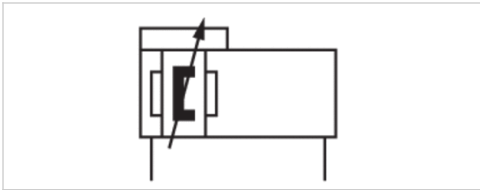


Rodless cylinders, Series RTC-CG

- Ø 16-40 mm
- Ports M7 G 1/8 G 1/4
- double-acting
- with magnetic piston
- ball rail guide
- Compact Guide
- Cushioning pneumatically adjustable
- Easy2Combine capable with connection kit



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

An example configuration is illustrated.
The delivered product may thus deviate from the illustration.

Technical data

Piston Ø	16 mm	25 mm	32 mm	40 mm
Stroke 200	R480148169	R480146993	R480154848	R480156966
300	R480148470	R480146765	R480154708	R480150407
400	R480153838	R480147184	R480148680	R480153577
500	R480147715	R480146182	R480146674	R480146348
600	R480146105	R480147519	R480146692	R480149794
700	R480156308	R480146193	R480146396	R480156967
800	-	R480148254	R480153429	R480146347
900	-	-	R480156962	R480156968
1000	-	-	R480153428	R480147888

Technical data

Piston Ø	16 mm	25 mm	32 mm	40 mm
Piston force	127 N	309 N	507 N	792 N
Cushioning length	20 mm	20 mm	20 mm	20 mm
Cushioning energy	1,5 J	4 J	7 J	10 J

Piston Ø	16 mm	25 mm	32 mm	40 mm
Speed max.	2 m/s	2 m/s	2 m/s	2 m/s
Weight 0 mm stroke	0,94 kg	1,64 kg	2,43 kg	3,92 kg
+10 mm stroke	0,026 kg	0,041 kg	0,056 kg	0,075 kg
Stroke max.	1800 mm	1800 mm	1800 mm	2000 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.

Use hydraulic shock absorbers for precise end position adjustment.

thread depth: 12 mm for piston Ø 16, 25 & 40 mm, 10,5 mm for piston Ø 32

thread depth: 12,7 mm for piston Ø 16–40 mm

thread depth: 9 mm for piston Ø 16–40 mm

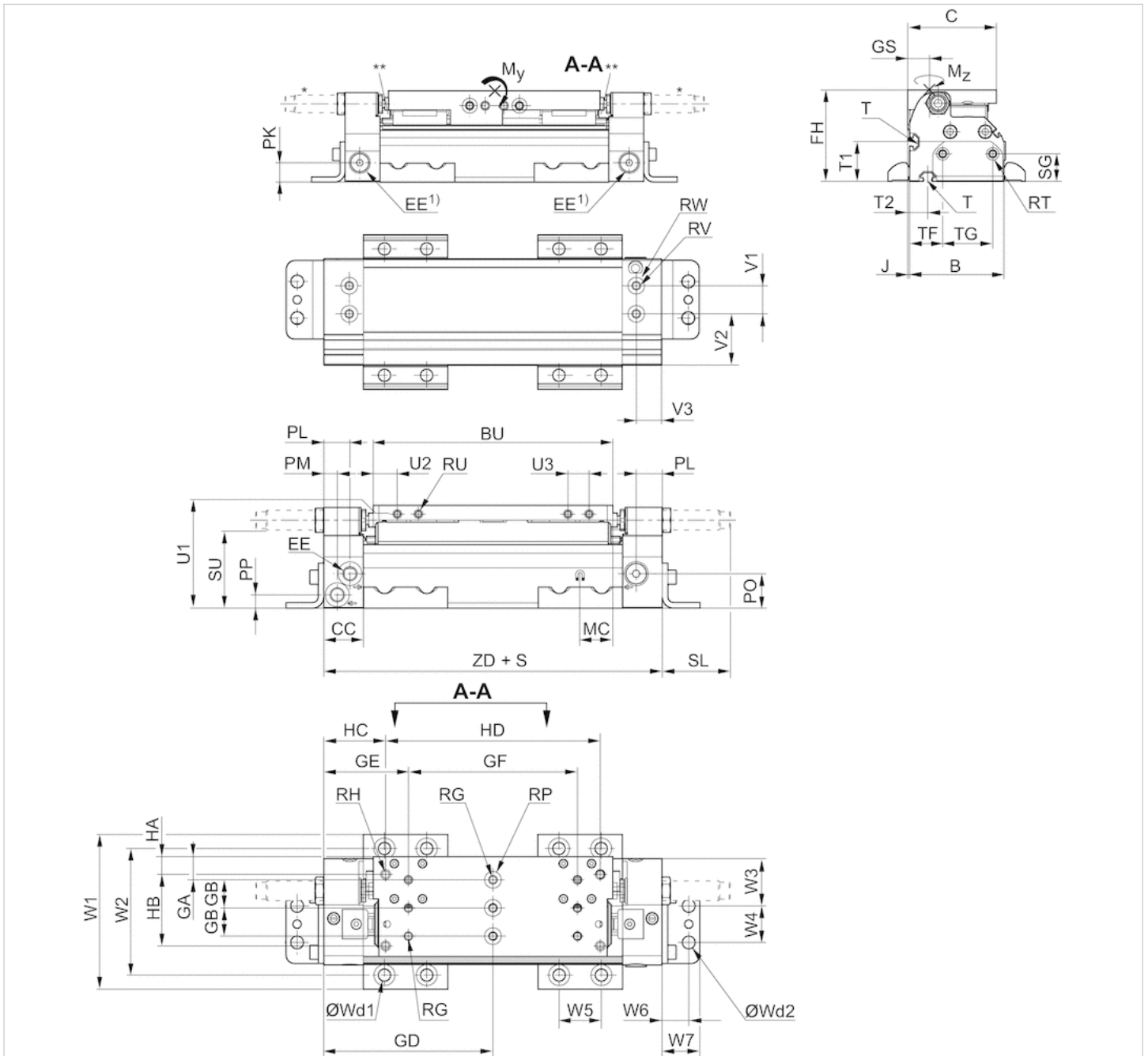
thread depth: 10 mm for piston Ø 16–40 mm

Technical information

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

Dimensions

Dimensions



S = stroke

T = Type of t-groove nut

1) Auxiliary air feeding

An example configuration is illustrated. The delivered product may thus deviate from the illustration.

* Shock absorber optional in end cover for diameters 16-40

** RTC-CG 16 & 25: 2x Lube ports on each runner block, RTC-CG 32 & 40: Lube nipple of funnel type with thread connection M3

Dimensions

Piston Ø	B	C	BU	CC	EE	FH	GA	GB	GD	GE	GF	GS	HA	HB	HC	HD	J	MC
16 mm	50	51	122	28	3xM7	54	7	20	93.5	38.5	110	11.5	7.6	38.1	68.1	50.8	2	12
25 mm	62.5	58.1	147	28	3xG 1/8	65	6	20	107.5	53.5	108	15	5.1	45.7	38.9	137.2	1.5	15
32 mm	75.5	71	170	28	3xG 1/8	73	16.5	20	120	60	120	17.5	12.7	50.8	43.8	152.4	1.5	20
40 mm	85.5	74	186	28	3xG 1/4	94.4	16.5	20	131.6	71.6	120	18.5	12.7	50.8	55.4	152.4	1.5	17

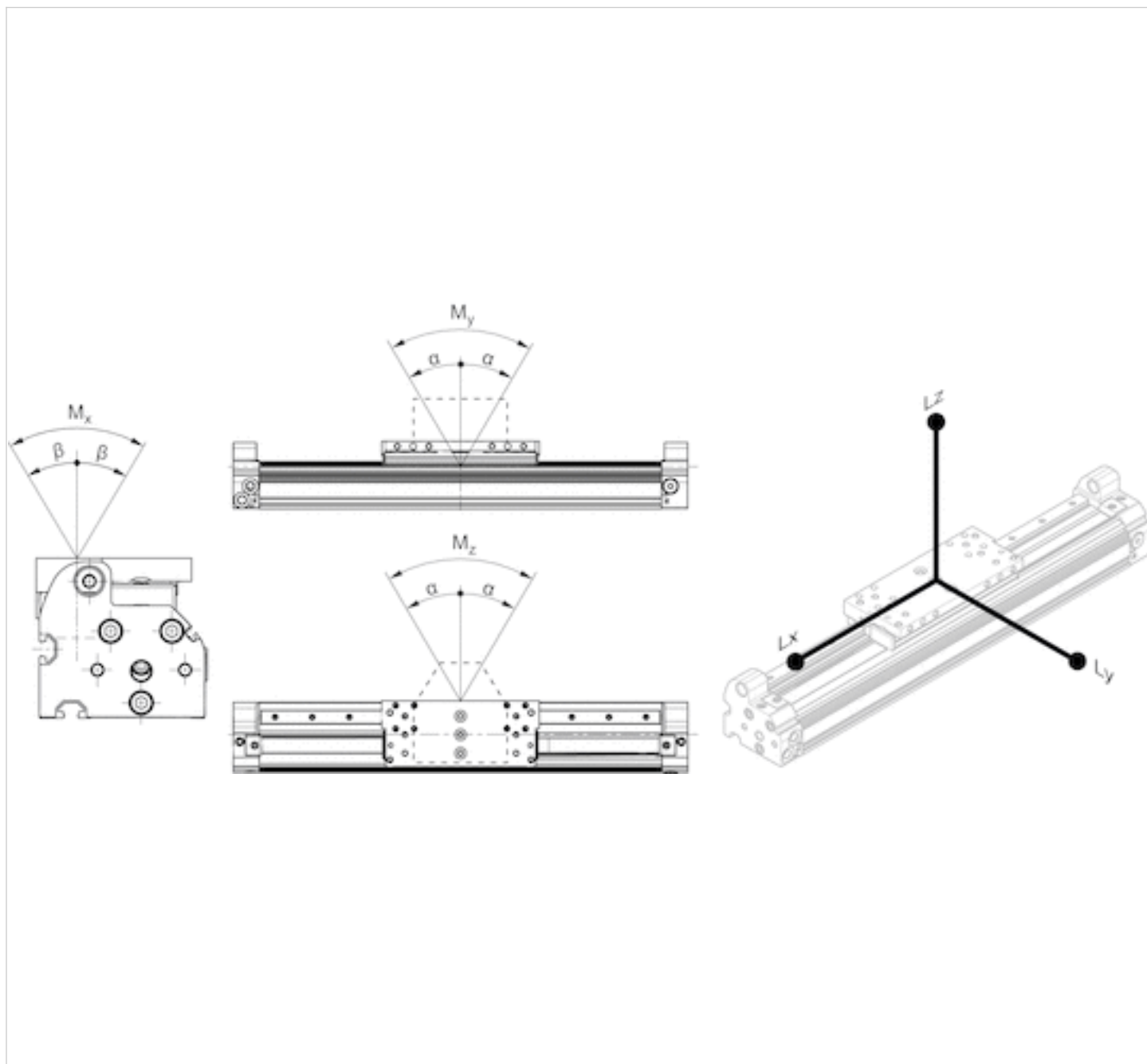
Piston Ø	PK	PL	PM	PN	PO	PP	RG 1)	RH 2)	RP	RT 3)	RU 4)	RV	RW
16 mm	11.9	18	7	7	13.3	7.3	M5	UNC 1/4-20	Ø 9	M5	M5	M5x8	Ø 9H8x1,6
25 mm	10.1	20	8	9	21.5	9.3	M5	UNC 1/4-20	Ø 9	M5	M6	M5x8	Ø 9H8x1,6
32 mm	15	18.5	9.5	12	24.5	9.5	M6	UNC 1/4-20	Ø 12	M6	M6	M6x10	Ø 12H8x2,1
40 mm	18	18	10	11	31.5	10.5	M6	UNC 1/4-20	Ø 12	M6	M6	M6x10	Ø 12H8x2,1

Piston Ø	SG	SL	SU	T	V1	V2	V3	W1	W2	W3	W4	W5	W6	W7	Wd1	Wd2	T1	T2	TF
16 mm	17.3	33.2	38.6	N4	20	6	14	78.4	61.4	24	18	30	13.5	19.8	M6	M6	18.5	10.5	25.5
25 mm	17.3	49.3	47.1	N6	20	26.5	18	90.9	73.9	31.5	18	30	13.5	19.8	M6	M6	26.6	13.5	31
32 mm	22	48.3	55.5	N6	20	36.5	18	109.9	89.9	33.5	26	30	19	26.8	M8	M8	31.5	14.5	26.5
40 mm	22	45.1	73.4	N6	20	40.5	18	119.9	99.9	37.5	26	30	19	26.8	M8	M8	41.4	13	30.5

Piston Ø	TG	U1	U2	U3	ZD	Moving mass kg
16 mm	19	48	13	15	187	0.22
25 mm	19	59	12.5	27	215	0.4
32 mm	40	67	17	34	240	0.47
40 mm	40	79.4	25	34	263.1	0.97

Dimensions

Max. play and recommended max. lever arm length



L = lever arm
M = Torques

Dimensions

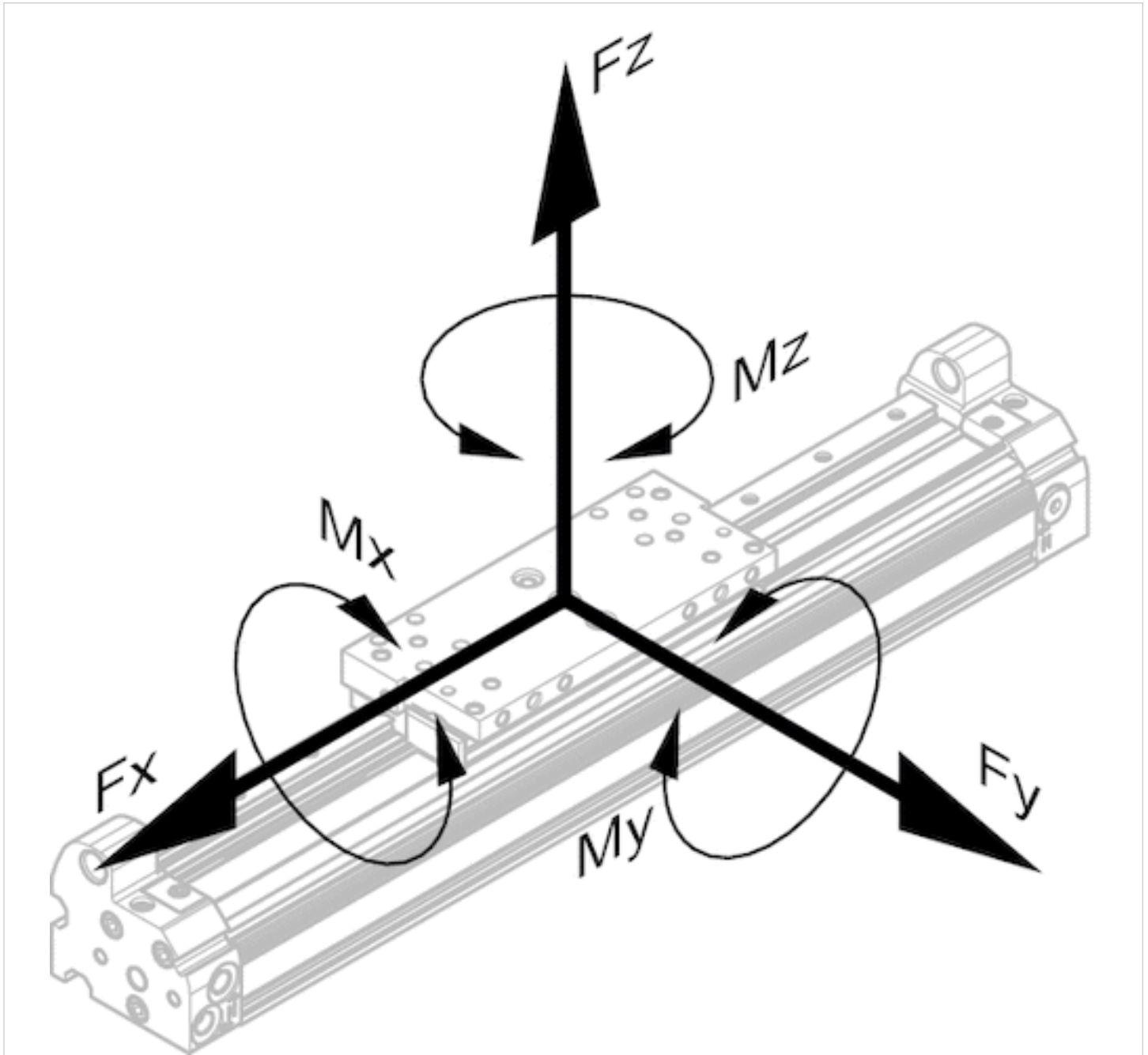
Piston Ø	α	β	Lx	Ly	Lz
16 mm	0,1°	0,2°	328	328	328
25 mm	0,1°	0,2°	424	424	424
32 mm	0,1°	0,2°	480	480	480
40 mm	0,1°	0,2°	532	532	532

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]
16 mm	4	30	30
25 mm	10	78	78
32 mm	22	158	110
40 mm	36	284	109

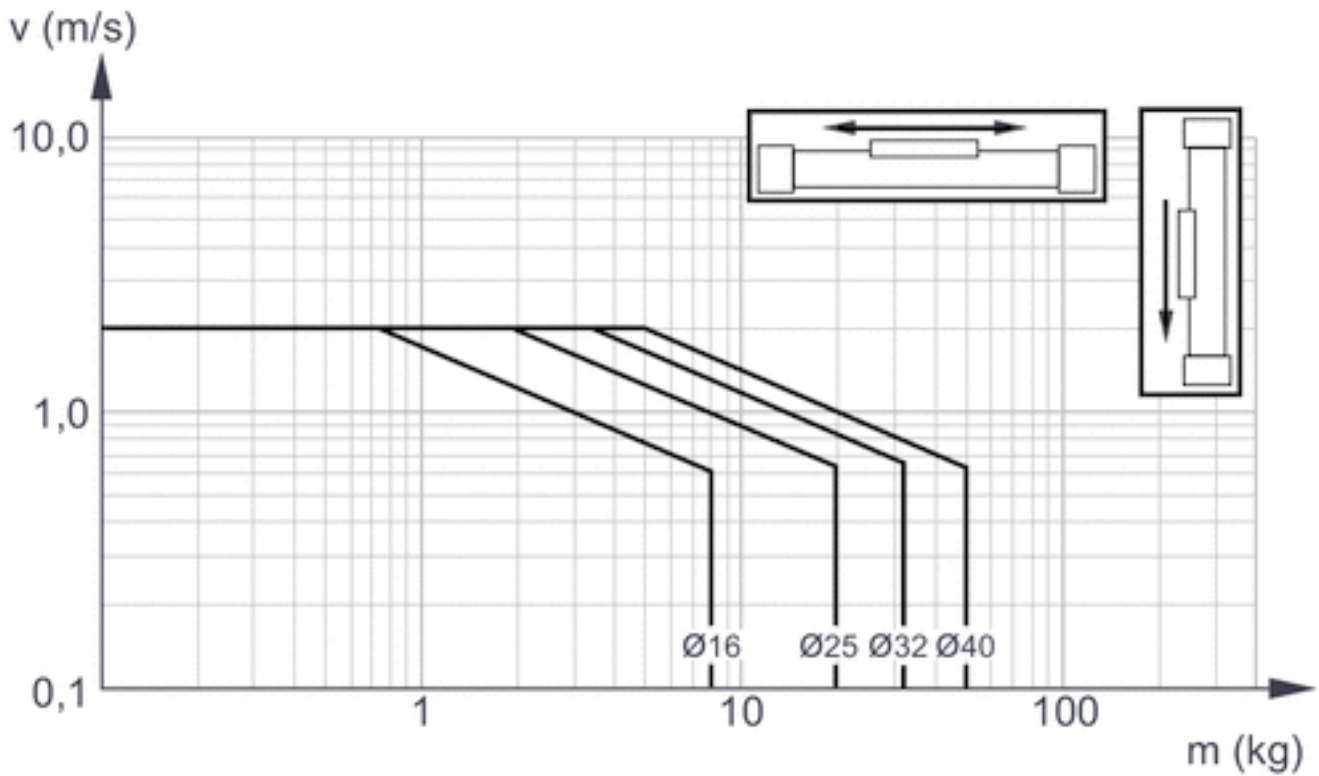
static

Piston Ø	Fx [N]	Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]
16 mm	744	744	744	4	30	30
25 mm	1456	1456	1456	10	78	78
32 mm	1840	1840	2646	22	158	110

Piston Ø	F _x [N]	F _y [N]	F _z [N]	M _x [Nm]	M _y [Nm]	M _z [Nm]
40 mm	1640	1640	4284	36	284	109

Diagrams

Limit diagram for pneumatic cushioning with horizontal mounting

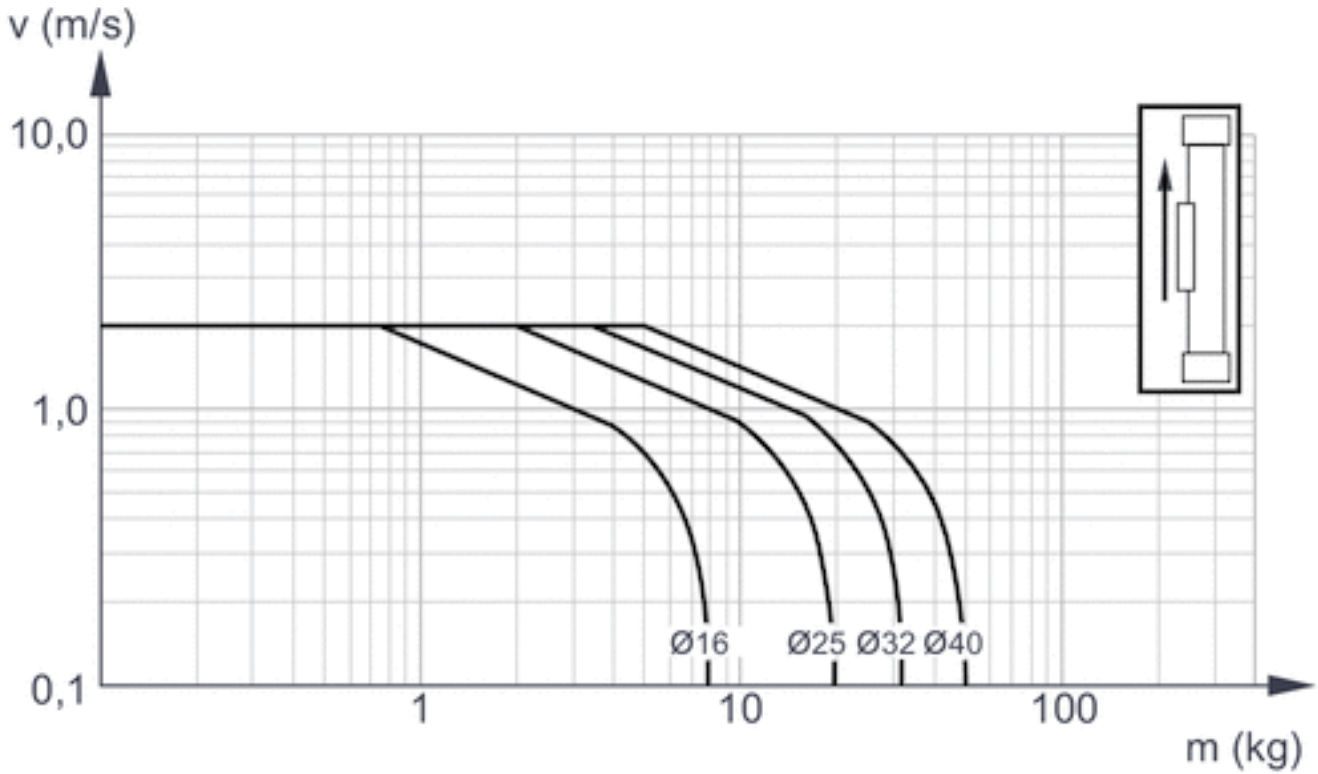


v = Piston velocity [m/s]

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

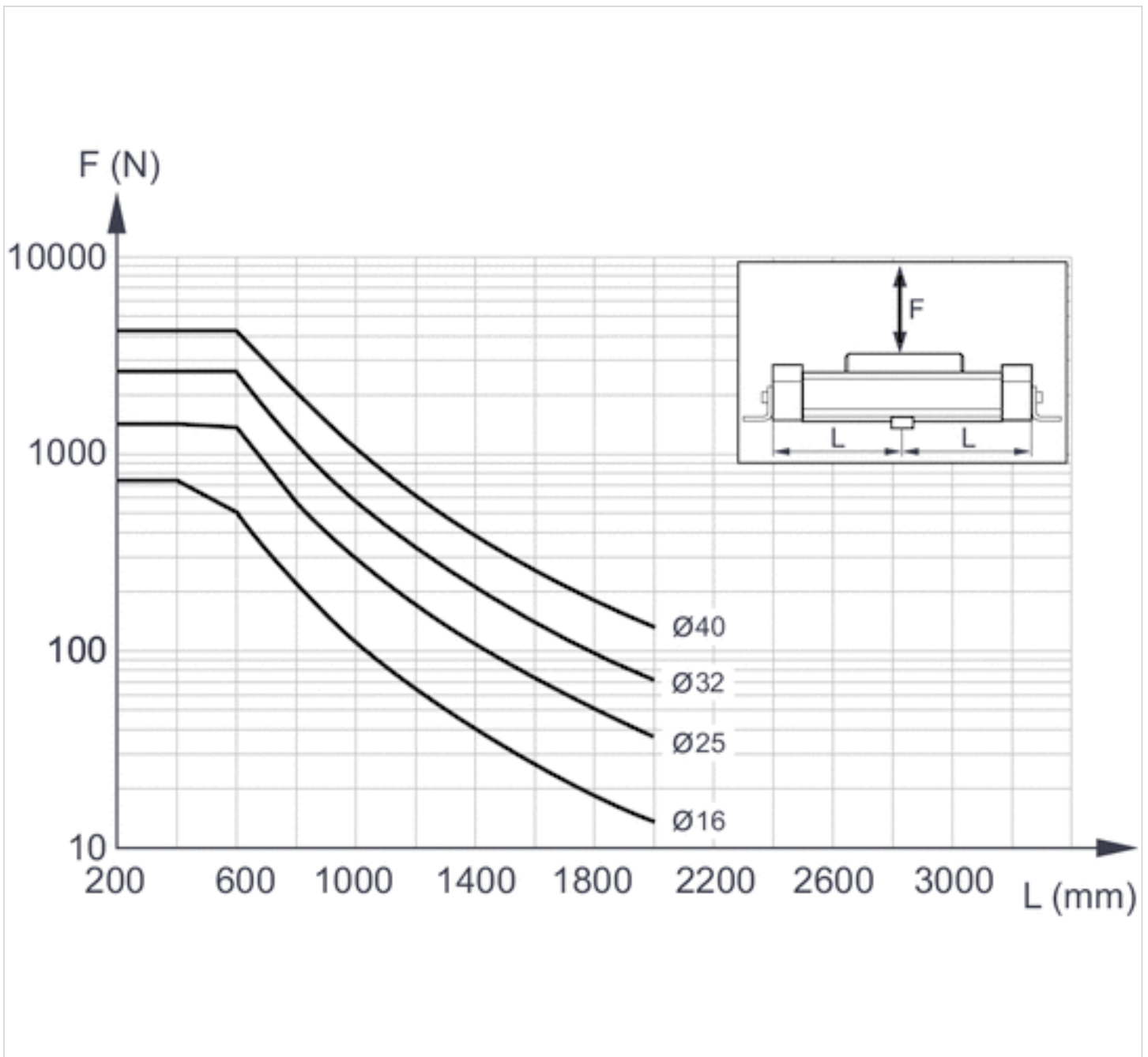


v = Piston velocity [m/s]

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.

Support span



Max. support span L [mm] as a function of F [N] at a deflection of 0.5 mm

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