

RFDC Series

Rotating Field Multiple Disc Clutches

Nine standard frame sizes available:

- 3.9 to 9.2" diameter ; 1.7 to 3.3" length
- Bore sizes from 0.8 to 2.8"
- Static torque from 12 to 795 lb-ft (wet); 32 to 882 lb-ft (dry)
- 1750 to 4200 RPM
- Operates both dry and in oil
- Modified designs and customized assemblies available



Performance/Mechanical Specifications

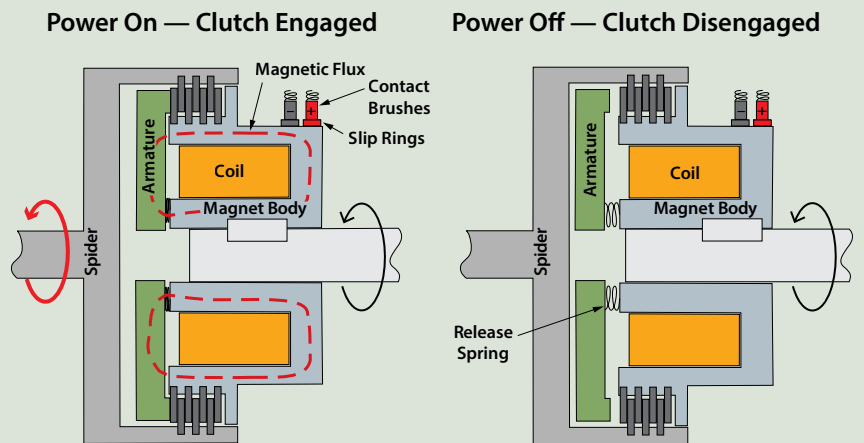
RFDC Series — Model Size

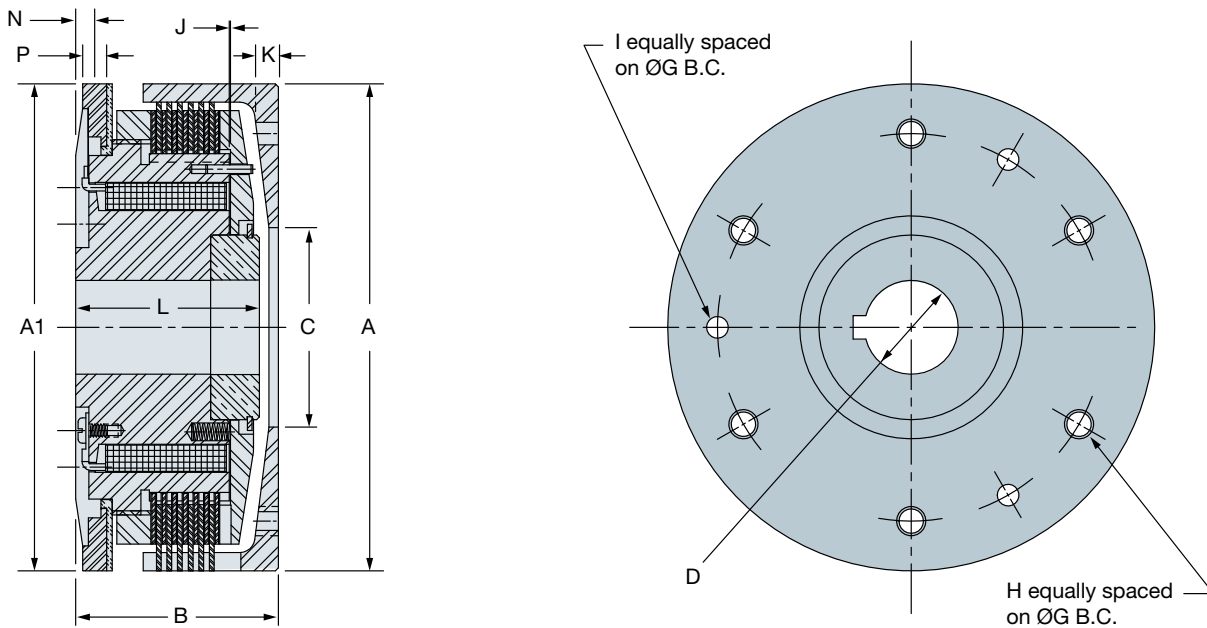
			395	435	475	520	580	640	720	795	925
Static Torque	Wet	lb-ft	12	23	46	75	117	187	300	505	795
		Nm	16.2	31.2	62.4	101.7	158.6	253.5	406.7	684.7	1077.9
	Dry	lb-ft	13	25	52	84	130	208	332	561	882
		Nm	17.6	33.9	70.5	113.9	176.3	282.0	450.1	760.6	1195.8
Starting Torque	Wet	lb-ft	7	12	25	42	65	107	168	281	449
		Nm	9.5	16.2	33.9	56.9	88.1	145.1	227.8	381.0	608.8
	Dry	lb-ft	10	19	39	63	98	161	253	421	673
		Nm	12.2	23.0	47.5	77.3	120.7	197.9	431.8	519.3	829.8
Recommended Max Speed	RPM	4200	4000	3500	3200	3000	2500	2200	2000	1750	
Coil Data – 24VDC	Amps	0.79	0.97	1.26	1.43	1.80	1.93	2.71	3.50	4.33	
		110VDC	0.25	0.31	0.36	0.46	0.47	0.50	0.62	0.76	0.95
Thermal Capacity	BTU/min	10.8	13.3	15.8	18.3	22.5	28.3	36.7	50.0	70.0	
Approximate Weight	lb	4.4	5.7	7.0	8.8	12	17	24	33	46	
	kg	2.00	2.59	3.18	4.00	4.45	7.7	10.9	15.0	20.9	

RFDC Operation:

When current is applied to the coil in the magnet body, a magnetic field is created which attracts the armature toward the magnet body face. This causes the outer disc to be squeezed between the inner discs, allowing torque to be transmitted from the input (magnet body) to the output (spider).

When current is turned off, the armature is disengaged from the magnet body with release springs to assist.





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Dimensions — Inches (mm)		395	435	475	520	580	640	720	795	925	
Spider Diameter	A	3.93 (99.82)	4.33 (109.98)	4.72 (119.89)	5.19 (131.83)	5.78 (146.81)	6.37 (161.80)	7.16 (181.86)	7.95 (201.93)	9.25 (234.95)	
Slip Ring Diameter	A1	3.93 (99.82)	4.33 (109.98)	4.72 (119.89)	5.19 (131.83)	5.70 (144.78)	6.29 (159.77)	7.08 (179.83)	7.87 (199.90)	9.05 (229.87)	
Overall Length (ref)	B	1.77 (44.96)	1.88 (47.75)	2.04 (51.82)	2.16 (54.86)	2.28 (57.91)	2.44 (61.98)	2.67 (67.82)	2.99 (75.95)	3.88 (98.55)	
Spider Bore	Min	C	1.500 (38.100)	1.750 (44.450)	2.000 (50.800)	2.125 (53.975)	2.375 (60.325)	2.750 (69.850)	2.875 (73.025)	3.375 (85.725)	4.000 (101.600)
	Max	C	2.750 (69.850)	2.950 (74.930)	3.340 (84.836)	3.540 (89.916)	4.130 (104.902)	4.520 (114.808)	5.310 (134.620)	5.900 (149.860)	6.880 (174.752)
Magnet Body Bore	Min	D	0.563 (14.300)	0.750 (19.050)	0.750 (19.050)	1.000 (25.400)	1.000 (25.400)	1.188 (30.175)	1.375 (34.925)	1.625 (41.275)	1.750 (44.450)
	Max	D	0.875 (22.225)	1.125 (28.575)	1.250 (31.750)	1.500 (38.100)	1.687 (42.850)	1.875 (47.625)	2.1887 (55.575)	2.500 (63.500)	2.875 (73.025)
Spider*	Mounting Circle	G	3.22 (81.79)	3.54 (89.92)	3.93 (99.82)	4.13 (104.90)	4.80 (121.92)	5.31 (134.87)	6.10 (154.94)	6.69 (169.93)	7.87 (199.90)
	Threaded Mounting Holes (Qty)	H	1/4-20 (4)	1/4-20 (4)	1/4-20 (6)	5/16-18 (6)	5/16-18 (6)	5/16-18 (6)	3/8-16 (6)	3/8-16 (6)	1/2-13 (6)
	Dowel Holes (Qty)	I	1/4 (2)	1/4 (2)	1/4 (3)	1/4 (3)	5/16 (3)	5/16 (3)	3/8 (3)	3/8 (3)	1/2 (3)
Air Gap	J	0.011 (0.279)	0.011 (0.279)	0.011 (0.279)	0.013 (0.330)	0.015 (0.381)	0.015 (0.381)	0.017 (0.432)	0.019 (0.483)	0.023 (0.584)	
Spider Face Depth	K	0.196 (4.978)	0.196 (4.978)	0.236 (5.994)	0.275 (6.985)	0.275 (6.985)	0.275 (6.985)	0.315 (8.001)	0.354 (8.992)	0.393 (9.882)	
Bore Length	L	1.65 (41.91)	1.77 (44.96)	1.88 (47.75)	1.96 (49.78)	2.08 (52.83)	2.24 (56.90)	2.48 (62.99)	2.75 (69.85)	3.14 (79.76)	
Slip Ring Center	N	0.206 (5.232)	0.206 (5.232)	0.206 (5.232)	0.206 (5.232)	0.216 (5.486)	0.216 (5.486)	0.236 (5.994)	0.236 (5.994)	0.236 (5.994)	
Slip Ring Width	N	0.255 (6.477)	0.255 (6.477)	0.255 (6.477)	0.255 (6.477)	0.275 (6.985)	0.275 (6.985)	0.315 (8.001)	0.315 (8.001)	0.315 (8.001)	

* Recommended bolt pattern; others optional, contact SEPAc