

# Technical information for double-tube linear actuators

The double-tube linear actuator is efficient, economical and universally applicable. It perfectly combines high rigidity, low deflection, high loads and easy handling. Two sizes are available for different applications and loads (tube size 30 mm and 40 mm).

## Features:

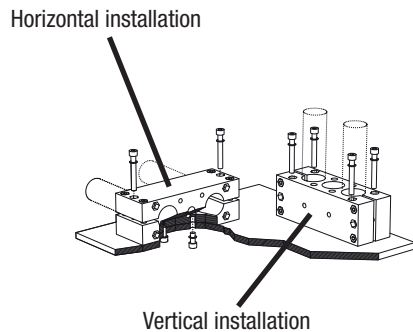
- Can be adjusted manually or with a motor.
- Position accuracy up to  $\pm 0.1$  mm can be achieved over 300 mm.
- Traversing speed up to 0.015 m/s.
- Drive via trapezoidal thread spindle.
- Any mounting position.

## Technical description:

A threaded spindle mounted on bearings with guide nut between the tubes converts the rotation into linear movement of a guide carriage.

## Mounting the linear actuator:

Depending on the mounting position and application, the linear unit can be fastened to a suitable substructure using screws. The linear actuator can be installed either horizontally or vertically. The specific tightening torques for the screws used must be observed during installation.



Dimensions	Strength 8.8	Strength 10.9	Strength 12.9
	Tightening torque $M_a$ (Nm)	Tightening torque $M_a$ (Nm)	Tightening torque $M_a$ (Nm)
M4	3,0	4,4	5,1
M5	5,9	8,7	10
M6	10	15	15
M8	25	35	43
M10	49	72	84

Guideline values for the tightening torques for metric DIN 4762 setscrews at 90% utilisation of the 0.2% yield strength for the coefficient of friction 0.14.

	21250 Ø30	21250-01 Ø30	21250 Ø40	21250-01 Ø40
<b>Guidance</b>	Slide guide			
<b>Assembly position</b>	unlimited			
<b>Max. speed</b>	0.015 m/s (independent of travel)		0.02 m/s (independent of travel)	
<b>Max. acceleration</b>	3 m/s <sup>2</sup>			
<b>Repeat accuracy</b>	± 0,1 mm			
<b>Max. idling torque</b>	0,6 Nm	0,7 Nm	0,7 Nm	0,8 Nm
<b>Drive</b>	Trapezoidal thread, Ø14, pitch 3		Trapezoidal thread, Ø20, pitch 4	
<b>Pitch accuracy</b>	(± 0,1 / 300 mm)			
<b>Duty cycle</b>	S3*, 30%, base 1 h			
<b>Ambient temperature</b>	0 °C to +60 °C			

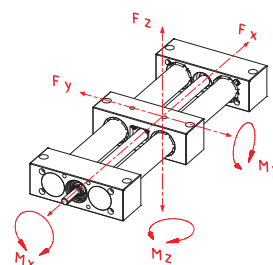
\* Intermittent duty without influence of the start-up on the temperature

**Load data\*:**

F force [N]

M moment [Nm]

I area moment of inertia [cm<sup>4</sup>]



\* Refers to guide carriage (guide element deflection f = 0.5 mm, static, end elements overlapping)

	<b>F<sub>x</sub></b>	<b>F<sub>y</sub></b> 500/1000/1500	<b>F<sub>z</sub></b> 500/1000/1500
<b>21250 Ø30</b>	800	1000/800/500	550/300/100
<b>21250-01 Ø30</b>	800	1400/1200/700	650/450/200
<b>21250 Ø40</b>	1000	3500/2600/1300	2000/580/120
<b>21250-01 Ø40</b>	1000	6000/3100/1800	2200/680/220

	<b>M<sub>x</sub></b>	<b>M<sub>y</sub></b>	<b>M<sub>z</sub></b>
<b>21250 Ø30</b>	60	60	75
<b>21250-01 Ø30</b>	80	110	140
<b>21250 Ø40</b>	120	130	150
<b>21250-01 Ø40</b>	160	190	240

	<b>I<sub>y</sub></b>	<b>I<sub>z</sub></b>
<b>21250 Ø30</b>	3,47	46,57
<b>21250-01 Ø30</b>	3,47	46,57
<b>21250 Ø40</b>	14,84	198,06
<b>21250-01 Ø40</b>	14,84	198,06

