

Rodless cylinders, Series RTC-LB

R480470742

AVENTICS
Series RTC
Rodless
cylinders

2024-04-22

AVENTICS Series RTC Rodless cylinders

The AVENTICS Series RTC rodless cylinders offer optimized stroke length in a compact size. The unique oval piston shape and one-piece slide/piston unit are just two characteristic features of RTC Series rodless cylinders besides their many common equipment options. They are available in four variants: as a basic version, slide bearing, compact guide and heavy duty versions for large loads. With different key strengths, they cover a large range of movements and positions. This saves space and facilitates machine design. The range of applications extends from piston diameters of 16 mm up to 80 mm and stroke lengths up to 9900 mm. The cylinders feature extreme repeatability and cover a large speed range from 0.01 m/s to >20 m/s.



Technical data

Industry	Industrial
Piston Ø	25 mm
Stroke	400 mm
Ports	G 1/8
Functional principle	Double-acting
Magnetic piston	with magnetic piston
Guide	Slide bearing guide with long slide
Piston force	309 N
Pressure for determining piston forces	6,3 bar
Cushioning length	20 mm
Cushioning energy	4 J
Cushioning	Pneumatically
Cushioning	adjustable
Max. speed	6.5 m/s
Stroke max.	7000 mm
Min. working pressure	2 bar
Max. working pressure	8 bar
Min. ambient temperature	-10 °C
Max. ambient temperature	60 °C

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Medium	Compressed air
Min. oil content of compressed air	0 mg/m ³
Max. oil content of compressed air	1 mg/m ³
Max. particle size	5 µm
Weight 0 mm stroke	2.38 kg
Weight +10 mm stroke	0.033 kg

Material

Material cylinder tube	Aluminum
Surface cylinder tube	anodized
Material front cover	Aluminum
Surface cover	anodized
Seal material	Polyurethane
Material sealing strips	Polyurethane Stainless Steel
Material guide rail	Aluminum
Surface ball rail table	anodized
Part No.	R480470742

Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The delivered product is lubricated for lifetime.

Archive product: Do not use in new constructions!

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

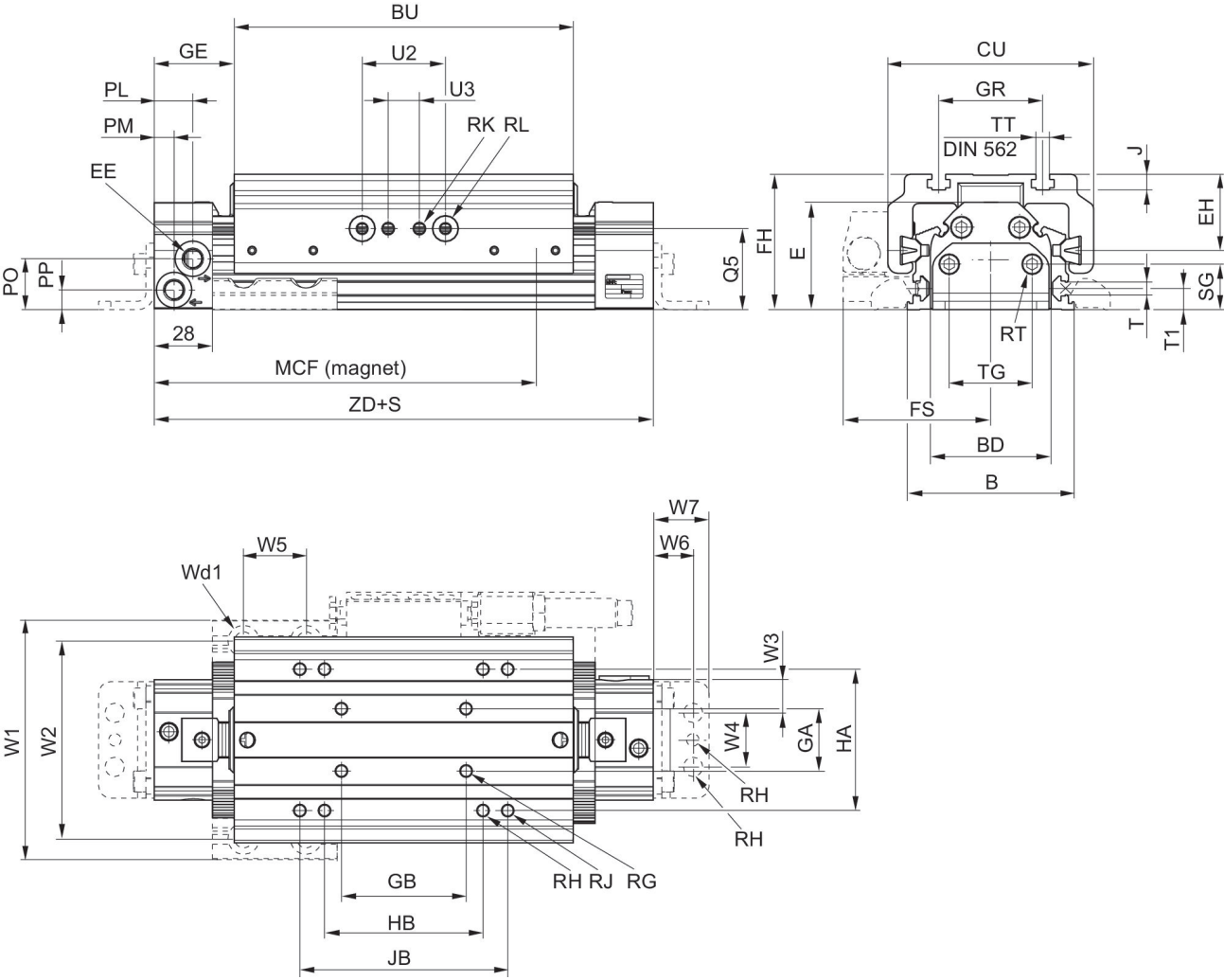
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Dimensions in mm

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S = stroke

Dimensions

Piston Ø	B	BU	BD	CU	EE	EH	FH	FS	GA
25	67,3	294	44	81	G 1/8	28	55.1	62	18
32	80,3	326	58	99	G 1/8	36,6	65.1	71	30
40	89,3	364	70	108	G 1/4	41	71	75.5	30

Piston Ø	GB	GE	GR	HA	HB	J	JB	MCF	PL
25	60	34	40	54.4	101.6	5.9	160	312	20
32	60	38.5	50	68	101.6	7.5	200	345	18.5
40	60	40.5	50	80	127	7.5	240	388	18

Piston Ø	PM	PO	PP	Q5	RG	RH	RJ	RK	RL
25	8	21.5	9.3	38.8	M4	1/4-28 UNF	M6	M6	Ø12.01 H7
32	9.5	24.5	9.5	39	M6	1/4-28 UNF	M6	M6	Ø12.01 H7

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Piston Ø	PM	PO	PP	Q5	RG	RH	RJ	RK	RL
40	10	31.5	11	44.6	M6	1/4-28 UNF	M6	M6	M6

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Piston Ø	RT 1)	SG	T	TT	T1	TG	U2	U3	W1
25	M5	17.3	N6	N6	10.1	19	40	15	96
32	M6	22	N6	N6	10.1	40	40	15	115
40	M6	22	N6	N6	11.2	40	40	15	124

Piston Ø	W2	W3	W4	W5	W6	W7	Wd1	Wd2	Wd3
25	79	7	18	30	13.5	19.8	Ø6.8	Ø6.8	Ø4G8
32	95	15	26	30	19	26.8	Ø8.8	Ø9.2	Ø6G8
40	104	15	26	30	19	26.8	Ø8.8	Ø9.2	Ø6G8

Piston Ø	ZD
25	362
32	403
40	445

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



static

Piston Ø	F_x [N]	F_y [N]	F_z [N]	M_x [Nm]	M_y [Nm]	M_z [Nm]
25	1800	1200	3200	42	160	160
32	2200	1400	3800	96	310	310
40	2700	1400	3800	109	362	362

dynamic

Piston Ø	M_x [Nm]	M_y [Nm]	M_z [Nm]
25	1.4	60	60

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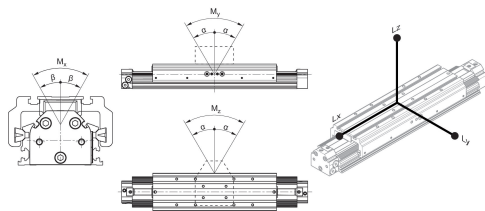
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Piston Ø	Mx [Nm]	My [Nm]	Mz [Nm]
32	6	90	90
40	8	100	100

Max. play and recommended max.
lever arm length



L = lever arm

M = moment (Nm)

Max. play and recommended max. lever arm length

Piston Ø	α	β	Lx	Ly	Lz
25	$\leq 0,2^\circ$	$\leq 0,3^\circ$	551	280	551
32	$\leq 0,1^\circ$	$\leq 0,3^\circ$	612	320	612
40	$\leq 0,1^\circ$	$\leq 0,3^\circ$	612	320	612