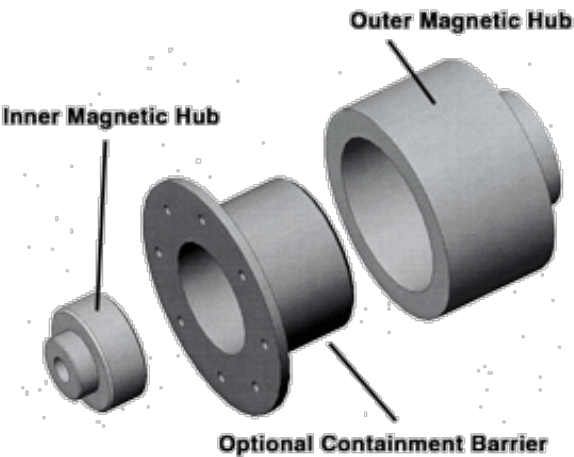




Co-Axial Couplings

How Co-Axial Couplings Work

The co-axial coupling consists of three parts. The outer hub consists of a series of rare earth magnets that are ground, potted and attached to the inside diameter of a steel hub. The inner hub consists of a series of rare earth magnets that are ground, potted and attached to the outside diameter of a steel rotor. The inner hub is then completely sealed in stainless steel to protect the magnets and rotor from damage or corrosive substances. Typically there is a radial air gap of up to .275" (7mm) between the inner and outer hubs. Conventional bores and keyways are used to drive the inner and outer hubs.



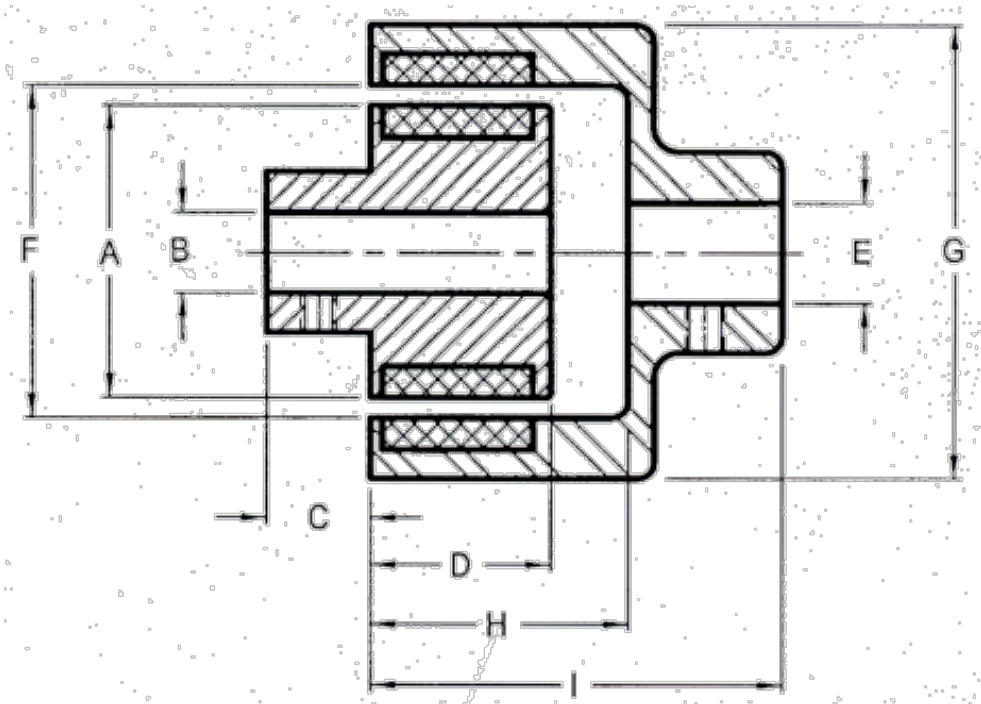
Specifications - Shown in English measure ([Click here for Metric](#))

Note: The dimensions and ratings for all co-axial type couplings are shown using only NdFeB type rare earth magnets. Ratings and dimensions may vary for the SmCo versions.

Advantages of Co-Axial Type Couplings

- Eliminates Rotating Seals
- No Wearing Parts
- Synchronous Design, No Slip at Any Speed
- No Physical Contact Between Driving and Driven Parts
- Custom Designs Available

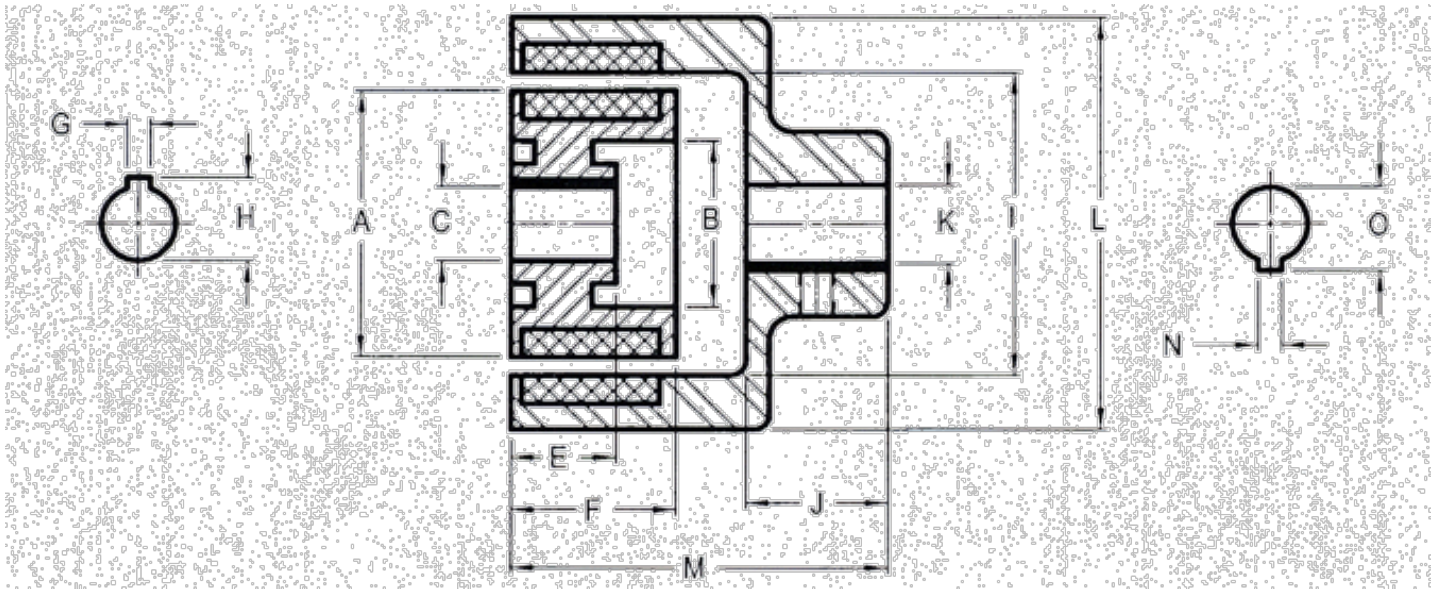
MTC-0.1 thru MTC-10



					INNER HUB				OUTER HUB				
Part Number	Max Speed (rpm)	Total Weight (lb)	Nominal Torque (in/lb)	Peak Torque (in/lb)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)
MTC-0.1	14000	0.2	1.0	1.25	0.50	0.107	0.20	0.50	0.230	0.71	1.00	0.75	1.10

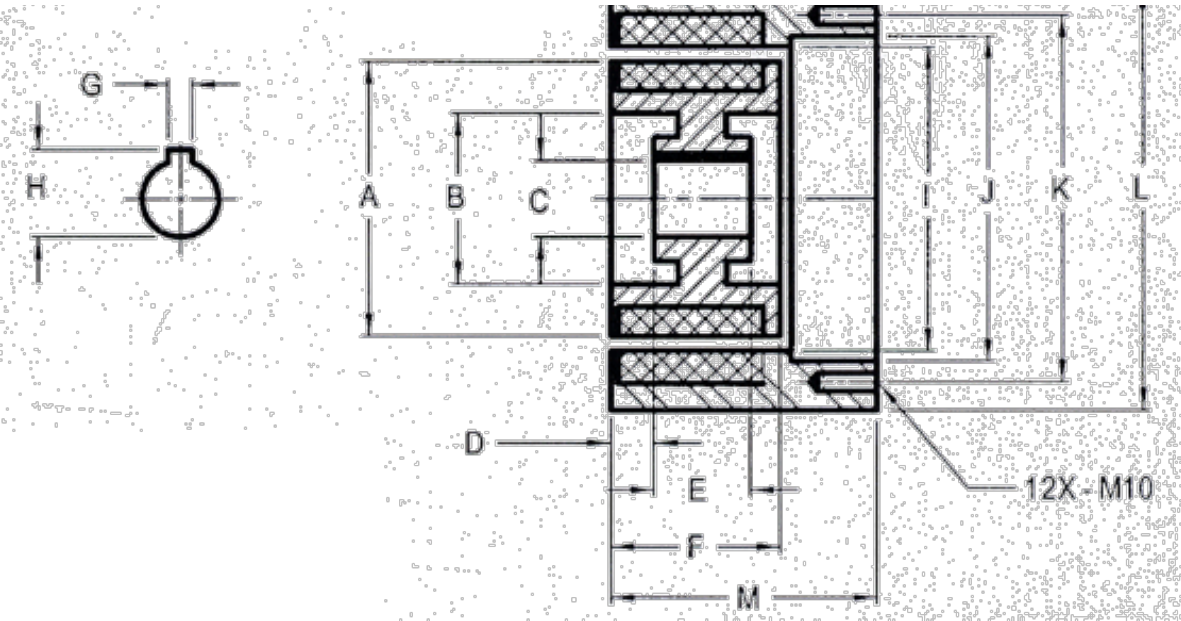
MTC-0.1	44000	0.2	1.0	1.75	0.50	0.197	0.28	0.59	0.236	0.71	1.02	0.75	1.18
MTC-0.3	26000	0.6	2.6	4.5	0.87	0.315	0.31	0.63	0.315	1.10	1.73	0.87	1.42
MTC-1	22000	1.7	9	13	1.10	0.394	0.47	0.79	0.394	1.38	2.13	1.10	1.73
MTC-3	18000	2.2	27	30	1.38	0.472	0.63	1.26	0.472	1.654	2.52	1.65	2.44
MTC-10	13000	5.5	90	105	2.28	0.630	0.79	1.38	0.787	2.60	3.54	1.97	3.15

MTC-16 thru MTC-140



Part Number	Max Speed (rpm)	Total Weight (lb)	Nominal Torque (in/lb)	Peak Torque (in/lb)	INNER HUB								OUTER HUB					
					A (in)	B (in)	C (in)	E (in)	F (in)	G (in)	H (in)	I (in)	J (in)	K (in)	L (in)	M (in)	N (in)	O (in)
MTC-16	13000	6.6	140	230	2.28	1.02	0.551	0.79	2.44	0.20	0.64	2.60	1.57	0.748	3.54	4.72	0.24	0.86
MTC-22	9400	16	200	310	3.47	1.97	0.787	1.18	1.97	0.24	0.90	3.82	1.97	0.945	4.88	4.72	0.31	1.07
MTC-30	9400	18	265	425	3.47	1.97	0.945	1.18	2.44	0.31	1.07	3.82	1.97	1.102	4.88	5.12	0.31	1.23
MTC-50	7300	26	450	708	4.80	3.15	1.181	1.18	1.97	0.31	1.31	5.20	2.36	1.496	6.30	5.12	0.39	1.63
MTC-65	7300	33	575	885	4.80	3.15	1.181	1.57	2.56	0.31	1.31	5.20	2.36	1.496	6.30	5.71	0.39	1.63
MTC-80	6500	42	710	1151	5.59	3.54	1.378	1.57	2.56	0.39	1.51	5.98	3.15	1.654	7.09	6.50	0.47	1.78
MTC-110	6500	48	1000	1460	5.59	3.54	1.378	1.57	3.15	0.39	1.51	5.98	3.15	1.654	7.09	7.09	0.47	1.78
MTC-140	6500	64	1250	1859	5.59	3.54	1.575	1.57	4.33	0.47	1.70	5.98	3.15	1.890	7.09	8.27	0.55	2.04

MTC-180 thru MTC-280



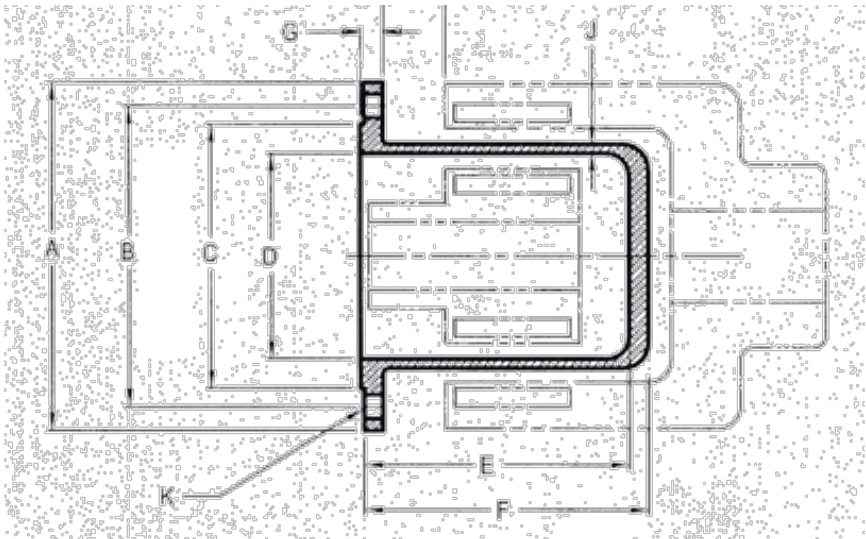
Part Number	Max Speed (rpm)	Total Weight (lb)	Nominal Torque (in/lb)	Peak Torque (in/lb)	INNER HUB								OUTER HUB				
					A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	J (in)	K (in)	L (in)	M (in)
MTC-180	6200	51	1600	2567	5.59	3.54	1.575	2.36	1.97	5.51	0.47	1.72	5.98	6.142	6.69	7.48	7.09
MTC-220	6200	57	2000	2921	5.59	3.54	1.890	2.76	2.36	6.30	0.55	2.06	5.98	6.142	6.69	7.48	7.87
MTC-280	6200	66	2500	3363	5.59	3.54	1.890	3.54	2.36	7.09	0.55	2.06	5.98	6.142	6.69	7.48	9.06

Technical Data		
Inner Cylinder		300 Stainless Steel, Hermetically Sealed
Outer Cylinder		Mild Steel, All Magnets Encapsulated
Magnet (Nickel-Plated)		NdFeB*
Operating Temp*		140C (284F)
*Note: Co-Axial couplings are also available with SmCo magnets, rated up to 280C (536F)		

Optional Containment Barrier

An optional stainless steel barrier can be used to separate the atmosphere or fluids surrounding the inner and outer hubs. This eliminates the need for a rotating shaft seal. Both standard and custom barrier designs up to 75 hp are available. All sizes over MTC-10-SB are made to order. All designed applications are economically produced, even in small quantities.





	STOCK CONTAINMENT BARRIER										
Part Number	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	J (in)	K (in)	# of Holes
MTC-0.1-SB	1.42	1.102	0.79	0.591	1.02	1.10	0.16	0.24	0.039	0.18	4
MTC-0.3-SB	1.93	1.575	1.18	0.945	1.18	1.26	0.20	0.28	0.039	0.22	4
MTC-1-SB	2.17	1.811	1.42	1.181	1.38	1.46	0.20	0.28	0.039	0.22	6
MTC-3-SB	2.60	2.165	1.73	1.496	1.77	1.97	0.26	0.39	0.039	0.26	6
MTC-10-SB	3.78	3.268	2.87	2.362	2.36	2.60	0.59	0.24	0.039	0.26	6

Note: The MTC-0.1 through -10 containment shells are 316 stainless, and are rated to a minimum of 450 psi. Containment shells for other sizes are made to order and are rated according to customer requirements.

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