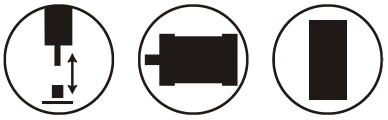
LINEAR ELECTRIC ACTUATORS WITH BALL SCREW SERIES 1E1 ISO 15552



The electric actuator is designed on the principle of converting rotary motion to rectilinear by means of a ball screw and a nut. Piston rod of the electric actuator is locked against accidental rotation. Radial load must correspond to the permitted values according to the charts. If load exceeds the permissible values, it must be secured by external guiding means. Profile of the pipe allows attachment of proximity switches using T-grooves. The wall for the use of proximity switches is marked on the dimensional drawings, and this surface can be oriented differently on request. The complete electric actuator offers precise positioning, defining of precise travel speeds, acting with precise force and the like. Compared to pneumatic cylinders, the electric actuator offers an increase in accuracy in all the listed physical parameters and it does not require an additional drive medium (compressed air), it is sufficient only with electrical energy. The mentioned electric actuators can even work at very low speeds, or can maintain the load for a limited time even in a static position.

Model	1E1 50	
	direct connection	side connection
Positioning repeatability [mm]	0,02	
Minimum step of travel [mm]	0,1	
Ball screw lead [mm]	5	
Ball screw [mm]	C7 ∅16	
Maximum speed [mm.s^{-1}]	100	
Maximum thrust force [N]	1400	
Gear ratio	1:3,6	
Maximum motor output [W]	200	
Maximum motor rotational speed [rpm]	3000, 4000 for a short time	
Motor voltage [V]	24	
Maximum continuous current [A]	5	
Recommended minimum power source [W]	200	
Stroke [mm]	50 to 800	100 to 800
Weight 0 mm stroke [kg]	5,3	7,1
Weight add. per 1 mm stroke [kg]	0,008	
Recommended proximity switch	KT-50, RZT7, MZT8	

Order codes

1E1 05 03 1 50 0100 00

Ball screw lead	
05	screw 5mm/rot.

Motor type	
00	without motor
03	BLDC

Motor connection	
0	without motor
1	direct
2	side

Size acc. to ISO15552	
50	ø50 mm

Stroke / Repair kit	
xxxx	mm of stroke 50 to 800 e.g.: 0100 = stroke 100 mm
9999	repair kit

Construction / materials

- caps: dural, anodized
- body: drawn dural profile, anodized
- piston rod: grounded round steel bar CK45 with hard chrome plated surface

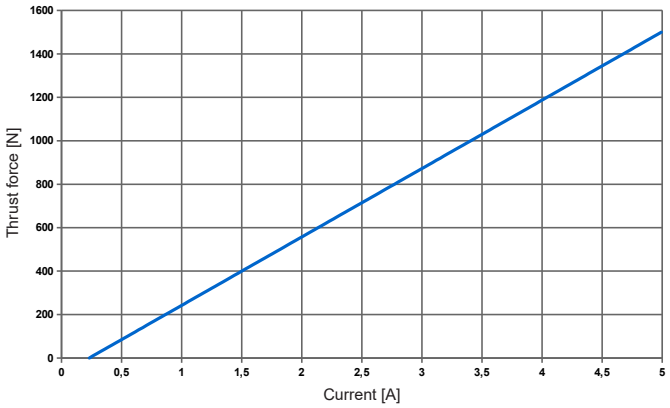
For the variant without a motor, it is necessary to contact our technical department in order to design the corresponding connection flange for the intended type and size of the motor.

For information on the electrical circuit, control and programming, please contact our technical department.

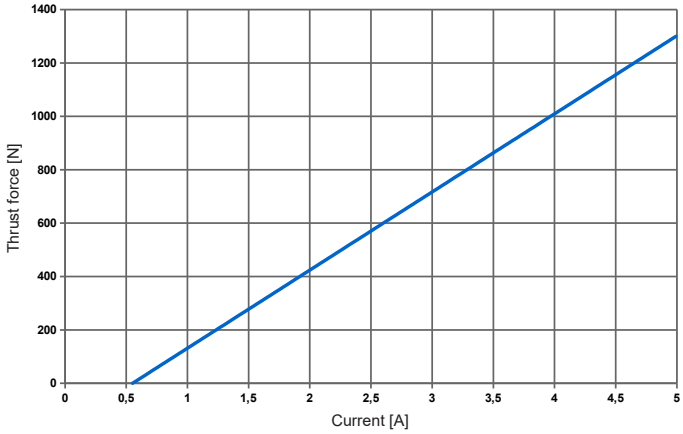
Static and dynamic characteristics

Dependence of force on current at speed v = 30 mm.s^{-1}

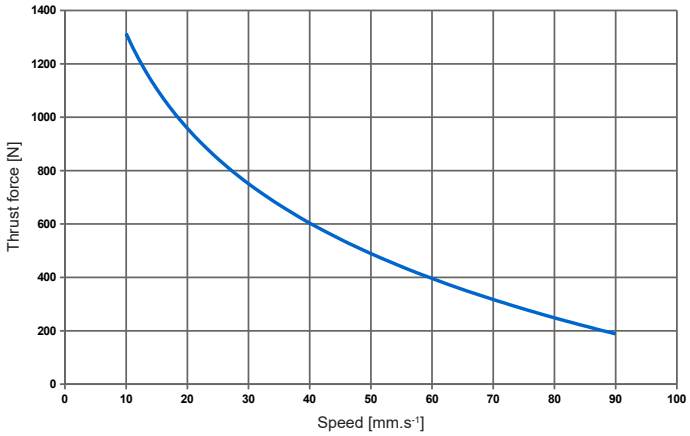
Direct motor connection



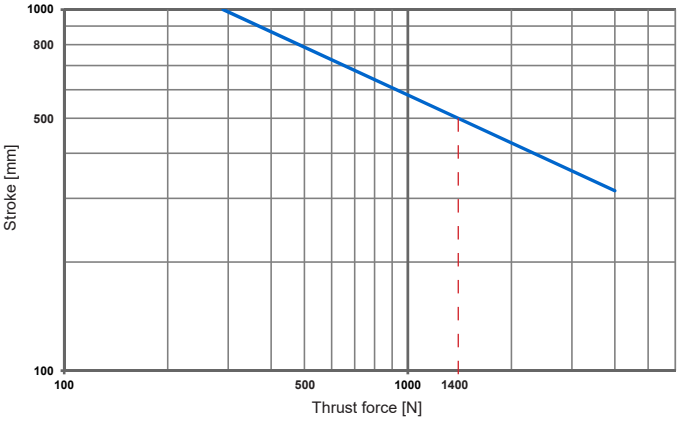
Side motor connection



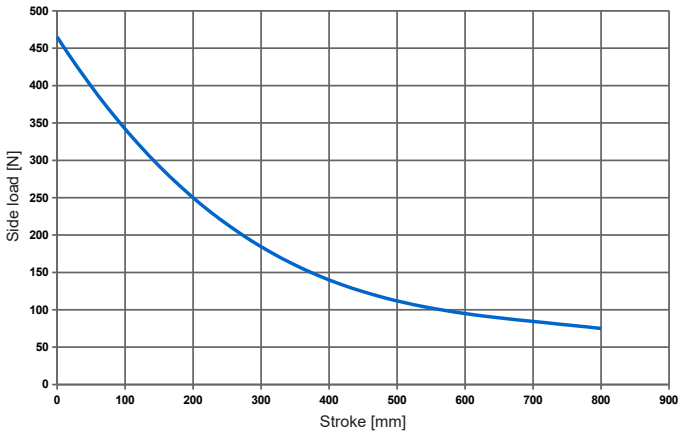
Dependence of the force on the speed at a current of I = 3 A



Dependence of permissible force on stroke



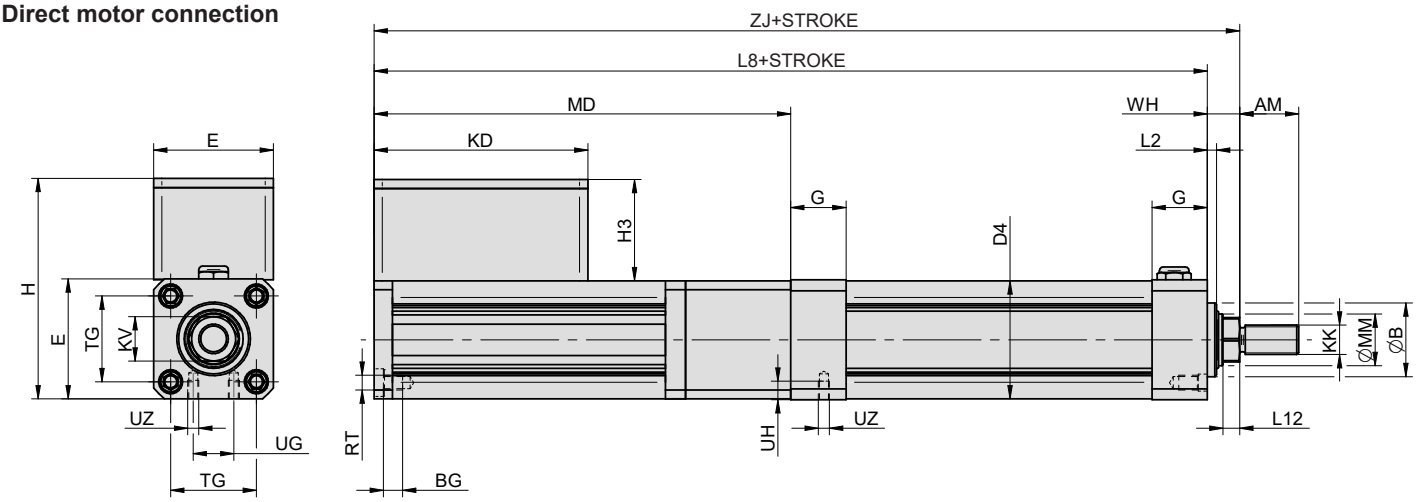
Maximum permissible side load depending on the stroke at maximum extension



M

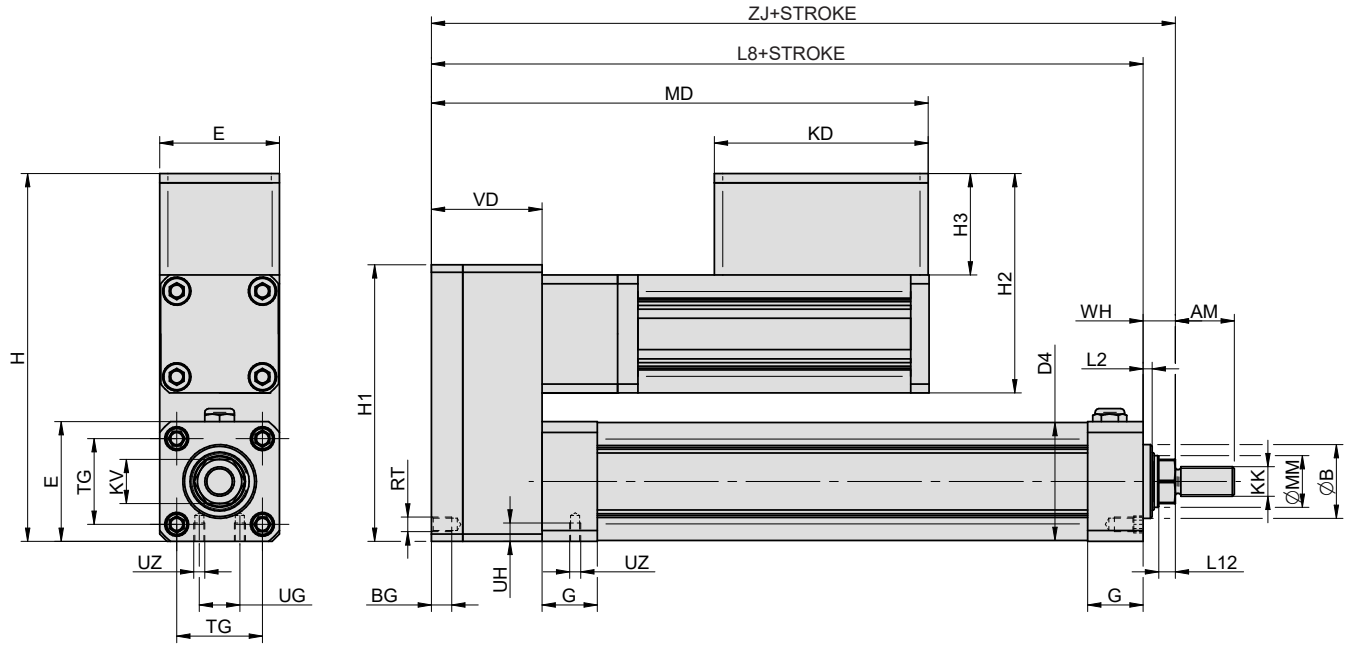
Dimensions

Direct motor connection



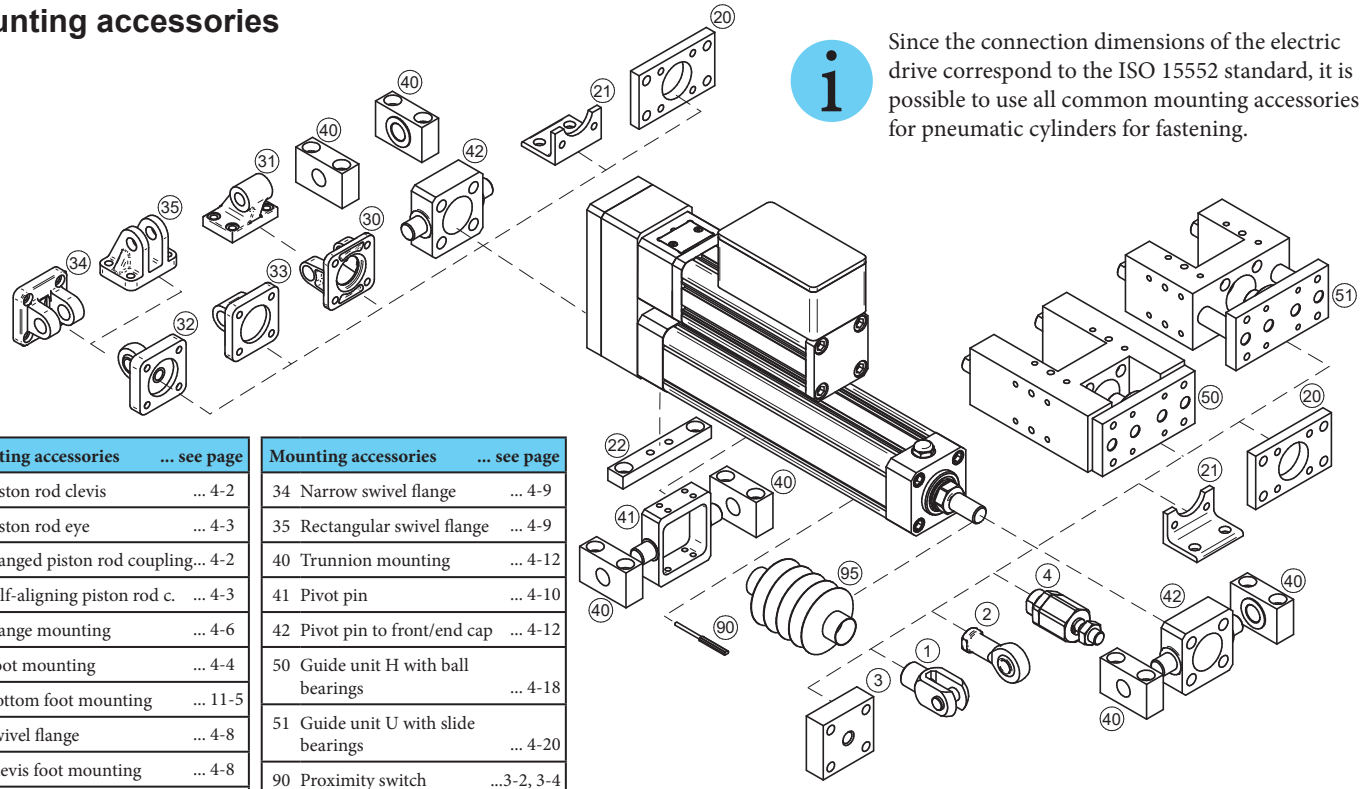
Size	AM	B	BG	D4	E	G	H	H3	KD	KK	KV	L2	L8	L12	MD	MM	RT	TG	UG	UH	UZ	WH	ZJ
50	32	40	10,5	64	65	30	119	55	116	M16X1,5	24	5	358	9	226	28	M8	46,5	22	10	M6	17,5	375,5

Side motor connection



Size	AM	B	BG	D4	E	G	H	H1	H2	H3	KD	KK	KV	L2	L8	L12	MD	MM	RT	TG	UG	UH	UZ	VD	WH	ZJ
50	32	40	17	64	65	30	204	150	119	55	116	M16x1,5	24	5	196	9	274	28	M8	46,5	22	10	M6	64	17,5	214

Mounting accessories



Since the connection dimensions of the electric drive correspond to the ISO 15552 standard, it is possible to use all common mounting accessories for pneumatic cylinders for fastening.

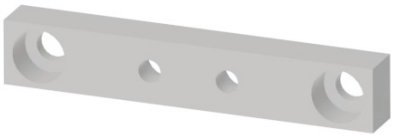
Mounting accessories	... see page
1 Piston rod clevis	... 4-2
2 Piston rod eye	... 4-3
3 Flanged piston rod coupling	... 4-2
4 Self-aligning piston rod c.	... 4-3
20 Flange mounting	... 4-6
21 Foot mounting	... 4-4
22 Bottom foot mounting	... 11-5
30 Swivel flange	... 4-8
31 Clevis foot mounting	... 4-8
32 Swivel flange with spherical bearing	... 4-10
33 Swivel flange	... 4-7

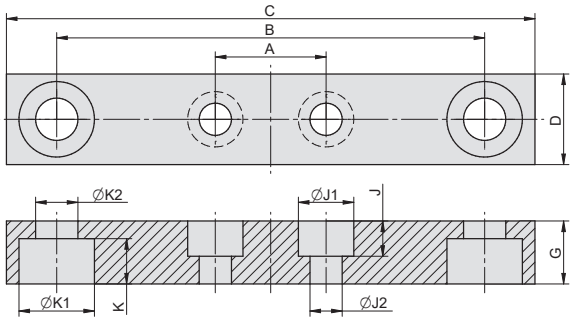
Mounting accessories	... see page
34 Narrow swivel flange	... 4-9
35 Rectangular swivel flange	... 4-9
40 Trunnion mounting	... 4-12
41 Pivot pin	... 4-10
42 Pivot pin to front/end cap	... 4-12
50 Guide unit H with ball bearings	... 4-18
51 Guide unit U with slide bearings	... 4-20
90 Proximity switch	...3-2, 3-4
95 Piston rod protective cover	... 4-24

For reliable operation, it is necessary that the body of the electric drive is fixed with a firm attachment in two places (e.g. foot and bottom foot, or front flange and bottom foot).

Bottom foot mounting

Supply contains:
1 pc bottom foot mounting
2 pcs screws





Size	A	B	C	D	G	J	J1	J2	K	K1	K2	Weight	Order codes
50	22	85	105	18	12,5	7	11	6,4	9	15	8,4	0,06	2115 2100 0050 0000

Control unit

The integrated control unit can work completely independently after connecting to a power source. It is possible to program up to 200 program steps, in which you can easily control speeds, absolute and relative positioning, set the output, work with 5 inputs, compare values and branch the program according to the result of the comparison. It is possible to communicate with the unit via the RS485 bus, which can be connected, for example, to the USB port of a computer using a converter. An application for communication with the unit is available for the Windows operating system, which can be used to easily control the unit, set its parameters and create or modify the program.
RS232 bus can be used for simple continuous display of unit status.