Linear Actuators MAGFORCE

STD ....

Technical Data:	Type	STD 10007 - 200	STD 12010 - 200	STD 15020 - 200	STD 15040 - 200
Push pull force	kN	10	12	15	15
Static load	kN	16	16	16	16
Speed	mm/sec	10	7	4	2
Stroke length	mm	200	200	200	200
Voltage	V=	3 x 400	3 x 400	3 x 400	3 x 400
Power consumption	W	920	800	700	500
Current consumption	A	1,8	1,7	1,6	1,4
Duty cycle	%	25	10	10	10
Ambient temperature	°C	- 10 / + 40	- 10 / + 40	- 10 / + 40	- 10 / + 40
Protection / insulation class		I/E	I/E	I/E	I/E
Protection class	IP	54	54	54	54
Weight	kg	16,3	16,3	16,3	16,3

Description

MAGFORCE linear actuators type STD are specially suitable for industrial application due to their compact and robust design.
The stroke is restricted by internal mechanical stops. Limit switches are not necessary as a friction clutch prevents the motor from being stalled in the end positions. The motor, however, should be prevented from operating for long periods of time against the end stops. The duty cycle stated above relates to an ambient temperature of +20° C and an interval operating time of 10 minutes. The technical data mentioned refer to operation under nominal load. A thermal switch incorporated in the motor winding cuts off the power supply at 100° C thus protecting the motor from overheating and resets itself again after cooling.
The standard stroke is 200 mm, but lengths up to 700 mm are available on request, whereby the body length is increased proportionally. With increasing push forces the safety factor decreases. In order to maintain the recommended safety factor of S = 4 an additional guide bearing can be fitted, which extends the body length by 50 mm.

Electrical Connection

Electrical connections are extremely simple because there are no built-in limit switches. Reversing of the motor is achieved by changing poles via push button or relay. A direct change of direction should be avoided because of the arising inertia forces. The push button or switch must return automatically to the neutral position when it is released so that the motor does not run against the end stops for longer than necessary. Alternatively external limit switches can be supplied on request which switch off the motor in the end positions.

For wiring diagram see inside terminal box. Do not connect motors in parallel. They must be connected according to a special diagram.

Installation

The actuator is fixed at the rear clevis and the push tube.
At the push tube an adapter supplied optionally as well as the fork head can be fixed.
Ensure that the push tube cannot turn, and that the load on the push tube is axial only. Side loads on the push tube must be avoided. The push tube must not be subjected to bending loads and motor and levers should be aligned.

Make sure that the electric cables are not damaged by squeezing, bending or stretching. Customers must ensure that the cable gland is tight to guarantee protection class IP 54.

Maintenance

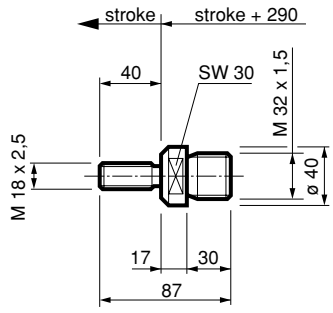
The linear actuator has sufficent lubricaten reserve and is almost maintance-free. Only the push tube should be cleaned and lightly greased from time to time. The service life depends very much on the corresponding application (for example; temperature; conditions regarding run, force and cycles, as well as environmental influences) and must be found out in case of need.
Defective motors may be repaired only in our factory for safety reasons.

Remark

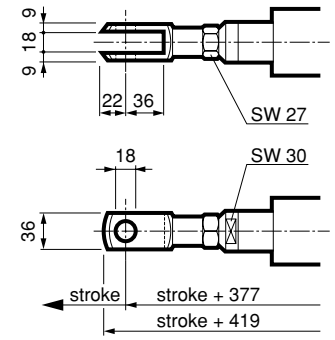
If our actuators are used for applications where persons could be directly or indirectly endangered, we have to be contacted in order to discuss safety precautions.

Accessories

– adapter	1031,0106
– fork head complete	1061,9038
– limit switches complete 0 ... 300 stroke lengths	1043,0268
– limit switches complete 100 ... 370 stroke lengths	1043,0252
– limit switches complete 200 ... 740 stroke lengths	1043,0266
– potentiometer 475 stroke lengths 1k-Ohm standard	1063,0011
– potentiometer max. 944 stroke lengths 1k-Ohm standard	1063,0012
– other potentiometer values on request	



adapter



fork head

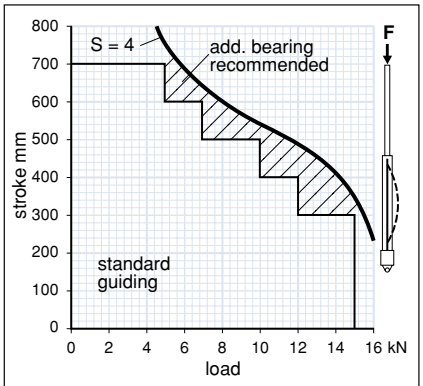
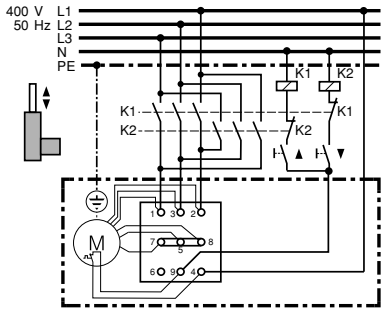
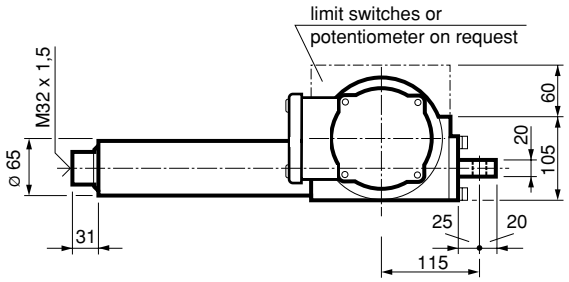


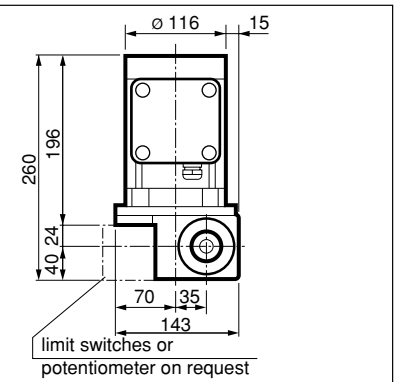
Diagram Bending of spindle

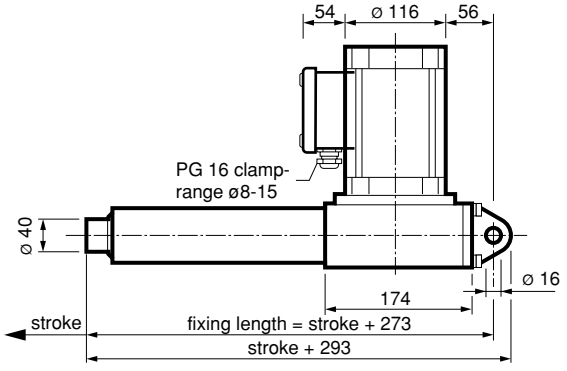


wiring diagram



top view





side view