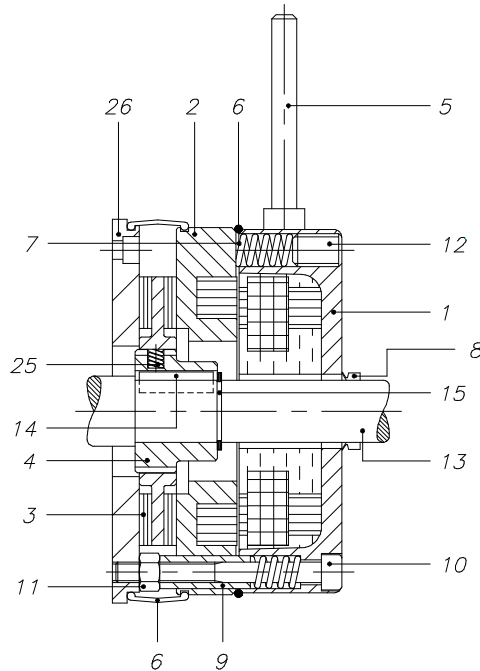
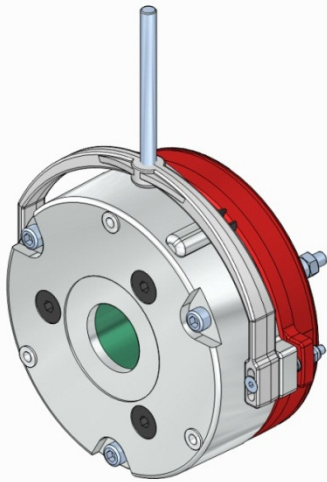




**O.E.G. SPRING-PRESSURE SAFETY BRAKES IN THREE-PHASE
ALTERNATE CURRENT, SINGLE-PHASE AND DIRECT CURRENT
MS and MSFM TYPE**

TECHNICAL DATASHEET



MS-MS/FM

- 1 Magnet casing
- 2 Mobile anchor
- 3 Brake disc
- 4 Driving hub
- 5 Hand release lever (OPTIONAL)
- 6 Protection + "O" ring (OPTIONAL)
- 7 Thrust spring
- 8 "V" ring (OPTIONAL)
- 9 Guide pipe
- 10 Fastening screw
- 11 Locking nut
- 12 Braking torque adjusting screw (OPTIONAL)
- 13 Driving shaft
- 14 Key
- 15 Seeger ring
- 25 Antivibration 'O' ring (OPTIONAL)
- 26 Flange (OPTIONAL)

The O.E.G. MS and MSFM type brakes are safety brakes, since they act in the absence of power supply through the pressure exerted by springs. When the magnet case (1) is energized, the mobile anchor (2) is attracted, against the force of the springs (7), thus leaving it free to rotate the shaft (13), on which is mounted the brake disc (3) sliding axially on the splined hub (4). Disconnecting the power supply, the springs (7) push the mobile armature (2), sliding on the guides (9), pressing the brake disc (3) against the flange (26). In this way the shaft (13) is braked. The construction creates a softer redundancy making the equipment failsafe.



FEATURES

Braking torque from 5 Nm to 250 Nm.

Normal input voltage 230 V Δ 400 V Y 50 Hz for direct supply from the mains.

All voltages in three-phase alternate current available on request.

Possible single-phase connection with appropriate condenser (see "Electric connections").

Possible direct current winding for power supply with appropriate current rectifier (see "Electric accessories").

S1 Service, Class F insulation, IP55 protection (on request) for assembly under motor guard.

Asbestos-free noiseless friction packing.

Steel brake disc.

Steel driving hub with antivibration 'O' ring.

No axial load on the driving shaft.

Braking torque adjustable from 100% to 35%.

Possible assembly of standard hand release or patented safety device.

High connect/disconnect speed.

TYPICAL APPLICATION

Automations with very high number of interventions (alternate current).

Lifting and handling machines.

Packaging and wrapping machines.

Electric trucks (direct current version).

Gearmotors .

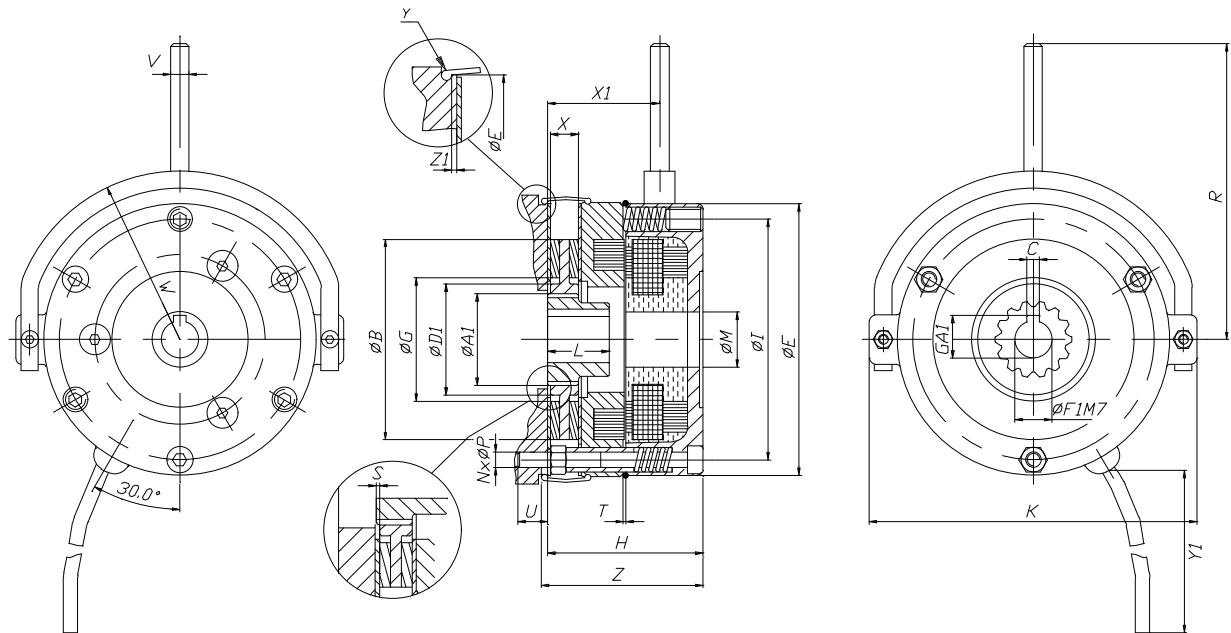
**DIMENSIONS**

With reference to the drawing, see brake dimensions in the table.

Where present, the letter superscript indicates possible constructive alternatives that have to be considered coupled by apex (i.e. choosing C¹ means you have GA¹, X¹, Y¹, Z¹)

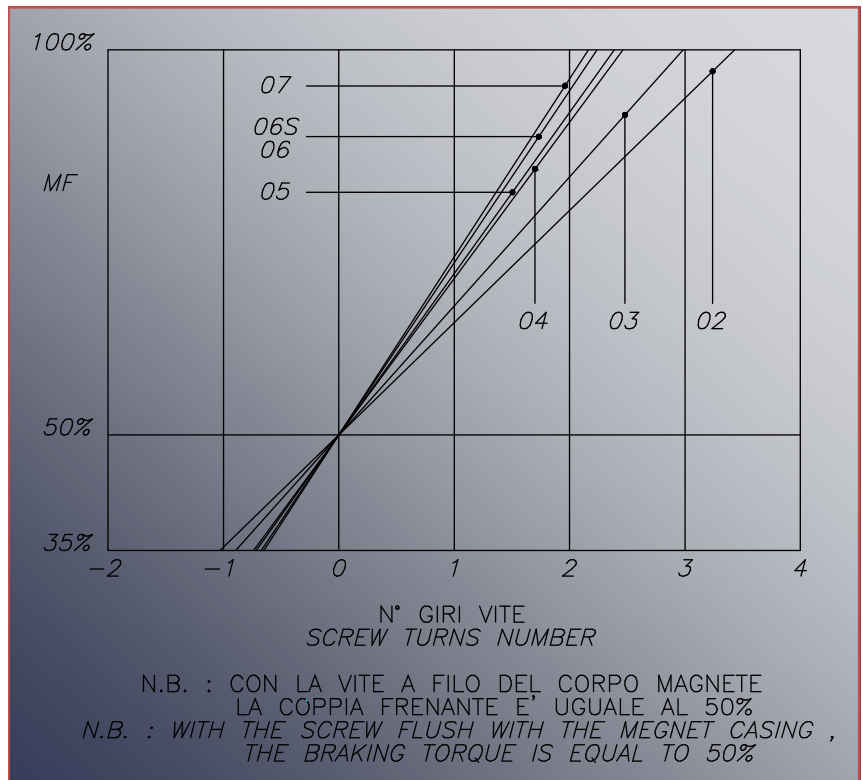
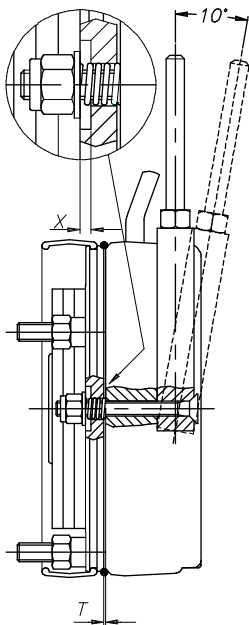
	02	03	04	05	06S	06	07	08
M_F[Nm]	5	10	20	40	70	100	200	250
A	25	30	35	42	50	50	65	65
A¹	30	35	42	50	50	65	74	74
B	65	75	85	102	124	133	153	182
C	4	5	6	8	8	12	12	12
C¹	5	6	8	8	8	12	14	14
D	30	34	41	46,5	56	56	76	76
D¹	36	41	48	56	56	76	84	84
E	88	101	116	135	160	170	190	230
FM7	12	15	20	25	30	30	40	40
F¹M7	15	20	25	30	30	40	45	45
G	40	50	60	65	85	85	114	132
GA	13,8	17,3	22,8	28,3	33,3	33,3	43,3	43,3
GA¹	17,3	22,8	28,3	33,3	33,3	43,3	47,8	47,8
H	49	55	66	73	86	86	91	105
K	106	120	135	155	187	194	215	254
I	78	88	100	120	140	150	170	206
L	20	20	23	26	35	35	35	51
M	15	18	23	28	32	43	43	43
M¹	18	23	28	32	32	43	48	48
N	3	3	3	3	3	3	6	6
P	M5	M5	M6	M6	M8	M8	M8	M10
R	116	124	134	160	198	200	217	247
S	1	1	1	1	1	1	1	1
T	0,2	0,2	0,3	0,3	0,35	0,35	0,4	0,5
U	10	10	10	13	13	13	13	15
V	6	6	6	7	8	8	8	8
W	57	65	75	82	96	98	115	145
X	9	9	9	9	10	10	10	16
X¹	35	37	43	47	59	59	60	74
Y	1	1	1	1,25	1,25	1,25	1,5	1,5
Y¹	300	300	400	400	500	500	600	600
Z	52	58	69	76,5	89	90	95	112,65
Z¹	1	1	1	1	1,5	1,5	1,5	3
PESO[daN]	1,3	1,9	3	5,6	9,7	10,3	14,7	24,5
P [VA]	60	80	110	250	470	550	600	1200
C [μF]	4,7	4,7	6,3	9,5	16	22	30	40

DRAWING



TECHNICAL INFORMATION

The chosen braking torque is obtained adjusting the regulation screws (12), on the back of the brake. Completely unscrewing does not allow braking torque falls below 35% safety value. Tightening the screws until in line with the back surface, the braking torque adjustment will be 50%.





Adjusting the braking torque to low values, allows the brake to release even with higher air-gaps than the adjustment X value for the manual release.

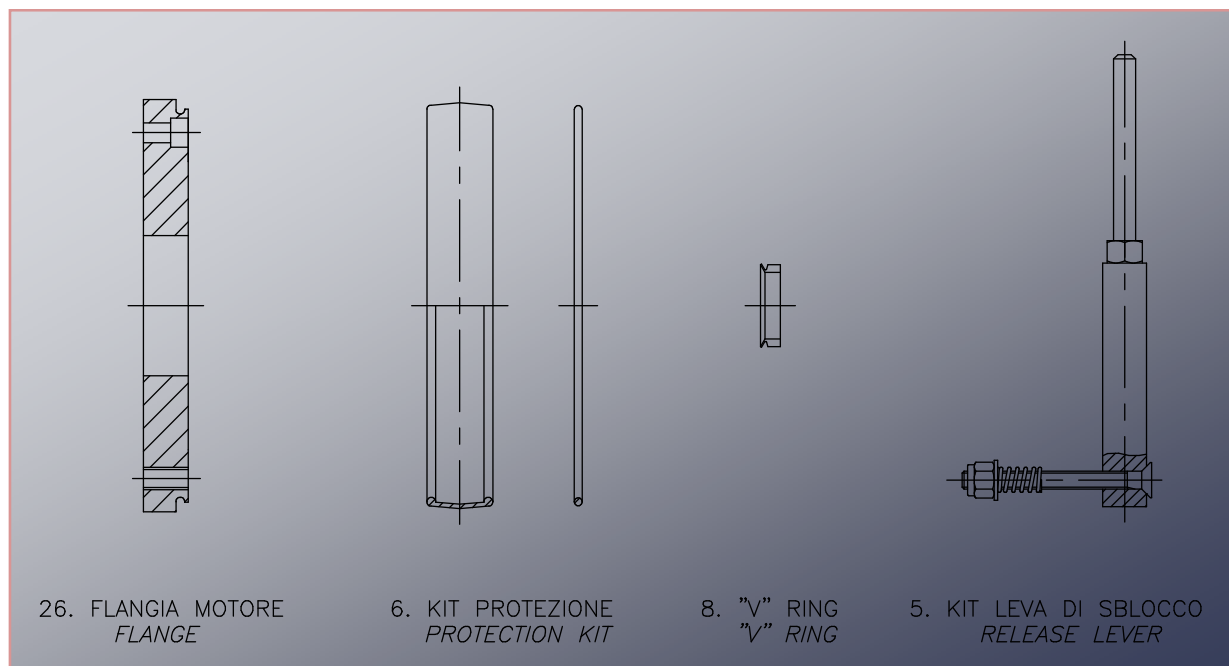
For safety reasons, the X value should be increased to a value that will not allow brake release with the adjustment value of the braking torque.

The lever rotation angle will increase accordingly.

When a patented safety release is mounted on the brake, adjusting the brake torque to lower values will not require any further operation.

ACCESSORY DEVICES

The accessory devices depicted here are present for the series of brakes.
For further details contact the manufacturer.





BRAKE SELECTION

Following table shows the parameter value for right brake selection.

		02	03	04	05	06S	06	07	08
Braking torque	M_F [Nm]	5	10	20	40	70	100	150	250
Air Gap	T_{min} [mm]	0,2	0,2	0,3	0,3	0,35	0,35	0,4	0,5
	T_{max} [mm]	0,5	0,5	0,6	0,6	0,7	0,7	0,8	1
Max speed	n_{max} [min ⁻¹]	3600	3600	3600	3600	3000	3000	1500	1500
release lever height	X [mm]	0,6	0,8	1	1	1,2	1,2	1,2	1,2
Brake disc moment of inertia	J [kgcm ²]	0,6	1,1	1,6	3,5	8,8	10,3	22,5	60
Brake life	$W^{1)_{tot}}$ [MJ]	260	370	500	750	1000	1100	1650	2700
	$W^{2)_{2}}$ [MJ]	15,6	22,4	30	45	70	77	132	225
$t_1^{3)}$	[ms]	4	4	6	8	16	16	16	16
$t_2^{3)}$	[ms]	20	40	60	90	120	140	180	200

1.For friction packing wear up to a 1 mm thickness.

2.Between two wear adjustments from T_{min} to T_{max} .

3.Value for AC connection. For value for DC connection, please contact the manufacturer.



BRAKE WORKING DIAGRAM FOR CALCULATIONS

MAXIMUM WORK
FOR NUMBER OF
INTERVENTIONS
PER HOUR

