Morflex Couplings

Accommodate High Angular Misalignment – Cushion Vibration and Shock

The Morflex Coupling is designed for applications where considerable misalignment is expected. It also cushions shock loads and absorbs vibration. The Morflex coupling compensates for misalignment and is torsionally flexible.

All drive and reaction forces are accommodated by displacement of the flexible Neoprene biscuits. Spring rates (Nm/degree) are low, which accounts for the efficient compensation for misalignment and prolonged bearing life of equipment coupled by Morflex. The centre member "floats" between the two flanges, and the two sets of Neoprene biscuits share the misalignment.

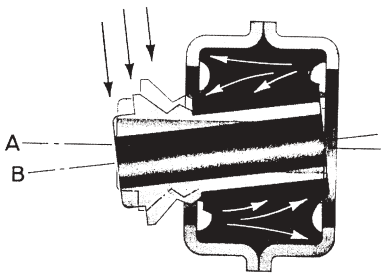
Round steel flanges are normally used, available with a minimum bore from stock. Lining up shaft centres is easier and higher operation speeds permissible with the Morflex Round Flanged Coupling.

The Morflex Principle

Specially developed, resilient, non-cold-flow neoprene biscuits are responsible for the flexibility of the Morflex coupling. Relative movement between shafts is confined to the controlled displacement of the neoprene. Preloading the biscuits in assembly permits them to allow considerable deflection, even with light load. The shape of neoprene biscuit has been carefully designed for uniform stress and deflection - an important operational advantage and one which contributes greatly to the life of the coupling. Morflex couplings can be used in ambient temperatures ranging from -15°C to 95°C.

Angular deflection

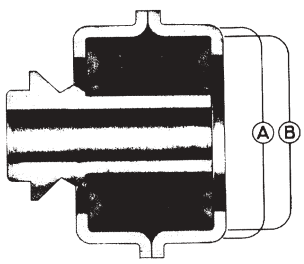
A. Centreline of biscuit before angular deflection.



B. Displacement of the neoprene, as indicated by arrows, compensates for angular misalignment of the connected shafts.

Axial displacement resulting from thrust loads

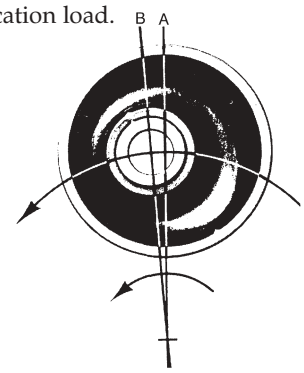
A. Position of biscuits prior to imposition of thrust load.



B. Position of biscuit after thrust load has been imposed. The flow of the neoprene permits controlled end float. Thrust loading is transmitted smoothly and uniformly.

Torsional deflection resulting from torque loads and torsional vibration

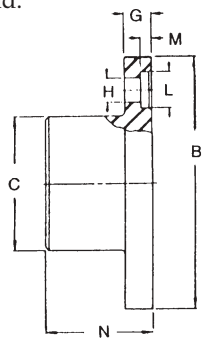
A. Centreline of biscuit before application load.



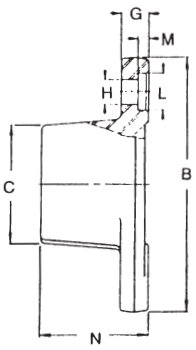
B. Imposition of a torque increases pressure in the direction of the load, and reduces pressure in the opposite direction. Because of its initial preloaded condition the neoprene remains under compression throughout its volume at maximum torque load.

Morflex Coupling Capacities

Cplg No.	Power Ratings		Max. rpm	Max. misalignment capabilities	Parallel Misalignment	Stock Min. Bore mm	Max Bore mm	Approx Wt. kg
	kW per 100 rpm	Torque Nm		Angular	Radial mm			
252-0	0.18	17.5	6500	1.5	0.25	9.53	15	0.35
302-0	0.28	27.0	6000	2	0.25	9.53	18	0.50
352-0	0.50	43.4	5500	3	0.38	9.53	22	0.90
402-	0.75	71.9	5500	4	0.38	12.70	30	1.80
502-	1.19	114.0	5300	5	0.50	12.70	38	3.15
602-	2.42	232.0	5000	5	0.75	19.10	42	5.45
702-	4.00	385.0	4600	5	0.89	22.22	50	9.00
802-	5.50	527.0	4400	5	1.00	25.40	55	13.60
902-	7.50	712.0	4200	4	1.00	25.40	62	21.75
1002-	10.30	983.0	4000	4	1.15	31.25	70	30.40
1202-	15.75	1505.0	3800	2	1.25	50.80	80	48.00



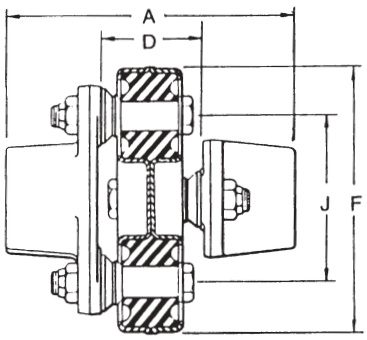
ROUND FLANGE



OVAL FLANGE

Dimensions mm

Cplg No.	A	B	C	D	F	G	H	J	L	M	N
252-0	57	57	24	19	67	4.0	6.4	41	-	-	19
302-0	70	65	30	25	79	4.8	6.4	49	-	-	22
352-0	79	76	35	28	92	6.4	7.9	57	-	-	25
402-	105	91	45	41	105	9.5	9.9	65	15.9	5.6	32
502-	124	107	57	48	128	9.5	11.5	81	19.1	4.8	38
602-	162	129	70	57	154	12.7	13.1	97	19.1	4.8	52
702-	186	148	79	62	178	15.9	14.7	110	22.3	4.8	62
802-	210	167	95	68	203	15.9	14.7	125	22.3	4.8	71
902-	248	193	108	76	229	19.1	16.7	141	28.6	5.6	86
1002-	279	215	120	79	254	23.8	19.8	157	31.8	5.6	100
1202-	317	247	133	92	330	31.8	26.2	187	38.2	7.1	113



Couplings 252-0 to 352-0 have oval flanges, other sizes have round flanges, although to size 1002 can be supplied to special order with oval flanges

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