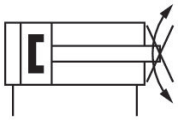
Compact cylinder, Series KPZ

0822391603

AVENTICS Series KPZ Compact cylinders

The AVENTICS Series KPZ is a compact cylinders based on the widely used standard NFE 49 004. It offer a wide variety of variants and are suitable for a multitude of applications thanks to their sizing.





Technical data

Industry	Industrial
Standards	NFE 49004
Piston Ø	20 mm
Stroke	20 mm
Ports	M5
Functional principle	Double-acting
Cushioning	Elastic cushioning
Magnetic piston	Piston with magnet
Environmental requirements	Industry standard ATEX optional
Piston rod thread - type	Internal thread
Piston rod	non-rotating, with front plate
Scraper	Standard Industry Scraper
Pressure for determining piston forces	6,3 bar
Retracting piston force	148 N
Extracting piston force	198 N
Min. ambient temperature	-20 °C
Max. ambient temperature	80 °C
Min. working pressure	1 bar
Max. working pressure	10 bar

Impact energy	0.2 J
Stroke max.	300 mm
Medium	Compressed air
Min. medium temperature	-20 °C
Max. medium temperature	80 °C
Max. particle size	50 µm
Min. oil content of compressed air	0 mg/m³
Max. oil content of compressed air	5 mg/m³

Material

Piston rod	Stainless Steel
Scraper material	Polyurethane
Seal material	Nitrile butadiene rubber
Material, front cover	Aluminum
Cylinder tube	Aluminum
End cover	Aluminum
Front plate	Aluminum
Part No.	0822391603

Technical information

The material for heat-resistant scraper and seal variants (ambient temperature: -10 °C ... 120 °C) is fluorocaoutchouc.

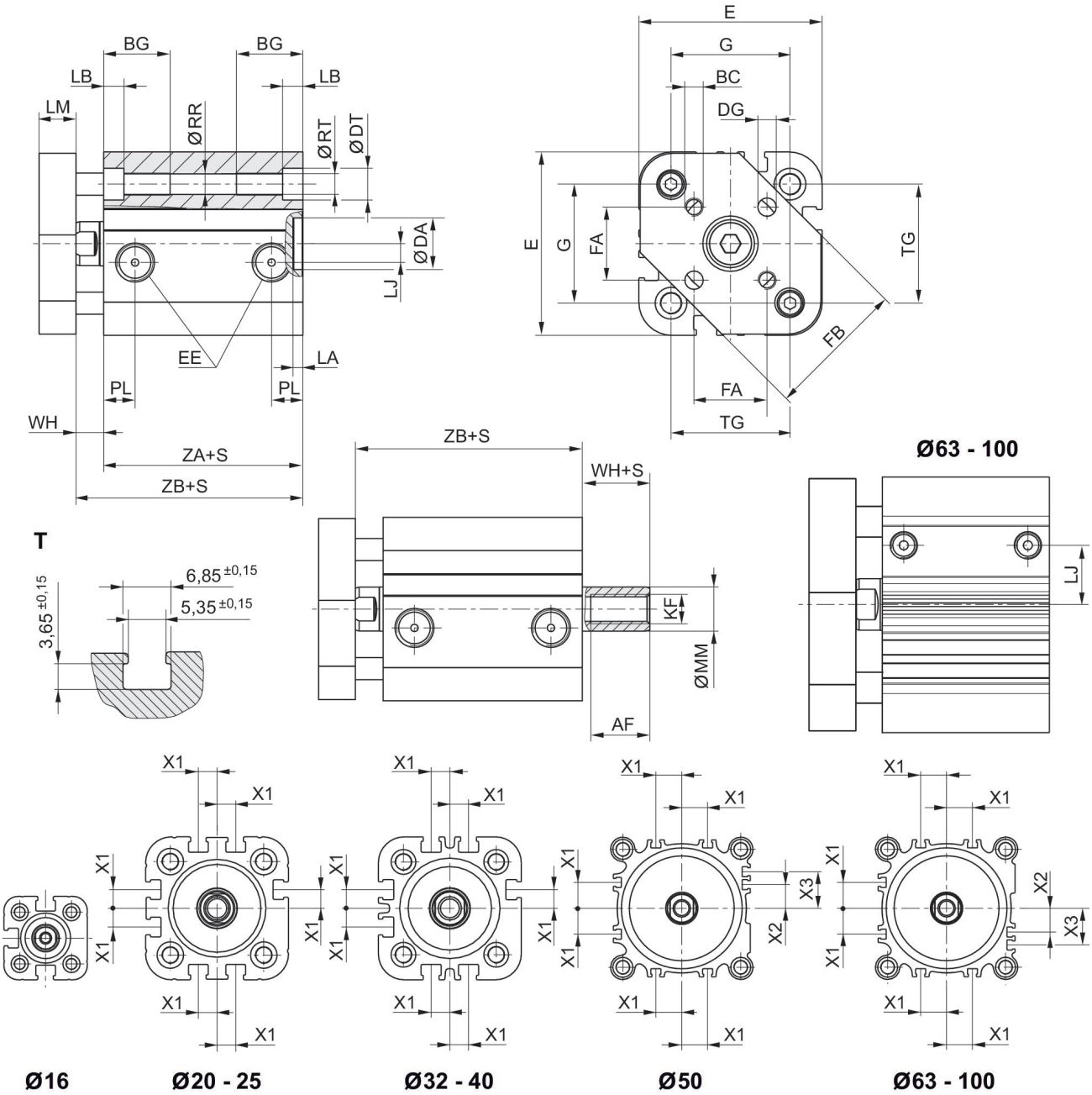
Further options can be generated in the Internet configurator.

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.

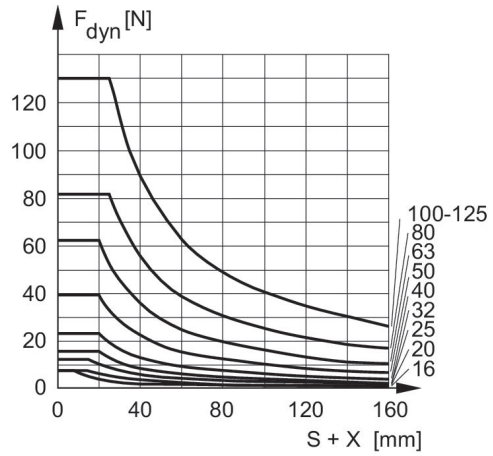
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in https://www.emerson.com/en-us/support).

Dimensions



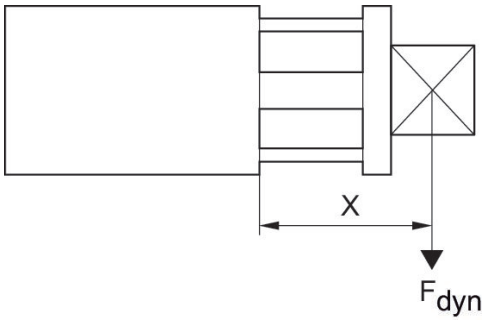
S = stroke
T = View for sensor groove without guide plate

Maximum admissible lateral force dynamic



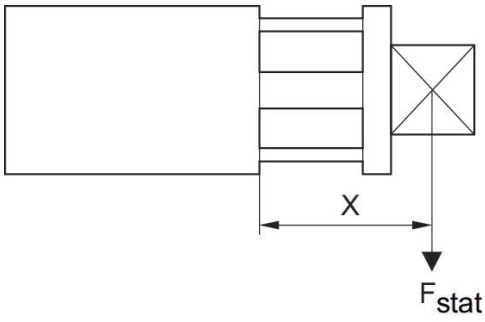
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force dynamic



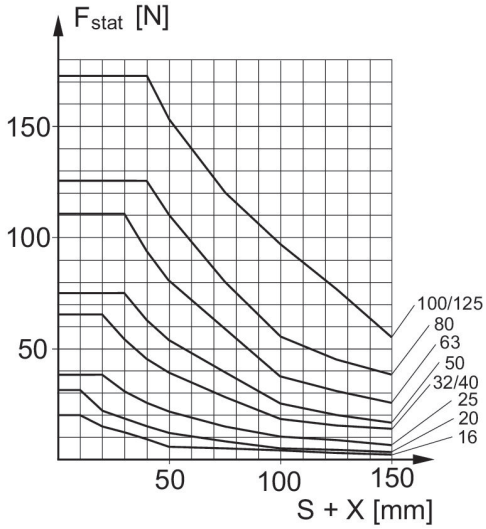
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force static



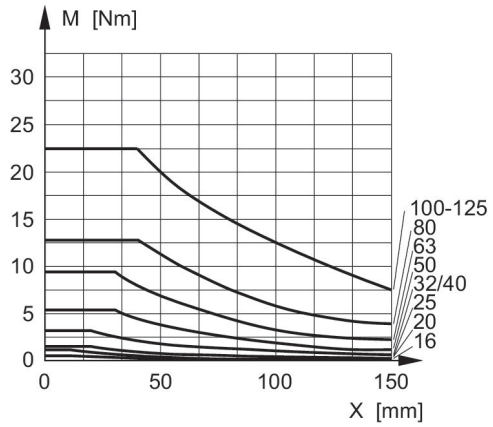
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force static



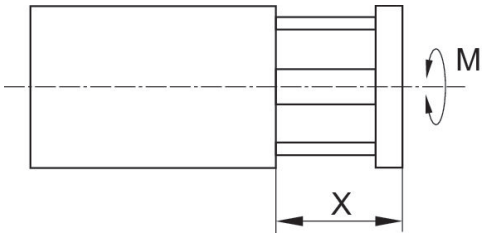
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Max. permissible torque



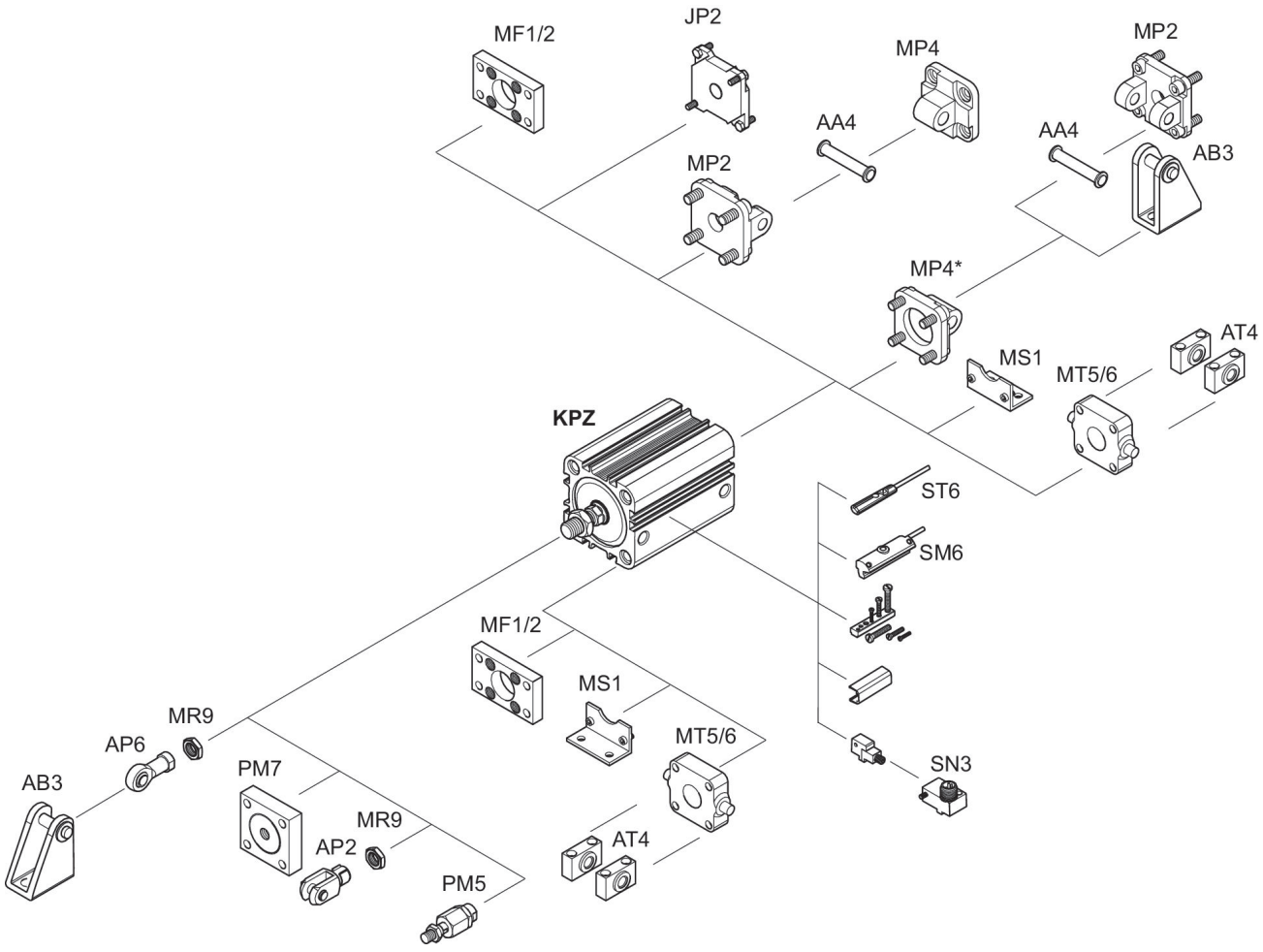
M = max. permissible torque
X = spacing between torque contact surface and cylinder cover

Max. permissible torque



M = max. permissible torque
X = distance between force application point and cylinder cover

Overview drawing



* Available for installation on KPZ for cylinder diameters 16 - 25 mm
NOTE: This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Piston Ø	AF min. Option: through piston rod	BC	BG min.	DA H11	DG H13	DT H13	E	EE	FA ±0,1
16	10	M3	14.5	10	3	6	29.5	M5	9.9
20	12 10: S<3 mm 2)	M4	15.5	12	4	7.5	36	M5	12
25	12 10: S<3 mm 2)	M5	15.5	12	5	8	40	M5	15.6
32	12	M5	18	14	5	8.6	50	G 1/8	19.8
40	12	M5	18	14	5	9	58	G 1/8	23.3
50	16 12: S<4 mm 2)	M6	24	18	6	11	68	G 1/8	29.7
63	16 12: S<4 mm 2)	M6	24	18	6	11	80	G 1/8	35.4
80	20 15: S<3 mm 2)	M8	28	23	8	14	99	G 1/8	46
100	26 21: S<5 mm 2)	M10	27.5	28	10	15	120	G 1/8	56.6

Piston Ø	FB	G	KF	LA	LB	LJ	LM	MM f8	PL
16	20	19	M4	2.5	3.5	2.5	6	8	7.5
20	24	25	M6	2.5	4.5	4.5	8	10	7.5
25	30	27	M6	2.5	4.4	5	8	10	7.5
32	38	32	M8	2.5	5.5	5.1	10	12	8.5
40	44	42	M8	2.5	5.5	9.6	10	12	8.5
50	54	50	M10	2.5	2	8.5	12	16	8.5
63	62	62	M10	2.5	2	17.8	12	16	8.5
80	80	82	M12	3	1	22.9	14	20	8.3
100	100	103	M16	3	3.5	26.5	14	25	9.7

Piston Ø	Ø RR	RT	TG	WH	X1	X2	X3	ZA + Stroke	ZB + Stroke
16	3.3	M4	18 ±0,4	4.5	–	–	–	38	42,5 0/+1,4
20	4.2	M5	22 ±0,4	5	4.2	–	–	38	43 0/+1,4
25	4.2	M5	26 ±0,4	5.5	4.5	–	–	39	44,5 0/+1,4
32	5.1	M6	32 ±0,5	7	6.5	–	–	44	51 0/+1,6
40	5.1	M6	42 ±0,5	7	11	–	–	45	52 0/+1,6
50	6.7	M8	50 ±0,6	7.5	13	4	13	45.5	53 0/+1,6
63	6.7	M8	62 ±0,7	8	18	12	21	49	57 0/+2
80	8.5	M10	82 ±0,7	9.5	18	16.5	25.5	54.5	64 0/+2
100	8.5	M10	103 ±0,7	10.5	20	20	29	66.5	77 0/+2