

AVENTICS Series KHZ Short-stroke cylinders

The AVENTICS Series KHZ is a non-standard short-stroke cylinder ideal for tight installation spaces and ensure easy, safe integration in machinery.



Technical data

Industry	Industrial
Piston Ø	50 mm
Stroke	100 mm
Ports	G 1/8
Functional principle	Double-acting
Cushioning	elastic cushioning
Magnetic piston	Piston with magnet
Environmental requirements	Industry standard
Piston rod thread - type	Internal thread
Piston rod	non-rotating
Scraper	Standard Industry Scraper
Pressure for determining piston forces	6,3 bar
Retracting piston force	1110 N
Extracting piston force	1237 N
Min. ambient temperature	-25 °C
Max. ambient temperature	80 °C
Min. working pressure	0.6 bar
Max. working pressure	10 bar
Impact energy	0.32 J
Weight 0 mm stroke	0.388 kg
Weight +10 mm stroke	0.086 kg
Medium	Compressed air
Min. medium temperature	-25 °C

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0822010869

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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
Piston material	Nitrile rubber
Scraper material	Polyurethane
Material, front cover	Aluminum
Cylinder tube	Aluminum
End cover	Aluminum
Part No.	0822010869

Technical information

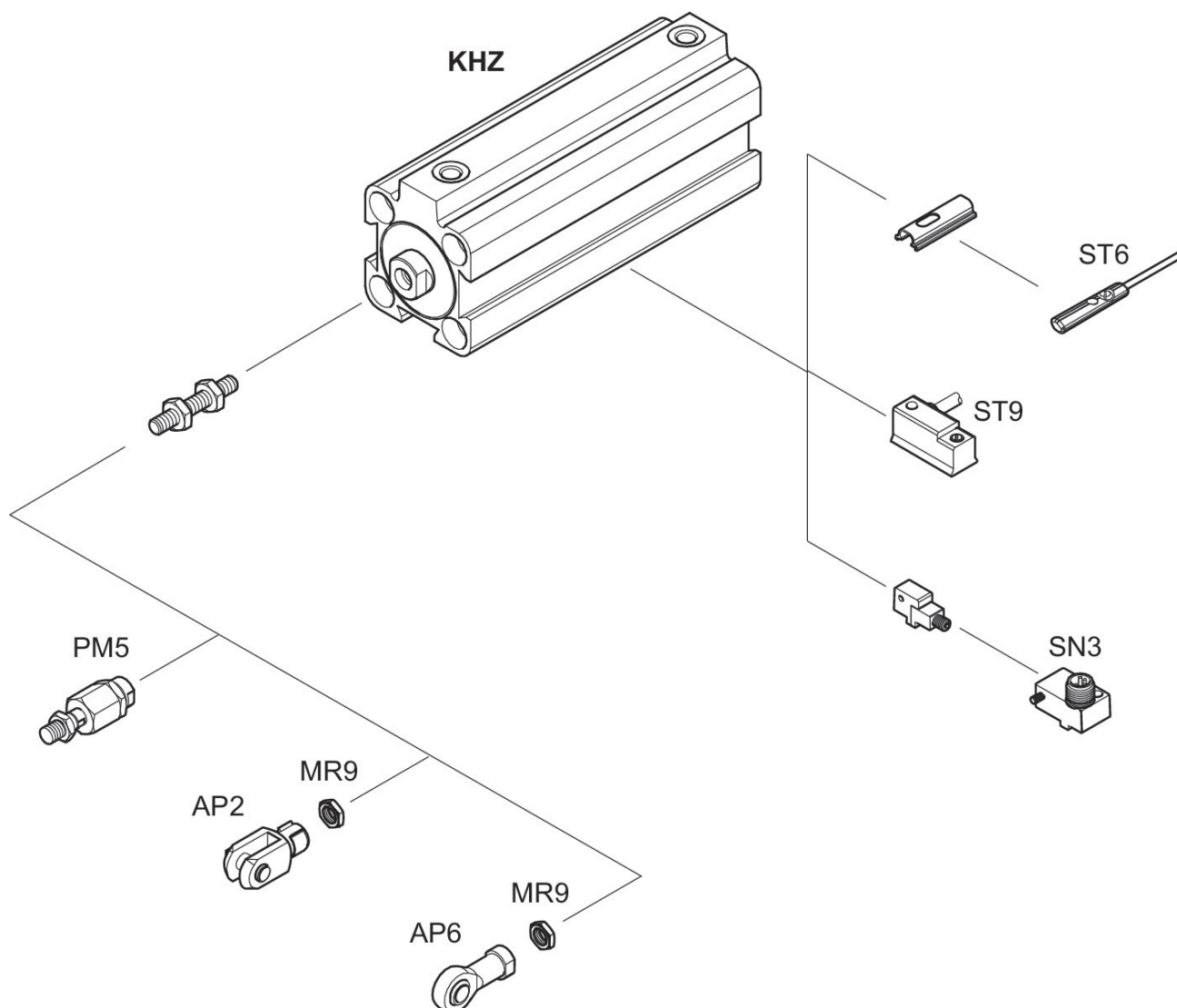
Other versions can be ordered from AVENTICS sales offices.

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.

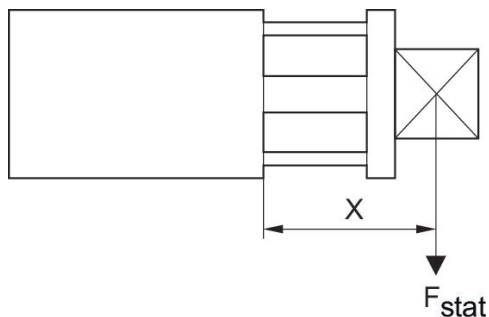
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

Overview drawing



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.

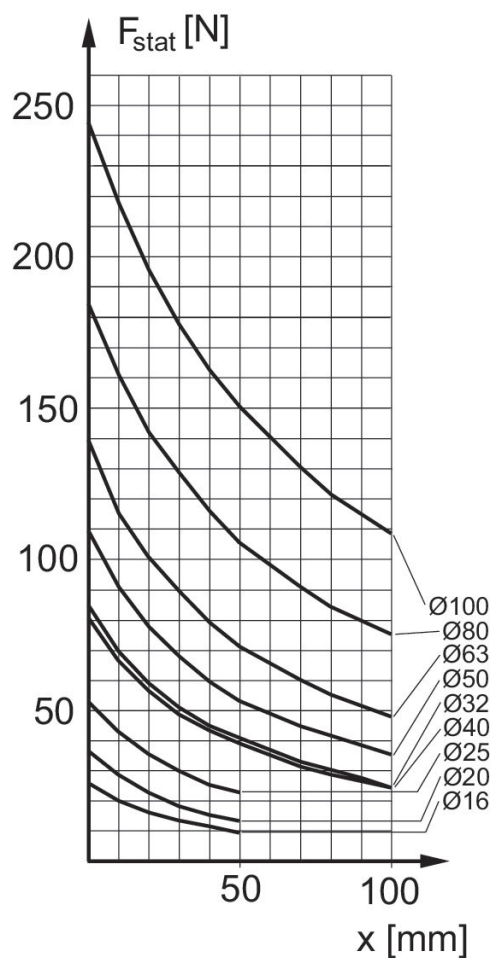
Maximum admissible lateral force static



F_{stat} = static lateral force

X = distance between force application point and cylinder cover

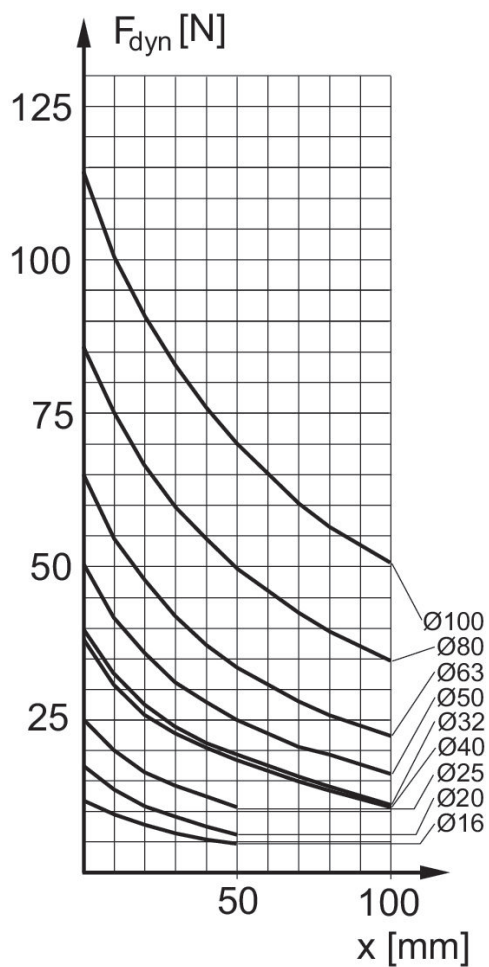
Maximum admissible lateral force static



F_{stat} = static lateral force

X = distance between force application point and cylinder cover

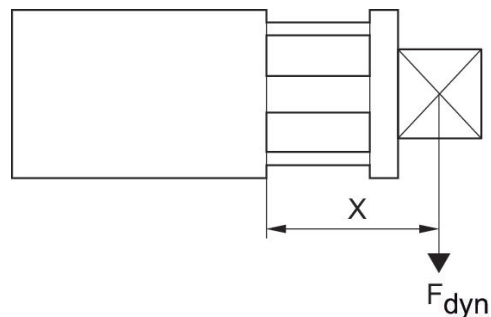
Maximum admissible lateral force dynamic



F_{dyn} = dynamic lateral force

X = distance between force application point and cylinder cover

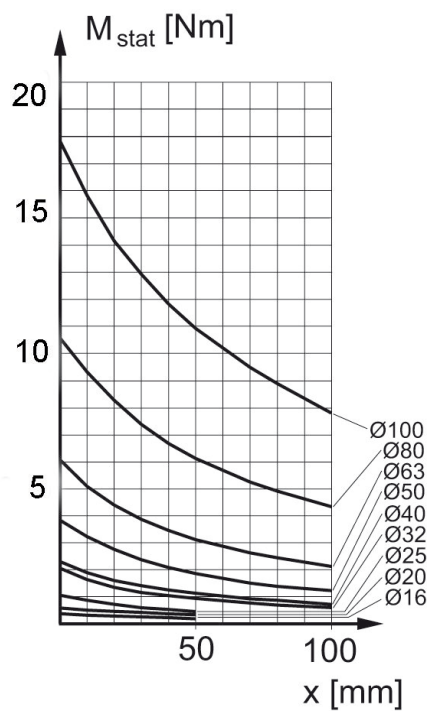
Maximum admissible lateral force dynamic



F_{dyn} = dynamic lateral force

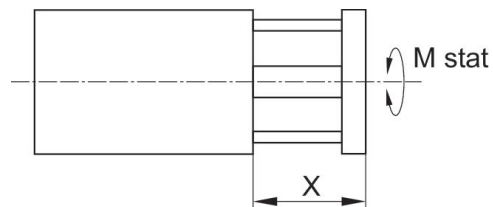
X = distance between force application point and cylinder cover

Max. permissible torque
static

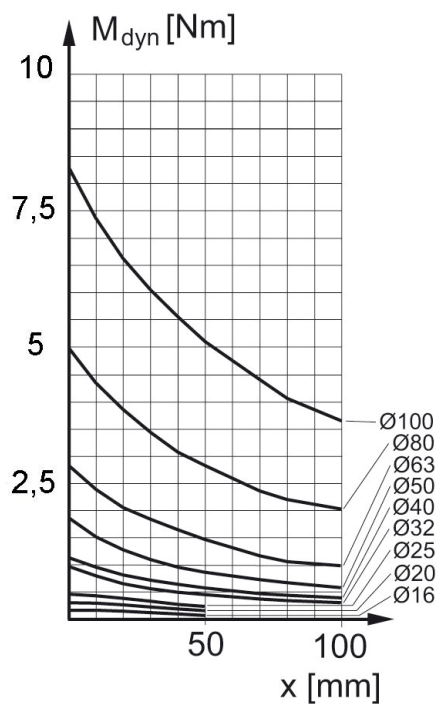


x = distance between force application point and cylinder cover

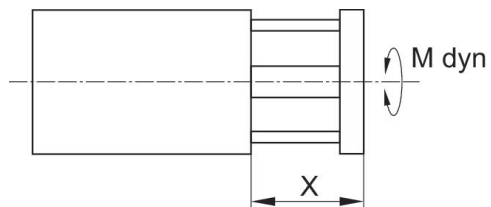
Max. permissible torque
static



M = max. permissible torque
dynamic



Max. permissible torque
dynamic



x = distance between force application point and cylinder cover

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Technical drawing of a 4-way ball valve, showing three views: front view, side view, and end view. The drawing includes numerous dimension lines and labels for various parts and measurements.

Front View Dimensions:

- D : Overall diameter
- E_1 : Distance from center to side port center
- E_2 : Distance from center to top/bottom port center
- TG_1 : Distance from center to side port face
- TG_2 : Distance from center to top/bottom port face
- RT : Port radius
- $\varnothing DT$: Port diameter
- F : Port length
- U : Distance from center to side port outer edge
- W : Distance from center to top/bottom port outer edge

Side View Dimensions:

- $\varnothing CC$: Ball diameter
- $\varnothing DD$: Shaft diameter
- BB : Ball bore diameter
- $\varnothing MM$: Shaft diameter at ball bore
- SW : Shaft diameter at seal
- $\varnothing GG$: Shaft diameter at seal
- WH : Seal thickness
- VD : Seal depth
- $ZA+S$: Distance from center to seal
- $ZB+S$: Distance from center to seal
- LM : Shaft length
- PL_1 : Distance from center to seal
- PL_2 : Distance from center to seal
- $\varnothing H$: Seal diameter
- EE : Seal diameter
- KF : Seal diameter
- $\varnothing RR$: Seal diameter
- LB : Seal diameter
- BG : Seal diameter

End View Dimensions:

- E_1 : Distance from center to side port center
- FA_1 : Distance from center to side port face
- E_2 : Distance from center to top/bottom port center
- FA_2 : Distance from center to top/bottom port face
- $\varnothing DD$: Shaft diameter
- BC : Port radius
- FB : Port length

Piston Ø	Stroke	BB	BC	BG min.	ØCC	D JS15	ØDD	ØDT H13	E1 JS15	E2 JS15
16	10	3.5	M3	12.4	6	33	3.5	6	28	28
20	10	5	M4	13.6	7.5	37	4.5	7.5	32	32
16	15 - 50	3.5	M3	17.5	6	33	3.5	6	28	28
20	15 - 50	5	M4	13.6	7.5	37	4.5	7.5	32	32
25	10 - 50	5	M4	13.6	8	47.5	4.5	8	37	39
32	10 - 100	5.7	M5	16.7	10	56	5.5	10	45	48
40	10 - 100	5.7	M5	16.7	10	62.5	5.5	10	54.5	54.5
50	10 - 100	6.8	M6	19.8	11	73	6.5	11	66	66
63	10 - 100	9	M6	25	14	88	9	15	80	80
80	10/25/50 /80/100	9	M8	25	14	110	9	15	100	100
100	10/25/50 /80/100	9	M8	30	14	132	9	17.5	124	124

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Piston Ø	EE	F	FB	ØGG -0,005/-0,025	ØH	KF	LB +0,4	LM	ØMM f8	PL1
16	M5	11.5	20	4	8	M 5	3.4	6	8	6.5
20	M5	11	25	5	8	M 5	4.6	8	10	6.5
16	M5	11.5	20	4	8	M 5	8.5	6	8	6.5
20	M5	11	25	5	8	M 5	4.6	8	10	6.5
25	G 1/8	17.5	30	6	15	M 5	4.6	8	10	9.5
32	G 1/8	18.5	35	8	15	M 6	5.7	10	12	8.5
40	G 1/8	18.5	40	8	15	M 6	5.7	10	12	10
50	G 1/8	18	50	10	15	M 8	6.8	12	16	10
63	G 1/8	23	60	12	15	M 8	9	12	16	11.5
80	G 1/4	27	75	12	19	M 10	9	15	20	12
100	G 1/4	28	90	14	19	M 12	11	15	25	12

Piston Ø	PL2	ØRR	RT	SW -0,3	TG1	TG2	U	VD -1	W	WH
16	11.3	3.3	M4	7	20 ±0,2	20 ±0,2	10	—	14 ±0,2	4.5
20	10	4.2	M5	8	22 ±0,2	22 ±0,2	11	—	16 ±0,2	4.5
16	11.3	3.3	M4	7	20 ±0,2	20 ±0,2	10	—	14 ±0,2	4.5
20	10	4.2	M5	8	22 ±0,2	22 ±0,2	11	—	16 ±0,2	4.5
25	11.5	4.2	M5	8	26 ±0,25	28 ±0,25	14	3.5	19,5 ±0,2	9.5
32	15	5.05	M6	10	32 ±0,25	36 ±0,25	18	3.5	24 ±0,2	11
40	13.5	5.05	M6	10	40 ±0,25	40 ±0,25	20	4.5	27,3 ±0,2	13.5
50	14	6.8	M8	13	50 ±0,25	50 ±0,25	25	6	33 ±0,2	13.5
63	14	8.5	M10	13	62 ±0,25	62 ±0,25	31	6.5	40 ±0,2	15.5
80	15.5	8.5	M10	17	82 ±0,3	82 ±0,3	41	8.5	50 ±0,3	18
100	18.5	10.2	M12	22	103 ±0,3	103 ±0,3	51.5	7	62 ±0,3	20

Piston Ø	FA1 ±0,1	FA2 ±0,1	ZA ±0,2	ZB ±0,8
16	20	20	32	36.5
20	22	22	32	36.5
16	20	20	38	42.5
20	22	22	38	42.5
25	26	28	39	48.5
32	32	36	39.5	50.5
40	40	40	39.5	53
50	50	50	39.5	53
63	62	62	42	57.5
80	82	82	46	64
100	103	103	56	76