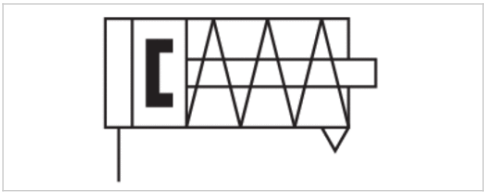
ISO 21287, Series CCI

AVENTICS™ ISO 21287, Series CCI

EMERSON.

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 Internal 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 M4 M5 8 mm	20 mm M6 M5 10 mm	25 mm M6 M5 10 mm	32 mm M8 G 1/8 12 mm	40 mm M8 G 1/8 12 mm	50 mm M10 G 1/8 16 mm
Stroke 5	R422001392	R422001393	R422001394	R422001395	R422001396	R422001397
10	R422001402	R422001403	R422001404	R422001405	R422001406	R422001407
15	R422001412	R422001413	R422001414	R422001415	R422001416	R422001417
20	R422001422	R422001423	R422001424	R422001425	R422001426	R422001427
25	R422001432	R422001433	R422001434	R422001435	R422001436	R422001437

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm
Stroke 5	R422001398	R422001399	R422001400
10	R422001408	R422001409	R422001410
15	R422001418	R422001419	R422001420
20	R422001428	R422001429	R422001430
25	R422001438	R422001439	R422001440

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	0.061 kg	0.101 kg	0.126 kg	0.237 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	0.309 kg	0.462 kg	0.703 kg	1.14 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	2.2 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).

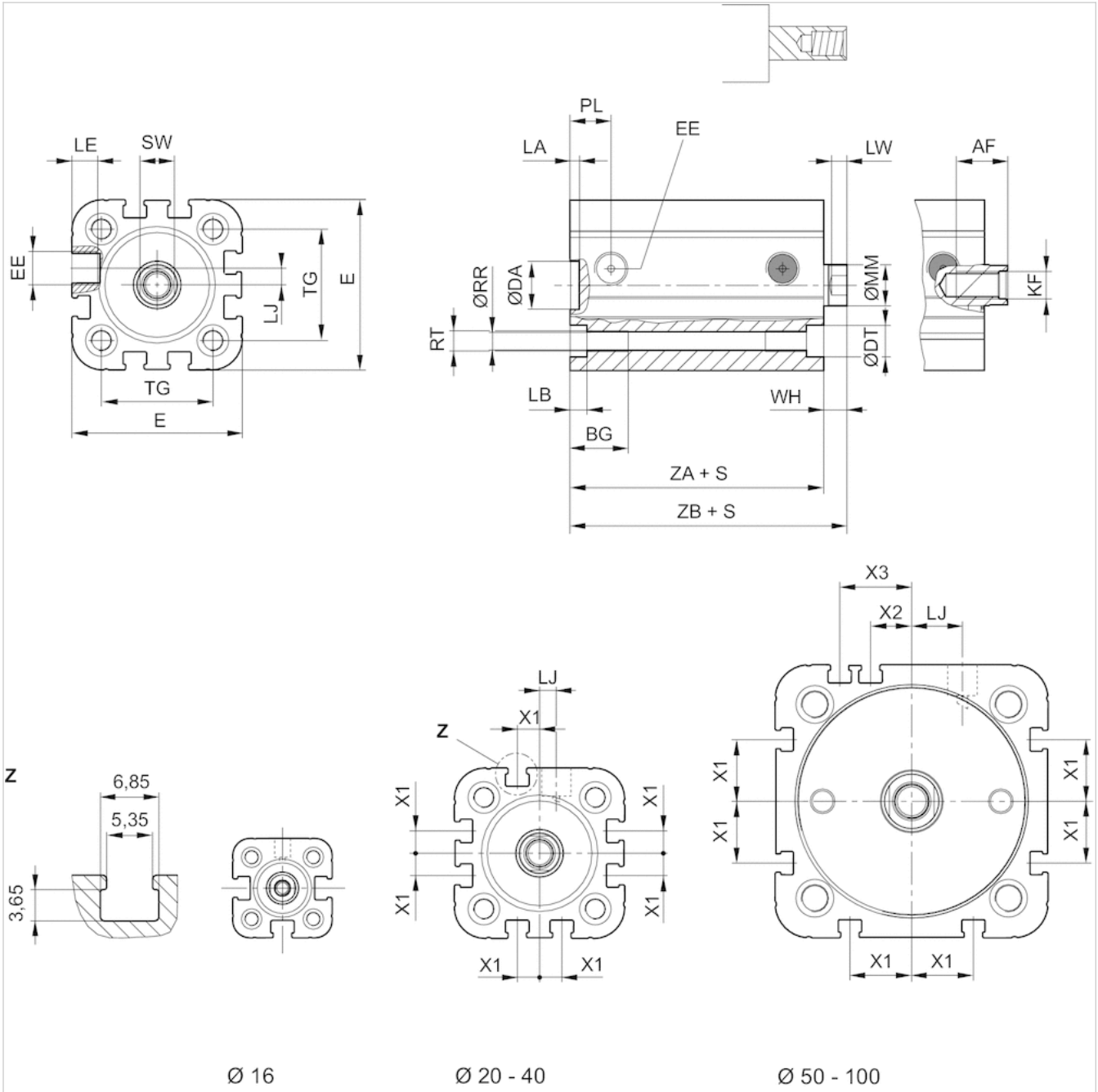
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Ø 16 mm ... 100 mm



S = stroke

Dimensions

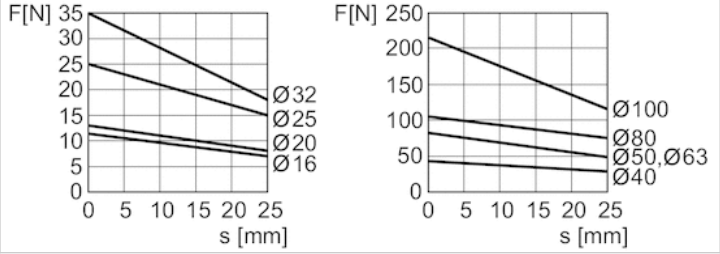
Piston Ø	AF	BG	DA H11	DT H13	E	EE	KF	KV	LA	LB	LE	LJ	MM f8	PL	RR	RT	SW
16 mm	10	15	10	6	29.3	M5	M4	10	2.5	3.5	4.5	–	8	8	3.3	M4	7
20 mm	12	15.5	12	7.5	36.3	M5	M6	13	2.5	4.5	4.5	4.5	10	10	4.2	M5	8
25 mm	12	15.5	12	8	40.3	M5	M6	13	2.5	4.5	4.5	4	10	10	4.2	M5	8
32 mm	12	17	14	9.2	50	G 1/8	M8	16	2.5	5	7.5	5	12	12	5.1	M6	10
40 mm	12	17	14	9.2	58	G 1/8	M8	16	2.5	5	7.5	10	12	12	5.1	M6	10
50 mm	16	17	18	11	68.3	G 1/8	M10	18	2.5	5	7.5	12	16	12	6.7	M8	13

Piston Ø	AF	BG	DA H11	DT H13	E	EE	KF	KV	LA	LB	LE	LJ	MM f8	PL	RR	RT	SW
63 mm	16	17	18	11	80	G 1/8	M10	18	2.5	5	7.5	15	16	12	6.7	M8	13
80 mm	20	20	23	15	96	G 1/8	M12	24	3	5	7.5	22	20	14	8.5	M10	16
100 mm	20	20	28	15	116	G 1/8	M12	24	3	5	7.5	27	25	16.5	8.5	M10	21

Piston Ø	TG	WH	X1	X2	X3	ZA	ZB
16 mm	18	4.8	–	–	–	34.9	39.7 ±0.8
20 mm	22	5.6	4.2	–	–	37.3	42.9 ±0.8
25 mm	26	5.6	4.5	–	–	39	44.6 ±0.9
32 mm	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	38	7.5	11	–	–	45	52.5 ±1
50 mm	46.5	8	13	4	13	45.5	53.5 ±1
63 mm	56.5	8	18	12	21	49	57 ±1
80 mm	72	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	89	10	20	20	29	67	77 ±1

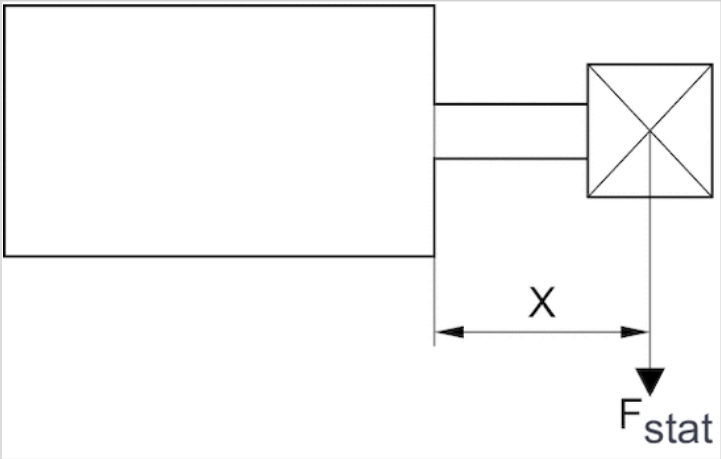
Diagrams

Extracting piston force



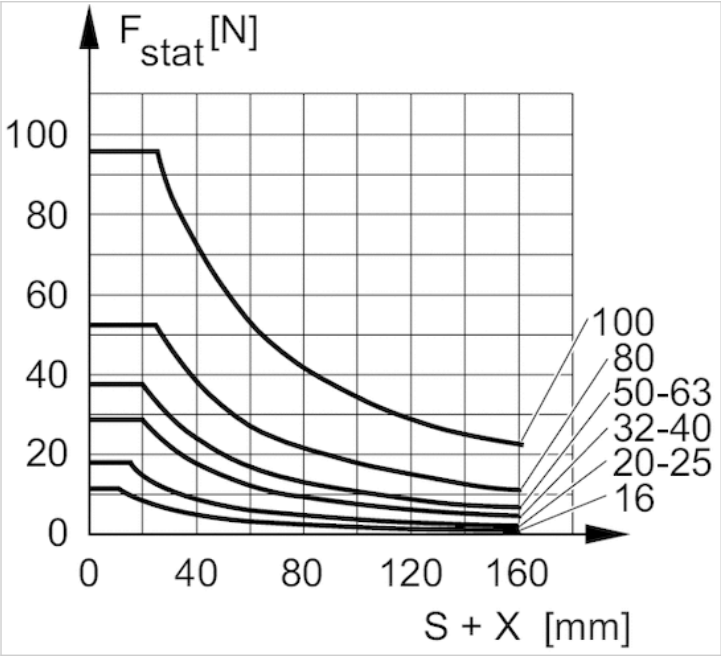
F = spring return force, s = return stroke

Maximum admissible lateral force, static



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

Maximum admissible lateral force, static



F stat. = static lateral force
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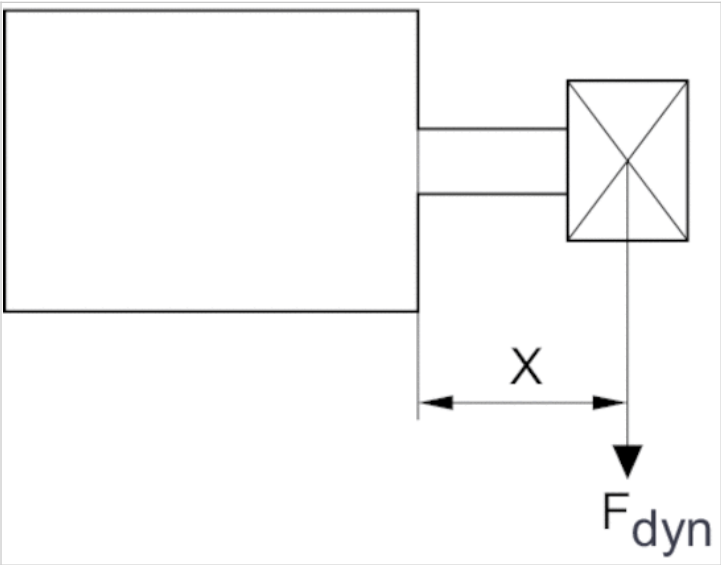
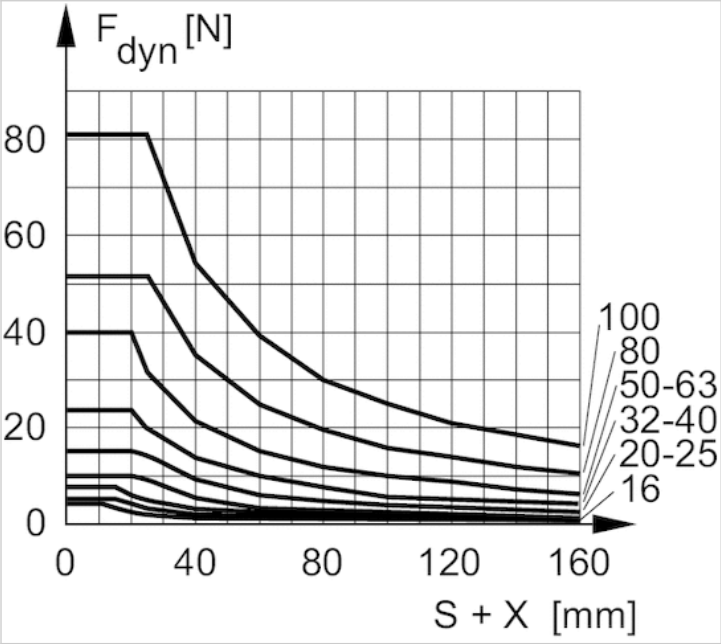
S = stroke

Maximum admissible lateral force, dynamic



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

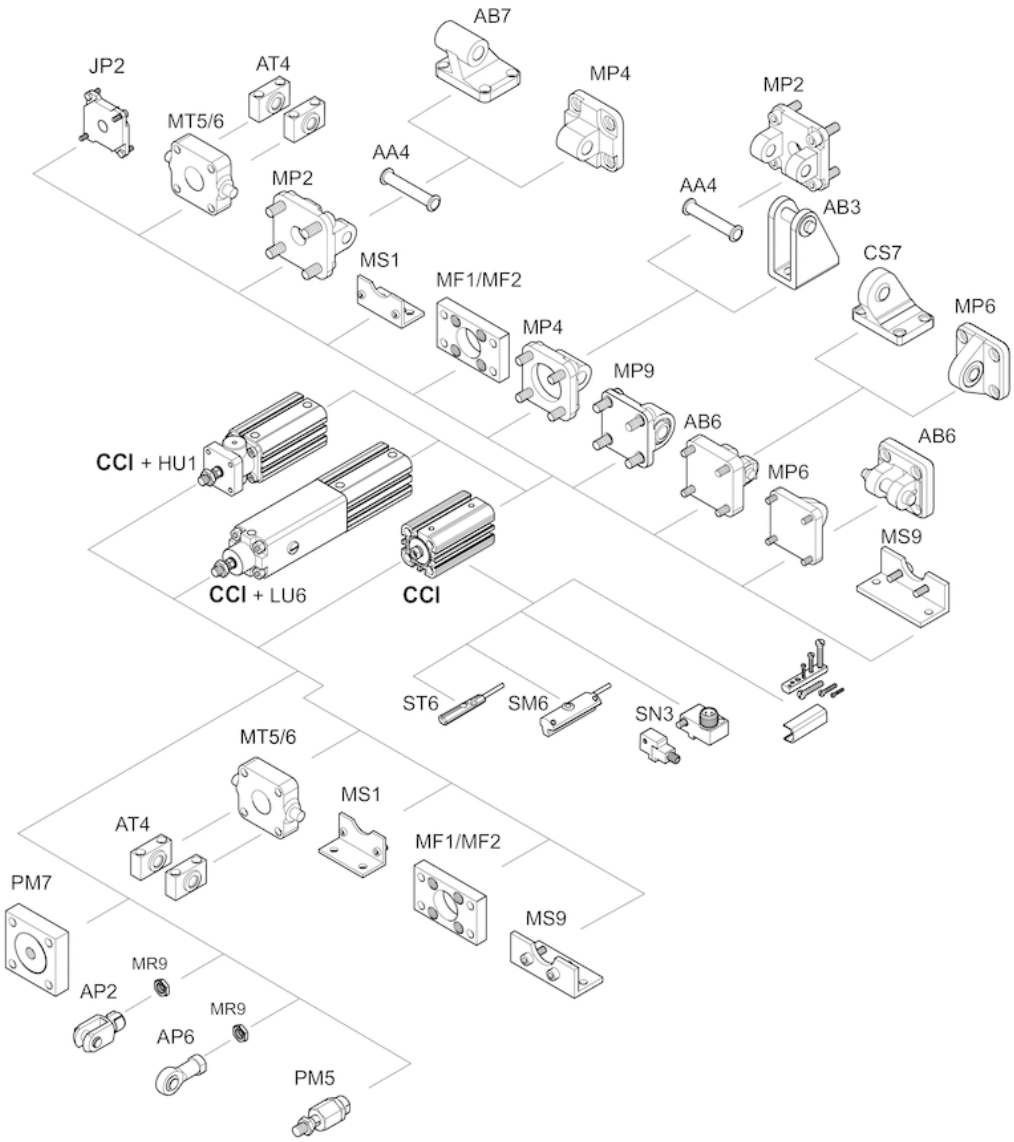
Maximum admissible lateral force, dynamic



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

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.

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

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	1.22 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).

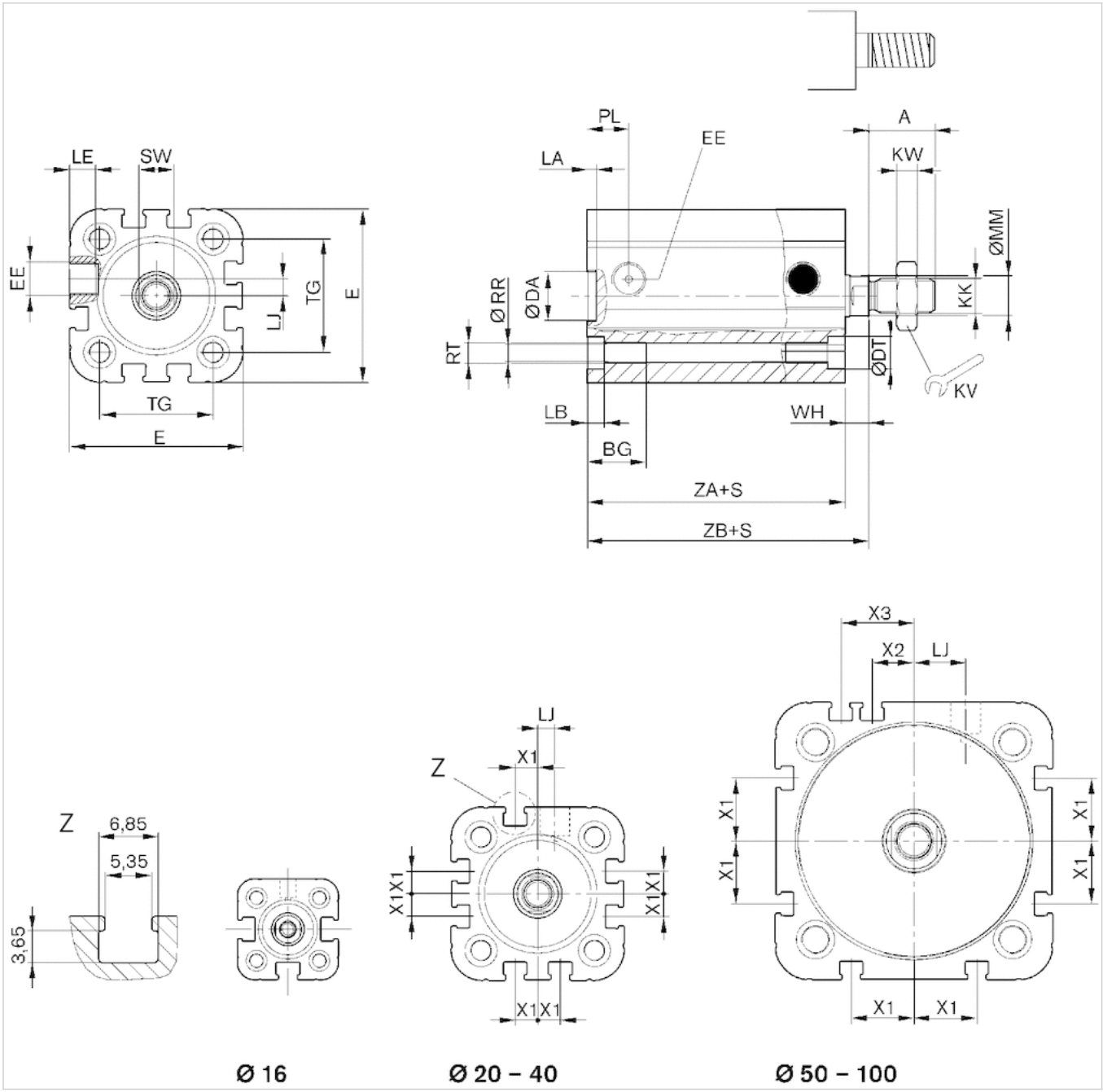
With cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

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

Dimensions

Ø 16 mm ... 100 mm



S = stroke

Dimensions

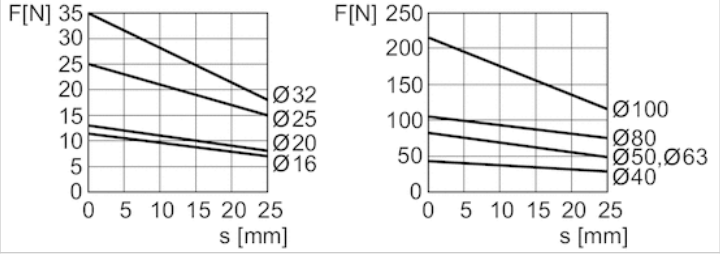
Piston Ø	A	BG	DA H11	DT H13	E	EE	KK	KV	KW	LA	LB	LE	LJ	MM f8	PL	RR
16 mm	12	15	10	6	29.3	M5	M6	10	3.2	2.5	3.5	4.5	–	8	8	3.3
20 mm	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5	4.5	4.5	4.5	10	10	4.2
25 mm	16	15.5	12	8	40.3	M5	M8	13	4	2.5	4.5	4.5	4	10	10	4.2
32 mm	19	17	14	9.2	50	G 1/8	M10x1.25	16	5	2.5	5	7.5	5	12	12	5.1
40 mm	19	17	14	9.2	58	G 1/8	M10x1.25	16	5	2.5	5	7.5	10	12	12	5.1
50 mm	22	17	18	11	68.3	G 1/8	M12x1.25	18	6	2.5	5	7.5	12	16	12	6.7

Piston Ø	A	BG	DA H11	DT H13	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	18	6	2.5	5	7.5	15	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	SW	TG	WH	X1	X2	X3	ZA	ZB
16 mm	M4	7	18	4.8	–	–	–	34.9	39.7 ±0,8
20 mm	M5	8	22	5.6	4.2	–	–	37.3	42.9 ±0,8
25 mm	M5	8	26	5.6	4.5	–	–	39	44.6 ±0,9
32 mm	M6	10	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	M6	10	38	7.5	11	–	–	45	52.5 ±1
50 mm	M8	13	46.5	8	13	4	13	45.5	53.5 ±1
63 mm	M8	13	56.5	8	18	12	21	49	57 ±1
80 mm	M10	16	72	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	M10	21	89	10	20	20	29	67	77 ±1

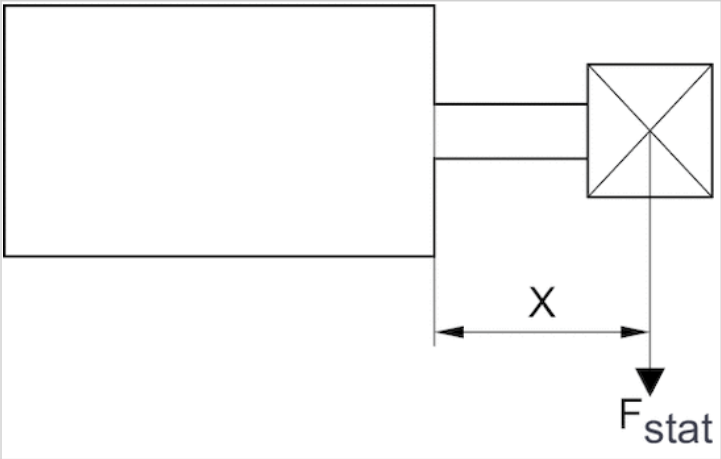
Diagrams

Extracting piston force



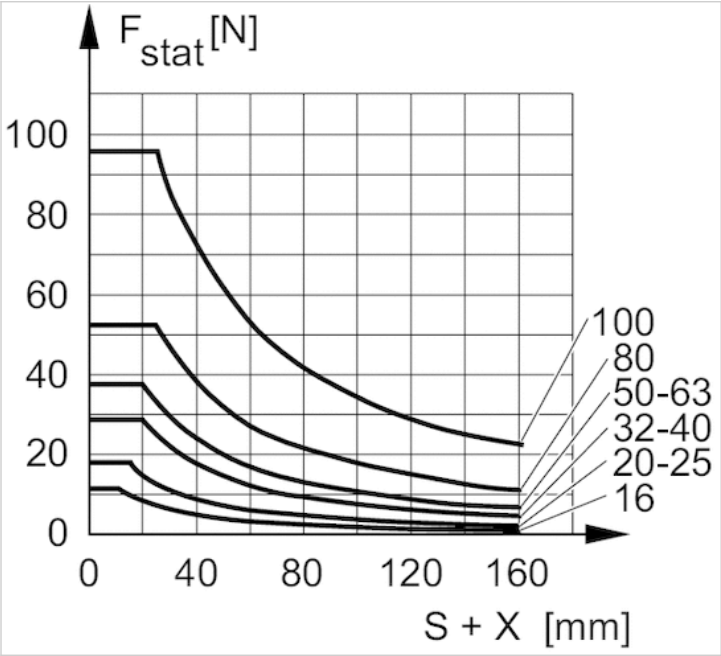
F = spring return force, s = return stroke

Maximum admissible lateral force, static



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

Maximum admissible lateral force, static



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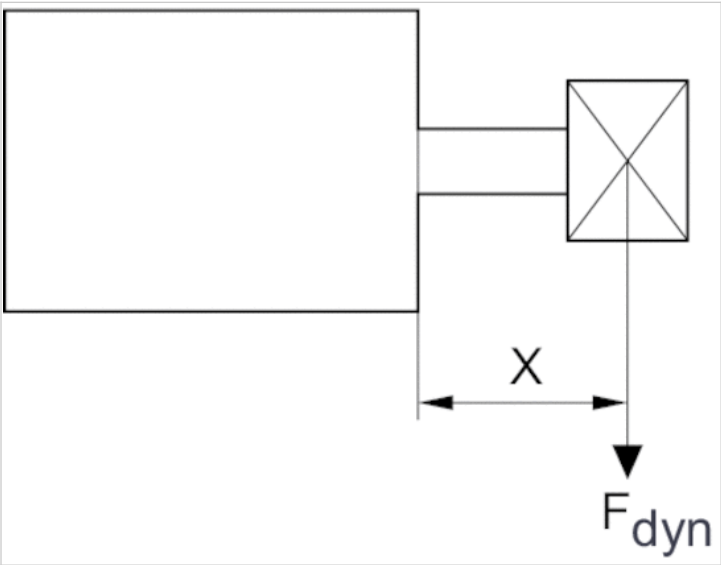
S = stroke

Maximum admissible lateral force, dynamic



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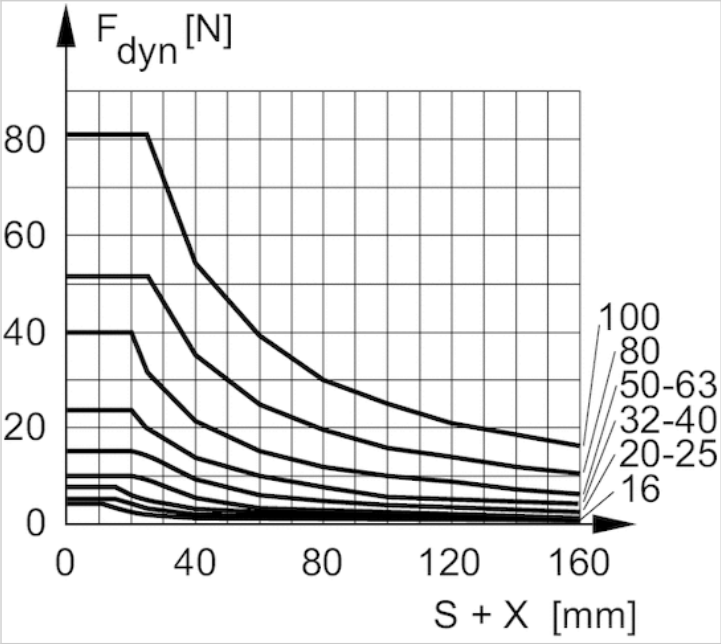
X = distance between force application point and cylinder cover
S = stroke

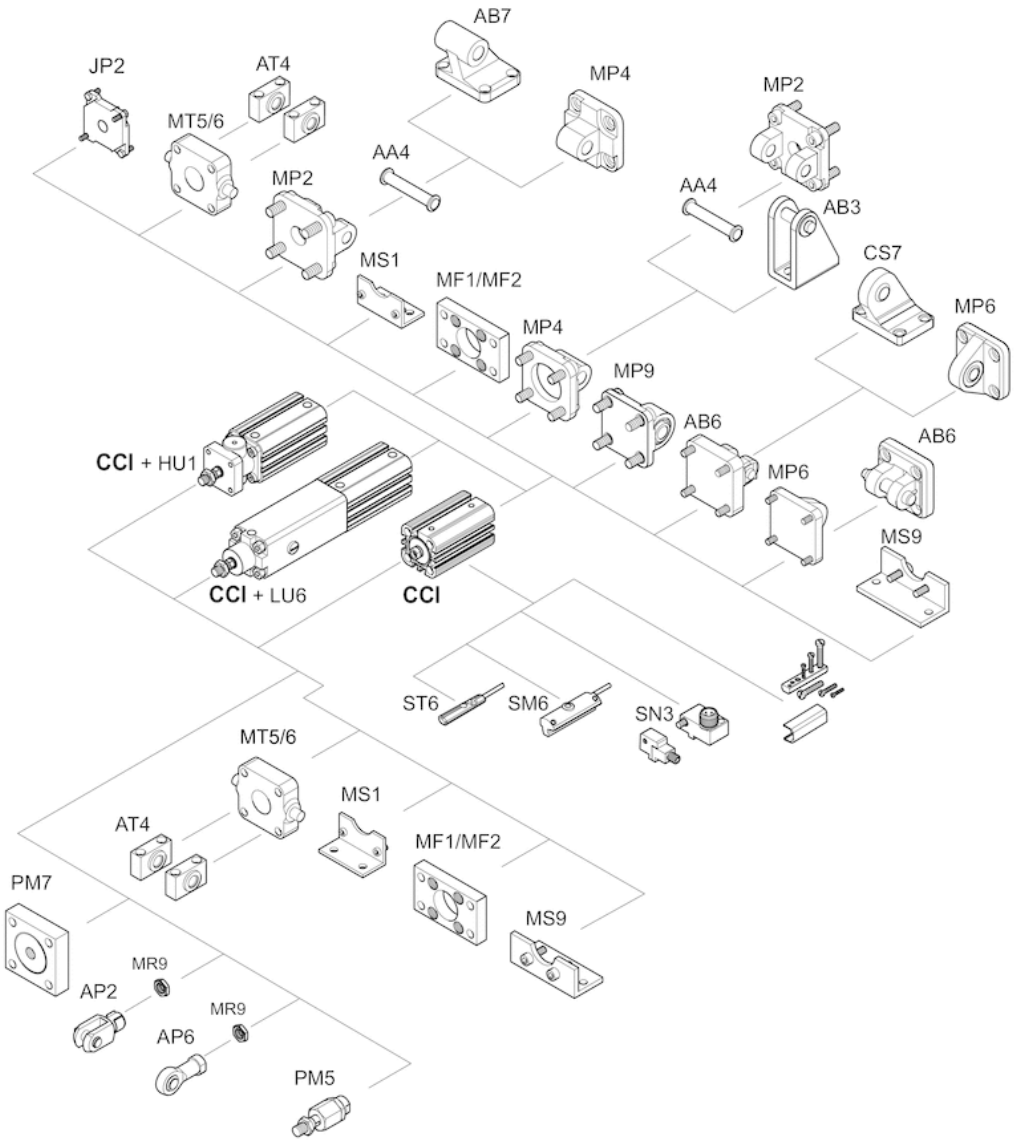
Maximum admissible lateral force, dynamic



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

Accessories overview

Overview drawing



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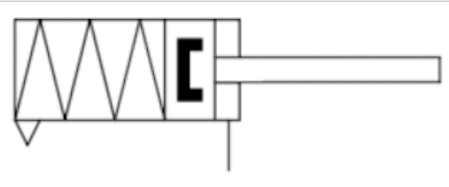
Compact cylinder ISO 21287, Series CCI

- Ø 16-100 mm
- Ports M5 G 1/8
- Single-acting, extended without pressure
- with magnetic piston
- Cushioning elastic
- Piston rod Internal 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 M4 M5 8 mm	20 mm M6 M5 10 mm	25 mm M6 M5 10 mm	32 mm M8 G 1/8 12 mm	40 mm M8 G 1/8 12 mm	50 mm M10 G 1/8 16 mm
Stroke 5	R422001492	R422001493	R422001494	R422001495	R422001496	R422001497
10	R422001502	R422001503	R422001504	R422001505	R422001506	R422001507
15	R422001512	R422001513	R422001514	R422001515	R422001516	R422001517
20	R422001522	R422001523	R422001524	R422001525	R422001526	R422001527
25	R422001532	R422001533	R422001534	R422001535	R422001536	R422001537

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm
Stroke 5	R422001498	R422001499	R422001500
10	R422001508	R422001509	R422001510
15	R422001518	R422001519	R422001520
20	R422001528	R422001529	R422001530
25	R422001538	R422001539	R422001540

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm
Retracting piston force	127 N	198 N	309 N	507 N
Extracting piston force	12 N	13 N	25 N	35 N
Impact energy	0.11 J	0.15 J	0.2 J	0.4 J
Weight 0 mm stroke	0.061 kg	0.101 kg	0.126 kg	0.237 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	792 N	1237 N	1964 N	3167 N
Extracting piston force	43 N	82 N	82 N	105 N
Impact energy	0.52 J	0.64 J	0.75 J	0.75 J
Weight 0 mm stroke	0.309 kg	0.462 kg	0.703 kg	1.14 kg
Weight +10 mm stroke	0.052 kg	0.07 kg	0.087 kg	0.116 kg
Working pressure min./max.	2 ... 10 bar	1.5 ... 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	4948 N
Extracting piston force	215 N
Impact energy	1 J
Weight 0 mm stroke	2.2 kg
Weight +10 mm stroke	0.168 kg
Working pressure min./max.	2 ... 10 bar
Stroke max.	25 mm

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

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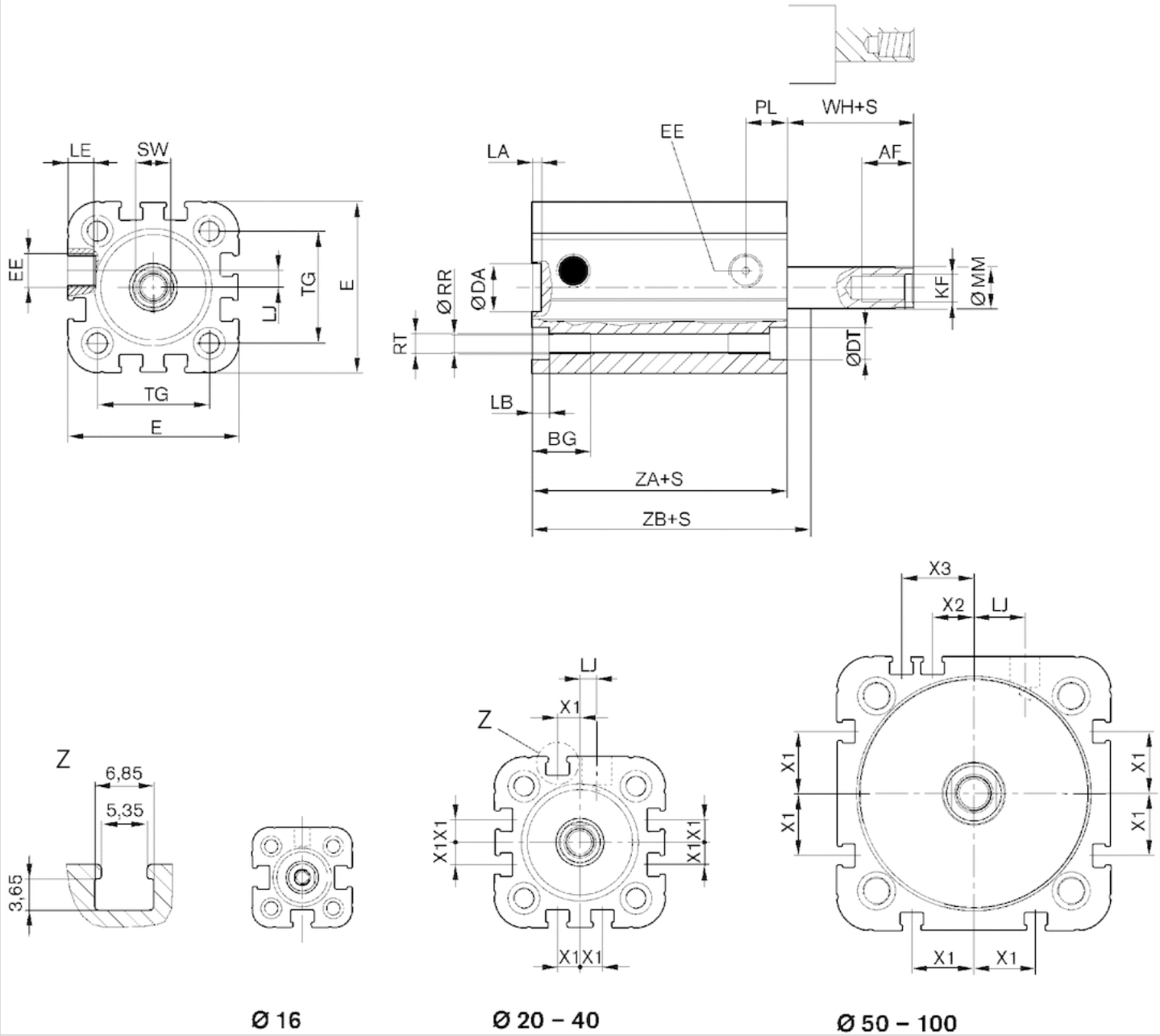
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Ø 16 mm ... 100 mm



S = stroke

Dimensions

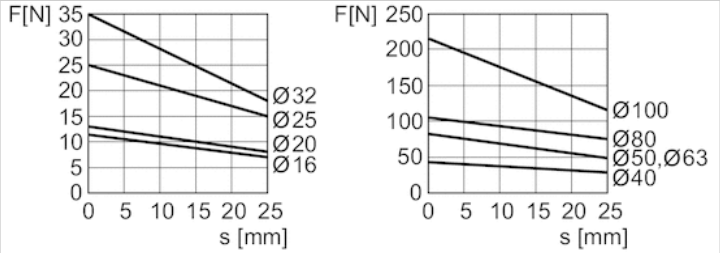
Piston Ø	AF	BG	DA H11	DT H13	E	EE	KF	LA	LB	LE	LJ	MM f8	PL	RR	RT	SW	TG
16 mm	10	15	10	6	29.3	M5	M4	2.5	3.5	4.5	–	8	8	3.3	M4	7	18
20 mm	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5	4.5	10	10	4.2	M5	8	22
25 mm	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4.5	4	10	10	4.2	M5	8	26
32 mm	12	17	14	9.2	50	G 1/8	M8	2.5	5	7.5	5	12	12	5.1	M6	10	32.5
40 mm	12	17	14	9.2	58	G 1/8	M8	2.5	5	7.5	10	12	12	5.1	M6	10	38
50 mm	16	17	18	11	68.3	G 1/8	M10	2.5	5	7.5	12	16	12	6.7	M8	13	46.5
63 mm	16	17	18	11	80	G 1/8	M10	2.5	5	7.5	15	16	12	6.7	M8	13	56.5

Piston Ø	AF	BG	DA H11	DT H13	E	EE	KF	LA	LB	LE	LJ	MM f8	PL	RR	RT	SW	TG
80 mm	20	20	23	15	96	G 1/8	M12	3	5	7.5	22	20	14	8.5	M10	16	72
100 mm	20	20	28	15	116	G 1/8	M12	3	5	7.5	27	25	16.5	8.5	M10	21	89

Piston Ø	WH	X1	X2	X3	ZA	ZB
16 mm	4.8	–	–	–	34.9	39.7 ±0,8
20 mm	5.6	4.2	–	–	37.3	42.9 ±0,8
25 mm	5.6	4.5	–	–	39	44.6 ±0,9
32 mm	7.5	6.5	–	–	44	51.5 ±1
40 mm	7.5	11	–	–	45	52.5 ±1
50 mm	8	13	4	13	45.5	53.5 ±1
63 mm	8	18	12	21	49	57 ±1
80 mm	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	10	20	20	29	67	77 ±1

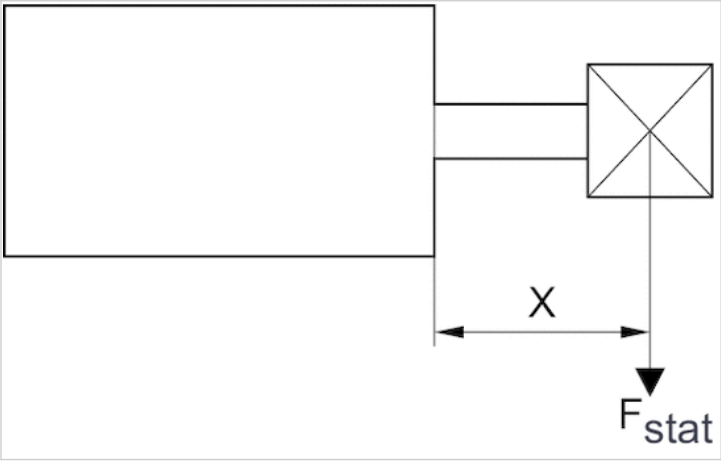
Diagrams

Extracting piston force



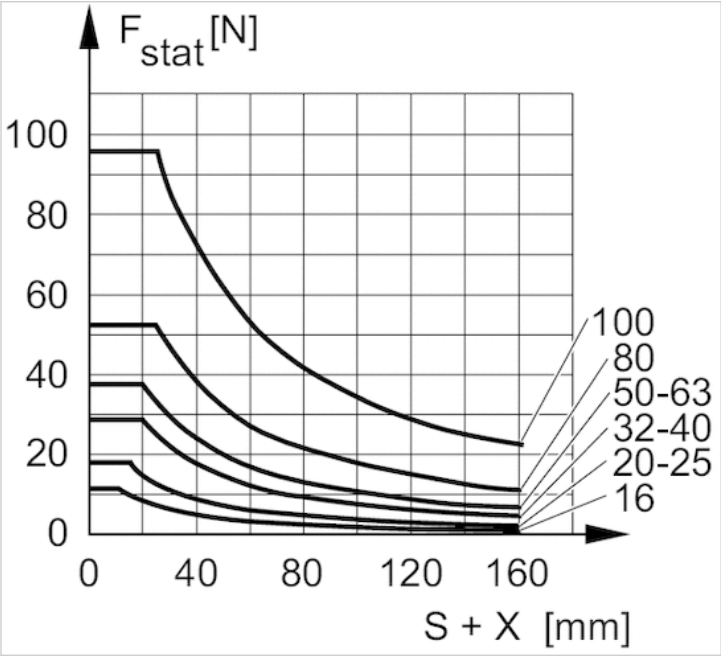
F = spring return force, s = return stroke

Maximum admissible lateral force, static



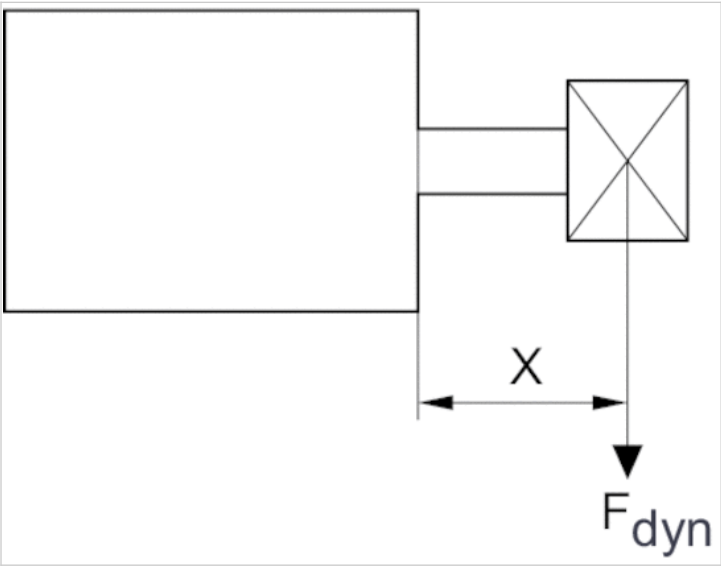
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



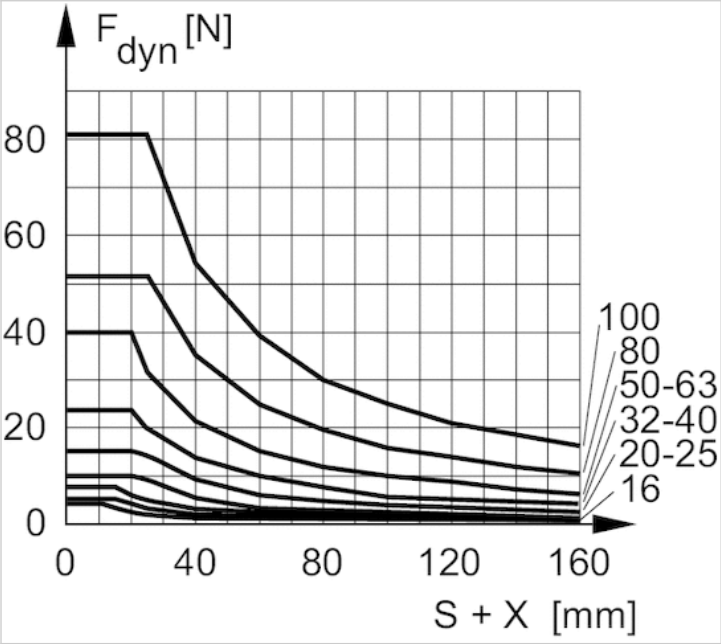
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force, dynamic



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

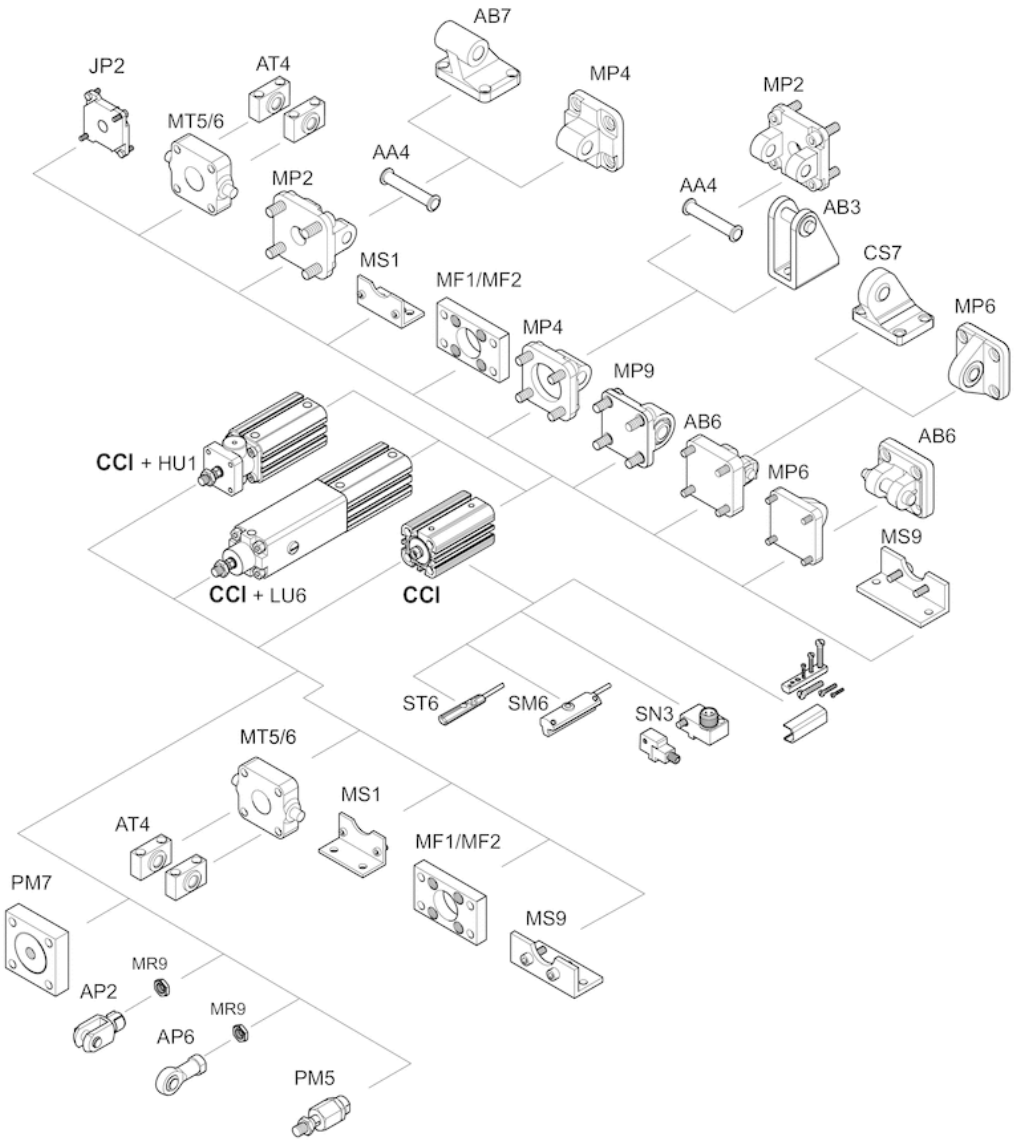
Maximum admissible lateral force, dynamic



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

Accessories overview

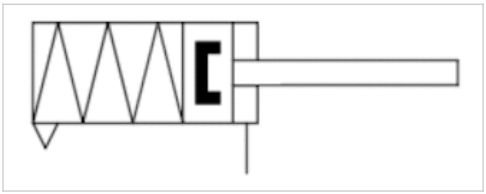
Overview drawing



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.

Compact cylinder ISO 21287, Series CCI

- Ø 16-100 mm
- Ports M5 G 1/8
- Single-acting, extended 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	R422001542	R422001543	R422001544	R422001545	R422001546	R422001547
10	R422001552	R422001553	R422001554	R422001555	R422001556	R422001557
15	R422001562	R422001563	R422001564	R422001565	R422001566	R422001567
20	R422001572	R422001573	R422001574	R422001575	R422001576	R422001577
25	R422001582	R422001583	R422001584	R422001585	R422001586	R422001587

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	R422001548	R422001549	R422001550
10	R422001558	R422001559	R422001560
15	R422001568	R422001569	R422001570
20	R422001578	R422001579	R422001580
25	R422001588	R422001589	R422001590

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm
Retracting piston force	127 N	198 N	309 N	507 N
Extracting piston force	12 N	13 N	25 N	35 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	792 N	1237 N	1964 N	3167 N
Extracting piston force	43 N	82 N	82 N	105 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	1.22 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	4948 N
Extracting piston force	215 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).

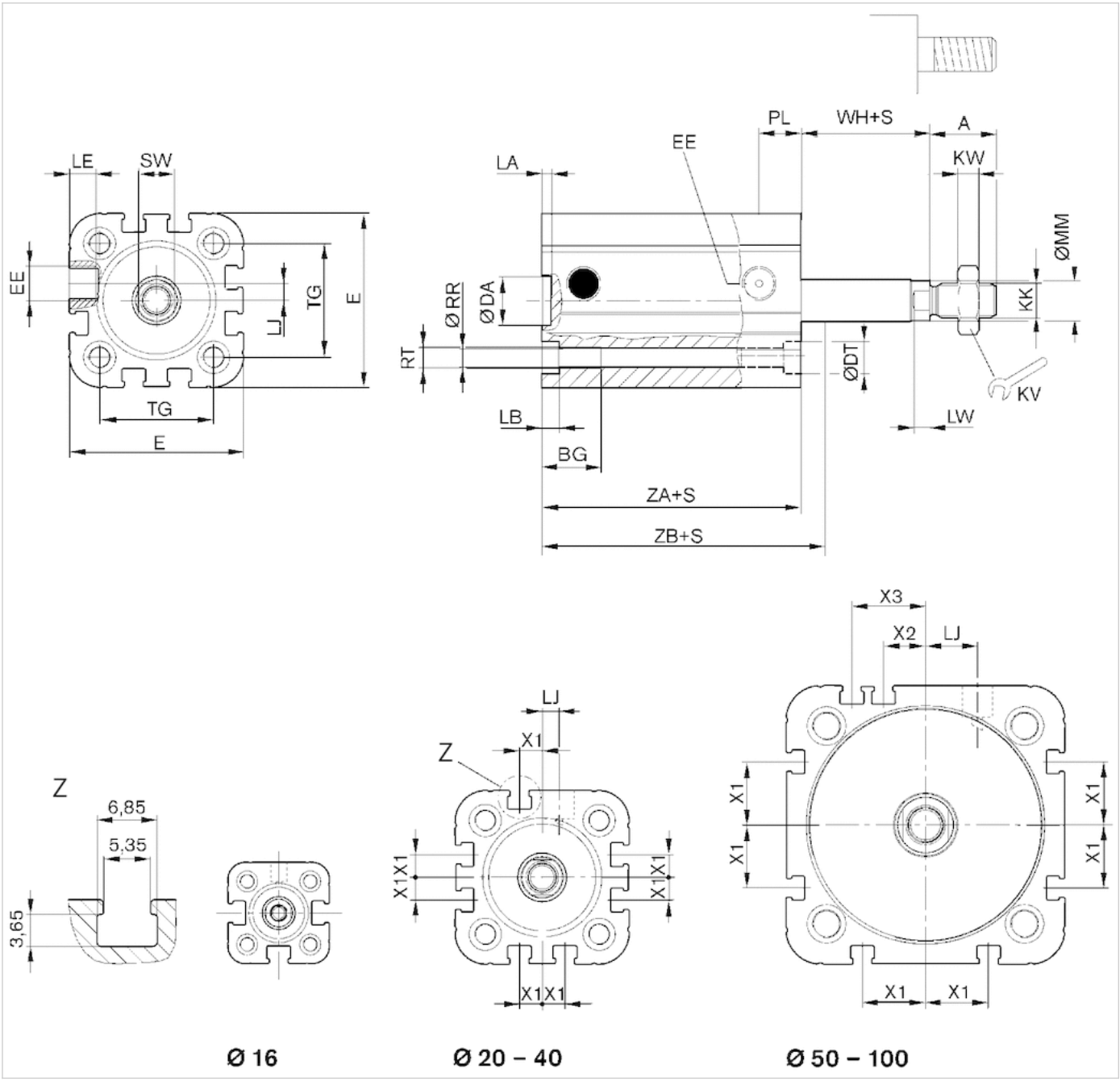
With cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

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

Dimensions

Ø 16 mm ... 100 mm



Dimensions

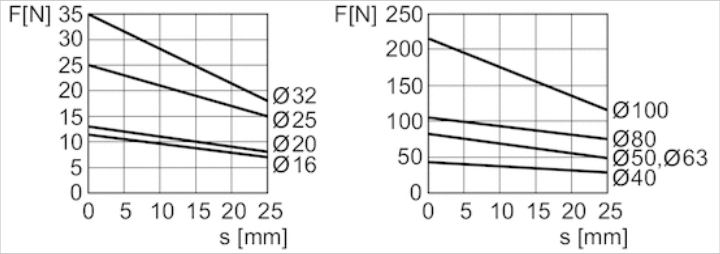
Piston Ø	A	BG	DA H11	DT H13	E	EE	KK	KV	KW	LA	LB	LE	LJ	LW	MM f8	PL	RR
16 mm	12	15	10	6	29.3	M5	M6	10	3	2.5	3.5	4.5	–	3.2	8	8	3.3
20 mm	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5	4.5	4.5	4.5	3.7	10	10	4.2
25 mm	16	15.5	12	8	40.3	M5	M8	13	4	2.5	4.5	4.5	4	3.7	10	10	4.2
32 mm	19	17	14	9.2	50	G 1/8	M10x1.25	16	5	2.5	5	7.5	5	5	12	12	5.1
40 mm	19	17	14	9.2	58	G 1/8	M10x1.25	16	5	2.5	5	7.5	10	5	12	12	5.1
50 mm	22	17	18	11	68.3	G 1/8	M12x1.25	18	6	2.5	5	7.5	12	5.7	16	12	6.7
63 mm	22	17	18	11	80	G 1/8	M12x1.25	18	6	2.5	5	7.5	15	5.7	16	12	6.7
80 mm	28	20	23	15	96	G 1/8	M16x1.5	24	8	3	5	7.5	22	7	20	14	8.5

Piston Ø	A	BG	DA H11	DT H13	E	EE	KK	KV	KW	LA	LB	LE	LJ	LW	MM f8	PL	RR
100 mm	28	20	28	15	116	G 1/8	M16x1.5	24	8	3	5	7.5	27	7.5	25	16.5	8.5

Piston Ø	RT	SW	TG	WH	X1	X2	X3	ZA	ZB
16 mm	M4	7	18	4.8	–	–	–	34,9	39.7 ±0,8
20 mm	M5	8	22	5.6	4.2	–	–	37,3	42.9 ±0,8
25 mm	M5	8	26	5.6	4.5	–	–	39	44.6 ±0,9
32 mm	M6	10	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	M6	10	38	7.5	11	–	–	45	52.5 ±1
50 mm	M8	13	46.5	8	13	4	13	45,5	53.5 ±1
63 mm	M8	13	56.5	8	18	12	21	49	57 ±1
80 mm	M10	16	72	10	18	16.5	25.5	54,7	64.7 ±1
100 mm	M10	21	89	10	20	20	29	67	77 ±1

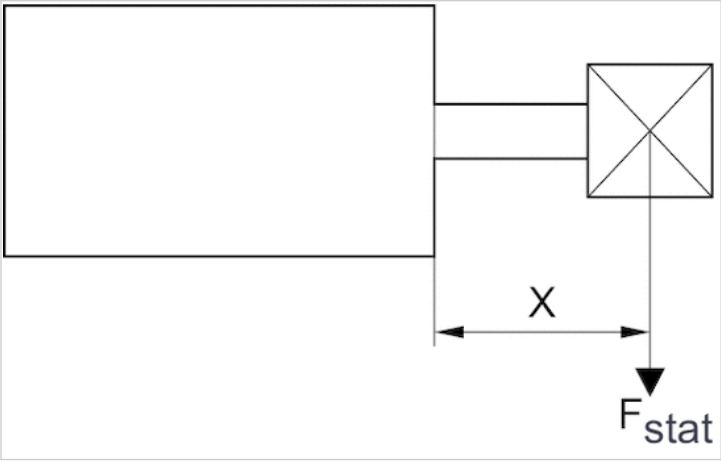
Diagrams

Extracting piston force



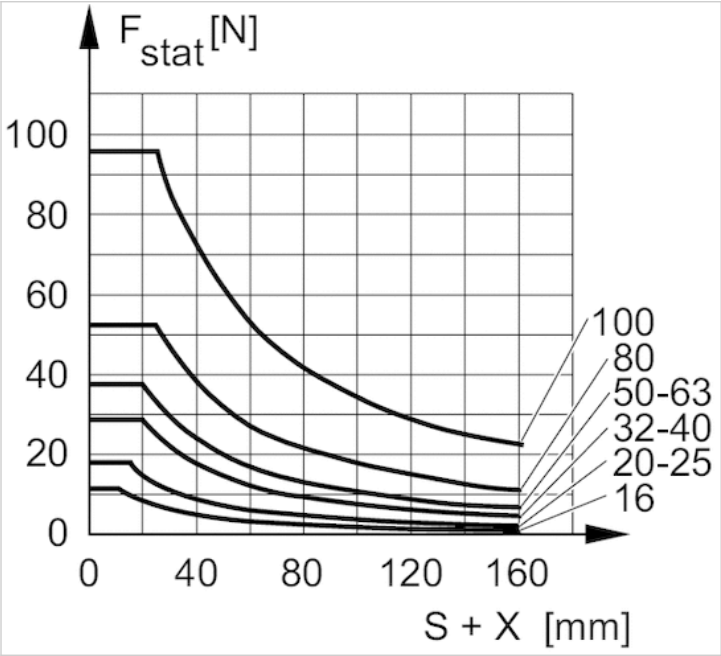
F = spring return force, s = return stroke

Maximum admissible lateral force, static



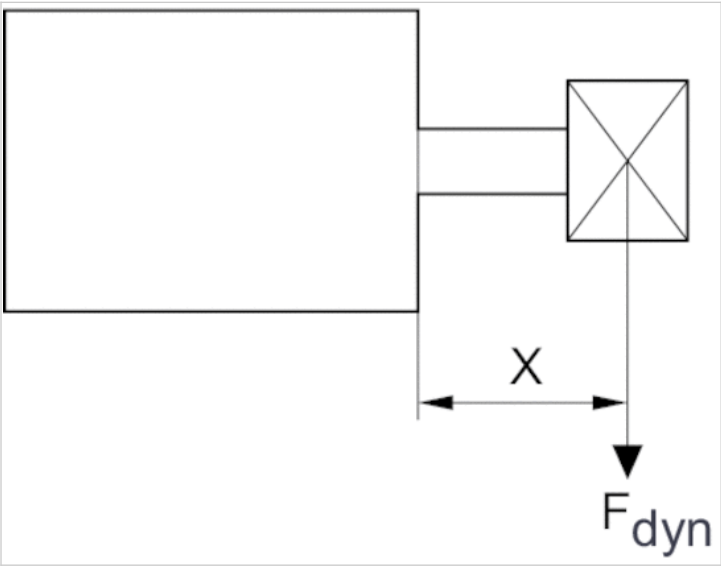
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



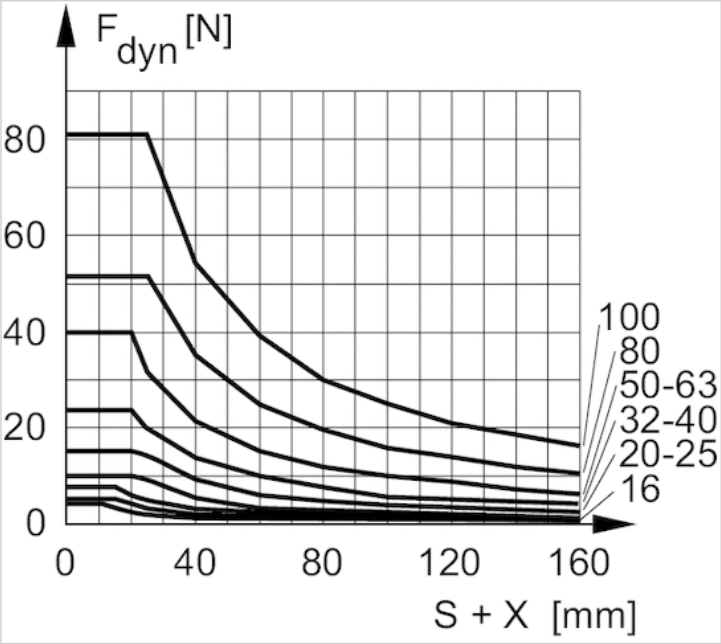
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force, dynamic



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

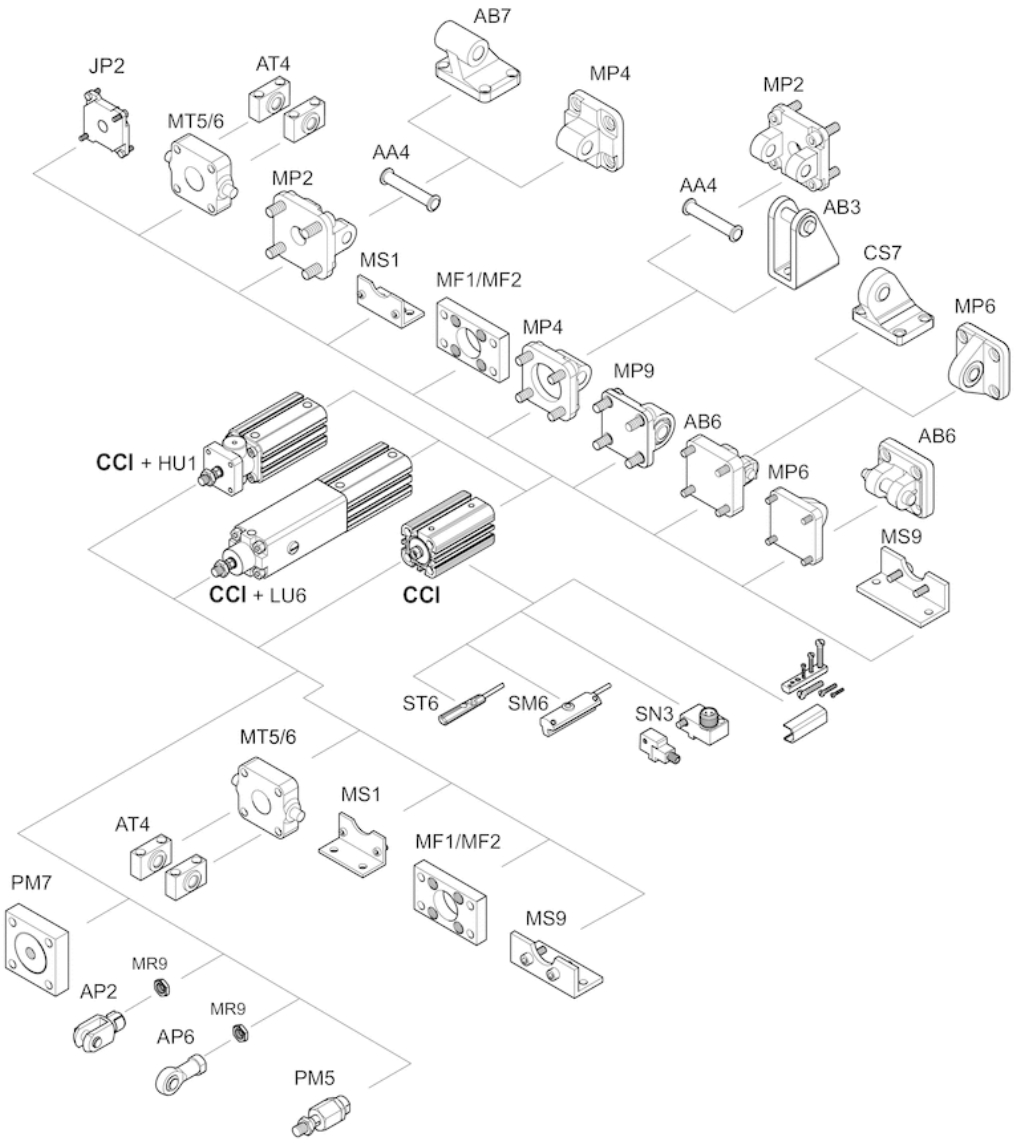
Maximum admissible lateral force, dynamic



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

Accessories overview

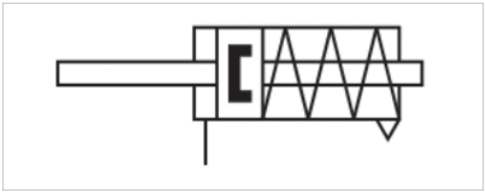
Overview drawing



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.

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 Internal thread
- Piston rod through



Standards	ISO 21287
Compressed air connection	Internal thread
Working pressure min./max.	1.5 ... 10 bar
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 M4 M5 8 mm	20 mm M6 M5 10 mm	25 mm M6 M5 10 mm	32 mm M8 G 1/8 12 mm	40 mm M8 G 1/8 12 mm	50 mm M10 G 1/8 16 mm
Stroke 5	R422001592	R422001593	R422001594	R422001595	R422001596	R422001597
10	R422001602	R422001603	R422001604	R422001605	R422001606	R422001607
15	R422001612	R422001613	R422001614	R422001615	R422001616	R422001617
20	R422001622	R422001623	R422001624	R422001625	R422001626	R422001627
25	R422001632	R422001633	R422001634	R422001635	R422001636	R422001637

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm
Stroke 5	R422001598	R422001599	R422001600
10	R422001608	R422001609	R422001610
15	R422001618	R422001619	R422001620
20	R422001628	R422001629	R422001630
25	R422001638	R422001639	R422001640

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	12 N	13 N	25 N	35 N	43 N	82 N	82 N
Extracting piston force	83 N	135 N	235 N	400 N	677 N	1028 N	1745 N
Impact energy	0.11 J	0.15 J	0.2 J	0.4 J	0.52 J	0.64 J	0.75 J
Weight 0 mm stroke	0.066 kg	0.109 kg	0.131 kg	0.25 kg	0.325 kg	0.486 kg	0.732 kg
Weight +10 mm stroke	0.02 kg	0.029 kg	0.032 kg	0.052 kg	0.06 kg	0.087 kg	0.103 kg
Stroke max.	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm

Piston Ø	80 mm	100 mm
Retracting piston force	105 N	215 N
Extracting piston force	2864 N	4424 N
Impact energy	0.75 J	1 J
Weight 0 mm stroke	1.21 kg	2.32 kg
Weight +10 mm stroke	0.14 kg	0.206 kg
Stroke max.	25 mm	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).

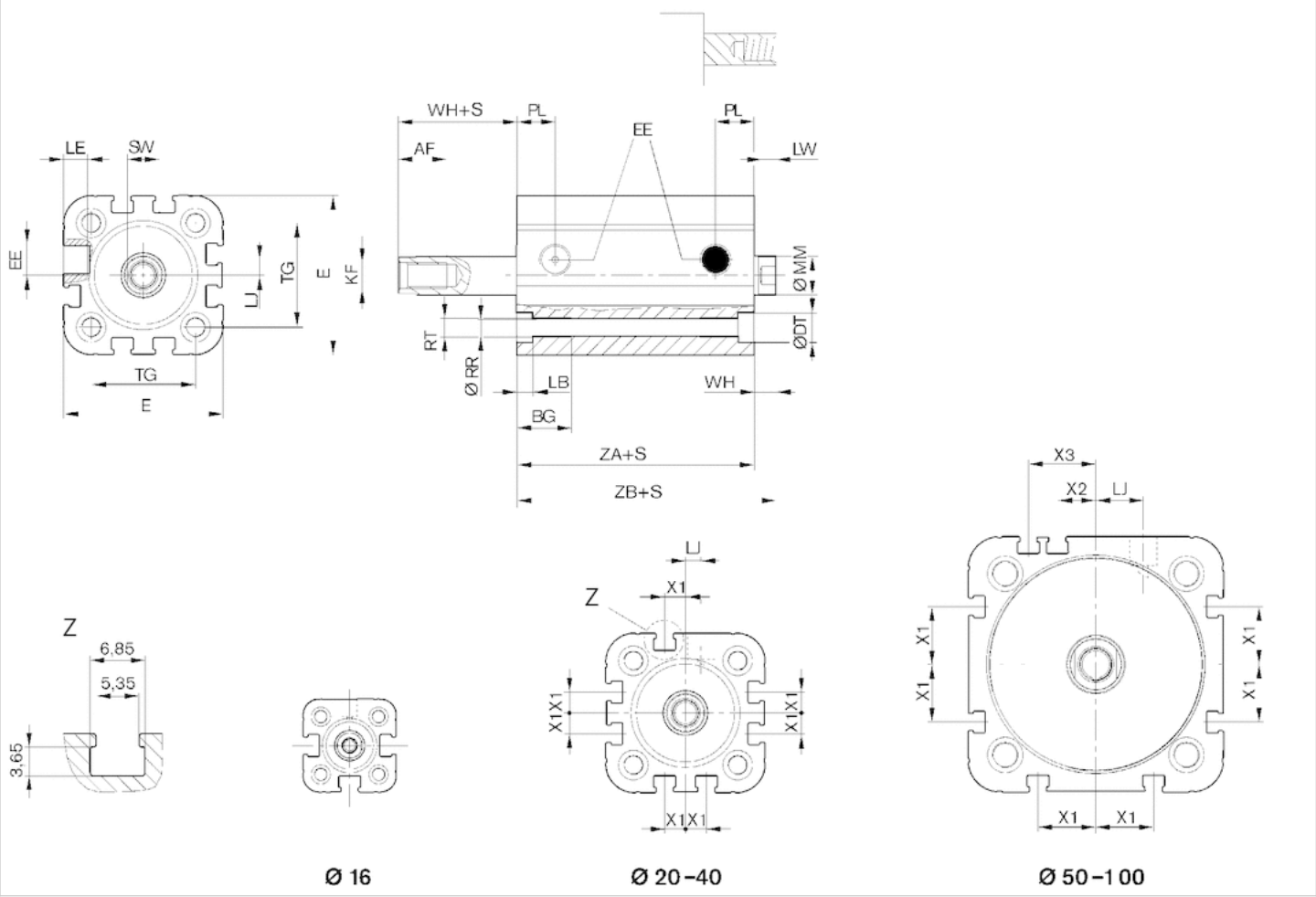
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.
Piston Ø 50/63, stroke 5 mm: AF= 11 mm
Piston Ø 80/100, stroke 5 mm: AF= 15 mm

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Ø 16 mm ... 100 mm



S = stroke

Dimensions

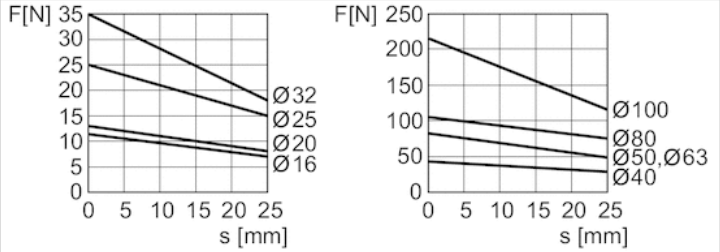
Piston Ø	AF	BG	DT H13	E	EE	KF	LB	LE	LJ	LW	MM f8	PL	RR	RT	SW	TG	WH
16 mm	10	15	6	29.3	M5	M4	3.5	4.5	–	3.2	8	8	3.3	M4	7	18	4.8
20 mm	12	15.5	7.5	36.3	M5	M6	4.5	4.5	4.5	3.7	10	10	4.2	M5	8	22	5.6
25 mm	12	15.5	8	40.3	M5	M6	4.5	4.5	4	3.7	10	10	4.2	M5	8	26	5.6
32 mm	12	17	9.2	50	G 1/8	M8	5	7.5	5	5	12	12	5.1	M6	10	32.5	7.5
40 mm	12	17	9.2	58	G 1/8	M8	5	7.5	10	5	12	12	5.1	M6	10	38	7.5
50 mm	16	17	11	68.3	G 1/8	M10	5	7.5	12	5.7	16	12	6.7	M8	13	46.5	8
63 mm	16	17	11	80	G 1/8	M10	5	7.5	15	5.7	16	12	6.7	M8	13	56.5	8
80 mm	20	20	15	96	G 1/8	M12	5	7.5	22	7	20	14	8.5	M10	16	72	10
100 mm	20	20	15	116	G 1/8	M12	5	7.5	27	7.5	25	16.5	8.5	M10	21	89	10

Piston Ø	X1	X2	X3	ZA	ZB
16 mm	–	–	–	34.9	39.7 ±0.8
20 mm	4.2	–	–	37.3	42.9 ±0.8
25 mm	4.5	–	–	39	44.6 ±0.9
32 mm	6.5	–	–	44	51.5 ±1

Piston Ø	X1	X2	X3	ZA	ZB
40 mm	11	–	–	45	52.5 ±1
50 mm	13	4	13	45.5	53.5 ±1
63 mm	18	12	21	49	57 ±1
80 mm	18	16.5	25.5	54.7	64.7 ±1
100 mm	20	20	29	67	77 ±1

Diagrams

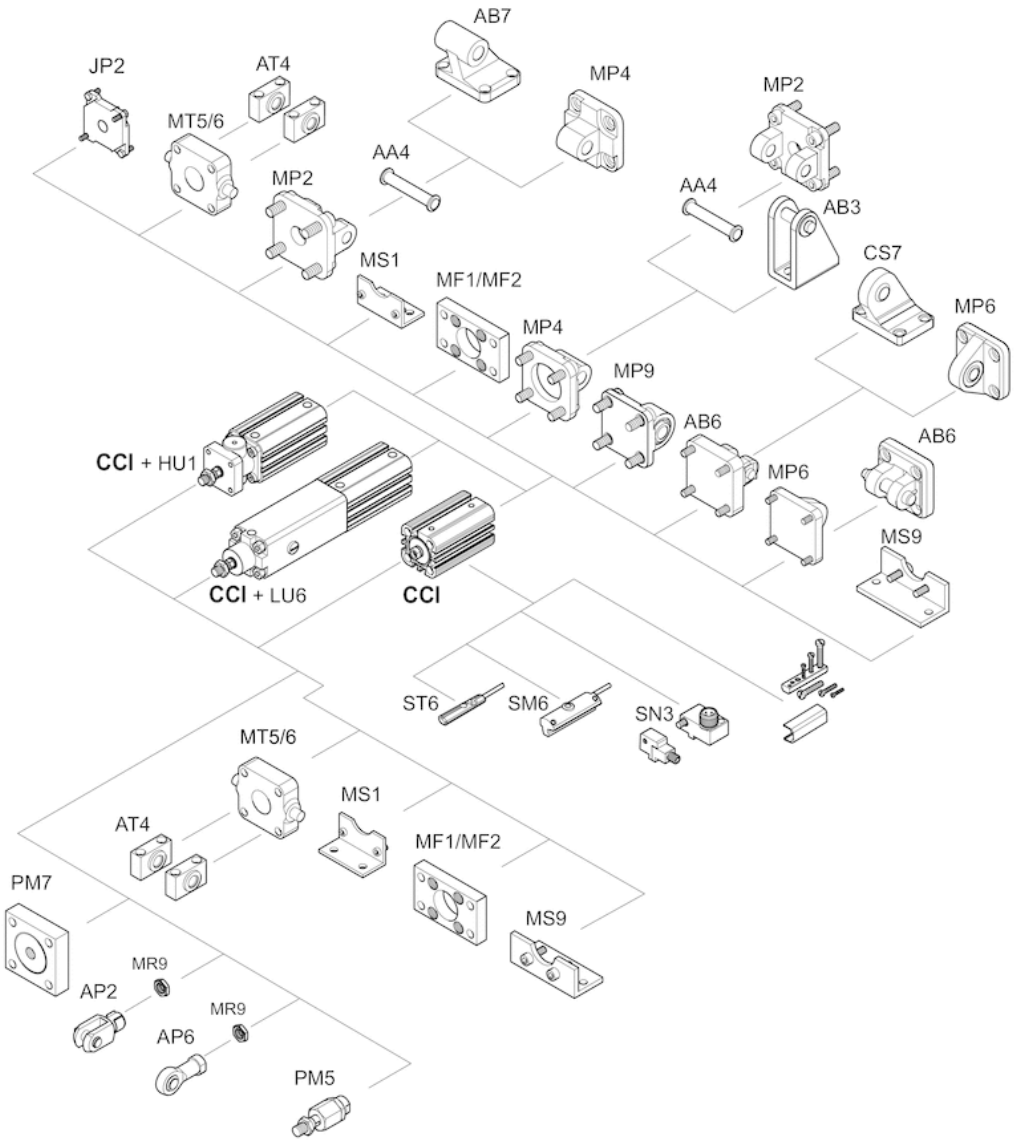
Extracting piston force



F = spring return force, s = return stroke

Accessories overview

Overview drawing



NOTE:
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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
- Piston rod through

Standards	ISO 21287
Compressed air connection	Internal thread
Working pressure min./max.	1.5 ... 10 bar
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	R422001642	R422001643	R422001644	R422001645	R422001646	R422001647
10	R422001652	R422001653	R422001654	R422001655	R422001656	R422001657
15	R422001662	R422001663	R422001664	R422001665	R422001666	R422001667
20	R422001672	R422001673	R422001674	R422001675	R422001676	R422001677
25	R422001682	R422001683	R422001684	R422001685	R422001686	R422001687

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	R422001648	R422001649	R422001650
10	R422001658	R422001659	R422001660
15	R422001668	R422001669	R422001670
20	R422001678	R422001679	R422001680
25	R422001688	R422001689	R422001690

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	12 N	13 N	25 N	35 N	43 N	82 N	82 N
Extracting piston force	83 N	135 N	235 N	400 N	677 N	1028 N	1745 N
Impact energy	0.11 J	0.15 J	0.2 J	0.4 J	0.52 J	0.64 J	0.75 J
Weight 0 mm stroke	0.074 kg	0.147 kg	0.169 kg	0.297 kg	0.372 kg	0.566 kg	0.811 kg
Weight +10 mm stroke	0.02 kg	0.029 kg	0.032 kg	0.052 kg	0.06 kg	0.087 kg	0.103 kg
Stroke max.	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm	25 mm

Piston Ø	80 mm	100 mm
Retracting piston force	105 N	215 N
Extracting piston force	2864 N	4424 N
Impact energy	0.75 J	1 J
Weight 0 mm stroke	1.36 kg	2.47 kg
Weight +10 mm stroke	0.14 kg	0.206 kg
Stroke max.	25 mm	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).

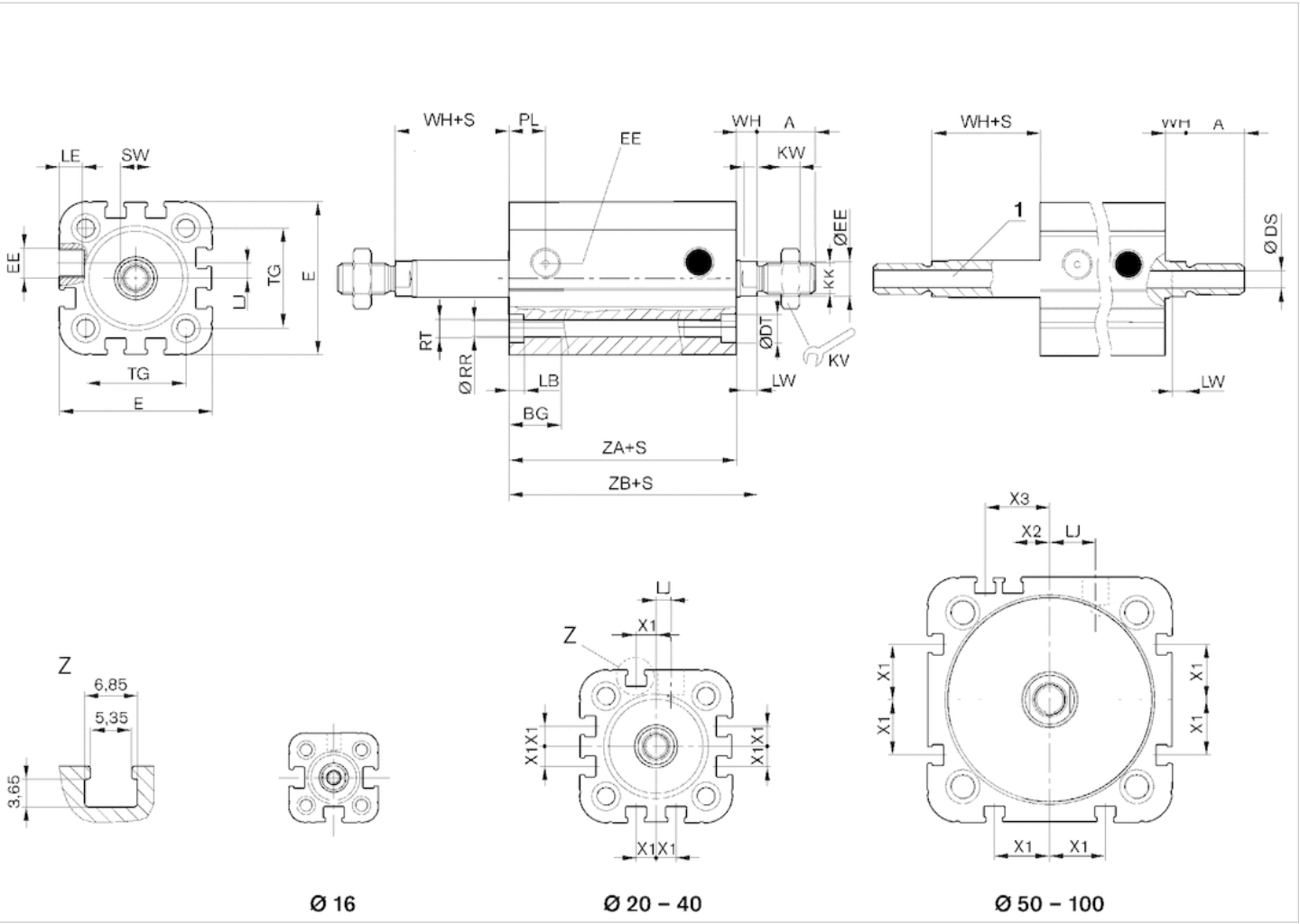
With cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.
Piston Ø 50/63, stroke 5 mm: AF= 11 mm
Piston Ø 80/100, stroke 5 mm: AF= 15 mm

Technical information

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

Dimensions

Ø 16 mm ... 100 mm



1) Hollow piston rod (to be generated by Internet configurator)
S = stroke

Dimensions

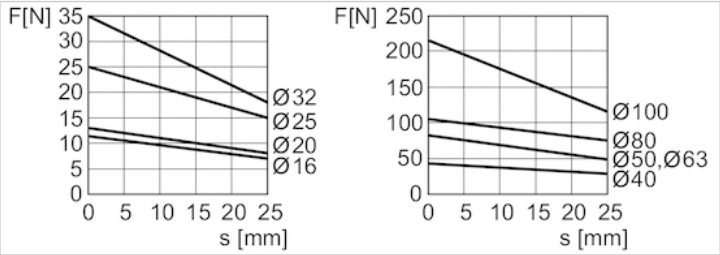
Piston Ø	A	AF	BG	DS	DT H13	E	EE	KK Solid piston rod/hollow piston rod	KV	KW	LB	LE	LJ
16 mm	12	10	15	2	6	29.3	M5	M6 / M5	10	3.2	3.5	4.5	-
20 mm	16	12	15.5	3	7.5	36.3	M5	M8 / G 1/8	13	4	4.5	4.5	4.5
25 mm	16	12	15.5	3	8	40.3	M5	M8 / G 1/8	13	4	4.5	4.5	4
32 mm	19	12	17	4.5	9.2	50	G 1	M10x1.25 / G 1/8	16	5	5	7.5	5
40 mm	19	12	17	4.5	9.2	58	G 1/8	M10x1.25 / G 1/8	16	5	5	7.5	10
50 mm	22	16	17	6	11	68.3	G 1	M12x1.25 / G 1/4 / G 1/8	18	6	5	7.5	12
63 mm	22	16	17	6	11	80	G 1/8	M12x1.25 / G 1/4 / G 1/8	18	6	5	7.5	15
80 mm	28	20	20	8	15	96	G 1	M16x1.5 / M16x1.5	24	8	5	7.5	22
100 mm	28	20	20	8	15	116	G 1/8	M16x1.5 / M16x1.5	24	8	5	7.5	27

Piston Ø	LW	MM f8	PL	RR	RT	SW	TG	WH	X1	X2	X3	ZA	ZB
16 mm	3.2	8	8	3.3	M4	7	18	4.8	–	–	–	34.9	39.7 ±0.8
20 mm	3.7	10	10	4.2	M5	8	22	5.6	4.2	–	–	37.3	42.9 ±0.8

Piston Ø	LW	MM f8	PL	RR	RT	SW	TG	WH	X1	X2	X3	ZA	ZB
25 mm	3.7	10	10	4.2	M5	8	26	5.6	4.5	–	–	39	44.6 ±0,9
32 mm	5	12	12	5.1	M6	10	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	5	12	12	5.1	M6	10	38	7.5	11	–	–	45	52.5 ±1
50 mm	5.7	16	12	6.7	M8	13	46.5	8	13	4	13	45,5	53.5 ±1
63 mm	5.7	16	12	6.7	M8	13	56.5	8	18	12	21	49	57 ±1
80 mm	7	20	14	8.5	M10	16	72	10	18	16.5	25.5	54,7	64.7 ±1
100 mm	7.5	25	16.5	8.5	M10	21	89	10	20	20	29	67	77 ±1

Diagrams

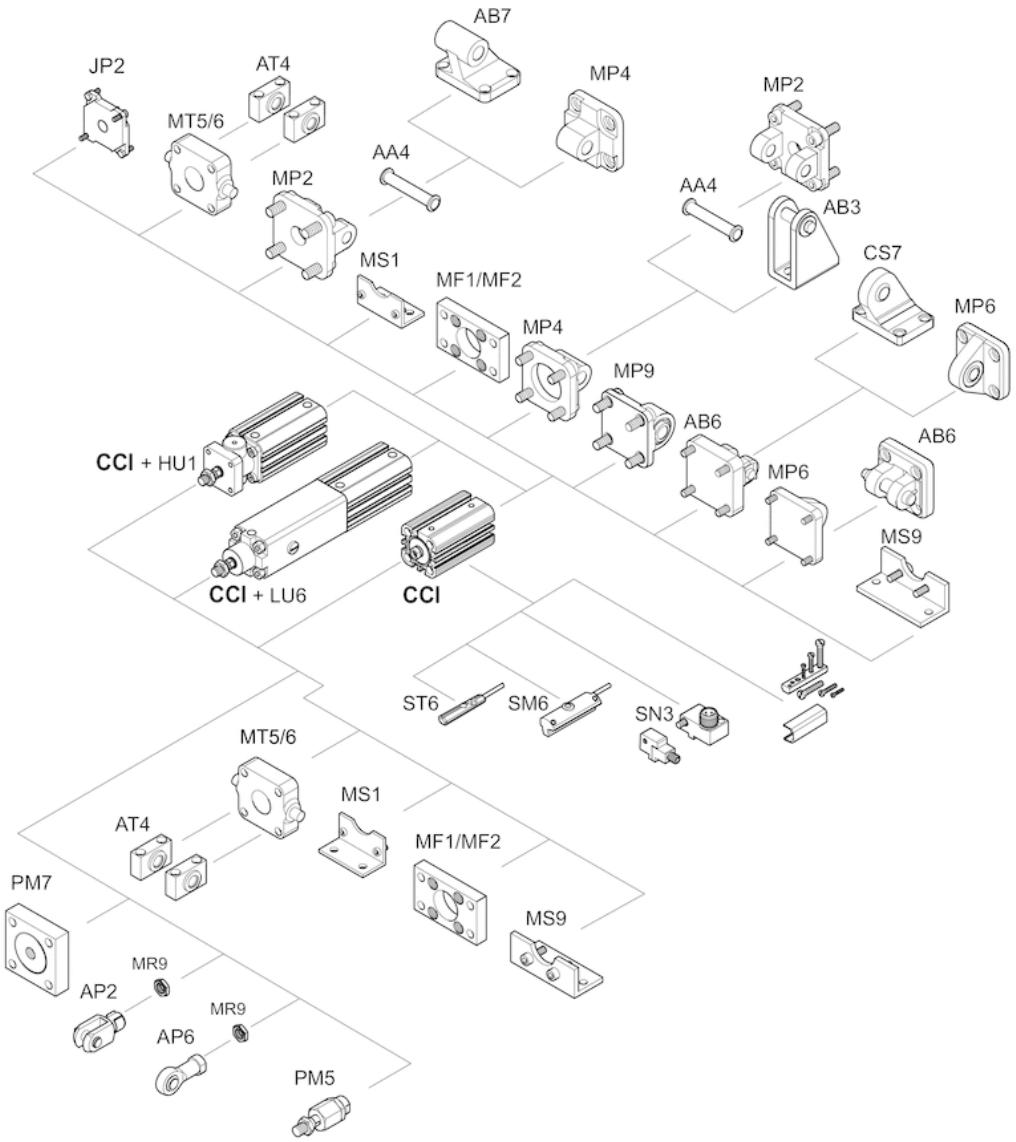
Extracting piston force



F = spring return force, s = return stroke

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.

Compact cylinder ISO 21287, Series CCI

- Ø 16-125 mm
- Ports M5, G 1/8, G 1/4
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- ATEX optional

Standards	ISO 21287 (Ø16-100 mm)
Certificates	ATEX optional
Compressed air connection	Internal thread
Working pressure min./max.	1 ... 10 bar
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 M4 M5 8 mm	20 mm M6 M5 10 mm	25 mm M6 M5 10 mm	32 mm M8 G 1/8 12 mm	40 mm M8 G 1/8 12 mm	50 mm M10 G 1/8 16 mm
Stroke 5	R422001002	R422001003	R422001004	R422001005	R422001006	R422001007
10	R422001012	R422001013	R422001014	R422001015	R422001016	R422001017
15	R422001022	R422001023	R422001024	R422001025	R422001026	R422001027
20	R422001032	R422001033	R422001034	R422001035	R422001036	R422001037
25	R422001042	R422001043	R422001044	R422001045	R422001046	R422001047
30	R422001052	R422001053	R422001054	R422001055	R422001056	R422001057
40	R422001062	R422001063	R422001064	R422001065	R422001066	R422001067
50	R422001072	R422001073	R422001074	R422001075	R422001076	R422001077
60	R422001082	R422001083	R422001084	R422001085	R422001086	R422001087
80	-	-	-	R422001095	R422001096	R422001097
100	-	-	-	R422001105	R422001106	R422001107
125	-	-	-	R422001115	R422001116	R422001117
150	-	-	-	R422001125	R422001126	R422001127

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm	125 mm M16 G 1/4 25 mm
Stroke 5	R422001008	R422001009	R422001010	R481636828
10	R422001018	R422001019	R422001020	R481636829
15	R422001028	R422001029	R422001030	R481636830
20	R422001038	R422001039	R422001040	R481636831
25	R422001048	R422001049	R422001050	R481636832
30	R422001058	R422001059	R422001060	R481636833
40	R422001068	R422001069	R422001070	R481636834
50	R422001078	R422001079	R422001080	R481636835
60	R422001088	R422001089	R422001090	R481636836
80	R422001098	R422001099	R422001100	R481636837
100	R422001108	R422001109	R422001110	R481636838
125	R422001118	R422001119	R422001120	R481636839
150	R422001128	R422001129	R422001130	R481636840

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	95 N	148 N	260 N	435 N	720 N	1110 N	1827 N
Extracting piston force	127 N	198 N	309 N	507 N	792 N	1237 N	1964 N
Impact energy	0.15 J	0.2 J	0.3 J	0.5 J	0.7 J	1 J	1.3 J
Weight 0 mm stroke	0.059 kg	0.099 kg	0.123 kg	0.233 kg	0.303 kg	0.448 kg	0.689 kg
Weight +10 mm stroke	0.016 kg	0.023 kg	0.026 kg	0.042 kg	0.052 kg	0.07 kg	0.087 kg
Stroke max.	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm

Piston Ø	80 mm	100 mm	125 mm
Retracting piston force	2969 N	4639 N	7422 N
Extracting piston force	3167 N	4948 N	7731 N
Impact energy	1.8 J	2.5 J	3.3 J
Weight 0 mm stroke	1.11 kg	2.15 kg	3.458 kg
Weight +10 mm stroke	0.116 kg	0.168 kg	0.173kg
Stroke max.	500 mm	500 mm	500 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).

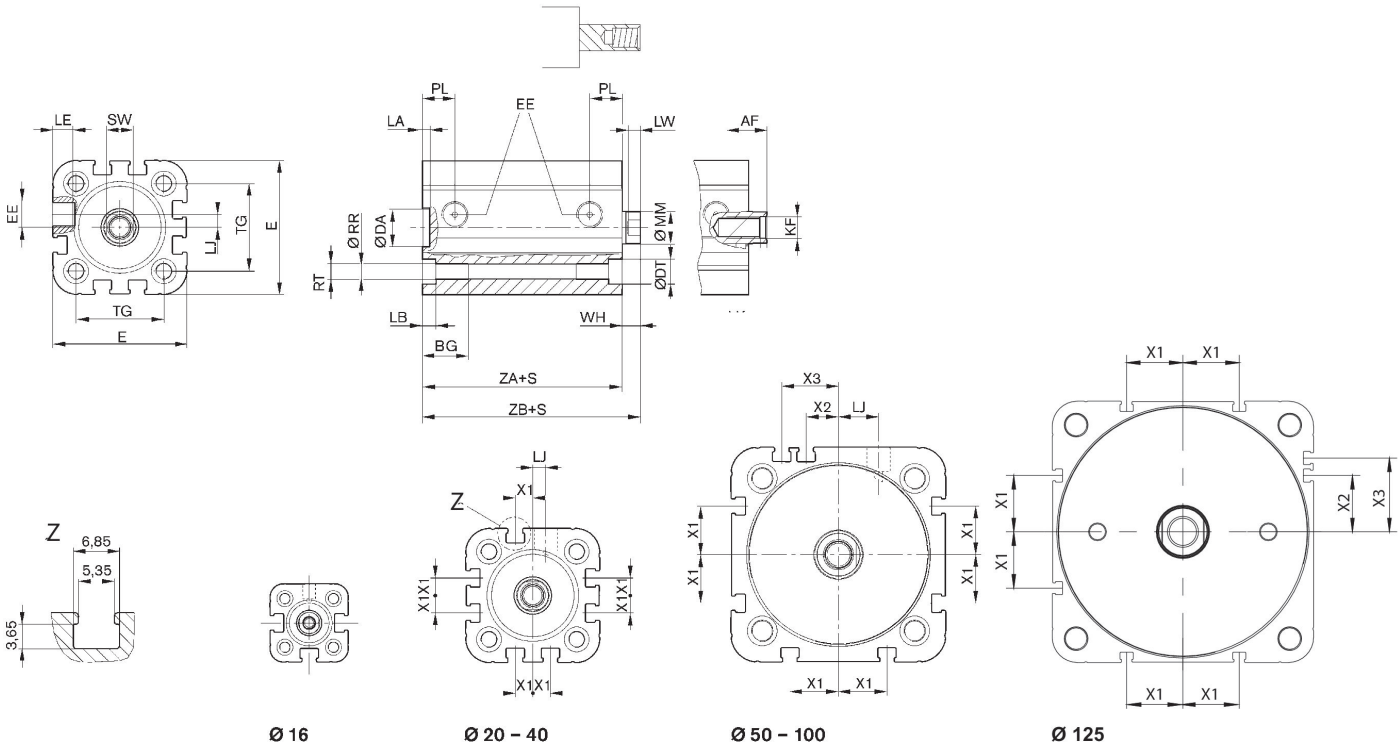
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator.
The operating temperature range for ATEX-certified cylinders is -20 °C ... 60 °C.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Ø 16 mm ... 125 mm



S = stroke

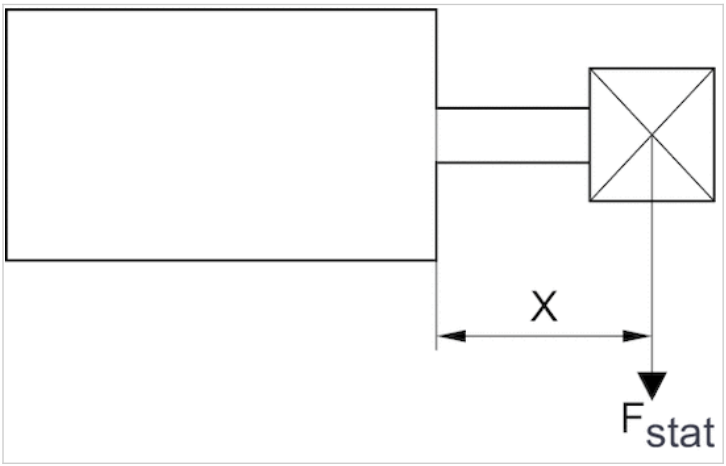
Dimensions

Piston Ø	AF	BG	DA H11	DT H13	E	EE	KF	LA	LB	LE	LJ	LW	MM f8	PL	RR	RT	SW
16 mm	10	15	10	6	29.3	M5	M4	2.5	3.5	4.5	–	3.2	8	8	3.3	M4	7
20 mm	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5	4.5	3.7	10	10	4.2	M5	8
25 mm	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4.5	4	3.7	10	10	4.2	M5	8
32 mm	12	17	14	9.2	50	G 1/8	M8	2.5	5	7.5	5	5	12	12	5.1	M6	10
40 mm	12	17	14	9.2	58	G 1/8	M8	2.5	5	7.5	10	5	12	12	5.1	M6	10
50 mm	16	17	18	11	68.3	G 1/8	M10	2.5	5	7.5	12	5.7	16	12	6.7	M8	13
63 mm	16	17	18	11	80	G 1/8	M10	2.5	5	7.5	15	5.7	16	12	6.7	M8	13
80 mm	20	20	23	15	96	G 1/8	M12	3	5	7.5	22	7	20	14	8.5	M10	16
100 mm	20	20	28	15	116	G 1/8	M12	3	5	7.5	27	7.5	25	16.5	8.5	M10	21
125 mm	25	35	12	-	134.6	G 1/4	M16	2.6	–	–	39	7.5	25	20.5	11.1	M12	21

Piston Ø	TG	WH	X1	X2	X3	ZA	ZB
16 mm	18	4.8	–	–	–	34.9	39.7 ±0,8
20 mm	22	5.6	4.2	–	–	37.3	42.9±0,8
25 mm	26	5.6	4.5	–	–	39	44.6 ±0,9
32 mm	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	38	7.5	11	–	–	45	52.5 ±1
50 mm	46.5	8	13	4	13	45.5	53.5 ±1
63 mm	56.5	8	18	12	21	49	57 ±1
80 mm	72	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	89	10	20	20	29	67	77 ±1
125 mm	110	11	29	29	38	81	92 ±1

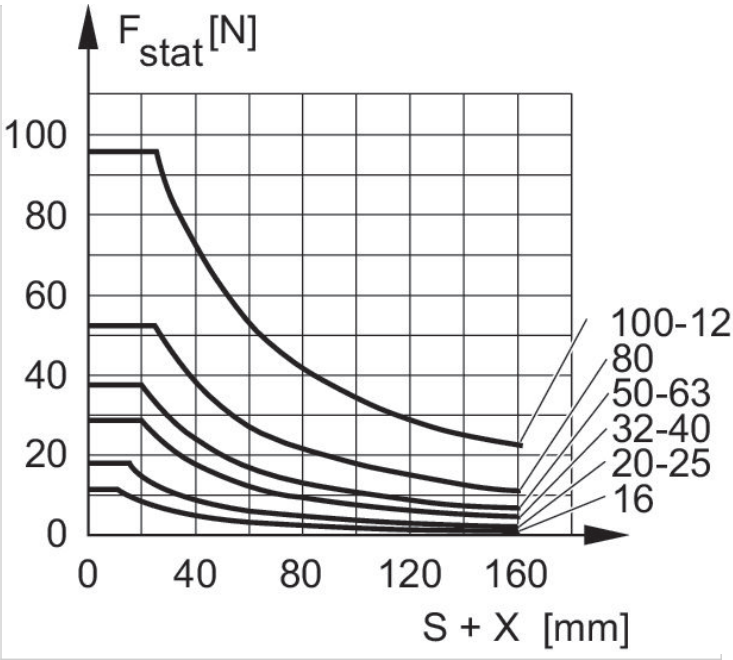
Diagrams

Maximum admissible lateral force, static



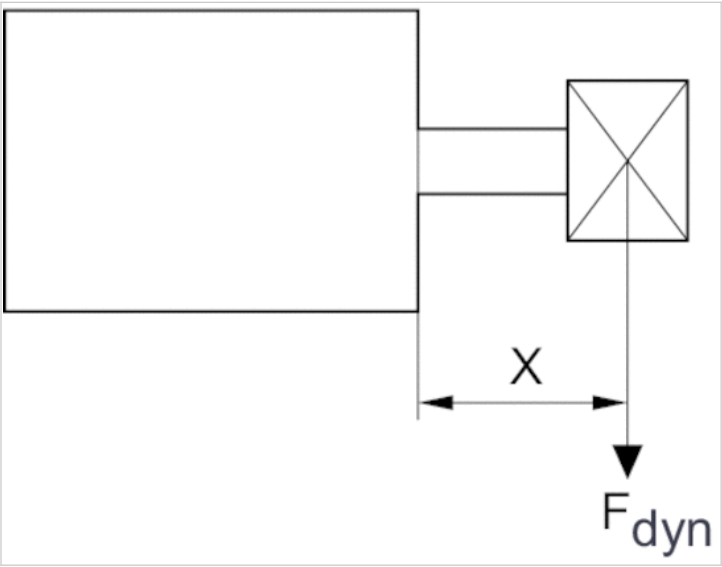
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



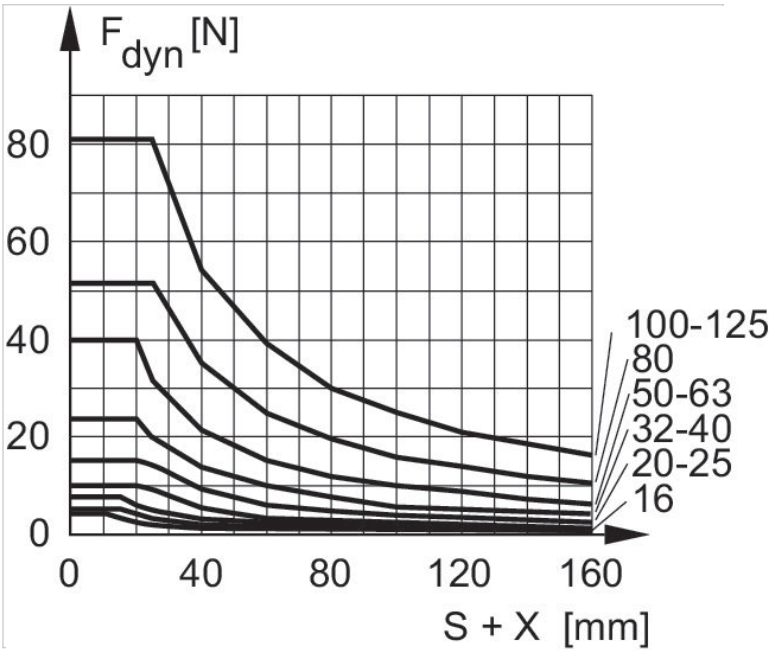
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force, dynamic



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

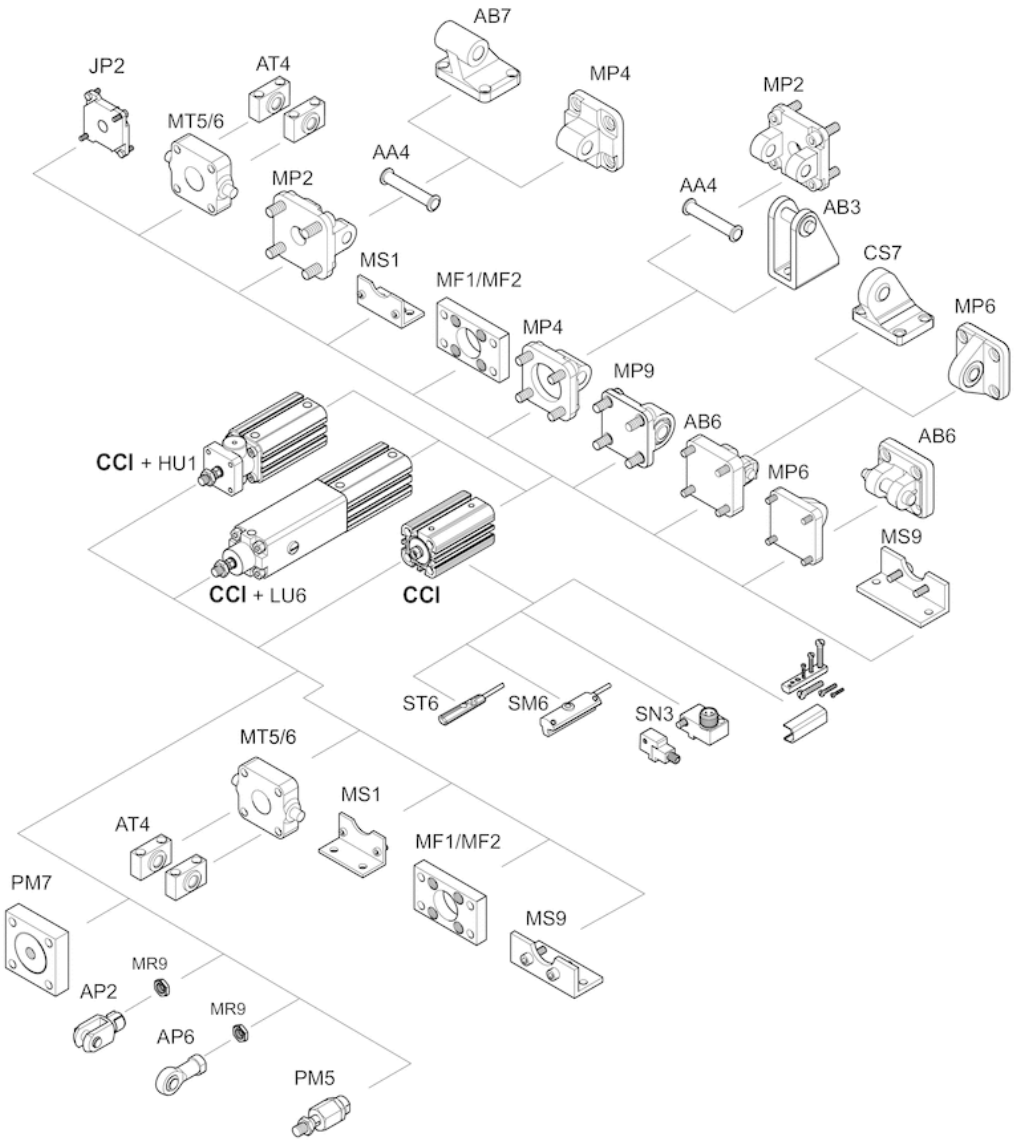
Maximum admissible lateral force, dynamic



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

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.

Compact cylinder ISO 21287, Series CCI

- Ø 16-125 mm
- Ports M5, G 1/8, G 1/4
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod External thread
- ATEX optional

Standards	ISO 21287 (Ø16-100 mm)
Certificates	ATEX optional
Compressed air connection	Internal thread
Working pressure min./max.	1 ... 10 bar
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	R422001132	R422001133	R422001134	R422001135	R422001136	R422001137
10	R422001142	R422001143	R422001144	R422001145	R422001146	R422001147
15	R422001152	R422001153	R422001154	R422001155	R422001156	R422001157
20	R422001162	R422001163	R422001164	R422001165	R422001166	R422001167
25	R422001172	R422001173	R422001174	R422001175	R422001176	R422001177
30	R422001182	R422001183	R422001184	R422001185	R422001186	R422001187
40	R422001192	R422001193	R422001194	R422001195	R422001196	R422001197
50	R422001202	R422001203	R422001204	R422001205	R422001206	R422001207
60	R422001212	R422001213	R422001214	R422001215	R422001216	R422001217
80	-	-	-	R422001225	R422001226	R422001227
100	-	-	-	R422001235	R422001236	R422001237
125	-	-	-	R422001245	R422001246	R422001247
150	-	-	-	R422001255	R422001256	R422001257

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	125 mm M20x1,5 G 1/4 25 mm
Stroke 5	R422001138	R422001139	R422001140	R481636841
10	R422001148	R422001149	R422001150	R481636842
15	R422001158	R422001159	R422001160	R481636843
20	R422001168	R422001169	R422001170	R481636844
25	R422001178	R422001179	R422001180	R481636845
30	R422001188	R422001189	R422001190	R481636846
40	R422001198	R422001199	R422001200	R481636847
50	R422001208	R422001209	R422001210	R481636848
60	R422001218	R422001219	R422001220	R481636849
80	R422001228	R422001229	R422001230	R481636850
100	R422001238	R422001239	R422001240	R481636851
125	R422001248	R422001249	R422001250	R481636852
150	R422001258	R422001259	R422001260	R481636853

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	95 N	148 N	260 N	435 N	720 N	1110 N	1837 N
Extracting piston force	127 N	198 N	309 N	507 N	792 N	1237 N	1964 N
Impact energy	0.15 J	0.2 J	0.3 J	0.5 J	0.7 J	1 J	1.3 J
Weight 0 mm stroke	0.064 kg	0.125 kg	0.149 kg	0.256 kg	0.326 kg	0.487 kg	0.728 kg
Weight +10 mm stroke	0.016 kg	0.023 kg	0.026 kg	0.043 kg	0.052 kg	0.07 kg	0.087 kg
Stroke max.	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm

Piston Ø	80 mm	100 mm	125 mm
Retracting piston force	2969 N	4639 N	7422 N
Extracting piston force	3167 N	4948 N	7731 N
Impact energy	1.8 J	2.5 J	3.3 J
Weight 0 mm stroke	1.2 kg	2.23 kg	3.626 kg
Weight +10 mm stroke	0.116 kg	0.168 kg	0.173 kg
Stroke max.	500 mm	500 mm	500 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).

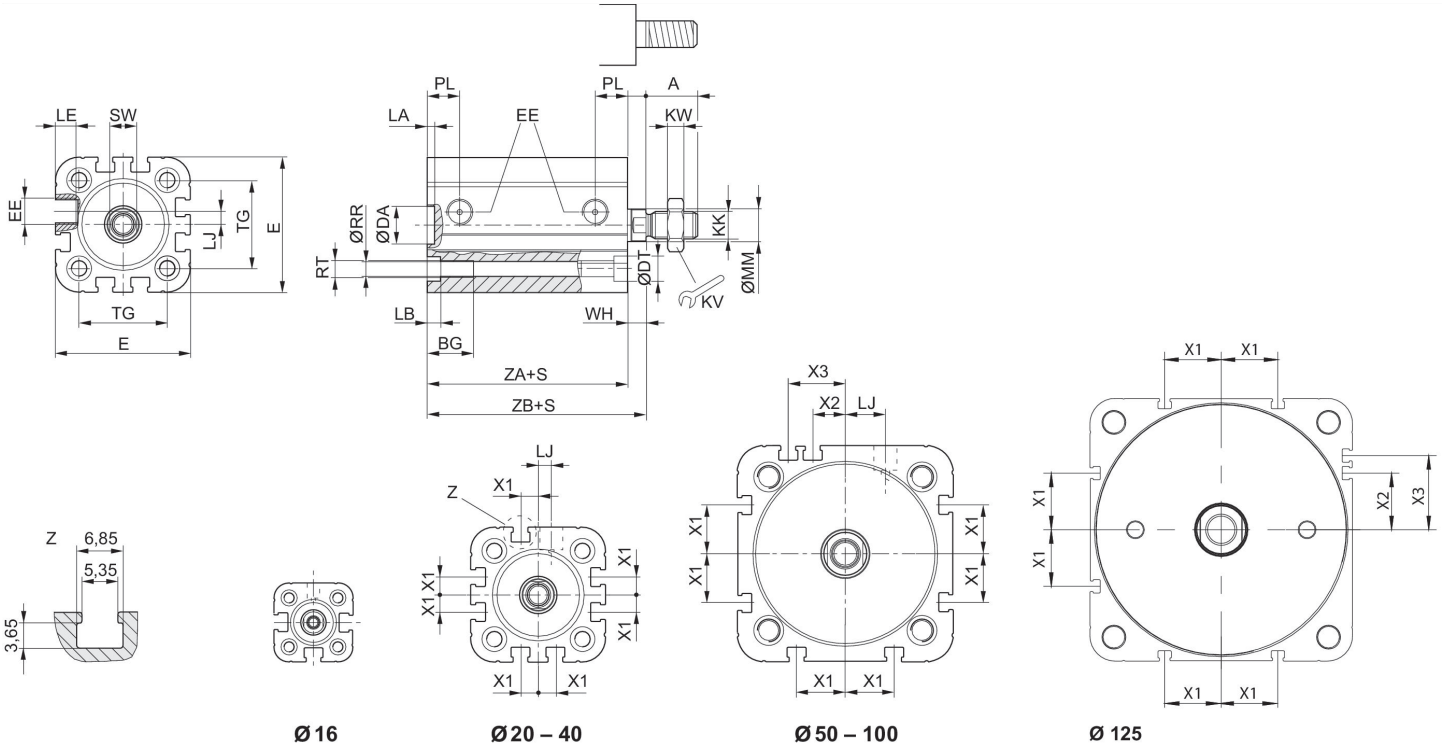
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator.
The operating temperature range for ATEX-certified cylinders is -20 °C ... 60 °C.
With cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

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

Dimensions

Ø 16 mm ... 125 mm



Ø 16 | Ø 20 – 40 | Ø 50 – 100 | Ø 125

S = stroke

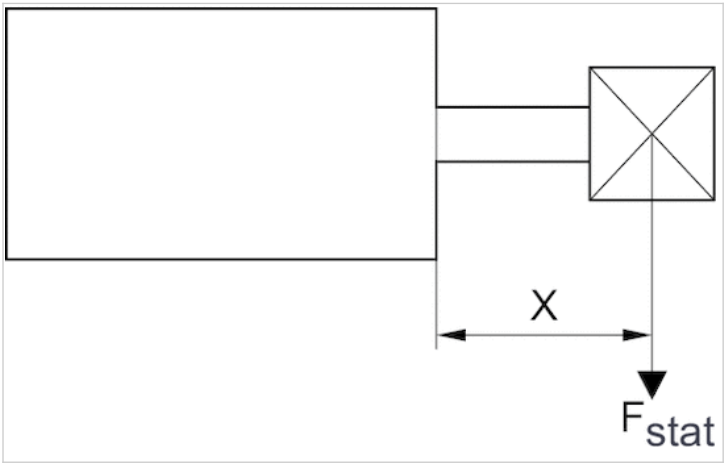
Dimensions

Piston Ø	A	BG	DA H11	DT H13	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	–	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	9.2	50	G 1/8	M10x1.25	16	5	2.5	5	7.5	5	12	12	5.1
40 mm	19	17	14	9.2	58	G 1/8	M10x1.25	16	5	2.5	5	7.5	10	12	12	5.1
50 mm	22	17	18	11	68.3	G 1/8	M12x1.25	18	6	2.5	5	7.5	12	16	12	6.7
63 mm	22	17	18	11	80	G 1/8	M12x1.25	18	6	2.5	5	7.5	15	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
125 mm	40	35	12	–	134.6	G 1/4	M20x1.5	30	10	2.6	-	7.5	39	25	20.5	11.1

Piston Ø	RT	SW	TG	WH	X1	X2	X3	ZA	ZB
16 mm	M4	7	18	4.8	–	–	–	34.9	39.7 ±0,8
20 mm	M5	8	22	5.6	4.2	–	–	37.3	42.9 ±0,8
25 mm	M5	8	26	5.6	4.5	–	–	39	44.6 ±0,9
32 mm	M6	10	32.5	7.5	6.5	–	–	44	51.5±1
40 mm	M6	10	38	7.5	11	–	–	45	52.5 ±1
50 mm	M8	13	46.5	8	13	4	13	45.5	53.5 ±1
63 mm	M8	13	56.5	8	18	12	21	49	57±1
80 mm	M10	16	72	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	M10	21	89	10	20	20	29	67	77 ±1
125 mm	M12	21	110	11	29	29	38	81	92 ±1

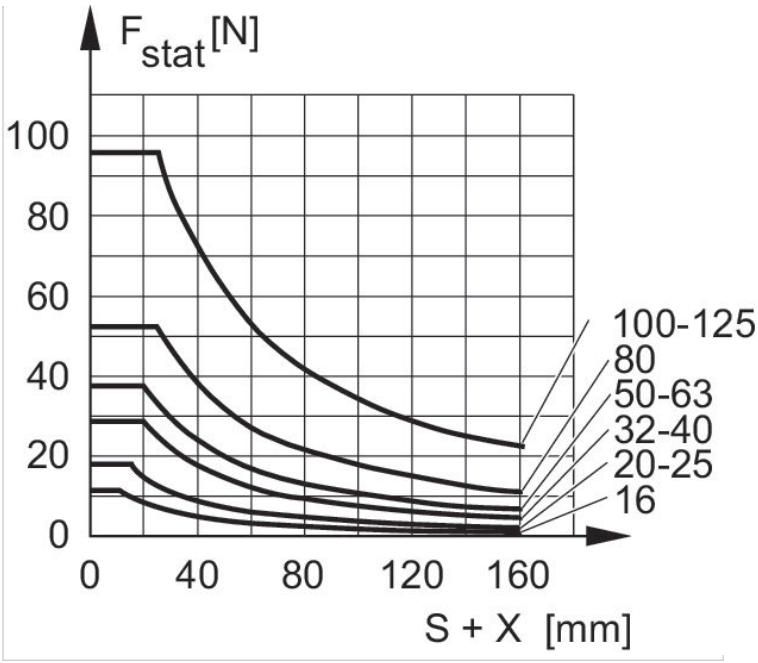
Diagrams

Maximum admissible lateral force, static



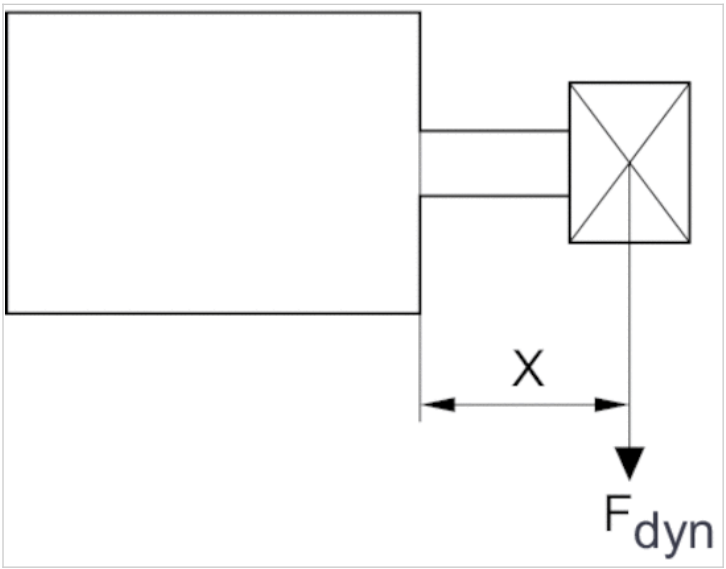
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



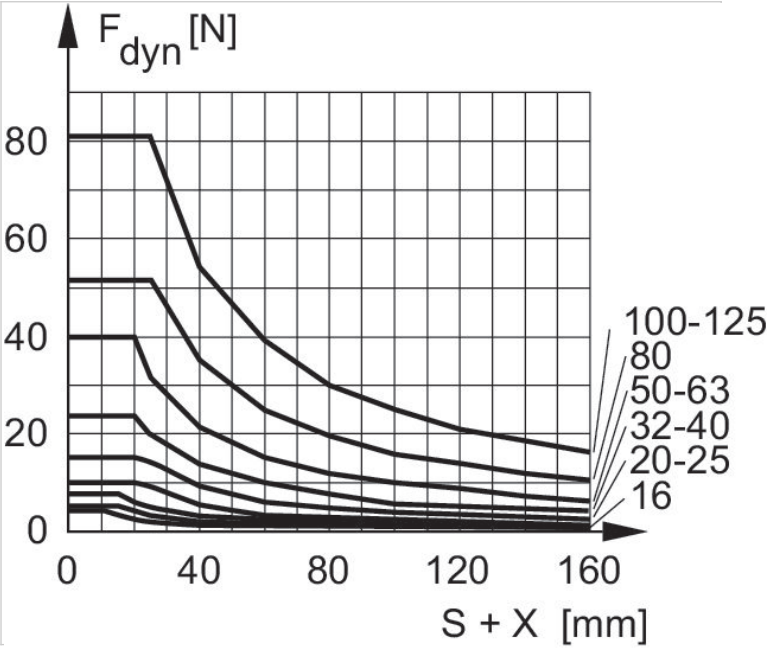
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force, dynamic



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

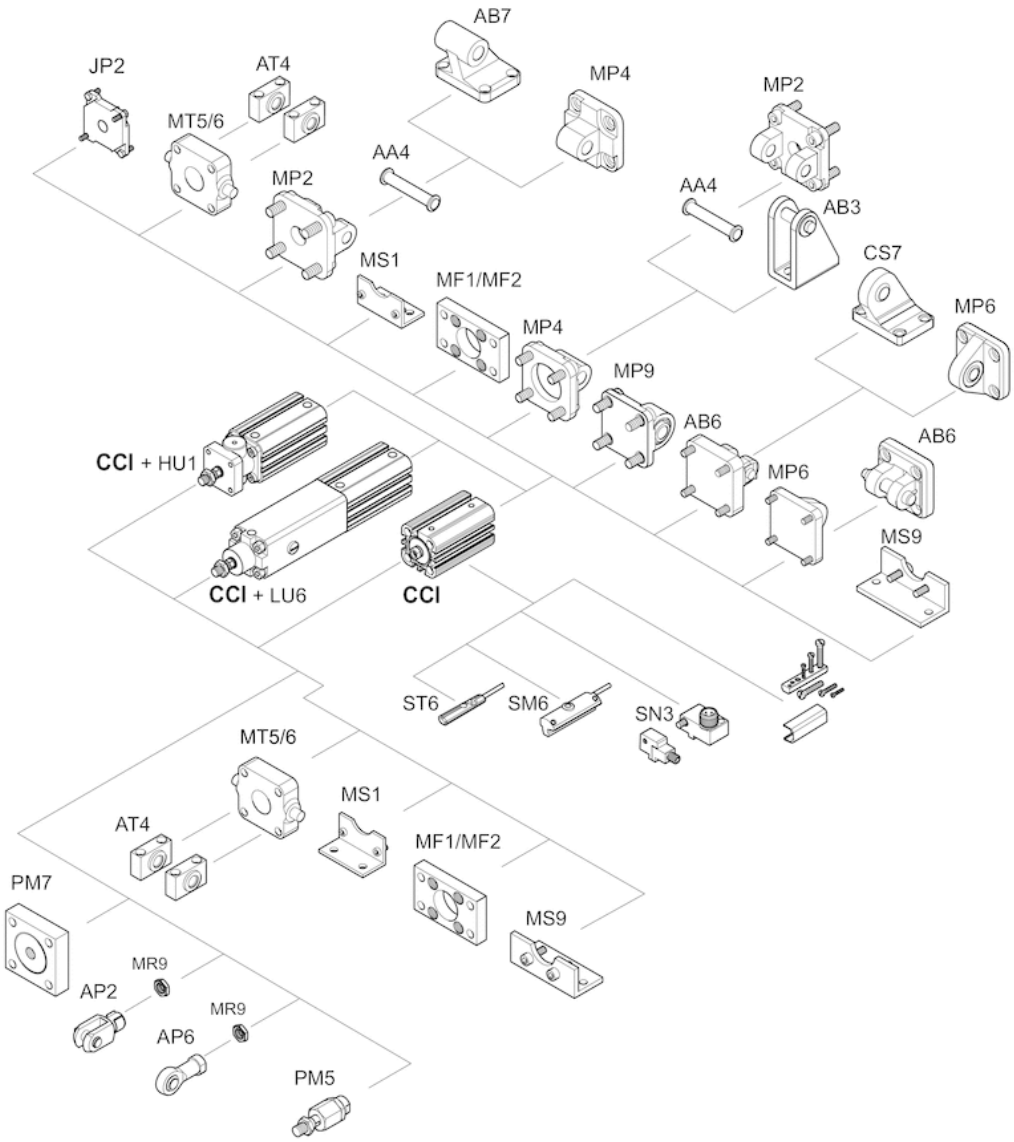
Maximum admissible lateral force, dynamic



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

Accessories overview

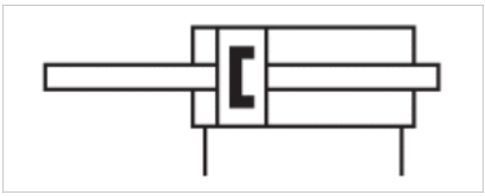
Overview drawing



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.

Compact cylinder ISO 21287, Series CCI

- Ø 16-125 mm
- Ports M5, G 1/8, G 1/4
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod through
- ATEX optional



Standards	ISO 21287 (Ø16-100 mm)
Certificates	ATEX optional
Compressed air connection	Internal thread
Working pressure min./max.	1 ... 10 bar
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 M4 M5 8 mm	20 mm M6 M5 10 mm	25 mm M6 M5 10 mm	32 mm M8 G 1/8 12 mm	40 mm M8 G 1/8 12 mm	50 mm M10 G 1/8 16 mm
Stroke 5	R422001692	R422001693	R422001694	R422001695	R422001696	R422001697
10	R422001702	R422001703	R422001704	R422001705	R422001706	R422001707
15	R422001712	R422001713	R422001714	R422001715	R422001716	R422001717
20	R422001722	R422001723	R422001724	R422001725	R422001726	R422001727
25	R422001732	R422001733	R422001734	R422001735	R422001736	R422001737

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm	125 mm M16 G 1/4 25 mm
Stroke 5	R422001698	R422001699	R422001700	R481636854
10	R422001708	R422001709	R422001710	R481636855
15	R422001718	R422001719	R422001720	R481636856
20	R422001728	R422001729	R422001730	R481636857

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm	125 mm M16 G 1/4 25 mm
25	R422001738	R422001739	R422001740	R481636858

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	91 N	137 N	216 N	364 N	560 N	871 N	1478 N
Extracting piston force	91 N	137 N	216 N	364 N	560 N	871 N	1478 N
Impact energy	0.15 J	0.2 J	0.3 J	0.5 J	0.7 J	1 J	1.3 J
Weight 0 mm stroke	0.064 kg	0.107 kg	0.128 kg	0.246 kg	0.319 kg	0.472 kg	0.718 kg
Weight +10 mm stroke	0.02 kg	0.029 kg	0.032 kg	0.052 kg	0.06 kg	0.087 kg	0.103 kg
Stroke max.	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm

Piston Ø	80 mm	100 mm	125 mm
Retracting piston force	2397 N	3886 N	7422 N
Extracting piston force	2397 N	3886 N	7731 N
Impact energy	1.8 J	2.5 J	3.3 J
Weight 0 mm stroke	1.18 kg	2.28 kg	6.225 kg
Weight +10 mm stroke	0.14 kg	0.206 kg	0.173 kg
Stroke max.	500 mm	500 mm	500 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).

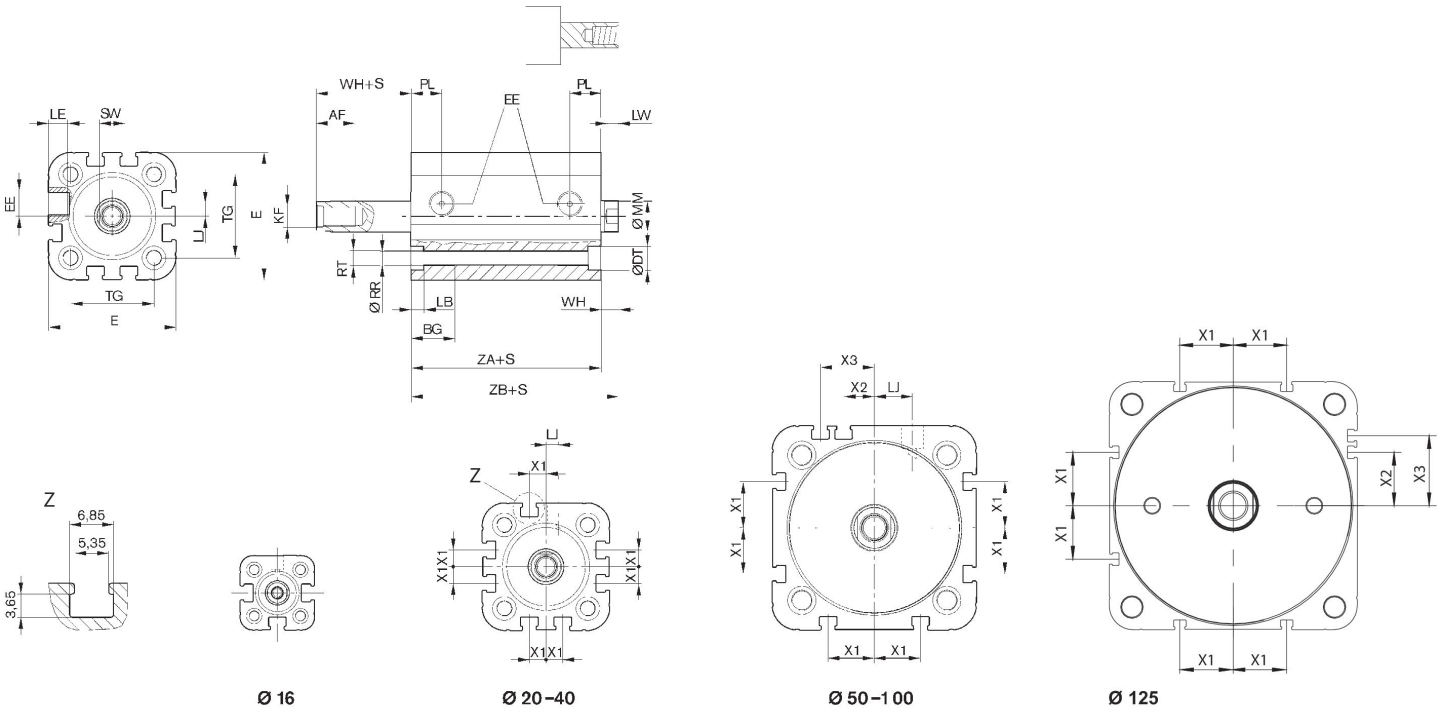
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator.
The operating temperature range for ATEX-certified cylinders is -20 °C ... 60 °C.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.
Piston Ø 50/63, stroke 5 mm: AF= 11 mm
Piston Ø 80/100, stroke 5 mm: AF= 15 mm

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Ø 16 mm ... 125 mm



S = stroke

Dimensions

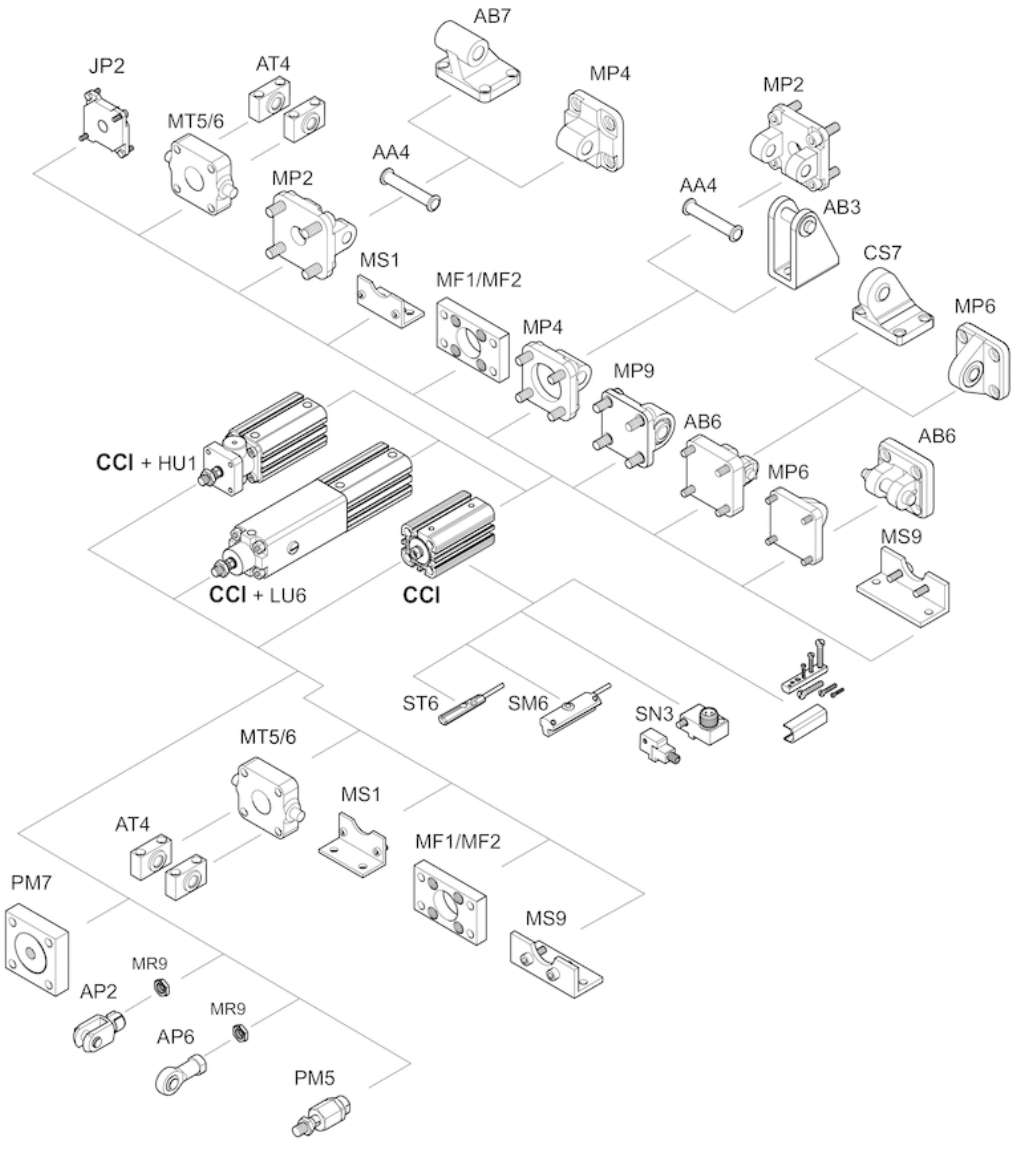
Piston Ø	AF	BG	DT H13	E	EE	KF	LB	LE	LJ	LW	MM f8	PL	RR	RT	SW	TG	WH
16 mm	10	15	6	29.3	M5	M4	3.5	4.5	–	3.2	8	8	3.3	M4	7	18	4.8
20 mm	12	15.5	7.5	36.3	M5	M6	4.5	4.5	4.5	3.7	10	10	4.2	M5	8	22	5.6
25 mm	12	15.5	8	40.3	M5	M6	4.5	4.5	4	3.7	10	10	4.2	M5	8	26	5.6
32 mm	12	17	9.2	50	G 1/8	M8	5	7.5	5	5	12	12	5.1	M6	10	32.5	7.5
40 mm	12	17	9.2	58	G 1/8	M8	5	7.5	10	5	12	12	5.1	M6	10	38	7.5
50 mm	16	17	11	68.3	G 1/8	M10	5	7.5	12	5.7	16	12	6.7	M8	13	46.5	8
63 mm	16	17	11	80	G 1/8	M10	5	7.5	15	5.7	16	12	6.7	M8	13	56.5	8
80 mm	20	20	15	96	G 1/8	M12	5	7.5	22	7	20	14	8.5	M10	16	72	10
100 mm	20	20	15	116	G 1/8	M12	5	7.5	27	7.5	25	16.5	8.5	M10	21	89	10
125 mm	25	35	–	134.6	G 1/4	M16	-	-	39	7.5	25	20.5	11.1	M12	21	110	11

Piston Ø	X1	X2	X3	ZA	ZB
16 mm	–	–	–	34,9	39.7 ±0,8
20 mm	4.2	–	–	37,3	42.9 ±0,8
25 mm	4.5	–	–	39	44.6 ±0,9
32 mm	6.5	–	–	44	51.5 ±1

Piston Ø	X1	X2	X3	ZA	ZB
40 mm	11	–	–	45	52.5 ±1
50 mm	13	4	13	45,5	53.5±1
63 mm	18	12	21	49	57 ±1
80 mm	18	16.5	25.5	54,7	64.7 ±1
100 mm	20	20	29	67	77 ±1
125 mm	29	29	38	81	92 ±1

Accessories overview

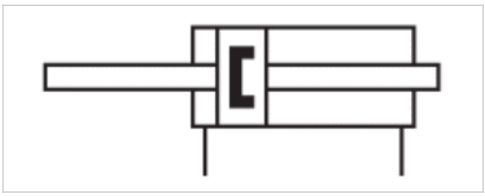
Overview drawing



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.

Compact cylinder ISO 21287, Series CCI

- Ø 16-125 mm
- Ports M5, G 1/8, G 1/4
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod External thread
- Piston rod through
- ATEX optional



Standards	ISO 21287 (Ø16-100 mm)
Certificates	ATEX optional
Compressed air connection	Internal thread
Working pressure min./max.	1 ... 10 bar
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	R422001742	R422001743	R422001744	R422001745	R422001746	R422001747
10	R422001752	R422001753	R422001754	R422001755	R422001756	R422001757
15	R422001762	R422001763	R422001764	R422001765	R422001766	R422001767
20	R422001772	R422001773	R422001774	R422001775	R422001776	R422001777
25	R422001782	R422001783	R422001784	R422001785	R422001786	R422001787

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	125 mm M20x1,5 G 1/4 25 mm
Stroke 5	R422001748	R422001749	R422001750	R481636859
10	R422001758	R422001759	R422001760	R481636860
15	R422001768	R422001769	R422001770	R481636861
20	R422001778	R422001779	R422001780	R481636862

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	125 mm M20x1,5 G 1/4 25 mm
25	R422001788	R422001789	R422001790	R481636863

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	91 N	137 N	216 N	364 N	560 N	871 N	1478 N
Extracting piston force	91 N	137 N	216 N	364 N	560 N	871 N	1478 N
Impact energy	0.15 J	0.2 J	0.3 J	0.5 J	0.7 J	1 J	1.3 J
Weight 0 mm stroke	0.072 kg	0.145 kg	0.166 kg	0.293 kg	0.366 kg	0.552 kg	0.797 kg
Weight +10 mm stroke	0.02 kg	0.029 kg	0.032 kg	0.052 kg	0.06 kg	0.087 kg	0.103 kg
Stroke max.	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm

Piston Ø	80 mm	100 mm	125 mm
Retracting piston force	2397 N	3886 N	7422 N
Extracting piston force	2397 N	3886 N	7731 N
Impact energy	1.8 J	2.5 J	3.3 J
Weight 0 mm stroke	1.33 kg	2.43 kg	6.591 kg
Weight +10 mm stroke	0.14 kg	0.206 kg	0.173 kg
Stroke max.	500 mm	500 mm	500 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).

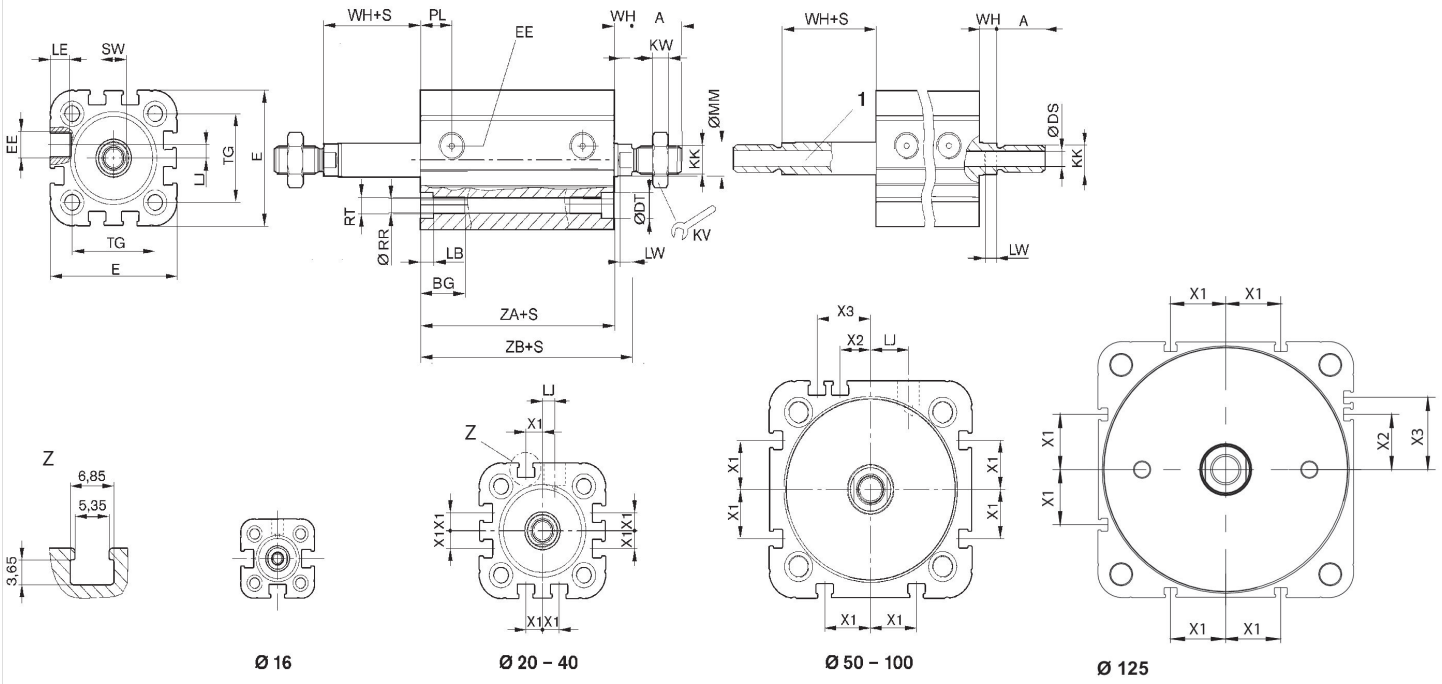
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator.
The operating temperature range for ATEX-certified cylinders is -20 °C ... 60 °C.
With cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.
With cylinders with a piston rod extension, dimensions "WH" and "ZB" are increased by the value of the piston rod extension.

Technical information

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

Dimensions

Ø 16 mm ... 125 mm



1) Hollow piston rod (to be generated by Internet configurator)
S = stroke

Dimensions

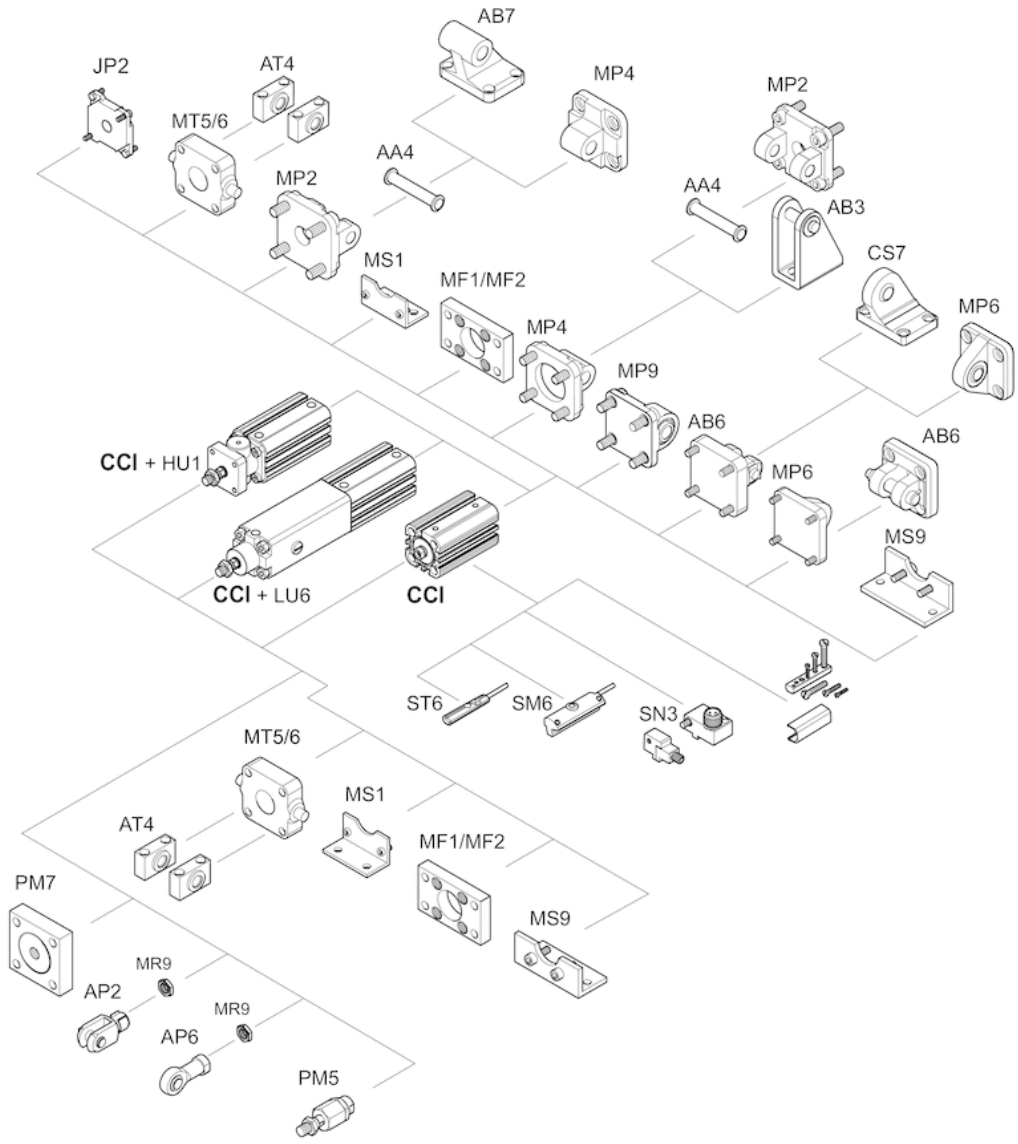
Piston Ø	A	BG	DS	DT H13	E	EE	KK Solid piston rod/hollow piston rod	KV	KW	LB	LE	LJ	LK
16 mm	12	15	2	6	29.3	M5	M6x1 / M5	10	3.2	3.5	4.5	–	1.6
20 mm	16	15.5	3	7.5	36.3	M5	M8x1.25 / G 1/8	13	4	4.5	4.5	4.5	2.5
25 mm	16	15.5	3	8	40.3	M5	M8x1.25 / G 1/8	13	4	4.5	4.5	4	2.5
32 mm	19	17	4.5	8.6	50	G 1/8	M10x1.25 / G 1/8	16	5	5	7.5	5	2.5
40 mm	19	17	4.5	9.2	58	G 1/8	M10x1.25 / G 1/8	16	5	5	7.5	10	2.5
50 mm	22	17	6	11	68.3	G 1/8	M12x1.25 / G 1/4 / G 1/8	18	6	5	7.5	12	3.5
63 mm	22	17	6	11	80	G 1/8	M12x1.25 / G 1/4 / G 1/8	18	6	5	7.5	15	3.5
80 mm	28	20	8	15	96	G 1/8	M16x1.5 / M16x1.5	24	8	5	7.5	22	3.5
100 mm	28	20	8	15	116	G 1/8	M16x1.5 / M16x1.5	24	8	5	7.5	27	3.5
125 mm	40	35	8	–	134.6	G 1/4	M20x1.5 / M20x1.5	30	10	-	7.5	39	-

Piston Ø	LW	MM f8	PL	RR	RT	SW	TG	WH	X1	X2	X3	ZA	ZB
16 mm	3.2	8	8	3.3	M4	7	18	4.8	–	–	–	34.9	39.7 ±0,8
20 mm	3.7	10	10	4.2	M5	8	22	5.6	4.2	–	–	37.3	42.9 ±0,8
25 mm	3.7	10	10	4.2	M5	8	26	5.6	4.5	–	–	39	44.6 ±0,9

Piston Ø	LW	MM f8	PL	RR	RT	SW	TG	WH	X1	X2	X3	ZA	ZB
32 mm	5	12	12	5.1	M6	10	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	5	12	12	5.1	M6	10	38	7.5	11	–	–	45	52.5 ±1
50 mm	5.7	16	12	6.7	M8	13	46.5	8	13	4	13	45.5	53.5 ±1
63 mm	5.7	16	12	6.7	M8	13	56.5	8	18	12	21	49	57 ±1
80 mm	7	20	14	8.5	M10	16	72	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	7.5	25	16.5	8.5	M10	21	89	10	20	20	29	67	77 ±1
125 mm	7.5	25	20.5	11.1	M12	21	110	11	29	29	38	81	92±1

Accessories overview

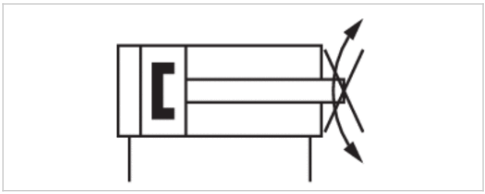
Overview drawing



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.

Compact cylinder ISO 21287, Series CCI

- Ø 16-125 mm
- Ports M5, G 1/8, G 1/4
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod non-rotating, with front plate



Standards	ISO 21287 (Ø16-100 mm)
Compressed air connection	Internal thread
Working pressure min./max.	1 ... 10 bar
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 M4 M5 8 mm	20 mm M6 M5 10 mm	25 mm M6 M5 10 mm	32 mm M8 G 1/8 12 mm	40 mm M8 G 1/8 12 mm	50 mm M10 G 1/8 16 mm
Stroke 5	R422001262	R422001263	R422001264	R422001265	R422001266	R422001267
10	R422001272	R422001273	R422001274	R422001275	R422001276	R422001277
15	R422001282	R422001283	R422001284	R422001285	R422001286	R422001287
20	R422001292	R422001293	R422001294	R422001295	R422001296	R422001297
25	R422001302	R422001303	R422001304	R422001305	R422001306	R422001307
30	R422001312	R422001313	R422001314	R422001315	R422001316	R422001317
40	R422001322	R422001323	R422001324	R422001325	R422001326	R422001327
50	R422001332	R422001333	R422001334	R422001335	R422001336	R422001337
60	R422001342	R422001343	R422001344	R422001345	R422001346	R422001347
80	-	-	-	R422001355	R422001356	R422001357
100	-	-	-	R422001365	R422001366	R422001367
125	-	-	-	R422001375	R422001376	R422001377
150	-	-	-	R422001385	R422001386	R422001387

Piston Ø Piston rod thread Ports Piston rod Ø	63 mm M10 G 1/8 16 mm	80 mm M12 G 1/8 20 mm	100 mm M12 G 1/8 25 mm	125 mm M16 G 1/4 25 mm
Stroke 5	R422001268	R422001269	R422001270	R481636864
10	R422001278	R422001279	R422001280	R481636865
15	R422001288	R422001289	R422001290	R481636866
20	R422001298	R422001299	R422001300	R481636867
25	R422001308	R422001309	R422001310	R481636868
30	R422001318	R422001319	R422001320	R481636869
40	R422001328	R422001329	R422001330	R481636870
50	R422001338	R422001339	R422001340	R481636871
60	R422001348	R422001349	R422001350	R481636872
80	R422001358	R422001359	R422001360	R481636873
100	R422001368	R422001369	R422001370	R481636874
125	R422001378	R422001379	R422001380	R481636875
150	R422001388	R422001389	R422001390	R481636876

Technical data

Piston Ø	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
Retracting piston force	95 N	148 N	260 N	435 N	720 N	1110 N	1837 N
Extracting piston force	127 N	198 N	309 N	507 N	792 N	1237 N	1964 N
Impact energy	0.15 J	0.2 J	0.3 J	0.5 J	0.7 J	1 J	1.3 J
Weight 0 mm stroke	0.071 kg	0.119 kg	0.155 kg	0.303 kg	0.383 kg	0.626 kg	0.907 kg
Weight +10 mm stroke	0.019 kg	0.026 kg	0.03 kg	0.05 kg	0.06 kg	0.09 kg	0.107 kg
Stroke max.	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm	300 mm

Piston Ø	80 mm	100 mm	125 mm
Retracting piston force	2969 N	4639 N	7422 N
Extracting piston force	3167 N	4948 N	7731 N
Impact energy	1.8 J	2.5 J	3.3 J
Weight 0 mm stroke	1.46 kg	2.64 kg	7.172kg
Weight +10 mm stroke	0.136 kg	0.188 kg	0.173 kg
Stroke max.	500 mm	500 mm	300 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.
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator. The operating temperature range for ATEX-certified cylinders is -20 °C ... 60 °C.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

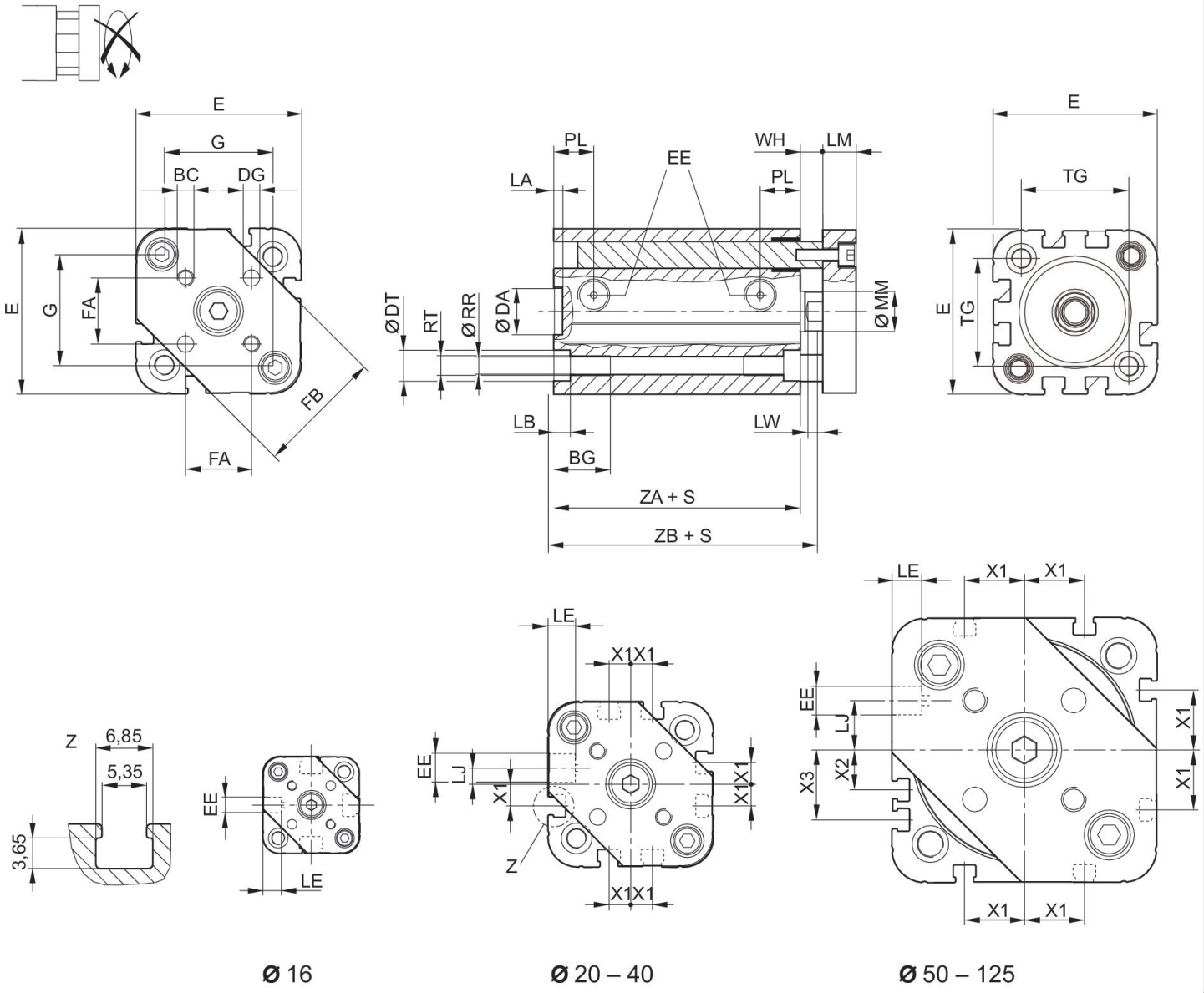
Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel

Material	
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Front plate	Aluminum
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Dimensions

Ø 16 mm ... 125 mm



Ø 16 Ø 20 – 40 Ø 50 – 125

S = stroke
G = distance between the guide rods

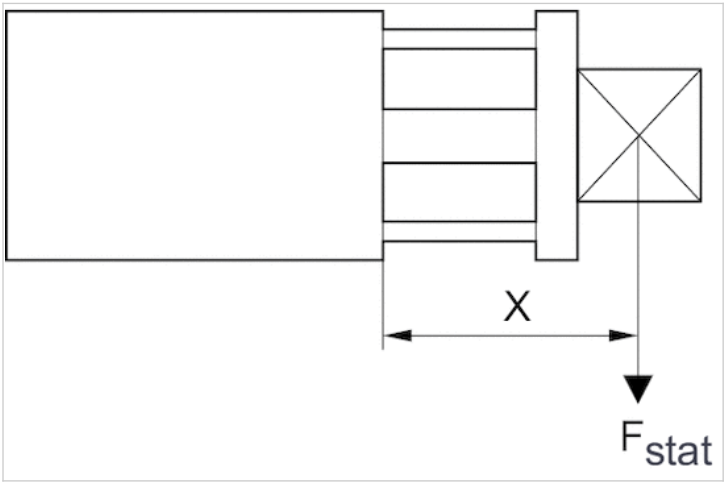
Dimensions

Piston Ø	BC	BG	DA H11	DG H13	DT H13	E	EE	FA	FB	G	LA	LB	LE	LJ	LM	LW
16 mm	M3	15	10	3	6	29.3	M5	9.9 ±0,1	20	19	2.5	3.5	4.5	–	6	3.2
20 mm	M4	15.5	12	4	7.5	36.3	M5	12 ±0,1	24	25	2.5	4.5	4.5	4.5	8	3.7
25 mm	M5	15.5	12	5	8	40.3	M5	15.6 ±0,1	30	27	2.5	4.5	4.5	4	8	3.7
32 mm	M5	17	14	5	9.2	50	G 1/8	19.8 ±0,1	38	34	2.5	5	7.5	5	10	5
40 mm	M5	17	14	5	9.2	58	G 1/8	23.3 ±0,1	44	42	2.5	5	7.5	10	10	5
50 mm	M6	17	18	6	11	68.3	G 1/8	29.7 ±0,1	54	49	2.5	5	7.5	12	12	5.7
63 mm	M6	17	18	6	11	80	G 1/8	35.4 ±0,1	62	60	2.5	5	7.5	15	12	5.7
80 mm	M8	20	23	8	15	96	G 1/8	46 ±0,1	80	72	3	5	7.5	22	14	7
100 mm	M10	20	28	10	15	116	G 1/8	56.6 ±0,1	100	92	3	5	7.5	27	14	7.5
125 mm	M10	35	12	10	–	134.5	G 1/4	63.64 ±0,1	120	110	2.6	-	7.5	39	18	7.5

Piston Ø	MM f8	PL	RR	RT	TG	WH	X1	X2	X3	ZA	ZB
16 mm	8	8	3.3	M4	18	4.8	–	–	–	34.9	39.7 ±0.8
20 mm	10	10	4.2	M5	22	5.6	4.2	–	–	37.3	42.9 ±0.8
25 mm	10	10	4.2	M5	26	5.6	4.5	–	–	39	44.6 ±0.9
32 mm	12	12	5.1	M6	32.5	7.5	6.5	–	–	44	51.5 ±1
40 mm	12	12	5.1	M6	38	7.5	11	–	–	45	52.5 ±1
50 mm	16	12	6.7	M8	46.5	8	13	4	13	45.5	53.5 ±1
63 mm	16	12	6.7	M8	56.5	8	18	12	21	49	57 ±1
80 mm	20	14	8.5	M10	72	10	18	16.5	25.5	54.7	64.7 ±1
100 mm	25	16.5	8.5	M10	89	10	20	20	29	67	77 ±1
125 mm	25	20.5	11.1	M12	110	11	29	29	38	81	92 ±1

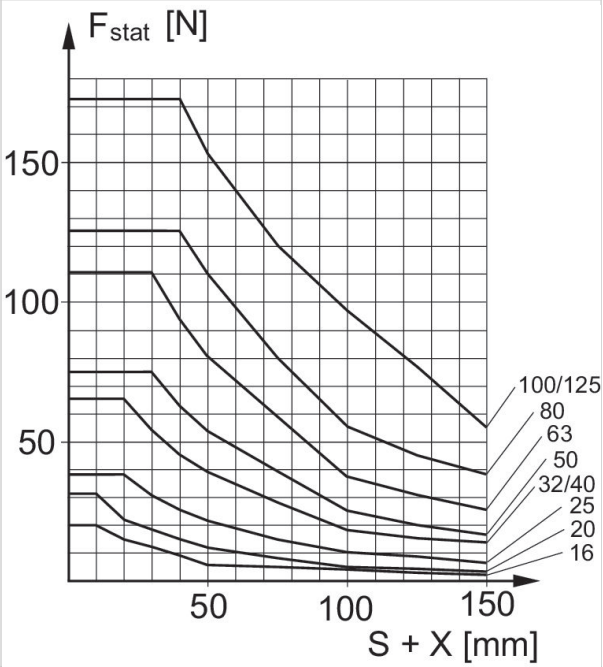
Diagrams

Maximum admissible lateral force, static



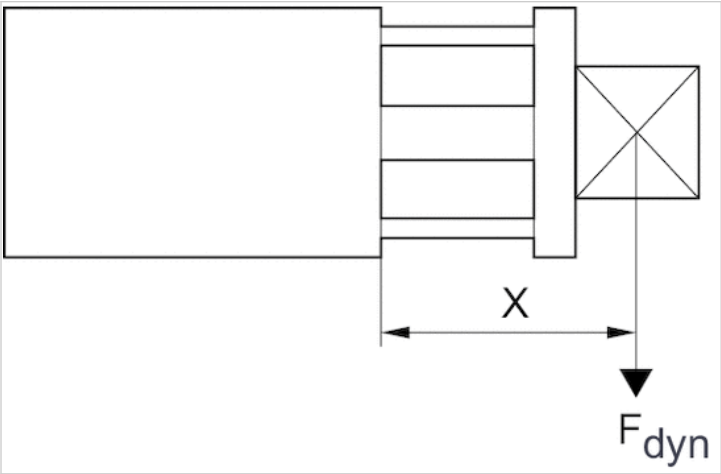
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



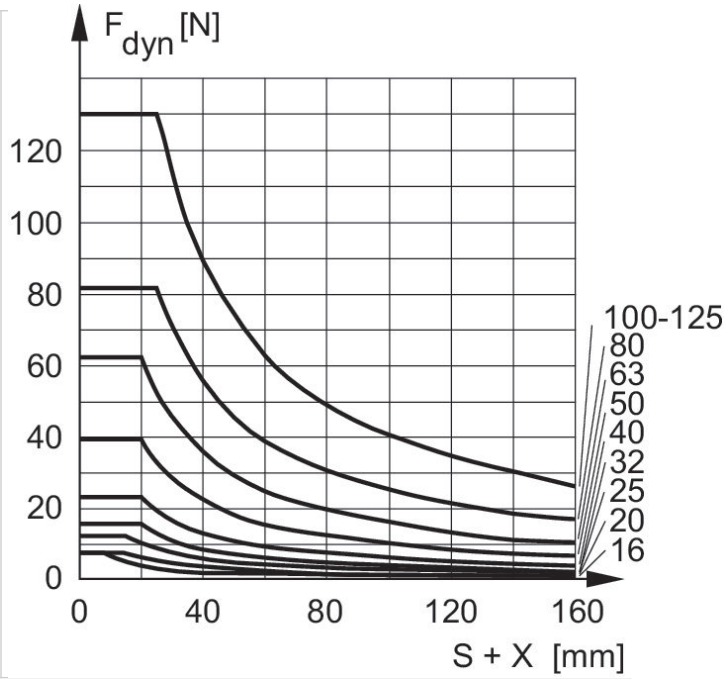
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force, dynamic



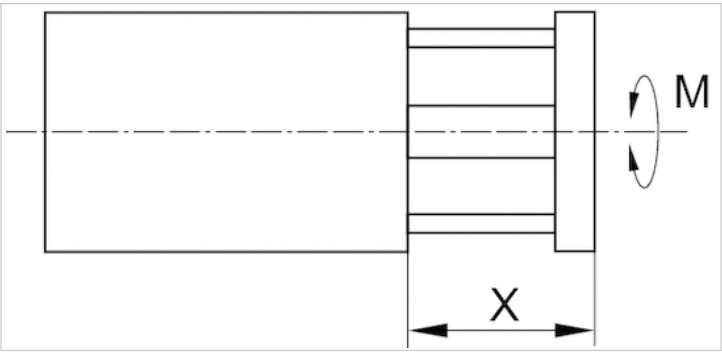
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, dynamic



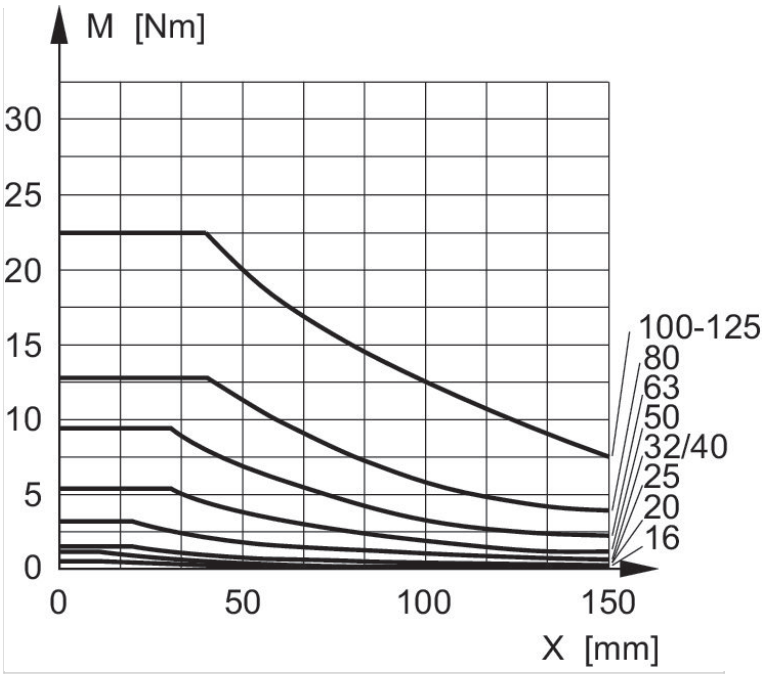
F dyn. = dynamic lateral force
X = distance between force application point and cylinder cover
S = stroke

Max. permissible torque



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

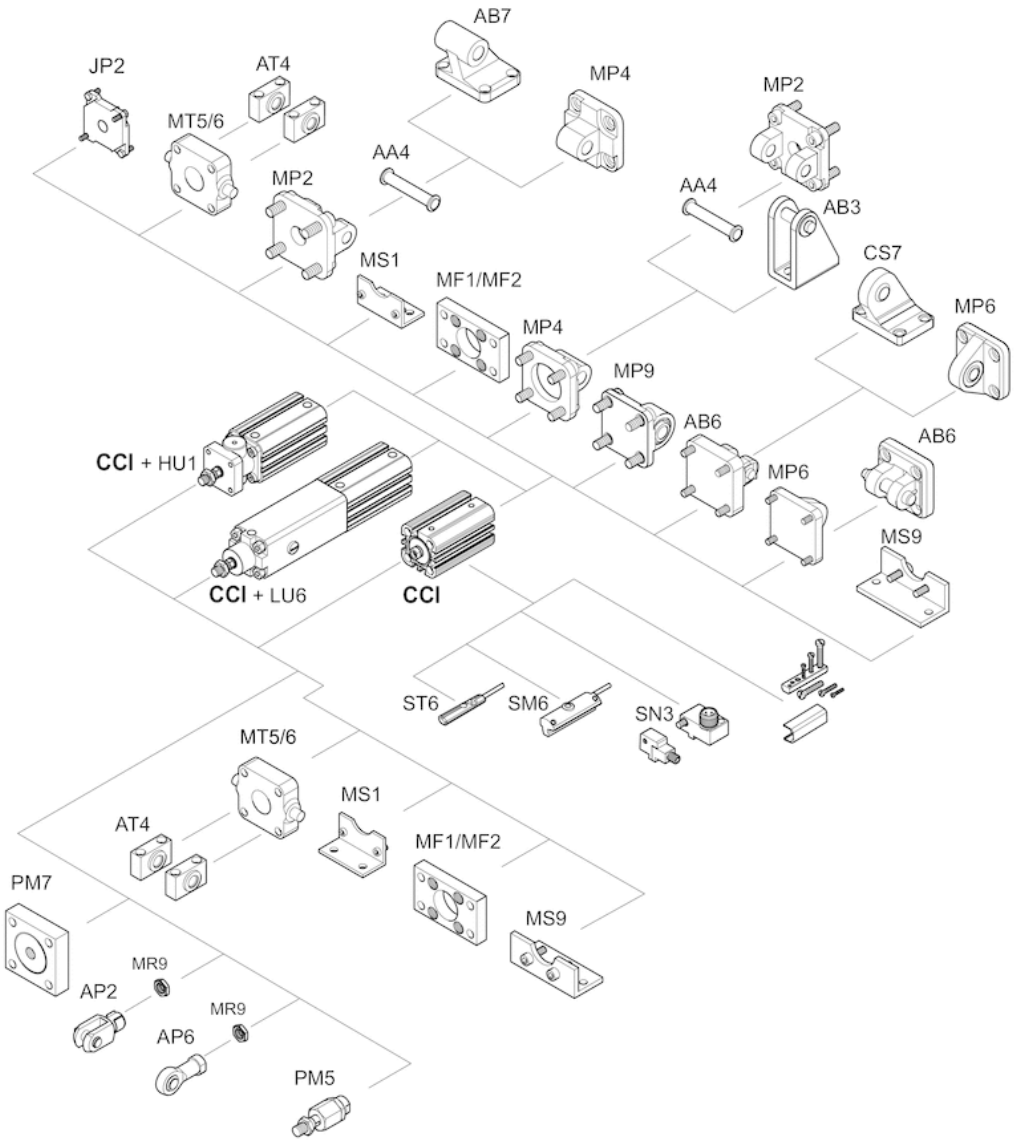
Max. permissible torque



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

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.

Compact cylinder ISO 21287, Series CCI

- Heat resistant

Ambient temperature min./max.	-10 ... 120 °C
Medium temperature min./max.	-10 ... 120 °C
Max. particle size	50 µm
Oil content of compressed air	0 ... 5 mg/m³

For additional technical data please see the relevant data sheets for the standard version.

Technical information

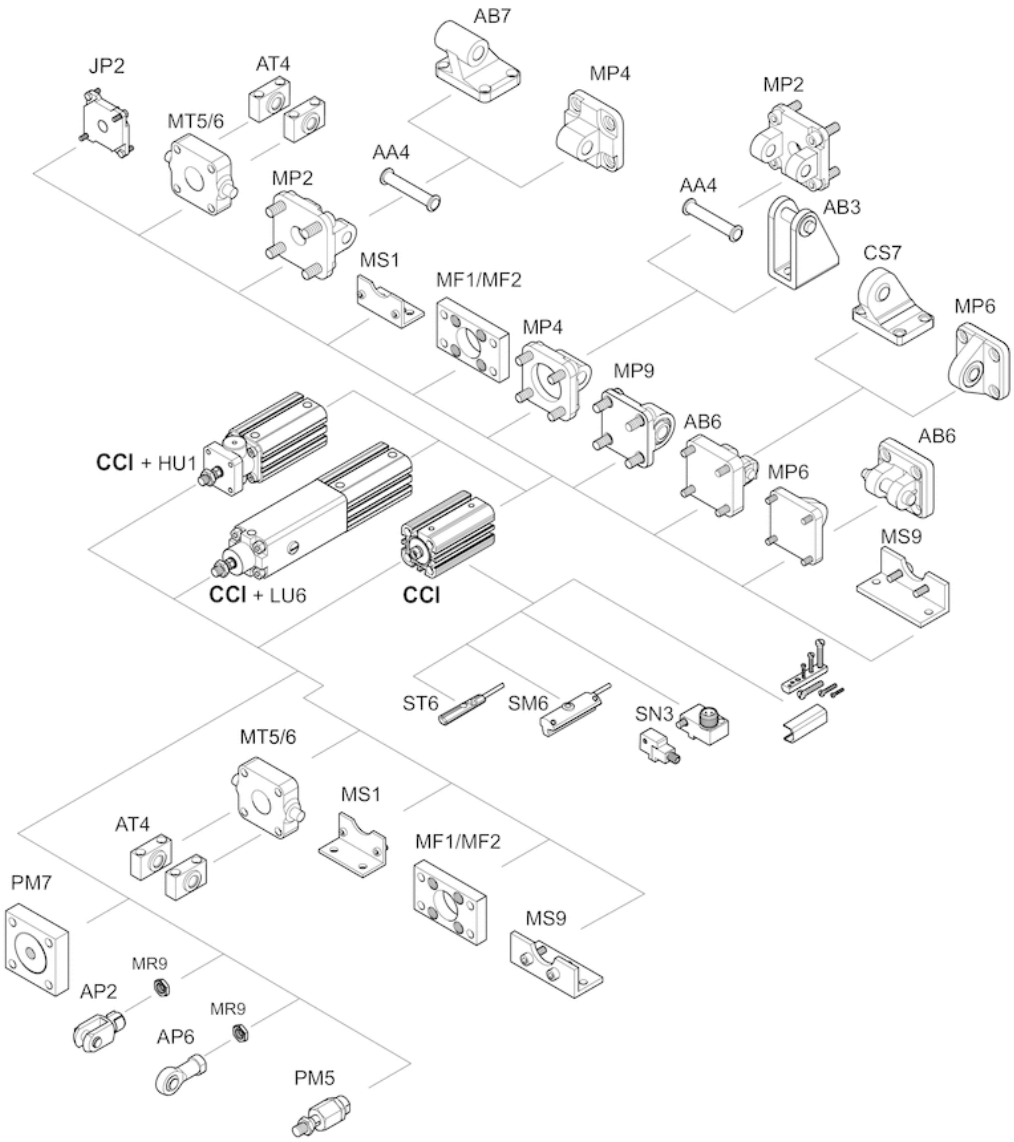
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The oil content of compressed air must remain constant during the life cycle.
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator. The operating temperature range for ATEX-certified cylinders is -20 °C ... 60 °C.
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
Front cover	Aluminum
End cover	Aluminum
Seal	Fluorocaoutchouc
Nut for piston rod	Steel, galvanized
Scraper	Fluorocaoutchouc

Accessories overview

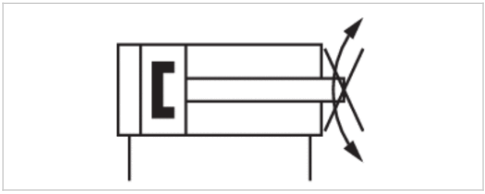
Overview drawing



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.

Compact cylinder ISO 21287, Series CCI

- Ø 20-63 mm
- Ports M5
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod non-rotating, Optionally through (hollow)



Standards	NFE 49004
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	20 mm	25 mm
Retracting piston force	148 N	260 N
Extracting piston force	198 N	309 N
Impact energy	0.2 J	0.3 J
Torque for torsion protection, max.	0.25 Nm	0.4 Nm
Weight 0 mm stroke	0.099 kg	0.123 kg
Weight +10 mm stroke	0.023 kg	0.026 kg
Working pressure min./max.	1 ... 10 bar	1 ... 10 bar
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	300 mm	300 mm

Piston Ø	32 mm	40 mm	50 mm
Retracting piston force	435 N	720 N	1110 N
Extracting piston force	507 N	792 N	1237 N
Impact energy	0.5 J	0.7 J	1 J
Torque for torsion protection, max.	0.75 Nm	0.75 Nm	1.5 Nm
Weight 0 mm stroke	0.233 kg	0.303 kg	0.448 kg
Weight +10 mm stroke	0.042 kg	0.052 kg	0.07 kg
Working pressure min./max.	0.6 ... 10 bar	0.6 ... 10 bar	0.6 ... 10 bar
Sealing material	Polyurethane	Polyurethane	Polyurethane

Piston Ø	32 mm	40 mm	50 mm
Stroke max.	300 mm	300 mm	300 mm

Piston Ø	63 mm
Retracting piston force	1827 N
Extracting piston force	1964 N
Impact energy	1.3 J
Torque for torsion protection, max.	1.5 Nm
Weight 0 mm stroke	0.689 kg
Weight +10 mm stroke	0.087 kg
Working pressure min./max.	0.6 ... 10 bar
Sealing material	Polyurethane
Stroke max.	300 mm

Technical information

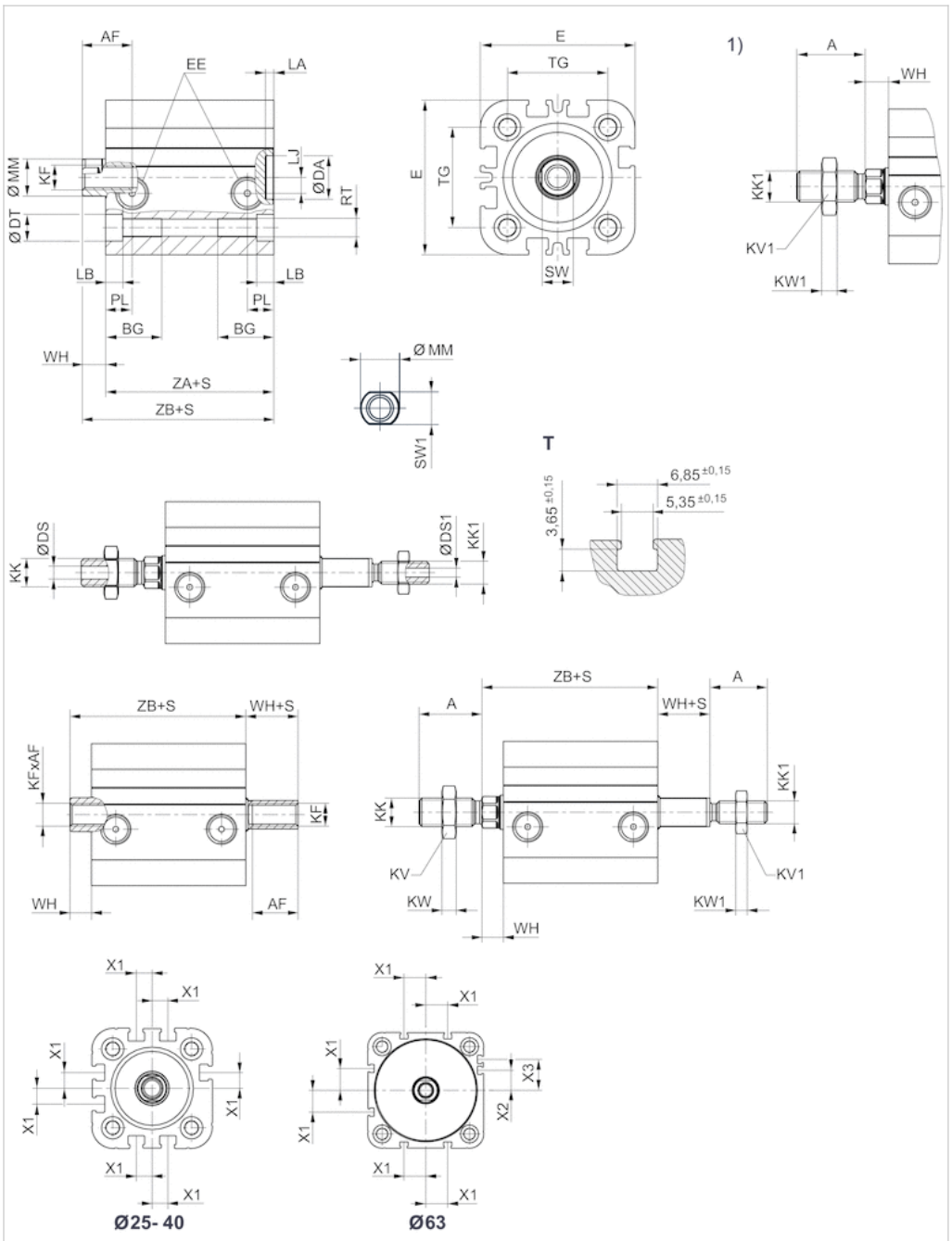
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

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

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Scraper	Polyurethane

Dimensions



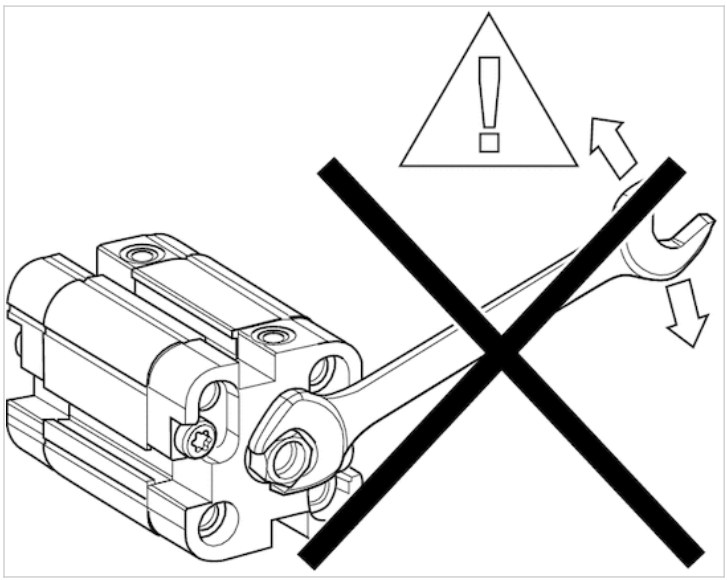
S = stroke
T = View for sensor groove
1) External thread

Dimensions

Ø	20	25	32	40	50	63
A	16	16	19	19	22	22
AF	12	12	12	16	20	20
BG	15.5	15.5	17	17	17	17

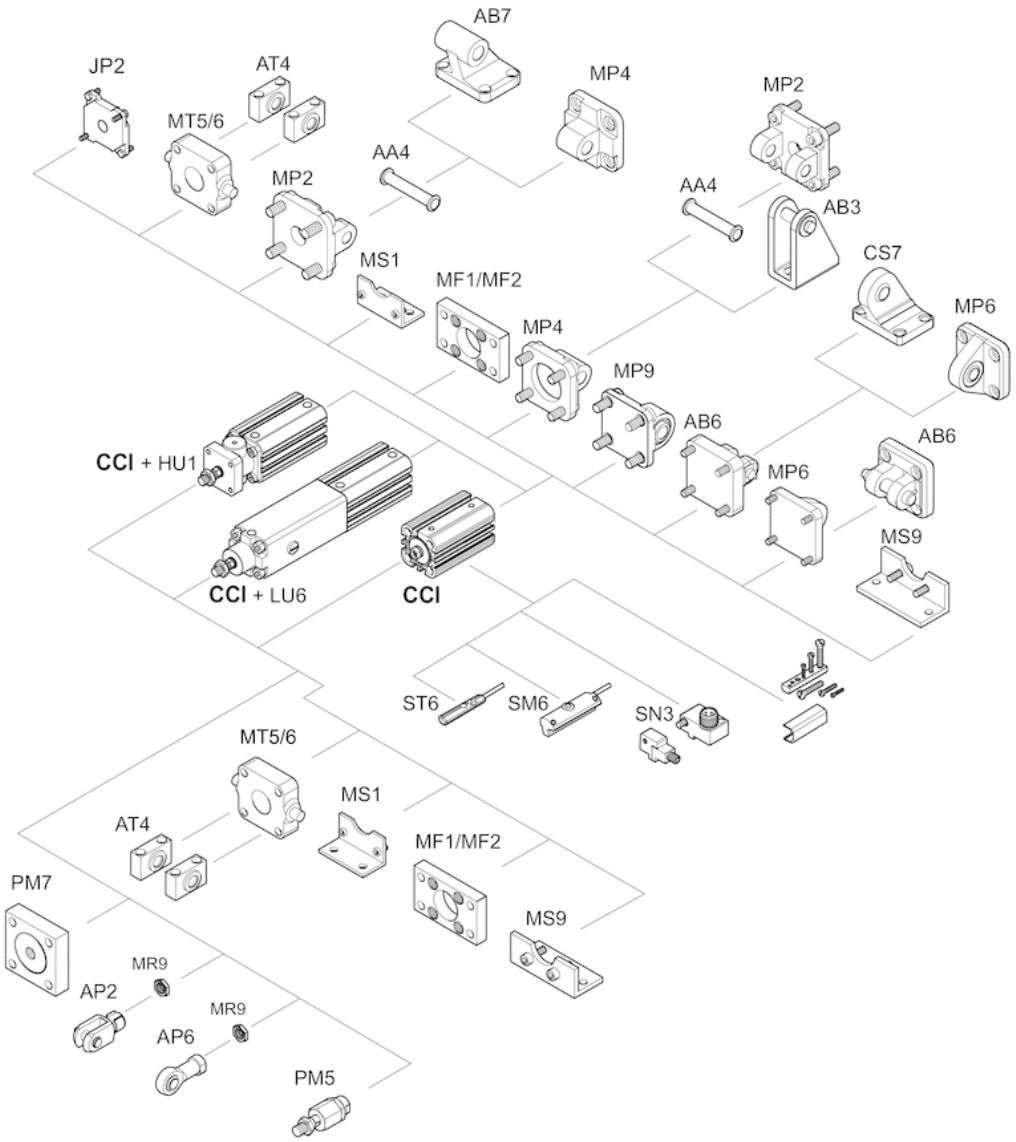
Ø	20	25	32	40	50	63
DA H11	12	12	14	14	18	18
DS	-	-	4.5	4.5	6	6
DS1	-	-	4.5	4.5	4.5	4.5
DT H13	7.5	8	9.2	9.2	11	11
E	36.3	40.3	50	58	68.3	80
EE	M5	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
KF	M6	M8	M8	M8	M10	M10
KK	M8x1.25	M8x1.25	M10x1.25	M10x1.25	M12x1.25	M12x1.25
KK1	-	-	M10x1.25	M10x1.25	M12x1.25	M12x1.25
KV	13	13	16	16	18	18
KV1	13	13	16	16	18	18
KW	4	4	5	5	6	6
KW1	4	4	5	5	6	6
LA	2.5	2.5	2.5	2.5	2.5	2.5
LB	4.5	4.5	5	5	5	5
LJ	4.5	4	5	10	12	15
LW	3.7	3.7	5	5	5.7	5.7
MM f8	10	10	12	12	16	16
PL	10	10	12	12	12	12
RT	M5	M5	M6	M6	M8	M8
SW	8	8	10	10	13	13
SW1	8	8	10	10	13	13
TG	22	26	32.5	38	46.5	56.5
WH	5.6	5.6	7.5	7.5	8	8
X1	4.2	4.5	6.5	11	13	18
X2	-	-	-	-	4	12
X3	-	-	-	-	13	21
ZA +S	37.3	39	44	45	45.5	49
ZB+S	42.9 ±0.8	44.6 ±0.9	51.5 ±1	52.5 ±1	53.5 ±1	57 ±1

Dimensions



Accessories overview

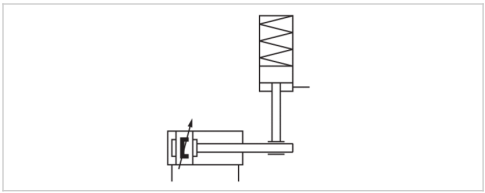
Overview drawing



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.

Compact cylinder ISO 21287, series CCI with integrated holding unit

- Ø 20-100 mm
- double-acting
- with magnetic piston
- Cushioning elastic
- with integrated holding unit
- Piston rod Internal thread



Compressed air connection	Internal thread
Working pressure min./max.	2 ... 8 bar
Ambient temperature min./max.	-10 ... 60 °C
Medium temperature min./max.	-10 ... 60 °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	20 mm	25 mm
Retracting piston force	148 N	260 N
Extracting piston force	198 N	309 N
Impact energy	0.2 J	0.3 J
Weight 0 mm stroke	0.27 kg	0.29 kg
Weight +10 mm stroke	0.02 kg	0.03 kg
Axial play	0.3 mm	0.3 mm
Min. holding force at 0 bar	400 N	400 N
Sealing material	Nitrile butadiene rubber	Nitrile butadiene rubber
Stroke max.	300 mm	300 mm

Piston Ø	32 mm	40 mm	50 mm	63 mm
Retracting piston force	435 N	665 N	1039 N	1766 N
Extracting piston force	507 N	792 N	1237 N	1964 N
Impact energy	0.5 J	0.7 J	1 J	1.3 J
Weight 0 mm stroke	0.56 kg	0.88 kg	1.25 kg	1.6 kg
Weight +10 mm stroke	0.04 kg	0.06 kg	0.08 kg	0.09 kg
Axial play	0.3 mm	0.3 mm	0.35 mm	0.35 mm
Min. holding force at 0 bar	650 N	1100 N	1600 N	2500 N

Piston Ø	32 mm	40 mm	50 mm	63 mm
Sealing material	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Stroke max.	300 mm	300 mm	300 mm	300 mm

Piston Ø	80 mm	100 mm
Retracting piston force	2857 N	4639 N
Extracting piston force	3167 N	4948 N
Impact energy	1.8 J	2.5 J
Weight 0 mm stroke	3 kg	5 kg
Weight +10 mm stroke	0.12 kg	0.15 kg
Axial play	0.35 mm	0.35 mm
Min. holding force at 0 bar	4000 N	6300 N
Sealing material	Polyurethane	Polyurethane
Stroke max.	500 mm	500 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).

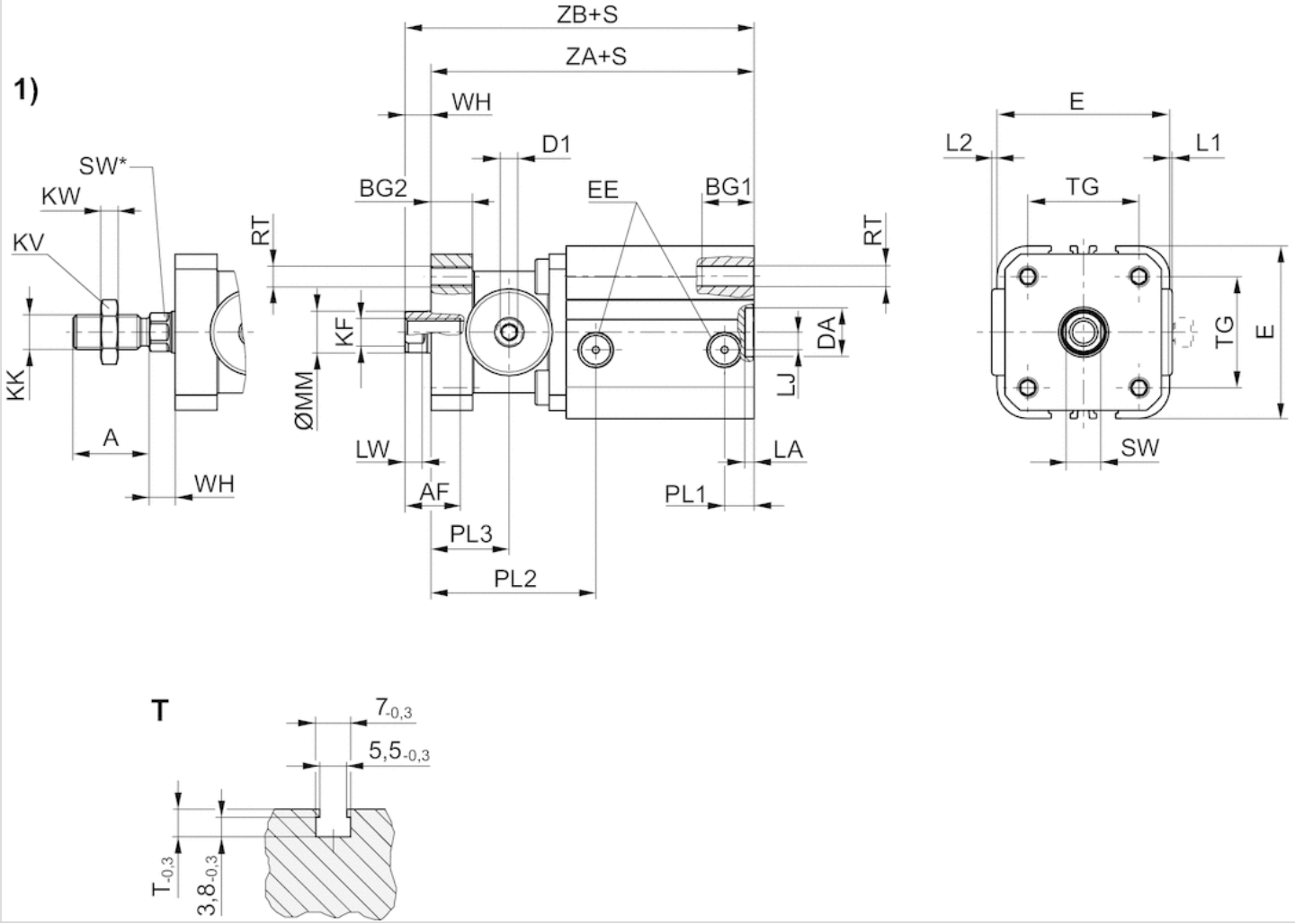
Warning: The holding unit may not be used for the following applications:
1) for dynamic holding
2) in or as safety equipment
Holding unit may only be unlocked when turned off.
Make sure that the load direction does not change during a holding interval. A change in the direction of force, as well as external forces such as impacts, strong vibrations, or torsional forces, will briefly release the piston rod and may destroy the HU1 holding unit.
When clamped, there must be no residual pressure on the holding unit (0 bar).
NOTE:
The minimum control pressure is >= working pressure!
Use our Internet configurator to order variants with an external thread.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Nitrile butadiene rubber Polyurethane
Scraper	Polyurethane

Dimensions

Dimensions



S = stroke
T = View for sensor groove
1) External thread
Use our Internet configurator to order variants with an external thread.

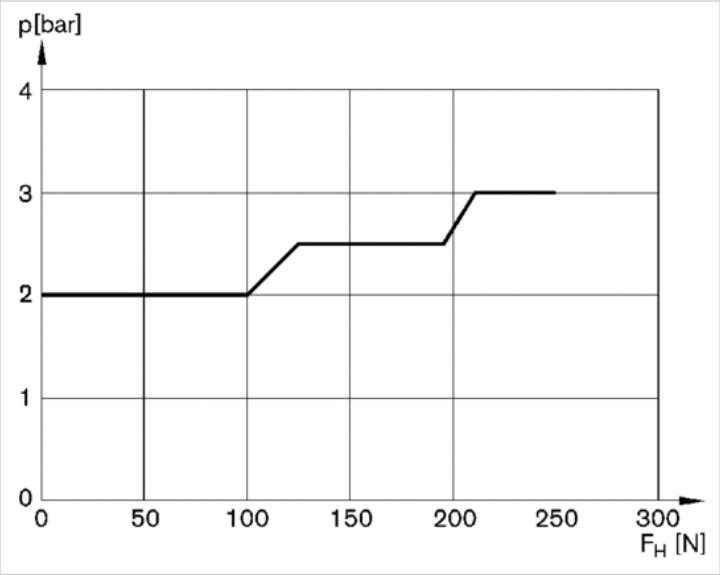
Dimensions

Ø	20	25	32	40	50	63	80	100
A	16	16	19	19	22	22	28	28
AF	12	12	12	16	20	20	26	26
BG1	12	12	18	18	22	22	27	24
BG2	15	10	12	20	25	18	20	20
Ø D1	M5	M5	M5	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
DA H11	12	12	14	14	18	18	23	28
E	36	40	50	58	68	80	96	116
EE	M5	M5	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
KF	M6	M6	M8	M8	M10	M10	M12	M12
KK	M8x1.25	M8x1.25	M10x1.25	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M16x1.5
KV	13	13	16	16	18	18	24	24

Ø	20	25	32	40	50	63	80	100
KW	4	4	5	5	6	6	8	8
L1	3	1	0.5	1	2	–	–	–
L2	1	–	–	–	–	–	–	–
LA	2.5	2.5	2.5	2.5	2.5	2.5	3	3
LJ	4.5	5	5	10	12	15	22	27
LW	3.5	3.5	5	6	7	7	7.5	7.5
MM	10	10	12	16	20	20	25	25
PL1	5.5	5.5	8.5	8.5	8.5	8.5	8.3	9.7
PL2	43	39	47.5	63.5	72	62.5	77	91
PL3	21	20.5	22.5	34.5	38.5	33	40	45.5
RT	M5	M5	M6	M6	M8	M8	M10	M10
SW	8	8	10	13	16	16	21	21
SW*	–	–	10	13	16	16	21	21
TG	22	26	32.5	38	46.5	56.5	72	89
WH	5.5	5.5	7	9.5	10	10	12	12
ZA	65	66.5	83	95	104.5	97.5	122.5	143.5
ZB	70.5 ±1.4	72 ±1.4	90 ±1.6	104.5 ±1.6	114.5 ±1.6	107.5 ±2	134.5 ±2	155.5 ±2

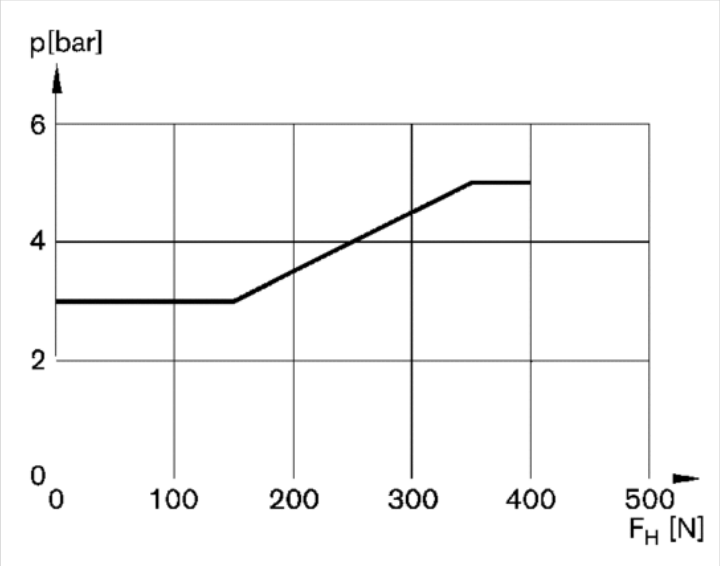
Diagrams

Holding force for piston Ø 20



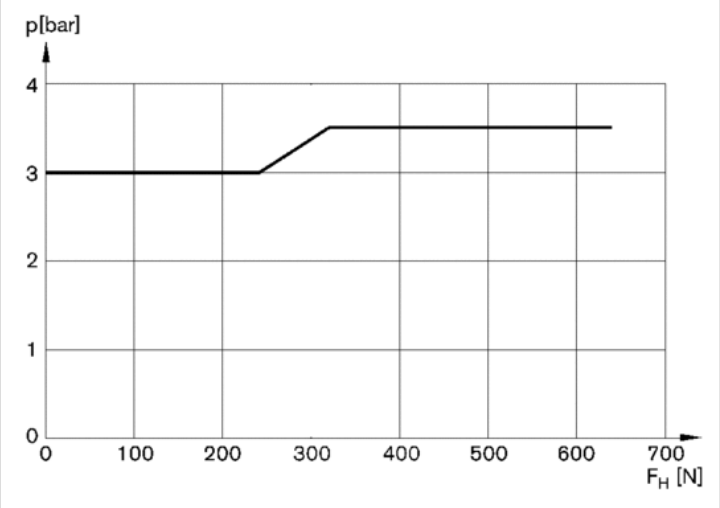
p = release pressure for holding unit
FH = holding force of cylinder

Holding force for piston Ø 25



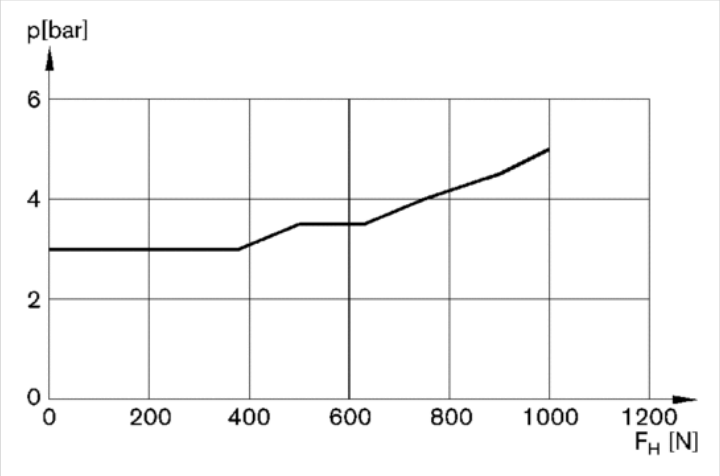
p = release pressure for holding unit
FH = holding force of cylinder

Holding force for piston Ø 32



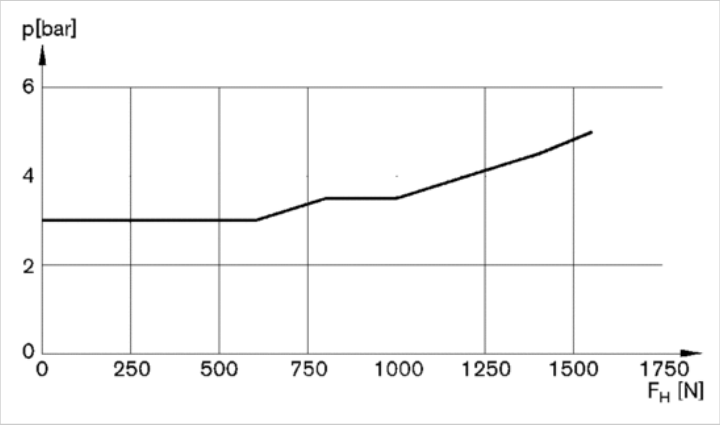
p = release pressure for holding unit
FH = holding force of cylinder

Holding force for piston Ø 40

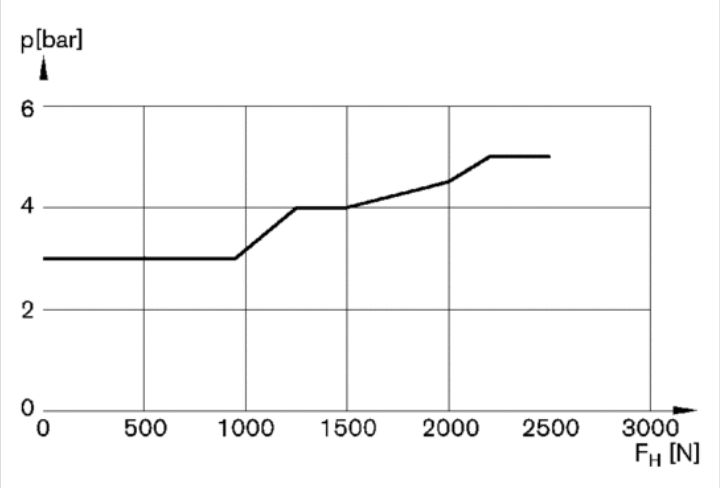


p = release pressure for holding unit
FH = holding force of cylinder

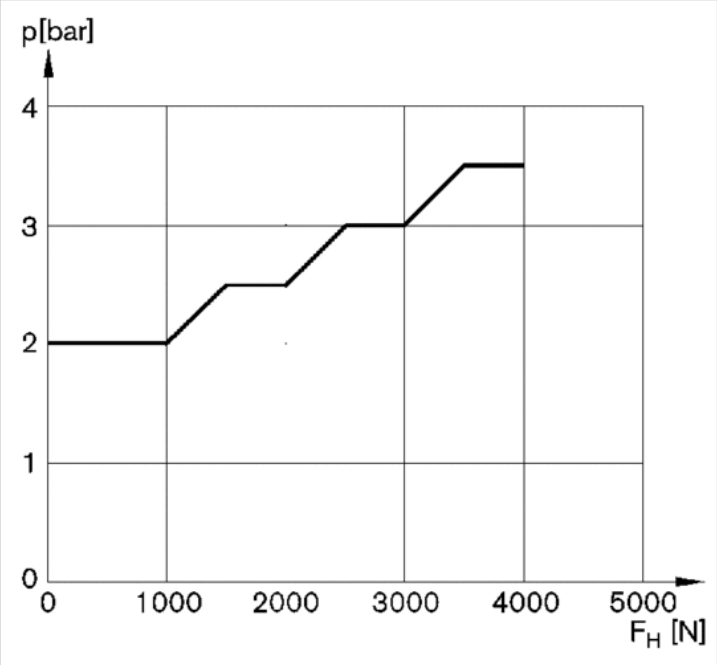
Holding force for piston Ø 50 mm



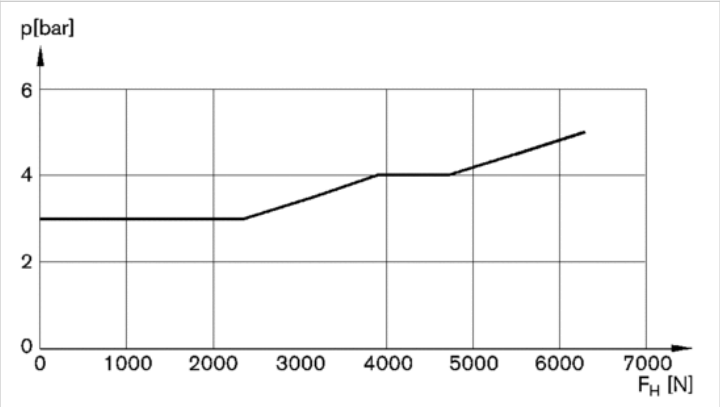
Holding force for piston Ø 63 mm



Holding force for piston Ø 80

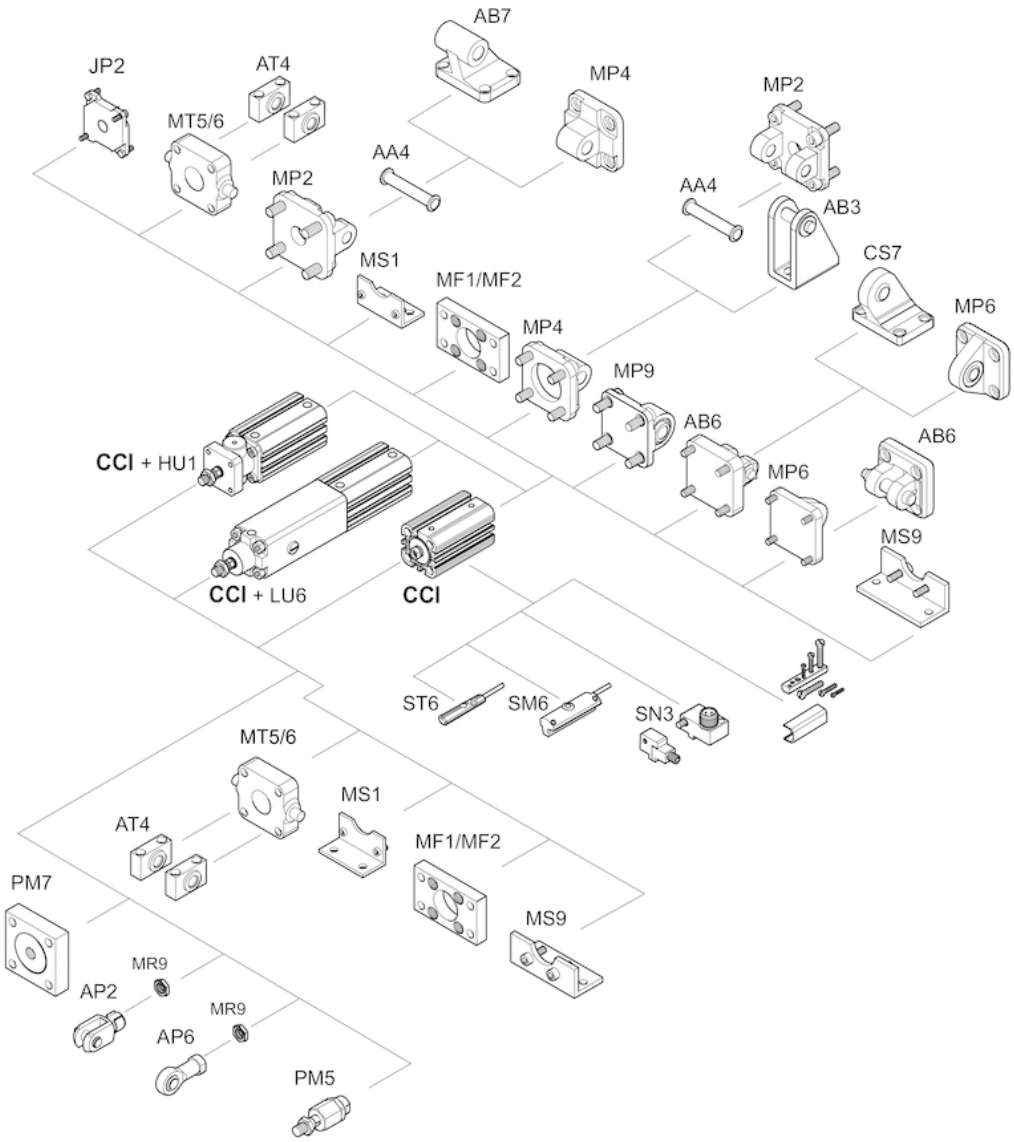


Holding force for piston Ø 100



Accessories overview

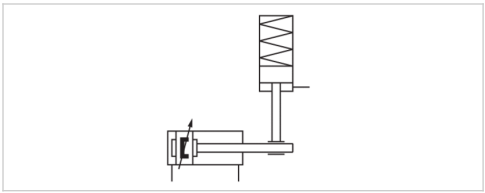
Overview drawing



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.

Compact cylinder ISO 21287, Series CCI with integrated LU6 locking unit

- Ø 32-100 mm
- double-acting
- with magnetic piston
- Cushioning elastic
- With integrated locking unit
- Piston rod Internal thread



Compressed air connection	Internal thread
Working pressure min./max.	2 ... 10 bar
Ambient temperature min./max.	-20 ... 80 °C
Medium temperature min./max.	-10 ... 60 °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	32 mm	40 mm	50 mm	63 mm	80 mm	100 mm
Retracting piston force	435 N	665 N	1039 N	1766 N	2857 N	4639 N
Extracting piston force	507 N	792 N	1237 N	1964 N	3167 N	4948 N
Weight 0 mm stroke	1.19 kg	1.57 kg	2.74 kg	4 kg	7.63 kg	12.72 kg
Weight +10 mm stroke	0.04 kg	0.06 kg	0.08 kg	0.09 kg	0.13 kg	0.17 kg
Min. holding force at 0 bar	760 N	1200 N	1900 N	3000 N	5000 N	8000 N
Stroke max.	300 mm	300 mm	300 mm	300 mm	500 mm	500 mm

Technical information

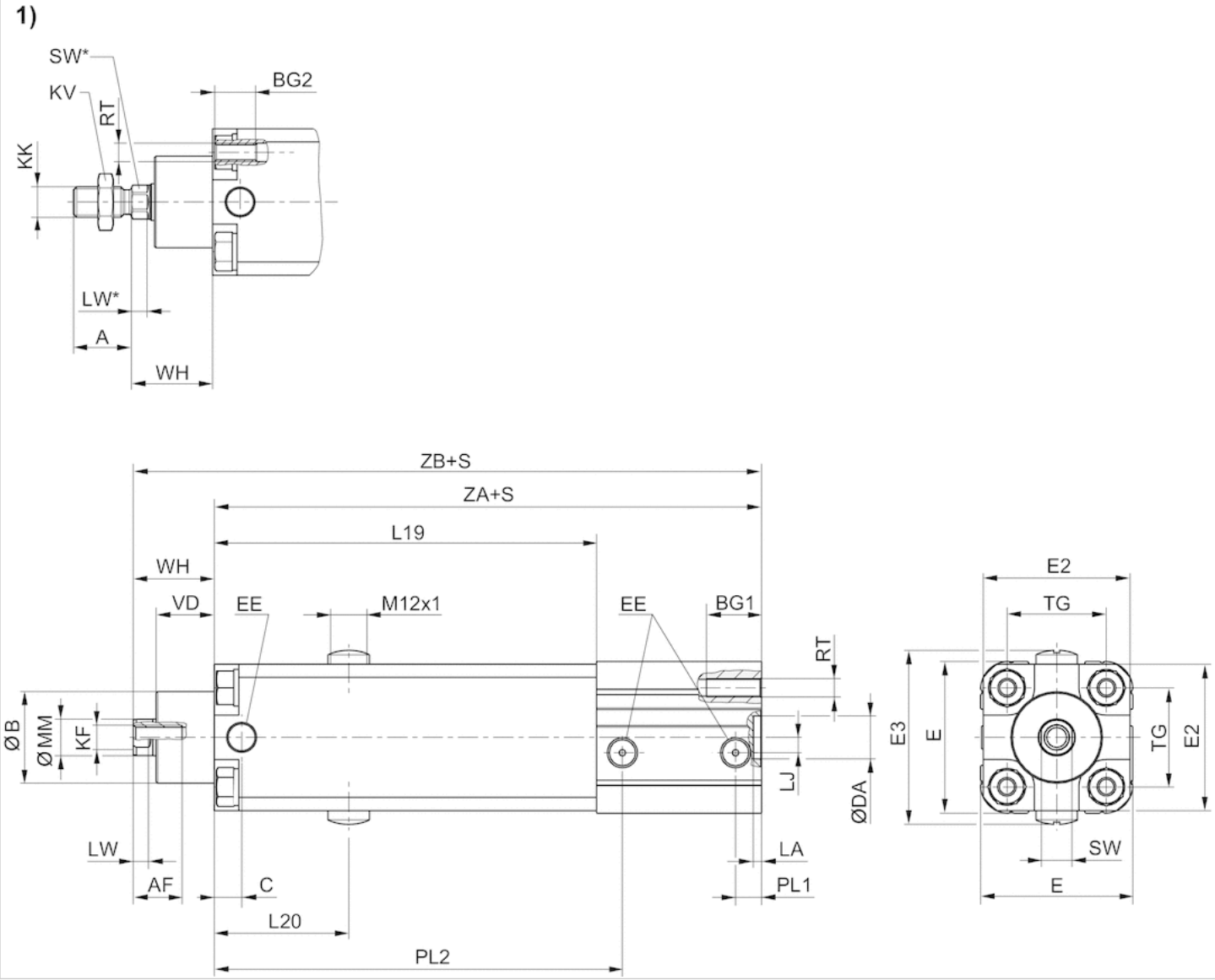
The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C .
The oil content of compressed air must remain constant during the life cycle.
Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in the MediaCentre).

The maximum ambient and medium temperature is + 70 °C for the dynamic braking function.
Note:
Before pressurizing the locking unit, make sure that there is a balance of forces at the piston on the drive cylinder. Please see the operating instructions for further safety-relevant information. The locking unit can be used in controls with a max. performance level e in accordance with DIN EN ISO 13849-1 ("basic and well-tried safety principles"). For applications in category 2 to 4 controls, additional control measures according to DIN EN ISO 13849-1 are required.
The locking unit can be used as an individual component or pre-mounted on a cylinder..
Scope of delivery: LU6, each with 4 flange nuts, washers, and tie rods
Use our Internet configurator to order variants with an external thread.

Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions



S = stroke
T = View for sensor groove
1) External thread
Use our Internet configurator to order variants with an external thread.

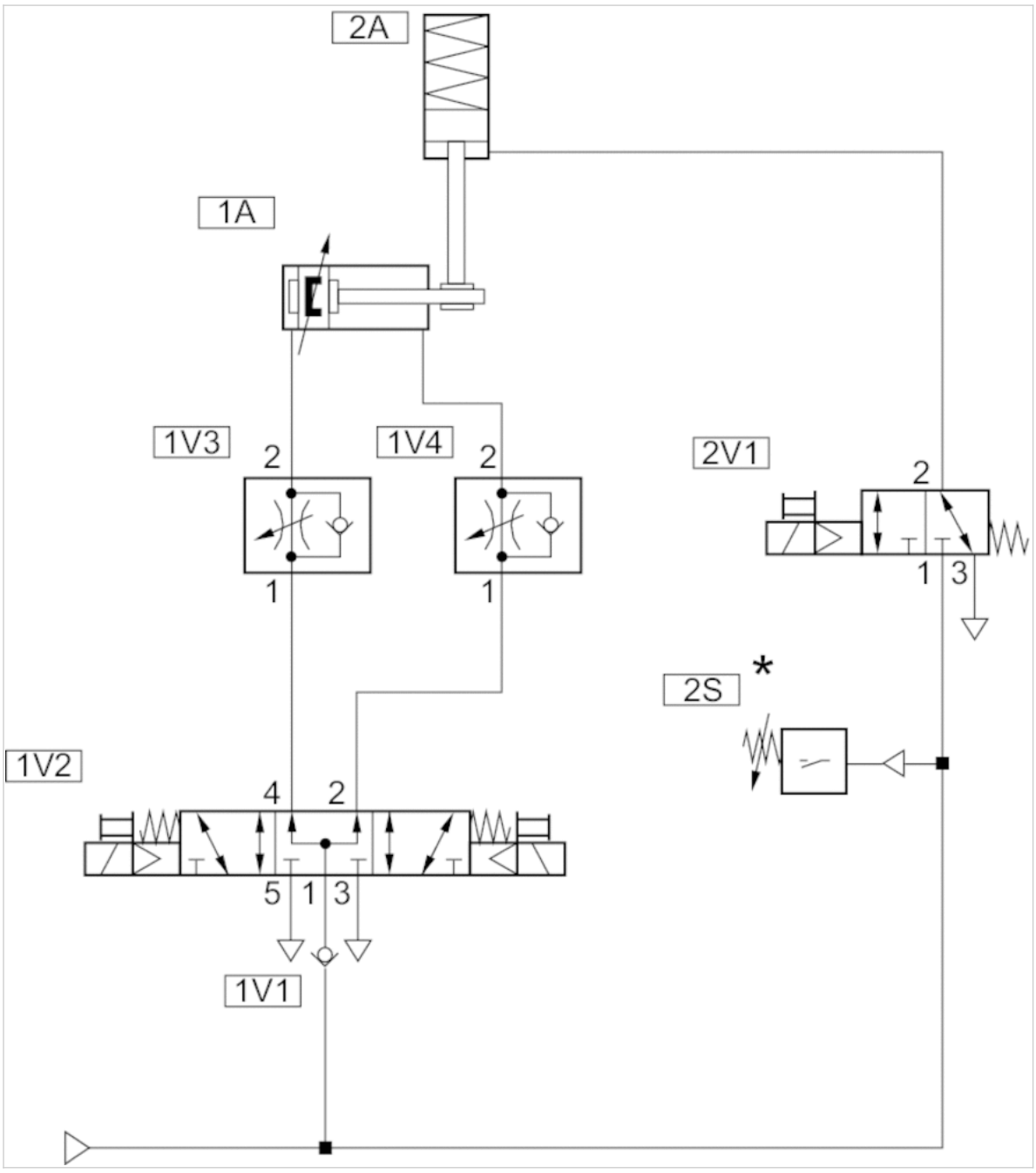
Dimensions

Ø	32	40	50	63	80	100
A	19	19	22	22	28	28
AF	12	16	20	20	26	26
ØB d11	30	35	40	45	45	55
BG1	18	18	22	22	27	24
BG2	10	10	12	12	16.5	16.5
C	9	9	9	10	11	13

Ø	32	40	50	63	80	100
DA H11	14	14	18	18	23	28
E	50	58	68	80	96	116
E2	48	53	63	75	98	118
E3	57	62	72	64	107	127
EE	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8	G 1/8
KF	M8	M8	M10	M10	M12	M12
KK	M10x1.25	M10x1.25	M12x1.25	M12x1.25	M16x1.5	M16x1.5
KV	16	16	18	18	24	24
KW	5	5	6	6	8	8
LA	2.5	2.5	2.5	2.5	3	3
LJ	5	10	12	15	22	27
LW	5	6	7	7	7.5	7.5
L19	125	126	145	165	185	220
L20	44	44	49	52	61.5	68
ØMM f8	12	16	20	20	25	25
PL1	8.5	8.5	8.5	8.5	8.3	9.7
PL2	133.5	133.5	153.5	173.5	193.3	229.7
RT	M6	M6	M8	M8	M10	M10
SW	10	13	16	16	21	21
SW*	10	13	16	16	21	21
VD	19	21	28	28	34	37
TG	32.5	38	46.5	56.5	72	89
WH	26.5	30.5	38	38	46	49
ZA	169	165	186	208.5	239	282
ZB	195.5 ±1.6	195.5 ±1.6	224 ±1.6	246.5 ±2	285 ±2	331 ±2

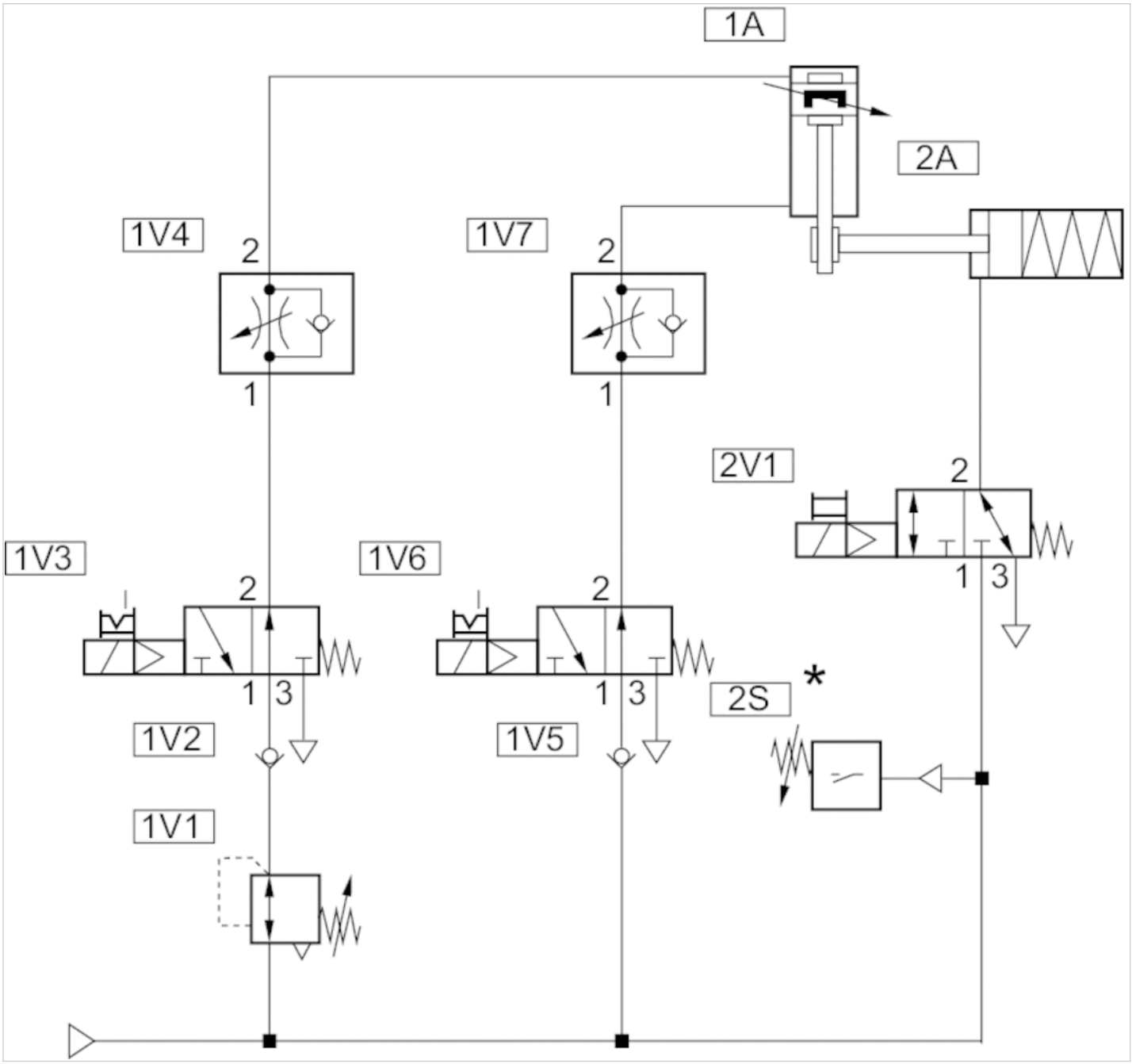
Circuit diagram

Circuit example for non-safety relevant functions:, horizontal installation position



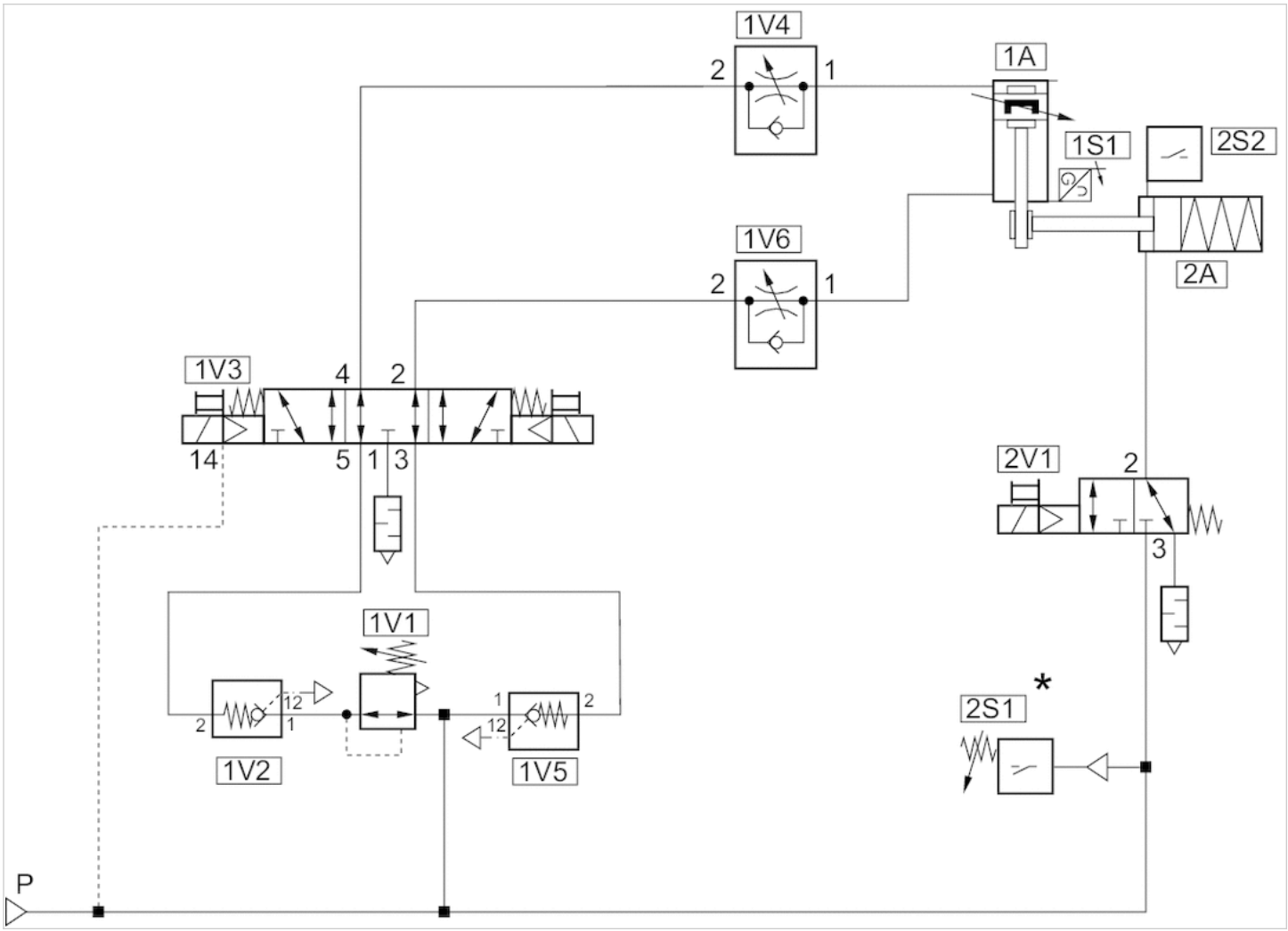
* From 4 bar : release of 2V1

Circuit example for non-safety relevant functions:, Vertical mounting orientation



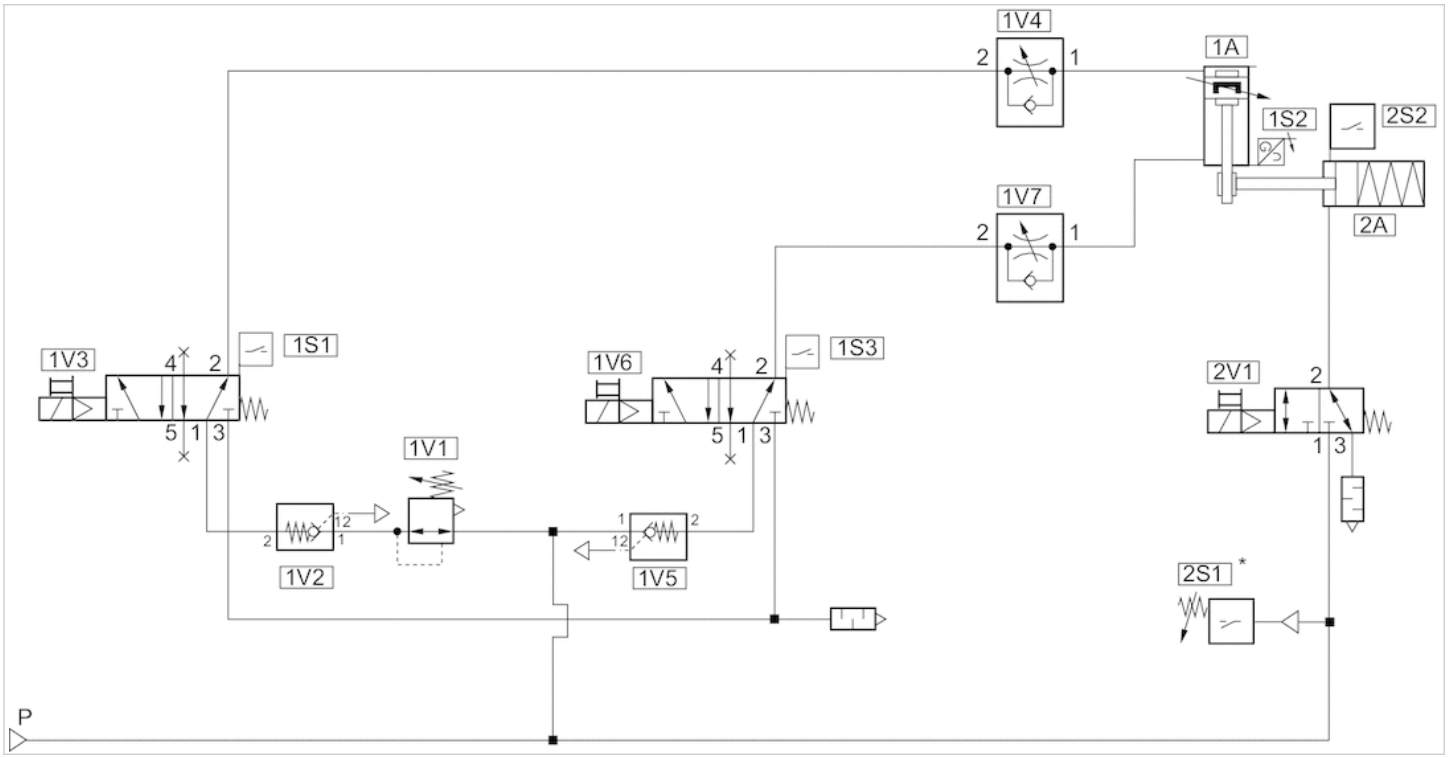
* From 4 bar : release of 2V1

Circuit example for safety-related stop functions:, horizontal installation position



Channel 1: Safe stopping and closing
Channel 2: Safe brake control
* From 4 bar : release of 2V1

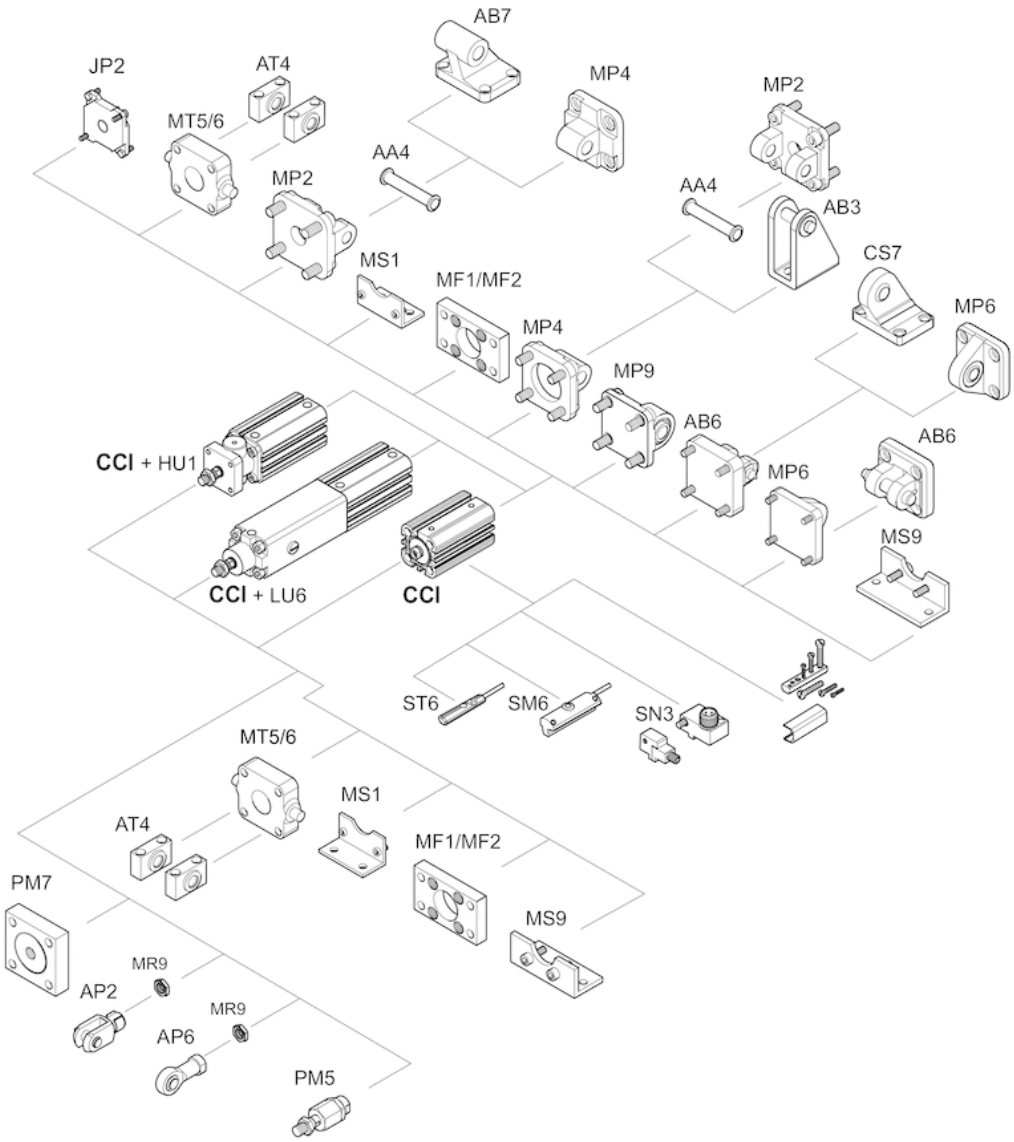
Circuit example for safety-related stop functions:, Vertical mounting orientation



Channel 1: Safe stopping and closing
Channel 2: Safe brake control
* From 4 bar : release of 2V1

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.

Compact cylinder ISO 21287, Series CCI-Multiple position

- Ø 25-100 mm
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod Internal thread
- Piston rod Reinforced
- multi-position cylinder 5 positions

Compressed air connection	Internal thread
Working pressure min./max.	1.5 ... 10 bar
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	25 mm	40 mm	63 mm	100 mm
Retracting piston force	260 N	665 N	1766 N	4639 N
Extracting piston force	309 N	792 N	1964 N	4948 N
Impact energy	0.3 J	0.7 J	1 J	3 J
Max. single stroke	400 mm	850 mm	850 mm	850 mm
Stroke max.	1000 mm	2000 mm	2000 mm	2000 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).

In case of tensile load, positioning for intermediate strokes is only possible with counter pressure in the front chamber.
Use our Internet configurator to order variants with an external thread.

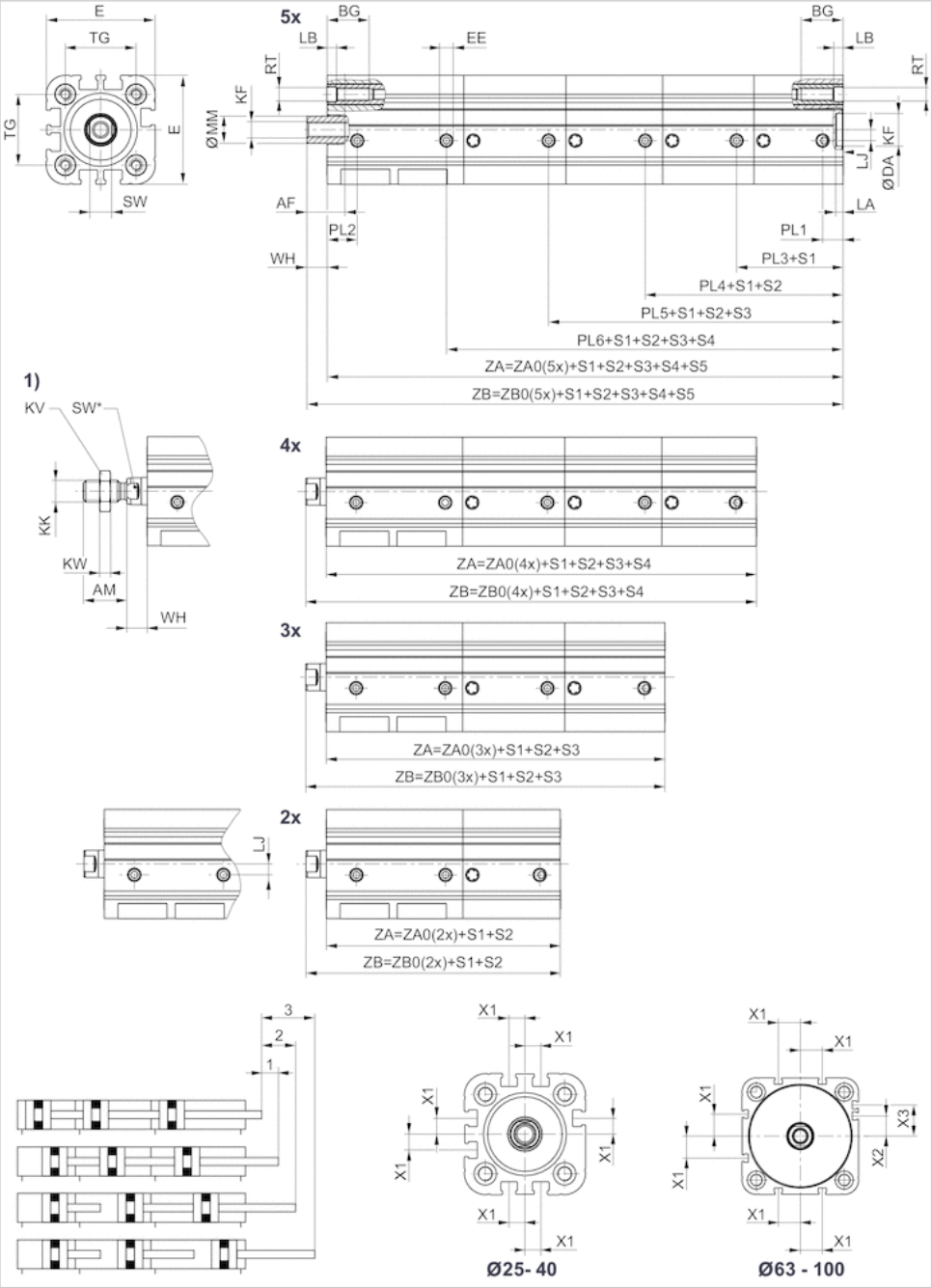
Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum

Material	
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane

Dimensions

Dimensions



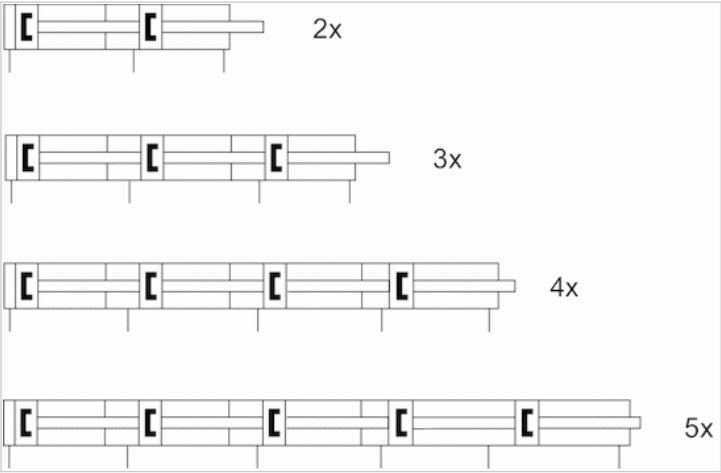
S = stroke
1) External thread
Use our Internet configurator to order variants with an external thread.

Dimensions

Ø	25	40	63	100
AF	14	20	20	26
AM	16 (32)	24 (48)	32 (64)	40 (80)
BG	15.5	17	18	20
DA H11	12	14	18	28
E	40	58	80	116
EE	M5	G 1/8	G 1/8	G 1/8
KF	M6	M10	M12	M16
KK	M8	M12x1.25	M16x1.5	M20x1.5
KV	13	18	24	30
KW	4	6	8	10
LA	2.5	2.5	2.5	3
LB 2)	3.5	4	5.5	6.5
LJ	4	9	15	27
MM f8	10	16	20	25
PL 1	7.5	12	10	13
PL 2	10	12	12	16.5
PL 3	37.1	44.1	46.3	61.4
PL4	66.6	72.6	82.8	109.2
PL5	96.1	101.1	119.3	157
PL6	125.6	129.6	155.8	204.8
RT	M5	M6	M8	M10
SW	8	13	16	21
SW*	–	13	16	21
TG	26	38	56.5	89
WH	7.5	9.5	10	12
X1	4.5	11	18	20
X2	–	–	12	20
X3	–	–	21	29
ZA0 (2x) ±0,5	70.8	78.5	90.9	119.4
ZA0 (3x) ±0,8	100.3	107	127.4	167.2
ZA0 (4x) ±1,1	129.8	135.5	163.9	215
ZA0 (5x) ±1,4	159.3	164	200.4	262.8
ZB0 (2x)	78.3	88	100.9	131.4
ZB0 (3x)	107.8	116.5	137.4	179.2
ZB0 (4x)	137.3	145	173.9	227
ZB0 (5x)	166.8	173.5	210.4	274.8

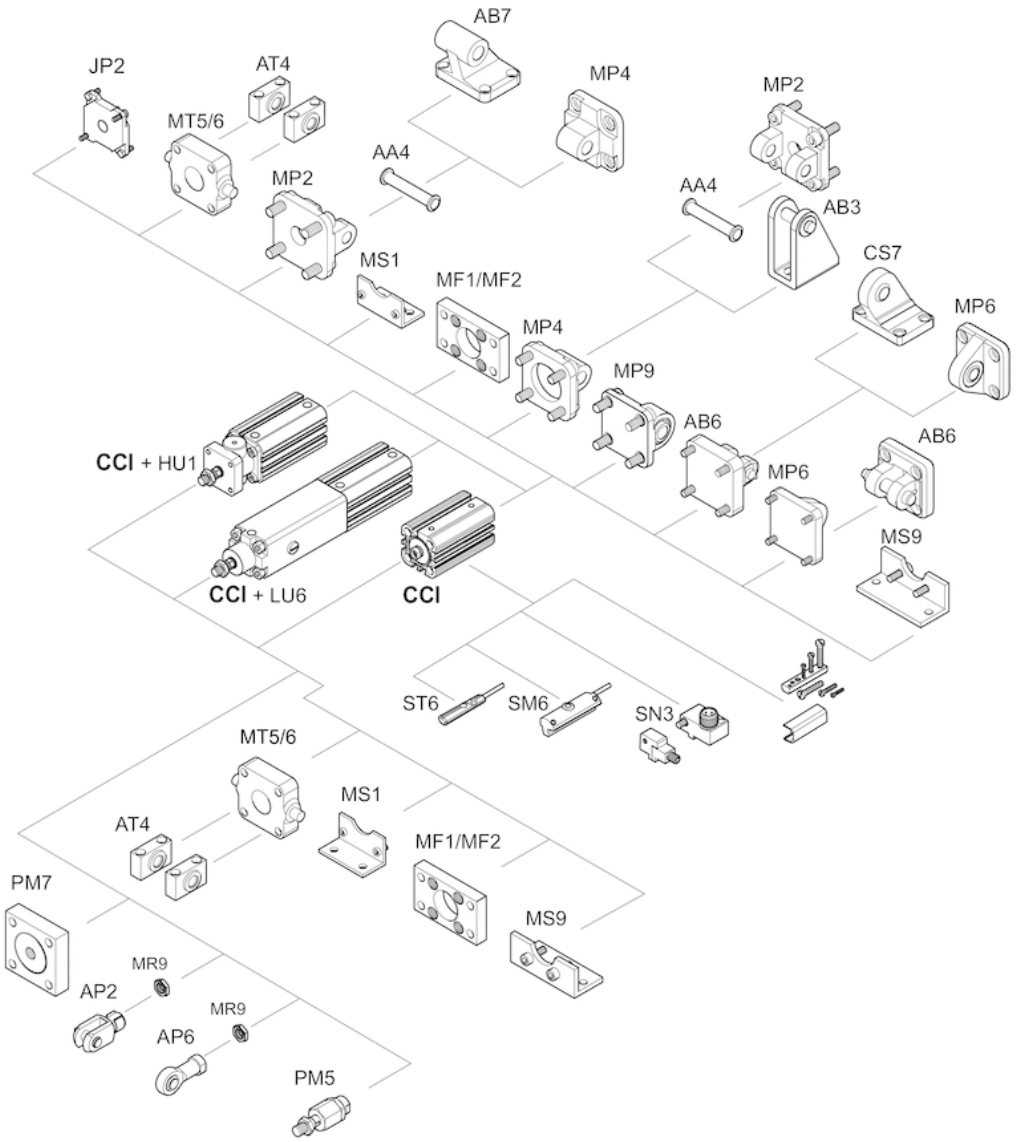
Diagrams

Circuit symbol



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.

Compact cylinder ISO 21287, Series CCI-tandem cylinder

- Ø 25-100 mm

Compressed air connection	Internal thread
Working pressure min./max.	2 ... 10 bar
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	25 mm	40 mm	63 mm	100 mm
Retracting piston force	260 N	665 N	1766 N	4639 N
Piston force Tandem, 2x	619 N	1583 N	3928 N	9896 N
extracting Tandem, 3x	928 N	2375 N	5892 N	14844 N
theoretical Tandem, 4x	1237 N	3167 N	7855 N	19792 N
Impact energy	0.3 J	0.7 J	1.3 J	2.5 J
Weight 0 mm stroke Tandem, 2x	0.29 kg	0.65 kg	1.58 kg	4.13 kg
Tandem, 3x	0.37 kg	0.92 kg	2.11 kg	5.67 kg
Tandem, 4x	0.45 kg	1.15 kg	2.64 kg	7.19 kg
Weight +10 mm stroke Tandem, 2x	0.06 kg	0.125 kg	0.2 kg	0.34 kg
Tandem, 3x	0.09 kg	0.185 kg	0.29 kg	0.51 kg
Tandem, 4x	0.12 kg	0.24 kg	0.385 kg	0.68 kg
Stroke max.	200 mm	200 mm	200 mm	200 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).

This product can be configured with 2x, 3x, or 4x extending piston force.

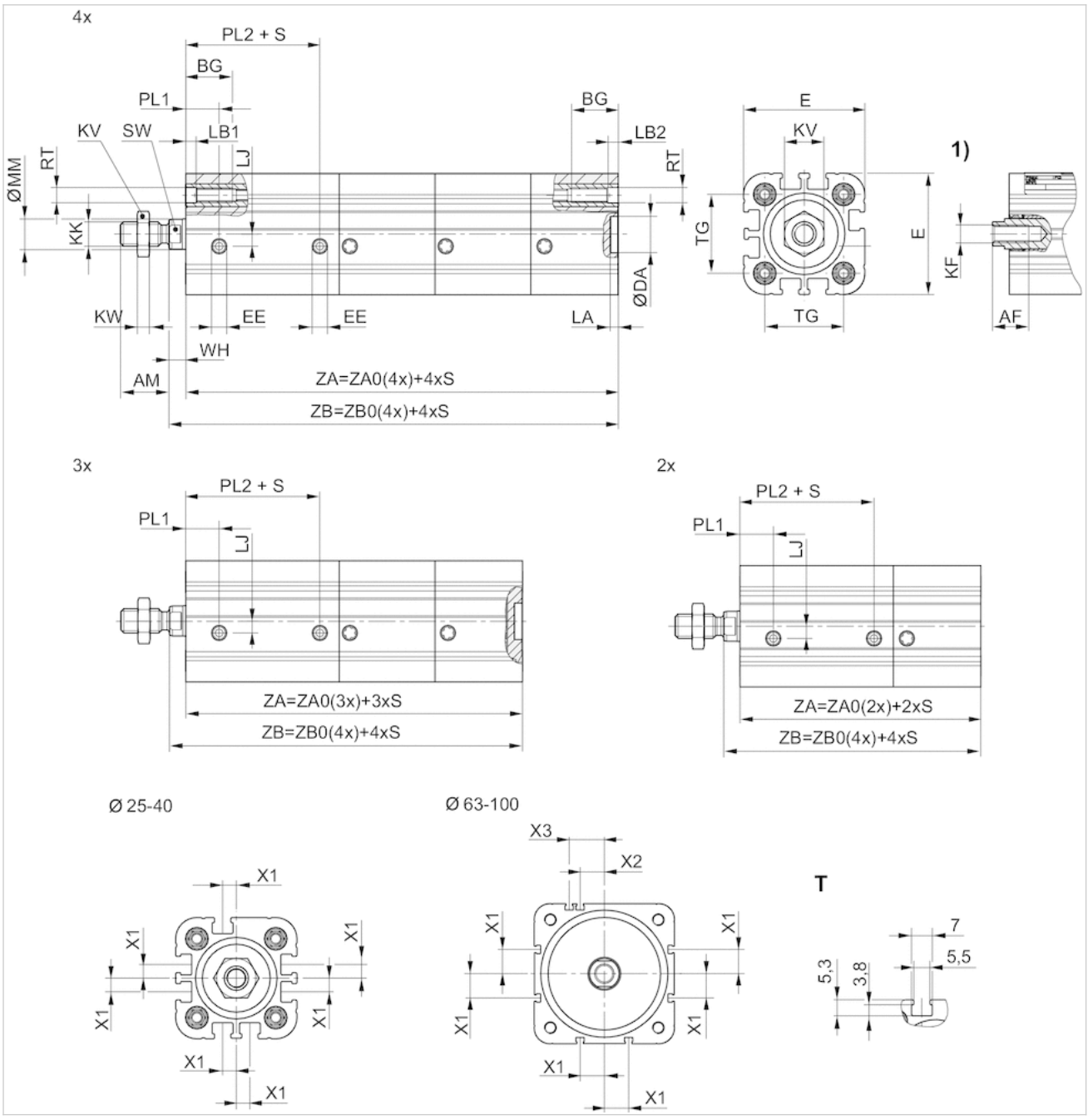
Technical information

Material	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Aluminum

Material	
End cover	Aluminum
Seal	Polyurethane
Scraper	Polyurethane
Tie rod nuts	Steel, galvanized

Dimensions

Dimensions



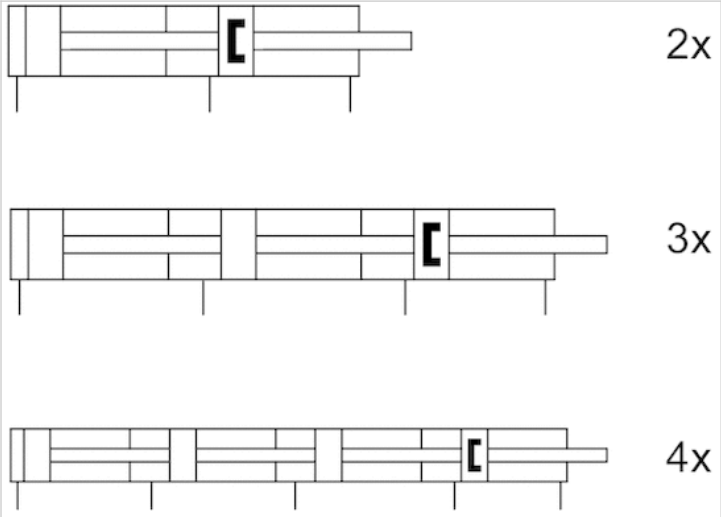
S = stroke
T = View for sensor groove
1) Internal thread

Dimensions

Ø	25	40	63	100
max. AM	16 / 32	22 / 44	28 / 56	40 / 80
min. BG	15.5	17	18	20
DA H11	12	14	18	28
E	40.3	58	80	116
EE	M5	G 1/8	G 1/8	G 1/8
KF x AF	M6x12	M10x16	M12x20	M16x24
KK	M8	M12x1.25	M16x1.5	M20x1.5
KV	13	18	24	30
KW	4	6	8	10
LA	2.5	2.5	2.5	3
LB1	3.5	4	5.5	–
LB2	3.5	4	5.5	5.5
LJ	4	9	15	27
MM	10	16	20	25
PL 1	10	12	12	16.5
PL 2	34	36.5	45	58.5
RT	M5	M6	M8	M10
SW h13	8	13	16	21
TG	26 ±0.4	38 ±0.5	56.5 ±0.7	89 ±0.7
WH	5.6 ±1.4	8.4 ±1.6	9.8 ±1.6	10 ±2
X1	4.5	11	18	20
X2	–	–	12	20
X3	–	–	21	29
ZA0 2x ±0,5	59.5	65.5	84	110
ZA0 3x ±0,8	81	89	115.5	147.5
ZA0 4x ±1,0	102.5	112.5	147	185
ZB0 2x	65.1 ±1.4	73.9 ±1.6	93.8 ±1.6	120 ±2
ZB0 3x	86.6 ±1.4	97.4 ±1.6	125.3 ±1.6	157.5 ±2
ZB0 4x	108.1 ±1.4	120.9 ±1.6	156.8 ±1.6	195 ±2

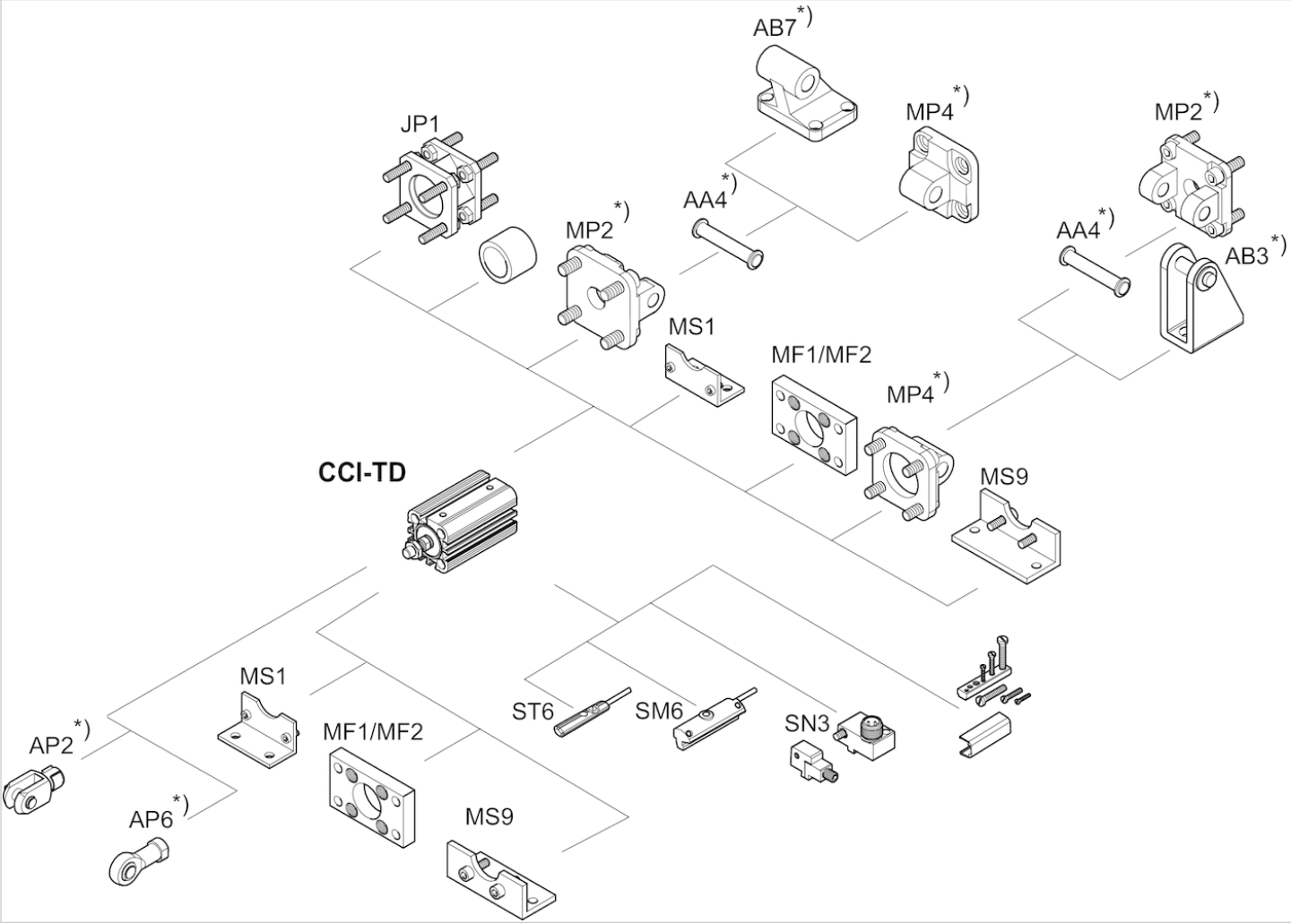
Diagrams

Circuit symbol



Accessories overview

Accessories overview



* Can only be used for 2x tandem

Bearing block AB7-HD, Series CM1

- Suitable for robust mechanical engineering applications, with fixed bearin
- Cylinder mounting in accordance with ISO 1555
- Suitable piston Ø 32, 40, 50, 63, 80, 100, 125 mm

Standards ISO 15552

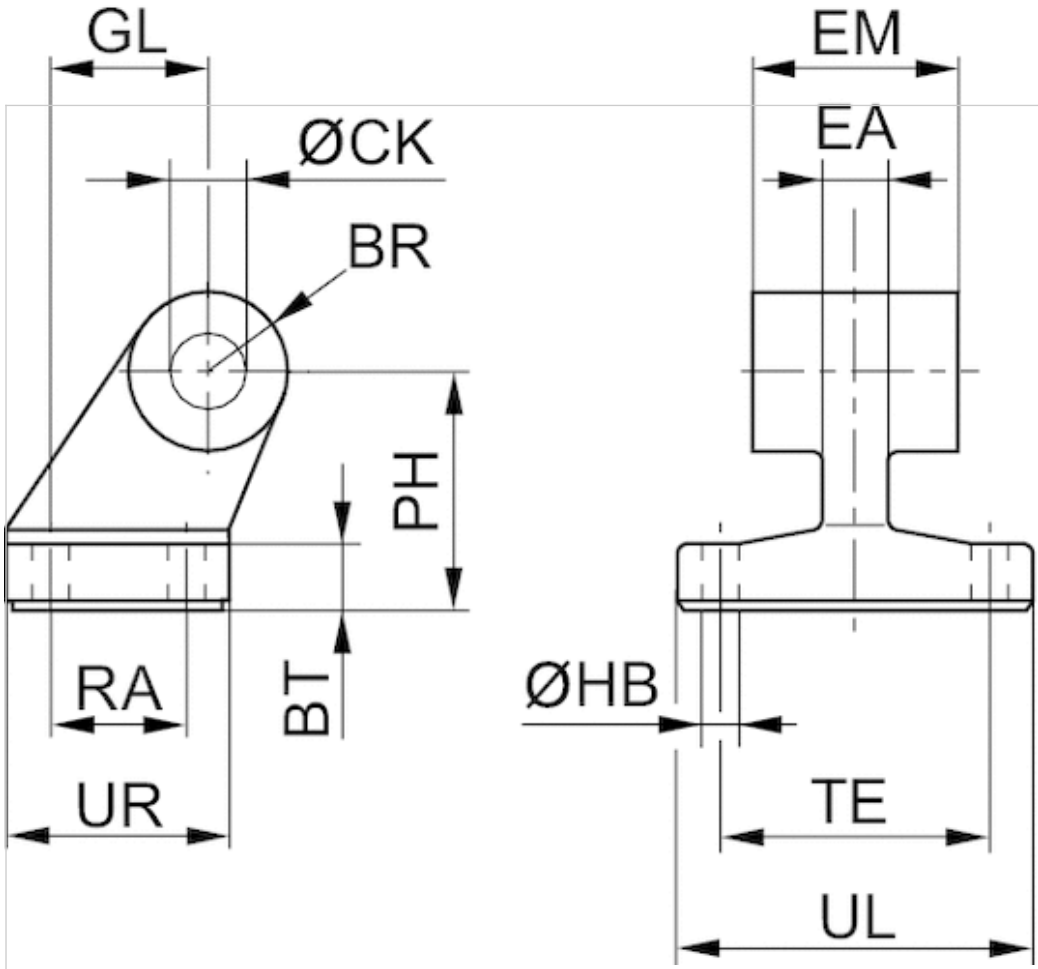
Technical data

Part No.	Piston Ø	Swivel bearing Ø
1825805275	32 mm	10 mm
1825805276	40 mm	12 mm
1825805277	50 mm	12 mm
1825805278	63 mm	16 mm
1825805279	80 mm	16 mm
1825805280	100 mm	20 mm
1825805281	125 mm	25 mm

Technical information

Material	
Material	Nodular graphite iron
	galvanized
Screws	galvanized steel

Dimensions



Dimensions

Part No.	Piston Ø	BR	BT	Ø CK H9	Ø HB H13	EM	GL JS14	EA max.	PH JS15
1825805275	32 mm	10	8	10	6.6	26 –0,2/–0,6	21	10	32
1825805276	40 mm	11	10	12	6.6	28 -0,2/-0,6	24	12	36
1825805277	50 mm	13	12	12	9	32 –0,2/–0,6	33	16	45
1825805278	63 mm	15	12	16	9	40 –0,2/–0,6	37	16	50
1825805279	80 mm	15	14	16	11	50 -0,2/–0,6	47	20	63
1825805280	100 mm	19	15	20	11	60 –0,2/–0,6	55	20	71
1825805281	125 mm	22,5	20	25	14	70 –0,5/–1,5	70	30	90

Piston Ø	RA JS14	TE JS14	UL max.	UR max.
32 mm	18	38	51	31
40 mm	22	41	54	35
50 mm	30	50	65	45
63 mm	35	52	67	50
80 mm	40	66	86	60
100 mm	50	76	96	70
125 mm	60	94	124	90

Bearing block CS7, Series CM1

- With ball joint and foo
- Cylinder mounting in accordance with VDMA 24562 part
- Suitable piston Ø 32, 40, 50, 63, 80, 100, 125 mm

Standards VDMA 24562 part 2

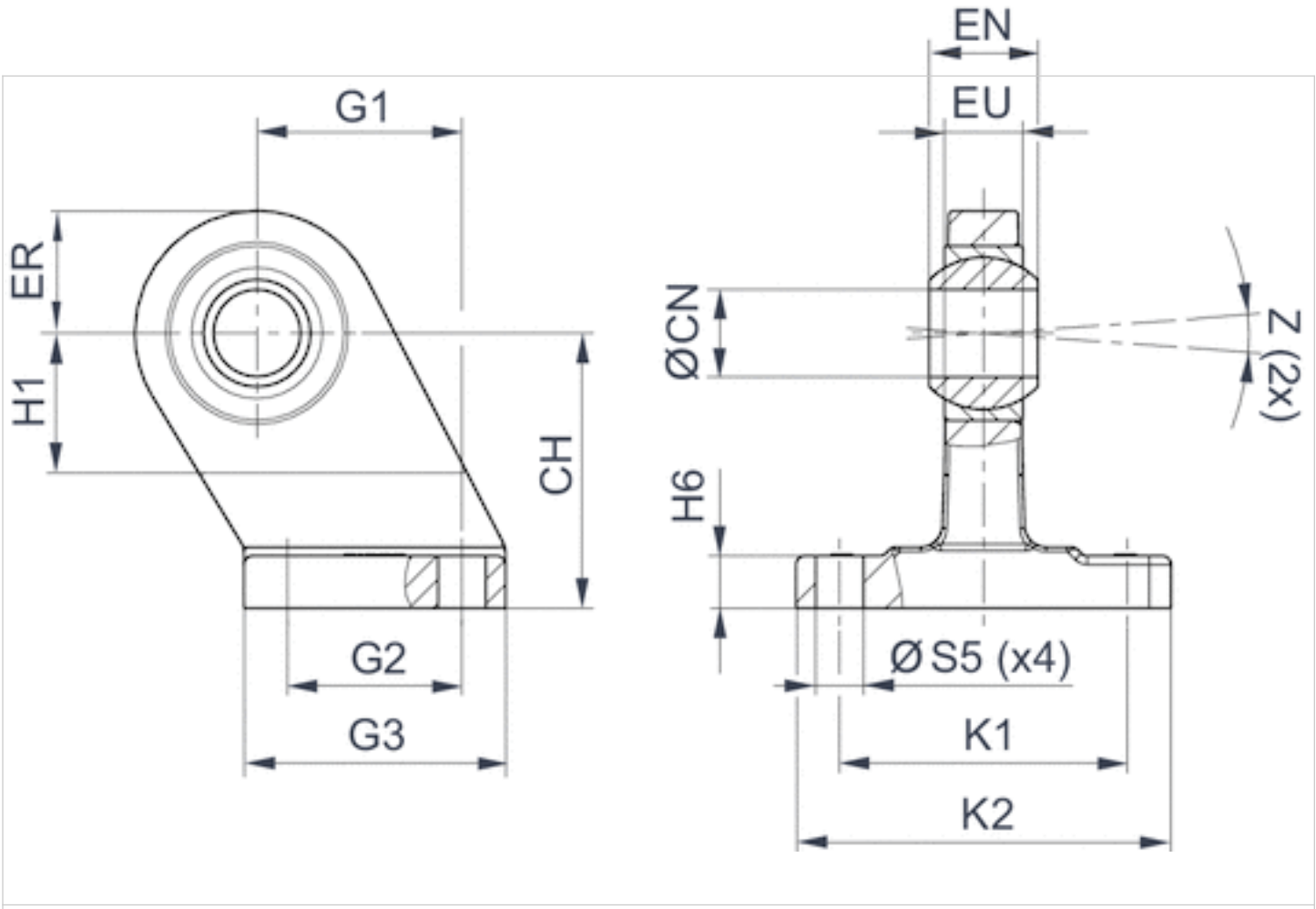
Technical data

Part No.	Piston Ø	Swivel bearing Ø
1827001784	32 mm	10 mm
1827001785	40 mm	12 mm
1827001786	50 mm	16 mm
1827001787	63 mm	16 mm
1827001788	80 mm	20 mm
1827001789	100 mm	20 mm
1827001790	125 mm	30 mm

Technical information

Material	
Material	Nodular graphite iron
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	CH JS15	ØCN H7	EU max.	EN -1,0	ER max.	G1 JS14	G2 JS14	G3 max.
1827001784	32 mm	32	10	10.5	14	16	21	18	31
1827001785	40 mm	36	12	12	16	18	24	22	35
1827001786	50 mm	45	16	15	21	21	33	30	45
1827001787	63 mm	50	16	15	21	23	37	35	50
1827001788	80 mm	63	20	18	25	28	47	40	60
1827001789	100 mm	71	20	18	25	30	55	50	70
1827001790	125 mm	90	30	25	37	40	70	60	90

Piston Ø	H1 min	H6	K1 JS14	K2 max.	ØS5 H13	Z min.
32 mm	16	9 ±1	38	51	6.6	4°
40 mm	20	9 ±1	41	54	6.6	4°
50 mm	22	11 ±1	50	65	9	4°
63 mm	27	11 ±1	52	67	9	4°
80 mm	31	12 ±1,5	66	86	11	4°
100 mm	38	13 ±1,5	76	96	11	4°
125 mm	40	17 ±1,5	94	124	14	4°

Clevis mounting AB6, Series CM1

- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 32, 40, 50, 63, 80, 100, 125 mm

Standards ISO 15552

Technical data

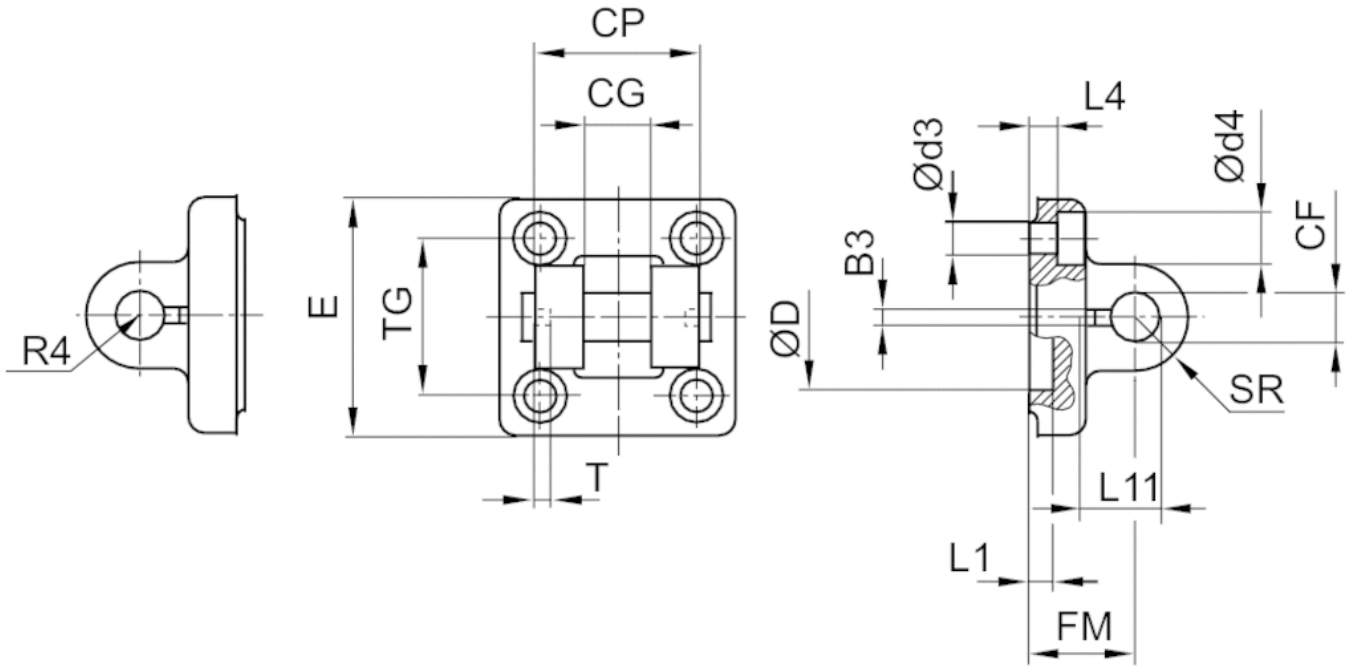
Part No.	Piston Ø	Swivel bearing Ø
1827001593	32 mm	10 mm
1827001594	40 mm	12 mm
1827001595	50 mm	16 mm
1827002024	63 mm	16 mm
1827001597	80 mm	20 mm
1827001598	100 mm	20 mm
1827001599	125 mm	30 mm

Scope of delivery: clevis mounting incl. pivot pins and mounting screws

Technical information

Material	
Material	Aluminum (forged)
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	B3 ±0.2	Ø CF F7	CG D10	CP d12	Ø d3	Ø d4	Ø D	E	FM ±0.2
1827001593	32 mm	3.3	10	14	34	6.6	11	30	49	22
1827001594	40 mm	4.3	12	16	40	6.6	11	35	55	25
1827001595	50 mm	4.3	16	21	45	9	15	40	67	27
1827002024	63 mm	4.3	16	21	51	9	15	45	77	32
1827001597	80 mm	4.3	20	25	65	11	18	45	97	36
1827001598	100 mm	4.3	20	25	75	11	18	55	117	41
1827001599	125 mm	6.3	30	37	97	14	20	60	138	50

Piston Ø	L1 min.	L4 ±0.5	L11 –0.5	R4	SR	T ±0.2	TG
32 mm	4.5	5.5	16.5	17	11	3	32,5 ±0.2
40 mm	4.5	5.5	18	20	12	4	38 ±0.2
50 mm	4.5	6.5	23	22	15	4	46,5 ±0.2
63 mm	4.5	6.5	23	25	15	4	56,5 ±0.2
80 mm	4.5	10	27	30	20	4	72 ±0.2
100 mm	4.5	10	27	32	20	4	89 ±0.2
125 mm	7	10	40	42	26	6	110 ±.3

Clevis mounting AB3, Series CM1

- Suitable piston Ø 12, 16, 20, 25 mm

The delivered product may vary from that in the illustration.

Technical data

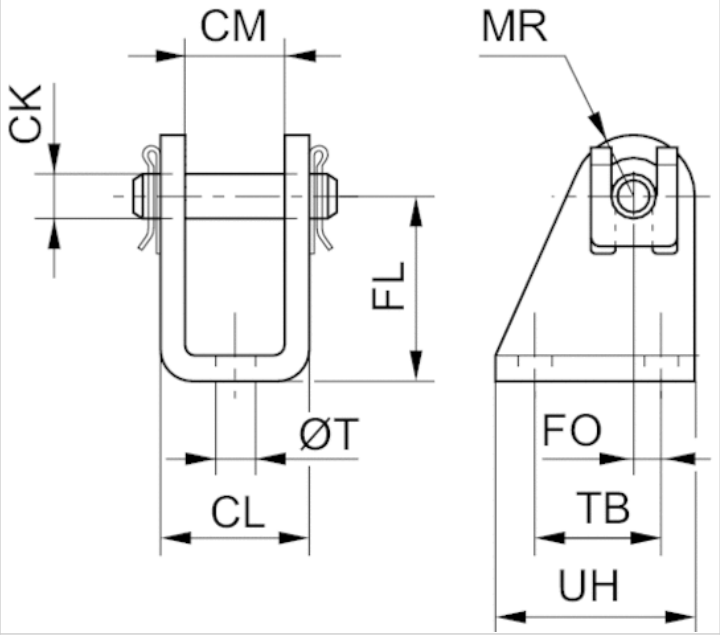
Part No.	Piston Ø	Swivel bearing Ø
1827001446	12, 16 mm	6 mm
1827001445	20, 25 mm	8 mm

Scope of delivery: clevis mounting incl. pivot pins

Technical information

Material	
Material	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	CM	Ø CK	CL	FL	FO	MR	Ø T	TB	UH
1827001446	12, 16 mm	12,1	6	18,1	27	2,0	7	5,5	15	25
1827001445	20, 25 mm	16,1	8	24,1	30	4,0	10	6,6	20	32

Clevis mounting MP2-HD, Series CM1

- Suitable for robust mechanical engineering application
- Cylinder mounting in accordance with ISO 1555
- Suitable piston Ø 32, 40, 50, 63, 80, 100, 125 mm

Standards ISO 15552

Technical data

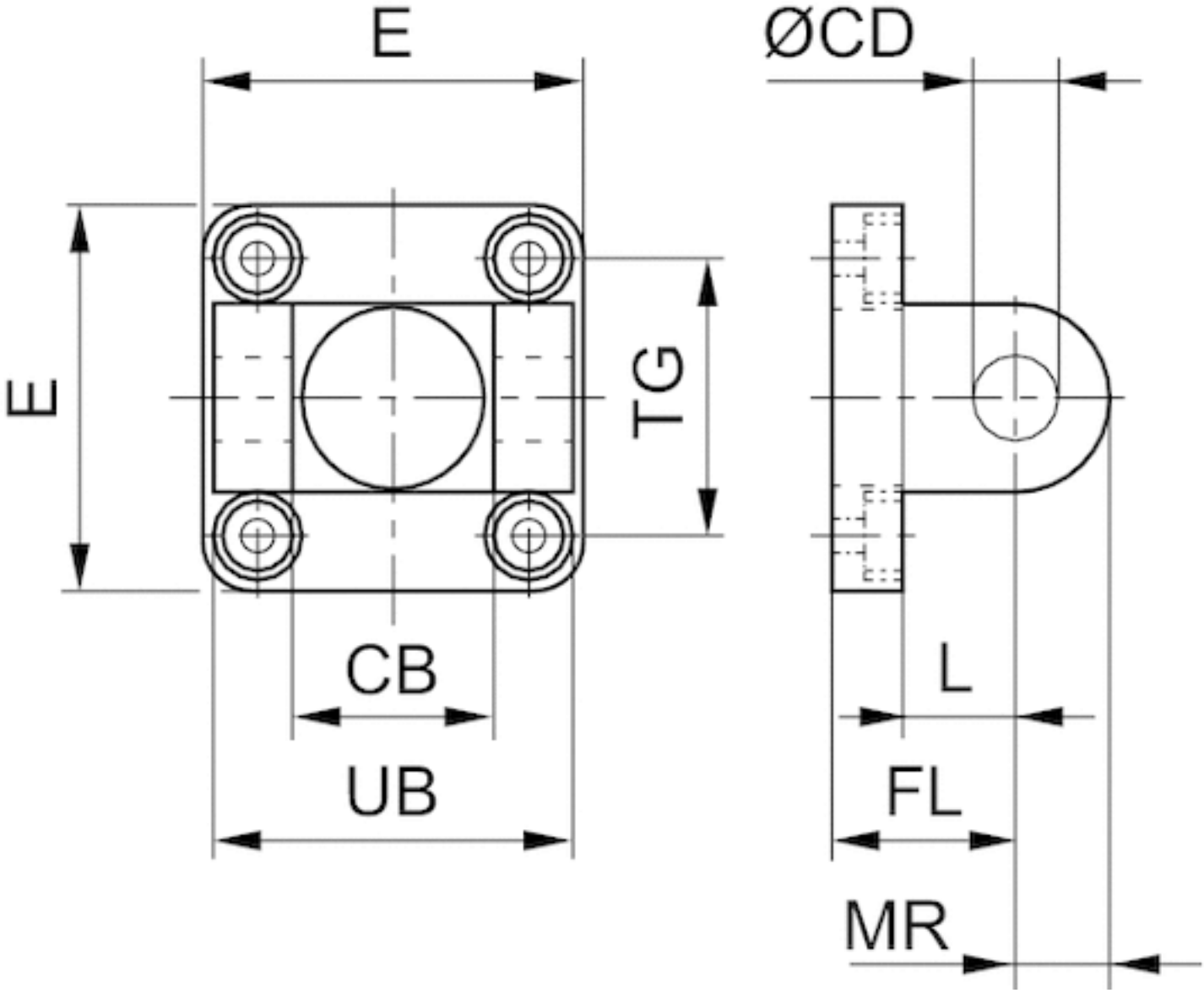
Part No.	Piston Ø	Swivel bearing Ø
1827001289	32 mm	10 mm
1827001290	40 mm	12 mm
1827001291	50 mm	12 mm
1827001500	63 mm	16 mm
1827001293	80 mm	16 mm
1827001294	100 mm	20 mm
1827004862	125 mm	25 mm

Scope of delivery: clevis mounting incl. mounting screws

Technical information

Material	
Material	Aluminum (forged)
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	CB H14	Ø CD H9	E	FL ±0.2	L min.	MR max.	UB h13	TG
1827001289	32 mm	26	10	47.5	22	12	10	45	32.5 ±0.2
1827001290	40 mm	28	12	53.5	25	15	13	52	38 ±0.2
1827001291	50 mm	32	12	64	27	15	13	60	46.5 ±0.2
1827001500	63 mm	40	16	74	32	18	17	70	56.5 ±0.2
1827001293	80 mm	50	16	94	36	20	17	90	72.0 ±0.2
1827001294	100 mm	60	20	113.5	41	25	18	110	89.0 ±0.2
1827004862	125 mm	70	25	138	50	30	26	130	110 ±0.3

Rear eye MP4-HD, Series CM1

- Suitable for robust mechanical engineering applications - for clevis mounting MP2 and AB3
- Cylinder mounting in accordance with ISO 21287 ISO 15552
- Suitable piston Ø 16, 20, 25, 32, 40, 50, 63, 80, 100, 125 mm

Standards: See table below

Technical data

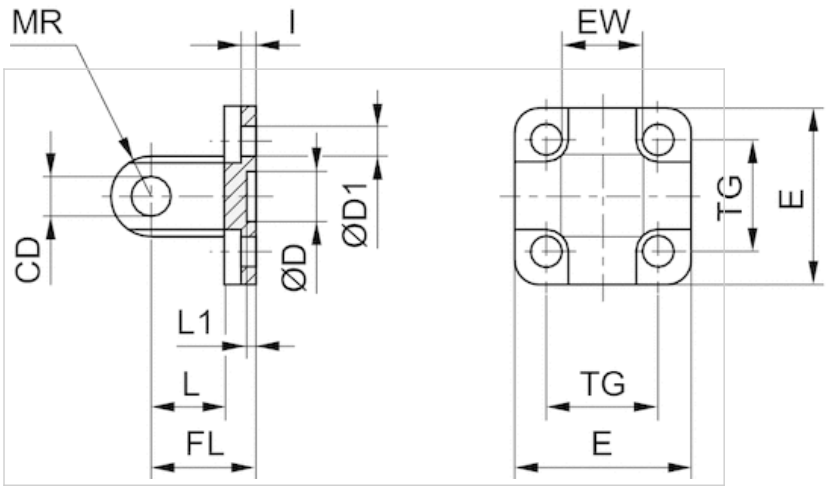
Part No.	Piston Ø	Swivel bearing Ø	Standardization	Housing material	Surface
1825805368	16 mm	6 mm	-	Die-cast aluminum	-
1827002300	20 mm	8 mm	ISO 21287	Steel	galvanized
1827002301	25 mm	8 mm	ISO 21287	Steel	galvanized
1827001283	32 mm	10 mm	ISO 15552	Aluminum (forged)	-
1827001284	40 mm	12 mm	ISO 15552	Aluminum (forged)	-
1827001285	50 mm	12 mm	ISO 15552	Aluminum (forged)	-
1827020086	63 mm	16 mm	ISO 15552	Aluminum (forged)	-
1827001287	80 mm	16 mm	ISO 15552	Aluminum (forged)	-
1827001288	100 mm	20 mm	ISO 15552	Aluminum (forged)	-
1827004866	125 mm	25 mm	ISO 15552	Aluminum (forged)	-

Scope of delivery: clevis incl. mounting screws

Technical information

Material	
Material	Die-cast aluminum Steel Aluminum (forged)
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	CD H9	Ø D	Ø D1	E	EW	FL ±0,2	I ±0,5	L min.	L1 min.
1825805368	16 mm	6	10 H13	4.5	27	12 –0,2/–0,6	16	2.6	10	3
1827002300	20 mm	8	12 H13	5.5	34	16 –0,2/–0,6	20	2.6	14	3
1827002301	25 mm	8	12 H13	5.5	40	16 –0,2/–0,6	20	2.6	14	3
1827001283	32 mm	10	30 H11	6.6	48	26 –0,2/–0,6	22	5.5	12	4.5
1827001284	40 mm	12	35 H11	6.6	53	28 –0,2/–0,6	25	5.5	15	4.5
1827001285	50 mm	12	40 H11	9	63	32 –0,2/–0,6	27	6.5	15	4.5
1827020086	63 mm	16	45 H11	9	73	40 –0,2/–0,6	32	6.5	20	4.5
1827001287	80 mm	16	45 H11	11	98	50 –0,2/–0,6	36	10	20	4.5
1827001288	100 mm	20	55 H11	11	115	60 –0,2/–0,6	41	10	25	4.5
1827004866	125 mm	25	60 H11	14	138	70 –0,5/–1,2	50	10	30	7

Piston Ø	MR max.	TG
16 mm	6	18 ±0,2
20 mm	8	22 ±0,4
25 mm	8	26 ±0,4
32 mm	10	32,5 ±0,2
40 mm	12	38 ±0,2
50 mm	12	46,5 ±0,2
63 mm	16	56,5 ±0,2
80 mm	16	72 ±0,2
100 mm	20	89 ±0,2
125 mm	26	110 ±0,3

Rear eye MP6, Series CM1

- With ball joint and foot
- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 32, 40, 50, 63, 80, 100, 125 mm

Standards	ISO 15552
Weight	See table below

Technical data

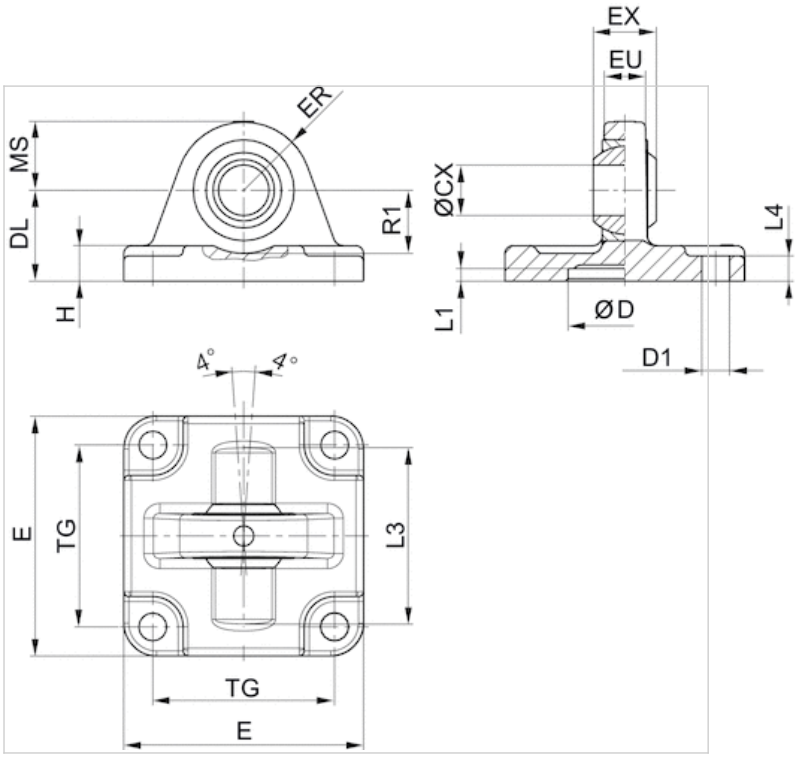
Part No.	Piston Ø	Swivel bearing Ø	Bearing material, inner ring	Bearing material, outer ring	Weight
1827001619	32 mm	10 mm	Stainless steel	Brass with PTFE coating	0.1 kg
1827001620	40 mm	12 mm	Stainless steel	Brass with PTFE coating	0.1 kg
1827001621	50 mm	16 mm	Stainless steel	Brass with PTFE coating	0.2 kg
1827020087	63 mm	16 mm	Stainless steel	Brass with PTFE coating	0.3 kg
1827001623	80 mm	20 mm	Stainless steel	Brass with PTFE coating	0.6 kg
1827001624	100 mm	20 mm	Stainless steel	Brass with PTFE coating	0.8 kg
1827001625	125 mm	30 mm	Stainless steel	Brass with PTFE coating	1.4 kg

Scope of delivery: clevis incl. mounting screws

Technical information

Material	
Material	Aluminum (forged)
Screws	galvanized steel
Bearing	Stainless steel

Dimensions



Dimensions

Part No.	Piston Ø	ØCX H7	ØD H11	ØD1 H13	DL ±0,2	E	EX –0,1	ER	EU	H	L1 min.	L3
1827001619	32 mm	10	30	6.6	22	47	14	15	10.5	9	4.5	36
1827001620	40 mm	12	35	6.6	25	53	16	18	12	9	4.5	42
1827001621	50 mm	16	40	9	27	65	21	20	15	10.5	4.5	48
1827020087	63 mm	16	45	9	32	75	21	23	15	10.5	4.5	55
1827001623	80 mm	20	45	11	36	95	25	27	18	14	4.5	70
1827001624	100 mm	20	55	11	41	115	25	30	18	15	4.5	80
1827001625	125 mm	30	60	14	50	140	37	40	25	16	7	100

Piston Ø	L4	MS -0,5	R1 min.	TG
32 mm	5.5	15	12	32,5 ±0,2
40 mm	5.5	18	15	38 ±0,2
50 mm	6.5	21	19	46,5 ±0,2
63 mm	6.5	23	21	56,5 ±0,2
80 mm	10	27	24	72 ±0,2
100 mm	10	30	25	89 ±0,2
125 mm	10	40	33	110 ±0,3

Rear eye MP9, Series CM1

- With rubber bushin
- Cylinder mounting in accordance with ISO 1555
- Suitable piston Ø 32 40 50 63 80 100 125 m

Standards	ISO 15552
Weight	See table below

Technical data

Part No.	Piston Ø	Swivel bearing Ø	Bearing material	Weight	Fig.
3683203000	32 mm	10 mm	Bronze	0,092 kg	Fig. 2
3683204000	40 mm	12 mm	Bronze	0,143 kg	Fig. 1
3683205000	50 mm	12 mm	Bronze	0,217 kg	Fig. 2
3683206000	63 mm	16 mm	Bronze	0,411 kg	Fig. 1
3683208000	80 mm	16 mm	Bronze	0,64 kg	Fig. 2
3683210000	100 mm	20 mm	Bronze	0,956 kg	Fig. 1
R412015973	125 mm	25 mm	steel, galvanized	1,37 kg	Fig. 2

Scope of delivery: clevis incl. mounting screws

Technical information

Material	
Material	Aluminum (forged)
Bearing	Bronze steel, galvanized

Dimensions

Fig. 1

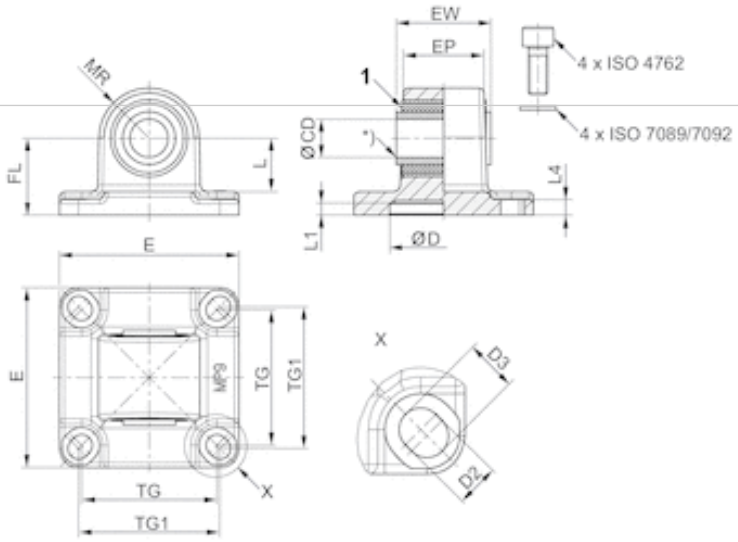
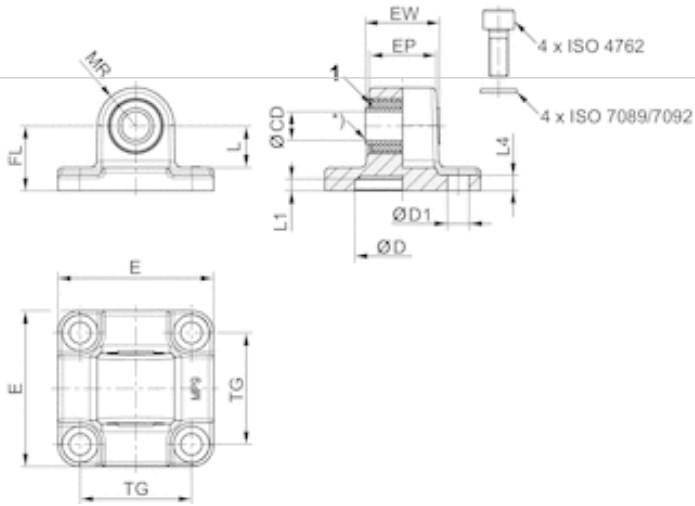


Fig. 2



1) Rubber bushing

Dimensions

Part No.	Piston Ø	CD H11	CD H9	E	EW	EP	TG	TG1 ±0,2	FL ±0,2	L 1)	MR	L1	L4
3683203000	32 mm	10	-	46	25.5	18,9	32.5	–	22	13.8	12.5	5	5.5
3683204000	40 mm	-	12	53	27	23,5	38	40	25	16.3	15	5	5.5
3683205000	50 mm	-	12	65	31	28	46.5	–	27	17.3	16	5	6.5
3683206000	63 mm	-	16	75	39.5	33.5	56.5	59	32	22.3	21	5	6.5
3683208000	80 mm	-	16	94.5	49.5	43	72	–	36	21.8	22	5	10
3683210000	100 mm	-	20	114	59.5	54	89	90	41	25.8	25	5	10
R412015973	125 mm	-	25	138	69.5	60	110	–	50	33.8	34	7.5	10

Piston Ø	D	D1 H13	D2 -0,2	D3 -0,2	Fig.
32 mm	30	6.6	–	–	Fig. 2
40 mm	35	–	6.6	8	Fig. 1
50 mm	40	9	–	–	Fig. 2
63 mm	45	6.6	–	–	Fig. 1
80 mm	45	11	–	–	Fig. 2
100 mm	55	–	11	11.7	Fig. 1
125 mm	60	13.5	–	–	Fig. 2

Trunnion mounting MT5, MT6, Series CM1

- for mounting to the cylinder cover or base
- Suitable piston Ø 20, 25, 32, 40, 50, 63, 80, 100, 125 mm
- for series CCI, KPZ, CCL-IC/-IS CCI, CVI, CCL-IC/-IS, PRA/TRB

Weight

See table below

The delivered product may vary from that in the illustration.

Technical data

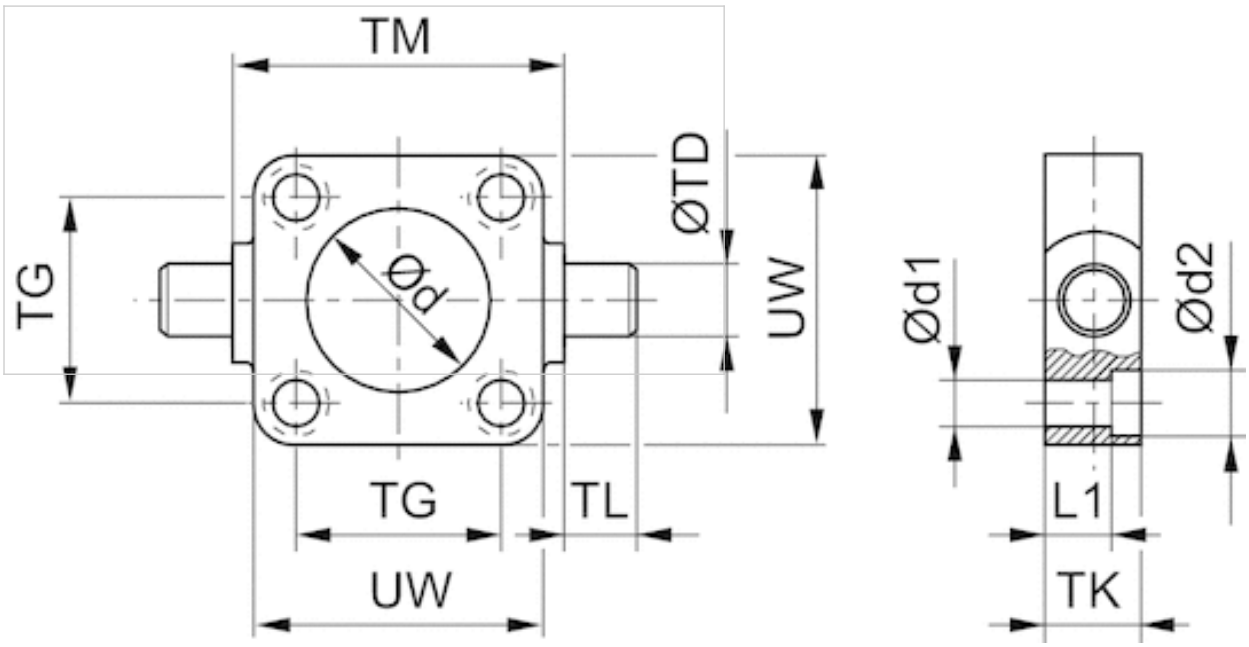
Part No.	Piston Ø	Weight
1825805360	20 mm	0.104 kg
1825805361	25 mm	0.122 kg
1827001609	32 mm	0.29 kg
1827001610	40 mm	0.5 kg
1827001611	50 mm	0.7 kg
1827002046	63 mm	1.1 kg
1827001613	80 mm	1.5 kg
1827001614	100 mm	2.7 kg
1827001615	125 mm	3.8 kg

Scope of delivery: trunnion mounting incl. mounting screws

Technical information

Material	
Material	Nodular graphite iron
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	Ø d H11	Ø d1	Ø d2	L1	TD e9	TG ±0,2	TK	TL h14	TM h14	UW
1825805360	20 mm	18	5.5	10	8	12	22	14	12	38	35
1825805361	25 mm	22	5.5	10	8	12	26	14	12	42	39
1827001609	32 mm	30	6.6	11	7.5	12	32.5	16	12	50	48
1827001610	40 mm	35	6.6	11	7.5	16	38	20	16	63	56
1827001611	50 mm	40	9	15	10	16	46.5	24	16	75	65
1827002046	63 mm	45	9	15	10	20	56.5	24	20	90	75
1827001613	80 mm	45	11	18	16	20	72	28	20	110	100
1827001614	100 mm	55	11	18	25.5	25	89	38	25	132	120
1827001615	125 mm	60	14	20	34	25	110	46	25	160	145

Bearing AT4, Series CM1

- for trunnion mounting MT4, MT5, MT6
- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 20, 25, 32 40, 50 63, 80, 100, 125 mm
- for series CCI, CCL-IC, ICL, KPZ, PRA/TRB CCI, CCL-IC, KPZ, PRA/TRB

Standards	ISO 15552

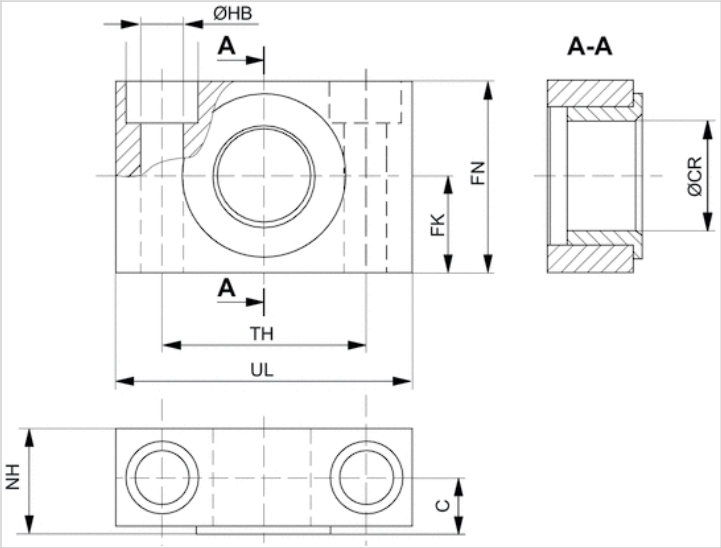
Technical data

Part No.	Piston Ø	Swivel bearing Ø	Scope of delivery
1827001603	20, 25, 32 mm	12 mm	2 piece
1827001604	40, 50 mm	16 mm	2 piece
1827001605	63, 80 mm	20 mm	2 piece
1827001606	100, 125 mm	25 mm	2 piece

Technical information

Material	
Material	Steel
	galvanized
Guide bushing	Sintered bronze

Dimensions



Dimensions

Part No.	Piston Ø	UL	NH	TH	C	CR H9	HB H13	FN	FK	Plain bearing
1827001603	20, 25, 32 mm	46	18	32 ±0,2	10.5	12	6.6	30	15 ±0,1	Sintered bronze
1827001604	40, 50 mm	55	21	36 ±0,2	12	16	9	36	18 ±0,1	Sintered bronze
1827001605	63, 80 mm	65	23	42 ±0,2	13	20	11	40	20 ±0,1	Sintered bronze
1827001606	100, 125 mm	75	28.5	50 ±0,2	16	25	14	50	25 ±0,1	Sintered bronze

Flange mounting MF1, MF2, Series CM1

- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 32, 40, 50, 63, 80, 100,125 mm

Standards ISO 15552

Technical data

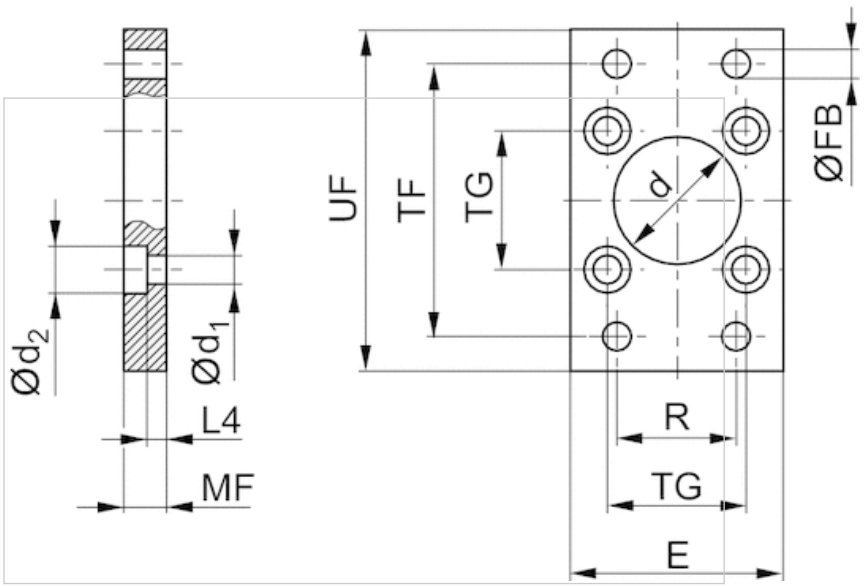
Part No.	Piston Ø	Swivel bearing Ø
1827001277	32 mm	30 mm
1827001278	40 mm	35 mm
1827001279	50 mm	40 mm
1827001499	63 mm	45 mm
1827001281	80 mm	45 mm
1827001282	100 mm	55 mm
1827004861	125 mm	60 mm

Scope of delivery: flange mounting incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	Ød H11	Ød1	Ød2	E max.	ØFB	L4	MF	R	TF	TG	UF
1827001277	32 mm	30	6.6	11	50	7	4.5	10	32	64	32,5 ±0,2	80
1827001278	40 mm	35	6.6	11	55	9	4.5	10	36	72	38 ±0,2	90
1827001279	50 mm	40	9	15	65	9	6	12	45	90	46,5 ±0,2	110
1827001499	63 mm	45	9	15	75	9	6	12	50	100	56,5 ±0,2	125
1827001281	80 mm	45	11	18	100	12	9	16	63	126	72 ±0,2	154
1827001282	100 mm	55	11	18	120	14	9	16	75	150	89 ±0,2	186
1827004861	125 mm	60	14	20	140	16	10.5	20	90	180	110 ±0,3	220

Flange mounting MF1, MF2, Series CM1

- Suitable piston Ø 16, 20, 25 mm

Weight See table below

Technical data

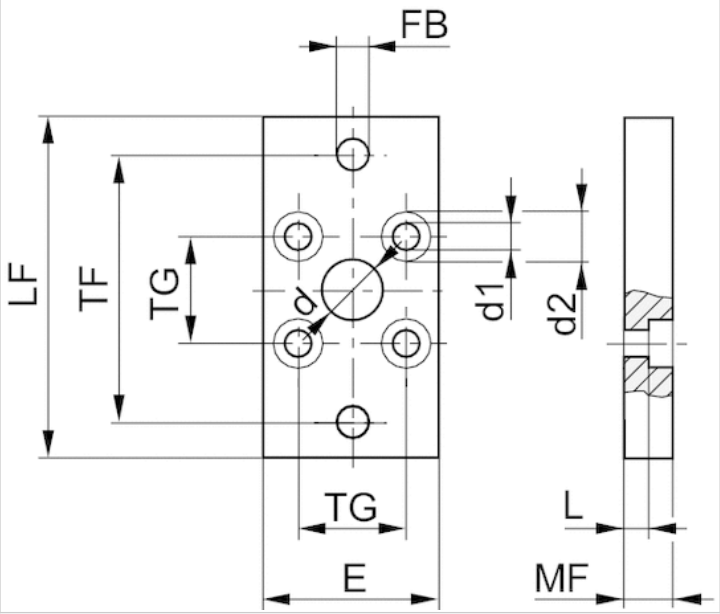
Part No.	Piston Ø	Swivel bearing Ø	Weight
1821038241	16 mm	10 mm	0.05 kg
1827002292	20 mm	12 mm	0.18 kg
1827002293	25 mm	12 mm	0.23 kg

Scope of delivery: flange mounting incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	Ød H11	Ød1	Ød2	E 1)	ØFB	L4	MF	R	TF	TG	UF
1821038241	16 mm	10	4.5	10	29	5.5	5.6	10	–	43	18	55
1827002292	20 mm	12	5.5	10	36	6.6	4.6	10	–	55	22	70
1827002293	25 mm	12	5.5	10	40	6.6	4.6	10	–	60	26	76

1) Max.

Intermediate flange JP2, Series CM1

- for multi-position cylinders
- Suitable piston Ø 16, 20, 25, 32, 40, 50, 63, 80, 100 mm
- for series CCI, KPZ, CCI

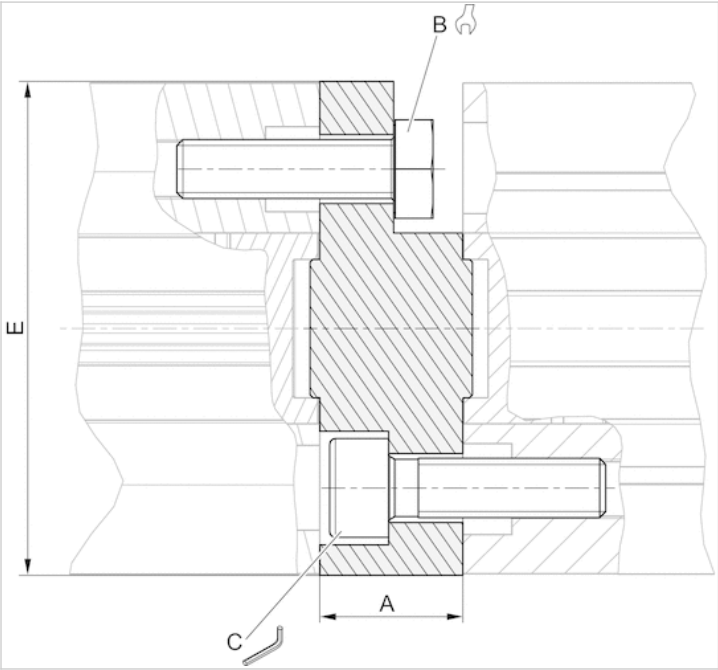
Technical data

Part No.	Piston Ø
1827020290	16 mm
1827020267	20 mm
1827020268	25 mm
1827020269	32 mm
1827020270	40 mm
1827020271	50 mm
1827020272	63 mm
R412024535	80 mm
R412024536	100 mm

Technical information

Material	
Material	Aluminum

Dimensions



Dimensions

Part No.	For series	A	B	C	Md [Nm] 1)	E
1827020290	CCI, KPZ	12.5	7	–	2.5	28.4
1827020267	CCI, KPZ	12.5	8	–	4	35
1827020268	CCI, KPZ	13	8	4	4	40
1827020269	CCI, KPZ	14.5	10	5	4	50
1827020270	CCI, KPZ	14.5	10	5	4	57.1
1827020271	CCI, KPZ	14.5	13	6	8	67.4
1827020272	CCI, KPZ	14.5	13	6	8	80
R412024535	CCI	16.5	16	8	16	95
R412024536	CCI	19.5	16	8	16	115

1) torque

Foot mounting MS1, Series CM1

- to mount on cylinder PRA, TRB, CCL-IS/-IC, CCI, KPZ, 167, CVI, ITS
- Cylinder mounting in accordance with ISO 15552
- Suitable piston Ø 16, 20, 25, 32, 40, 50, 63, 80, 100, 125 mm

Standards See table below

Technical data

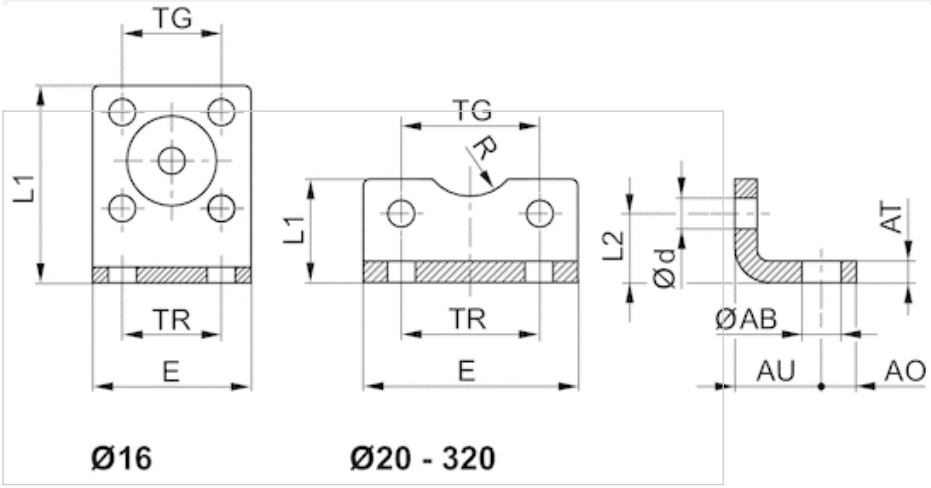
Part No.	Piston Ø	For series	Standardization
1821332053	16 mm	KPZ CCI CCL-IC	-
1827002284	20 mm	KPZ CCI CCL-IC	-
1827002285	25 mm	KPZ CCI CCL-IC	-
1827001271	32 mm	PRA/TRB CCL-IC/-IS CCI CVI	ISO 15552
1827001272	40 mm	PRA/TRB CCL-IC/-IS CCI CVI	ISO 15552
1827001273	50 mm	PRA/TRB CCL-IC/-IS CCI CVI	ISO 15552
1827001498	63 mm	PRA/TRB CCL-IC/-IS CCI CVI	ISO 15552
1827001275	80 mm	PRA/TRB CCL-IC/-IS CCI CVI	ISO 15552
1827001276	100 mm	CCI CCL-IC/-IS PRA/TRB CVI	ISO 15552
1827001310	125 mm	PRA/TRB CCI CVI	ISO 15552

Scope of delivery: 2 foot mountings incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	ØAB	AO	AT	AU ±0,2	Ød	E	L1	L2	R	TG	TR
1821332053	16 mm	5.5	5	3	13	4.5	29	35.5	13	8	18 ±0,2	18
1827002284	20 mm	6.6	6	4	16	5.4	36	22	16	10	22 ±0,2	22
1827002285	25 mm	6.6	6	4	16	5.4	40	23	17	11	26 ±0,2	26
1827001271	32 mm	7	8	4 ±0,3	24	6.6	48	25	15.5	15	32,5 ±0,2	32
1827001272	40 mm	10	10	4 ±0,3	28	6.6	56	26	17	17.5	38 ±0,2	36
1827001273	50 mm	10	11	5 ±0,3	32	9	68	32	21.5	20	46,5 ±0,2	45
1827001498	63 mm	10	13	5 ±0,3	32	9	78	34	21.5	22.5	56,5 ±0,2	50
1827001275	80 mm	12	16	6 ±0,5	41	11	98	47	27	22.5	72 ±0,2	63
1827001276	100 mm	14.5	19	6 ±0,5	41	11	117	52	26.5	27.5	89 ±0,2	75
1827001310	125 mm	16.5	20	8 ±1	45	13.5	144	69	35	30	110 ±0,3	90

Foot mounting MS9, Series CM1

- long version
- Suitable piston Ø 32, 40, 50, 63, 80, 100 mm

Technical data

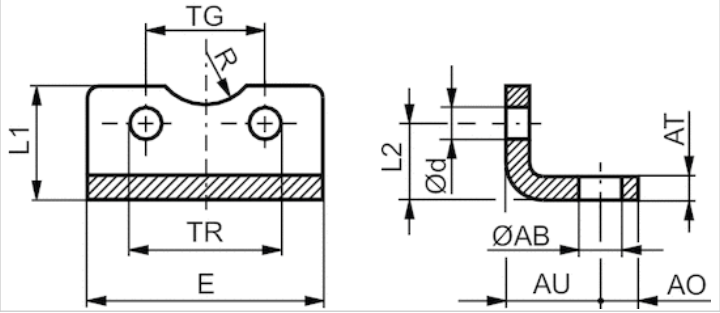
Part No.	Piston Ø
1827001018	32 mm
1827001019	40 mm
1827001020	50 mm
1827020085	63 mm
1827001022	80 mm
1827001023	100 mm

Scope of delivery: 2 foot mountings incl. mounting screws

Technical information

Material	
Material	Steel
	galvanized
Screws	Steel
	galvanized

Dimensions



Dimensions

Part No.	Piston Ø	Ø AB H13	AO	AT	AU	Ø d	E	L1	L2	R	TG ±0,1	TR JS14
1827001018	32 mm	7	12	5	18	6.6	79	30	15.8	15	32.5	65
1827001019	40 mm	10	12	5	18	6.6	90	30	17	17.5	38	75
1827001020	50 mm	10	14	5	21	9	110	35	21.7	20	46.5	90
1827020085	63 mm	10	14	5	21	9	120	35	21.7	25	56.5	100
1827001022	80 mm	12	13	5	27	11	153	50	27	22.5	72	128
1827001023	100 mm	14.5	13	5	27	11	178	50	26.5	27.5	89	148

Bolts AA4, Series CM1

- Cylinder mounting in accordance with ISO 1555
- Suitable piston Ø 32 40 50 63 80 100 125 m

Standards	See table below
Weight	See table below

Technical data

Part No.	Piston Ø	Standardization	Weight	Fig.
1823120020	32 mm	-	0,03 kg	Fig. 1
1823120021	40 mm	-	0,05 kg	Fig. 1
1823120022	50 mm	-	0,06 kg	Fig. 1
1823120023	63 mm	-	0,12 kg	Fig. 1
1823120024	80 mm	-	0,15 kg	Fig. 1
1823120025	100 mm	-	0,29 kg	Fig. 1
5236000092	125 mm	ISO 15552	0,53 kg	Fig. 2

Scope of delivery: pivot pins incl. circlips

Technical information

Material	
Material	Steel
	galvanized

Dimensions

Fig. 1

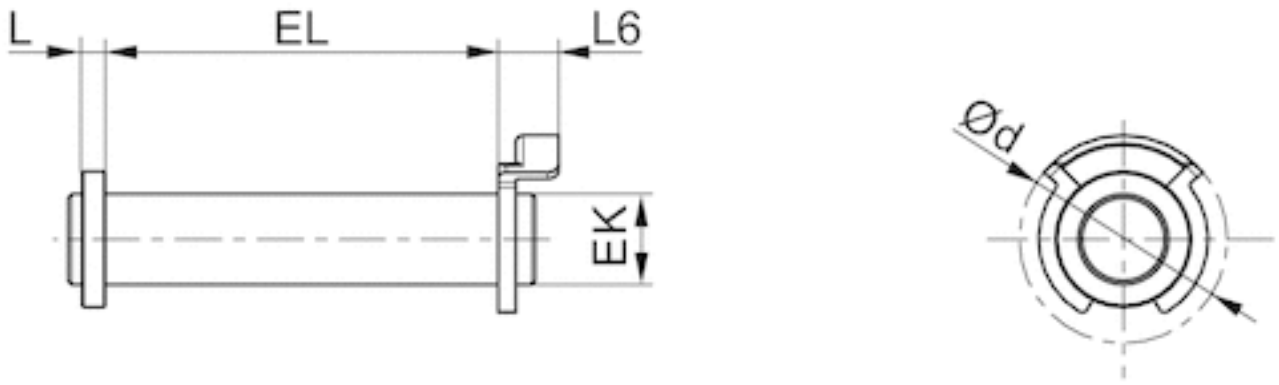
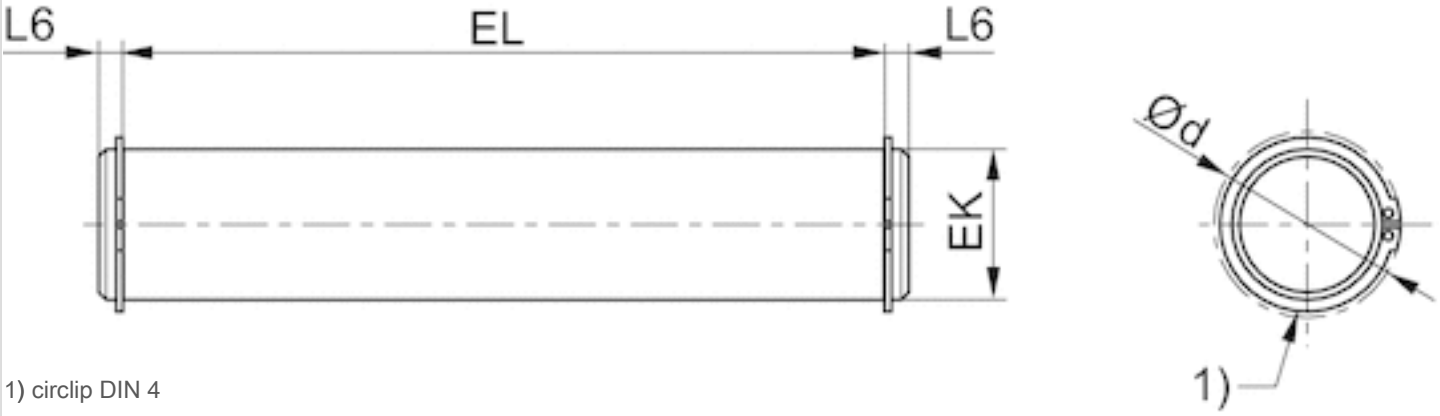


Fig. 2



1) circlip DIN 4

Dimensions

Part No.	Piston Ø	Fig.	Ø d max	EK e8	EL	L max.	L6 max.
1823120020	32 mm	Fig. 1	20	10	45.2 +0,3	3.5	9
1823120021	40 mm	Fig. 1	22	12	52.2 +0,3	4	9
1823120022	50 mm	Fig. 1	22	12	60.2 +0,3	4	9
1823120023	63 mm	Fig. 1	28	16	70.2 +0,3	4.5	11
1823120024	80 mm	Fig. 1	28	16	90.2 +0,3	4.5	11
1823120025	100 mm	Fig. 1	38	20	110.2 +0,3	5	11
5236000092	125 mm	Fig. 2	34.2	25	132 +0,5	-	3.75

Mounting kit

Weight 0.02 kg

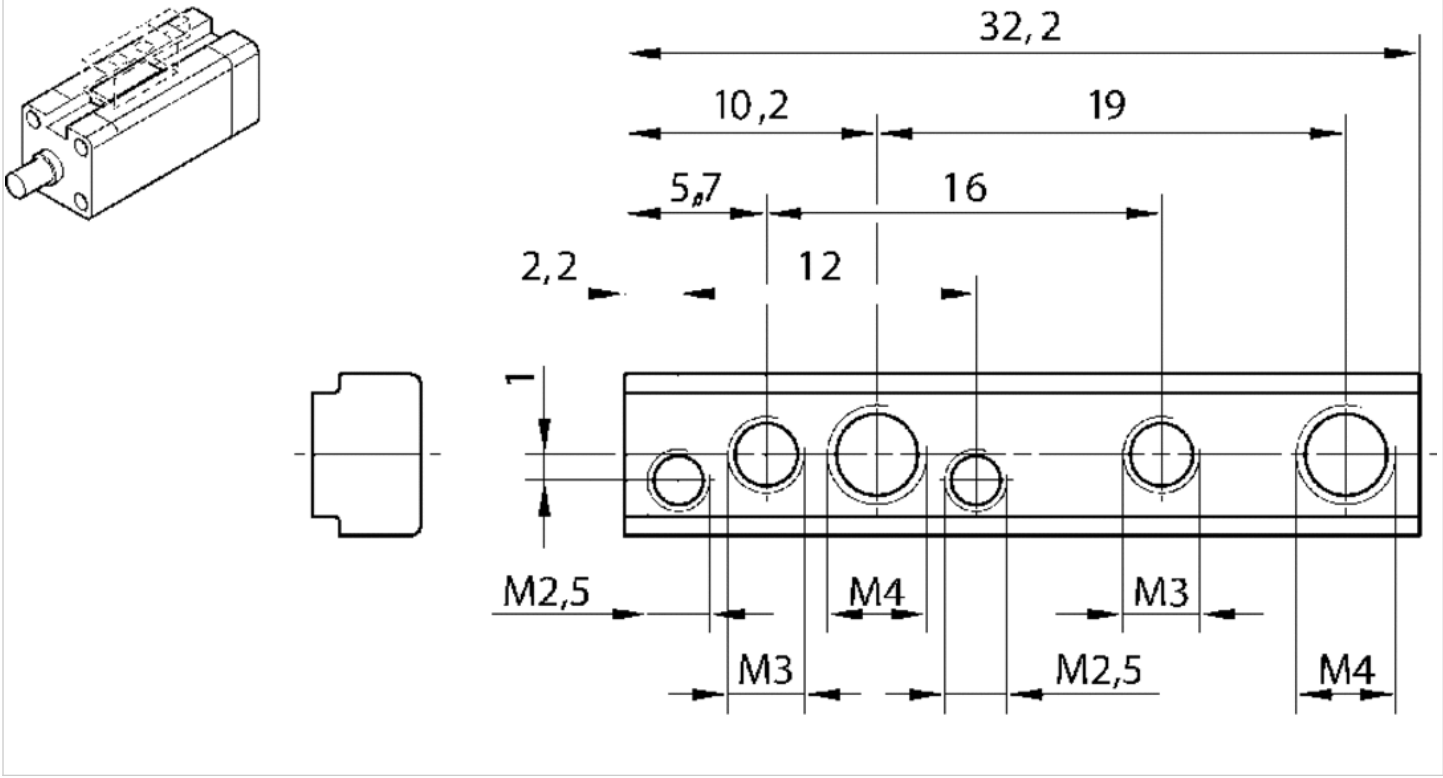
Technical data

Part No.
1827020275

Technical information

Material	
Housing	Brass

Dimensions



Dimensions

Part No.	Ø mm	Material Screws	Surface Screws
1827020275	16–100	Steel	galvanized

Piston rod nut MR9

Weight See table below

Technical data

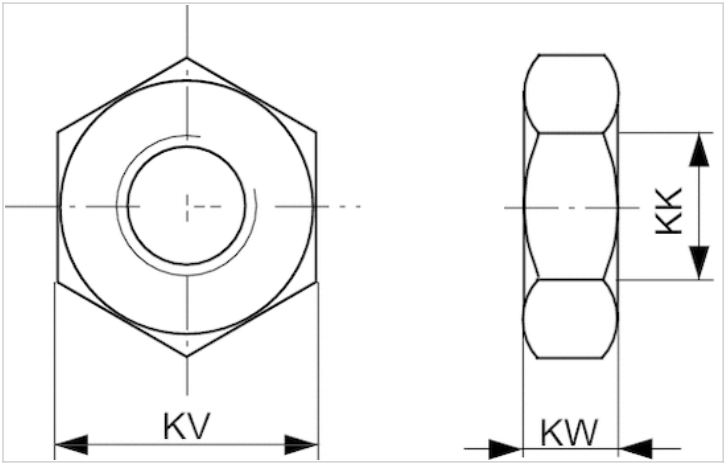
Part No.	Suitable piston rod thread	Material	Weight	
1823300033	M6	Steel, galvanized	0.004 kg	-
1823300034	M8	Steel, galvanized	0.005 kg	-
1823A00020	M10x1,25	Steel, galvanized	0.01 kg	-
8103190344	M12x1,25	Steel, galvanized	0.012 kg	-
1823300030	M16x1,5	Steel, galvanized	0.017 kg	-
3330320000	M8	Stainless steel	0.006 kg	-
3590302000	M10x1,25	Stainless steel	0.01 kg	-
3590304000	M12x1,25	Stainless steel	0.02 kg	-
3590305000	M16x1,5	Stainless steel	0.03 kg	1)
8103040344	M20x1,5	Steel, galvanized	0.06 kg	-

1) 3590305000 can also be used as an MR3, nut for cylinder mounting.

Technical information

Material	
	Steel Stainless steel
	galvanized

Dimensions



Dimensions

Part No.	KK	KV	KW
1823300033	M6	10	3.2
1823300034	M8	13	4
8103190344	M12x1,25	19	6
1823300030	M16x1,5	24	8
3330320000	M8	13	4
3590302000	M10x1,25	16	5
3590304000	M12x1,25	19	6
3590305000	M16x1,5	24	8
8103040344	M20x1,5	30	10

Rod clevis AP2, Series CM2

- to mount on cylinder PRA, TRB, CCI, MNI, ICM, KPZ, KHZ, 167, CVI, RPC, RDC, ITS

Weight See table below

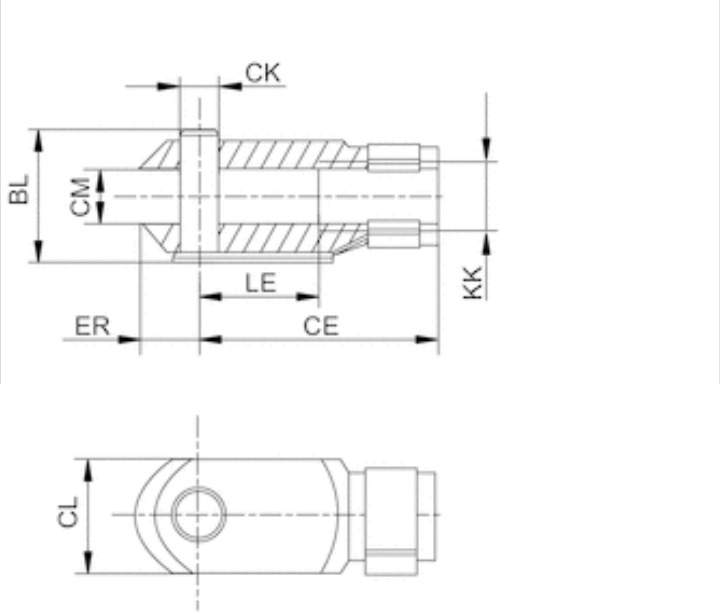
Technical data

Part No.	Suitable piston rod thread	for	Weight
1822122009	M6	CCI MNI ICM KHZ	0.02 kg
1822122010	M8	CCI MNI ICM KHZ	0.05 kg
1822122024	M10x1,25	PRA TRB CCI MNI ICM KPZ 167 CVI RPC RDC	0.1 kg
1822122025	M12x1,25	PRA TRB CCI KPZ 167 CVI RPC 102	0.16 kg
1822122005	M16x1,5	PRA TRB CCI KPZ 167 CVI RPC RDC 102	0.4 kg
1822122004	M20x1,5	PRA TRB CCI KPZ 167 CVI 102	0.7 kg

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	KK	BL	CE	ØCK e11	CL	CM	ØD1	ER	LE
1822122009	M6	16	24	6	12	6	10	7	12
1822122010	M8	21,5	32	8	16	8	14	10	16
1822122024	M10x1,25	26	40	10	20	10	18	12	20
1822122025	M12x1,25	31	48	12	24	12	20	14	24
1822122005	M16x1,5	39	64	16	32	16	26	19	32
1822122004	M20x1,5	50	80	20	40	20	34	20	40

Rod clevis PM6, Series CM2

- for ball eye rod end AP6

Technical data

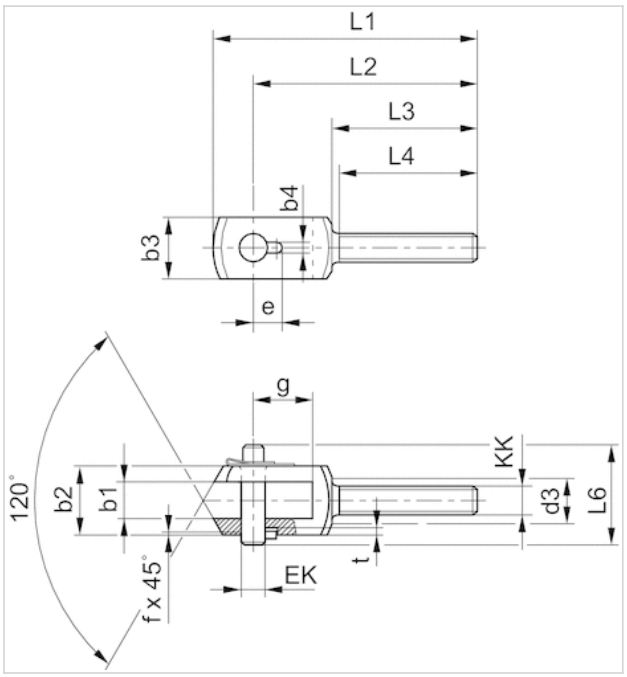
Part No.	for	Swivel bearing Ø
1822122032	AP6	14 mm
1822122033	AP6	16 mm
1822122034	AP6	21 mm

Scope of delivery incl. bolt

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	b1 B12	b2 d12	b3	b4 +0,2	d3	e +0,3	EK	f	g	L1	L2	L3	L4 +1	L6	t +0,2
1822122032	14	28	20	3.3	17	11.5	10	0.7	20	90	78	53	50	35	3
1822122033	16	30	25	4.3	19	12	12	1	26	108	92	58	55	39	3
1822122034	21	40	35	4.3	24	14	16	1	31	129	108	65	62	50	3

Ball eye rod end AP6, series CM2

- with flange to mount on cylinder PRA, TRB, CCI, SSI, MNI, RPC, KPZ, 167, CVI, RDC, 102, ITS

Weight See table below

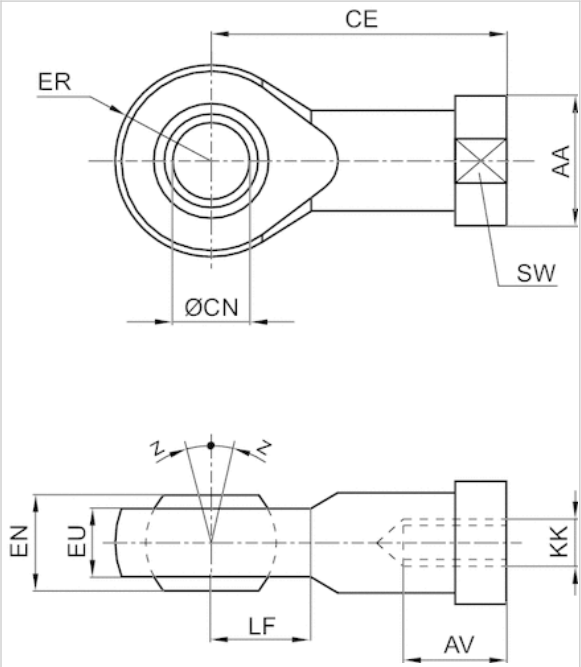
Technical data

Part No.	Suitable piston rod thread	for	Weight	Swivel bearing Ø
1822124001	M6	MNI CCI SSI	0.03 kg	6 mm
1822124002	M8	MNI CCI SSI KPZ	0.05 kg	8 mm
1822124003	M10x1,25	PRA TRB MNI CCI SSI RPC KPZ 167 CVI RDC	0.07 kg	10 mm
1822124004	M12x1,25	PRA TRB CCI SSI RPC KPZ 167 CVI 102	0.12 kg	12 mm
1822124005	M16x1,5	PRA TRB CCI SSI RPC KPZ 167 CVI RDC 102	0.21 kg	16 mm
1822124006	M20x1,5	PRA TRB CCI KPZ 167 CVI 102	0.12 kg	20 mm

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	KK	AA	AV min.	CE	Ø CN H7	EN –0,1	ER	EU max.	LF	SW	Z [°] max.
1822124001	M6	13	9	30	6	9	10	7.5	10	11	4
1822124002	M8	16	12	36	8	12	12	9.5	12	14	4
1822124003	M10x1,25	19	15	43	10	14	14	11.5	14	17	4
1822124004	M12x1,25	22	18	50	12	16	16	12.5	16	19	4
1822124005	M16x1,5	27	24	64	16	21	21	15.5	21	22	4
1822124006	M20x1,5	34	30	77	20	25	25	18.5	25	30	4

Compensating coupling PM5, series CM2

- to mount on cylinder PRA, TRB, CCL-IS/-IC, CCI, SSI, MNI, KPZ, KHZ, 167, CVI, RPC, RDC, ITS, spherical

Weight See table below

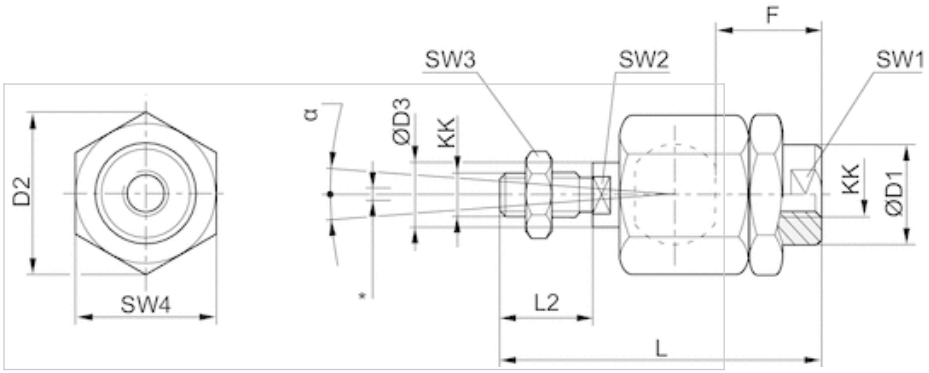
Technical data

Part No.	Suitable piston rod thread	for	Weight
R412026140	M6x1	CCL-IC CCI MNI	0.02 kg
R412026141	M8x1,25	CCL-IC CCI MNI	0.05 kg
R412026142	M10x1,25	PRA TRB CCL-IS CCL-IC CCI SSI KPZ 167 CVI RPC	0.21 kg
R412026143	M12x1,25	PRA TRB CCI CCL-IS CCL-IC SSI KPZ 167 CVI RPC	0.21 kg
R412026144	M16x1,5	PRA TRB CCI CCL-IS CCL-IC KPZ 167 CVI RPC RDC	0.65 kg
R412026145	M20x1,5	PRA TRB CCI CCL-IS SSI KPZ 167 CVI	0.68 kg

Technical information

Material	
	Steel
	galvanized

Dimensions



* Radial joint

Dimensions

Part No.	KK	Ø D1	D2	Ø D3	F	L ±2	L2	SW1	SW2	SW3	SW4	α [°]	1)	2)
R412026140	M6x1	8.5	14.5	6	11	36.5	11	7	5	10	13	6	0.05-0.5	0-1,5
R412026141	M8x1,25	12.5	19	8	21	58	21	11	7	13	17	8	0.05-0.5	0-1,5
R412026142	M10x1,25	22	32	14	23	74.5	23	19	12	17	30	8	0.05-0.5	0-2
R412026143	M12x1,25	22	32	14	24	75	24	19	12	19	30	7	0.05-0.5	0-2
R412026144	M16x1,5	32	45	22	30	103	30	30	20	24	41	6	0.05-0.5	0-2
R412026145	M20x1,5	32	45	22	40	119	40	30	20	30	41	6	0.05-0.5	0-2

1) Axial play

2) Radial play

Compensating coupling PM7, series CM2

- to mount on cylinder PRA, TRB, CCL-IS/-IC, CCI, SSI, KPZ, 167, CVI, RPC, ITS, with plate

Weight See table below

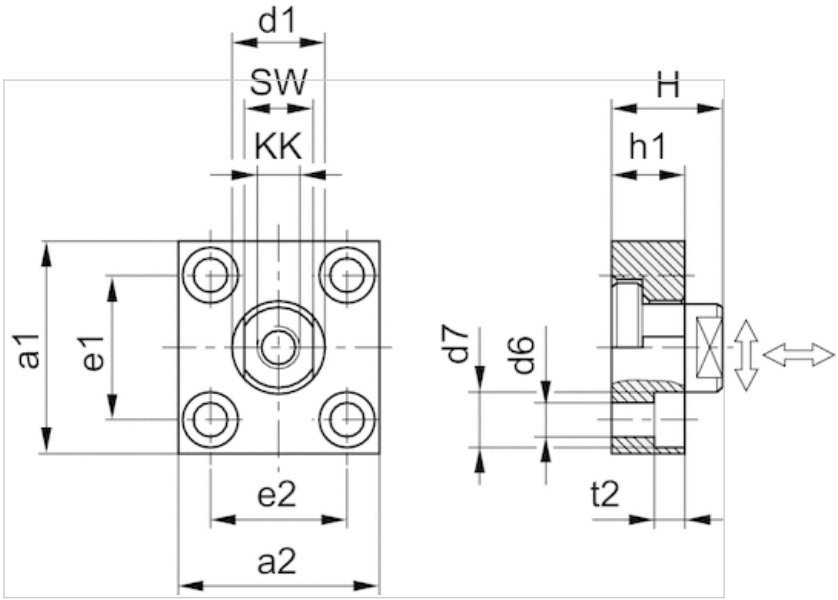
Technical data

Part No.	Suitable piston rod thread	for	Weight
1827001629	M10x1,25	PRA TRB CCL-IS CCL-IC CCI SSI KPZ RPC 167	0.3 kg
1827001630	M12x1,25	PRA TRB CCL-IS CCL-IC CCI SSI KPZ RPC 167	0.4 kg
1827001631	M16x1,5	PRA TRB CCL-IS CCL-IC CCI SSI KPZ RPC 167	0.9 kg
1827001632	M20x1,5	PRA TRB CCL-IS CCI SSI KPZ 167	1.15 kg

Technical information

Material	
	Steel
	galvanized

Dimensions



Dimensions

Part No.	a1	a2	d1 h11	d6 H13	d7 H13	e1 H13	e2	h1	t2	H	SW
1827001629	60	37	20	6.6	11	36 ±0,15	23 ±0,15	15	7	24	17
1827001630	60	56	25	9	15	42 ±0,2	38 ±0,2	20	9	30	19
1827001631	80	80	30	11	18	58 ±0,2	58 ±0,2	20	11	32	24
1827001632	90	90	40	14	20	65 ±0,3	65 ±0,2	20	13	35	36

Part No.	Tightening torque for the coupling pin Ma ± 5%	Axial play min./max.	Radial play min./max.
1827001629	17 Nm	0.4 / 0.8 mm	1.9 / 2.3 mm
1827001630	29 Nm	0.4 / 0.8 mm	1.9 / 2.3 mm
1827001631	71 Nm	0.4 / 0.8 mm	1.9 / 2.3 mm
1827001632	138 Nm	0.4 / 0.8 mm	1.9 / 2.3 mm

Piston rod extension, series CM2

Weight See table below

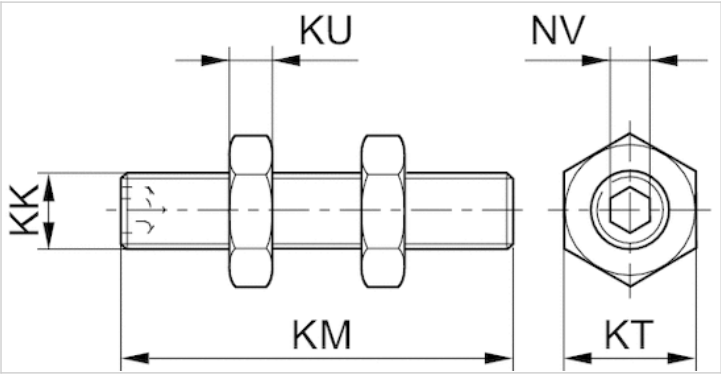
Technical data

Part No.	Suitable piston rod thread	Weight
2701432000	M6	0.02 kg
2701450000	M8	0.03 kg
2701463000	M10	0.05 kg

Technical information

Material	
	Stainless steel

Dimensions

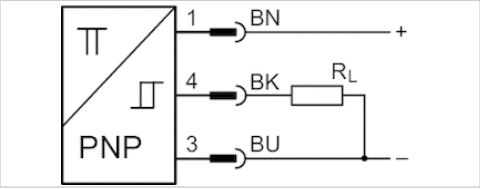


Dimensions

Part No.	KK	KM	KT	KU	NV
2701432000	M6	30	10	3.2	3
2701450000	M8	35	13	4	4
2701463000	M10	40	16	5	5

Sensor, Series ST6

- 6 mm T-slot
- with cable
- open cable ends, 3-pin
- ATEX
- UL certification, ATEX
- electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates	ATEX CE declaration of conformity cULus RoHS
ATEX class G	II 3G Ex nA IIC T4 Gc X
ATEX class D	II 3D Ex tc IIIC T135°C Dc X
Ambient temperature min./max.	-20 ... 50 °C
Protection class	IP67
Switching point precision	±0,1 mT
Quiescent current (without load)	10 mA
Min./max. DC operating voltage	10 ... 30 V DC
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	3 5 m

Technical data

Part No.	for	Type of contact	Cable length L
R412022854	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	3 m
R412022856	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	5 m

Part No.	Voltage drop U at Imax	DC switching current, max.
R412022854	≤ 2,5 V	0.1 A
R412022856	≤ 2,5 V	0.1 A

Part No.	Max. switching frequency
R412022854	1000 Hz
R412022856	1000 Hz

Part No.	Version
R412022854	short circuit resistant Protected against polarity reversal

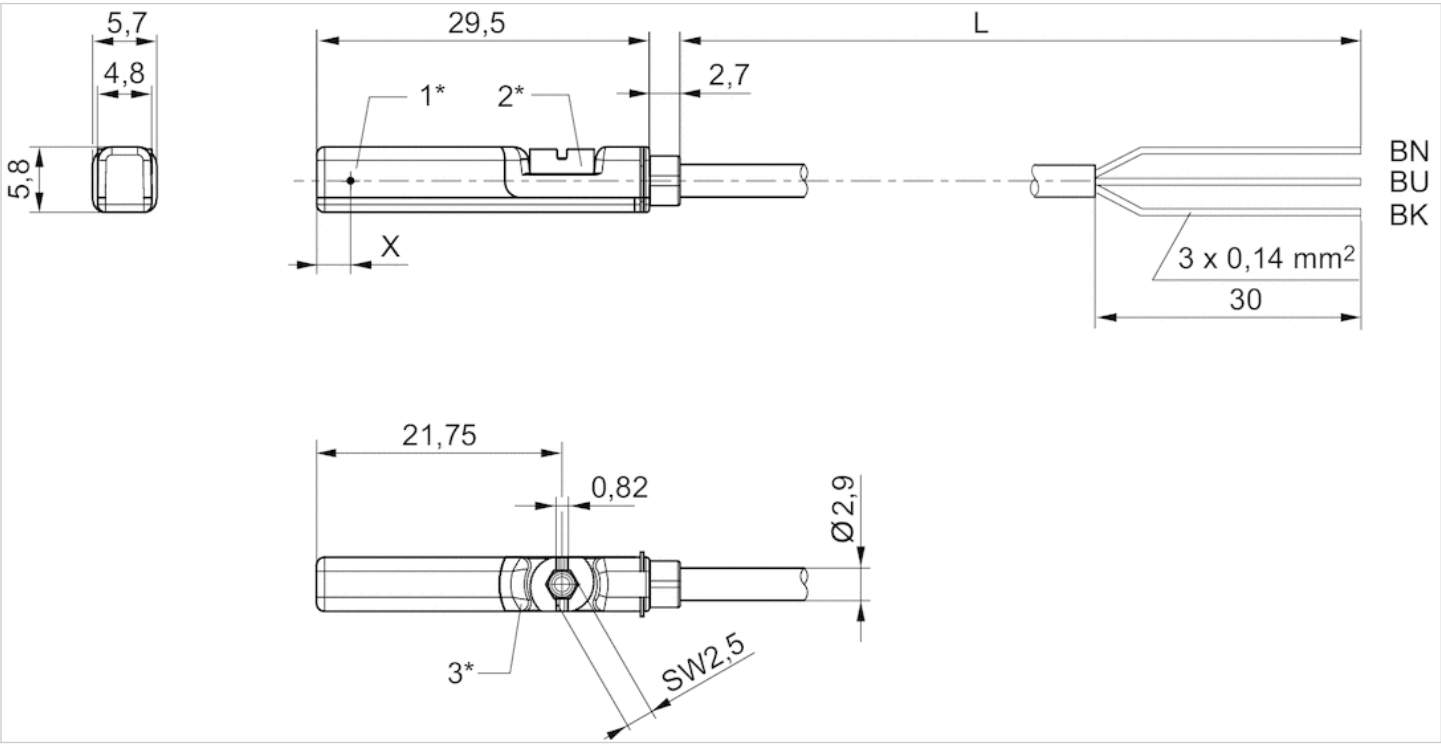
Part No.	Version
R412022856	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Fig. 2



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
BN = brown, BK = black, BU = blue
X = electronic: 11.6 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- open cable ends, 2-pin open cable ends, 3-pin
- UL certification
- Reed electronic PNP electronic NPN
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR

Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67, IP69K
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	See table below
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	3 5 10 m

Technical data

Part No.		for	Type of contact
R412022866		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412027170		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022869		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022870		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022871		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022853		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022855		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022857		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022849		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN
R412022850		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN

Part No.	Cable length L	Min./max. DC operating voltage	Min./max. AC operating voltage
R412022866	3 m	10 ... 230 V DC	10 ... 230 V AC
R412027170	5 m	10 ... 230 V DC	10 ... 230 V AC
R412022869	3 m	10 ... 30 V DC	10 ... 30 V AC
R412022870	5 m	10 ... 30 V DC	10 ... 30 V AC
R412022871	10 m	10 ... 30 V DC	10 ... 30 V AC
R412022853	3 m	10 ... 30 V DC	-
R412022855	5 m	10 ... 30 V DC	-
R412022857	10 m	10 ... 30 V DC	-
R412022849	3 m	10 ... 30 V DC	-
R412022850	5 m	10 ... 30 V DC	-

Part No.	Voltage drop U at Imax	DC switching current, max.
R412022866	≤ 3,5 V	0.13 A
R412027170	≤ 3,5 V	0.13 A
R412022869	I*Rs	0.3 A
R412022870	≤ 0,1 V	0.3 A
R412022871	I*Rs	0.3 A
R412022853	≤ 2,5 V	0.13 A
R412022855	≤ 2,5 V	0.13 A
R412022857	≤ 2,5 V	0.13 A
R412022849	≤ 2,5 V	0.13 A
R412022850	≤ 2,5 V	0.13 A

Part No.	AC switching current, max.	Switching capacity
R412022866	0.13 A	Reed, 2-pin: max. 10 W
R412027170	0.13 A	Reed, 2-pin: max. 10 W
R412022869	0.5 A	Reed, 3-pin: max. 6 W
R412022870	0.5 A	Reed, 3-pin: max. 6 W
R412022871	0.5 A	Reed, 3-pin: max. 6 W

Part No.	AC switching current, max.	Switching capacity
R412022853	-	-
R412022855	-	-
R412022857	-	-
R412022849	-	-
R412022850	-	-

Part No.	Max. switching frequency	Operating current, not switched
R412022866	400 Hz	-
R412027170	400 Hz	-
R412022869	400 Hz	-
R412022870	400 Hz	-
R412022871	400 Hz	-
R412022853	1000 Hz	8 mA
R412022855	1000 Hz	8 mA
R412022857	1000 Hz	8 mA
R412022849	1000 Hz	8 mA
R412022850	1000 Hz	8 mA

Part No.	Operating current, switched
R412022866	-
R412027170	-
R412022869	-
R412022870	-
R412022871	-
R412022853	30 mA
R412022855	30 mA
R412022857	30 mA
R412022849	30 mA
R412022850	30 mA

Part No.	Version	Fig.	
R412022866	Protected against polarity reversal	Fig. 1	1)
R412027170	Protected against polarity reversal	Fig. 1	1)
R412022869	Protected against polarity reversal	Fig. 2	2)
R412022870	Protected against polarity reversal	Fig. 2	2)
R412022871	Protected against polarity reversal	Fig. 2	2)
R412022853	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022855	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022857	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022849	short circuit resistant Protected against polarity reversal	Fig. 2	3)
R412022850	short circuit resistant Protected against polarity reversal	Fig. 2	3)

1) open cable ends, 2-pin, The product of operating voltage and continuous current must not exceed the maximum switching capacity.

2) open cable ends, 3-pin, The product of operating voltage and continuous current must not exceed the maximum switching capacity.

3) open cable ends, 3-pin

Technical information

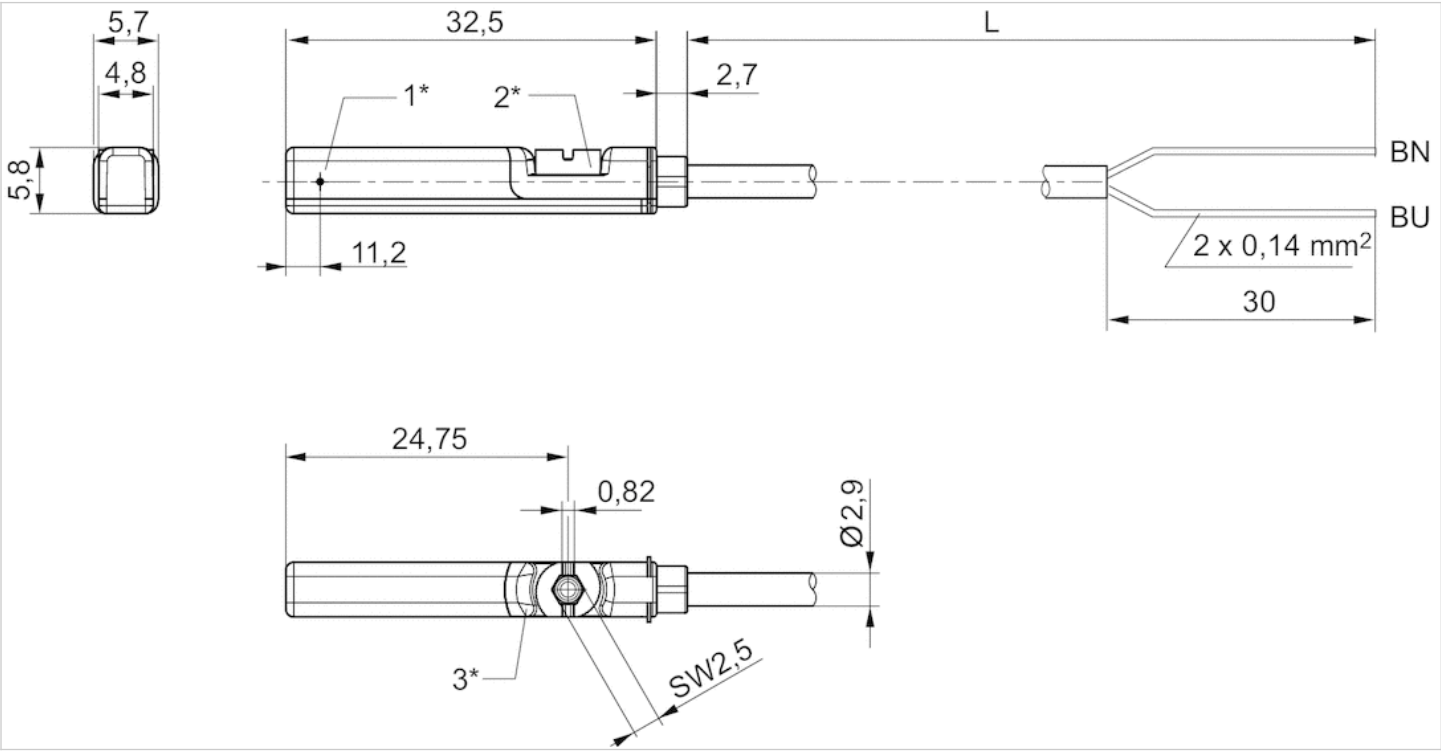
No cULus certification for 230 V variant.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

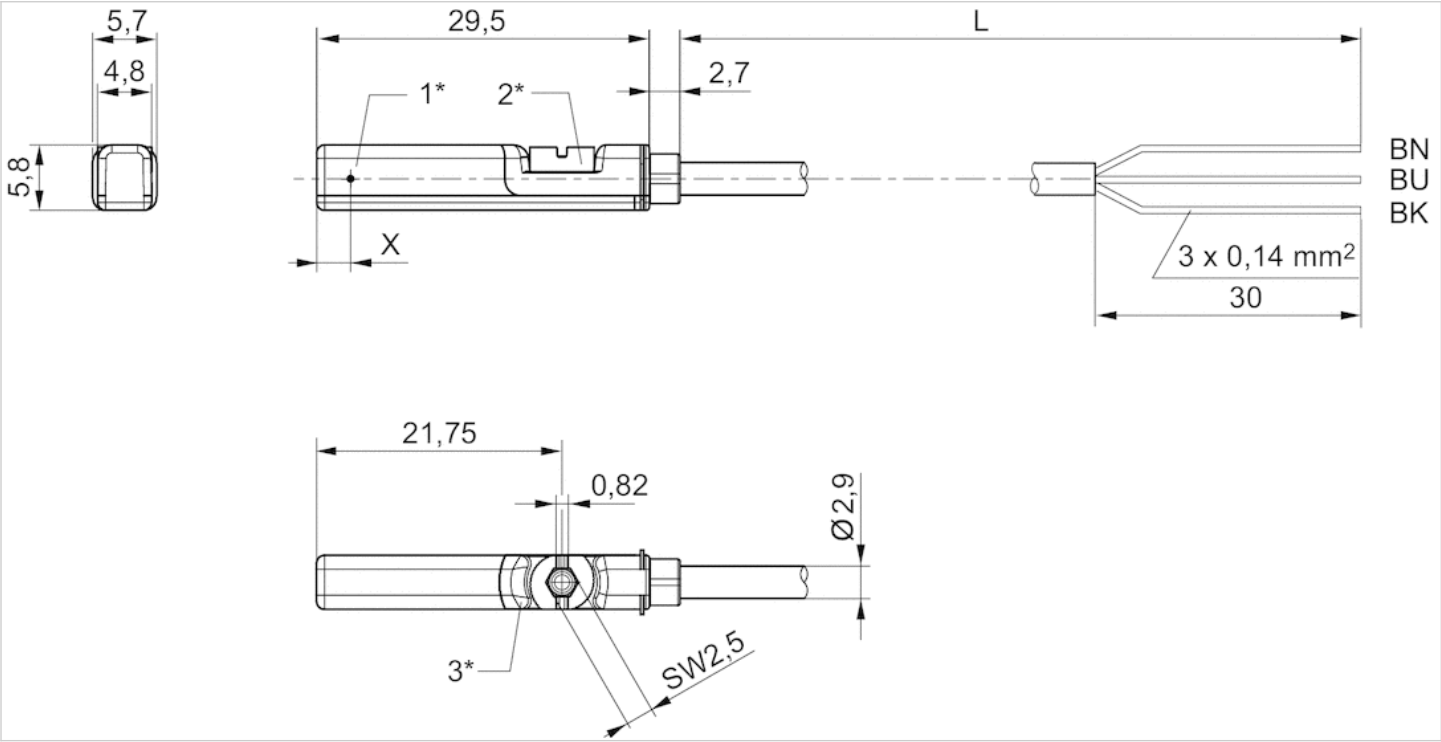
Dimensions

Fig. 1



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
BN=brown, BU=blue

Fig. 2



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
BN = brown, BK = black, BU = blue
X = electronic: 11.6 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin Plug, M8, 2-pin
- UL certification
- Reed electronic PNP electronic NPN
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR

Certificates	CE declaration of conformity cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	10 ... 30 V DC
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.		for	Type of contact
R412022868		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412027172		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022872		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022858		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022851		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN

Part No.	Cable length L	Min./max. AC operating voltage	Voltage drop U at Imax
R412022868	0.3 m	10 ... 30 V AC	≤ 3,5 V
R412027172	0.3 m	10 ... 30 V AC	≤ 3,5 V
R412022872	0.3 m	10 ... 30 V AC	≤ 0,1 V
R412022858	0.3 m	-	≤ 2,5 V
R412022851	0.3 m	-	≤ 2,5 V

Part No.	DC switching current, max.	AC switching current, max.
R412022868	0.13 A	0.13 A
R412027172	0.13 A	0.13 A
R412022872	0.3 A	0.5 A
R412022858	0.13 A	-

Part No.	DC switching current, max.	AC switching current, max.
R412022851	0.13 A	-

Part No.	Switching capacity	Max. switching frequency
R412022868	Reed, 2-pin: max. 10 W	400 Hz
R412027172	Reed, 2-pin: max. 10 W	400 Hz
R412022872	Reed, 3-pin: max. 6 W	400 Hz
R412022858	-	1000 Hz
R412022851	-	1000 Hz

Part No.	Operating current, not switched	Operating current, switched
R412022868	-	-
R412027172	-	-
R412022872	-	-
R412022858	8 mA	30 mA
R412022851	8 mA	30 mA

Part No.	Version	
R412022868	Protected against polarity reversal	1)
R412027172	Protected against polarity reversal	1)
R412022872	Protected against polarity reversal	1)
R412022858	short circuit resistant Protected against polarity reversal	-
R412022851	short circuit resistant Protected against polarity reversal	-

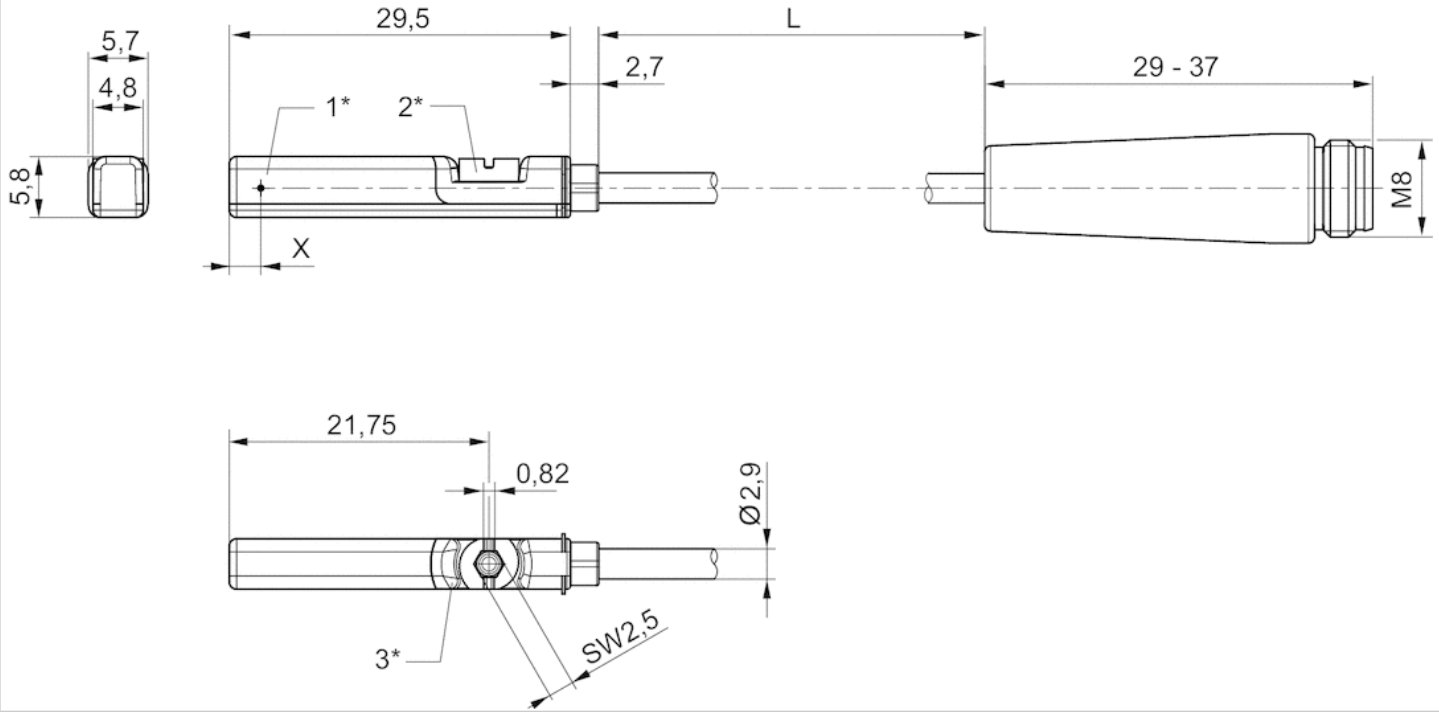
1) The product of operating voltage and continuous current must not exceed the maximum switching capacity.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

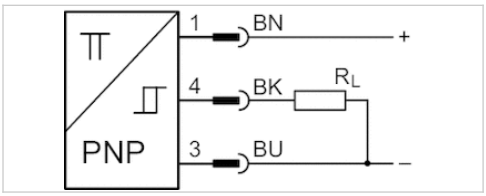
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M12, 3-pin, with knurled screw
- ATEX
- UL certification, ATEX
- electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates	ATEX CE declaration of conformity cULus RoHS
ATEX class G	II 3G Ex nA IIC T4 Gc X
ATEX class D	II 3D Ex tc IIIC T135°C Dc X
Ambient temperature min./max.	-20 ... 50 °C
Protection class	IP67
Switching point precision	±0,1 mT
Quiescent current (without load)	10 mA
Min./max. DC operating voltage	10 ... 30 V DC
Switching logic	NO (make contact)
LED status display	Yellow Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412022864	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	0.3 m

Part No.	Voltage drop U at Imax	DC switching current, max.
R412022864	≤ 2,5 V	0.1 A

Part No.	Max. switching frequency
R412022864	1000 Hz

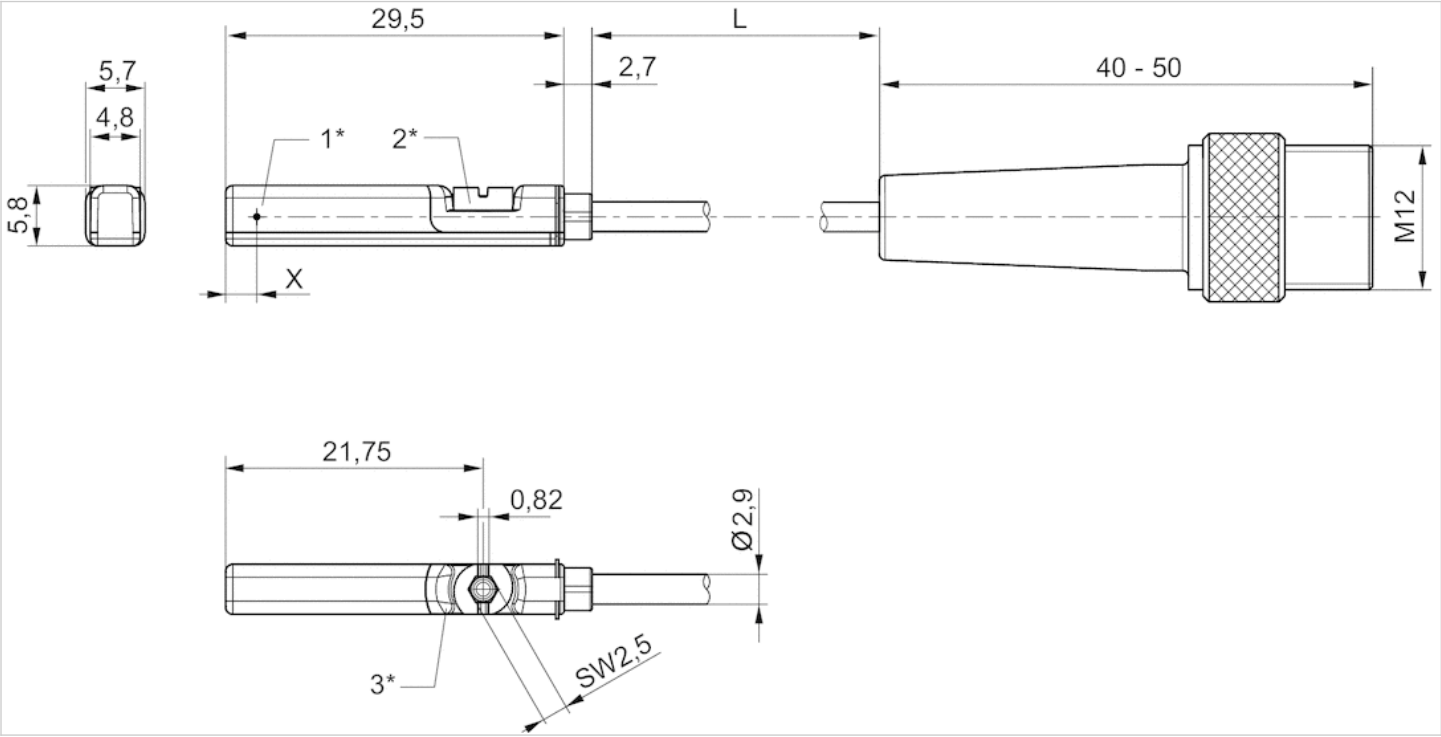
Part No.	Version
R412022864	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

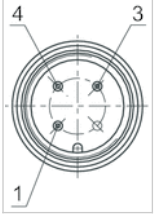
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = PNP: 11,6 mm, reed: 8,3 mm

Pin assignments

Pin assignments



Pin	1	3	4
Allocation	(+)	(-)	(OUT)

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M12, 2-pin, with knurled screw Plug, M12, 4-pin, with knurled screw
- UL certification
- Reed electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR

Certificates	CE declaration of conformity cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	See table below
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	10 ... 30 V DC
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 0.1 3 5 m

Technical data

Part No.		for	Type of contact
R412027171		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022876		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022879		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022863		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022877		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022878		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP

Part No.	Cable length L	Min./max. AC operating voltage	Voltage drop U at Imax
R412027171	0.3 m	10 ... 30 V AC	≤ 3,5 V
R412022876	0.3 m	10 ... 30 V AC	≤ 0,1 V
R412022879	0.1 m	-	≤ 2,5 V
R412022863	0.3 m	-	≤ 2,5 V
R412022877	3 m	-	≤ 2,5 V
R412022878	5 m	-	≤ 2,5 V

Part No.	DC switching current, max.	AC switching current, max.
R412027171	0.13 A	0.13 A
R412022876	0.3 A	0.5 A

Part No.	DC switching current, max.	AC switching current, max.
R412022879	0.13 A	-
R412022863	0.13 A	-
R412022877	0.13 A	-
R412022878	0.13 A	-

Part No.	Switching capacity	Max. switching frequency
R412027171	Reed, 2-pin: max. 10 W	400 Hz
R412022876	Reed, 3-pin: max. 6 W	400 Hz
R412022879	-	1000 Hz
R412022863	-	1000 Hz
R412022877	-	1000 Hz
R412022878	-	1000 Hz

Part No.	Operating current, not switched	Operating current, switched	Protection class
R412027171	-	-	IP65, IP67
R412022876	-	-	IP65, IP67
R412022879	8 mA	30 mA	IP65, IP67
R412022863	8 mA	30 mA	IP65, IP67, IP69K
R412022877	8 mA	30 mA	IP65, IP67
R412022878	8 mA	30 mA	IP65, IP67

Part No.	Version	
R412027171	Protected against polarity reversal	1)
R412022876	Protected against polarity reversal	1)
R412022879	short circuit resistant Protected against polarity reversal	-
R412022863	short circuit resistant Protected against polarity reversal	-
R412022877	short circuit resistant Protected against polarity reversal	-
R412022878	short circuit resistant Protected against polarity reversal	-

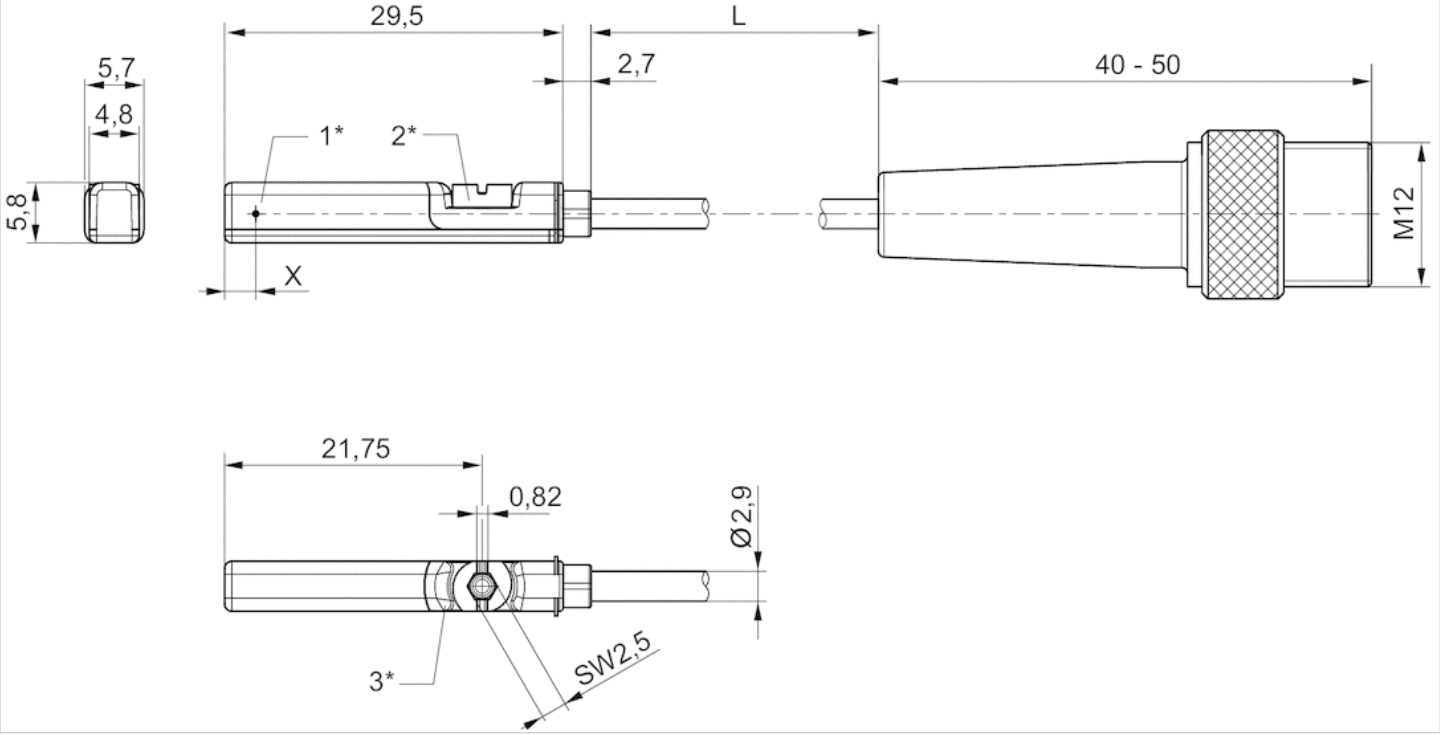
1) The product of operating voltage and continuous current must not exceed the maximum switching capacity.

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

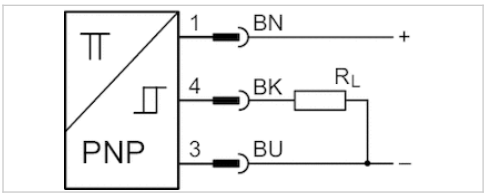
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = PNP: 11,6 mm, reed: 8,3 mm

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- ATEX
- UL certification, ATEX
- electronic PNP
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR



Certificates	ATEX CE declaration of conformity cULus RoHS
ATEX class G	II 3G Ex nA IIC T4 Gc X
ATEX class D	II 3D Ex tc IIIC T135°C Dc X
Ambient temperature min./max.	-20 ... 50 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Quiescent current (without load)	10 mA
Min./max. DC operating voltage	10 ... 30 V DC
Switching logic	NO (make contact)
LED status display	Yellow Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412022860	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP	0.3 m

Part No.	Voltage drop U at Imax	DC switching current, max.
R412022860	≤ 2,5 V	0.1 A

Part No.	Max. switching frequency
R412022860	1000 Hz

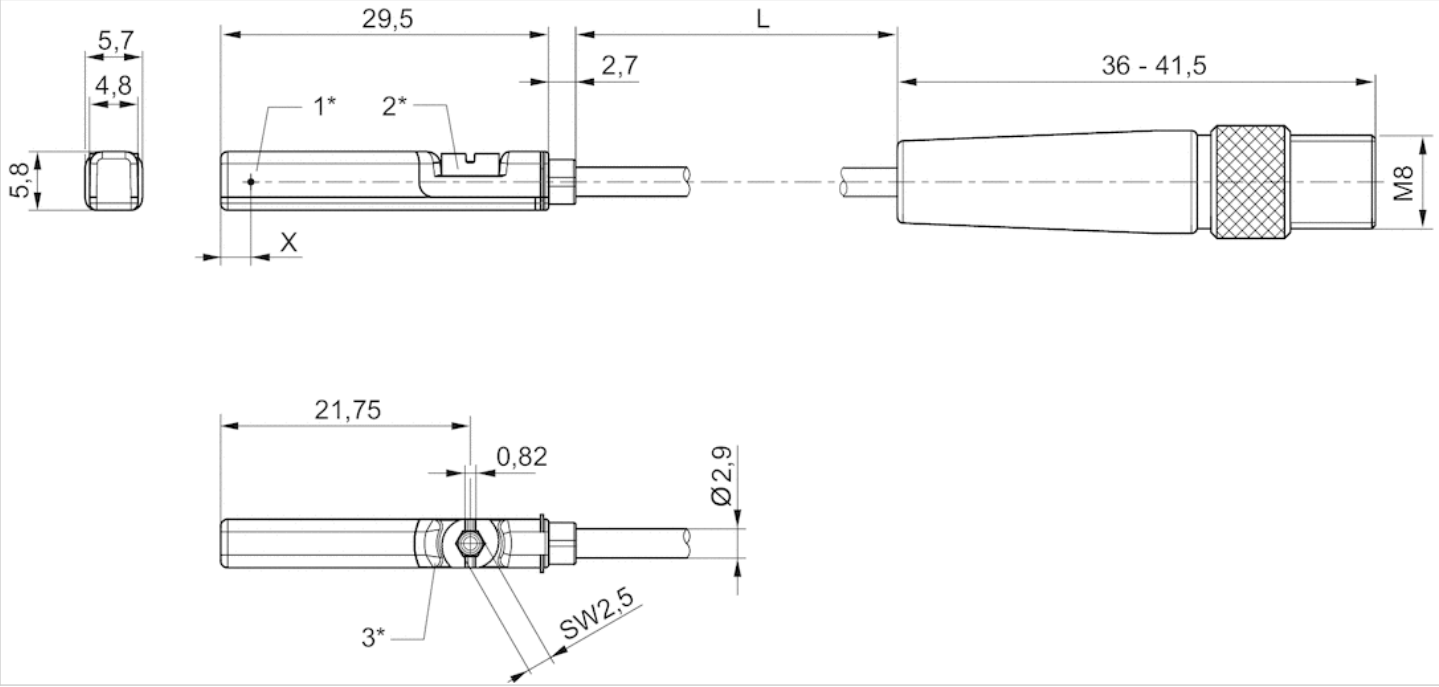
Part No.	Version
R412022860	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

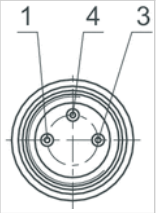
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

Pin assignments

Pin assignments



Pin	1	3	4
Allocation	(+)	(-)	(OUT)

Sensor, Series ST6

- 6 mm T-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- UL certification
- Reed electronic PNP electronic NPN
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC, ICS-D2, ICM, KHZ, TRR

Certificates	CE declaration of conformity cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Nominal current, actuated state	30 mA
Quiescent current (without load)	8 mA
Min./max. DC operating voltage	10 ... 30 V DC
Min./max. AC operating voltage	See table below
Hysteresis	≥ 0,2 mT
Switching logic	NO (make contact)
Switching capacity	Reed, 3-pin: max. 6 W
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 0.5 m

Technical data

Part No.		for	Type of contact
R412022873		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022875		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022874		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Reed
R412022859		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022862		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022861		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic PNP
R412022852		PRA, PRE, CCI, KPZ, SSI, GPC, CVI	electronic NPN

Part No.	Cable sheath	Cable length L	Min./max. AC operating voltage
R412022873	Polyurethane	0.3 m	10 ... 30 V AC
R412022875	Polyvinyl chloride	0.3 m	10 ... 30 V AC
R412022874	Polyurethane	0.5 m	10 ... 30 V AC
R412022859	Polyurethane	0.3 m	-
R412022862	Polyvinyl chloride	0.3 m	-
R412022861	Polyurethane	0.5 m	-
R412022852	Polyurethane	0.3 m	-

Part No.	Voltage drop U at Imax	DC switching current, max.
R412022873	I*Rs	0.3 A
R412022875	I*Rs	0.3 A
R412022874	I*Rs	0.3 A
R412022859	≤ 2,5 V	0.13 A
R412022862	≤ 2,5 V	0.13 A
R412022861	≤ 2,5 V	0.13 A
R412022852	≤ 2,5 V	0.13 A

Part No.	AC switching current, max.	Max. switching frequency
R412022873	0.5 A	400 Hz
R412022875	0.5 A	400 Hz
R412022874	0.5 A	400 Hz
R412022859	-	1000 Hz
R412022862	-	1000 Hz
R412022861	-	1000 Hz
R412022852	-	1000 Hz

Part No.	Operating current, not switched	Operating current, switched
R412022873	-	-
R412022875	-	-
R412022874	-	-
R412022859	8 mA	30 mA
R412022862	8 mA	30 mA
R412022861	8 mA	30 mA
R412022852	8 mA	30 mA

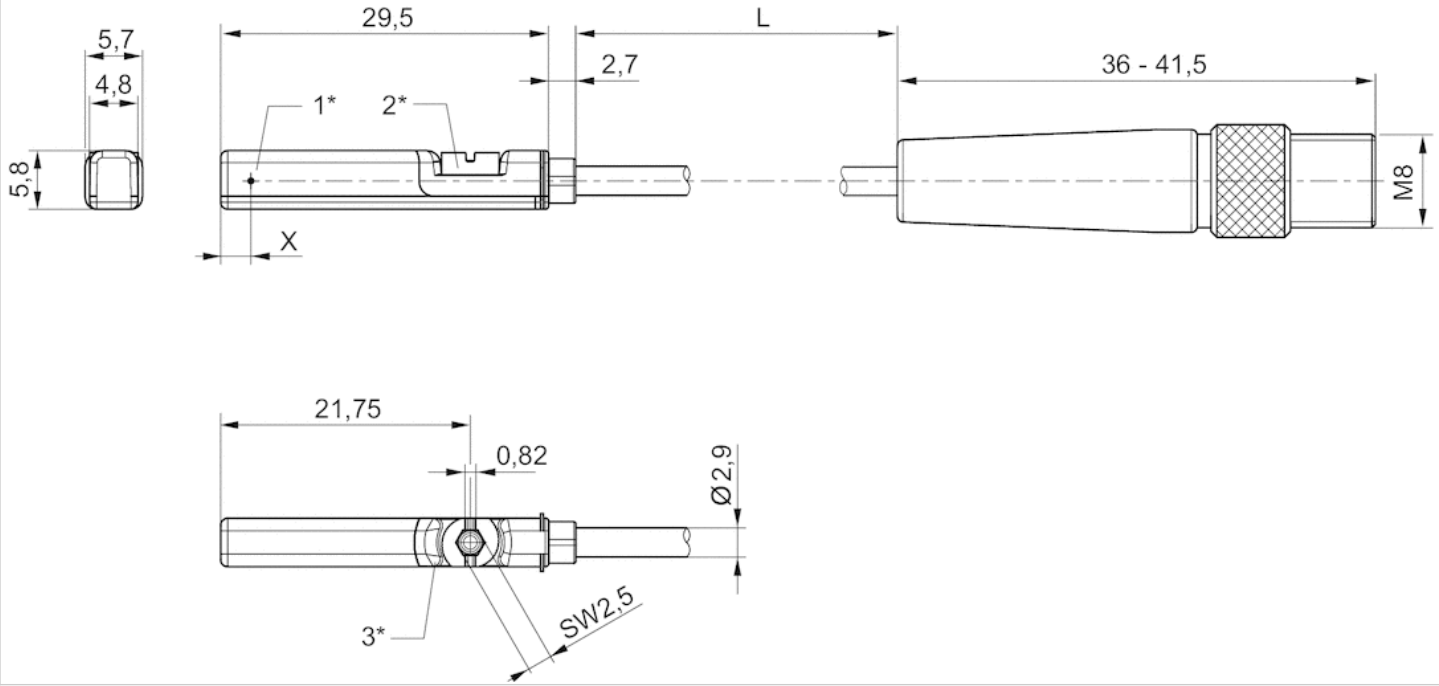
Part No.	Version
R412022873	Protected against polarity reversal
R412022875	Protected against polarity reversal
R412022874	Protected against polarity reversal
R412022859	short circuit resistant Protected against polarity reversal
R412022862	short circuit resistant Protected against polarity reversal
R412022861	short circuit resistant Protected against polarity reversal
R412022852	short circuit resistant Protected against polarity reversal

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane Polyvinyl chloride
Locking screw	Stainless steel

Dimensions

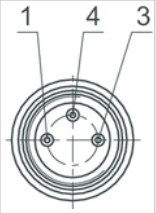
Dimensions



1* = switching point 2* = locking screw 3* = LED window, transparent
L = cable length
X = electronic: 11,6 mm, Reed: 8,3 mm

Pin assignments

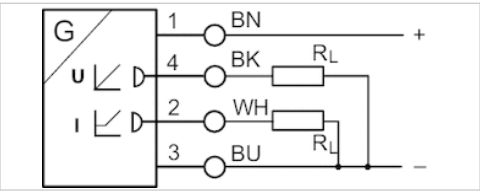
Pin assignments



Pin	1	3	4
Allocation	(+)	(-)	(OUT)

Sensors, Series SM6

- 6 mm groove
- with cable
- without wire end ferrule, tin-plated, 4-pin
- with distance measuring sensor, measurement range 32 ... 256 mm
- Analog
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, 167, MNI, ICM, TRR



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	25 mA
Maximum load (analog current output)	500 Ω
Residual ripple	≤ 10 %
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	2 m

Technical data

Part No.	for	Type of contact	Cable length L
R412010141	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010143	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010262	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010264	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010411	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010413	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010415	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m
R412010417	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	2 m

Part No.	max. measuring range	Overall length Sensor A
R412010141	32 mm	45 mm
R412010143	64 mm	77 mm
R412010262	96 mm	109 mm
R412010264	128 mm	141 mm
R412010411	160 mm	173 mm
R412010413	192 mm	205 mm

Part No.	max. measuring range	Overall length Sensor A
R412010415	224 mm	237 mm
R412010417	256 mm	269 mm

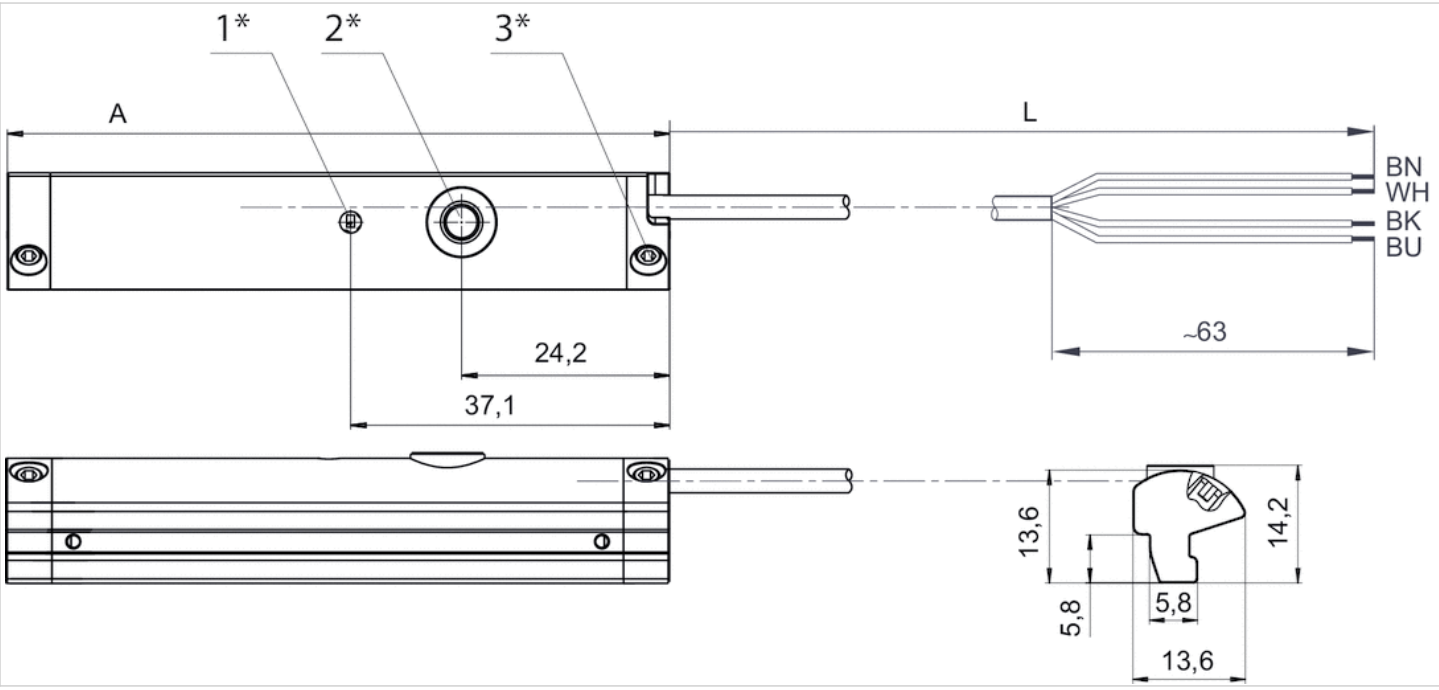
Part No.	Version
R412010141	short circuit resistant Protected against polarity reversal Overload protection
R412010143	short circuit resistant Protected against polarity reversal Overload protection
R412010262	short circuit resistant Protected against polarity reversal Overload protection
R412010264	short circuit resistant Protected against polarity reversal Overload protection
R412010411	short circuit resistant Protected against polarity reversal Overload protection
R412010413	short circuit resistant Protected against polarity reversal Overload protection
R412010415	short circuit resistant Protected against polarity reversal Overload protection
R412010417	short circuit resistant Protected against polarity reversal Overload protection

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

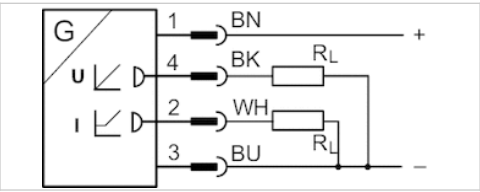
Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11
L = cable length
(1) BN=brown
(2) WH=white
(3) BU=blue
(4) BK=bl
A = sensor length

Sensors, Series SM6

- 6 mm groove
- with cable
- Plug, M8x1, 4-pin, with knurled screw
- with distance measuring sensor, measurement range 32 ... 256 mm
- Analog
- Direct mounting for series PRA, PRE, CCI, KPZ, SSI, GPC, CVI
- Indirect mounting for series TRB, ITS, 167, MNI, ICM, TRR



Certificates	cULus
Ambient temperature min./max.	-20 ... 70 °C
Protection class	IP67
Output signal	0 - 10 V DC, 4 - 20 mA
Quiescent current (without load)	25 mA
Min./max. DC operating voltage	15 ... 30 V DC
sampling interval	1 ms
Resolution max. measuring range	0,05 mm
Repetitive precision max. measuring range	0.1 mm
Linearity deviation	0,3 mm
Sampling speed	3 m/s
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m

Technical data

Part No.	for	Type of contact	Cable length L
R412010142	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010144	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010263	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010265	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010410	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010412	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010414	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m
R412010416	PRA, PRE, CCI, KPZ, SSI, GPC, CVI	Analog	0.3 m

Part No.	max. measuring range	Overall length Sensor A
R412010142	32 mm	45 mm
R412010144	64 mm	77 mm
R412010263	96 mm	109 mm
R412010265	128 mm	141 mm
R412010410	160 mm	173 mm
R412010412	192 mm	205 mm

Part No.	max. measuring range	Overall length Sensor A
R412010414	224 mm	237 mm
R412010416	256 mm	269 mm

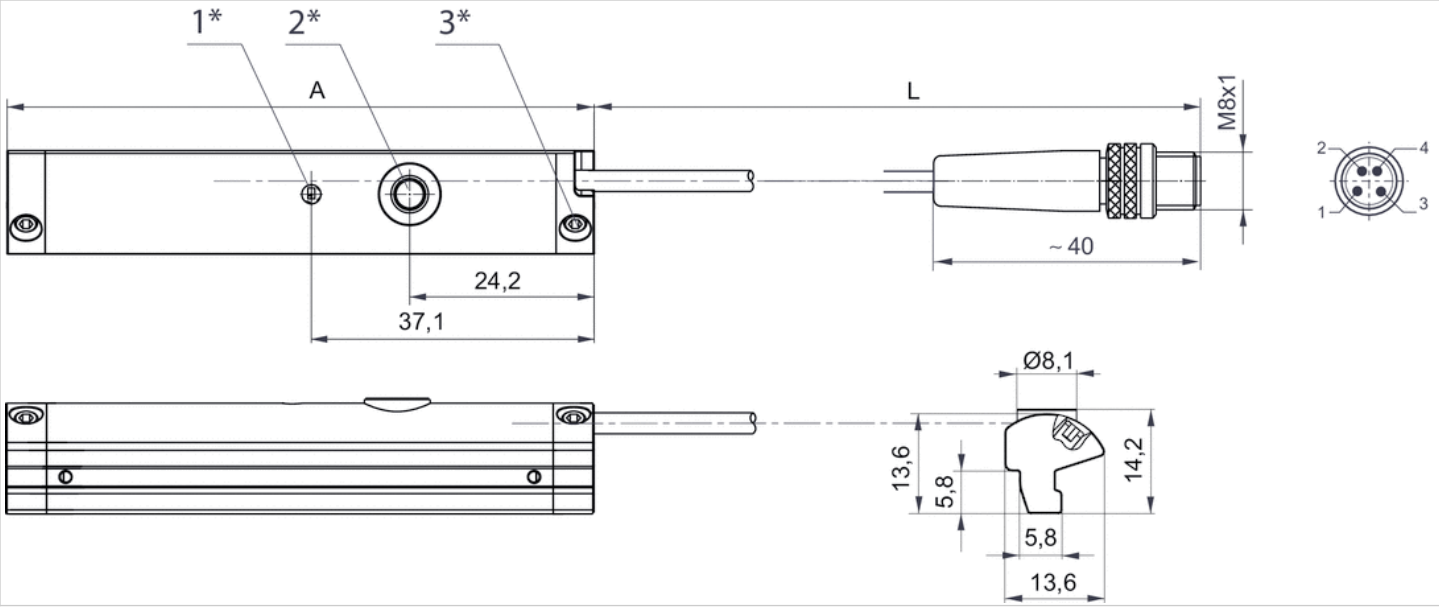
Part No.	Version
R412010142	short circuit resistant Protected against polarity reversal Overload protection
R412010144	short circuit resistant Protected against polarity reversal Overload protection
R412010263	short circuit resistant Protected against polarity reversal Overload protection
R412010265	short circuit resistant Protected against polarity reversal Overload protection
R412010410	short circuit resistant Protected against polarity reversal Overload protection
R412010412	short circuit resistant Protected against polarity reversal Overload protection
R412010414	short circuit resistant Protected against polarity reversal Overload protection
R412010416	short circuit resistant Protected against polarity reversal Overload protection

Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

Dimensions

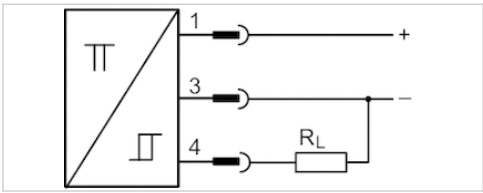
Dimensions



1* = LED 2* = teach button 3* = threaded pin M3x11
L = cable length
Pin assignment: 1 = (+), 2 = (OUT 1) 3 = (GND), 4 = (OUT 2), EN 60947-5-7
A = sensor length

Sensor, Series SN3

- welding-proof
- Plug, M12, 3-pin
- welding-proof
- electronic PNP
- Indirect mounting for series PRA, PRE, CCI, KPZ, KHZ, FLT, GPC, CVI



Ambient temperature min./max.	-25 ... 70 °C
Protection class	IP67, IP65
Switching point precision	±0,1 mT
Nominal current, actuated state	≤ 10 mA
Quiescent current (without load)	≤ 5 mA
Min./max. DC operating voltage	10 V DC
LED status display	Yellow
Vibration resistance	55 Hz, 1 mm
Shock resistance	30 g / 11 ms

Technical data

Part No.	Type of contact	Voltage drop U at Imax	DC switching current, max.
0830100438	electronic PNP	≤ 1,8 V	0.2 A

Part No.	Max. switching frequency
0830100438	20 Hz

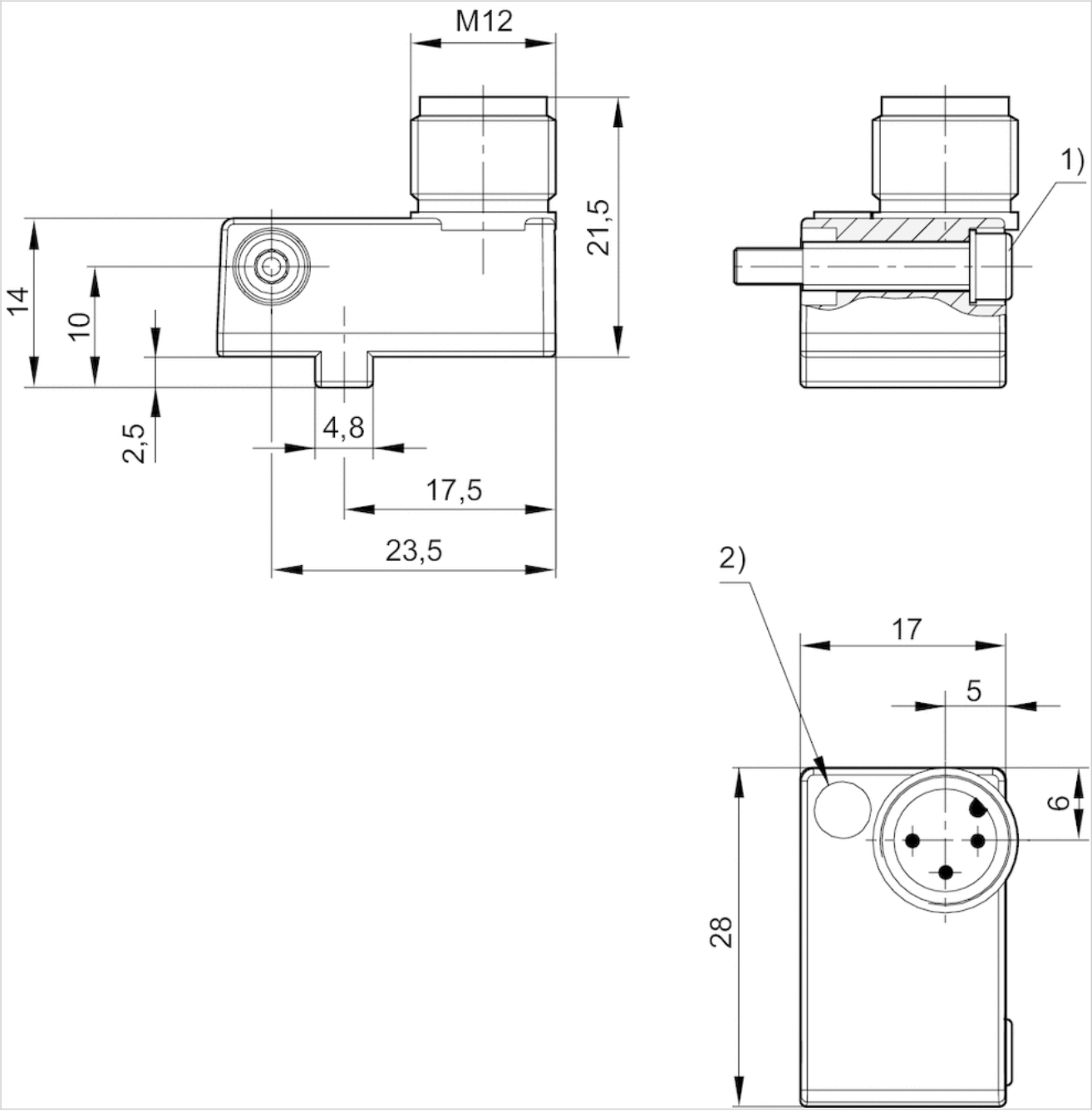
Part No.	Version	welding-proof
0830100438	short circuit resistant Protected against polarity reversal	welding-proof

Technical information

Material	
Housing	Polyamide

Dimensions

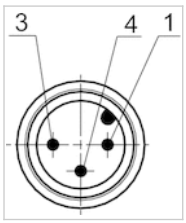
Dimensions



1) Clamping screw
2) LED
Pin assignments: 1 = (+), 3 = (-), 4 = (OUT), EN 60947-5-2:1998

Pin assignments

Pin assignments

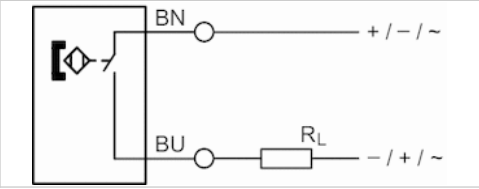


Pin	1	3	4
Allocation	(+)	(-)	(OUT)
			EN 60947-5-2:1998

Sensor, Series ST6-HT

- 6 mm T-slot
- with cable
- open cable ends, 2-pin
- Heat resistant
- UL certification
- Reed
- Direct mounting for series PRA, PRE, CCI, KPZ
- Indirect mounting for series TRB, ITS, CCL-IS, MNI, CSL-RD, RPC

Certificates	CE declaration of conformity RoHS
Ambient temperature min./max.	-20 ... 120 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Min./max. DC operating voltage	0 ... 30 V DC
Min./max. AC operating voltage	0 ... 30 V AC
Switching logic	NO (make contact)
Switching capacity	Reed, 2-pin: max. 10 W
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	3 10 m



Technical data

Part No.	for	Type of contact	Cable length L	Voltage drop U at Imax
R412022865	PRA, PRE, CCI, KPZ	Reed	3 m	≤ 3,5 V
R412022867	PRA, PRE, CCI, KPZ	Reed	10 m	≤ 3,5 V

Part No.	DC switching current, max.	AC switching current, max.
R412022865	0.13 A	0.13 A
R412022867	0.13 A	0.13 A

Part No.	Max. switching frequency	Version
R412022865	400 Hz	Protected against polarity reversal
R412022867	400 Hz	Protected against polarity reversal

Part No.	Temperature resistance
R412022865	Heat resistant

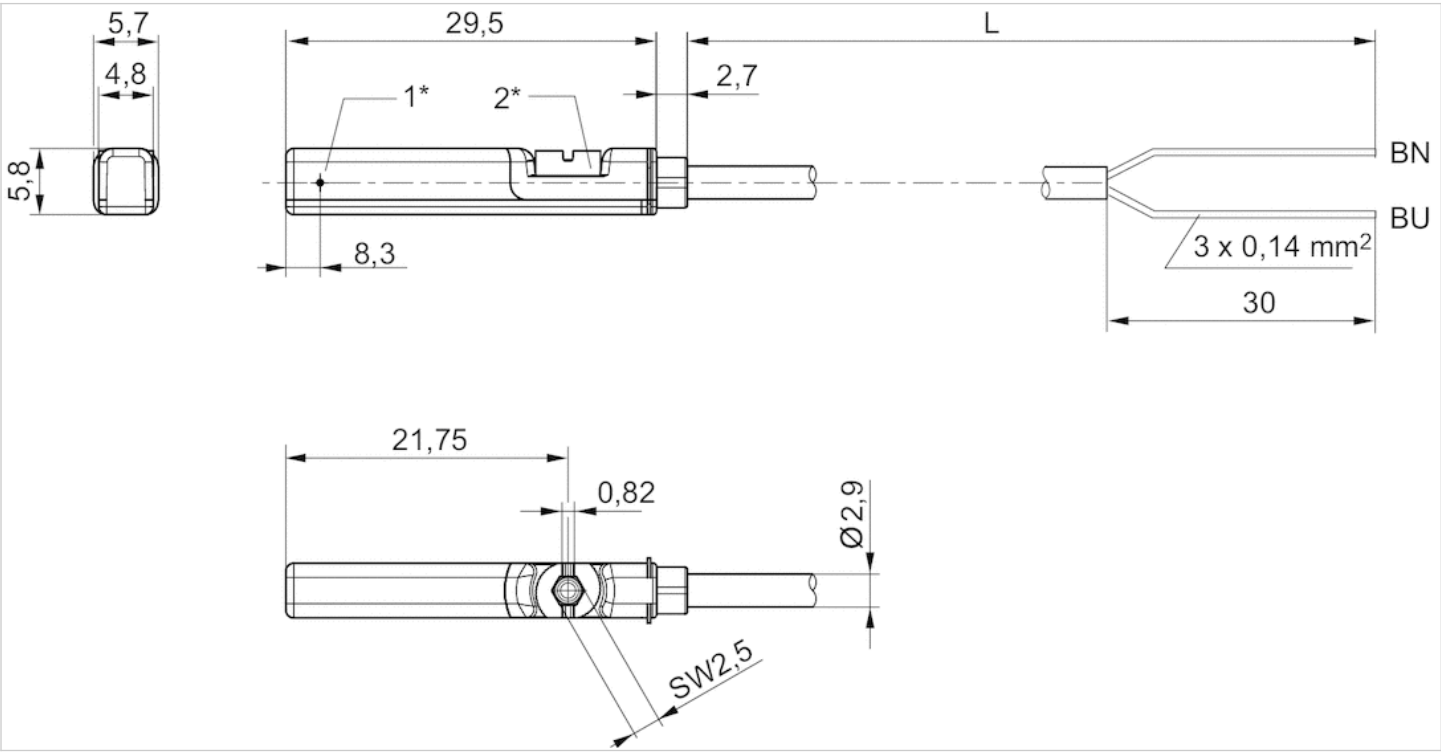
Part No.	Temperature resistance
R412022867	Heat resistant

Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane
Locking screw	Stainless steel

Dimensions

Dimensions



1* = switching point 2* = locking screw
L = cable length
BN=brown, BU=blue

Sensor mounting, Series CB1

- for series SN3
- to mount on cylinder PRA, KPZ, GPC, CCI, KHZ

Weight 0.007 kg

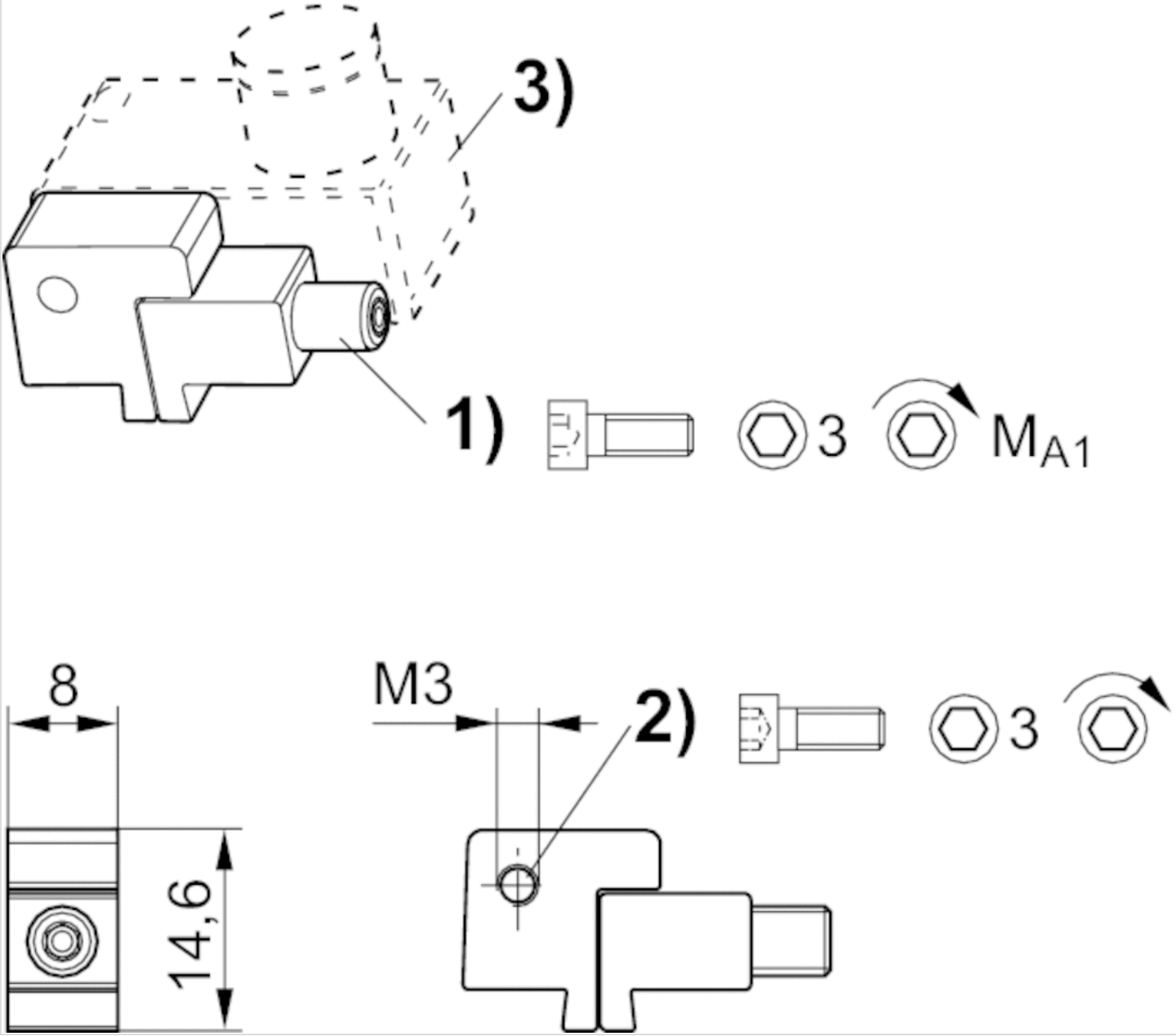
Technical data

Part No.	for series
1827020386	SN3

Technical information

Material	
	Aluminum

Dimensions



1) Clamping screw 2) Mounting screw for sensor 3) Sensor

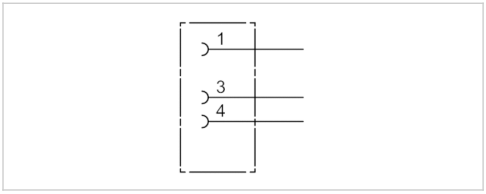
Dimensions

Part No.	1)	MA1 [Nm]
1827020386	M3x25	1,8 +0,4

Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, straight, 180°
- UL (Underwriters Laboratories)
- unshielded

Connection type	Soldering
Ambient temperature min./max.	-25 ... 80 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Weight	0.009 kg



Technical data

Part No.	Max. current	suitable cable-Ø min./max
1834484173	4 A	3.5 / 5 mm

Technical information

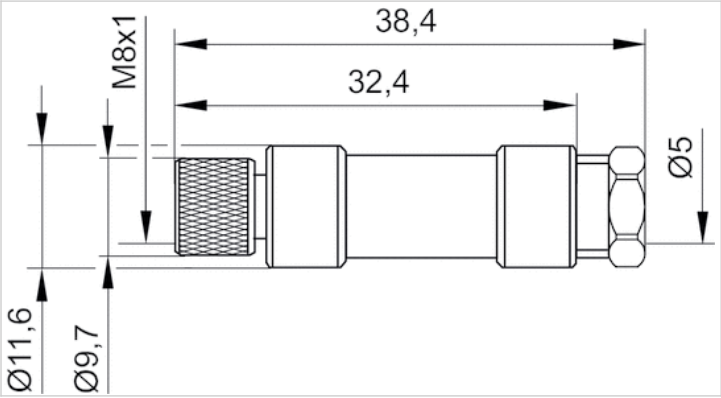
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

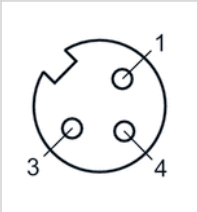
Dimensions

Dimensions



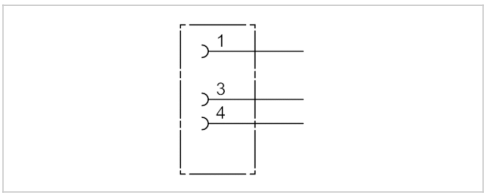
Pin assignments

Pin assignment, socket



Round plug connector, Series CON-RD

- Socket, M8x1, 3-pin, A-coded, angled, 90°
- UL (Underwriters Laboratories)
- unshielded



Connection type	Soldering
Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Weight	0.01 kg

Technical data

Part No.	Max. current	Contact assignment	suitable cable-Ø min./max
1834484174	4 A	3	3.5 / 5 mm

Technical information

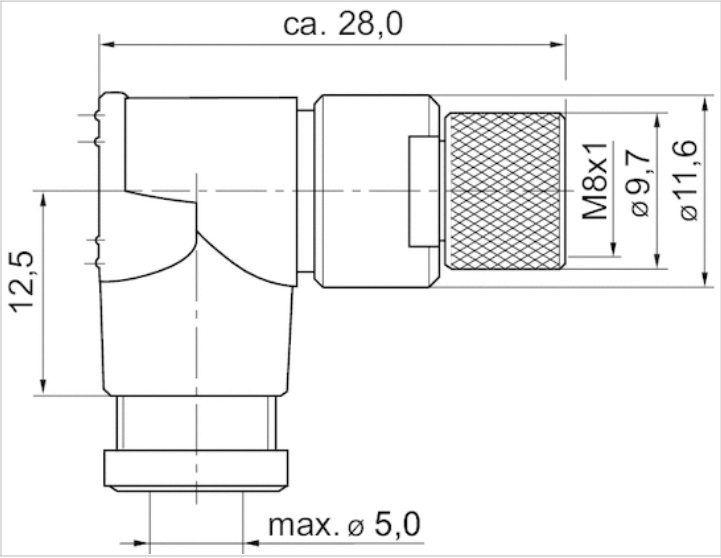
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyamide

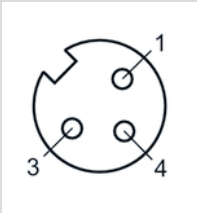
Dimensions

Dimensions



Pin assignments

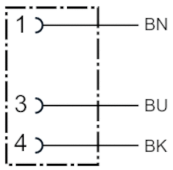
Pin assignment, socket



Round plug connector, Series CON-RD

- Socket M8x1 3-pin A-coded straight 180°
- open cable ends
- with cable
- UL (Underwriters Laboratories)
- unshielded

Ambient temperature min./max.	-25 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.24 mm²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Certification	Weight
1834484166	4 A	3	4.5 mm	3 m	UL (Underwriters Laboratories)	0.087 kg
1834484168	4 A	3	4.5 mm	5 m	UL (Underwriters Laboratories)	0.141 kg
1834484247	4 A	3	4.5 mm	10 m	UL (Underwriters Laboratories)	0.277 kg

Technical information

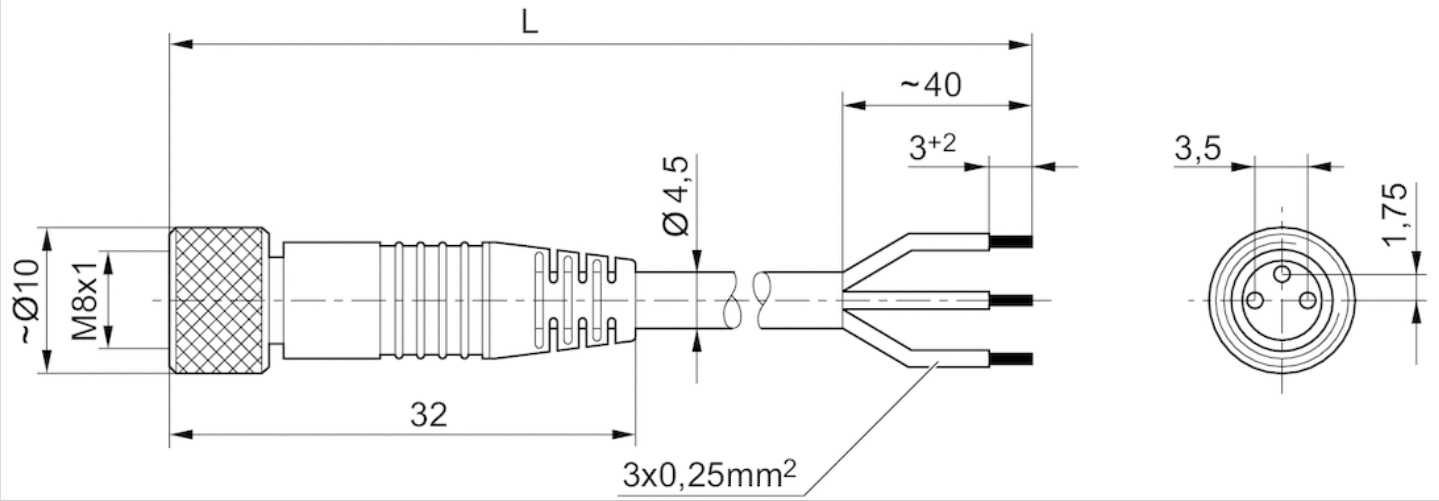
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

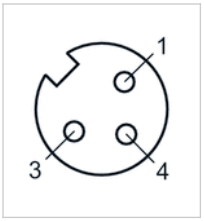
Dimensions



L = length

Pin assignments

Pin assignment, socket

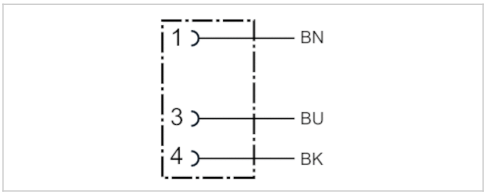


(1) BN=brown
(3) BU=blue
(4) BK=black

Round plug connector, Series CON-RD

- Socket M8x1 3-pin A-coded angled 90°
- open cable ends
- with cable
- unshielded

Ambient temperature min./max.	-40 ... 85 °C
Operational voltage	48 V AC/DC
Protection class	IP67
Wire cross-section	0.24 mm²
Weight	See table below



Technical data

Part No.	Max. current	Number of wires	Cable-Ø	Cable length	Weight
1834484167	4 A	3	4.5 mm	3 m	0.087 kg
1834484169	4 A	3	4.5 mm	5 m	0.139 kg
1834484248	4 A	3	4.5 mm	10 m	0.279 kg

Technical information

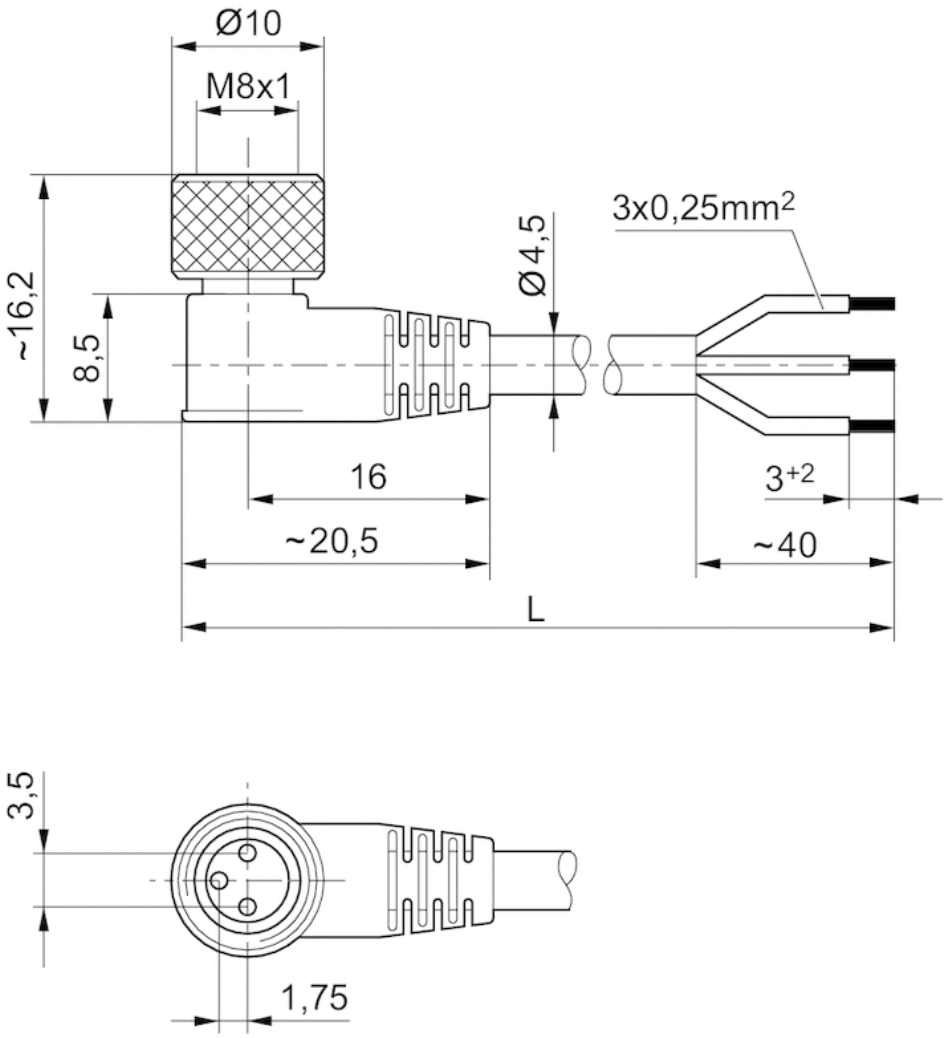
The specified protection class is only valid in assembled and tested state.

Technical information

Material	
Housing	Polyurethane
Cable sheath	Polyurethane

Dimensions

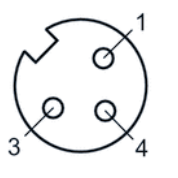
Dimensions



L = length

Pin assignments

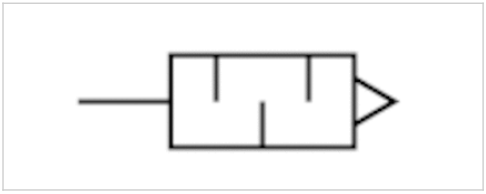
Pin assignment, socket



(1) BN=brown
(3) BU=blue
(4) BK=black

Silencers, series SI1

- M5
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	72 dB
Weight	0.004 kg
Comment	Flow characteristic curves can be found under “Diagrams”.

Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000006	M5	398 l/min	10 piece

Weight per piece

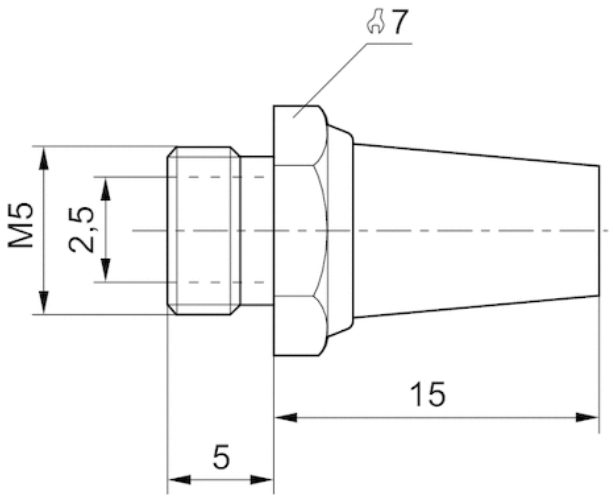
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

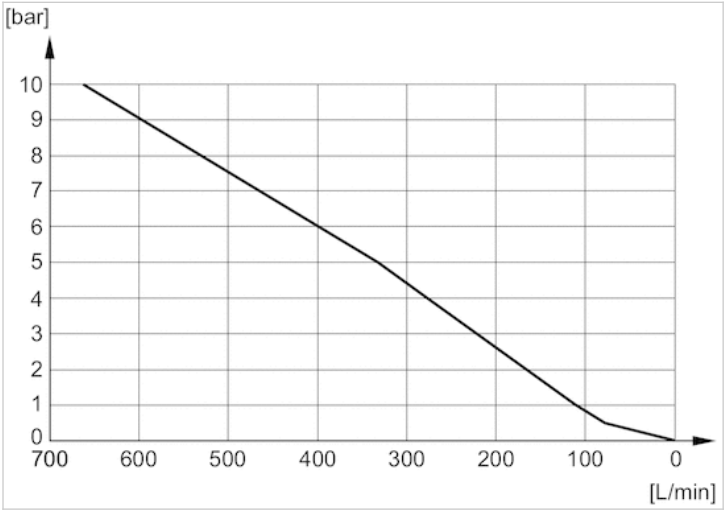
Dimensions

Dimensions in mm



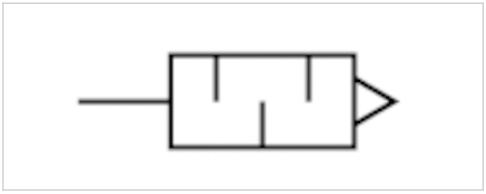
Diagrams

Flow diagram, 1827000006



Silencers, series SI1

- G 1/8
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	75 dB
Weight	0.01 kg
Comment	Flow characteristic curves can be found under “Diagrams”.

Technical data

Part No.	Compressed air connection	Flow	Delivery unit
		Qn	
1827000000	G 1/8	1623 l/min	10 piece

Weight per piece

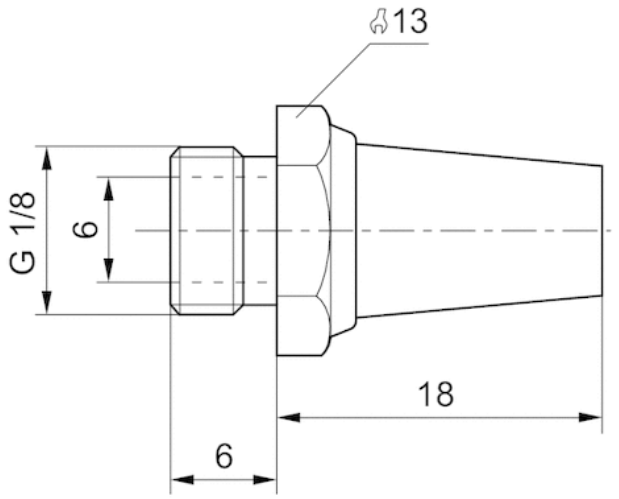
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

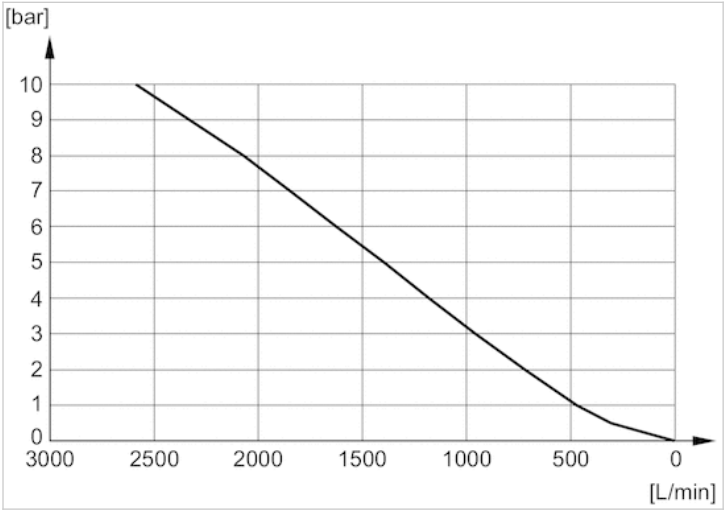
Dimensions

Dimensions in mm



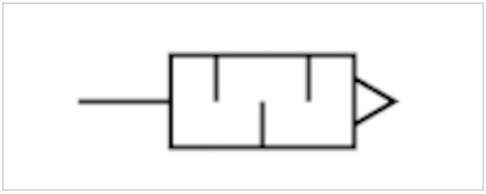
Diagrams

Flow diagram, 1827000000



Silencers, series SI1

- M5 G 1/8
- Sintered bronze



Working pressure min./max.	0 ... 10 bar
Ambient temperature min./max.	-25 ... 80 °C
Medium	Compressed air
Sound pressure level	See table below
Weight	See table below
Comment	Flow characteristic curves can be found under “Diagrams”.

Technical data

Part No.	Compressed air connection	Sound pressure level	Flow	Delivery unit	Weight
			Qn		
1827000032	M5	79 dB	252 l/min	10 piece	0.005 kg
1827000031	G 1/8	85 dB	700 l/min	10 piece	0.001 kg

Weight per piece

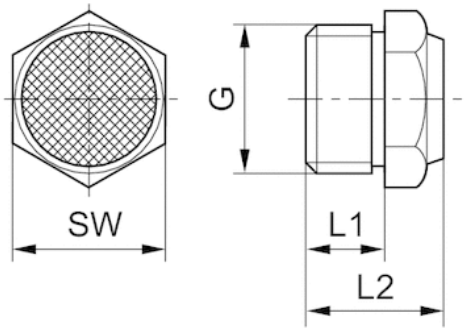
Nominal flow Qn at p1 = 6 bar (absolute) freely discharged. Sound pressure level measured at 6 bar against atmosphere at 1 m distance.

Technical information

Material	
Silencer	Sintered bronze
Thread	Brass

Dimensions

Dimensions



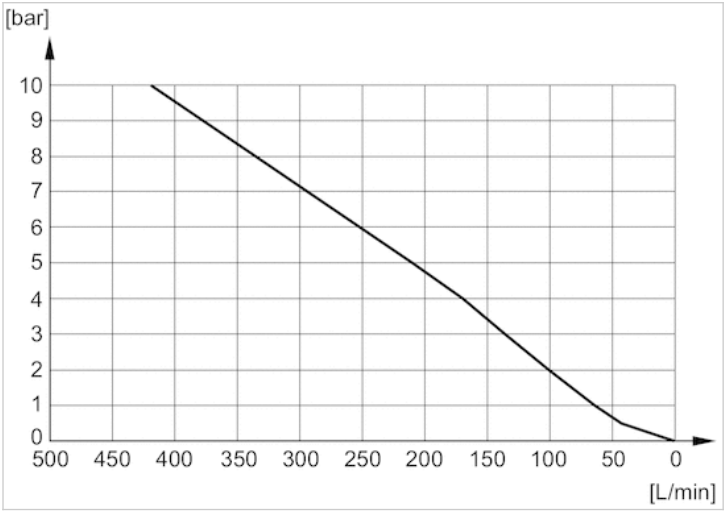
Dimensions

Part No.	Port G	L1	L2	SW
1827000032	M5	5	10.3	7
1827000031	G 1/8	6	11.5	13

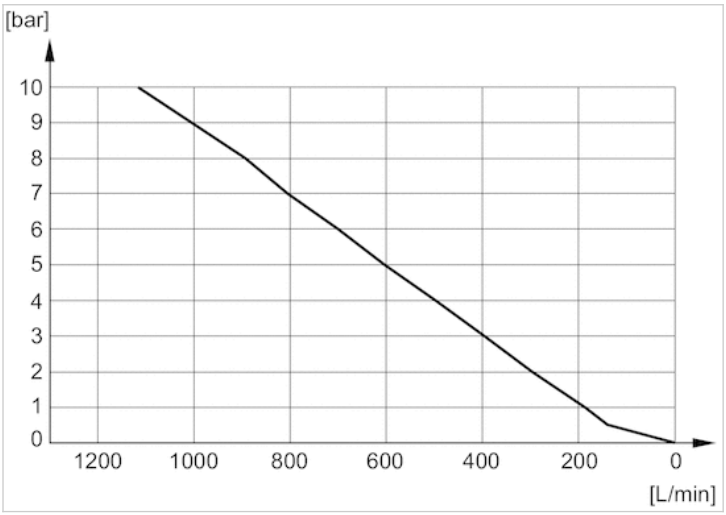
Sound pressure level measured at 6 bar at 1 m distance

Diagrams

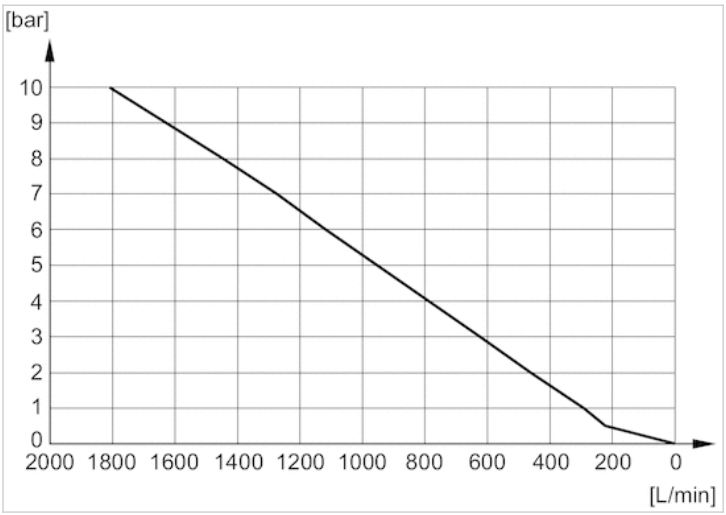
Flow diagram, 1827000032



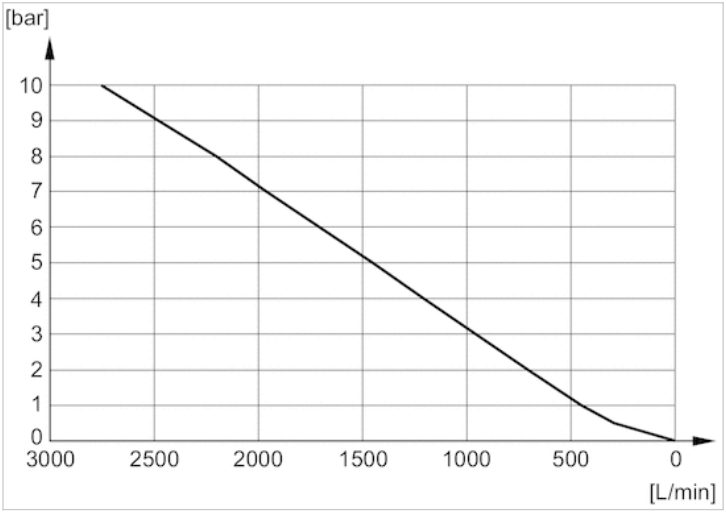
Flow diagram, 1827000031



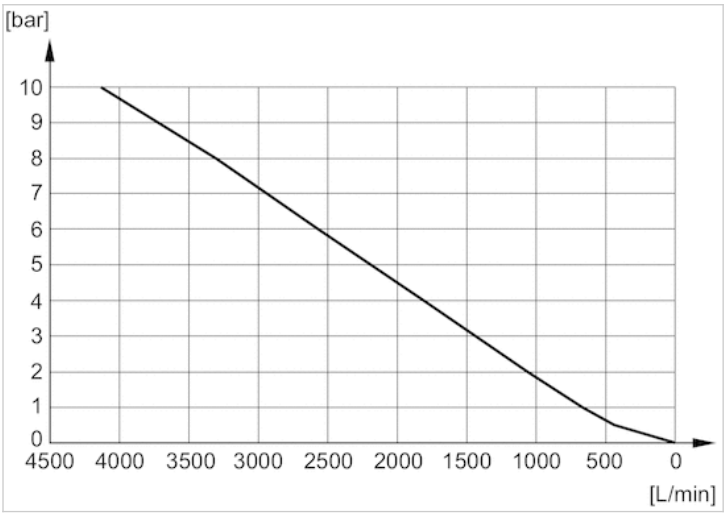
Flow diagram, 1827000033



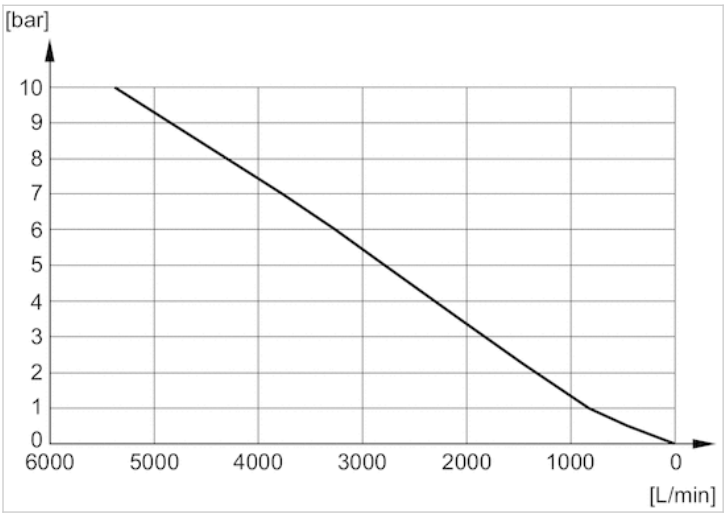
Flow diagram, 1827000034



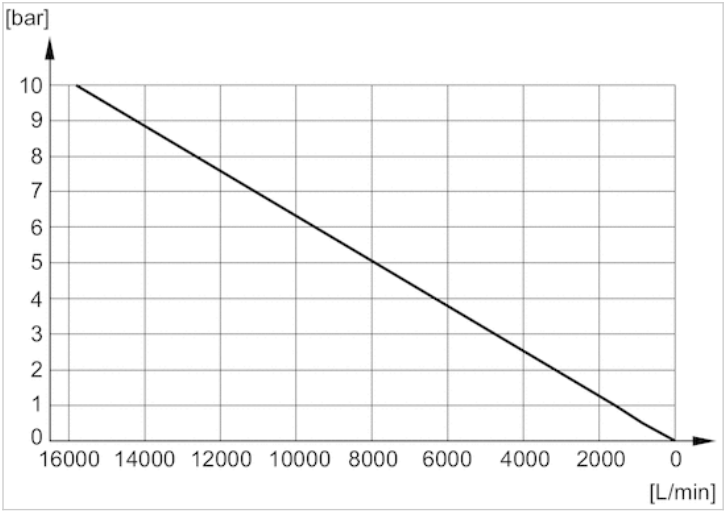
Flow diagram, 1827000035



Flow diagram, 8145003400



Flow diagram, 8145001000



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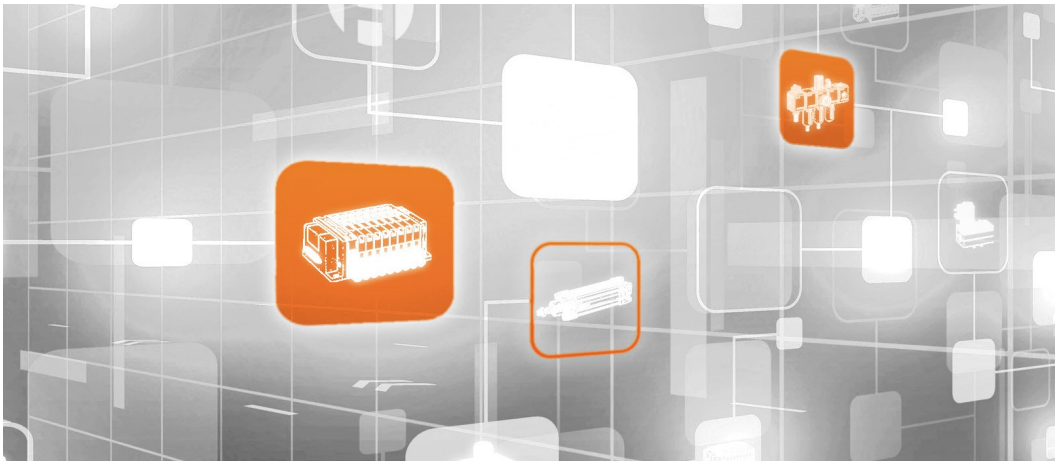

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