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Compact cylinder ISO 21287, Series CCI

- Ø 16-100 mm
- Ports M5 G 1/8
- Single-acting, retracted without pressure
- with magnetic piston
- Cushioning elastic
- Piston rod External thread

Standards	ISO 21287
Compressed air connection	Internal thread
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-20 ... 80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³
Pressure for determining piston forces	6.3 bar

Technical data

Piston Ø Piston rod thread Ports Piston rod Ø	16 mm M6x1 M5 8 mm	20 mm M8x1,25 M5 10 mm	25 mm M8x1,25 M5 10 mm	32 mm M10x1,25 G 1/8 12 mm	40 mm M10x1,25 G 1/8 12 mm	50 mm M12x1,25 G 1/8 16 mm
Stroke 5	R422001442	R422001443	R422001444	R422001445	R422001446	R422001447
10	R422001452	R422001453	R422001454	R422001455	R422001456	R422001457
15	R422001462	R422001463	R422001464	R422001465	R422001466	R422001467
20	R422001472	R422001473	R422001474	R422001475	R422001476	R422001477
25	R422001482	R422001483	R422001484	R422001485	R422001486	R422001487

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M12x1,25 G 1/8 16 mm	80 mm M16x1,5 G 1/8 20 mm	100 mm M16x1,5 G 1/8 25 mm
Stroke 5	R422001448	R422001449	R422001450
10	R422001458	R422001459	R422001460
15	R422001468	R422001469	R422001470
20	R422001478	R422001479	R422001480
25	R422001488	R422001489	R422001490

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Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm
Retracting piston force	12 N	13 N	25 N	35 N
Extracting piston force	115 N	185 N	284 N	472 N
Impact energy	0,11 J	0,15 J	0,2 J	0,4 J
Weight 0 mm stroke	0,066 kg	0,127 kg	0,152 kg	0,26 kg
Weight +10 mm stroke	0,016 kg	0,023 kg	0,026 kg	0,043 kg
Working pressure min./max.	2 ... 10 bar	2 ... 10 bar	2 ... 10 bar	2 ... 10 bar
Stroke max.	25 mm	25 mm	25 mm	25 mm

Piston Ø	40 mm	50 mm	63 mm	80 mm
Retracting piston force	43 N	82 N	82 N	105 N
Extracting piston force	749 N	1155 N	1882 N	3062 N
Impact energy	0,52 J	0,64 J	0,75 J	0,75 J
Weight 0 mm stroke	0,332 kg	0,501 kg	0,742 kg	1,223 kg
Weight +10 mm stroke	0,052 kg	0,07 kg	0,087 kg	0,116 kg
Working pressure min./max.	2 ... 10 bar	2 ... 10 bar	2 ... 10 bar	2 ... 10 bar
Stroke max.	25 mm	25 mm	25 mm	25 mm

Piston Ø	100 mm
Retracting piston force	215 N
Extracting piston force	4733 N
Impact energy	1 J
Weight 0 mm stroke	2,28 kg
Weight +10 mm stroke	0,168 kg
Working pressure min./max.	2 ... 10 bar
Stroke max.	25 mm

Technical information

The pressure dew point must be at least 15 °C under 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 the MediaCentre).

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Nut for cylinder mounting	Steel, galvanized
Scraper	Polyurethane

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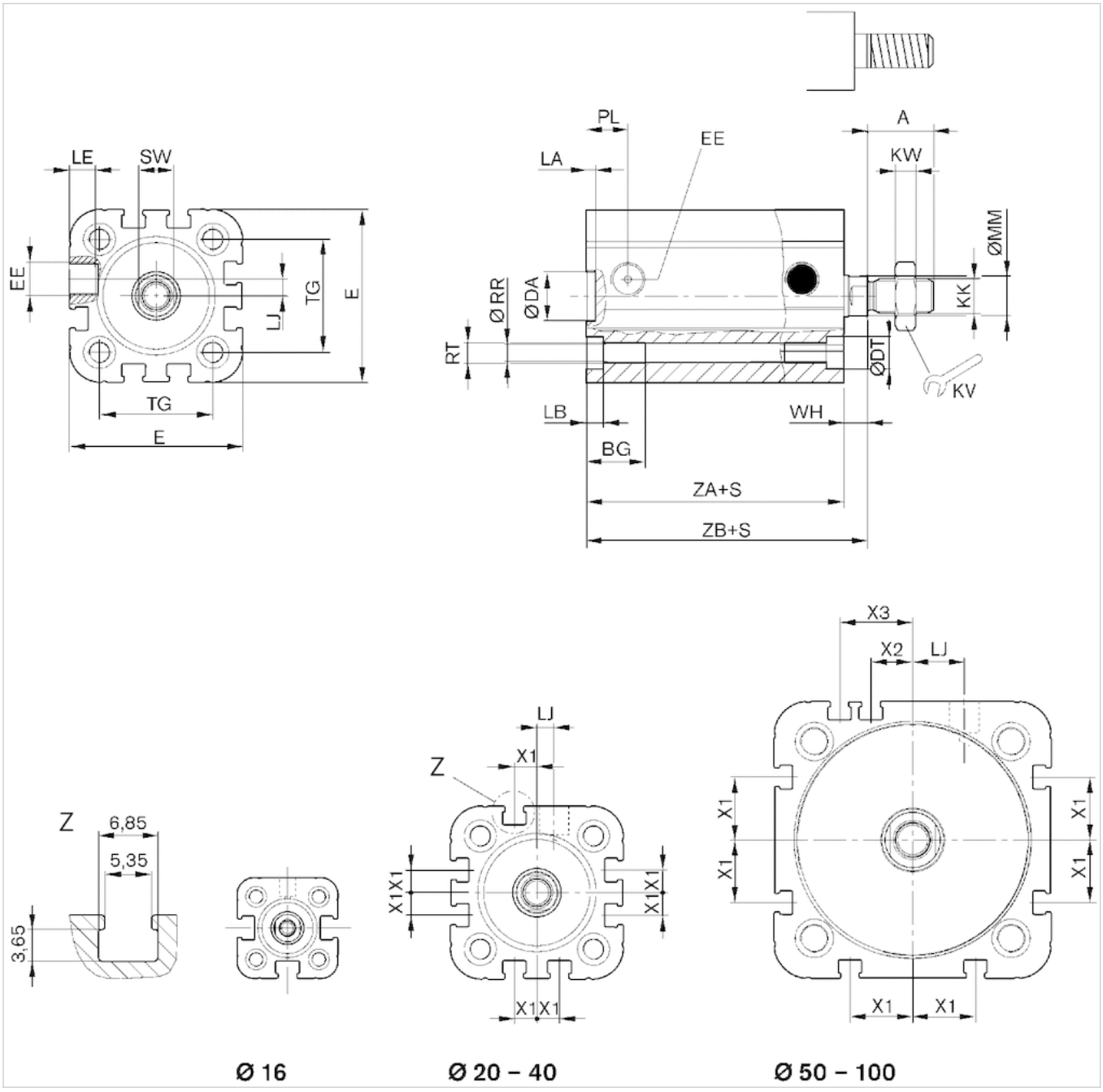
Dimensions

Ø 16 mm ... 100 mm



S = stroke

Dimensions

Piston Ø	A *)	BG	DA H11	DT	E	EE	KK	KV	KW	LA	LB	LE	LJ	MM f8	PL	RR
16 mm	12	15	10	6	29.3	M5	M6	10	3	2.5	3.5	4.5	0	8	8	3.3
20 mm	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5	4.5	4.5	4.5	10	10	4.2
25 mm	16	15.5	12	8	40.3	M5	M8	13	4	2.5	4.5	4.5	4	10	10	4.2
32 mm	19	17	14	8.6	50	G 1/8	M10x1,25	17	5	2.5	5	7.5	4.85	12	12	5.1
40 mm	19	17	14	9.2	58	G 1/8	M10x1,25	17	5	2.5	5	7.5	9.85	12	12	5.1
50 mm	22	17	18	11	68.3	G 1/8	M12x1,25	19	6	2.5	5	7.5	12	16	12	6.7

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Piston Ø	A *)	BG	DA H11	DT	E	EE	KK	KV	KW	LA	LB	LE	LJ	MM f8	PL	RR
63 mm	22	17	18	11	80	G 1/8	M12x1,25	19	6	2.5	5	7.5	14.8	16	12	6.7
80 mm	28	20	23	15	96	G 1/8	M16x1,5	24	8	3	5	7.5	22	20	14	8.5
100 mm	28	20	28	15	116	G 1/8	M16x1,5	24	8	3	5	7.5	27	25	16.5	8.5

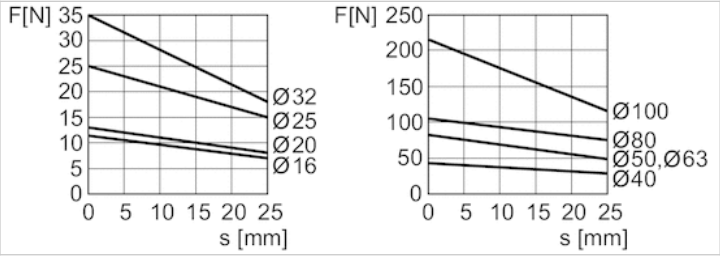
Piston Ø	RT 6H	SW	TG	WH 1)	X1	X2	X3	ZA	ZB 1)
16 mm	M4	7	18	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20 mm	M5	8	22	6,3 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25 mm	M5	8	26	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32 mm	M6	10	32.5	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40 mm	M6	10	38	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50 mm	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63 mm	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80 mm	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100 mm	M10	21	89	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1

* With cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.

1) With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

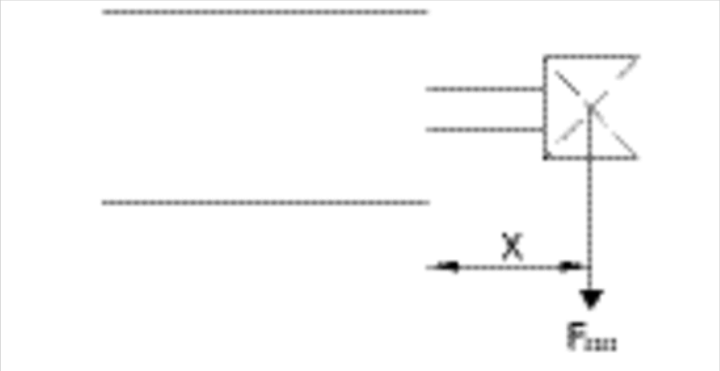
Diagrams

Extracting piston force



F = spring return force, s = return stroke

Maximum admissible lateral force static



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

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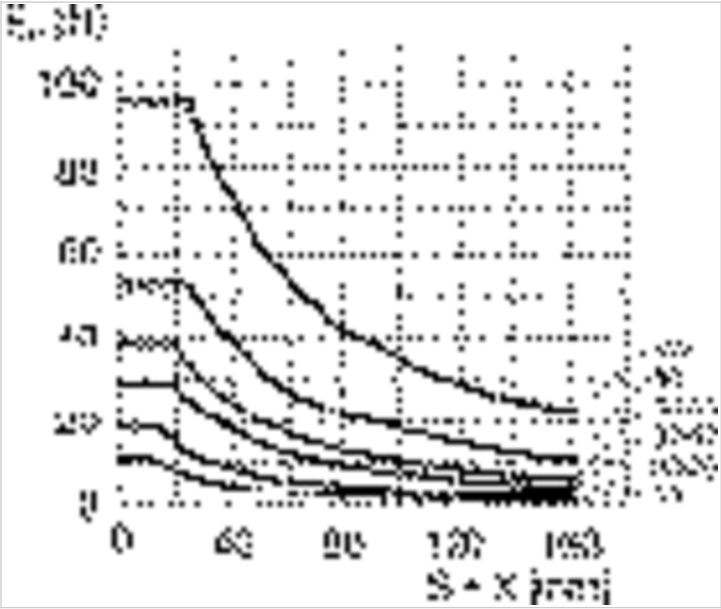
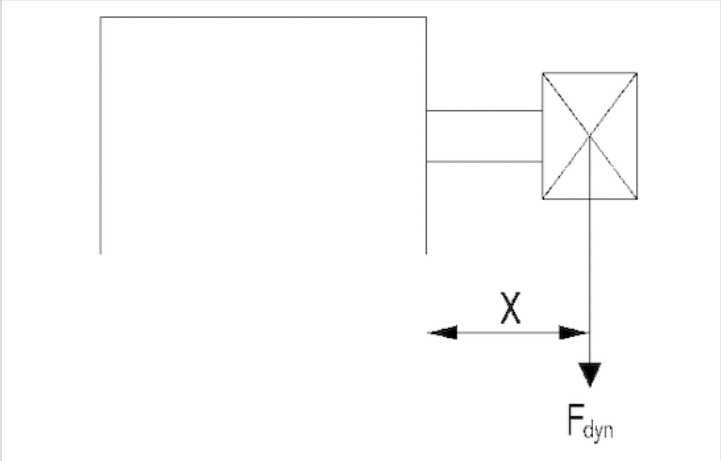
Maximum admissible lateral force static



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

Maximum admissible lateral force dynamic



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

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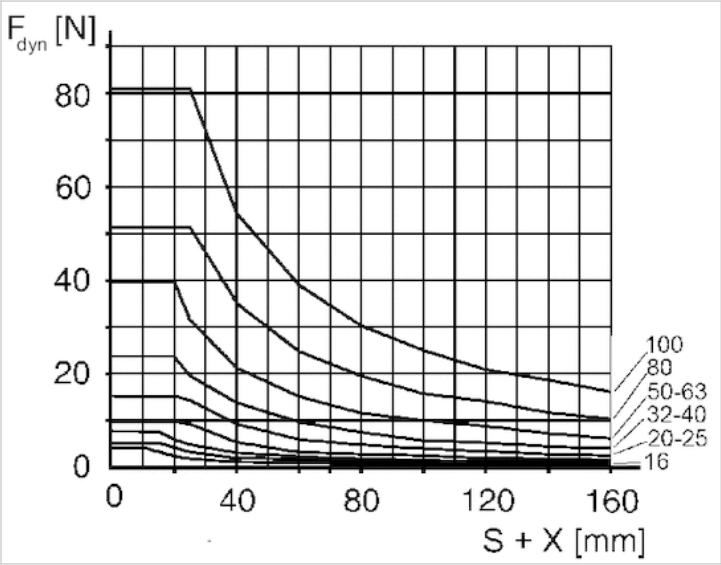
Maximum admissible lateral force dynamic



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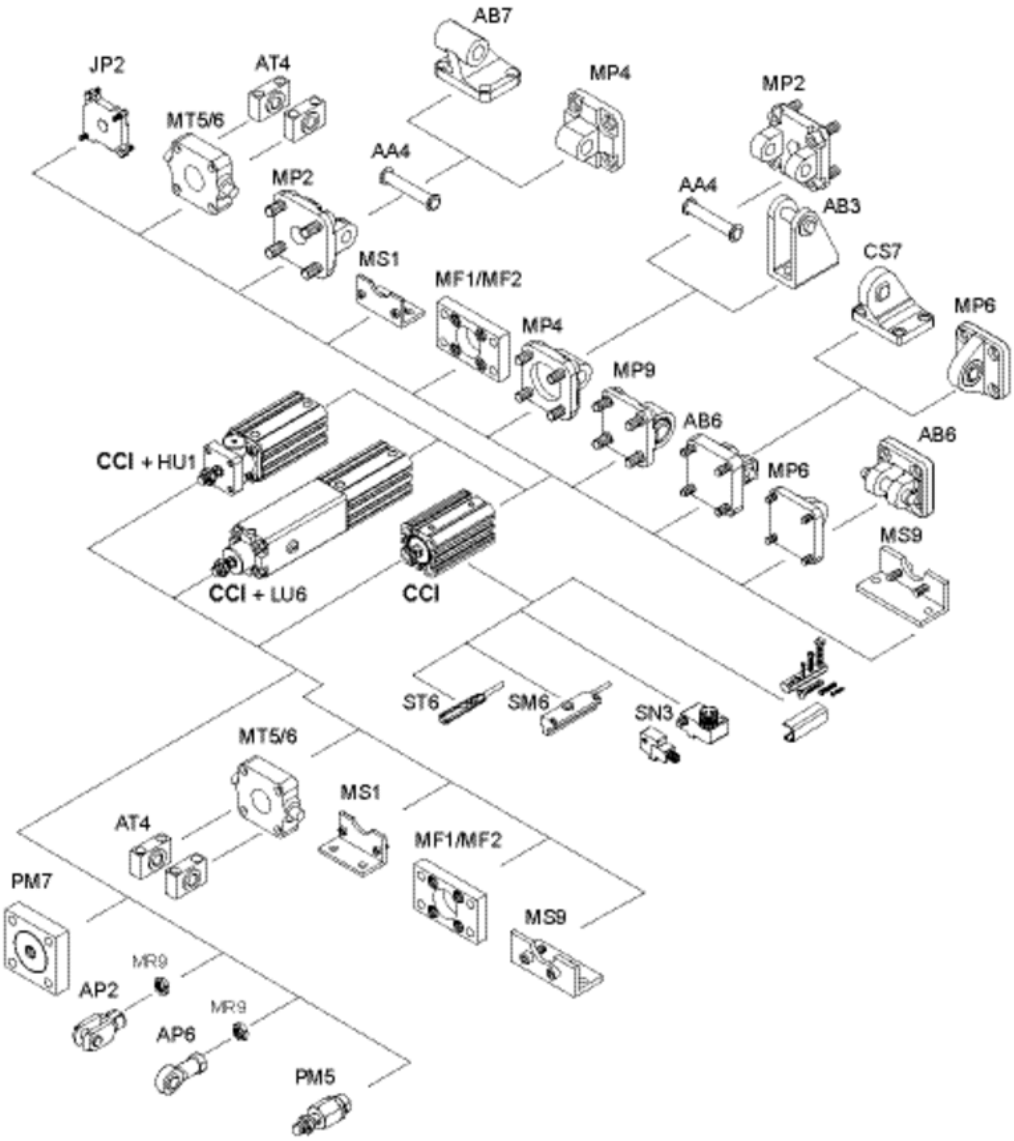
Accessories overview

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.