

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	10 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 thread	M6
Piston rod	Non-rotating, biplane
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
Max. torque for torsion protection	0.25 Nm
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/m ³
Max. oil content of compressed air	5 mg/m ³

Material

Piston rod	Stainless Steel
Scraper material	Polyurethane
Seal material	Nitrile butadiene rubber
Material, front cover	Aluminum
Cylinder tube	Aluminum
End cover	Aluminum
Part No.	0822391901

Technical information

Use our Internet configurator to order variants with an external thread.

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>).

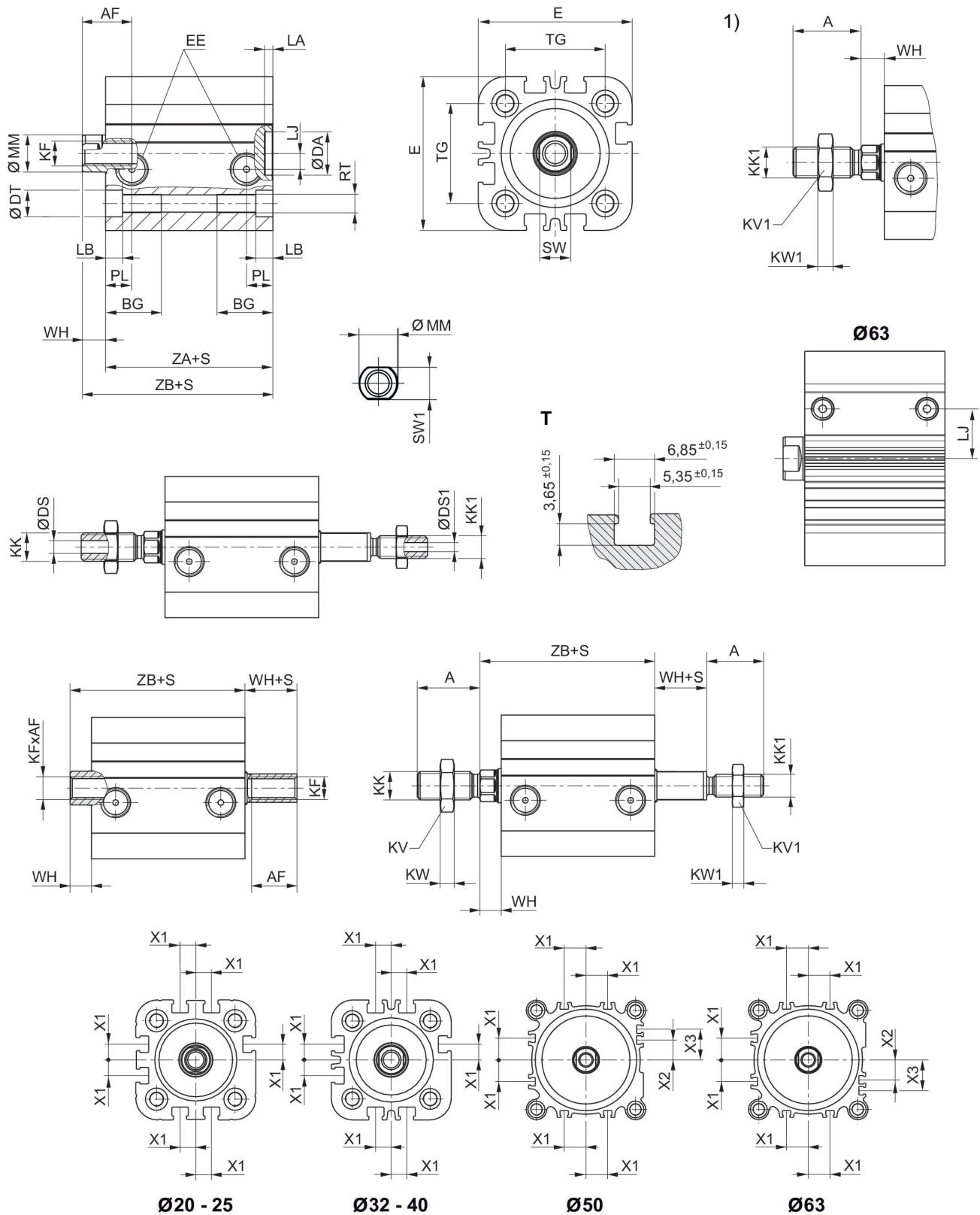
Compact cylinder, Series KPZ

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Series KPZ

2025-07-17

Dimensions



S = stroke

T = View for sensor groove

1) External thread

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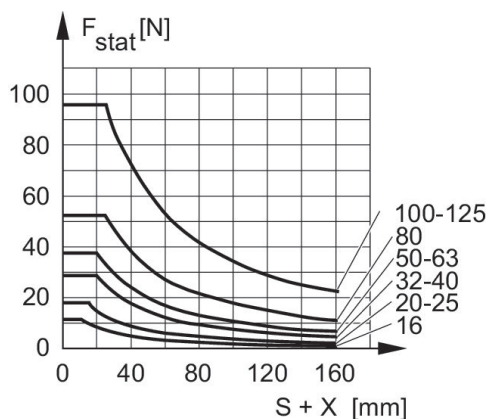
Overview drawing



* 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.

Maximum admissible lateral force static



F_{stat} = static lateral force

X = distance between force application point and cylinder cover

S = stroke

Maximum admissible lateral force static



F_{stat} = static lateral force

X = distance between force application point and cylinder cover

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

S = stroke

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Piston Ø	A	AF min. Option: through piston rod	BG min.	Ø DA H11	Ø DS	Ø DS1	Ø DT H13	E	EE	KF
20	22	12 10: S<3 mm 2)	15,5	12	3	-	7,5	36	M5	M6
25	22	12 10: S<3 mm 2)	15,5	12	3	-	8	40	M5	M6
32	22	12	18	14	4,5	3	8,6	50	G 1/8	M8
40	22	12	18	14	4,5	3	9	58	G 1/8	M8
50	24	16 12: S<4 mm 2)	24	18	6	6	11	68	G 1/8	M10
63	24	16 12: S<4 mm 2)	24	18	6	6	11	80	G 1/8	M10

Piston Ø	KK	KK1	KV	KV1	KW	KW1	LA	LB	LJ	LW
20	M10x1,25	M8x1,25	16	13	5	4	2,5	4,5	4,5	3,7
25	M10x1,25	M8x1,25	16	13	5	4	2,5	4,4	5	3,7
32	M10x1,25	M8x1,25	16	13	5	4	2,5	5,5	5,1	5
40	M10x1,25	M8x1,25	16	13	5	4	2,5	5,5	9,6	5
50	M12x1,25	M10x1,25	18	16	6	5	2,5	2	8,5	5,7
63	M12x1,25	M10x1,25	18	16	6	5	2,5	2	17,8	5,7

Piston Ø	MM f8	PL	RT	SW	SW1	TG	WH	X1	X2	X3
20	10	7,5	M5	8	8	22 ±0,4	5	4,2	-	-
25	10	7,5	M5	8	8	26 ±0,4	5,5	4,5	-	-
32	12	8,5	M6	10	10	32 ±0,5	7	6,5	-	-
40	12	8,5	M6	10	10	42 ±0,5	7	11	-	-
50	16	8,5	M8	13	13	50 ±0,6	7,5	13	4	13
63	16	8,5	M8	13	13	62 ±0,7	8	18	12	21

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Piston Ø	ZA + Stroke	ZB + Stroke
20	38	43 0/+1,4
25	39	44,5 0/ +1,6
32	44	51 0/+1,6
40	45	52 0/+1,6
50	45,5	53 0/+1,6
63	49	57 ±2