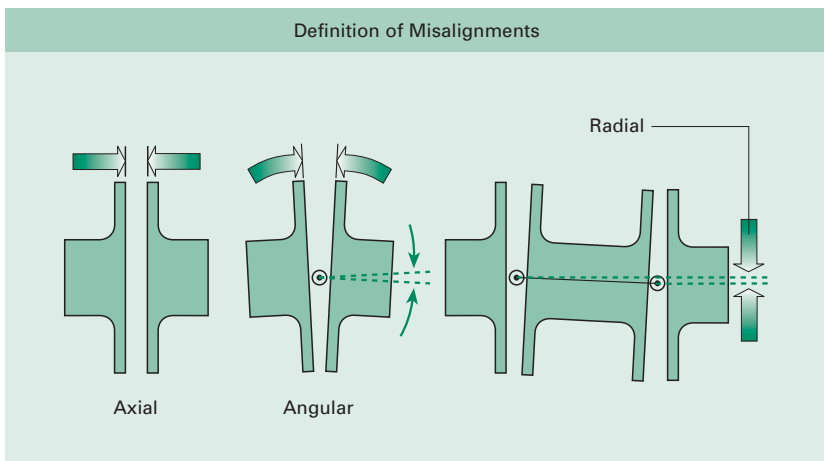
Note: Angular / Radial as percentage of stated value for 'Point A'. Axial as percentage of stated value for 'Point C'.

### TF Misalignment

Coupling Size TF	Max. Angular Misalignment (Deg)	Bending Moment (Nm/deg)	Max. Axial Deflection (Zero Angular Misalignment) (mm)	Max. Axial Thrust (N)	Max. Axial Deflection at full Angular Misalignment (mm)	Axial Thrust (N)
	Point A (1) (2)	(4)	Point C (3)		Point B (4)	
	Per Element		Per Assembly			
27	0.5	31	1.7	560	0.5	65
38	0.5	27	2.2	500	0.5	40
140	0.5	27	2.7	1278	0.5	90
260	0.5	40	3.3	2410	0.6	125
400	0.5	89	4.3	4080	1.4	500
750	0.5	146	5	6140	1.8	900
1310	0.5	222	6	8770	2.2	1300
1900	0.33	375	5	11000	1.5	1500
2500	0.33	500	5.4	12900	1.7	1500
3300	0.33	590	6	15650	1.8	1800
6000	0.33	955	7.5	23000	2.4	2700
8500	0.33	1390	8.1	33500	2.8	5000
12000	0.33	1710	9	38200	3	5000



1. Combined angular/radial misalignment
2. 1 degree angle is equivalent to 0.017 mm/mm radial misalignment
3. At zero speed (Static)
4. At maximum speed & continuous rated torque



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