

# 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](http://www.framo-morat.com)  
[info@framo-morat.com](mailto: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.

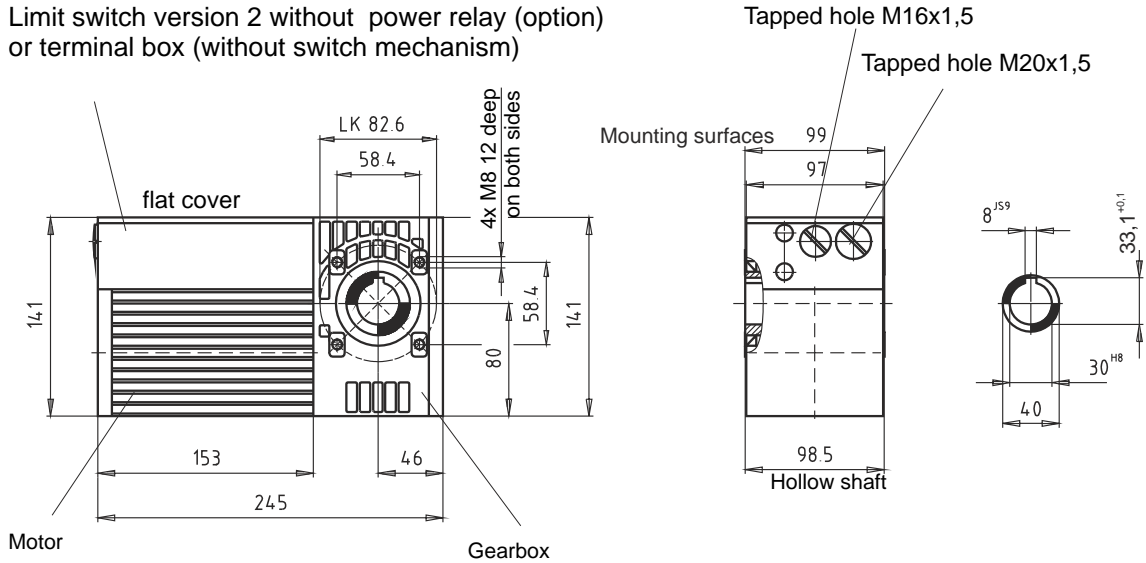
**Please contact the manufacturer in case of the following operating conditions:**

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

**Dimensions**

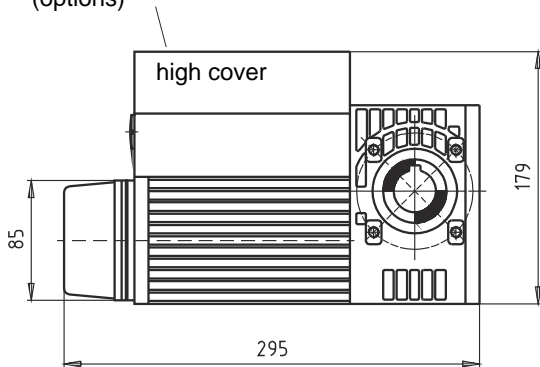
**Standard drive with 3-phase or single-phase motor**

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

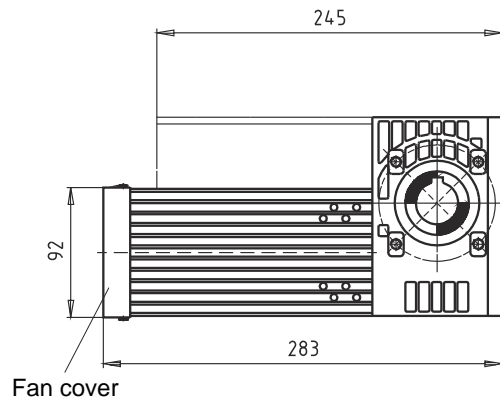


**with motor brake (option)**

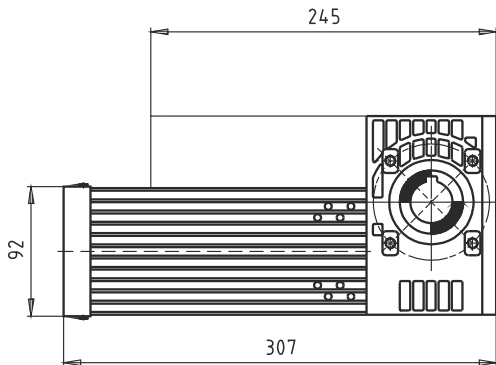
Limit switch version 1 with power relays, (options)



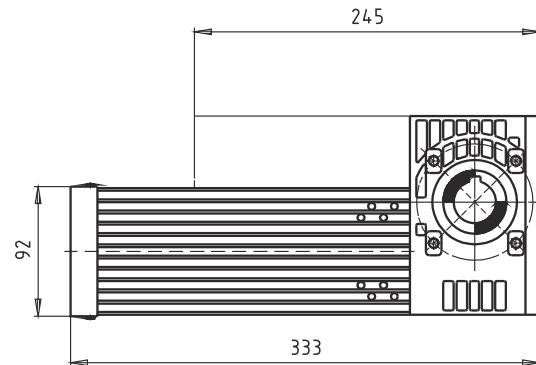
**with rotor fan (option)**



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



**with motor brake and motorized fan (option)**

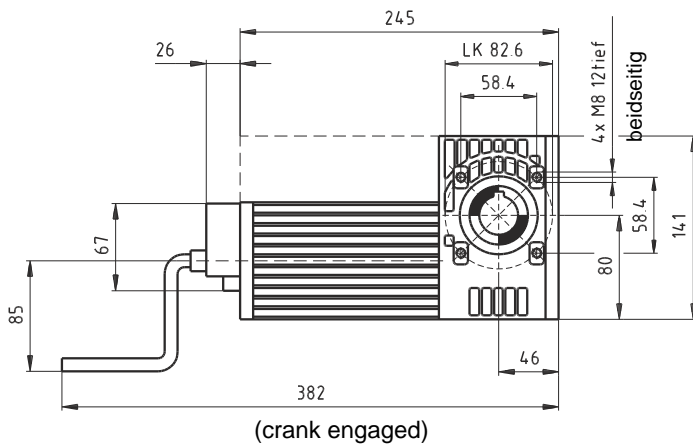


Some options may be combined

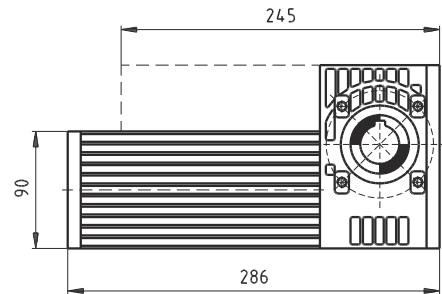
Subject to technical changes

## Dimensions

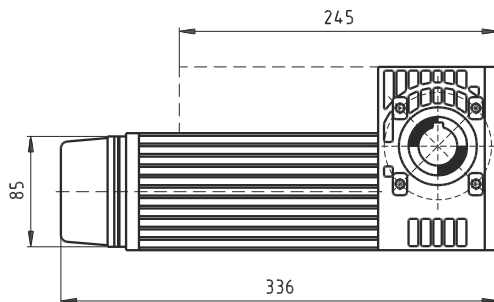
**Hand crank with elec. interlock (option)**  
(removable)



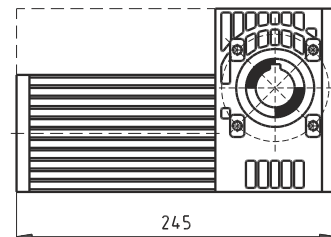
**with DC motor (option)**



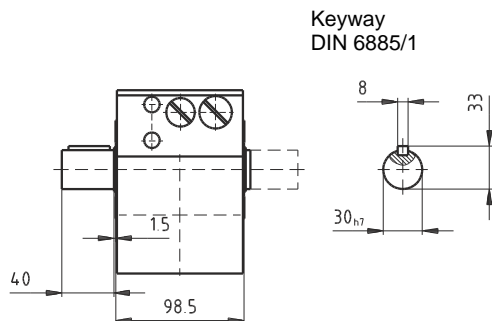
**with DC motor and motor brake (option)**



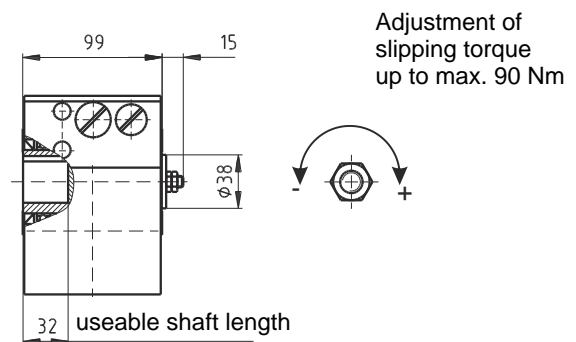
**with integrated cone brake (only with single- and 3-phase AC motor) (option)**



**with stub shaft (option)**  
(left or right)



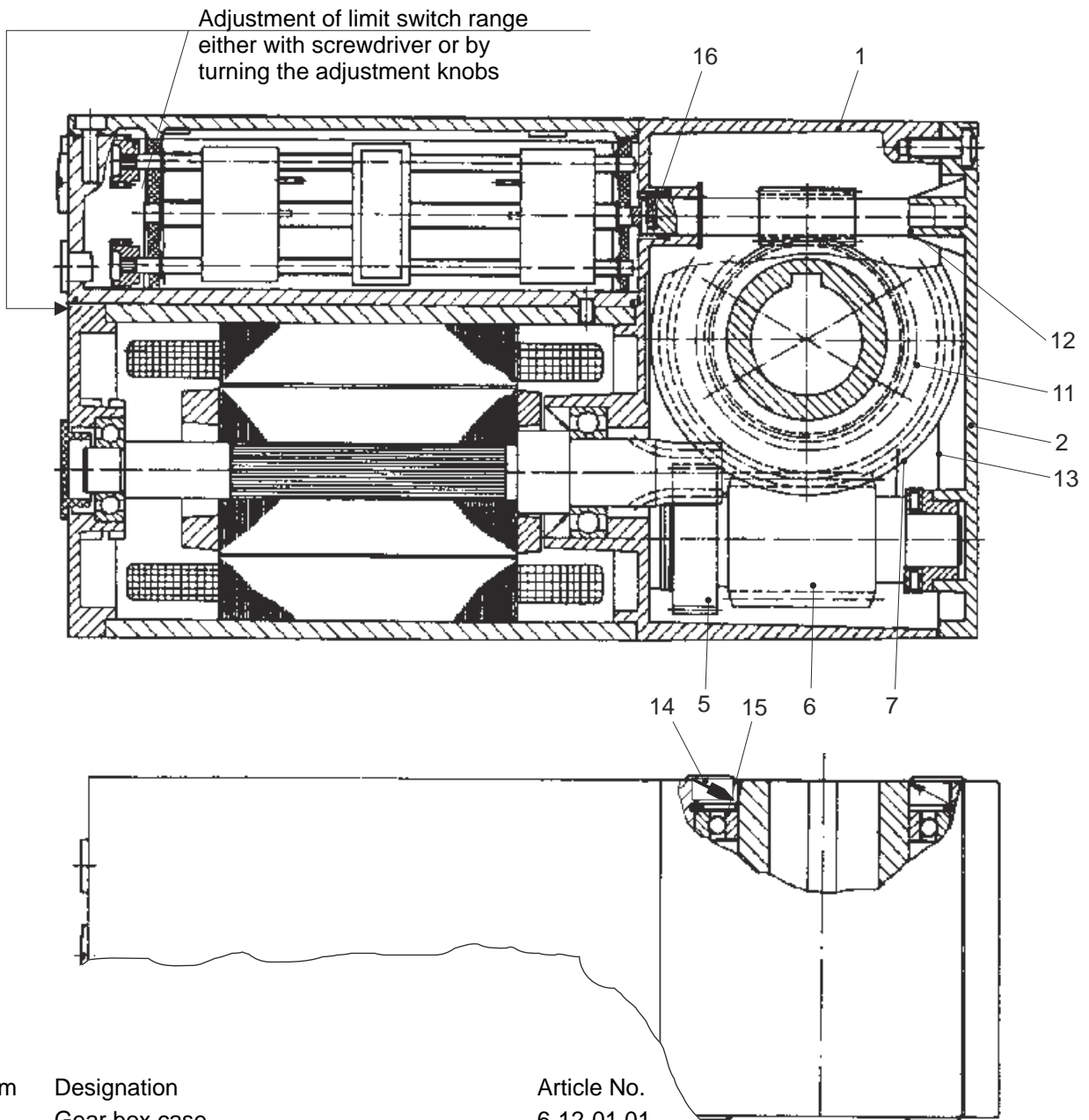
**with slip clutch (option)**



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

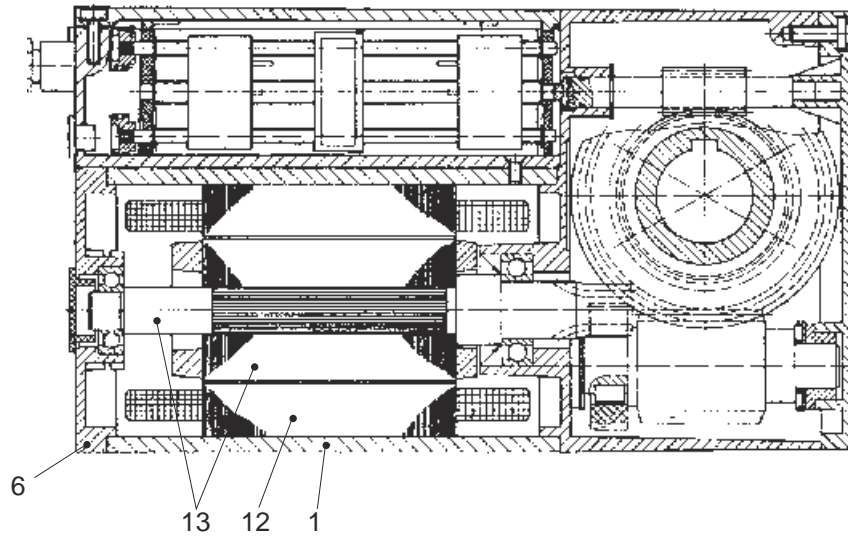
**Spare parts can only be supplied if the serial number is stated**

Some options may be combined

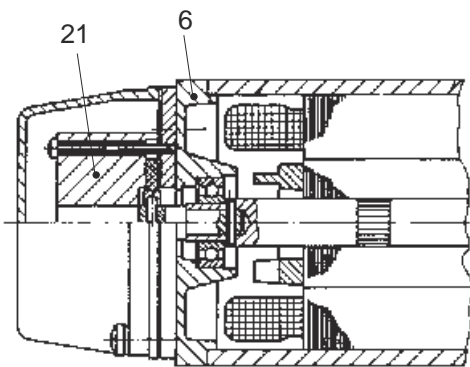
Subject to technical changes

## Spare parts motor

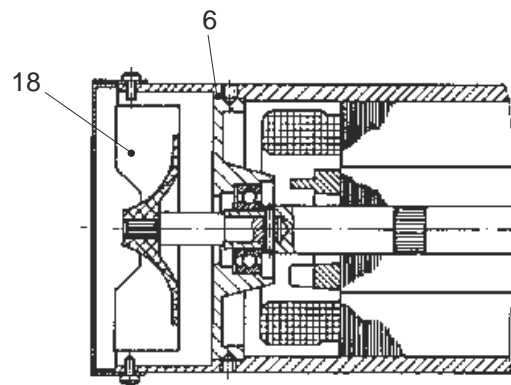
### Motor - Standard version (without fan)



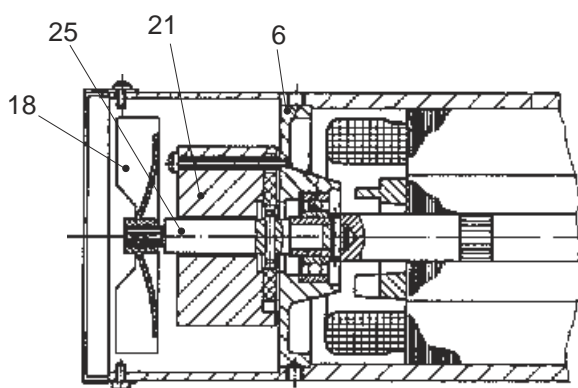
### Motor with brake (without fan)



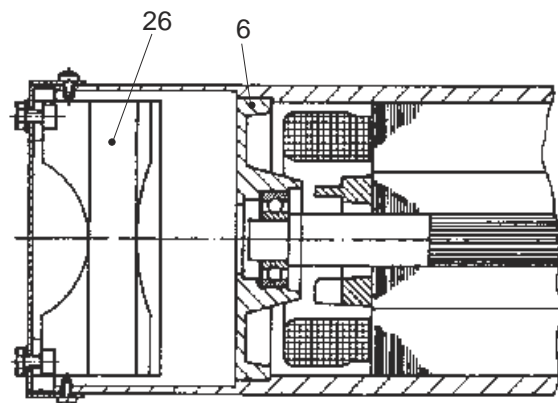
### Motor with rotor fan



### Motor with brake and rotor fan



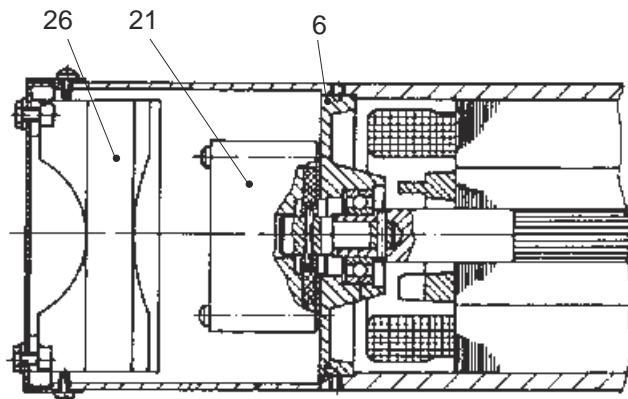
### Motor with motorized fan



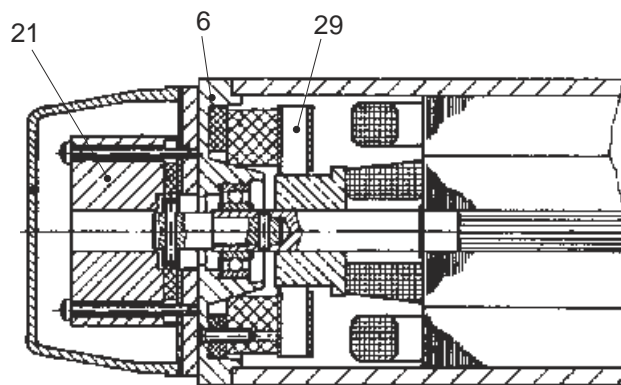
Subject to technical changes

## Spare parts motor

### Motor with brake and motorized fan



### DC motor (shunt wound) with brake



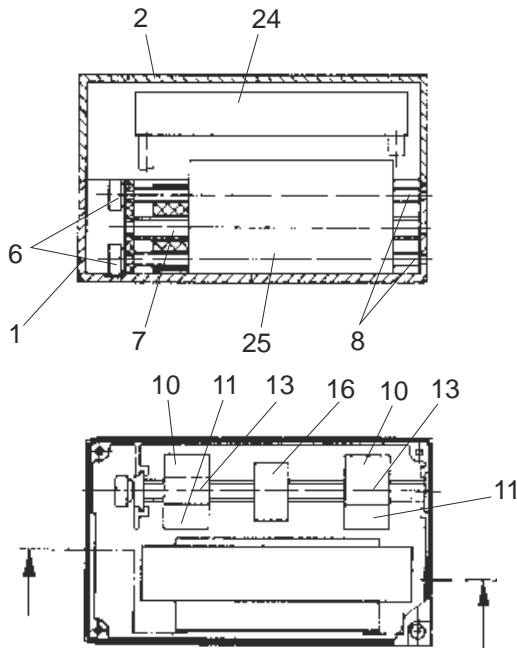
Item	Designation	Article No.
1	Motor casing N (standard motor)	Serial-No.
6	Motor cover	Serial-No.
12	Stator	Serial-No.
13	Rotor cpl.	Serial-No.
18	Fan blade	6-10-119.03
21	Motor brake	Serial-No.
26	Motorized fan	02901100007000

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

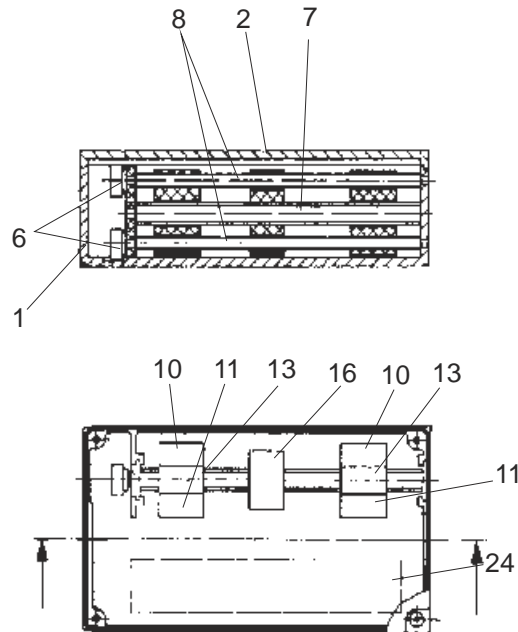
Subject to technical changes

## 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