

# Pump Spacer Coupling TFI Series - Torsiflex-i

## API610/ISO13709 | Double Flex Spacer

### Torsiflex-i Disc Couplings Specifically designed for the process pump and general industrial markets.

The TFI coupling is specifically designed for the process pump and general industrial applications. It is comprised of two fully machined steel hubs, and a factory assembled drop out transmission unit. Standard spacer lengths are stock or it can be ordered for any custom spacing. This coupling is suitable for moderate to high speed operation on a wide range of general purpose motor and turbine driven equipment, including pumps, compressors and fans.



#### Advantages

- Standard coupling is fully compliant with the requirements of API610/ISO13709 & ISO14691
- Max bores matched to NEMA motor shafts, resulting in up to 60% weight savings per application
- Smaller diameter and lower weight per HP provide better inherent balance
- Plug-in spacer design allows installation and removal without disturbing the hubs
- Robust disc pack design allows for greater torque load in a smaller coupling, resulting in lower weight
- Large bolts for high clamp load, increasing frictional torque load, and reduced bolt bending stress
- ATEX compliance is standard — ExII 2GDc135degC(T4)
- Built-in Anti-Flail Feature
- Large hubs available on first three sizes
- Compliance with API 671/ISO 10441 is available

#### Standard Materials

Hubs - Carbon Steel  
Adapters - Carbon Steel  
Spacer - Carbon Steel  
Disc Pack - Stainless Steel  
Hardware - Alloy Steel  
O/L Washers - High Strength  
“Non-Sparking” Material

#### Standard Finish

Zinc phosphate coating on hubs, spacers and adapters.

#### Features

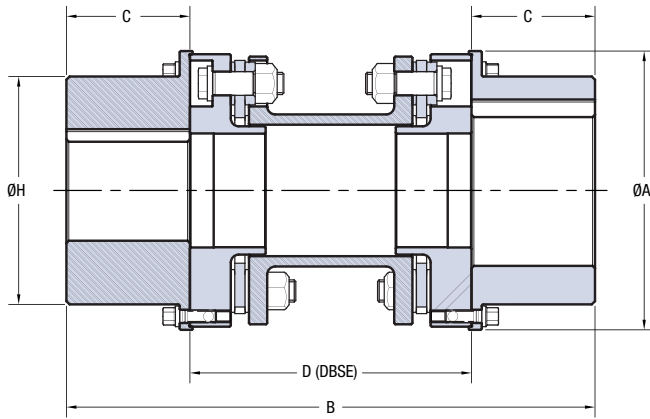
- Torsiflex-i couplings consist of 2 hubs and a factory assembled transmission unit. Installation involves fitting the hubs to the machinery shaft ends, introducing the transmission unit, then securing with the attachment screws
- MAXIMUM SPEEDS shown are for standard materials. When higher speeds are required please consult TB Woods Engineering.
- AGMA 9 BALANCE CLASS is met when hubs are bored for interference fit.
- 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-i couplings, making them suitable for GAS ZONE environments
- STANDARD COUPLINGS are designed for general purpose applications and are suitable for the majority of process pump, fan, and compressors applications
- SPECIAL COUPLING versions available include:
  - Torque overload protection
  - Limited end float
  - Electrical Insulation
  - Bolted adapters suitable for high cyclic torques

#### Material / Finish Options

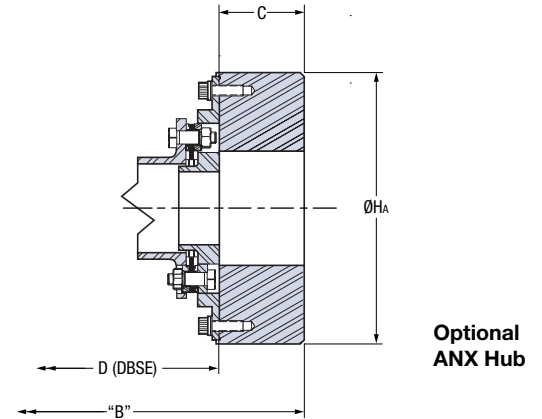
Disc Pack - Inconel  
Zinc Electro Plating  
Alloy Steel Hubs  
Welded Tube Spacer for Longer Spans

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Standard Torsiflex-i Coupling



Optional ANX Hub

Size	Coupling Dimensions (in)						Max Bore						Stock Spacer Length (in) <sup>(2)</sup>							
	A	B	C	H	HA	Min DBSE <sup>(1)</sup>	Square Key			Reduced Key			3.50	4.38	5.00	5.50	7.00	7.50	8.00	9.00
							Standard Hub (in)	Large Hub (in)	ANX Hub (in)	Standard Hub (in / [mm])	Large Hub (in / [mm])	ANX HUB (mm)								
17	2.87	5.67	1.46	2.047*	-	2.76	1.50	2.00	-	1.63 [40]	2.00 [52]	-	S	S	S	S	S	O	O	O
27	3.35	5.91	1.57	2.143	4.776	2.76	1.56	2.25	3.00	1.69 [42]	2.25 [57]	82	S	S	S	S	S	O	O	O
38	4.21	6.30	1.77	2.891	5.647	2.76	2.19	3.00	3.75	2.25 [58]	3.00 [76]	104	S	S	S	S	S	O	O	O
140	5.00	9.84	2.95	3.757	6.526	3.94	2.75	-	4.50	2.94 [75]	-	121		S	S	S	S	O	O	O
260	6.06	11.42	3.35	4.662	7.589	4.72	3.44	-	5.25	3.69 [95]	-	145			S	S	S	O	O	O
400	6.93	13.78	4.13	5.568	8.874	5.51	4.19	-	6.00	4.50 [116]	-	165					S	S	S	O
750	7.99	16.14	4.72	6.46	10.09	6.69	4.63	-	6.50	5.00 [132]	-	192					S	S	S	O
1310	9.49	19.29	5.71	7.76	11.567	7.87	5.63	-	7.50	6.13 [162]	-	226							S	S
1900	10.98	19.69	5.91	9.17	13.064	7.87	6.75	-	9.00	7.00 [192]	-	260							S	S
2500	11.65	21.57	6.46	9.45	13.733	8.66	6.88	-	9.50	7.13 [197]	-	276								S
3300	12.84	23.78	7.17	10.63	-	9.45	7.63	-	-	8.25 [220]	-	-								
6000	15.55	28.35	9.06	12.68	-	10.24	9.00	-	-	9.88 [265]	-	-								
8500	17.44	33.07	10.24	14.37	-	12.60	10.63	-	-	11.25 [302]	-	-								
12000	19.45	36.38	11.50	16.02	-	13.39	11.50	-	-	12.75 [337]	-	-								

\* For Large Hub H = A

(1) The inclusion of additional features such as packing rings, shims and/or electrical insulation will increase the minimum DBSE (Distance Between Shaft Ends)

(2) S = Stocked length ; O = Optional length

Size	Torque Rating		Max Speed RPM	Weight Transmission Unit (lb)			Weight Unbored Hub (lb) (3)			Angular Misalignment	Axial Deflection (in)
	HP / 100 RPM	(lb-in)		Mass @ Min DBSE	ANX Adder Per End	Extra Per (inch)	Standard	Large	ANX		
17	2.38	1,505	25,000	1.3	-	0.04	1.54	2.64	-	.5°	0.010
27	3.79	2,390	20,000	3.0	0.443	0.17	1.9	3.80	7.5		0.019
38	5.34	3,363	16,500	4.3	0.497	0.25	3.81	6.75	12		0.019
140	19.7	12,391	12,000	10.1	0.638	0.39	9.76	-	32.9		0.019
260	36.5	23,013	10,000	17.2	0.724	0.57	16.94	-	56.8		0.024
400	56.2	35,404	8,500	28.4	1.73	0.80	29.63	-	91.5		0.055
750	105	66,383	7,500	46.7	3.821	1.26	46.1	-	140.3		0.071
1310	184	115,948	6,500	80.7	3.948	1.49	80.2	-	213.7		0.087
1900	267	168,169	5,600	100	-5.178	1.84	109	-	310		0.059
2500	351	221,275	5,200	132	-6.983	2.24	133	-	375.5		0.067
3300	463	292,083	4,900	179	-	2.73	186	-	-	0.071	
6000	843	531,060	4,000	273	-	4.10	333	-	-	0.094	
8500	1194	752,335	3,600	439	-	5.39	485	-	-	0.11	
12000	1685	1,062,120	3,000	569	-	6.64	686	-	-	0.118	

(3) For Finish Bore Hub weight = Weight Unbored hub - .222 \* Hub Length \* Bore Dia.^2

### ORDERING

TF SERIES COUPLINGS ARE SOLD AS COMPONENTS  
COUPLINGS CONSIST OF:

2 - HUBS - Example (TFI0038 x 2.00 mm)

1 - TRANSMISSION UNIT - Example for DBSE = 5.00" (TFI0038SA500MM)