

Turboflex HF Series Disc Couplings for High Performance Applications



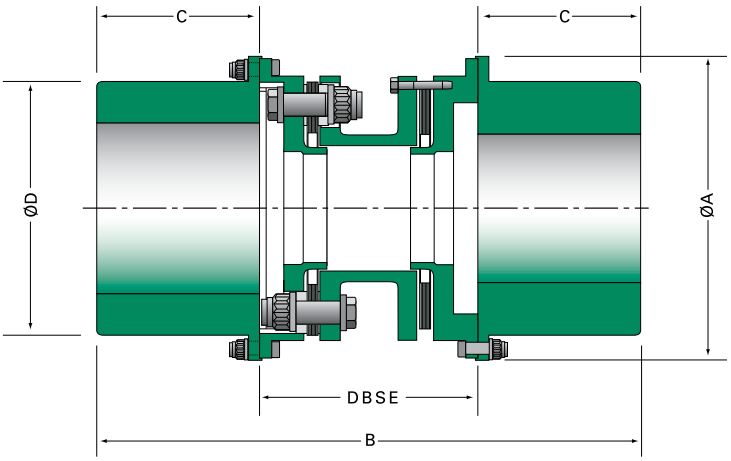
BIBBY TURBOFLEX™

A REGAL REXNORD BRAND

TURBOFLEX HF SERIES DISC COUPLING RANGES

Specifically designed for high performance applications.

- Plug-in design allows rapid installation and ensures that shaft alignment is always maintained.
- Standard couplings fully compliant with the requirements of API 671 / ISO 10441.
- Incorporates anti-flail feature.
- Incorporates windage shrouds (where required).



HF Ratings

Coupling Size HF	kW/ RPM	Rating kNm	MAX SPEED RPM	COUPLING DIMENSIONS					MAX BORE mm	Coupling Weight (kg)*
				A mm	B mm	C mm	D mm	Min DBSE mm**		
250	0.3	2.5	19500	155	307	85	118	137	79	16.2
450	0.5	4.5	15600	180	364	105	140	154	93	25.4
720	0.8	7.2	13800	209	426	120	162	186	108	39.8
1480	1.5	14.8	11400	247	520	145	194	230	129	67.6
2700	2.8	27.0	11100	282	575	150	228	275	152	102.6
4600	4.8	46.0	10100	312	580	150	256	280	171	121.4
5900	6.2	59.0	9100	335	638	164	282	310	188	155.0
7600	8.0	76.0	8500	369	694	182	304	330	203	202.4
12900	13.5	129.0	6800	447	825	230	366	365	244	345.2
16300	17.1	163.0	6000	458	885	245	378	395	252	396.8
19300	20.2	193.0	5900	494	958	262	408	434	272	499.0
25800	27.0	258.0	5600	540	1056	292	444	472	296	645.2

* Coupling weight based on 457.2mm (18") DBSE and maximum bores
** The inclusion of additional features such as shims and/or electrical insulation will increase the minimum DBSE (Distance Between Shaft Ends)

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

@ In accordance with API 671, a minimum service factor of 1.5 is recommended

- TURBOFLEX HF 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 bolts and nuts.
- MAXIMUM SPEEDS shown are for standard materials. When higher speeds are required, please consult Bibby Transmissions.
- API 671 defined PEAK TORQUE capacity is 1.33 X continuous rating and API 671 defined MOMENTARY TORQUE capacity (or SCT) is 1.9 X continuous rating.
- SPARK FREE overload protection is provided as a standard feature on all Turboflex HF couplings making them suitable for GAS ZONE environments.
- SPECIAL VERSIONS are available for:
  - Torque overload protection
  - Limited end float
  - Electrical insulation

Type HF - Materials

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

Hubs: Alloy Steel

Spacers: Alloy Steel

Adapters: Alloy Steel

Discs: Stainless Steel (301)

Bolts: Alloy Steel

Nuts: Alloy Steel

Overload Collars: High strength 'non-sparking' material

TX Ex
Approval Certificate
No. SIRA 03XT205 R3

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

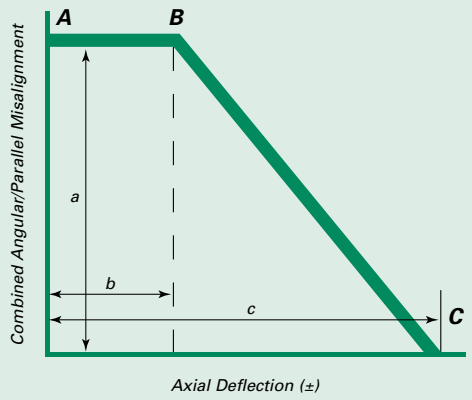
Recommended Installation Alignments shown as % of the Maximum Permitted values for the Couplings	
Allowable Angular / Radial Misalignment	**Allowable Axial Misalignment**
20% Maximum	10% Maximum

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

HF Misalignment

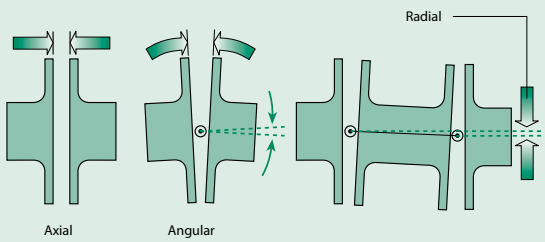
Coupling Size HF	Max. Angular Misalignment (Deg)	Bending Moment (Nm/deg)	Max. Axial Deflection (Zero Angular Misalignment) (mm)	Max. Axial Thrust (N)
	Point A (1) (2)	(4)	Point C (3)	
	Per Element		Per Assembly	
250	0.33	21	2.4	2300
450	0.33	32	3.0	3700
720	0.33	52	3.7	6100
1480	0.33	83	4.5	10300
2700	0.33	160	5.0	15000
4600	0.25	340	4.0	21500
5900	0.25	420	4.5	25000
7600	0.25	500	5.0	32300
12900	0.25	720	6.2	38300
16300	0.25	1090	6.6	48200
19300	0.25	1040	7.2	68400
25800	0.25	1390	7.8	70500

Allowable Misalignments for Disc Couplings

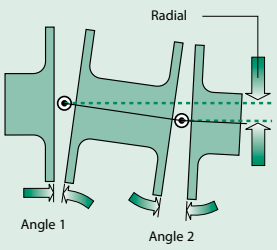


1. Combined angular/radial misalignment
2. 1 degree angle is equivalent to 0.017 mm/mm radial misalignment
3. At zero speed (Static)
4. At maximum speed & continuous rated torque

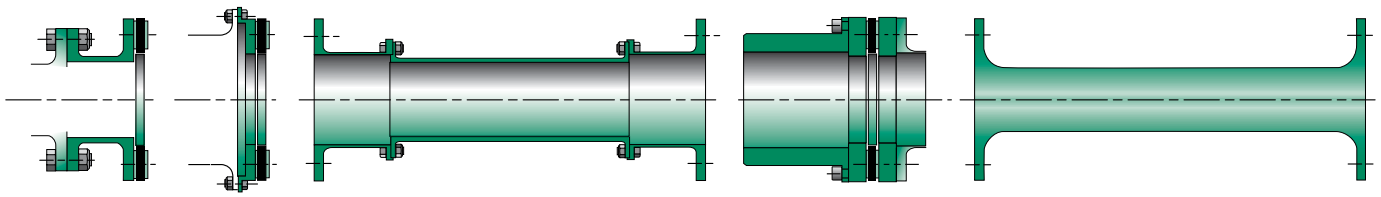
Definition of Misalignments



Angular & Radial Misalignment in "Combination"



Alternative arrangments available



Yoke Adapter **Flange Adapter** **3 Piece Spacer** **Double Adapter** **Torsion Bar Spacer**

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Disc, Gear, Grid Couplings,
Overload Clutches

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