Piston rod cylinders → Standard cylinders

Compact cylinder, ISO 21287, Series CCI

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



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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/m³ - 5 mg/m³
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 air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- ATEX-certified cylinders can be generated in the Internet configurator.
- ATEX ID II 2G2D c T4 T135°C -20°C ≤Ta ≤60°C
- For ATEX-certified cylinders, the temperature range specified in the header does not apply. See the ATEX ID.

Piston Ø		**[mm]**	**16**	**20**	**25**	**32**	**40**
Retracting piston force		[N]	91	137	216	364	560
Extending piston force		[N]	106	164	259	422	665
Impact energy		[J]	0.11	0.15	0.2	0.4	0.52
Weight	0 mm stroke	[kg]	0.059	0.099	0.123	0.233	0.303
	+10 mm stroke	[kg]	0.016	0.023	0.026	0.042	0.052
Stroke max.		[mm]	300	300	300	300	300

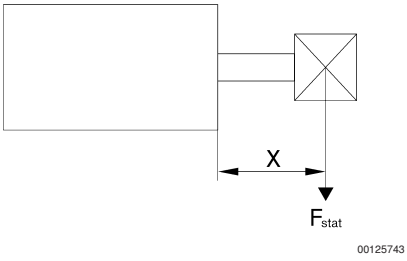
Piston Ø		**[mm]**	**50**	**63**	**80**	**100**	
Retracting piston force		[N]	871	1478	2397	3886	
Extending piston force		[N]	1035	1647	2656	4145	
Impact energy		[J]	0.64	0.75	0.75	1	
Weight	0 mm stroke	[kg]	0.448	0.689	1.114	2.153	
	+10 mm stroke	[kg]	0.07	0.087	0.116	0.168	
Stroke max.		[mm]	300	300	500	500	

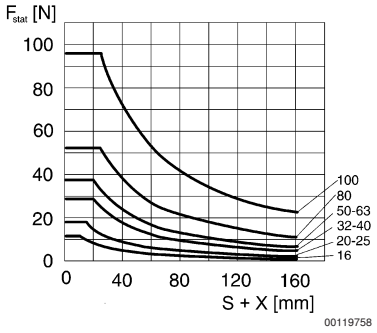
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	Piston Ø Piston rod thread Ports Piston rod Ø	16 M4 M5 8	20 M6 M5 10	25 M6 M5 10	32 M8 G 1/8 12	40 M8 G 1/8 12
	Stroke 5	**R422001002**	**R422001003**	R422001004	R422001005	R422001006
	10	**R422001012**	**R422001013**	**R422001014**	**R422001015**	**R422001016**
	15	**R422001022**	**R422001023**	**R422001024**	**R422001025**	**R422001026**
	20	**R422001032**	**R422001033**	**R422001034**	**R422001035**	**R422001036**
	25	**R422001042**	**R422001043**	**R422001044**	**R422001045**	**R422001046**
	30	**R422001052**	**R422001053**	**R422001054**	**R422001055**	**R422001056**
	40	**R422001062**	**R422001063**	**R422001064**	**R422001065**	**R422001066**
	50	**R422001072**	**R422001073**	**R422001074**	**R422001075**	**R422001076**
	60	**R422001082**	**R422001083**	**R422001084**	**R422001085**	**R422001086**
	80	-	-	-	**R422001095**	**R422001096**
	100	-	-	-	**R422001105**	**R422001106**
	125	-	-	-	**R422001115**	**R422001116**
	150	-	-	-	**R422001125**	**R422001126**
	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	R422001007	R422001008	R422001009	R422001010	
	10	**R422001017**	**R422001018**	**R422001019**	R422001020	
	15	**R422001027**	**R422001028**	**R422001029**	R422001030	
	20	**R422001037**	**R422001038**	**R422001039**	R422001040	
	25	**R422001047**	**R422001048**	**R422001049**	R422001050	
	30	**R422001057**	**R422001058**	**R422001059**	R422001060	
	40	**R422001067**	**R422001068**	**R422001069**	R422001070	
	50	**R422001077**	**R422001078**	**R422001079**	R422001080	
	60	**R422001087**	**R422001088**	**R422001089**	R422001090	
	80	**R422001097**	**R422001098**	**R422001099**	R422001100	
	100	**R422001107**	**R422001108**	**R422001109**	R422001110	
	125	**R422001117**	**R422001118**	**R422001119**	R422001120	
	150	**R422001127**	**R422001128**	**R422001129**	R422001130	

Maximum permissible lateral force, Static





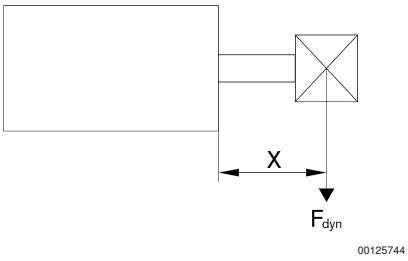
F stat. = static lateral force
X = spacing between force application point and cylinder cover

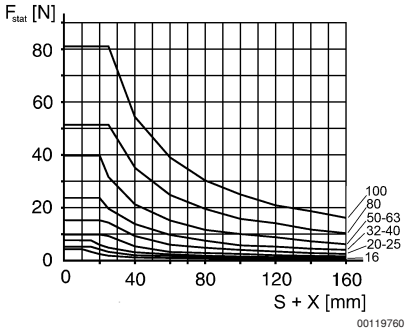
S = stroke

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Maximum permissible lateral force, Dynamic

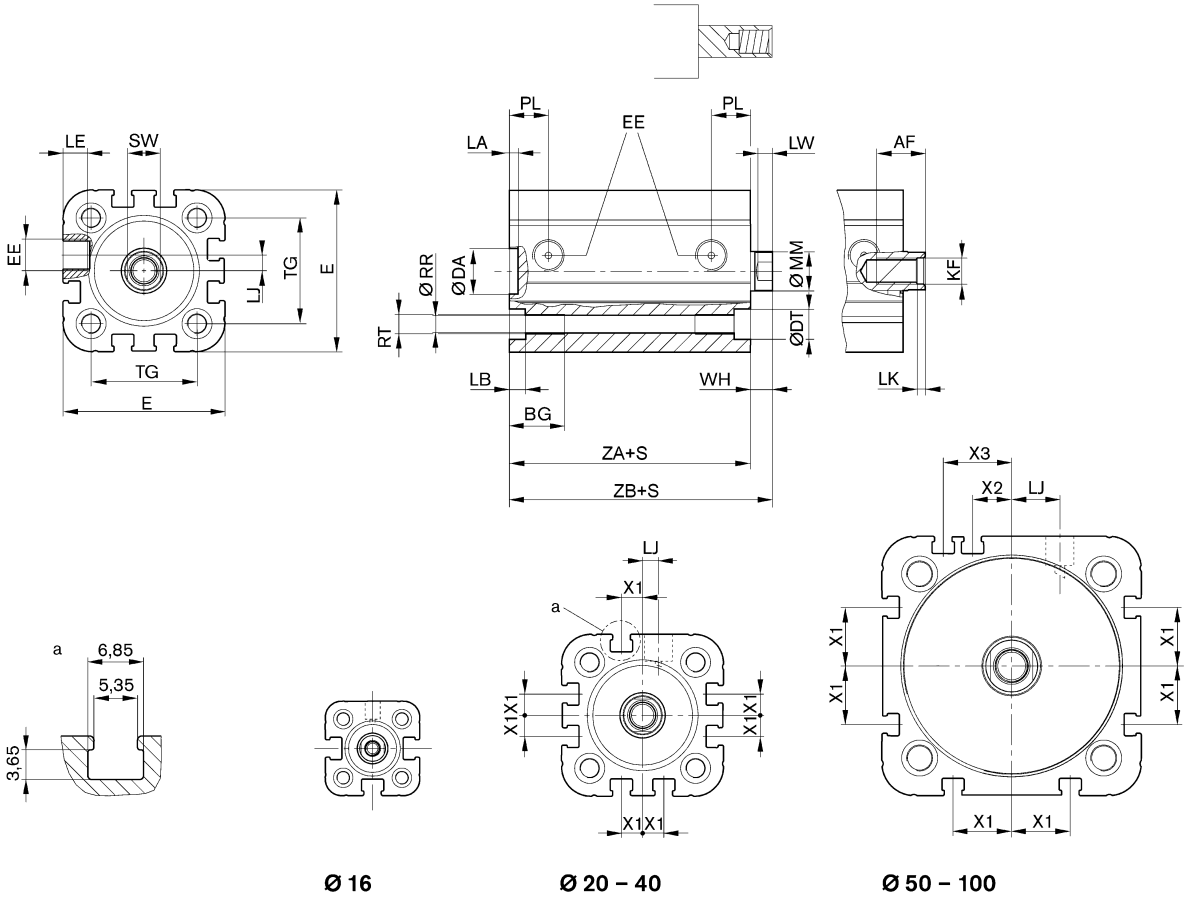




F dyn. = dynamic lateral force
X = spacing between force application point and cylinder cover

S = stroke

Ø 16 - 100 mm



S = stroke

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Piston Ø	AF	BG	DA H11	DT	E	EE	KF	LA	LB	LE	LJ	LK	LW
16	10	15	10	6	29.3	M5	M4	2.5	3.5	4.5	0	1.6	4
20	12	15.5	12	7.5	36.3	M5	M6	2.5	4.5	4.5	4.5	2.5	4
25	12	15.5	12	8	40.3	M5	M6	2.5	4.5	4.5	4	2.5	4
32	12	17	14	9.2	50	G 1/8	M8	2.5	5	7.5	4.85	2.5	4.5
40	12	17	14	9.2	58	G 1/8	M8	2.5	5	7.5	9.85	2.5	4.5
50	16	17	18	11	68.3	G 1/8	M10	2.5	5	7.5	12	3.5	6
63	16	17	18	11	80	G 1/8	M10	2.5	5	7.5	14.8	3.5	6
80	20	20	23	15	96	G 1/8	M12	3	5	7.5	22	3.5	7
100	20	20	28	15	116	G 1/8	M12	3	5	7.5	27	3.5	7

Piston Ø	MM f8	PL	RR	RT 6H	SW	TG	WH 2)	X1	X2	X3	ZA	ZB 2)
16	8	8	3.3	M4	7	18	4,8 ±0,9	–	–	–	34,9 ±0,1	39,7 ±0,8
20	10	11	4.2	M5	8	22	6,3 ±0,9	4.2	–	–	37,3 ±0,1	43,6 ±0,8
25	10	11	4.2	M5	8	26	5,6 ±0,9	4.5	–	–	39 ±0,1	44,5 ±0,9
32	12	12	5.1	M6	10	32.5	7,4 ±0,9	6.5	–	–	44 ±0,1	51,4 ±1
40	12	12	5.1	M6	10	38	7,4 ±0,9	11	–	–	45 ±0,1	52,4 ±1
50	16	12	6.7	M8	13	46.5	8,4 ±0,9	13	4	13	45,5 ±0,1	53,6 ±1
63	16	12	6.7	M8	13	56.5	8,5 ±0,9	18	12	21	49 ±0,1	57,4 ±1
80	20	14	8.5	M10	16	72	9,8 ±1	18	16.5	25.5	54,7 ±0,1	64,4 ±1
100	25	16.5	8.5	M10	21	89	9,8 ±1	20	20	29	67 ±0,1	76,7 ±1

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