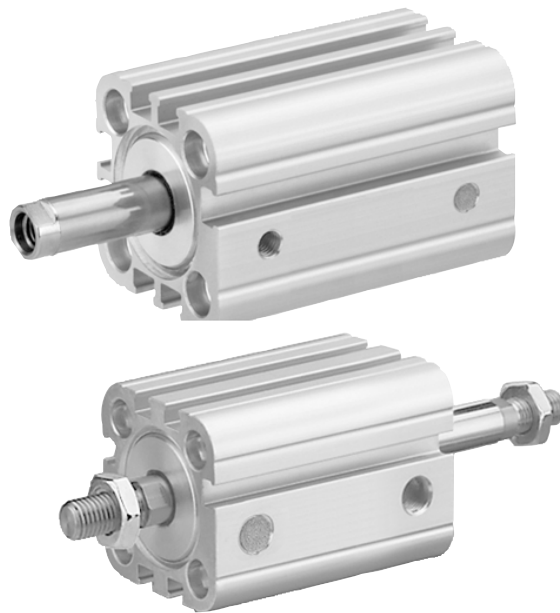


Piston rod cylinder ▶

ISO 21287, series CCI







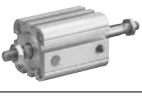


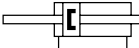

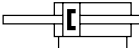


Brochure

Rexroth
Pneumatics



Piston rod cylinder ▶

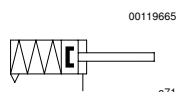
ISO 21287, series CCI

		<p>Compact cylinder, ISO 21287, Series CCI</p> <p>▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ Single-acting, extended without pressure ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: internal thread</p>	3
		<p>Compact cylinder, ISO 21287, Series CCI</p> <p>▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ Single-acting, extended without pressure ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: external thread</p>	7
		<p>Compact cylinder, ISO 21287, Series CCI</p> <p>▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ Single-acting, retracted without pressure ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, internal thread</p>	11
		<p>Compact cylinder, ISO 21287, Series CCI</p> <p>▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ Single-acting, retracted without pressure ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, external thread</p>	15
		<p>Compact cylinder, ISO 21287, Series CCI</p> <p>▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, internal thread ▶ ATEX optional</p>	19
		<p>Compact cylinder, ISO 21287, Series CCI</p> <p>▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, external thread ▶ ATEX optional</p>	22
		<p>Compact cylinder, Series CCI</p> <p>▶ Heat-resistant version</p>	25
		Core program, series CCI	on line

Piston rod cylinder ▶

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
Working pressure min./max.	1.5 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Pressure for determining piston forces	6 bar

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

Technical Remarks

- 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, see chapter „Technical information“.

Piston Ø	[mm]	16	20	25	32	40	
Retracting piston force	[N]	79	124	191	329	517	
Extracting piston force	[N]	12	13	25	35	43	
Impact energy	[J]	0.11	0.15	0.2	0.4	0.52	
Weight	0 mm stroke	[kg]	0.061	0.101	0.126	0.237	0.309
	+10 mm stroke	[kg]	0.016	0.023	0.026	0.043	0.052
Stroke max.	[mm]	25	25	25	25	25	

Piston Ø	[mm]	50	63	80	100	
Retracting piston force	[N]	789	1396	2292	3671	
Extracting piston force	[N]	82	82	105	215	
Impact energy	[J]	0.64	0.75	0.75	1	
Weight	0 mm stroke	[kg]	0.462	0.703	1.142	2.199
	+10 mm stroke	[kg]	0.07	0.087	0.116	0.168
Stroke max.	[mm]	25	25	25	25	

Supplementary products


Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

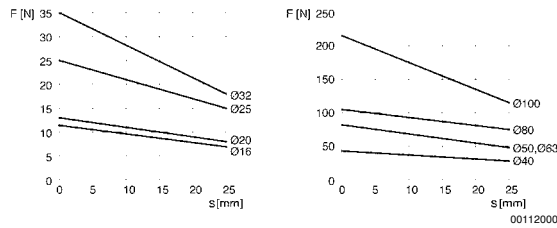
Piston rod cylinder ▶

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

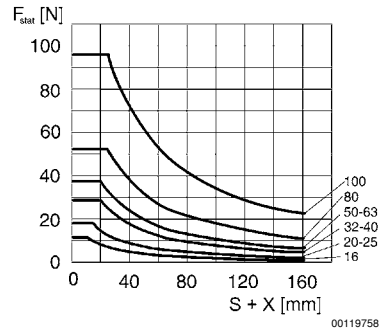
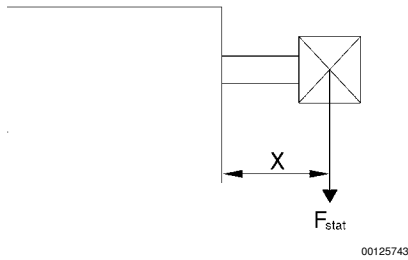
	Piston Ø	16	20	25	32	40
	Piston rod thread	M4	M6	M6	M8	M8
	Ports	M5	M5	M5	G 1/8	G 1/8
	Piston rod Ø	8	10	10	12	12
	Stroke 5	R422001492	R422001493	R422001494	R422001495	R422001496
	10	R422001502	R422001503	R422001504	R422001505	R422001506
	15	R422001512	R422001513	R422001514	R422001515	R422001516
	20	R422001522	R422001523	R422001524	R422001525	R422001526
	25	R422001532	R422001533	R422001534	R422001535	R422001536
	Piston Ø	50	63	80	100	
	Piston rod thread	M10	M10	M12	M12	
	Ports	G 1/8	G 1/8	G 1/8	G 1/8	
	Piston rod Ø	16	16	20	25	
	Stroke 5	R422001497	R422001498	R422001499	R422001500	
10	R422001507	R422001508	R422001509	R422001510		
15	R422001517	R422001518	R422001519	R422001520		
20	R422001527	R422001528	R422001529	R422001530		
25	R422001537	R422001538	R422001539	R422001540		

Extracting piston force



F = spring return force, s = stroke

Maximum permissible lateral force, Static



F stat. = static lateral force

X = spacing between force application point and cylinder cover

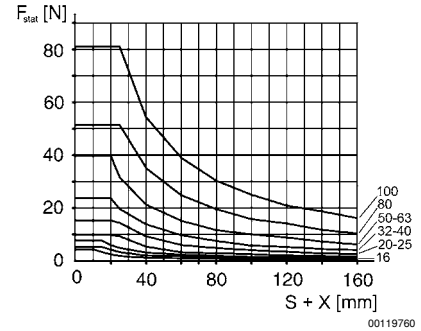
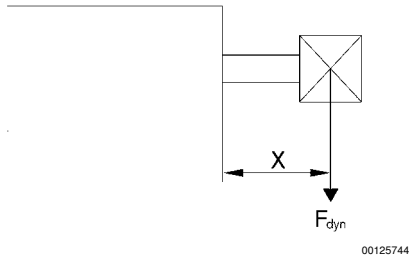
S = stroke

Piston rod cylinder ▶

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

Maximum permissible lateral force, Dynamic

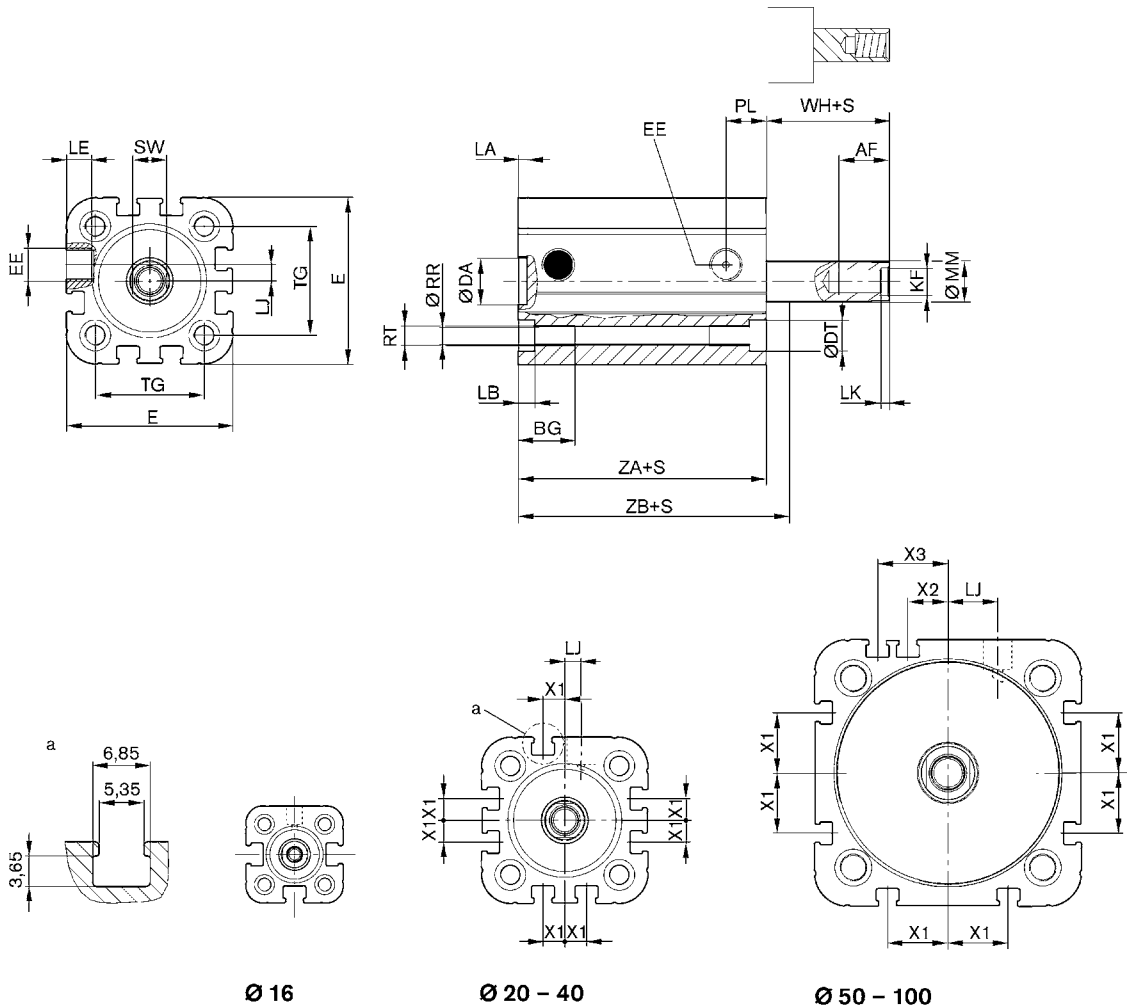


F_{dyn} = dynamic lateral force

X = spacing between force application point and cylinder cover

S = stroke

Ø 16 - 100 mm



S = stroke

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

Piston rod cylinder ▶

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

Piston Ø	AF	BG	DA H11	DT	E	EE	KF	LA	LB	LE	LJ	LK	MM f8
16	10	15	10	6	29.3	M5	M4	2.5	3.5	4.5	0	1.6	8
20	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5	4.5	2.5	10
25	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4.5	4	2.5	10
32	12	17	14	9.2	50	G 1/8	M8	2.5	5	7.5	4.85	2.5	12
40	12	17	14	9.2	58	G 1/8	M8	2.5	5	7.5	9.85	2.5	12
50	16	17	18	11	68.3	G 1/8	M10	2.5	5	7.5	12	3.5	16
63	16	17	18	11	80	G 1/8	M10	2.5	5	7.5	14.8	3.5	16
80	20	20	23	15	96	G 1/8	M12	3	5	7.5	22	3.5	20
100	20	20	28	15	116	G 1/8	M12	3	5	7.5	27	3.5	25

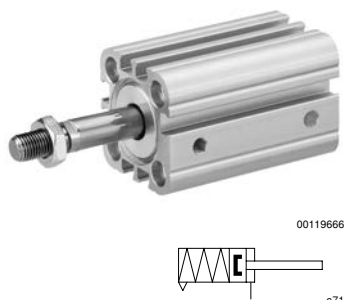
Piston Ø	PL	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA	ZB 2)
16	8	3.3	M4	7	18	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20	11	4.2	M5	8	22	6,3 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25	11	4.2	M5	8	26	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40	12	5.1	M6	10	38	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	16.5	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1

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

Piston rod cylinder ▶

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
Working pressure min./max.	1.5 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Pressure for determining piston forces	6 bar

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

Technical Remarks

- 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, see chapter „Technical information“.

Piston Ø	[mm]	16	20	25	32	40	
Retracting piston force	[N]	79	124	191	329	517	
Extracting piston force	[N]	12	13	25	35	43	
Impact energy	[J]	0.11	0.15	0.2	0.4	0.52	
Weight	0 mm stroke	[kg]	0.066	0.127	0.152	0.26	0.332
	+10 mm stroke	[kg]	0.016	0.023	0.026	0.043	0.052
Stroke max.	[mm]	25	25	25	25	25	

Piston Ø	[mm]	50	63	80	100	
Retracting piston force	[N]	789	1396	2292	3671	
Extracting piston force	[N]	82	82	105	215	
Impact energy	[J]	0.64	0.75	0.75	1	
Weight	0 mm stroke	[kg]	0.501	0.742	1.223	2.28
	+10 mm stroke	[kg]	0.07	0.087	0.116	0.168
Stroke max.	[mm]	25	25	25	25	

Supplementary products


Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

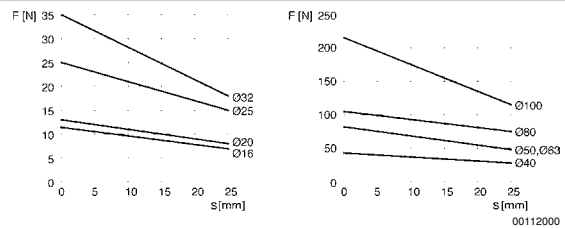
Piston rod cylinder ▶

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

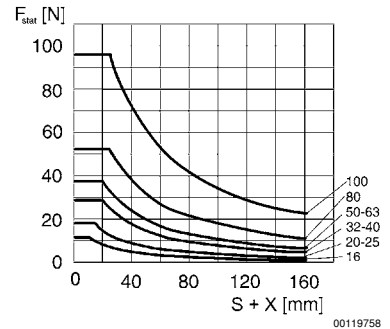
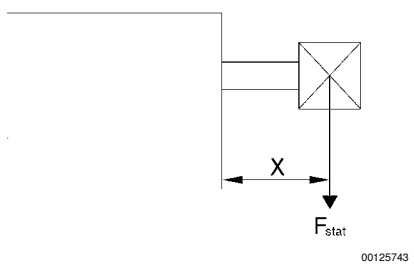
	Piston Ø Piston rod thread Ports Piston rod Ø	16 M6x1 M5 8	20 M8x1,25 M5 10	25 M8x1,25 M5 10	32 M10x1,25 G 1/8 12	40 M10x1,25 G 1/8 12	
	Stroke						
	5	R422001542	R422001543	R422001544	R422001545	R422001546	
	10	R422001552	R422001553	R422001554	R422001555	R422001556	
	15	R422001562	R422001563	R422001564	R422001565	R422001566	
	20	R422001572	R422001573	R422001574	R422001575	R422001576	
	25	R422001582	R422001583	R422001584	R422001585	R422001586	
	Piston Ø Piston rod thread Ports Piston rod Ø	50 M12x1,25 G 1/8 16	63 M12x1,25 G 1/8 16	80 M16x1,5 G 1/8 20	100 M16x1,5 G 1/8 25		
	Stroke						
	5	R422001547	R422001548	R422001549	R422001550		
	10	R422001557	R422001558	R422001559	R422001560		
15	R422001567	R422001568	R422001569	R422001570			
20	R422001577	R422001578	R422001579	R422001580			
25	R422001587	R422001588	R422001589	R422001590			

Extracting piston force



F = spring return force, s = stroke

Maximum permissible lateral force, Static



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

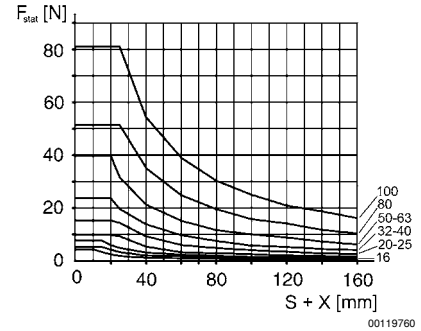
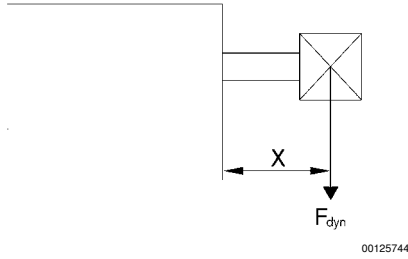
S = stroke

Piston rod cylinder ▶

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

Maximum permissible lateral force, Dynamic

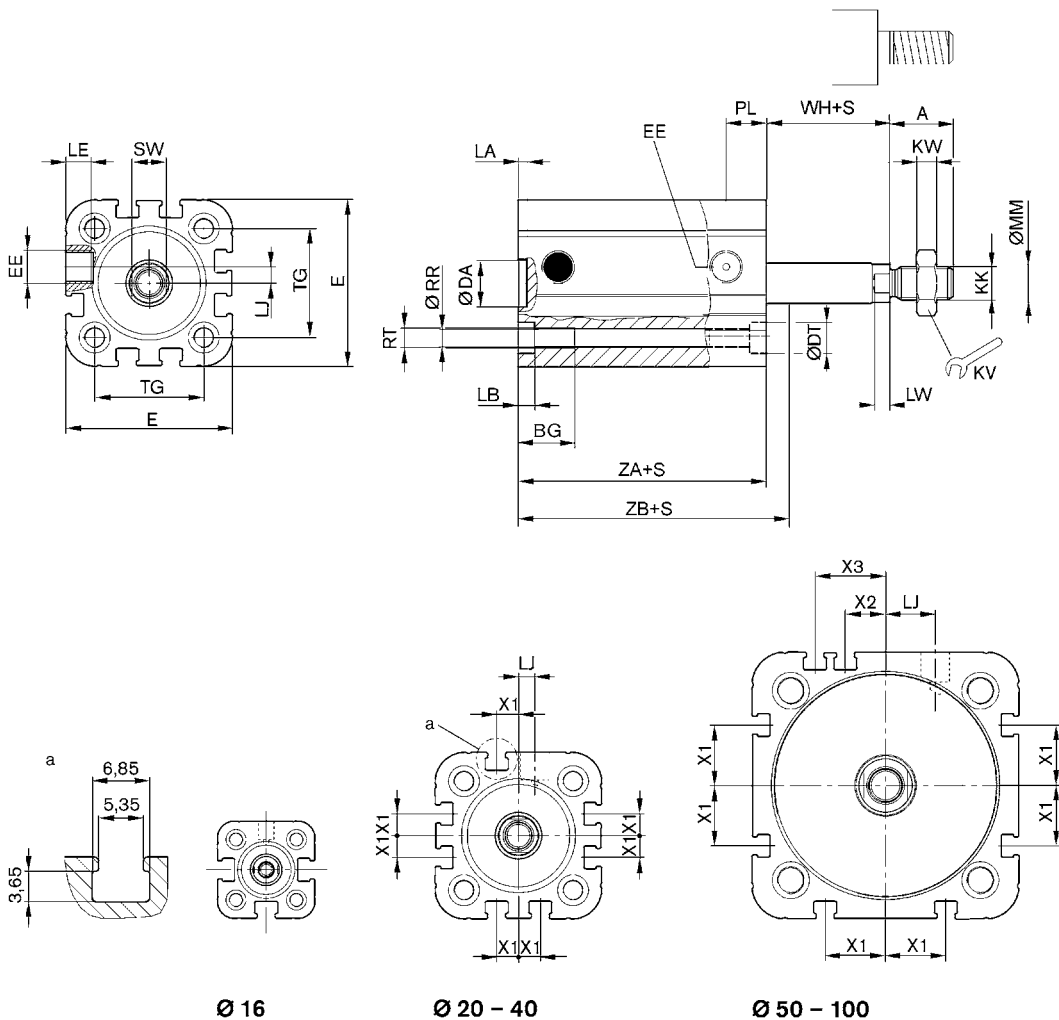


F_{dyn.} = dynamic lateral force

X = spacing between force application point and cylinder cover

S = stroke

Ø 16 - 100 mm



S = stroke

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

Piston rod cylinder ▶

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

Piston Ø	A 2)	BG	DA H11	DT	E	EE	KK	KV	KW	LA	LB	LE	LJ
16	12	15	10	6	29.3	M5	M6	10	3	2.5	3.5	4.5	0
20	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5	4.5	4.5	4.5
25	16	15.5	12	8	40.3	M5	M8	13	4	2.5	4.5	4.5	4
32	19	17	14	9.2	50	G 1/8	M10x1,25	17	5	2.5	5	7.5	4.85
40	19	17	14	9.2	58	G 1/8	M10x1,25	17	5	2.5	5	7.5	9.85
50	22	17	18	11	68.3	G 1/8	M12x1,25	19	6	2.5	5	7.5	12
63	22	17	18	11	80	G 1/8	M12x1,25	19	6	2.5	5	7.5	14.8
80	28	20	23	15	96	G 1/8	M16x1,5	24	8	3	5	7.5	22
100	28	20	28	15	116	G 1/8	M16x1,5	24	8	3	5	7.5	27

Piston Ø	LW	MM f8	PL	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA
16	4	8	8	3.3	M4	7	18	4,8 ±0,9	-	-	-	34,9 ±0,1
20	4	10	11	4.2	M5	8	22	6,3 ±0,9	4.2	-	-	37,3 ±0,1
25	4	10	11	4.2	M5	8	26	5,6 ±0,9	4.5	-	-	39 ±0,1
32	4.5	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	-	-	44 ±0,1
40	4.5	12	12	5.1	M6	10	38	7,4 ±0,9	11	-	-	45 ±0,1
50	6	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1
63	6	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1
80	7	20	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1
100	7	25	16.5	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1

Piston Ø	ZB 2)											
16	39,7 ±0,8											
20	43,6 ±0,8											
25	44,5 ±0,9											
32	51,4 ±1											
40	52,4 ±1											
50	53,6 ±1											
63	57,4 ±1											
80	64,4 ±1											
100	76,7 ±1											

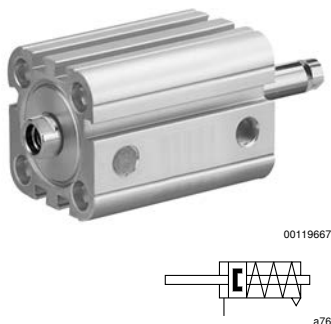
1) with cylinders with external thread extension, dimension "A" is increased by the value of the thread extension.

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

Piston rod cylinder ▶

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: through, internal thread



Standards	ISO 21287
Compressed air connection	internal thread
Working pressure min./max.	1.5 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Pressure for determining piston forces	6 bar

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

Technical Remarks

- 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, see chapter „Technical information“.

Piston Ø	[mm]	16	20	25	32	40
Retracting piston force	[N]	12	13	25	35	43
Extracting piston force	[N]	79	124	191	329	517
Impact energy	[J]	0.11	0.15	0.2	0.4	0.52
Weight	0 mm stroke	0.066	0.109	0.131	0.25	0.325
	+10 mm stroke	0.02	0.029	0.032	0.052	0.06
Stroke max.	[mm]	25	25	25	25	25

Piston Ø	[mm]	50	63	80	100
Retracting piston force	[N]	82	82	105	215
Extracting piston force	[N]	789	1396	2292	3671
Impact energy	[J]	0.64	0.75	0.75	1
Weight	0 mm stroke	0.486	0.732	1.21	2.324
	+10 mm stroke	0.087	0.103	0.14	0.206
Stroke max.	[mm]	25	25	25	25


Supplementary products

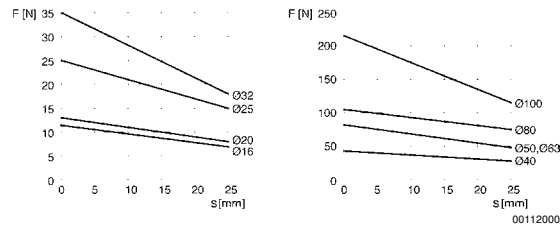
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

Piston rod cylinder >
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: through, internal thread

	Piston Ø Piston rod thread Ports Piston rod Ø	16 M4 M5 8	20 M6 M5 10	25 M6 M5 10	32 M8 G 1/8 12	40 M8 G 1/8 12	
	Stroke 5	R422001592	R422001593	R422001594	R422001595	R422001596	
	10	R422001602	R422001603	R422001604	R422001605	R422001606	
	15	R422001612	R422001613	R422001614	R422001615	R422001616	
	20	R422001622	R422001623	R422001624	R422001625	R422001626	
	25	R422001632	R422001633	R422001634	R422001635	R422001636	
	Piston Ø Piston rod thread Ports Piston rod Ø	50 M10 G 1/8 16	63 M10 G 1/8 16	80 M12 G 1/8 20	100 M12 G 1/8 25		
	Stroke 5	R422001597	R422001598	R422001599	R422001600		
	10	R422001607	R422001608	R422001609	R422001610		
	15	R422001617	R422001618	R422001619	R422001620		
	20	R422001627	R422001628	R422001629	R422001630		
25	R422001637	R422001638	R422001639	R422001640			

Retracting piston force


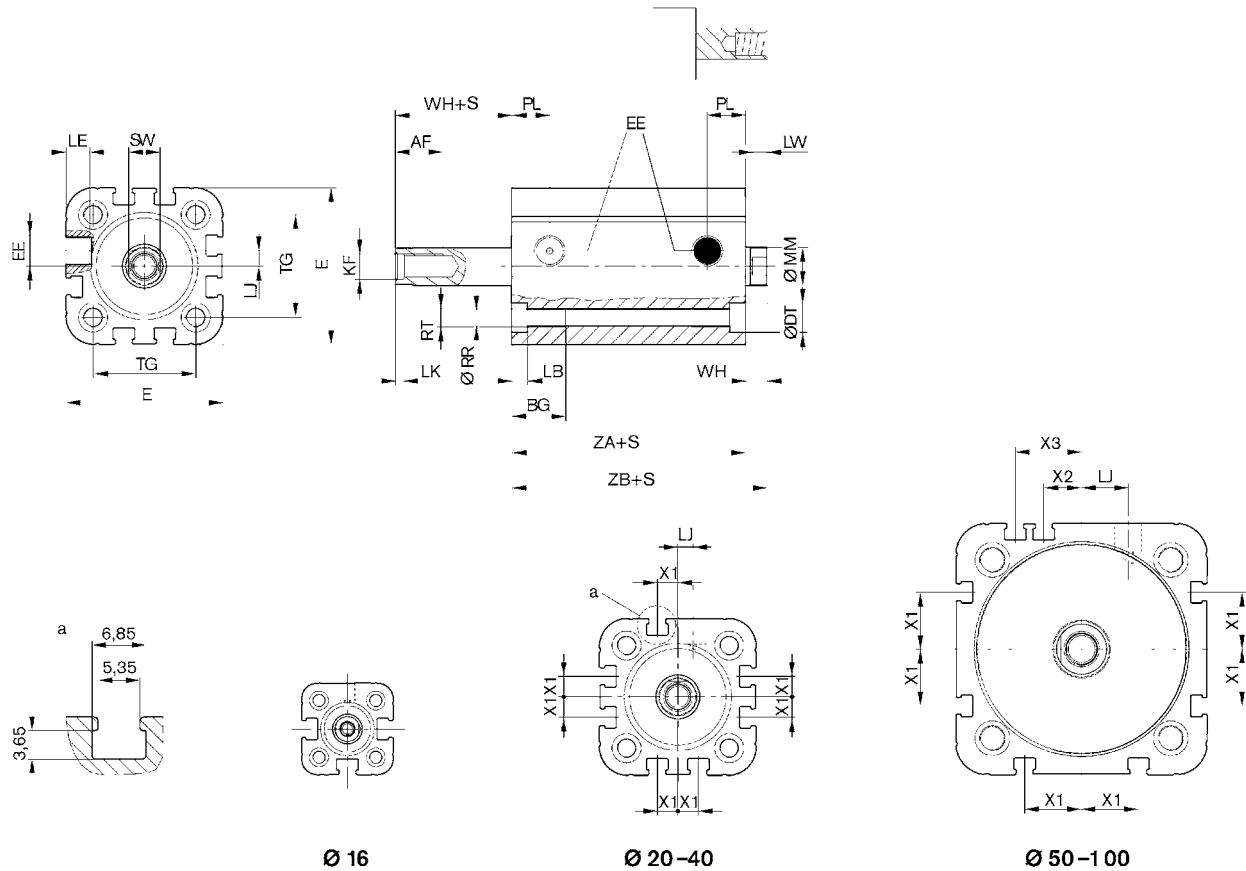
F = spring return force, s = return stroke

Piston rod cylinder ▶

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: through, internal thread

Ø 16 - 100 mm



S = stroke

00125754

Piston Ø	AF	BG	DT	E	EE	KF	LB	LE	LJ	LK	LW	MM f8	PL
16	10	15	6	29.3	M5	M4	3.5	4.5	-	1.6	4	8	8
20	12	15.5	7.5	36.3	M5	M6	4.5	4.5	4.5	2.5	4	10	11
25	12	15.5	8	40.3	M5	M6	4.5	4.5	4	2.5	4	10	11
32	12	17	9.2	50	G 1/8	M8	5	7.5	4.85	2.5	4.5	12	12
40	12	17	9.2	58	G 1/8	M8	5	7.5	9.85	2.5	4.5	12	12
50	16 1)	17	11	68.3	G 1/8	M10	5	7.5	12	3.5	6	16	12
63	16 1)	17	11	80	G 1/8	M10	5	7.5	14.8	3.5	6	16	12
80	20 2)	20	15	96	G 1/8	M12	5	7.5	22	3.5	7	20	14
100	20 2)	20	15	116	G 1/8	M12	5	7.5	27	3.5	7	25	16.5

Piston Ø	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA	ZB 2)
16	3.3	M4	7	18	4,8 ±0,9	-	-	-	34,9 ±0,1	39,7 ±0,8
20	4.2	M5	8	22	6,3 ±0,9	4.2	-	-	37,3 ±0,1	43,6 ±0,8
25	4.2	M5	8	26	5,6 ±0,9	4.5	-	-	39 ±0,1	44,5 ±0,9
32	5.1	M6	10	32.5	7,4 ±0,9	6.5	-	-	44 ±0,1	51,4 ±1
40	5.1	M6	10	38	7,4 ±0,9	11	-	-	45 ±0,1	52,4 ±1
50	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1

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

1) Stroke < 5 mm: AF= 11 mm

2) Stroke < 5 mm: AF= 15 mm

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

Piston rod cylinder ▶
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: through, internal thread

Piston Ø	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA	ZB 2)		
80	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1		
100	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1		

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

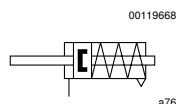
1) Stroke < 5 mm: AF= 11 mm

2) Stroke < 5 mm: AF= 15 mm

Piston rod cylinder ▶

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: through, external thread



Standards	ISO 21287
Compressed air connection	internal thread
Working pressure min./max.	1.5 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Pressure for determining piston forces	6 bar

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

Technical Remarks

- 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, see chapter „Technical information“.

Piston Ø	[mm]	16	20	25	32	40	
Retracting piston force	[N]	12	13	25	35	43	
Extracting piston force	[N]	79	124	191	329	517	
Impact energy	[J]	0.11	0.15	0.2	0.4	0.52	
Weight	0 mm stroke	[kg]	0.074	0.147	0.169	0.297	0.372
	+10 mm stroke	[kg]	0.02	0.029	0.032	0.052	0.06
Stroke max.	[mm]	25	25	25	25	25	

Piston Ø	[mm]	50	63	80	100	
Retracting piston force	[N]	82	82	105	215	
Extracting piston force	[N]	789	1396	2292	3671	
Impact energy	[J]	0.64	0.75	0.75	1	
Weight	0 mm stroke	[kg]	0.566	0.811	1.359	2.474
	+10 mm stroke	[kg]	0.087	0.103	0.14	0.206
Stroke max.	[mm]	25	25	25	25	

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

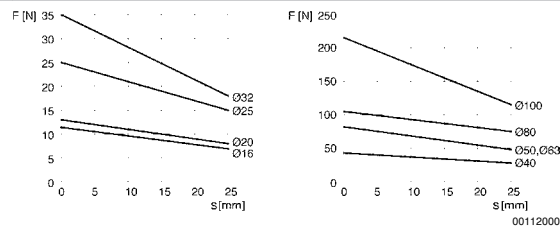
Piston rod cylinder ▶

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: through, external thread

	Piston Ø Piston rod thread Ports Piston rod Ø	16 M6x1 M5 8	20 M8x1,25 M5 10	25 M8x1,25 M5 10	32 M10x1,25 G 1/8 12	40 M10x1,25 G 1/8 12	
	Stroke 5	R422001642	R422001643	R422001644	R422001645	R422001646	
	10	R422001652	R422001653	R422001654	R422001655	R422001656	
	15	R422001662	R422001663	R422001664	R422001665	R422001666	
	20	R422001672	R422001673	R422001674	R422001675	R422001676	
	25	R422001682	R422001683	R422001684	R422001685	R422001686	
	Piston Ø Piston rod thread Ports Piston rod Ø	50 M12x1,25 G 1/8 16	63 M12x1,25 G 1/8 16	80 M16x1,5 G 1/8 20	100 M16x1,5 G 1/8 25		
	Stroke 5	R422001647	R422001648	R422001649	R422001650		
	10	R422001657	R422001658	R422001659	R422001660		
	15	R422001667	R422001668	R422001669	R422001670		
	20	R422001677	R422001678	R422001679	R422001680		
25	R422001687	R422001688	R422001689	R422001690			

Retracting piston force



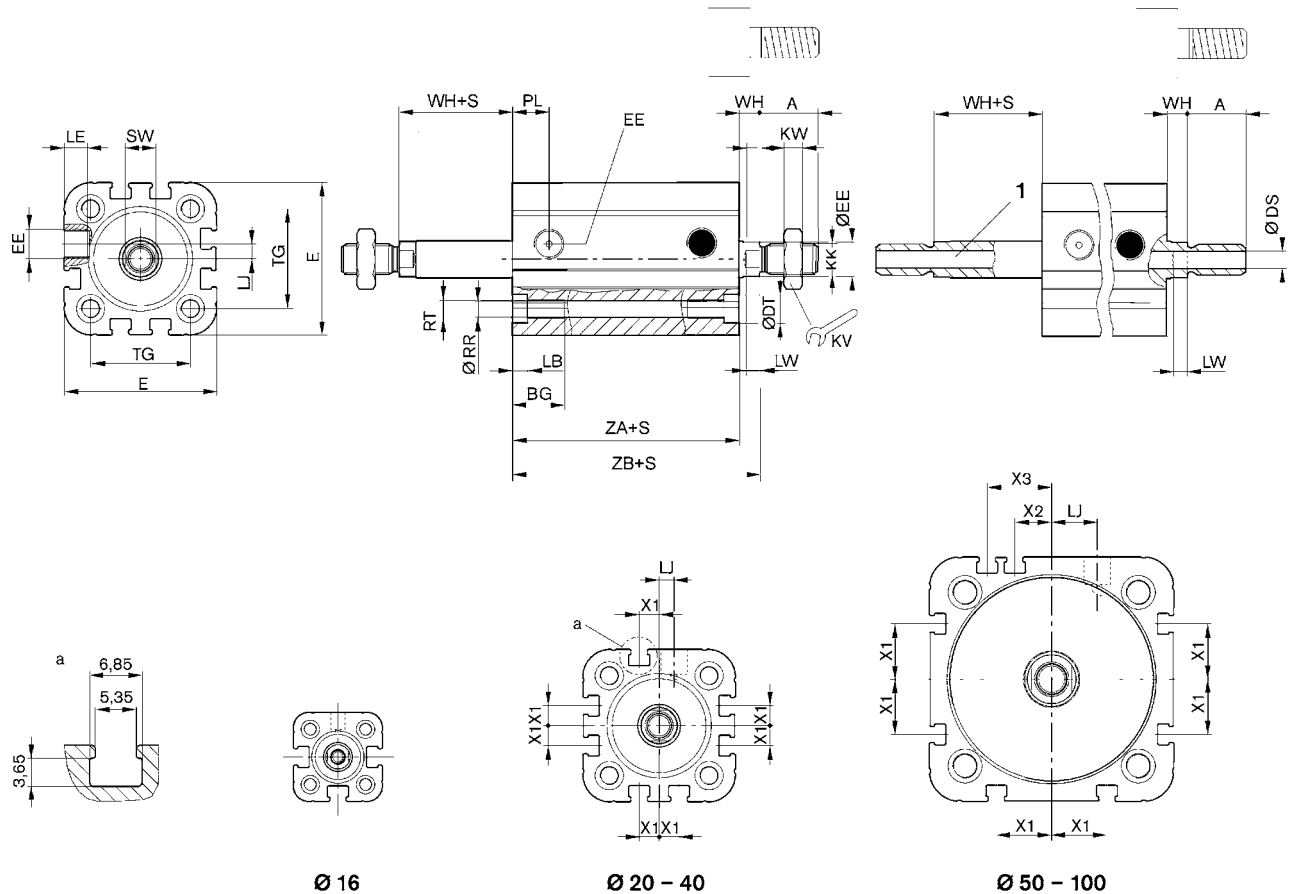
F = spring return force, s = return stroke

Piston rod cylinder ▶

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: through, external thread

Ø 16 - 100 mm



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

00119659

Piston Ø	A 1)	AF	BG	Ø DS	DT	E	EE	KK 4)	KV	KW	LB	LE
16	12	10	15	2	6	29.3	M5	M6 / M5	10	3	3.5	4.5
20	16	12	15.5	3.8	7.5	36.3	M5	M8 / G 1/8	13	4	4.5	4.5
25	16	12	15.5	3.8	8	40.3	M5	M8 / G 1/8	13	4	4.5	4.5
32	19	12	17	4.5	9.2	50	G 1/8	M10x1,25 / G 1/8	17	5	5	7.5
40	19	12	17	4.5	9.2	58	G 1/8	M10x1,25 / G 1/8	17	5	5	7.5
50	22	16 3)	17	6	11	68.3	G 1/8	M12x1,25 / G 1/4	19	6	5	7.5
63	22	16 3)	17	6	11	80	G 1/8	M12x1,25 / G 1/4	19	6	5	7.5
80	28	20 5)	20	8	15	96	G 1/8	M16x1,5 / M16x1,5	24	8	5	7.5
100	28	20 5)	20	8	15	116	G 1/8	M16x1,5 / M16x1,5	24	8	5	7.5

Piston Ø	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA
16	0	4	8	8	3.3	M4	7	18	4,8 ±0,9	-	-	-	34,9 ±0,1
20	4.5	4	10	11	4.2	M5	8	22	6,3 ±0,9	4.2	-	-	37,3 ±0,1
25	4	4	10	11	4.2	M5	8	26	5,6 ±0,9	4.5	-	-	39 ±0,1
32	4.85	4.5	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	-	-	44 ±0,1
40	9.85	4.5	12	12	5.1	M6	10	38	7,4 ±0,9	11	-	-	45 ±0,1
50	12	6	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1
63	14.8	6	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1
80	22	7	20	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

Piston rod cylinder >
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: through, external thread

Piston Ø	LJ	LW	MM f8	PL	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA
100	27	7	25	16.5	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1

Piston Ø	ZB 2)												
16	39,7 ±0,8												
20	43,6 ±0,8												
25	44,5 ±0,9												
32	51,4 ±1												
40	52,4 ±1												
50	53,6 ±1												
63	57,4 ±1												
80	64,4 ±1												
100	76,7 ±1												

1) 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.

Stroke < 5 mm: AF= 11 mm

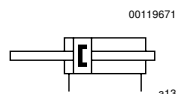
Solid piston rod/hollow piston rod

5) Stroke < 5 mm: AF= 15 mm

Piston rod cylinder ▶

Compact cylinder, ISO 21287, Series CCI

▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, internal thread ▶ ATEX optional



Standards	ISO 21287
Compressed air connection	internal thread
Working pressure min./max.	1 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Pressure for determining piston forces	6 bar

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

Technical Remarks

- 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, see chapter „Technical information“.
- ATEX-certified cylinders can be generated in the Internet configurator.
- ATEX ID: II 2G c IIB T4 II 2D c IP65 T125 °C X
- The operating temperature range for ATEX-certified cylinders is -20 °C to +50 °C.

Piston Ø		[mm]	16	20	25	32	40
Retracting piston force		[N]	91	137	216	364	560
Extracting piston force		[N]	91	137	216	364	560
Impact energy		[J]	0.11	0.15	0.2	0.4	0.52
Weight	0 mm stroke	[kg]	0.064	0.107	0.128	0.246	0.319
	+10 mm stroke	[kg]	0.02	0.029	0.032	0.052	0.06
Stroke max.		[mm]	300	300	300	300	300

Piston Ø		[mm]	50	63	80	100
Retracting piston force		[N]	871	1478	2397	3886
Extracting piston force		[N]	871	1478	2397	3886
Impact energy		[J]	0.64	0.75	0.75	1
Weight	0 mm stroke	[kg]	0.472	0.718	1.182	2.278
	+10 mm stroke	[kg]	0.087	0.103	0.14	0.206
Stroke max.		[mm]	300	300	500	500

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

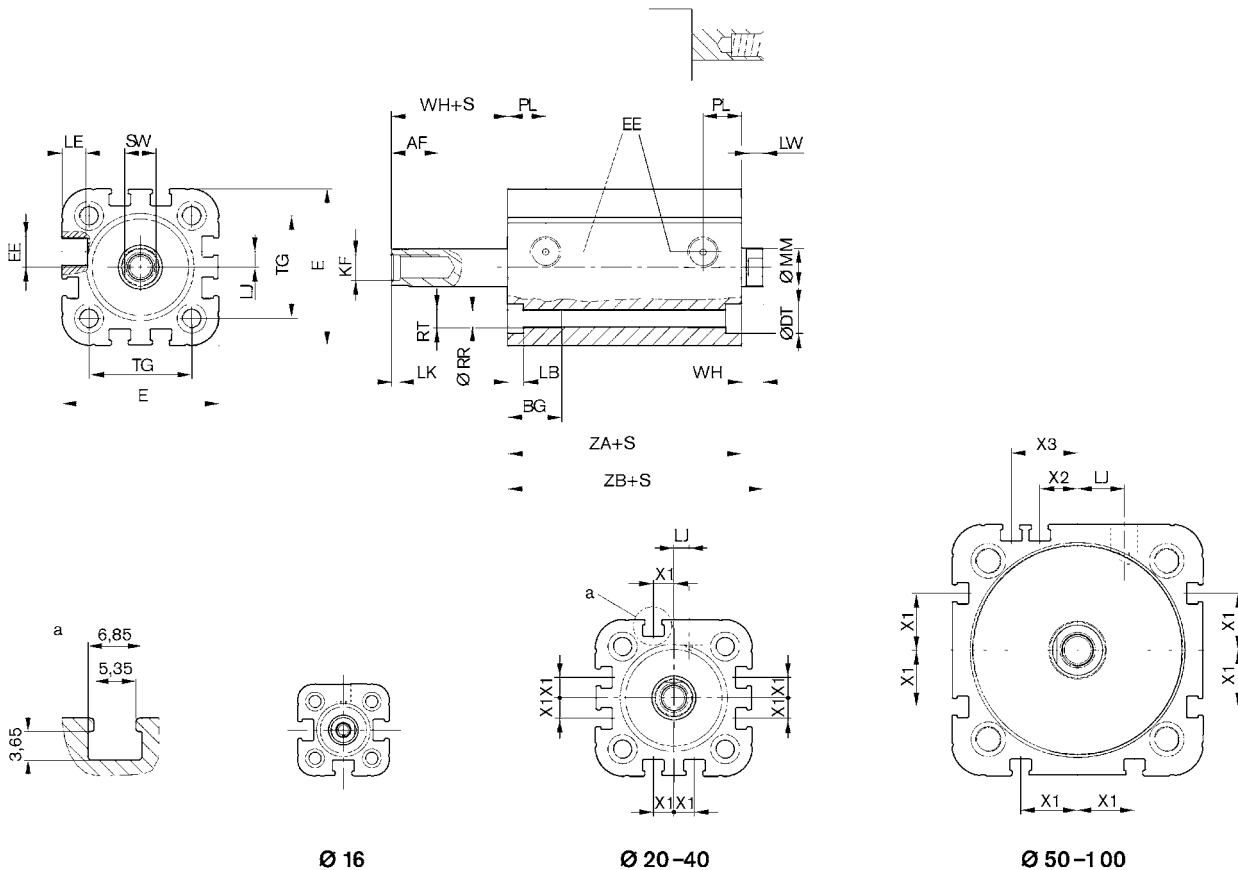
Piston rod cylinder ▶

Compact cylinder, ISO 21287, Series CCI

▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, internal thread ▶ ATEX optional

	Piston Ø	16	20	25	32	40
	Piston rod thread	M4	M6	M6	M8	M8
	Ports	M5	M5	M5	G 1/8	G 1/8
	Piston rod Ø	8	10	10	12	12
	Stroke 5	R422001692	R422001693	R422001694	R422001695	R422001696
	10	R422001702	R422001703	R422001704	R422001705	R422001706
	15	R422001712	R422001713	R422001714	R422001715	R422001716
	20	R422001722	R422001723	R422001724	R422001725	R422001726
	25	R422001732	R422001733	R422001734	R422001735	R422001736
	Piston Ø	50	63	80	100	
	Piston rod thread	M10	M10	M12	M12	
	Ports	G 1/8	G 1/8	G 1/8	G 1/8	
	Piston rod Ø	16	16	20	25	
	Stroke 5	R422001697	R422001698	R422001699	R422001700	
10	R422001707	R422001708	R422001709	R422001710		
15	R422001717	R422001718	R422001719	R422001720		
20	R422001727	R422001728	R422001729	R422001730		
25	R422001737	R422001738	R422001739	R422001740		

Ø 16 - 100 mm



S = stroke

00132001

Piston Ø	AF	BG	DT	E	EE	KF	LB	LE	LJ	LK	LW	MM f8	PL
16	10	15	6	29.3	M5	M4	3.5	4.5	-	1.6	4	8	8

Piston rod cylinder ▶
Compact cylinder, ISO 21287, Series CCI

▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, internal thread ▶ ATEX optional

Piston Ø	AF	BG	DT	E	EE	KF	LB	LE	LJ	LK	LW	MM f8	PL
20	12	15.5	7.5	36.3	M5	M6	4.5	4.5	4.5	2.5	4	10	11
25	12	15.5	8	40.3	M5	M6	4.5	4.5	4	2.5	4	10	11
32	12	17	9.2	50	G 1/8	M8	5	7.5	4.85	2.5	4.5	12	12
40	12	17	9.2	58	G 1/8	M8	5	7.5	9.85	2.5	4.5	12	12
50	16 1)	17	11	68.3	G 1/8	M10	5	7.5	12	3.5	6	16	12
63	16 1)	17	11	80	G 1/8	M10	5	7.5	14.8	3.5	6	16	12
80	20 2)	20	15	96	G 1/8	M12	5	7.5	22	3.5	7	20	14
100	20 2)	20	15	116	G 1/8	M12	5	7.5	27	3.5	7	25	16.5

Piston Ø	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA	ZB 2)
16	3.3	M4	7	18	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20	4.2	M5	8	22	6,3 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25	4.2	M5	8	26	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32	5.1	M6	10	32.5	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40	5.1	M6	10	38	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1

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

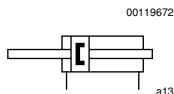
1) Stroke < 5 mm: AF= 11 mm

2) Stroke < 5 mm: AF= 15 mm

Piston rod cylinder ▶

Compact cylinder, ISO 21287, Series CCI

▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, external thread ▶ ATEX optional



Standards	ISO 21287
Compressed air connection	internal thread
Working pressure min./max.	1 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m ³ - 5 mg/m ³
Pressure for determining piston forces	6 bar

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

Technical Remarks

- 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, see chapter „Technical information“.
- ATEX-certified cylinders can be generated in the Internet configurator.
- ATEX ID: II 2G c IIB T4 II 2D c IP65 T125 °C X
- The operating temperature range for ATEX-certified cylinders is -20 °C to +50 °C.

Piston Ø	[mm]	16	20	25	32	40	
Retracting piston force	[N]	91	137	216	364	560	
Extracting piston force	[N]	91	137	216	364	560	
Impact energy	[J]	0.11	0.15	0.2	0.4	0.52	
Weight	0 mm stroke	[kg]	0.072	0.145	0.166	0.293	0.366
	+10 mm stroke	[kg]	0.02	0.029	0.032	0.052	0.06
Stroke max.	[mm]	300	300	300	300	300	

Piston Ø	[mm]	50	63	80	100	
Retracting piston force	[N]	871	1478	2397	3886	
Extracting piston force	[N]	871	1478	2397	3886	
Impact energy	[J]	0.64	0.75	0.75	1	
Weight	0 mm stroke	[kg]	0.552	0.797	1.331	2.428
	+10 mm stroke	[kg]	0.087	0.103	0.14	0.206
Stroke max.	[mm]	300	300	500	500	

Piston rod cylinder ▶

Compact cylinder, ISO 21287, Series CCI

▶ Ø 16 - 100 mm ▶ Ports: M5 - G 1/8 ▶ double-acting ▶ with magnetic piston ▶ cushioning: elastic ▶ Piston rod: through, external thread ▶ ATEX optional

Piston Ø	A 1)	BG	Ø DS	DT	E	EE	KK 3)	KV	KW	LB	LE	LJ
25	16	15.5	3.8	8	40.3	M5	M8 / G 1/8	13	4	4.5	4.5	4
32	19	17	4.5	9.2	50	G 1/8	M10x1,25 / G 1/8	17	5	5	7.5	4.85
40	19	17	4.5	9.2	58	G 1/8	M10x1,25 / G 1/8	17	5	5	7.5	9.85
50	22	17	6	11	68.3	G 1/8	M12x1,25 / G 1/4	19	6	5	7.5	12
63	22	17	6	11	80	G 1/8	M12x1,25 / G 1/4	19	6	5	7.5	14.8
80	28	20	8	15	96	G 1/8	M16x1,5 / M16x1,5	24	8	5	7.5	22
100	28	20	8	15	116	G 1/8	M16x1,5 / M16x1,5	24	8	5	7.5	27

Piston Ø	LK	LW	MM f8	PL	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA
16	1.6	4	8	8	3.3	M4	7	18	4,8 ±0,9	-	-	-	34,9 ±0,1
20	2.5	4	10	11	4.2	M5	8	22	6,3 ±0,9	4.2	-	-	37,3 ±0,1
25	2.5	4	10	11	4.2	M5	8	26	5,6 ±0,9	4.5	-	-	39 ±0,1
32	2.5	4.5	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	-	-	44 ±0,1
40	2.5	4.5	12	12	5.1	M6	10	38	7,4 ±0,9	11	-	-	45 ±0,1
50	3.5	6	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1
63	3.5	6	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1
80	3.5	7	20	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1
100	3.5	7	25	16.5	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1

Piston Ø	ZB 2)											
16	39,7 ±0,8											
20	43,6 ±0,8											
25	44,5 ±0,9											
32	51,4 ±1											
40	52,4 ±1											
50	53,6 ±1											
63	57,4 ±1											
80	64,4 ±1											
100	76,7 ±1											

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

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

3) Solid piston rod/hollow piston rod

Piston rod cylinder ▶

Compact cylinder, Series CCI

▶ Heat-resistant version



00119665

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

Materials:

Cylinder tube	Aluminum, anodized
Front cover	Aluminum
End cover	Aluminum
Seal	Fluorocautchouc
Nut for piston rod	Steel, galvanized
Scraper	Fluorocautchouc

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

Technical Remarks

- 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, see chapter „Technical information“.

Configurable product



This product is configurable. Please use our Internet configurator at <http://www.aventics.com> or contact the nearest AVENTICS sales office.

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2014-12-15, ©AVENTICS S.a.r.l., subject to change

AVENTICS GmbH
Ulmer Straße 4
30880 Laatzen
Phone +49 511 2136-0
Fax +49 511 2136-269
www.aventics.com
info@aventics.com



Find more contact information at
www.aventics.com/contact

Only use the AVENTICS products shown in industrial applications. Read the product documentation completely and carefully before using the product.

Observe the applicable regulations and laws of the respective country. When integrating the product into applications, note the system manufacturer's specifications for safe use of the product.

The data specified only serve to describe the product.

No statements concerning a certain condition or suitability for a certain application can be derived from our information.

The information given does not release the user from the obligation of own judgment and verification.

It must be remembered that the products are subject to a natural process of wear and aging.

15-12-2014