

SFDC Series

Stationary Field Multiple Disc Clutches

Nine standard frame sizes available:

- 3.9 to 9.2" diameter ; 2.6 to 5.4" length
- Bore sizes from 0.8 to 2.8"
- Static torque from 11 to 722 lb-ft (wet); 12 to 802 lb-ft (dry)
- 1750 to 4200 RPM
- Operates both dry and in oil
- Modified designs and customized assemblies available



Performance/Mechanical Specifications

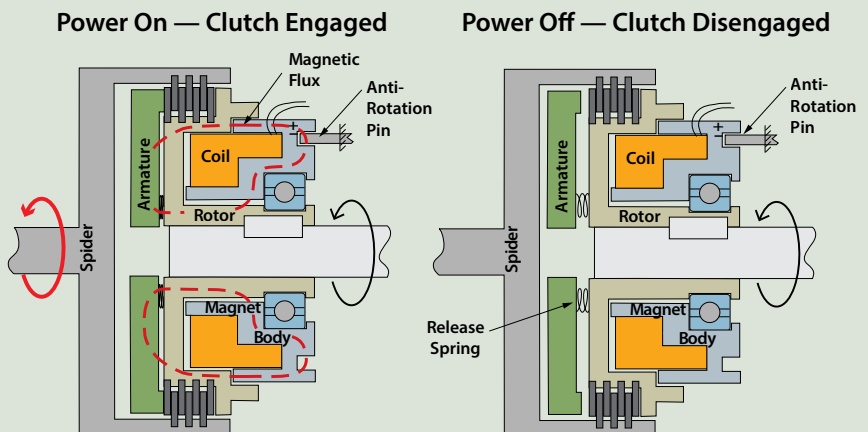
SFDC Series — Model Size

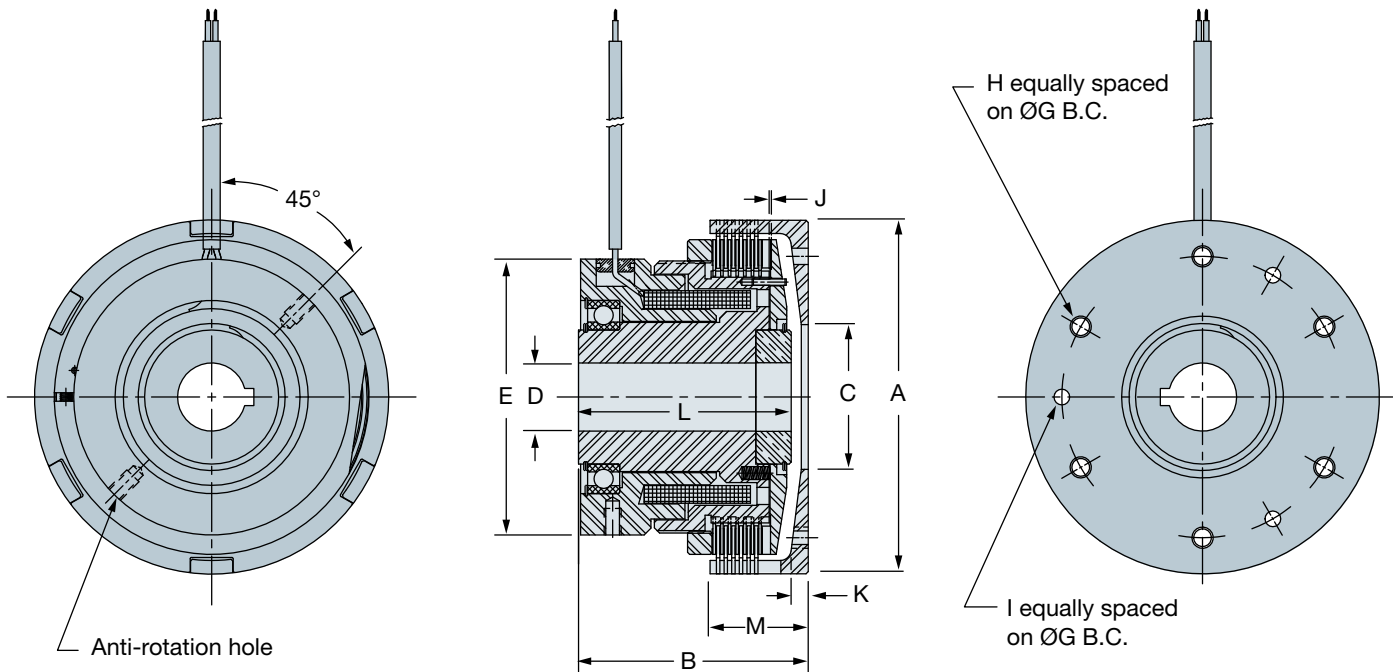
		395	435	475	520	580	640	720	795	925
Static Torque (Wet)	lb-ft	11	21	42	68	106	170	272	459	722
	Nm	14.9	28.5	56.9	92.2	143.7	230.5	368.8	622.3	978.9
Starting Torque (Wet)	lb-ft	6	11	23	38	59	97	153	255	408
	Nm	8.1	14.9	31.2	51.5	80.0	131.5	207.4	345.7	533.2
Static Torque (Dry)	lb-ft	12	23	47	76	118	189	302	510	802
	Nm	16.2	31.2	63.7	103.0	160.0	256.2	409.5	691.5	1087.4
Starting Torque (Dry)	lb-ft	9	17	35	57	89	146	230	383	612
	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	1.10	1.37	1.86	1.95	2.51	3.02	3.61	4.27	4.34
		110VDC	0.30	0.36	0.44	0.48	0.62	0.75	0.90	1.03
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	5	7	9	13	17	23	33	45	70
	kg	2.27	3.18	4.08	5.90	7.71	10.43	14.97	20.41	31.75

SFDC Operation:

When current is applied to the coil in the magnet body, a magnetic field is created which attracts the armature toward the rotor face. This causes the outer disc to be squeezed between the inner discs, allowing torque to be transmitted from the input (rotor) to the output (spider). The magnet body is held stationary by means of an anti-rotation hole as specified by the customer.

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





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Dimensions — Inches (mm)		395	435	475	520	580	640	720	795	925	
Overall 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)	
Overall Length (ref)	B	2.56 (65.02)	2.75 (69.85)	3.06 (77.72)	3.37 (85.60)	3.56 (90.42)	3.75 (95.25)	4.16 (105.66)	4.75 (120.65)	5.44 (138.18)	
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)	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)	6.880 (174.752)	
Rotor Bore	Min	D	0.562 (14.275)	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)	2.000 (50.800)	2.250 (57.150)	2.875 (73.025)
Magnet Body Diameter	E	3.07 (77.98)	3.38 (85.85)	3.68 (93.47)	4.05 (102.87)	4.50 (114.30)	5.00 (127.00)	5.58 (141.73)	6.20 (157.48)	7.22 (183.39)	
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)	
Spider* 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	0.009 (0.229)	0.009 (0.229)	0.009 (0.229)	0.010 (0.254)	0.011 (0.279)	0.012 (0.305)	0.014 (0.356)	0.016 (0.406)	0.020 (0.508)	
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	2.36 (59.94)	2.56 (65.02)	2.80 (71.12)	3.12 (79.25)	3.30 (83.82)	3.50 (88.90)	3.88 (98.55)	4.40 (111.76)	5.06 (128.52)	
Spider Length	M	1.10 (27.94)	1.13 (28.70)	1.33 (33.78)	1.44 (36.58)	1.52 (38.61)	1.55 (39.37)	1.73 (43.94)	2.04 (51.82)	2.34 (59.44)	

* Recommended bolt pattern; others optional, contact SEPAAC