

PIN BUSH COUPLING



Flexible couplings transmit torque from one shaft to another and are particularly useful in cases where limited misalignment of shaft is unavoidable. Flexible couplings are suitable for driving all class of machinery.

AREA OF VALIDITY

This standard is valid for all pin & bush coupling being manufactured by Leading Edge Technocrat unless otherwise specified as per customer's requirement & special designs.

SCOPE

This standard gives over all dimensions for selection, procurement & Inspection of various size of coupling.

Material of Construction

Hub 1:

Cast Steel (IS 1030 / Gr. 280 - 540) Hardness: 135 - 185 BHN

Bush:

PERBUNAN with Shore Hardness: 80 A Min. Ash content: 5% Max.

Pin:

C-60N

Procurement Condition

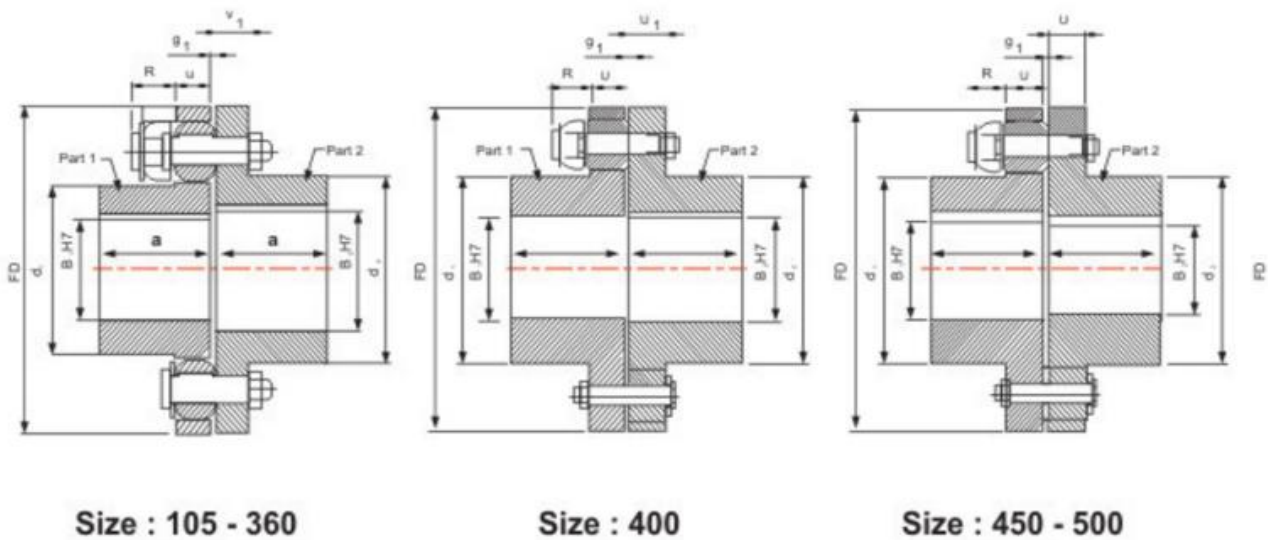
With Pilot Bore (Hub1 / Hub 2per) / As part list.

Flanges are bored to suit the requirement. Couplings can also be supplied with the pilot bore.

Features

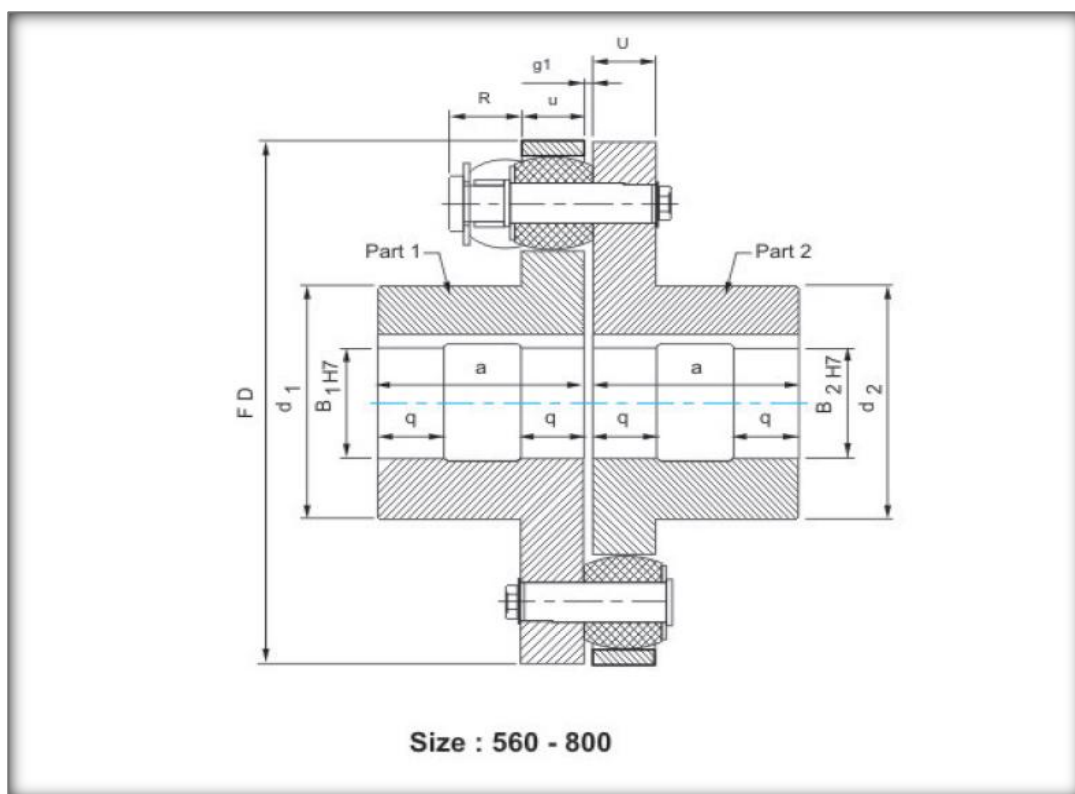
- Compact Design
- Low Inertia*
- High torque to wait ratio*
- Low torque to bore ratio

TFC FLEXIBLE COUPLING



														Mass Moment of Inertia		Weight	
Size TFC	Nominal Torque (Nm)	Max Speed nmax (1/min)	Bore From B1/2 (mm)	Bore To B1 (mm)	Bore To B2 (mm)	FD (mm)	d1 (mm)	d2 (mm)	a (mm)	R (mm)	g1 (mm)	v1 (mm)	u (mm)	Part 1 (kgm ²)	Part 2 (kgm ²)	Part 1 (kg)	Part 2 (kg)
105	190	5,000	-	32	38	105	53	59	45	30	2.4	12	13	0.001	0.001	1.0	1.5
125	330	5,000	-	40	48	125	65	68	50	35	2.4	15	16	0.003	0.003	2.0	2.0
144	475	4,900	-	50	60	144	76	84	55	35	2.4	15	16	0.004	0.006	2.3	3.5
162	700	4,300	-	55	65	162	85	92	60	40	2.5	18	20	0.007	0.013	3.3	5.0
178	900	3,800	-	70	75	178	102	108	70	40	2.5	18	20	0.014	0.022	5.0	7.0
198	1,225	3,400	-	80	85	198	120	128	80	40	2.5	18	20	0.023	0.031	7.3	9.0
228	2,100	3,000	-	85	95	228	129	140	90	50	2.5	24	26	0.040	0.074	9.5	14.5
252	2,600	2,700	38	100	110	252	150	160	100	50	2.5	24	26	0.070	0.120	13.5	19.5
285	4,000	2,400	48	110	120	285	164	175	110	60	3.6	30	32	0.130	0.220	20.0	28.0
320	5,200	2,100	55	125	130	320	180	192	125	60	3.6	30	32	0.230	0.310	28.0	36.5
360	7,400	1,900	65	135	140	360	200	210	140	75	3.6	42	42	0.420	0.710	38.5	55.0
400	12,000	1,700	75	150	150	400	230	230	160	75	3.6	-	42	0.890	0.890	63.0	63.0
450	17,500	1,500	85	170	170	450	260	260	180	90	4.7	-	52	1.700	1.700	93.5	93.5
500	23,500	1,350	95	190	190	500	290	290	200	90	4.7	-	52	2.800	2.800	120.5	120.5

The specifications contained herein are subject to change without notice.



Size TFC	Nominal Torque (Nm)	Max Speed nmax (1/min)	Bore From (mm)	Bore To (mm)	FD (mm)	d1&2 (mm)	a (mm)	q (mm)	R (mm)	g1 (mm)	u (mm)	Mass Moment of Inertia - Part 1/2 (kgm ²)	Weight - Part 1/2 (kg)
560	37,000	1,200	100	165	560	250	220	70	120	4.8	68	4.6	155.0
560	37,000	1,200	>165	200	560	300	220	70	120	4.8	68	5.0	165.0
560	37,000	1,200	>200	210	560	320	220	70	120	4.8	68	5.1	160.0
630	49,500	1,050	100	165	630	250	240	80	120	4.8	68	7.2	190.0
630	49,500	1,050	>165	200	630	300	240	80	120	4.8	68	7.7	205.0
630	49,500	1,050	>200	235	630	355	240	80	120	4.8	68	8.4	220.0
710	80,000	950	110	190	710	290	260	80	140	5.9	80	13.0	280.0
710	80,000	950	>190	220	710	330	260	80	140	5.9	80	14.0	285.0
710	80,000	950	>220	250	710	385	260	80	140	5.9	80	15.0	300.0
800	1,04,500	850	125	210	800	320	290	90	140	5.9	80	22.0	365.0
800	1,04,500	850	>210	240	800	360	290	90	140	5.9	80	23.0	380.0
800	1,04,500	850	>240	280	800	420	290	90	140	5.9	80	24.5	400.0

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SELECTOPN FOR TFC FLEXIBLE COUPLING

Obtain Shaft Size:

- Compare shaft sizes of driving and driven equipment with listed bores of desired Series coupling to determine “Tentative” coupling size.
- Compute effective kW/rpm OR hp/rpm OR torque to be transmitted; select a service factor from above.

Determine kW/rpm

$$\text{kW/rpm (effective)} = \frac{\text{kW TRANSMITTED} \times \text{SERVICE FACTOR}}{\text{rpm}}$$

OR determine hp/rpm

$$\text{hp/rpm (effective)} = \frac{\text{hp TRANSMITTED} \times \text{SERVICE FACTOR}}{\text{rpm}}$$

OR determine Torque (daNm)

$$\text{Torque (effective)} = \frac{955 \times \text{kW TRANSMITTED} \times \text{SERVICE FACTOR}}{\text{rpm}}$$

Driven Machines	Service Factor - Type of Driving Unit			
	Electric Motor or Steam Turbine	Steam Engine or Water Turbine	Gas or Oil Engines	Source / Transcription Note
Even torque machines, smooth loads, centrifugal pumps, generators, line shafting, textile machines, screens, evaporators, etc.	1	1.25	2	
Balancers, liner sets coucres, machine tools, reeders, beaters, agitators, rotary dryers, light fan drives, blowers stackers, rubber mixers, conveyors, intermittent loads, etc.	1.1	1.35	2.4	Wording retained from source.
Heavy fan and blower drives, mine fans, cement mills, vacuum pumps, disintegrators, winders, wood working machines, copper and brass rolling mills, etc.	1.3	1.6	2.6	
Calenders, compressors, paper drying, cylinders, cranes and hoists, planning machines, three-throw pumps, elevators, etc.	15	1.8	3	Source visibly shows '15' in the Electric Motor / Steam Turbine column; retained exactly as printed.
Tube and rolling mills, crushers, grinders, punch and shears, ball mills, pulverizers, double drum winders, dredgers jordens, reversing and ship propulsion, etc.	2.2	2.4	3.4	Wording retained from source.

The couplings work within the permissible limits of misalignment as per IS:2693 and BS:3170.