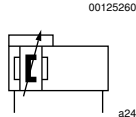


## Rodless cylinders → Rodless cylinders

**Rodless cylinder, Series RTC-HD**

► Ø 16 - 63 mm ► Ports: M7 - G 3/8 ► double-acting ► with magnetic piston ► ball rail guide ► Heavy Duty ► cushioning: pneumatically, adjustable ► Easy-2-Combine-capable with connection kit



Working pressure min./max.	4 bar / 8 bar
Ambient temperature min./max.	-10 °C / +60 °C
Medium temperature min./max.	-10 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 1 mg/m³
Pressure for determining piston forces	6,3 bar

**Materials:**

Cylinder tube	Aluminum, anodized
Covers	Aluminum, anodized
Seals	Polyurethane
Sealing strips	Polyurethane; Stainless steel
Ball rail table	Aluminum, anodized
Guide rail	Steel, hardened

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

**Technical Remarks**

- 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.
- This product may only be operated with oil-free, dry compressed air.
- Use hydraulic shock absorbers for precise end position adjustment.
- The product is a part of the EasyHandling system.

Piston Ø		[mm]	<b>16</b>	<b>25</b>	<b>32</b>	<b>40</b>	<b>50</b>
Piston force		[N]	127	309	507	792	1237
Cushioning length		[mm]	20	20	20	20	20
Cushioning energy		[J]	1.5	4	7	10	15
Speed max.		[m/s]	2	2	2	2	2
Weight	0 mm stroke	[kg]	1.62	2.96	3.9	6.58	8.94
	+10 mm stroke	[kg]	0.047	0.071	0.086	0.128	0.162
Stroke max.		[mm]	1800	4300	4300	4300	4300

Piston Ø		[mm]	<b>63</b>				
Piston force		[N]	1964				
Cushioning length		[mm]	20				
Cushioning energy		[J]	25				
Speed max.		[m/s]	2				
Weight	0 mm stroke	[kg]	11.75				
	+10 mm stroke	[kg]	0.193				
Stroke max.		[mm]	3700				

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	Piston Ø Ports	16 M7	25 G 1/8	32 G 1/8	40 G 1/4	50 G 1/4
	Stroke 200	R480156949	R480149659	R480154726	R480155259	-
	300	R480156950	R480149553	R480148820	R480154424	-
	400	R480156951	<b>R480150759</b>	<b>R480148602</b>	R480154425	R480155175
	500	R480147724	R480147725	<b>R480147726</b>	R480147727	R480147728
	600	R480156953	R480153574	<b>R480148603</b>	R480148971	R480146987
	700	R480156954	<b>R480156959</b>	R480154001	R480149554	R480156943
	800	-	R480155572	R480150325	R480156710	R480149774
	900	-	-	R480156963	R480156969	R480156944
	1000	-	-	R480148582	R480150515	R480149030
		Piston Ø Ports	63 G 3/8			
	Stroke 200	-				
	300	-				
	400	R480156946				
	500	R480147729				
	600	R480156947				
	700	R480149638				
	800	R480154379				
	900	R480149592				
1000	R480149031					

## Configurable product

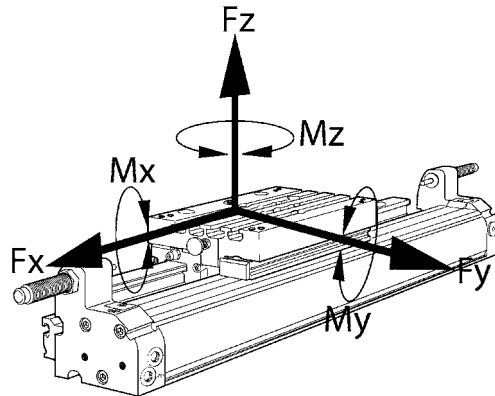


This product is configurable. Please use our Internet configurator at [www.boschrexroth.com/pneumatics](http://www.boschrexroth.com/pneumatics) or contact the nearest Bosch Rexroth sales office.

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

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

00125850



00125257

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 [www.boschrexroth.com/pneumatics](http://www.boschrexroth.com/pneumatics).

Rodless cylinders → Rodless cylinders

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**Static**

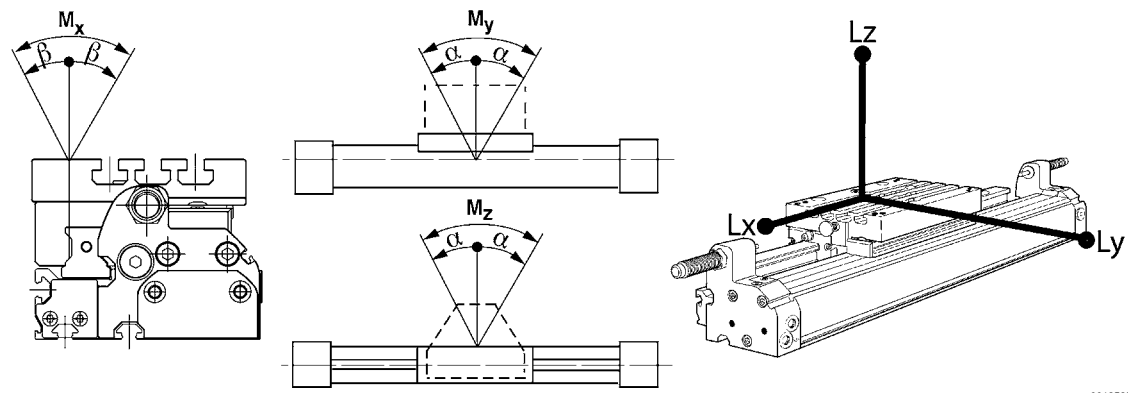
Piston Ø	F <sub>x</sub> [N]	F <sub>y</sub> [N]	F <sub>z</sub> [N]	M <sub>x</sub> [Nm]	M <sub>y</sub> [Nm]	M <sub>z</sub> [Nm]							
16	1640	1640	4284	34	138	53							
25	2640	2640	7810	100	336	114							
32	3760	3760	9952	154	502	190							
40	6840	6840	13922	254	764	376							
50	6840	6840	13922	254	924	455							
63	6840	6840	13922	254	1120	551							

**Dynamic**

Piston Ø	M <sub>x</sub> [Nm]	M <sub>y</sub> [Nm]	M <sub>z</sub> [Nm]										
16	34	138	53										
25	100	336	114										
32	154	502	190										
40	254	764	376										
50	254	924	455										
63	254	1120	551										

Recommended values for an expected lifetime of 3200 km

**Max. play and recommended max. lever arm length**



L = lever arm

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Piston Ø	α	β	L <sub>x</sub>	L <sub>y</sub>	L <sub>z</sub>								
16	<0,1°	<0,2°	260	260	260								
25	<0,1°	<0,2°	344	344	344								
32	<0,1°	<0,2°	404	404	404								
40	<0,1°	<0,2°	440	440	440								
50	<0,1°	<0,2°	532	532	532								
63	<0,1°	<0,2°	644	644	644								

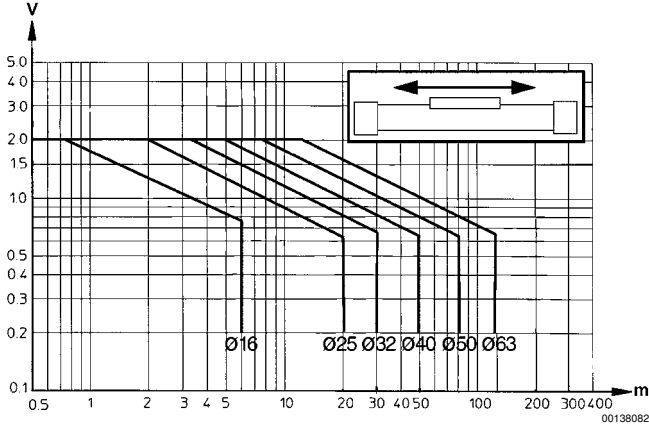
Rodless cylinders → Rodless cylinders

**Rodless cylinder, Series RTC-HD**

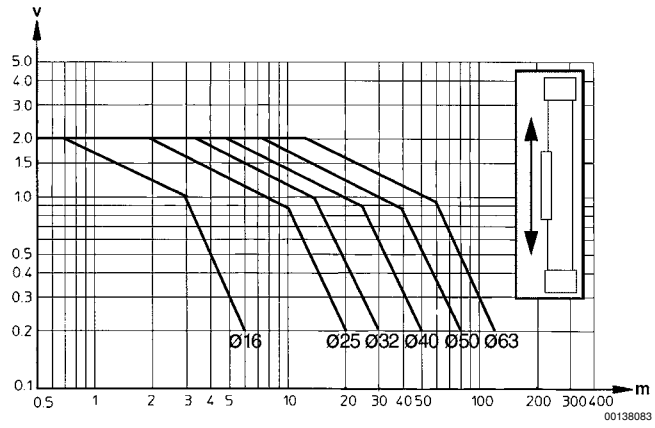
▶ Ø 16 - 63 mm ▶ Ports: M7 - G 3/8 ▶ double-acting ▶ with magnetic piston ▶ ball rail guide ▶ Heavy Duty ▶ cushioning: pneumatically, adjustable ▶ Easy-2-Combine-capable with connection kit



**Limit diagram for pneumatic cushioning with horizontal mounting**

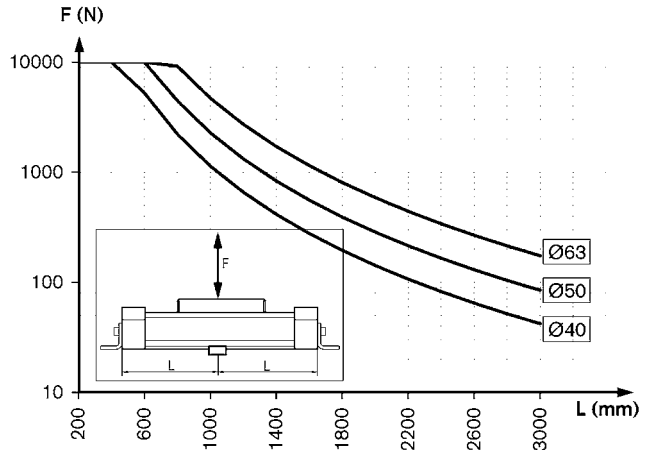
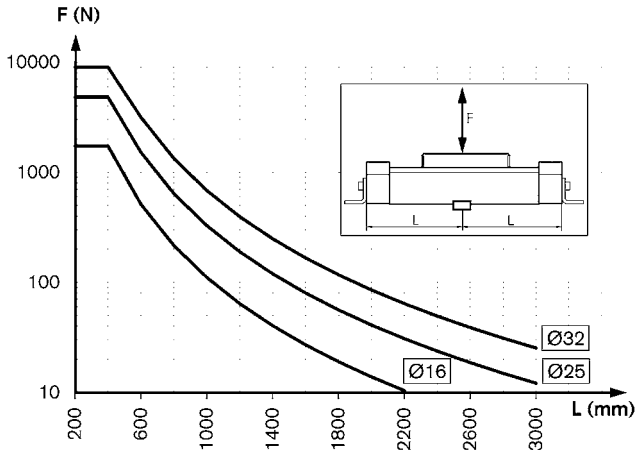


**Limit diagram for pneumatic cushioning with vertical mounting**



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**



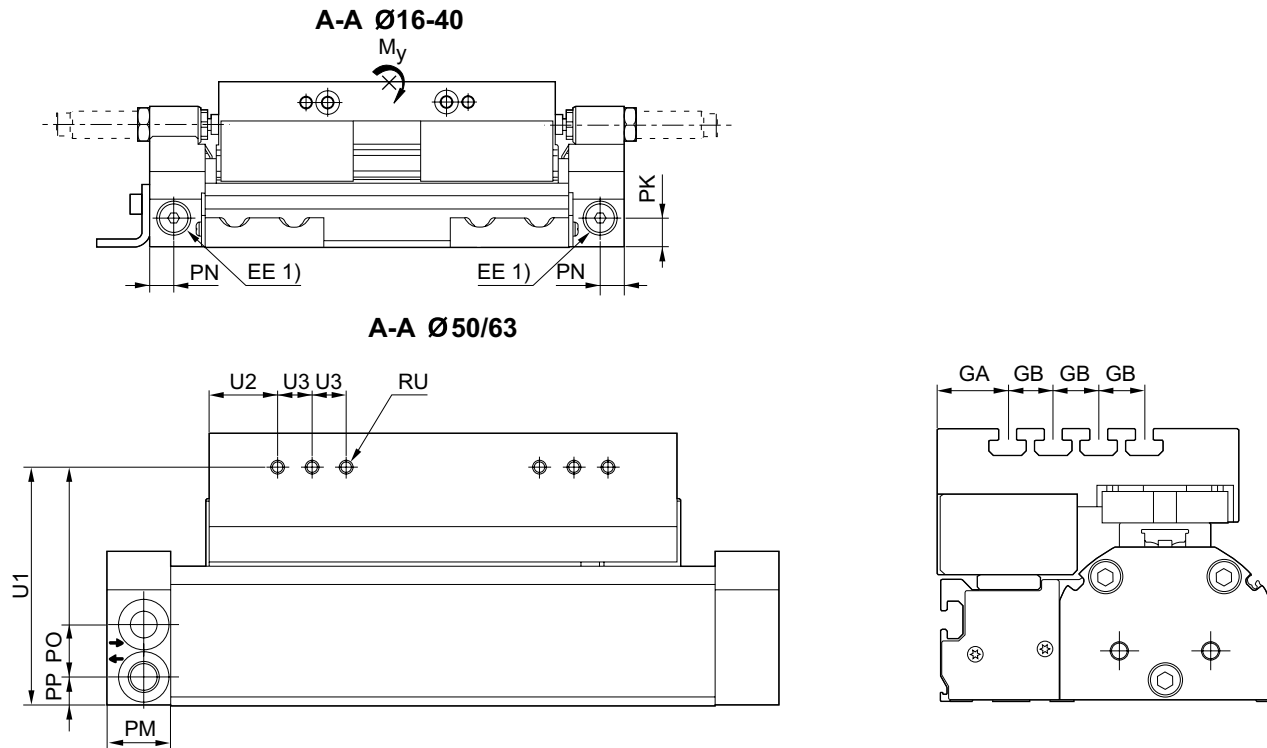
Max. support span L [mm] as a function of F [N] at a deflection of 0.5 mm



## Rodless cylinders → Rodless cylinders

## Rodless cylinder, Series RTC-HD

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1) Auxiliary air feeding

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

Piston Ø	B	C	BU	CC	EE	FH	GA	GB	GD	GE	GF	GH	GI
16	82	82	122	28	M7	60	27	20	93.5	43.5	100	5	20/20/20
25	103	99.5	147	28	G 1/8	70	26	20	107.5	52.5	110	16	20/40
32	105	100	170	28	G 1/8	83.8	36.5	20	120	50	140	6.7	85
40	132	122	186	28	G 1/4	97.7	36.5	20	131.5	46.5	170	10	100
50	144.5	132.5	205	28	G 1/4	119.4	31	20	147.3	52.3	190	10	100
63	161	139	233	28	G 3/8	129.4	31	20	166.5	71.5	190	10	100

Piston Ø	GJ	GK	GS	HA	HB	HC	HD	J	K1	MC	PK	PL	PM
16	40	-	32	7.6	69.9	55.4	76.2	1.5	20.7	12	11.9	18	7
25	40	-	37	6.4	83.8	44	127	1.5	21.4	15	10.1	20	8
32	40	60	25.5	12.7	76.2	56.5	127	1.5	19.7	20	15	18.5	9.5
40	40	60	31.5	12.7	101.6	55.4	152.4	1.5	25.6	17	18	18	10
50	40	60	31.5	15.2	99.06	66	162.6	1.5	28.6	23	N/A	16	16
63	40	60	31.5	15.2	101.6	59.8	213.4	1.5	28.6	25	N/A	14	14

Piston Ø	PN	PO	PP	RG 1)	RH 2)	RP	RT 3)	RU 4)	SG	SL	SU	T	TT
16	7	13.3	7.3	M5	UNC 1/4-20	Ø 9	M5	M5	17.3	33.2	38.6	N4	N6
25	9	21.5	9.3	M5	UNC 1/4-20	Ø 9	M5	M5	17.3	49.3	47.1	N6	N6
32	12	24.5	9.5	M6	UNC 1/4-20	Ø 12	M6	M5	22	48.3	55.5	N6	N8
40	11	31.5	10.5	M6	UNC 1/4-20	Ø 12	M6	M5	22	45.1	73.4	N6	N8
50	N/A	35	12	M8	UNC 5/16-18	Ø 12	M8	M5	22	N/A	N/A	N8	N8
63	N/A	45.5	14.5	M8	UNC 5/16-18	Ø 12	M8	M5	30	N/A	N/A	N8	N8

Piston Ø	W1	W2	W3	W4	W5	W6	W7	Wd1	Wd2	T1	T2	T3	TF
16	110.4	93.4	56	18	30	13.5	19.8	M6	M6	20.8	13.7	-	55.5

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information  
Pneumatics catalog, online PDF, as of 2013-04-11, © Bosch Rexroth AG, subject to change

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Piston Ø	W1	W2	W3	W4	W5	W6	W7	Wd1	Wd2	T1	T2	T3	TF
25	131.4	114.4	72	18	30	13.5	19.8	M6	M6	20	14	54	71.5
32	139.4	119.4	63	26	30	19	26.8	M8	M8	23	14	44	56
40	166.4	146.4	84	26	30	19	26.8	M8	M8	24.7	29.5	59.5	77
50	192.1	166.9	63.5	70	40	22	32.7	M12	M12	35.6	18.5	43.5	78.5
63	208.6	183.4	80	50	40	22	32.7	M12	M12	45.6	17	39.5	65

Piston Ø	TG	U1	U2	U3	ZD	M [kg] 5)							
16	19	47	16.5	15	187	0.64							
25	19	57	16.5	15	215	1.25							
32	40	71	30	15	240	1.4							
40	40	82.7	30	15	263.1	2.57							
50	40	114.4	30	15	294.6	3.19							
63	80	114.4	30	15	333	3.46							

1) thread depth: 12 mm for piston Ø 16–25, 16 mm for piston Ø 32–40, 14 mm for piston Ø 50–63

2) thread depth: 12,7 mm for piston Ø 16–63 mm

3) thread depth: 9 mm for piston Ø 16–40 mm, 12 mm for piston Ø 50–63 mm

4) thread depth: 10 mm for piston Ø 16–63 mm

5) M = moving mass