

## Electromagnetic Stationary Field Multi-Disc Clutch

Clutch with inner driver for torque transmission between shaft and free wheeling gear part.

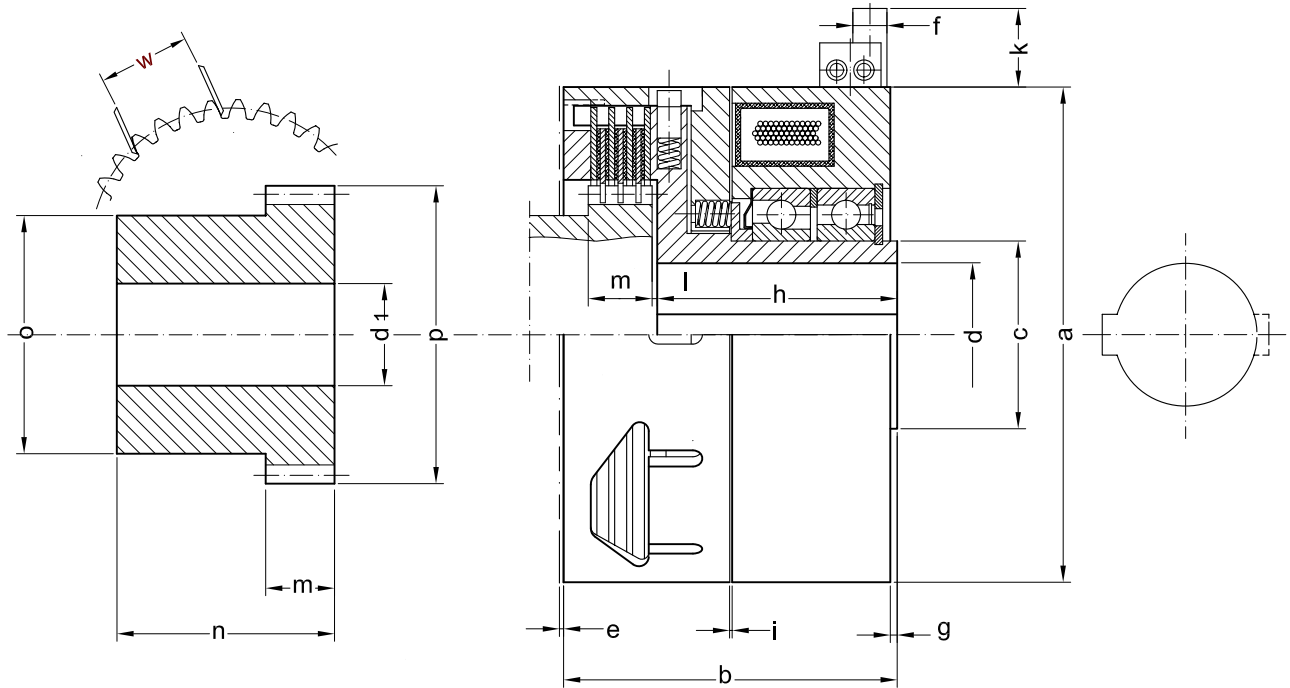
For dry operation, coil voltage 24 V DC

- ◆ Clutch with adjustable air gap.
- ◆ For operation at lower speed rates and drive power.
- ◆ With wear resistant steel- /sinter discs or discs with friction linings.
- ◆ Suited to connect two shafts of the same axis.
- ◆ Available accessory: Inner driver as per dimension drawing.
- ◆ Vertical mounting, only when ordered with application guidelines.

This clutch is especially suited for external gear application:

For the operation of feed drives, as well as main drives with steady torque at low speed rates. The magnetic flux does not circulate through the disc stack and permits the use of non magnetic friction materials.

The clutch can be controlled and if required adjusted very easily.



Data and Dimensions		FM 0,6	FM 1,2	FM 2,5	FM 5	FM 10	FM 20	FM 40	FM 80	FM 160	FM 315	
Static torque	Nm	10	20	40	80	160	320	630	1250	2500	5000	
Dynamic torque	Nm	8	16	32	63	125	250	500	1000	2000	4000	
Idling torque	Nm	0,04	0,06	0,10	0,15	0,25	0,40	0,80	1,50	3,00	6,00	
Friction work per engagement	kJ	2,5	3,0	5,5	7,0	13	20	30	40	60	70	
Thermal capacity	W	30	40	55	80	110	150	220	300	600	900	
Speed maximum	min <sup>-1</sup>	3000	2800	2500	2200	1800	1500	1200	800	600	350	
Torque-time constant <sup>1)</sup>	s	0,07	0,08	0,10	0,12	0,14	0,22	0,35	0,55	0,85	1,20	
Disengagement time <sup>2)</sup>	s	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,08	0,10	0,15	
Coil power consumption at 20 °C	W	15	25	30	40	50	60	60	75	160	210	
Inertia moment side A	10 <sup>-3</sup> kgm <sup>2</sup>	0,07	0,08	0,10	0,12	0,14	0,22	0,35	0,55	0,85	1,20	
Mass (weight)	kg	1	1,6	2,5	3,8	6	10,5	18,5	45	92	156	
Ø a	mm	66	80	95	113	135	167	205	260	315	392	
b	mm	60	68	75	81	90,5	105	124	185	232	260	
Ø c	mm	20	25	30	40	50	65	75	90	120	150	
Ø d H7	mm	15	20	25	30	40	50	60	70	90	110	
e	mm	1,2	1,3	1,5	1,5	1,5	1,7	1,8	2,2	2,5	3,0	
Ø f / k	mm	6 / 50	8 / 50	8 / 50	8 / 50	10 / 100	10 / 100	10 / 100	12 / 150	16 / 150	20 / 150	
h	mm	43	47	53	58	63	74	89	132	162	194	
i airgap (clutch engaged)	mm	0,2...0,4	0,2...0,4	0,3...0,5	0,3...0,5	0,4...0,6	0,4...0,6	0,5...0,8	0,5...0,8	0,7...1,2	0,7...1,2	
Keyway DIN 6885 - 2		1	1	1	1	1	1	1	1	2	2	
Inner driver	Ø d <sub>1</sub>	mm	12	16	20	25	30	40	45	56	63	80
	l	mm	1,0	1,5	1,5	1,5	1,5	2	2	3	3	3
	m	mm	15	15	18	18	20	22	25	35	45	45
	n	mm	56	60	63	75	90	100	112	140	185	235
	Ø o	mm	26	38	38	52	70	88	112	140	185	235
	Ø p	mm	34,5	45	50	65	84	102	126	160	204	260
	No. of teeth x module	mm	21 x 1,5	28 x 1,5	18 x 2,5	24 x 2,5	26 x 3	32 x 3	40 x 3	38 x 4	49 x 4	50 x 5
	w tooth width of	mm	11,446	16,021	11,626	19,206	23,148	32,257	41,440	55,173	67,598	84,568
w tooth width up to measured over tooth number	mm	11,473	16,048	11,656	19,240	23,182	32,291	41,478	55,211	67,636	84,615	

1) up to 60% of full torque rate    2) drop to 10% of full torque rate