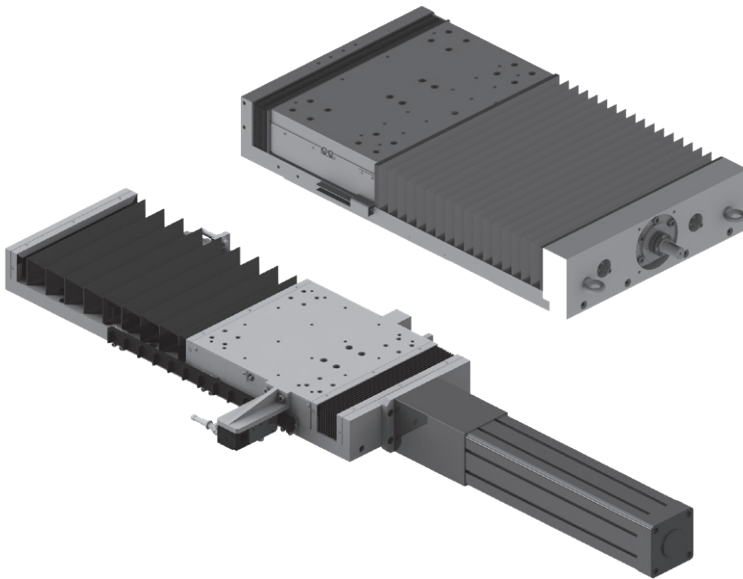
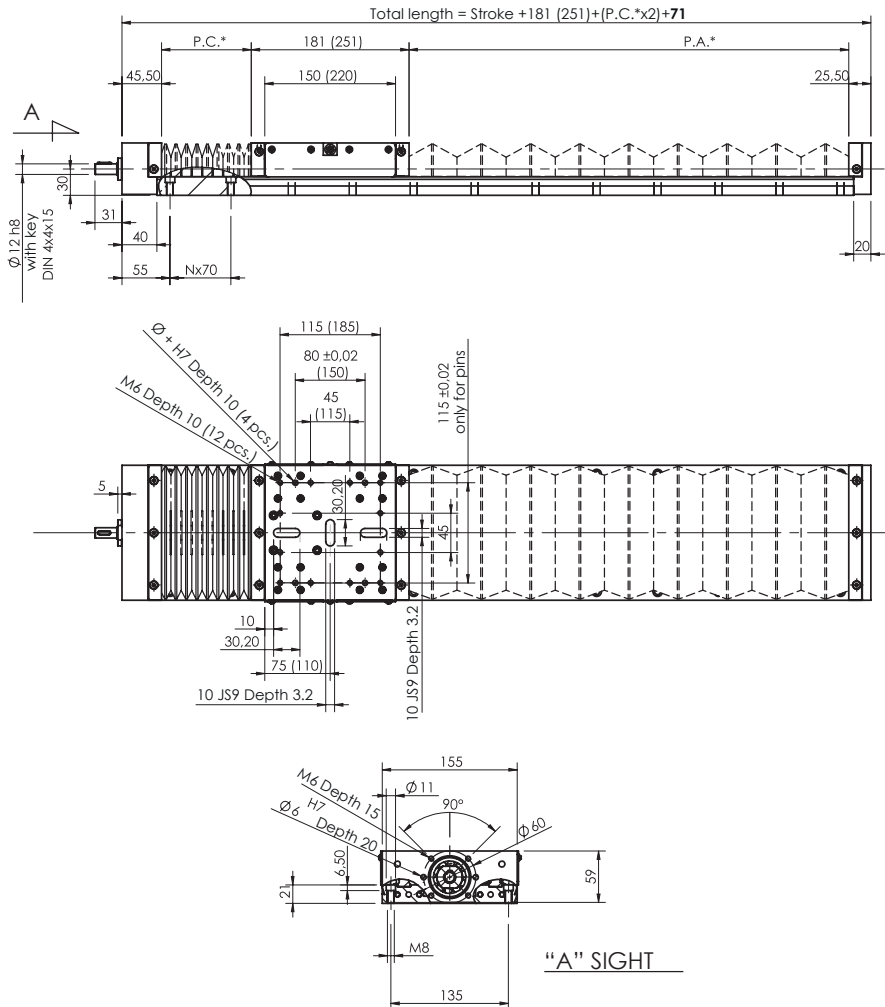


MECHANICAL LINEAR TABLE FOR HEAVY LOADS



MECHANICAL LINEAR TABLE TYPE 155 WITH BELLOWS

With ballscrew and linear guideway



* See calculations sheet.

MECHANICAL LINEAR TABLE TYPE 155 WITH BELLOWS

Weights

Basic length without stroke:	9 kg
Each 100 mm stroke:	0,5 kg
Carriage 150 mm:	3,5 kg
Carriage 220 mm:	4 kg
Moment of inertia:	$3,21 \cdot 10^{-5}$

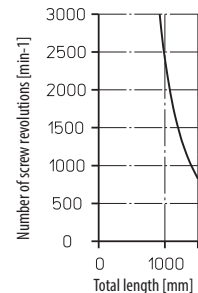
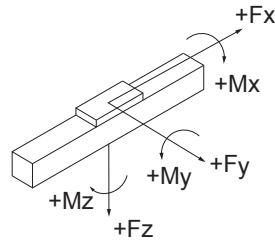
Technical data

Max. speed:	2,00 m/s
Repeat accuracy:	$\pm 0,03$ mm (KGT)
Acceleration:	single nut 10 m/sec ² (M) double nut 20 m/sec ² (MM)
Idle torque:	0,35 Nm
Drive element	
Ball screw:	$n_{max} = 3000$ 1/min*
Diameter:	16 mm
Pitch:	5-10-16-40 mm
Total length:	up to 1500 mm

* According to ballscrew type and length (see diagram).

Forces and moments

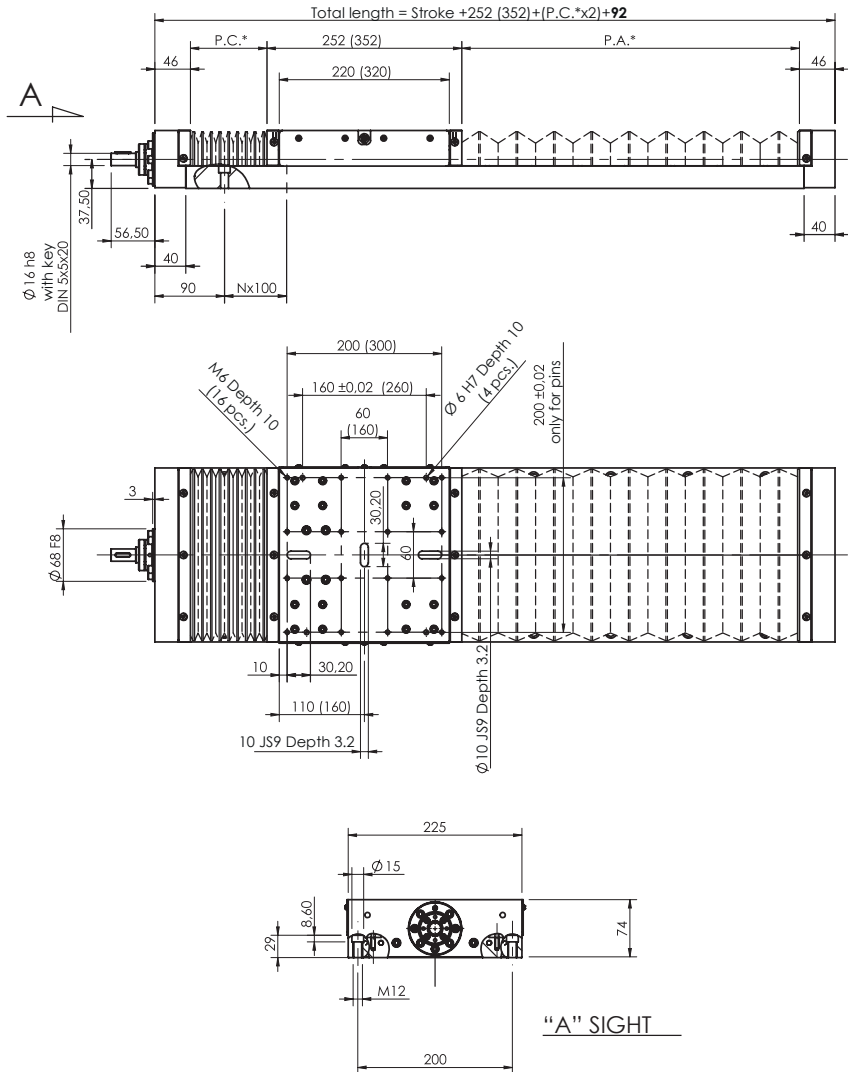
Version	With linear guideways
Forces	dynamic [N]
F _x	3500
F _y	1700
F _z	20000
-F _z	15000
Moments	dynamic [Nm]
M _x	1000
M _y	900 (1300)
M _z	400 (580)



MECHANICAL LINEAR TABLE TYPE 225 WITH BELLOWS



With ballscrew and linear guideway



* See calculations sheet.

MECHANICAL LINEAR TABLE TYPE 225 WITH BELLOWS

Weights

Basic length without stroke:	12,5 kg
Each 100 mm stroke:	1,5 kg
Carriage 220 mm:	5,5 kg
Carriage 320 mm:	6,5 kg
Moment of inertia:	$2,25 \cdot 10^{-4}$

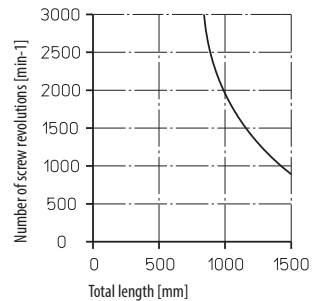
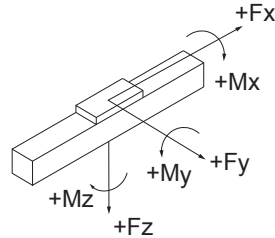
Technical data

Max. speed:	2,50 m/s
Repeat accuracy:	$\pm 0,03$ mm (KGT)
Acceleration:	single nut 10 m/sec^2 (M) double nut 20 m/sec^2 (MM)
Idle torque:	1,20 Nm
Drive element	
<i>Ball screw:</i>	$n_{\text{max}} = 3000$ 1/min*
Diameter:	25 mm
Pitch:	5-10-25-50 mm
Total length:	up to 2000 mm

* According to ballscrew type and length (see diagram).

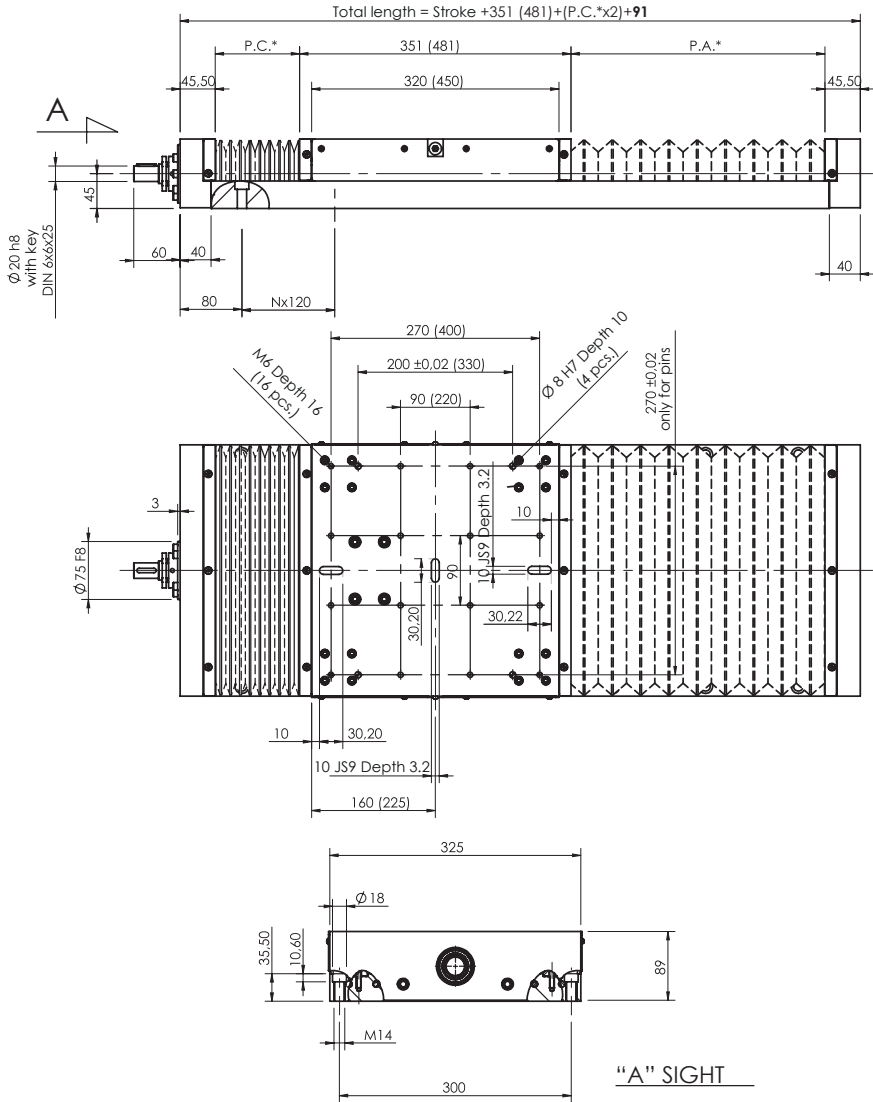
Forces and moments

Version	With linear guideways
Forces	dynamic [N]
F _x	6000
F _y	5000
F _z	58000
-F _z	40000
Moments	dynamic [Nm]
M _x	4000
M _y	3000 (4000)
M _z	1200 (1700)



MECHANICAL LINEAR TABLE TYPE 325 WITH BELLOWS

With ballscrew and linear guideway



* See calculations sheet.

MECHANICAL LINEAR TABLE TYPE 325 WITH BELLOWS

Weights

Basic length without stroke:	20,5 kg
Each 100 mm stroke:	2 kg
Carriage 150 mm:	9,5 kg
Carriage 220 mm:	12 kg
Moment of inertia:	$6,43 \cdot 10^{-4}$

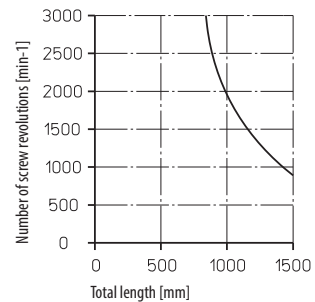
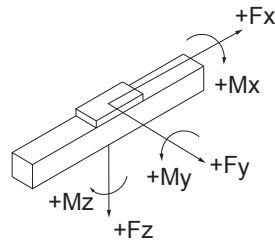
Technical data

Max. speed:	3 m/s
Repeat accuracy:	$\pm 0,03$ mm (KGT)
Acceleration:	single nut 10 m/sec ² (M) double nut 20 m/sec ² (MM)
Idle torque:	1,6 Nm
Drive element	
<i>Ball screw:</i>	$n_{max} = 3000$ 1/min*
Diameter:	32 mm
Pitch:	5-10-20-40-60 mm
Total length:	up to 2000 mm

* According to ballscrew type and length (see diagram).

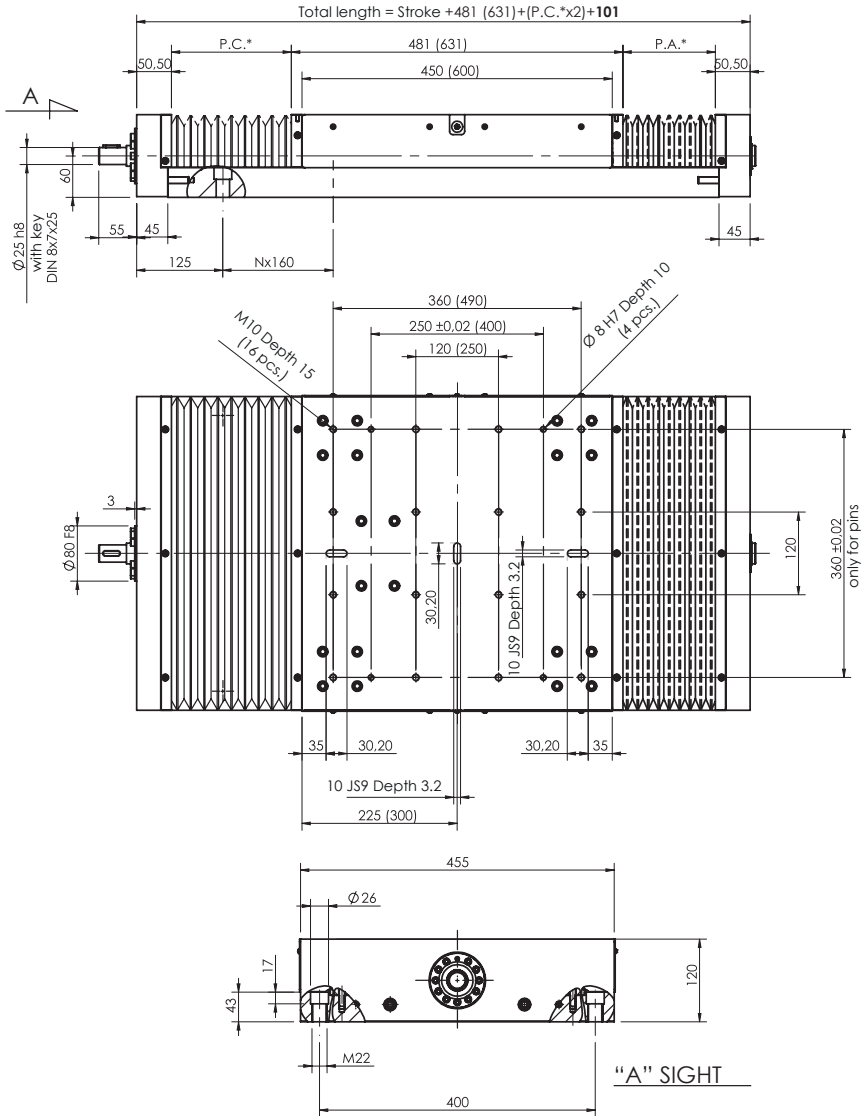
Forces and moments

Version	With linear guideways
Forces	dynamic [N]
F _x	12000
F _y	11000
F _z	95000
-F _z	63000
Moments	dynamic [Nm]
M _x	6300
M _y	7500 (9500)
M _z	3750 (5000)



MECHANICAL LINEAR TABLE TYPE 455 WITH BELLOWS

With ballscrew and linear guideway



* See calculations sheet.

MECHANICAL LINEAR TABLE TYPE 455 WITH BELLOWS

Weights

Basic length without stroke:	49,5 kg
Each 100 mm stroke:	5,5 kg
Carriage 450 mm:	25 kg
Carriage 600 mm:	31 kg
Moment of inertia:	$1,65 \cdot 10^{-3}$

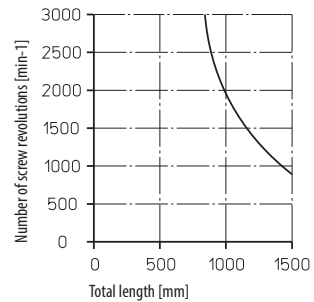
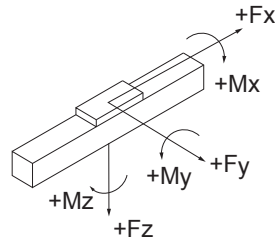
Technical data

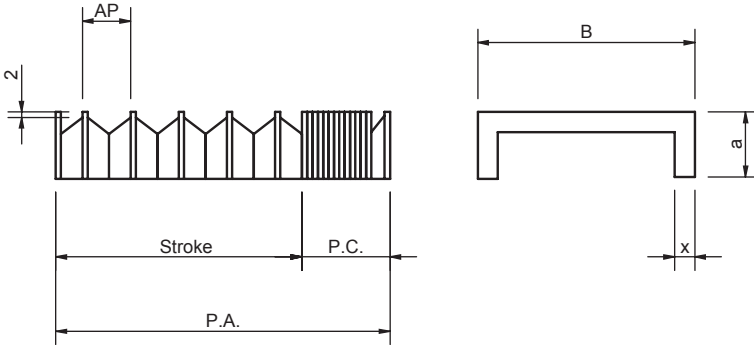
Max. speed:	2,0m/s
Repeat accuracy:	$\pm 0,03$ mm (KGT)
Acceleration:	single nut 10 m/sec^2 (M) double nut 20 m/sec^2 (MM)
Idle torque:	2,5 Nm
Drive element	
<i>Ballscrew:</i>	$n_{\text{max}} = 3000$ 1/min*
Diameter:	40 mm
Pitch:	5-10-20-40 mm
Total length:	up to 2000 mm

* According to ballscrew type and length (see diagram).

Forces and moments

Version	With linear guideways
Forces	dynamic [N]
Fx	18000
Fy	14000
Fz	120000
-Fz	80000
Moments	dynamic [Nm]
Mx	12000
My	10000 (13000)
Mz	5000 (6000)





- P.A.** = Open
- B** = Bellows width
- P.C.** = Closed
- a** = Bellows height
- Stroke** = Open - Closed
- x** = Pleats height

Formula for the calculation of block length of bellows, closed

- AP** = Open 1 pleat = $x \cdot 2 - 8$
- SM** = Bellows material thickness*
- SS** = Support thickness*
- SF** = Connecting flange thickness*
- NP** = Nr. of pleats = $(P.A. : AP) + 2$
- P.C.** = $(SM \cdot 8 + SS) \cdot NP + (SF \cdot 2)$

* see materials

Example:

Deatils: Pleats height = 15 mm
Open block = 1000 mm

$$1 \text{ pleat open} = 15 \times 2 - 8 = 22$$

$$\text{Nr. of pleats} = \frac{1000}{22} + 2 = 48$$

$$\text{Closed block} = (0,25^* \times 8 \times 1^{**}) \times 48 + (2^{***} \times 2)$$

$$\text{Closed block} = 3 \times 48 + 4 = 148$$

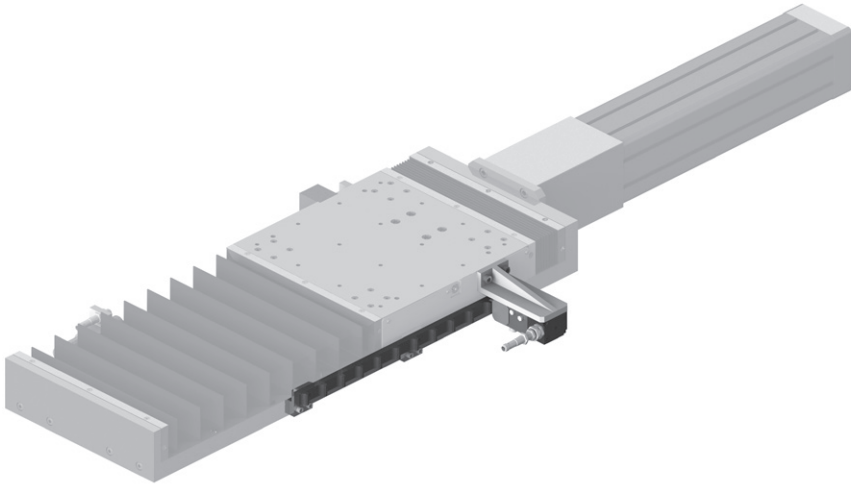
Closed block = 148 mm

* we suppose that bellows material is "TEMAT015"
(see materials)

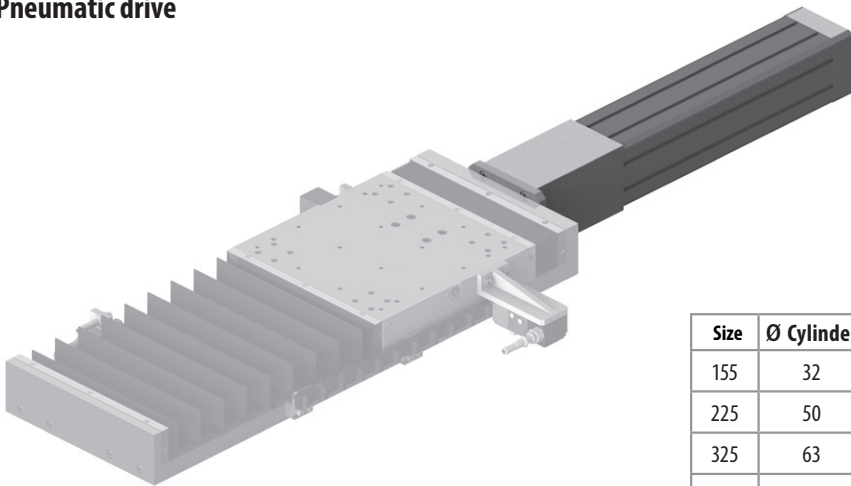
** we suppose that support thickness is 1 mm

*** we suppose that flange thickness is 2 mm
(see materials)

Safety device with limit switches

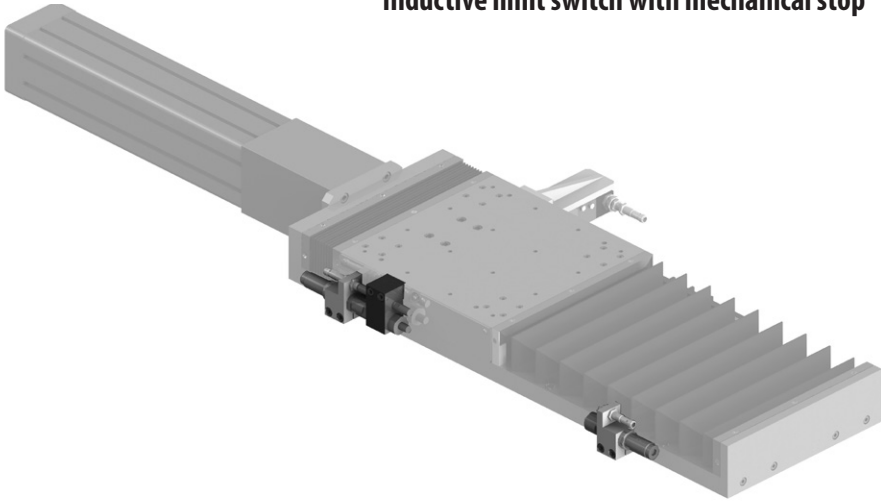


Pneumatic drive

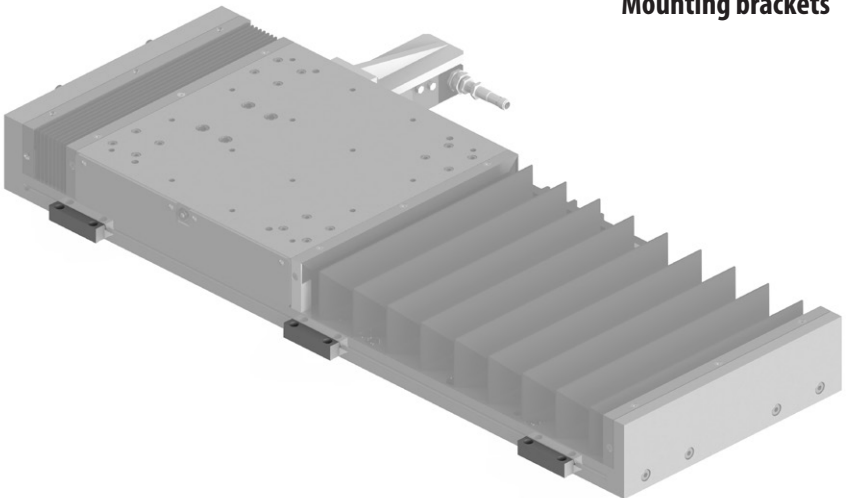


Size	Ø Cylinder
155	32
225	50
325	63
455	80

Inductive limit switch with mechanical stop



Mounting brackets



Inductive limit switch

