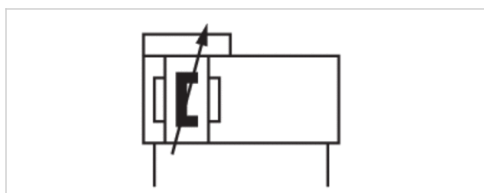


Rodless cylinders, Series RTC-SB

- Ø 25-50 mm
- Ports G 1/8 G 1/4
- double-acting
- with magnetic piston
- Slide bearing guide
- Cushioning pneumatically adjustable



Working pressure min./max.	2 ... 8 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m ³
Pressure for determining piston forces	6.3 bar

Technical data

Piston Ø	25 mm	32 mm	40 mm	50 mm
Stroke 100	R480470710	R480677234	R480470700	R480695199
200	R480470711	R480470720	R480470701	R480695200
300	R480470712	R480470721	R480470702	R480695201
400	R480470713	R480470722	R480470703	R480695202
500	R480470714	R480470723	R480470704	R480695203
600	R480470715	R480470724	R480470705	R480695204
700	R480470716	R480470725	R480470706	R480695205
800	R480470717	R480470726	R480470707	R480695206
900	R480470718	R480470727	R480470708	R480695207
1000	R480470719	R480470728	R480470709	R480695208

Technical data

Piston Ø	25 mm	32 mm	40 mm	50 mm
Piston force	309 N	507 N	792 N	1237 N
Cushioning length	20 mm	20 mm	20 mm	20 mm
Cushioning energy	4 J	7 J	10 J	15 J
Speed max.	6,5 m/s	4 m/s	5 m/s	3 m/s

Piston Ø	25 mm	32 mm	40 mm	50 mm
Weight 0 mm stroke	1,34 kg	2,1 kg	2,85 kg	4,5 kg
+10 mm stroke	0,033 kg	0,04 kg	0,049 kg	0,078 kg
Stroke max.	6600 mm	6600 mm	6600 mm	6600 mm

Technical information

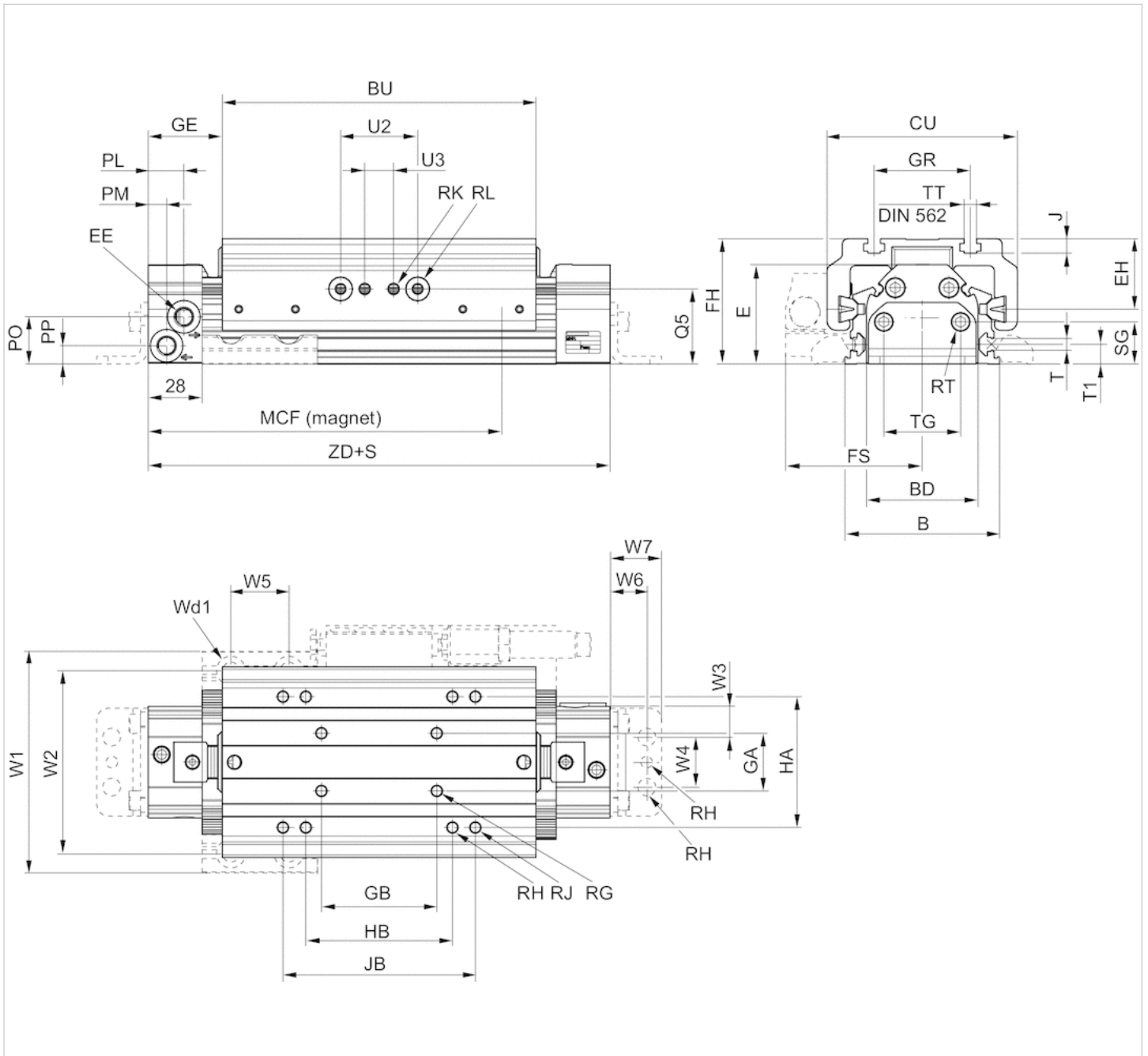
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The delivered product is lubricated for lifetime.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Cap	Aluminum, anodized
Seal	Polyurethane
Sealing strips	Polyurethane Stainless steel
Ball rail table	Aluminum, anodized

Dimensions

Dimensions in mm



S = stroke

Dimensions

Piston Ø	B	BU	BD	CU	EE	EH	FH	FS	GA	GB	GE	GR	HA	HB	J	JB	MCF	PL	PM
25 mm	67,3	147	44	81	G 1/8	28	55.1	62	18	60	34	40	54.4	63.5	5.9	80	165	20	8
32 mm	80,3	163	58	99	G 1/8	36,6	65.1	71	30	60	38.5	50	68	76.2	7.5	100	182	18.5	9.5
40 mm	89,3	182	70	108	G 1/4	41	71	75.5	30	60	40.5	50	80	101.6	7.5	120	205	18	10
50 mm	117,5	205	92	134	G 1/4	37,6	78,2	97.5	40	60	44.6	70	100	127	9.8	160	230	16	16

Piston Ø	PO	PP	Q5	RG	RH	RJ	RK	RL	RT 1)	SG	T	TT	T1	TG	U2	U3	W1
25 mm	21.5	9.3	38.8	M4	1/4-28 UNF	M6	M6	Ø12.01 H7	M5	17.3	N6	M4	10.1	19	40	15	96
32 mm	24.5	9.5	39	M6	1/4-28 UNF	M6	M6	Ø12.01 H7	M6	22	N6	M6	10.1	40	40	15	115
40 mm	31.5	11	44.6	M6	1/4-28 UNF	M6	M6	Ø12.01 H7	M6	22	N6	M6	11.2	40	40	15	124
50 mm	35,3	12,3	68.6	M8	1/4-28 UNF	M8	M8	Ø12.01 H7	M8	22	M8	M8	14.1	40	72	40	165

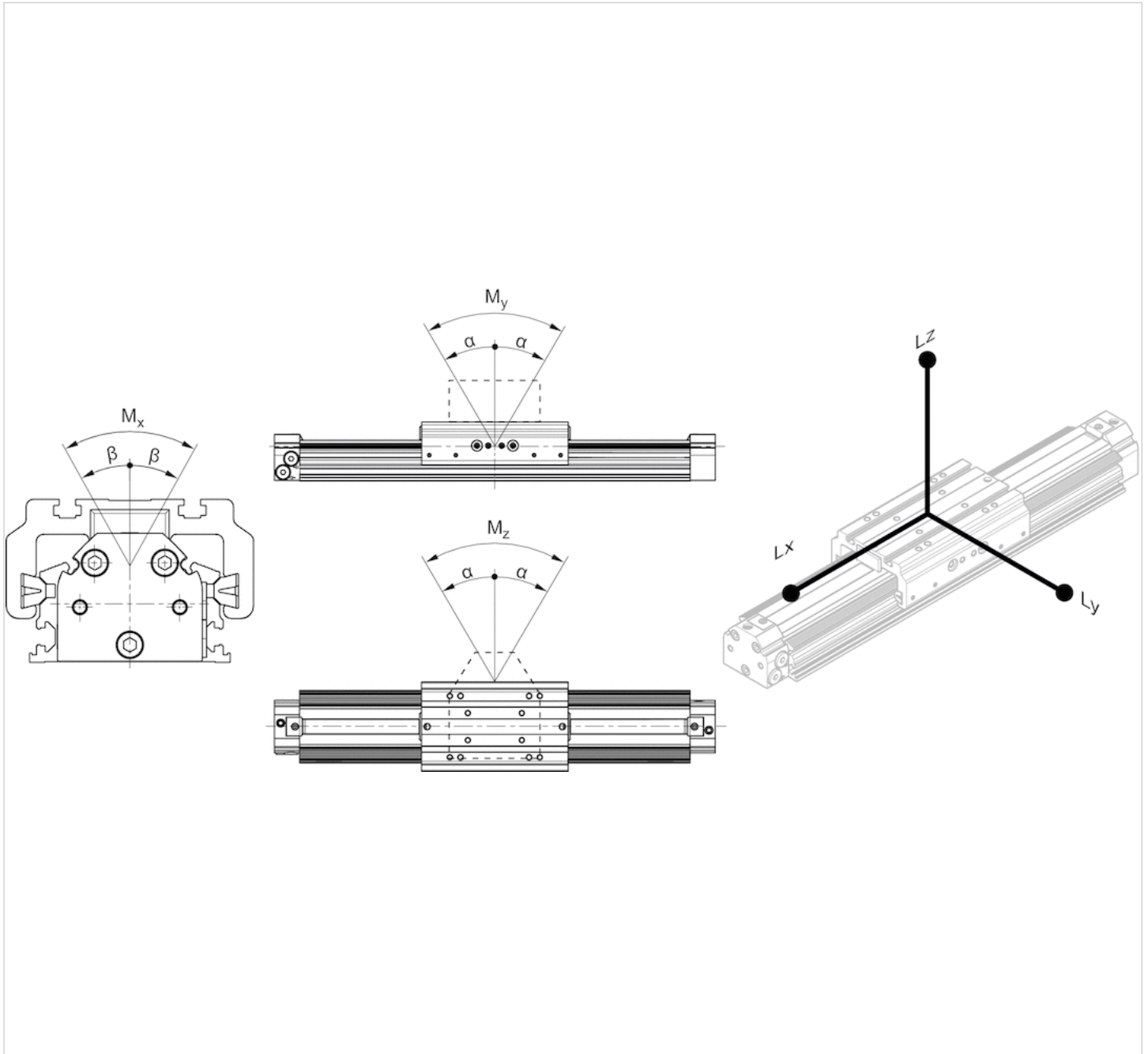
Piston Ø	W2	W3	W4	W5	W6	W7	Wd1	Wd2	Wd3	ZD
25 mm	79	7	18	30	13.5	19.8	Ø6.8	Ø6.8	Ø4G8	215
32 mm	95	15	26	30	19	26.8	Ø8.8	Ø9.2	Ø6G8	240
40 mm	104	15	26	30	19	26.8	Ø8.8	Ø9.2	Ø6G8	263
50 mm	140	11	70	40	22	32.7	Ø13	Ø13.7	Ø6G8	294

For long slide

Piston Ø	BU	HB	JB	MCF	ZD
25 mm	294	101.6	160	312	362
32 mm	326	101.6	200	345	403
40 mm	364	127	240	388	445
50 mm	410	152.4	240	434	499

Dimensions

Max. play and recommended max. lever arm length



L = lever arm
M = Torques

Dimensions

Piston Ø	α	β	Lx	Ly	Lz
25 mm	$\leq 0,2^\circ$	$\leq 0,3^\circ$	200	110	200
32 mm	$\leq 0,2^\circ$	$\leq 0,3^\circ$	240	120	240
40 mm	$\leq 0,2^\circ$	$\leq 0,3^\circ$	240	120	240
50 mm	$\leq 0,2^\circ$	$\leq 0,3^\circ$	300	150	300

For long slide

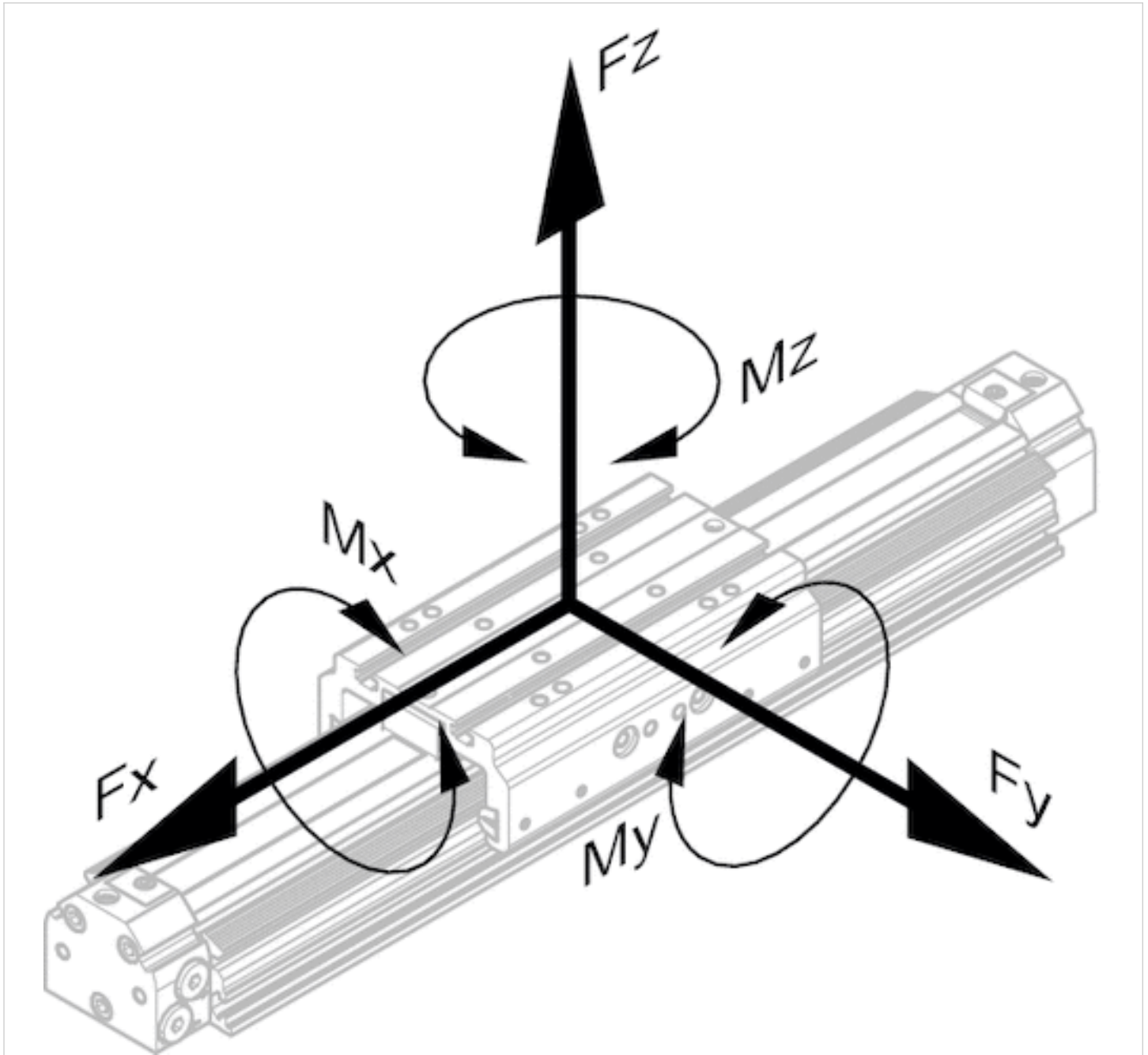
Piston Ø	α	β	Lx	Ly	Lz
25 mm	$\leq 0,2^\circ$	$\leq 0,3^\circ$	550	110	550
32 mm	$\leq 0,1^\circ$	$\leq 0,3^\circ$	610	320	610
40 mm	$\leq 0,1^\circ$	$\leq 0,3^\circ$	610	320	610
50 mm	$\leq 0,1^\circ$	$\leq 0,3^\circ$	760	400	760

Dimensions

Permissible forces F_x, F_y, F_z and torques M_x, M_y, M_z

$$\frac{M_x}{M_{x_{\max.}}} + \frac{M_y}{M_{y_{\max.}}} + \frac{M_z}{M_{z_{\max.}}} \leq 1$$

With simultaneously moments on the cylinder this equation must be used in addition to the maximum moments check. In the cushioning phase of the movement additional forces occur and must be considered. Please use our calculation tool for rodless cylinders on the <http://www.aventics.com>.



dynamic

Piston Ø	Mx [Nm]	My [Nm]	Mz [Nm]
25 mm	1.4	30	30
32 mm	6	45	45
40 mm	8	50	50
50 mm	12	80	80

static

Piston Ø	Fx [N]	Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]
25 mm	1800	700	2300	32	50	50
32 mm	2200	1000	2600	73	91	91
40 mm	2700	1000	2600	83	111	111

Piston Ø	F _x [N]	F _y [N]	F _z [N]	M _x [Nm]	M _y [Nm]	M _z [Nm]
50 mm	3400	1500	2900	140	270	140

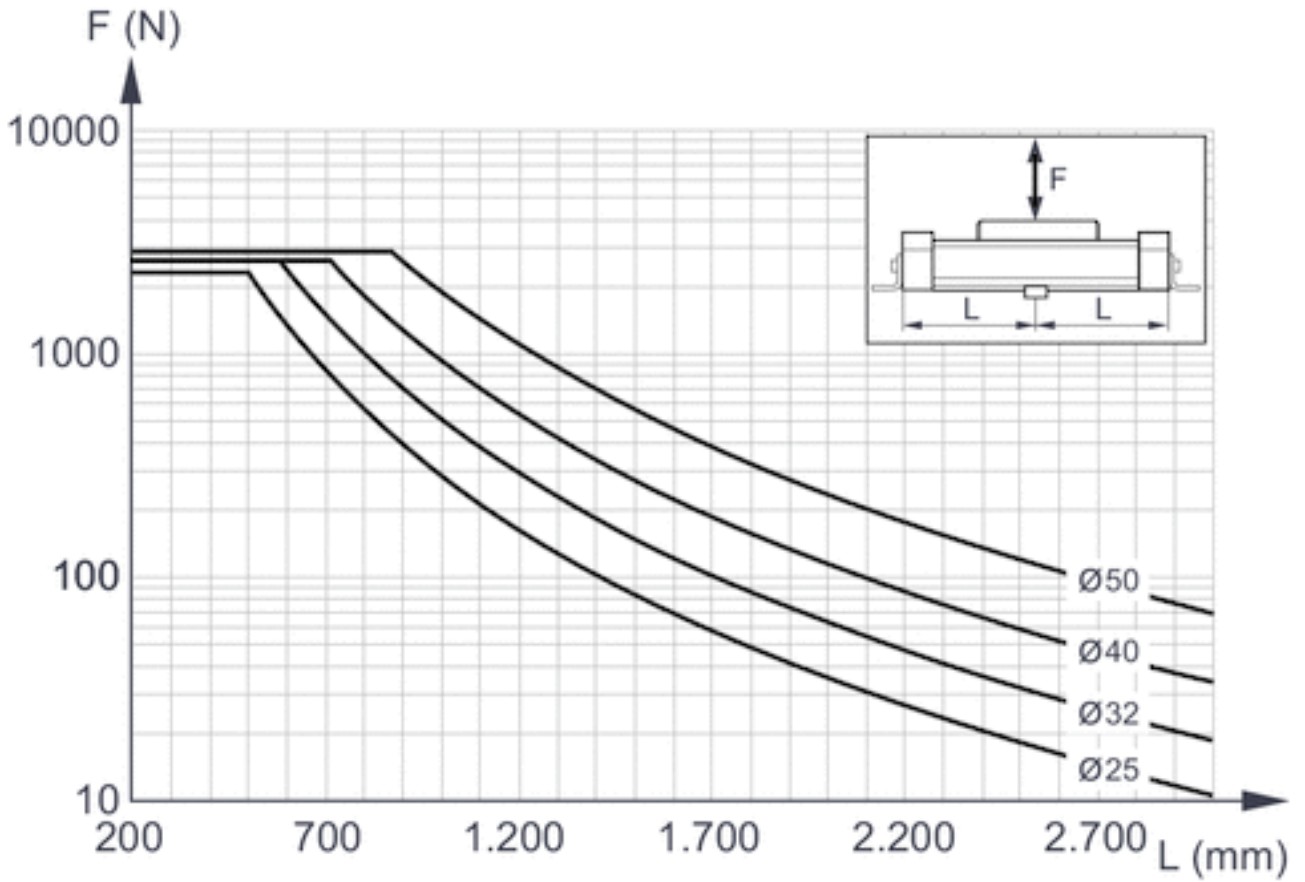
For long slide

Piston Ø	M _x [Nm]	M _y [Nm]	M _z [Nm]
25 mm	1,4	60	60
32 mm	6	90	90
40 mm	8	100	100
50 mm	12	160	160

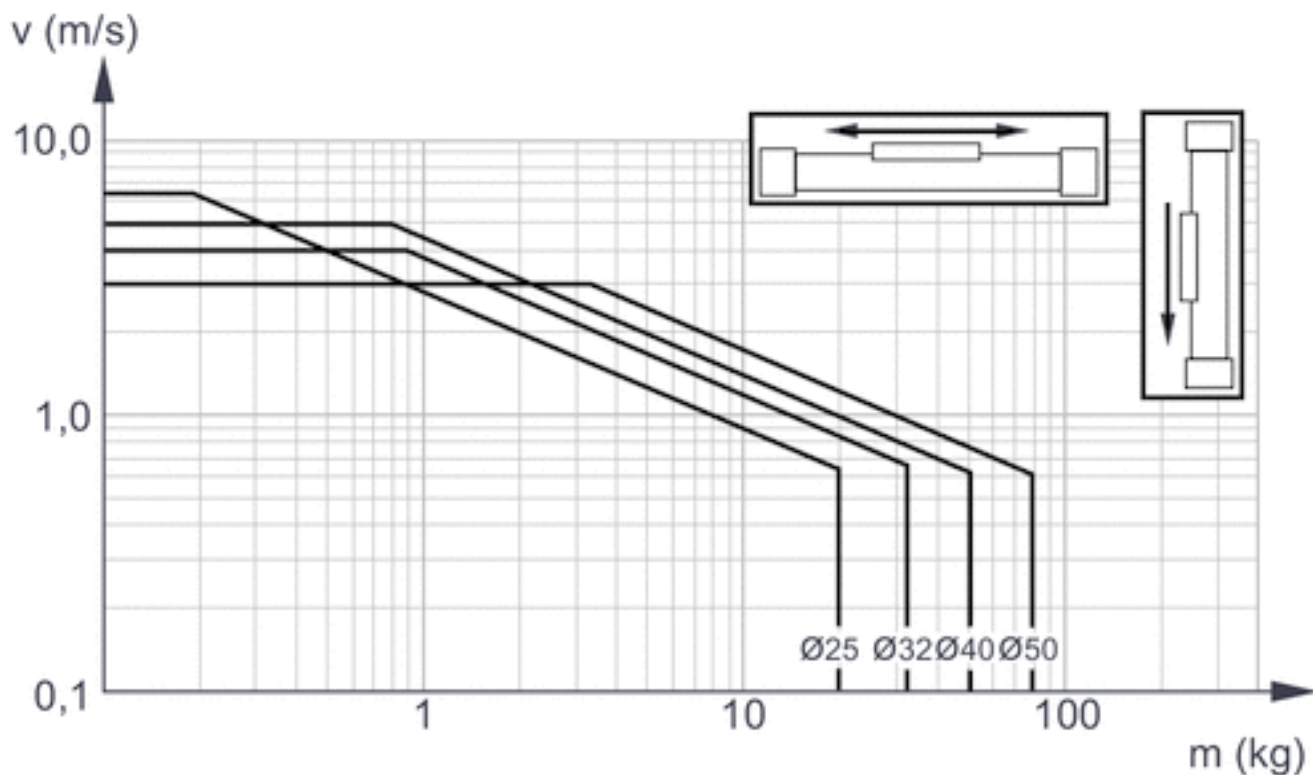
For long slide

Piston Ø	F _x [N]	F _y [N]	F _z [N]	M _x [Nm]	M _y [Nm]	M _z [Nm]
25 mm	1800	1200	3200	42	160	160
32 mm	2200	1400	3800	96	310	310
40 mm	2700	1400	3800	109	362	362
50 mm	3400	2000	4500	140	500	500

Diagrams



Limit diagram for pneumatic cushioning with horizontal mounting

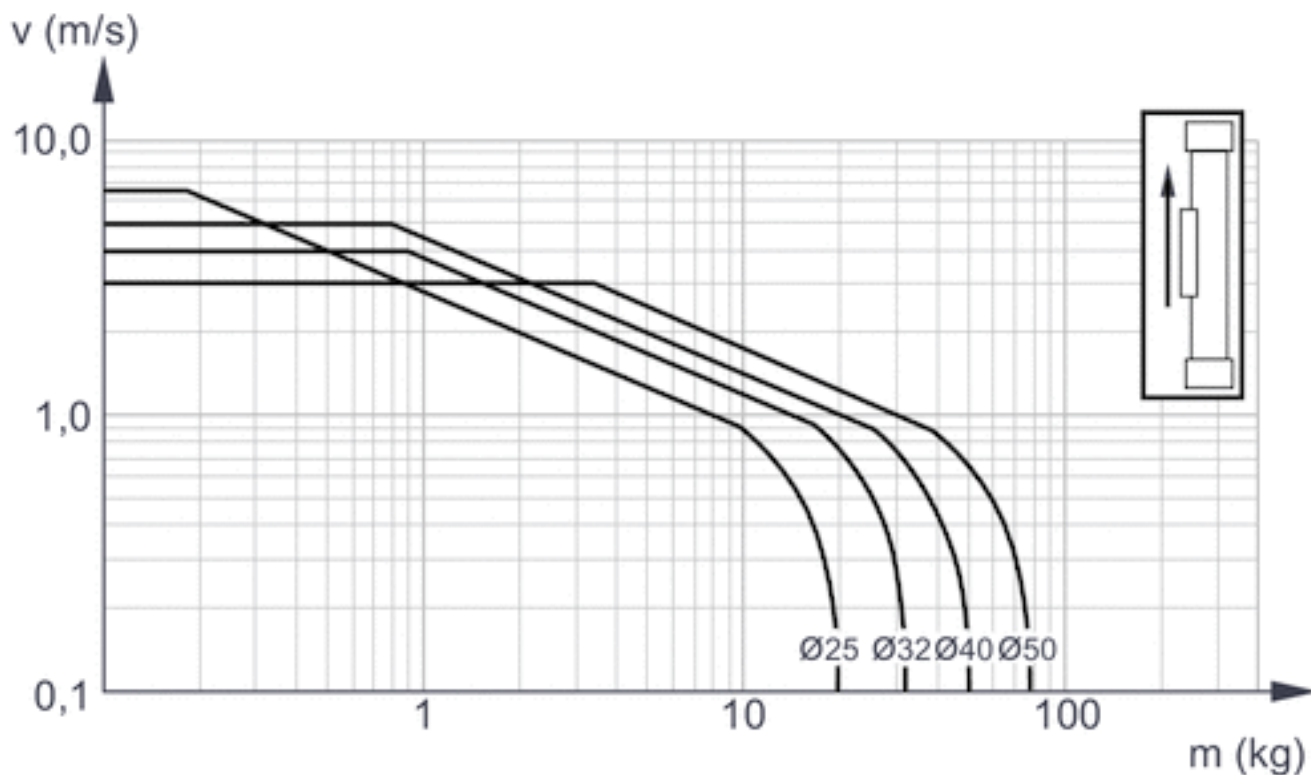


v = Piston velocity [m/s]

m = Cushionable mass [kg]

The values for the cushionable mass m and piston velocity v must be on or below the graph for the selected piston diameter.

Limit diagram for pneumatic cushioning with vertical mounting



v = Piston velocity [m/s]

m = Cushionable mass [kg]

The values for the cushionable mass m and piston velocity v must be on or below the graph for the selected piston diameter.

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