

Magnetic Couplings

FCM Series

FCL Series

FCD Series

Catalog

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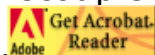
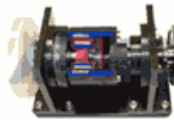
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MAGNETIC COUPLINGS

Magnetic couplings are employed in seal-less, leak-free magnetic drive pumps used to handle volatile, flammable, corrosive, abrasive, toxic or foul smelling liquids. The inner and outer magnet rings are fitted with permanent magnets, hermetically sealed from the liquids, in a multipole arrangement.

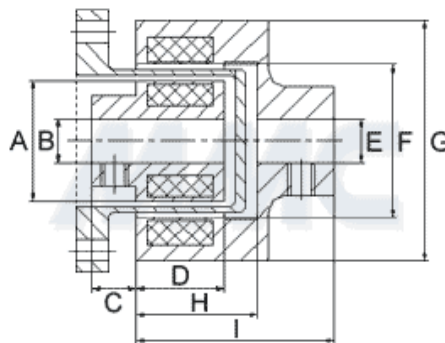
The inner and outer magnetic rotors are locked together by magnetic forces and work as a monous coupling. The permanent-permanent magnet rings create neither slippage nor induction current rotation. When excessive torque is applied, the magnets will decouple, they will not recouple unless the pump is stopped.



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Permanent magnetic couplings offer an efficient, leak-proof, cost effective, and more reliable alternative to various conventional sealing methods.



Technical and Assembly Data

P/N	Torque (N.M)	Torque (Ft. Lb.)	Inner Rotor (mm)				Outer Rotor (mm)			

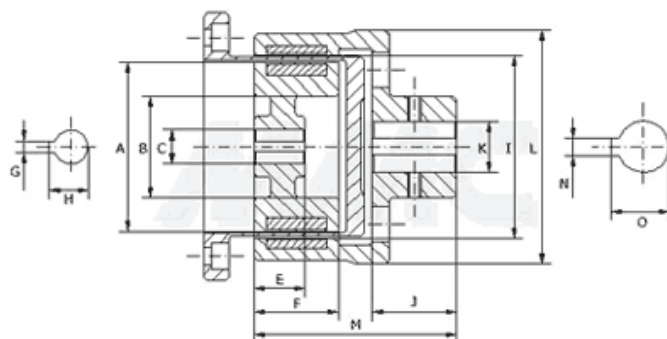
		Lbs.)	A	B	C	D	E	F	G	H	I
FCM-0.1	0.1	0.07	12.7	4	7	15	6	17.5	26	19	27
FCM-0.3	0.3	0.22	22	8	8	16	8	28	44	22	36
FCM-1	1.0	0.7	28	10	12	20	10	35	52	28	44
FCM-3	3.0	2.2	35	12	16	25	12	43	60	35	55
FCM-10	10.0	7.4	58	16	20	35	20	66	90	50	80

1. Air gap, $g = 1/2 (F - A)$, can be designed per customers' requirements.
2. Working temperature: NdFeB: $< 140^{\circ}\text{C}$, SmCo2:17: $< 280^{\circ}\text{C}$.
3. The inertia balance grade for the inner and outer rotor is 6.3G.
4. The couplings can be designed and manufactured to meet customers' requirements



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- * The transmissible torque is from 1N.m to 320NM.
- * The transmissible strength is from 1N to 500N.

Technical and Assembly Data

P/N	Torque N.M.max	Torque (Ft. Lbs.)	Inner Rotor (mm)							Outer Rotor (mm)						
			A	B	C	E	F	G	H	I	J	K	L	M	N	O
FCL-3	3	2.2	42	20	10	15	25	3	11.2	49	30	18	68	75	6	20.8
FCL-8	8	5.9	58	26	12	18	35	4	13.7	66	30	18	90	85	6	20.8
FCL-																

16	16	11.8	58	26	14	20	62	4	15.8	66	40	19	90	120	6	21.8
FCL-22	22	16.2	88	50	20	30	50	6	22.8	97	50	24	122	120	8	27.3
FCL-30	30	22.1	88	50	24	30	62	6	26.8	97	50	28	122	130	8	31.3
FCL-50	50	36.9	122	80	30	30	50	8	33.3	132	60	38	160	130	10	41.3
FCL-65	65	47.9	122	80	30	40	65	8	33.3	132	60	38	160	145	10	41.3
FCL-80	80	59.0	142	90	35	40	65	10	38.8	152	80	42	180	165	12	45.3
FCL-110	110	81.1	142	90	35	40	80	10	38.8	152	80	42	180	180	12	45.3
FCL-140	140	103.3	142	90	40	40	110	12	43.8	152	80	48	180	210	14	51.8

1. Air gap, $g = 1/2 (I - A)$, can be designed per customers' requirements.

2. Working temperature: NdFeB: < 140°C, SmCo2:17: < 280°C.

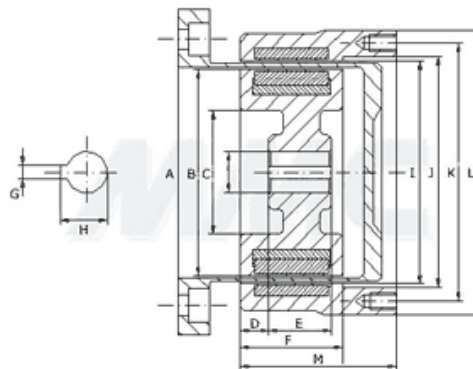
3. The inertia balance grade for the inner and outer rotor is 6.3 G.

4. The couplings can be designed and manufactured to meet customers' requirements



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* The transmissible torque is from 1N.m to 320NM.

* The transmissible strength is from 1N to 500N.

Technical and Assembly Data

P/N	Torque N.M.max	Torque (Ft. Lbs.)	Inner Rotor (mm)								Outer Rotor (mm)				
			A	B	C	D	E	F	G	H	I	J	K	L	M

FCD-3	3	2.2	42	20	10	5	15	25	3	11.2	49	52	60/6M4x60°	68	50
FCD-8	8	5.9	58	26	12	10	18	35	4	13.7	66	70	80/6M5x60°	90	65
FCD-16	16	11.8	58	26	14	30	20	62	4	15.8	66	70	80/6M6x60°	90	95
FCD-22	22	16.2	88	50	20	10	30	50	6	22.8	97	100	110/8M6x45°	120	85
FCD-30	30	22.1	88	50	24	20	30	62	6	26.8	97	100	110/8M6x45°	120	100
FCD-50	50	36.9	122	80	30	10	30	50	8	33.3	132	136	148/8M8x45°	164	85
FCD-65	65	47.9	122	80	30	20	30	65	8	33.3	132	136	148/8M8x45°	164	100
FCD-80	80	59.0	142	90	35	20	30	65	10	38.8	152	156	168/8M8x45°	184	100
FCD-110	110	81.1	142	90	35	30	30	80	10	38.8	152	156	168/12M8x30°	184	115
FCD-140	140	103.3	142	90	40	40	40	110	12	43.8	152	156	170/12M10x30°	190	145
FCD-180	180	132.8	142	90	40	60	50	140	12	43.8	152	156	170/12M10x30°	190	180
FCD-220	220	162.3	142	90	48	70	60	160	14	52.3	152	156	170/12M10x30°	190	200
FCD-280	280	206.5	142	100	48	90	60	180	14	52.3	152	156	170/12M12x30°	190	230
FCD-320	320	236.0	164	110	50	90	60	190	16	55.3	174	178	196/12M12x30°	214	230
FCD-380	380	280.3	164	110	50	100	80	240	16	55.3	174	178	196/12M12x30°	214	280

1. Air gap, $g = 1/2 (I - A)$, can be designed per customers' requirements.
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