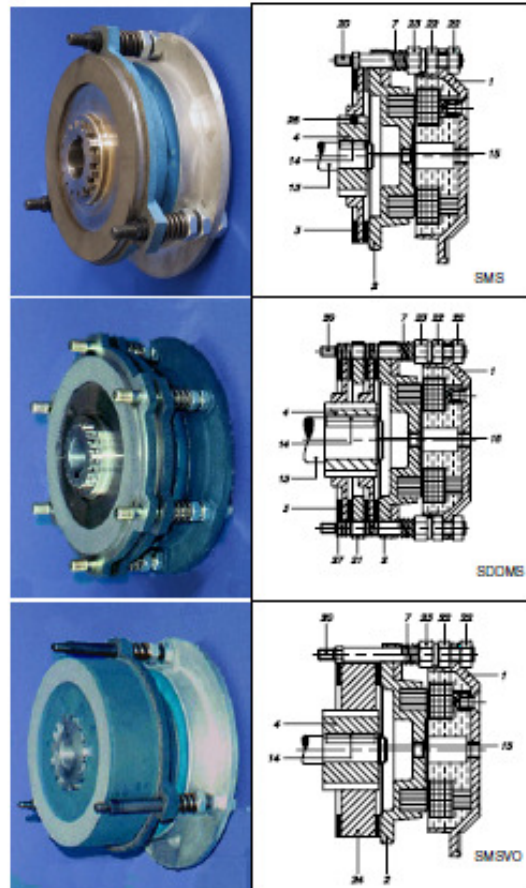
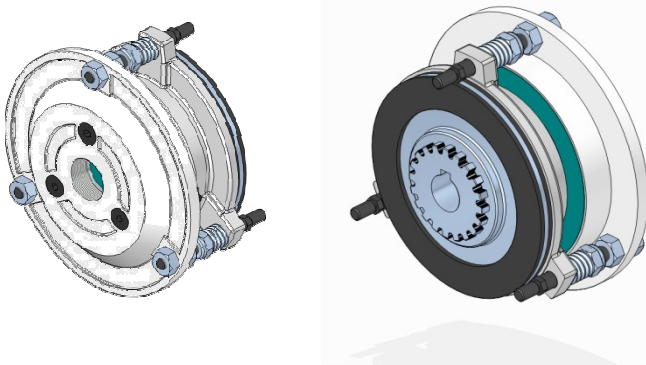




O.E.G. SPRING-PRESSURE SAFETY BRAKES IN THREE-PHASE ALTERNATE CURRENT, SINGLE-PHASE ALTERNATE CURRENT AND DIRECT CURRENT: SMS, SDDMS, SMSVO TYPE

TECHNICAL DATASHEET

- 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. SMS, SDDMS and SMSVO 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 10 Nm to 1100 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.

No axial load on the driving shaft.

High connect/disconnect speed.

Braking torque adjustable from 100% to 35%.

Reduced magnetization of the driving shaft (in direct current version).

Possible progressive start and braking (SMSVO series).

Possible doubling of the braking torque and brake life (SDDMS series).

Asbestos-free noiseless friction packing.

Steel brake disc.

Steel driving hub with antivibration 'O' ring.

Possible assembly of standard hand release or patented safety device.

TYPICAL APPLICATION

Heavy duty in general.

Applications with very high intervention frequency.

Lifting.

Bridge crane.

Crane.

Conveyor belts.

Geared motors.

Transfer machines.



DIMENSIONS

With reference to the drawing, see standard brake dimensions in the table, [mm].

	MEC63SMS	MEC71SMS	MEC80SMS	MEC90SMS	MEC100SMS
M_F[Nm]	10	20	40	50	75
A	46	46	46	62	62
B	100	110	125	140	153
C	5	6	8	8	8
D	58	58	58	80	80
E	123	138	155	175	188
F	14	18	24	28	28
G	65	75	85	102	114
GA	16,3	20,8	27,3	31,3	31,3
H	65	72	80	82	88
I	110	122	138	155	170
L	16	16	16	19	19
S	8	8	8	9	9
U	10	10	15	15	15
X	9,5	9,5	9,5	10	10
J	0,0002	0,0003	0,0007	0,0012	0,0016
Mass[daN]	2,3	2,8	4	5,4	7
P [VA]	75	110	185	225	270
	MEC63SMSVO	MEC71SMSVO	MEC80SMSVO	MEC90SMSVO	MEC100SMSVO
M_F[Nm]	10	20	40	50	75
A	46	46	46	62	62
B	100	110	125	140	153
C	5	6	8	8	8
E	123	138	155	175	188
F	14	18	24	28	28
G	65	75	85	102	114
GA	16,3	20,8	27,3	31,3	31,3
H	93	100	108	111	117
I	110	122	138	155	170
L	32	32	32	35	35
S	8	8	8	9	9
U	10	10	15	15	15
X	37	37	37	39	39
J	0,0028	0,0033	0,007	0,01	0,014
Mass[daN]	3,6	4,5	6,5	8,6	11,4
P [VA]	75	110	185	225	270

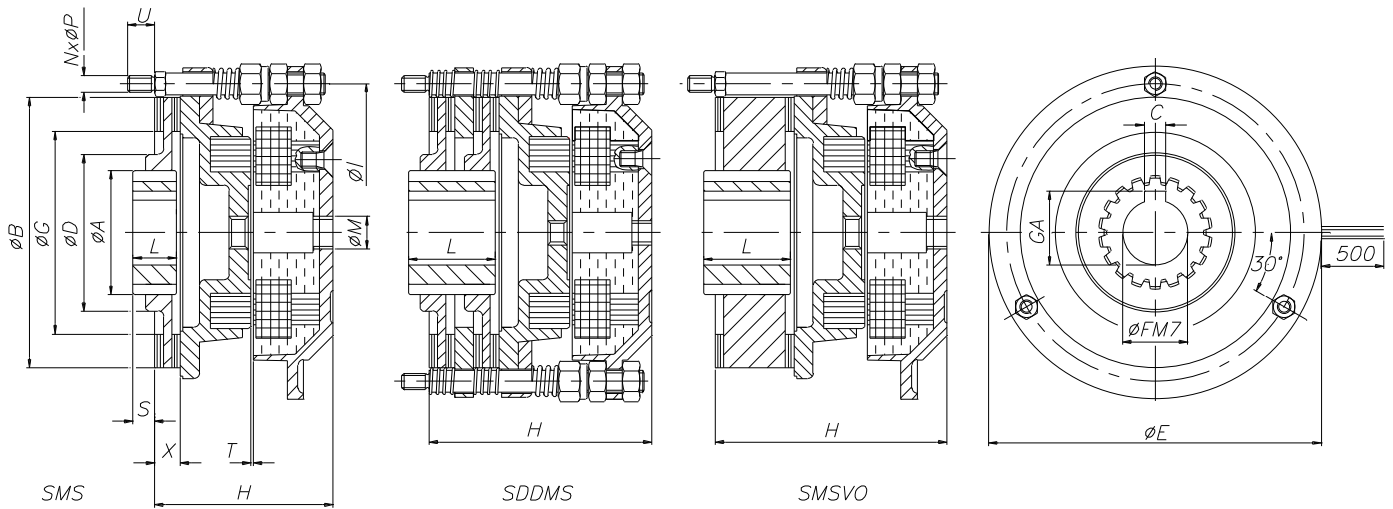


SMS	70	80	90	100	110	120	140	160	180	200DD
M_F[Nm]	10	20	40	50	75	100	150	200	300	750
A	46	46	46	62	62	62	62	74	90	90
B	100	110	125	140	153	180	190	205	250	250
C	5	6	8	8	8	10	10	12	14	14
D	58	58	58	80	80	80	80	90	110	110
E	130	145	170	180	200	230	240	255	329	329
F	14	18	24	28	28	34	34	42	48	48
G	65	75	85	102	114	133	143	155	155	155
GA	16,3	20,8	27,3	31,3	31,3	37,3	37,3	45,3	51,8	51,8
H	65	72	80	82	88	97	116	120	155	170
I	115	125	145	160	170	200	210	225	290	290
L	16	16	16	19	19	19	35	40	52	52
S	8	8	8	9	9	11	11	11	11	11
U	10	10	15	15	15	16	16	16	25	25
X	9,5	9,5	9,5	10	10	10	17	17	20	12
J	0,0002	0,0003	0,0007	0,0012	0,0016	0,003	0,005	0,006	0,015	0,028
Mass[daN]	2,3	3,1	4,2	6	7,5	10,5	19	29	42	52
P [VA]	75	110	185	225	270	330	530	760	825	1100
SMSVO	70	80	90	100	110	120	140	160	180	200
M_F[Nm]	10	20	40	50	75	100	150	200	300	750
A	46	46	46	62	62	62	62	74	90	90
B	100	110	125	140	153	180	190	205	250	250
C	5	6	8	8	8	10	10	12	14	14
E	130	145	170	180	200	230	240	255	329	329
F	14	18	24	28	28	34	34	42	48	48
G	65	75	85	102	114	133	143	155	155	155
GA	16,3	20,8	27,3	31,3	31,3	37,3	37,3	45,3	51,8	51,8
H	93	100	108	111	117	97	116	120	155	170
I	115	125	145	160	170	200	210	225	290	290
L	32	32	32	35	35	19	35	40	52	52
S	8	8	8	9	9	11	11	11	11	11
U	10	10	15	15	15	16	16	16	25	25
X	37	37	37	39	39	39	57	67	68	88
J	0,0028	0,0033	0,007	0,001	0,014	0,027	0,053	0,081	0,237	0,316
Mass[daN]	3,6	4,8	6,7	9,2	11,4	15,5	28	42,7	59	63
P [VA]	75	110	185	225	270	330	530	760	825	1100
SDDMS						120	140	160	180	200TD¹
M_F[Nm]						200	300	400	600	1100
A						62	62	74	90	90
B						180	190	205	250	250
C						10	10	12	14	14
D						80	80	90	110	110
E						230	240	255	329	329
F						34	34	42	48	48
G						133	143	155	155	155
GA						37,3	37,3	45,3	51,8	51,8
H						118	120	124	160	200
I						200	210	225	290	290
L						19	35	40	52	80
S						11	11	11	11	11
U						16	16	16	25	25
X						10	11	11	12	12
J						0,006	0,009	0,011	0,028	0,042
Mass[daN]						13	21,7	28	48	59
P [VA]						330	530	760	825	1100

1 triple disc



DRAWINGS



TECHNICAL INFORMATION

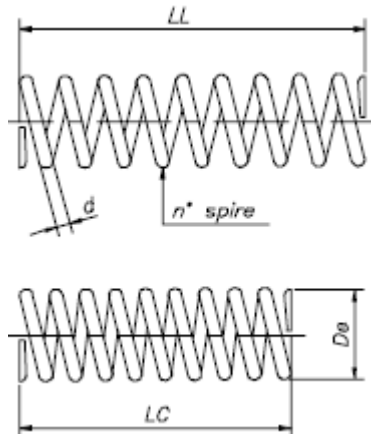
SMS	70S MEC63S	80S MEC71S	90S MEC80S	100S MEC90S	110S MEC100S	120S	140S	160S	180S	200S
M ²	25	25	25	25	25	28	48	48	50	50
N x P	3xM6	3xM6	3xM8	3xM8	3xM10	3xM12	3xM12	3xM12	3xM614	3xM16
T ³	0,3	0,3	0,3	0,3	0,3	0,4	0,4	0,5	0,5	0,5
P [VA]	75	110	185	225	270	330	530	760	825	1100
C [µF] ⁴	4,7	6,3	9,5	13	16	22	30	35	40	-

2) Maximum value

3) For DD brakes, increase the table values by 30%

4) For triangle connection. The maximum braking torque is lower by 30%.

The braking torque can be adjusted by means of the self-locking nuts that compress the pressure spring. To obtain the maximum braking torque, compress the spring according to the following table.

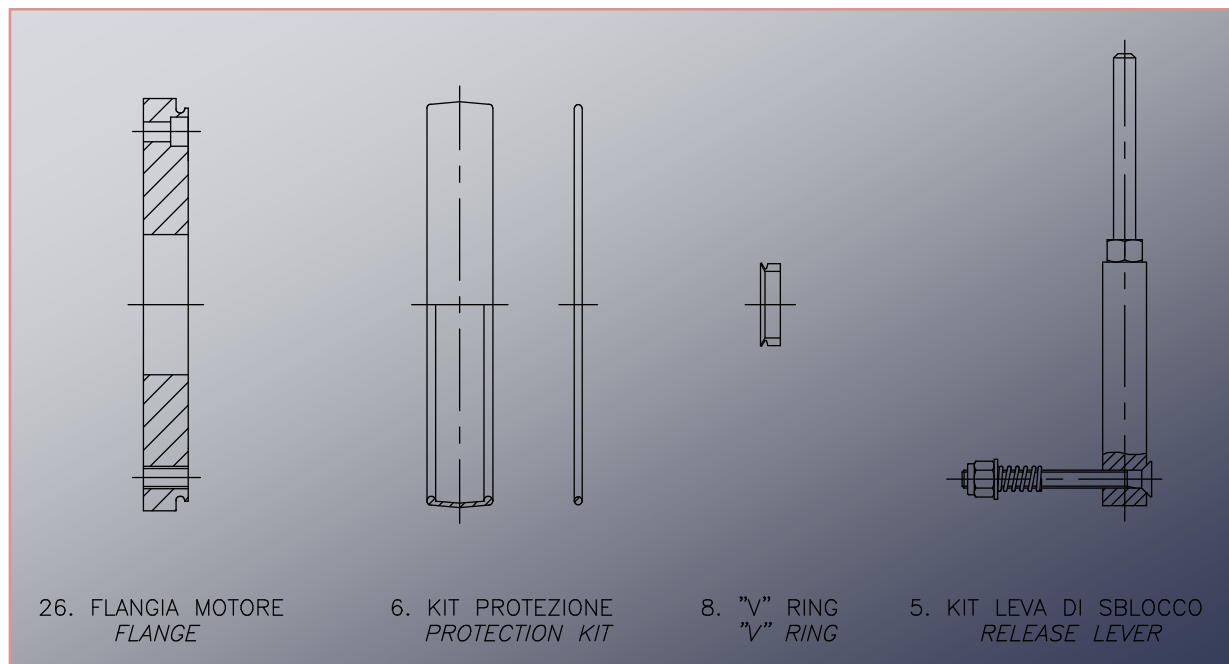




	70S MEC63S	80S MEC71S	90S MEC80S	100S MEC90S	110S MEC100S	120S	140S	160S	180S	200S DD
LL	17	20	20	20	20	20	28	28	43	41
LC	11	14,7	14,4	16,3	16,4	16,1	23,8	22,9	33	29
De	11,5	12,1	15,7	16,5	16,9	19,5	20,5	20,5	23	28
d	1,5	1,8	2,6	3	3,2	3,5	3,5	3,5	4	4,5
n	5,75	5	5,75	5,25	4,75	4,25	5,25	5,25	7	6
SDDMS						120S DD	140S DD	160S DD	180S DD	200S TD¹
LL						20	28	28	43	41
LC						17,4	23,4	20,6	29,5	29
De						19,5	19	19	22	28
d						3,5	3	3	3,5	4,5
e						4,25	5,25	5,25	7	6

ACCESSORY DEVICES

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





BRAKE SELECTION

The following table shows the characteristic values to be taken into consideration for the check calculation of the correct brake selection.

		70S MEC63S	80S MEC71S	90S MEC80S	100S MEC90S	110S MEC100S	120S	140S	160S	180S	200S DD
Braking torque	MF [Nm]	10	20	40	50	75	100	150	200	300	750
	T _{min} [mm]	0,3	0,3	0,3	0,3	0,3	0,4	0,4	0,5	0,5	0,65
Air Gap	T _{max} [mm]	0,7	0,7	0,7	0,7	0,7	0,8	0,8	1	1	1,15
	n _{max} [min ⁻¹]	3600	3600	3600	3600	3600	3000	3000	3000	3000	3000
Brake life	W ¹⁾ _{tot} [MJ]	750	1000	1100	1400	1650	2700	6000	7500	10000	25000
	W ²⁾ ₂ [MJ]	60	80	88	112	132	216	240	360	875	875
t ₁ ²	[ms]	5	6	6	8	8	10	15	15	25	35
t ₂ ³	[ms]	20	25	25	35	35	40	60	60	100	170
SDDMS							120S DD	140S DD	160S DD	180S DD	200S TD ¹
Braking torque	MF [Nm]						200	300	400	600	1100
	T _{min} [mm]						0,5	0,5	0,65	0,65	0,75
Air Gap	T _{max} [mm]						0,9	0,9	1,15	1,15	1,25
	n _{max} [min ⁻¹]						3000	3000	3000	3000	3000
Brake life	W ¹⁾ _{tot} [MJ]						5400	8000	10000	25000	37500
	W ²⁾ ₂ [MJ]						216	240	360	875	875
t ₁ ²	[ms]						10	15	15	25	35
t ₂ ³	[ms]						60	90	90	150	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

