

MS 12



Subject to technical changes

Framo Morat GmbH & Co. KG
Höchst 7 • D-79871 Eisenbach

Tel.: +49 (0) 7657 / 88-0
Fax: +49 (0) 7657 / 88-333

www.framo-morat.com
info@framo-morat.com

3-phase motors - 3x230/400V-50Hz

Output speed n_2 rpm	Output torque Nm ** at duty cycle			Transmission ratio	Motor speed n_1 rpm	Motor output kW ** at duty cycle			Self- locking	Max. limit switch range; output rotation
	40%	60%	100%			40%	60%	100%		
193	16	12	12	14,2:1	2750	0,4	0,3	0,3	So *	275
137,5	21	15,7	15,7	20:1	2750	0,4	0,3	0,3	So *	275
94,8	30	22,5	22,5	29:1	2750	0,4	0,3	0,3	So *	275
68	39,5	29,5	29,5	40,5:1	2750	0,4	0,3	0,3	So *	275
61	44	33	33	45:1	2750	0,4	0,3	0,3	So *	275
47,6	45,5	34	34	29:1	1380	0,3	0,23	0,23	So *	275
43,6	44	33	33	63:1	2750	0,4	0,3	0,3	So *	275
36,7	47	35	35	75:1	2750	0,4	0,3	0,3	So *	275
32,7	59	44	44	84:1	2750	0,4	0,3	0,3	Ss *	275
30,5	63	47	47	90:1	2750	0,4	0,3	0,3	Ss *	275
24,1	72	54	54	114:1	2750	0,4	0,3	0,3	Ss *	275
21,9	66	49	49	63:1	1380	0,3	0,23	0,23	So *	275
18,3	84	63	63	150:1	2750	0,4	0,3	0,3	Sd *	275
16,4	88	66	66	84:1	1380	0,3	0,23	0,23	Ss *	275
15,3	94,5	71	71	90:1	1380	0,3	0,23	0,23	Ss *	275
12,1	107,5	80,5	80,5	114:1	1380	0,3	0,23	0,23	Ss *	275
9,2	126	94,5	94,5	150:1	1380	0,3	0,23	0,23	Sd *	275
7,7	132	99	99	180:1	1380	0,3	0,23	0,23	Sd *	275
6,1	142	106,5	106,5	225:1	1380	0,3	0,23	0,23	Sd *	275
4,5	88	66	-	150:1	680	0,12	0,09	0,09	Sd *	275
3,8	92	68	-	180:1	680	0,12	0,09	0,09	Sd *	275
3	100	75	-	225:1	680	0,12	0,09	0,09	Sd *	275

Single-phase motors - 1x230V-50Hz

Output speed n_2 rpm	Output torque Nm (20% ED) ***	Transmission ratio	Motor speed n_1 rpm	Motor output kW	Self- locking
193,0	10,0	14,2:1	2750	0,28	So *
137,5	13,0	20,0:1	2750	0,28	So *
94,8	18,0	29,0:1	2750	0,28	So *
68,0	23,9	40,5:1	2750	0,28	So *
61,0	26,0	45,0:1	2750	0,28	So *
47,6	27,0	29,0:1	1380	0,25	So *
43,6	26,0	63,0:1	2750	0,28	So *
36,7	28,0	75,0:1	2750	0,28	So *
32,7	35,0	84,0:1	2750	0,28	Ss *
30,5	38,0	90,0:1	2750	0,28	Ss *
24,1	43,0	114,0:1	2750	0,28	Ss *
21,9	40,0	63,0:1	1380	0,25	So *
18,3	49,8	150,0:1	2750	0,28	Sd *
16,4	53,0	84,0:1	1380	0,25	Ss *
15,3	56,9	90,0:1	1380	0,25	Ss *
12,1	65,0	114,0:1	1380	0,25	Ss *
9,2	75,9	150,0:1	1380	0,25	Sd *
7,7	79,0	180,0:1	1380	0,25	Sd *
6,1	84,9	225,0:1	1380	0,25	Sd *

24V DC Permanentmagnet-Motor

Output speed n_2 rpm	Output torque Nm	Self-locking	Transmission ratio
140	16	So *	14,2 : 1
100	21	So *	20 : 1
69	30	So *	29 : 1
49	40	So *	40,5 : 1
44	45	So *	45 : 1
32	45	So *	63 : 1
27	48	So *	75 : 1
24	60	Ss *	84 : 1
22	65	Ss *	90 : 1
17,5	73	Ss *	114 : 1
13	88	Sd *	150 : 1
11	91	Sd *	180 : 1
8,9	96	Sd *	225 : 1

P = 0,3 kW
 $I_N = 25$ A
 30% Duty cycle

The output speed of Compacta gear motors with DC motors varies with the output torque.

Additional output table information:

*So = No self-locking
 Ss = Static self-locking
 Sd = Dynamic self-locking

** At 100% duty cycle (continuous operation) cooling is always required. With cooling, motors rated with 60% duty can be operated at 100% duty.

*** The stated single-phase torques are operational torques. The starting torque may be only 66% of the stated catalog torque. Please contact the manufacturer in case max. torque is required.

The gear motor can be overloaded by 50% for brief periods. Single-phase AC and DC motors may stall.

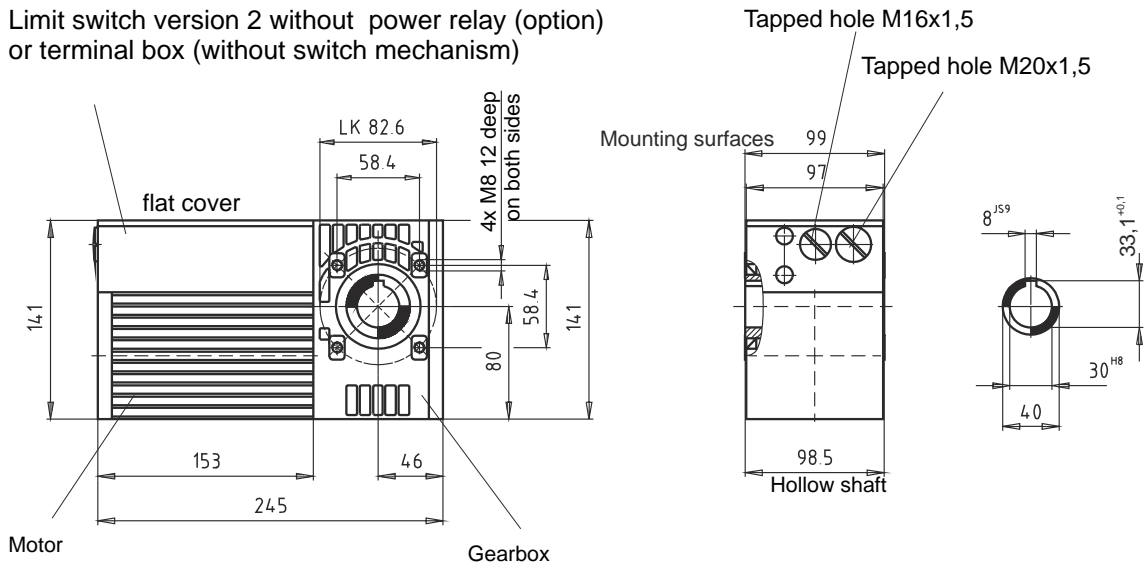
Please contact the manufacturer in case of the following operating conditions:

- Temperatures below 0°C (single-phase AC and DC motors: below 10°C)
- Temperatures above 40°C
- Strong vibrations

Dimensions

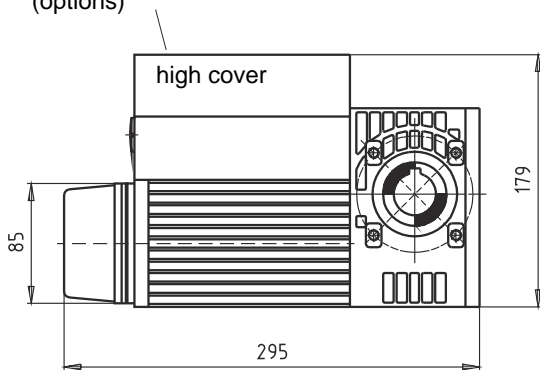
Standard drive with 3-phase or single-phase motor

Limit switch version 2 without power relay (option) or terminal box (without switch mechanism)

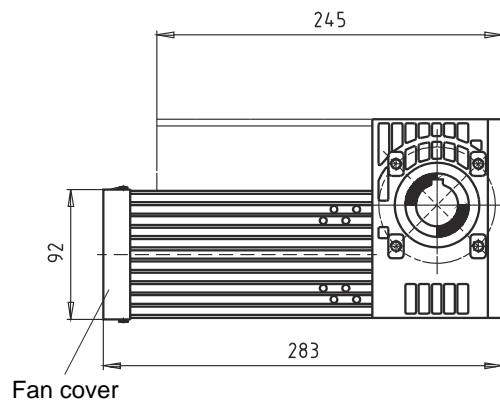


with motor brake (option)

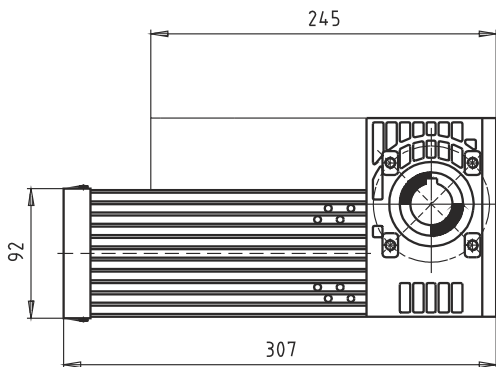
Limit switch version 1 with power relays, (options)



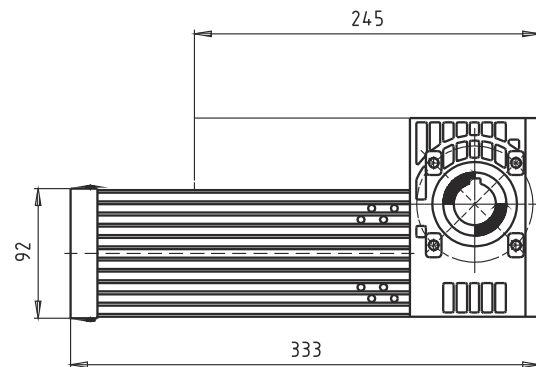
with rotor fan (option)



with rotor fan and motor brake or just motorized fan (option)



with motor brake and motorized fan (option)

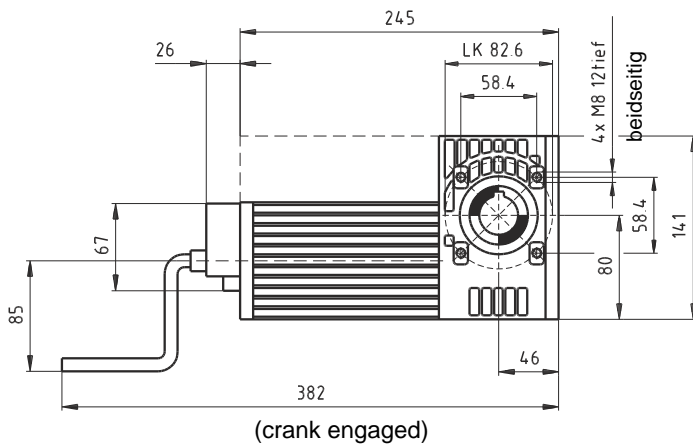


Some options may be combined

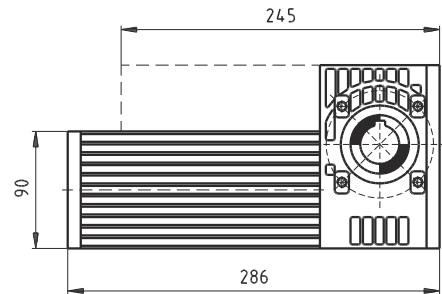
Subject to technical changes

Dimensions

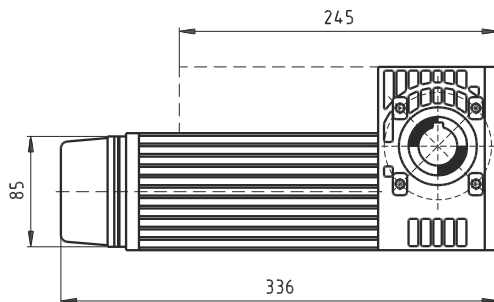
Hand crank with elec. interlock (option)
(removable)



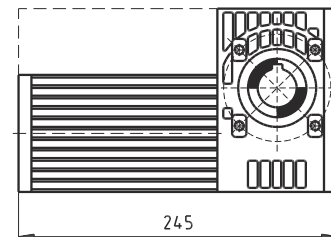
with DC motor (option)



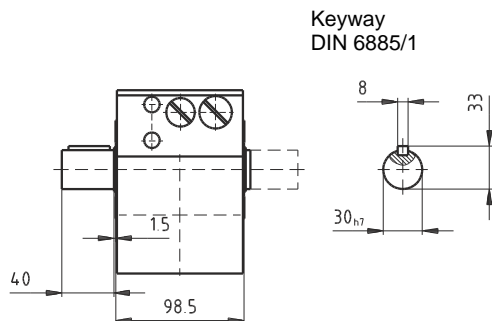
with DC motor and motor brake (option)



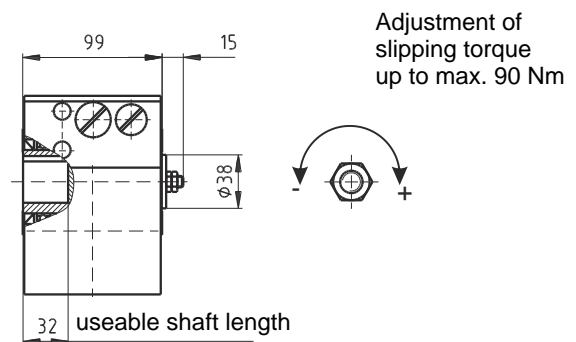
with integrated cone brake (only with single- and 3-phase AC motor) (option)



with stub shaft (option)
(left or right)



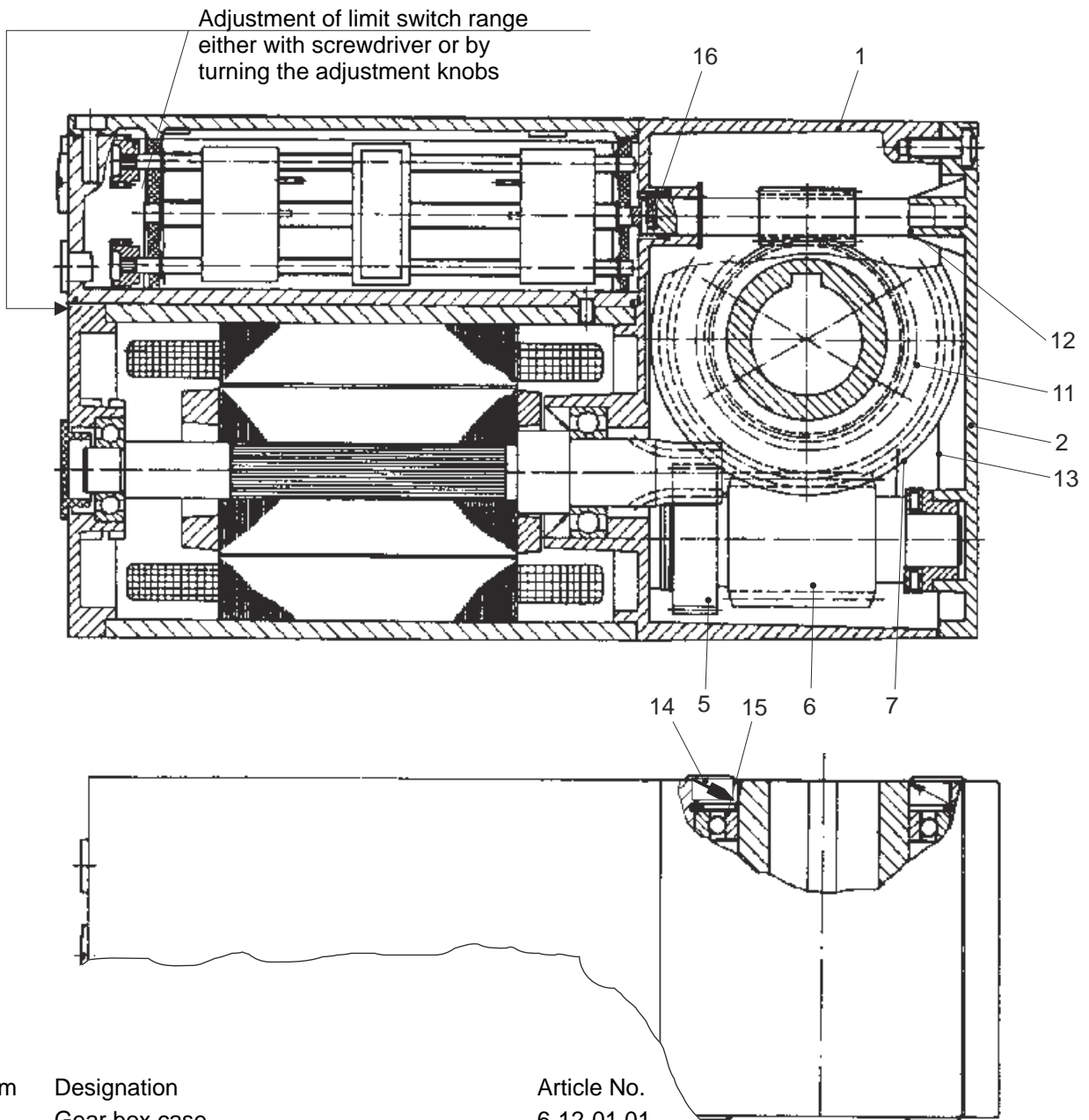
with slip clutch (option)



Some options may be combined

Subject to technical changes

Spare parts gearbox



Item	Designation	Article No.
1	Gear box case	6-12-01.01
2	Gear box cover	6-12-01.02
5	1st stage gear	Serial No.
6	Worm shaft A53	Serial No.
7	Worm wheel A53	Serial No.
11	Spur wheel	Serial No.
12	Control shaft	Serial No.
13	Cover seal	6-12-01.03A
14	Radial seal A40x68x7	00200104068072
15	Deep-groove ball bearing 16008	00300101600810
16	Coupling	6-12-36.03

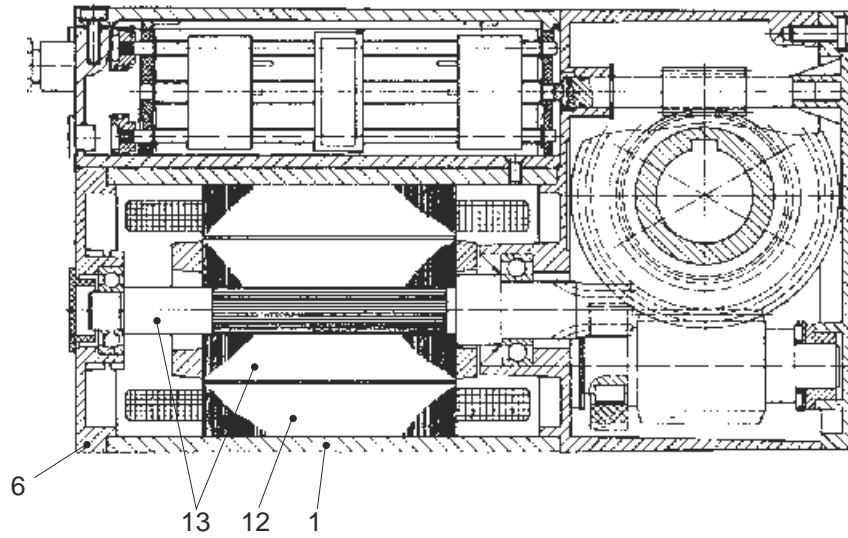
Spare parts can only be supplied if the serial number is stated

Some options may be combined

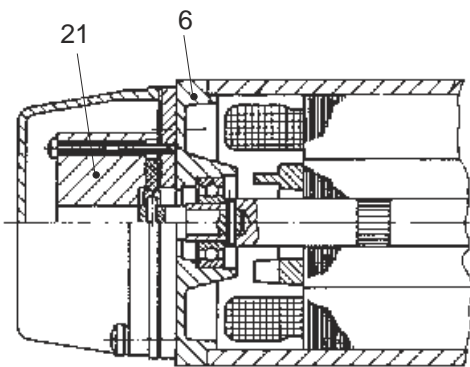
Subject to technical changes

Spare parts motor

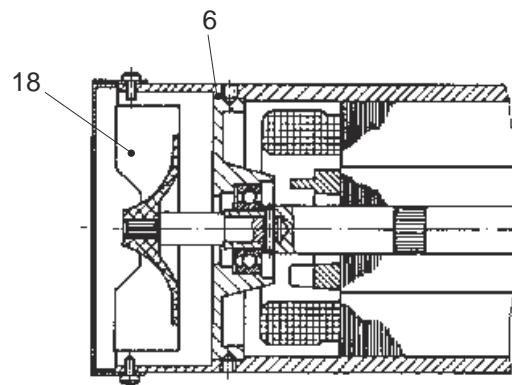
Motor - Standard version (without fan)



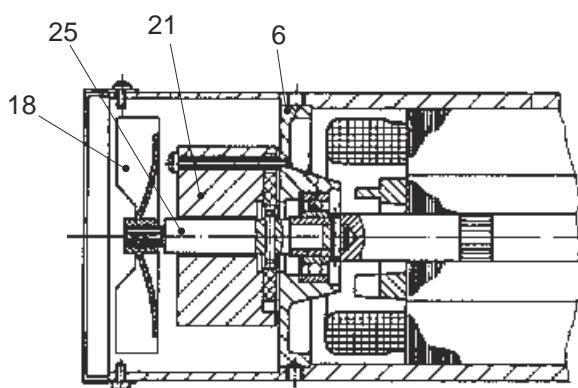
Motor with brake (without fan)



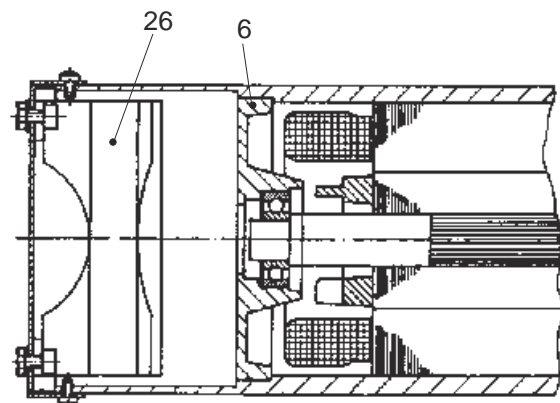
Motor with rotor fan



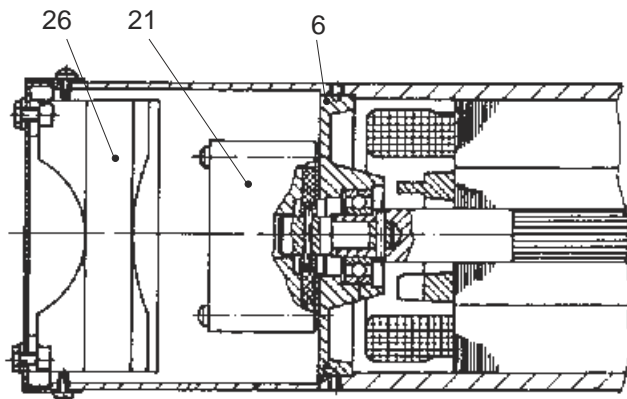
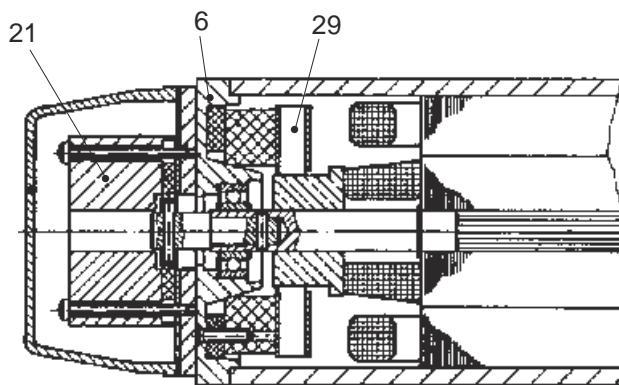
Motor with brake and rotor fan



Motor with motorized fan



Subject to technical changes

Spare parts motor
Motor with brake and motorized fan

**DC motor (shunt wound)
with brake**


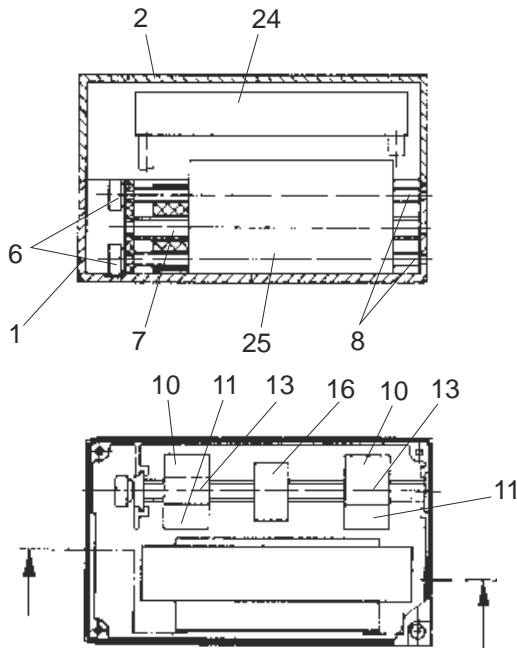
Item	Designation	Article No.
1	Motor casing N (standard motor)	Serial-No.
6	Motor cover	Serial-No.
12	Stator	Serial-No.
13	Rotor cpl.	Serial-No.
18	Fan blade	6-10-119.03
21	Motor brake	Serial-No.
26	Motorized fan	02901100007000

Spare parts can only be supplied if the serial number is stated

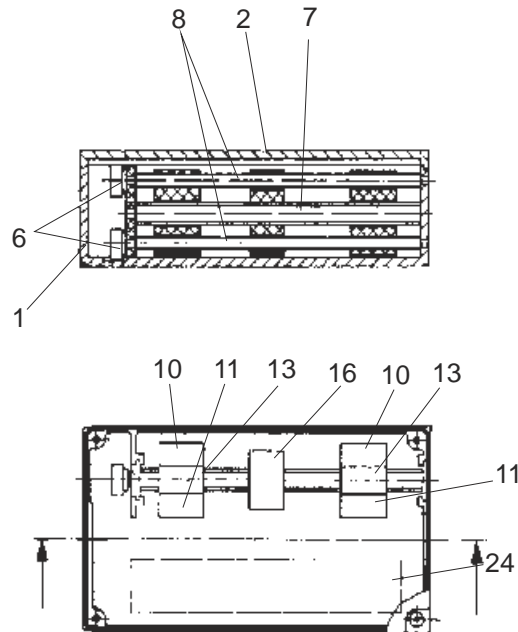
Subject to technical changes

Spare parts limit switches

Version 1



Version 2



Item	Designation	Article-No.
1	Limit switch housing	Serial-Nr.
2	Cover	Serial-Nr.
6	Adjustment knob	6-10-36.14
7	Control spindle	Serial-Nr.
8	Adjustment spindle	6-10-36.13
9	Adjustment spindle	6-10-600.13
10	Safety limit switch S4 / S5	02450100000250
11	Limit switch S6 / S7	02450100000050
13	Switch holder	6-10-36.21
16	Switching nut	Serial-Nr.
24	Terminal strip	02000102000000
25	Reversing contactor	Serial-Nr.
no No.	Clutch	6-12-36.03

Spare parts can only be supplied if the serial number is stated

Subject to technical changes