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AVENTICS Series CCI Compact cylinders (ISO 21287)

The AVENTICS Series CCI (ISO 21287) cylinders stand for innovative, compact construction and an easy to clean design. The Series CCI (ISO 21287) is ideal for long strokes and increased requirements for optimized cycle times and moving masses. The sensors can be installed quickly and easily on all sides and over the entire cylinder lengths.





Technical data

Piston rod thread - type

 Industry
 Industrial

 Standards
 ISO 21287

 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

Internal thread

Piston rod thread M6

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



series CCI

Compact cylinder ISO 21287, Series CCI

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Max. working pressure10 barImpact energy0.2 JWeight 0 mm stroke0.119 kgWeight +10 mm stroke0.026 kgStroke max.300 mm

Medium Compressed air

 $\begin{array}{lll} \mbox{Min. medium temperature} & -20 \ ^{\circ}\mbox{C} \\ \mbox{Max. medium temperature} & 80 \ ^{\circ}\mbox{C} \\ \mbox{Max. particle size} & 50 \ \mu\mbox{m} \\ \mbox{Min. oil content of compressed air} & 0 \ \mbox{mg/m}^{3} \\ \mbox{Max. oil content of compressed air} & 5 \ \mbox{mg/m}^{3} \\ \end{array}$

Material

Piston rod Stainless Steel
Scraper material Polyurethane
Seal material Polyurethane
Material, front cover Aluminum
Cylinder tube Aluminum
End cover Aluminum
Front plate Aluminum

Nut for piston rod Steel, chrome-plated

Part No. R422001273

Technical information

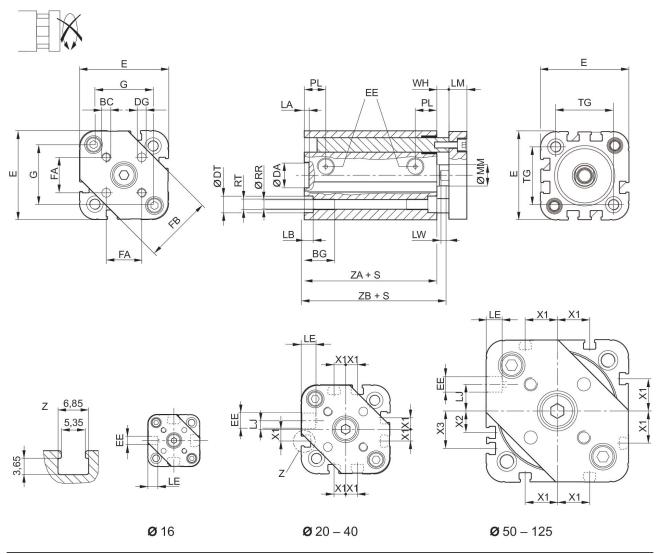
The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The 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



S = stroke

G = distance between the guide rods

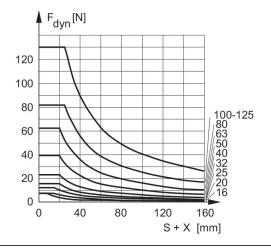
Piston Ø	ВС	BG	DA H11	DG H13	DT		EE	FA	FB
16	М3	15	10	3	6	29.3	M5	9.9 ±0.1	20
20	M4	15.5	12	4	7.5	36.3	M5	12 ±0.1	24
25	M5	15.5	12	5	8	40.3	M5	15.6 ±0.1	30
32	M5	17	14	5	8.6	50	G 1/8	19.8 ±0.1	38
40	M5	17	14	5	9.2	58	G 1/8	23.3 ±0.1	44
50	M6	17	18	6	11	68.3	G 1/8	29.7 ±0.1	54
63	M6	17	18	6	11	80	G 1/8	35.4 ±0.1	62
80	M8	20	23	8	15	96	G 1/8	46 ±0.1	80
100	M10	20	28	10	15	116	G 1/8	56.6 ±0.1	100
125	M10	35	12	10	-	134.6	G 1/4	63.64 ±0.1	120

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Piston Ø	G	LA	LB	LE	LJ	LM	LW	MM f8	PL
16	19	2.5	3.5	4.5	-	6	4	8	8
20	25	2.5	4.5	4.5	4.5	8	4	10	10
25	27	2.5	4.5	4.5	4	8	4	10	10
32	34	2.5	5	7.5	4.85	10	4.5	12	12
40	42	2.5	5	7.5	9.85	10	4.5	12	12
50	49	2.5	5	7.5	12	12	6	16	12
63	60	2.5	5	7.5	14.8	12	6	16	12
80	72	3	5	7.5	22	14	7	20	14
100	92	3	5	7.5	27	14	7	25	16.5
125	110	2.6	-	???	39	18	7.5	25	20.5

Piston Ø	RR	RT 6H	TG	WH	X1	X2	X3	ZA ±0,1	ZB
16	3.3	M4	18	4.8 ±0.9	_	_	_	34.9	39.7 ±0.8
20	4.2	M5	22	5.6 ±0.9	4.2	-	-	37.3	43.6 ±0.8
25	4.2	M5	26	5.6 ±0.9	4.5	-	-	39	44.5 ±0.9
32	5.1	M6	32.5	7.4 ±0.9	6.5	-	-	44	51.4 ±1
40	5.1	M6	38	7.4 ±0.9	11	-	-	45	52.4 ±1
50	6.7	M8	46.5	8.4 ±0.9	13	4	13	45.5	53.6 ±1
63	6.7	M8	56.5	8.5 ±0.9	18	12	21	49	57.4 ±1
80	8.5	M10	72	9.8 ±1	18	16.5	25.5	54.7	64.4 ±1
100	8.5	M10	89	9.8 ±1	20	20	29	67	76.7 ±1
125	11.1	M12	110	11	29	29	38	81	92 ±1

Maximum admissible lateral force dynamic

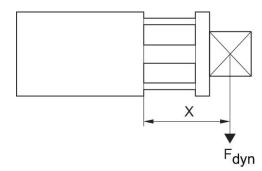


F dyn. = dynamic lateral force

X = distance between force application point and cylinder cover

S = stroke

Maximum admissible lateral force dynamic



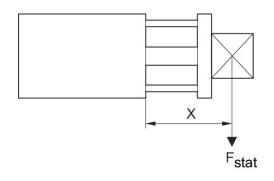
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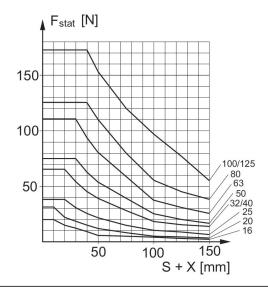
Maximum admissible lateral force static



F stat. = static lateral force

X = distance between force application point and cylinder cover

Maximum admissible lateral force static

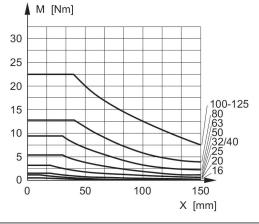


F stat. = static lateral force

X = distance between force application point and cylinder cover

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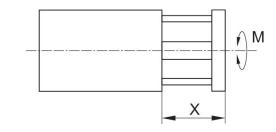
Max. permissible torque



M = max. permissible torque

X = spacing between torque contact surface and cylinder cover

Max. permissible torque

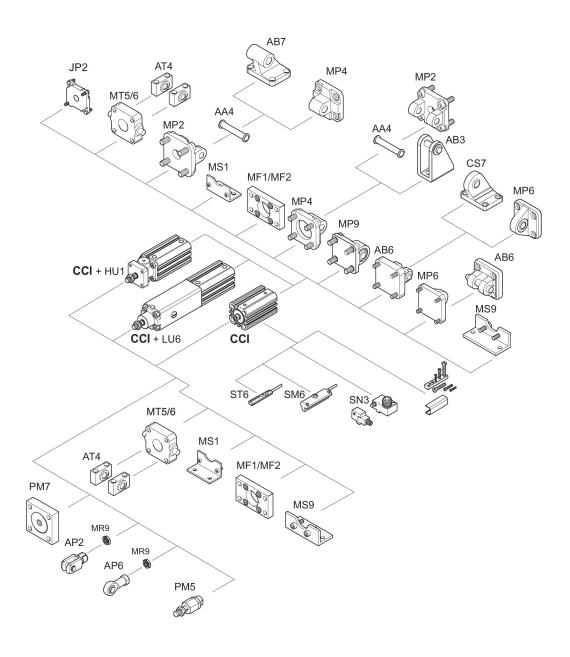


M = max. permissible torque

X = distance between force application point and cylinder cover

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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.