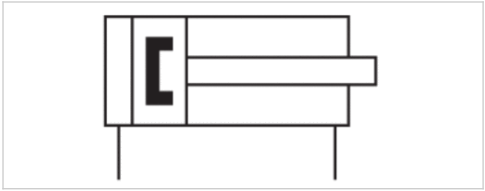
Compact cylinder ISO 21287, Series CCI

- ISO 21287
- Ø 16-100 mm
- Ports M5 G 1/8
- double-acting
- with magnetic piston
- Cushioning elastic
- Piston rod External thread
- ATEX optional





Standards	ISO 21287
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
Stroke 5	R422001138	R422001139	R422001140
10	R422001148	R422001149	R422001150
15	R422001158	R422001159	R422001160
20	R422001168	R422001169	R422001170
25	R422001178	R422001179	R422001180
30	R422001188	R422001189	R422001190
40	R422001198	R422001199	R422001200
50	R422001208	R422001209	R422001210
60	R422001218	R422001219	R422001220
80	R422001228	R422001229	R422001230
100	R422001238	R422001239	R422001240
125	R422001248	R422001249	R422001250
150	R422001258	R422001259	R422001260

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
Retracting piston force	2969 N	4639 N
Extracting piston force	3167 N	4948 N
Impact energy	1,8 J	2,5 J
Weight 0 mm stroke	1,2 kg	2,23 kg
Weight +10 mm stroke	0,116 kg	0,168 kg
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).

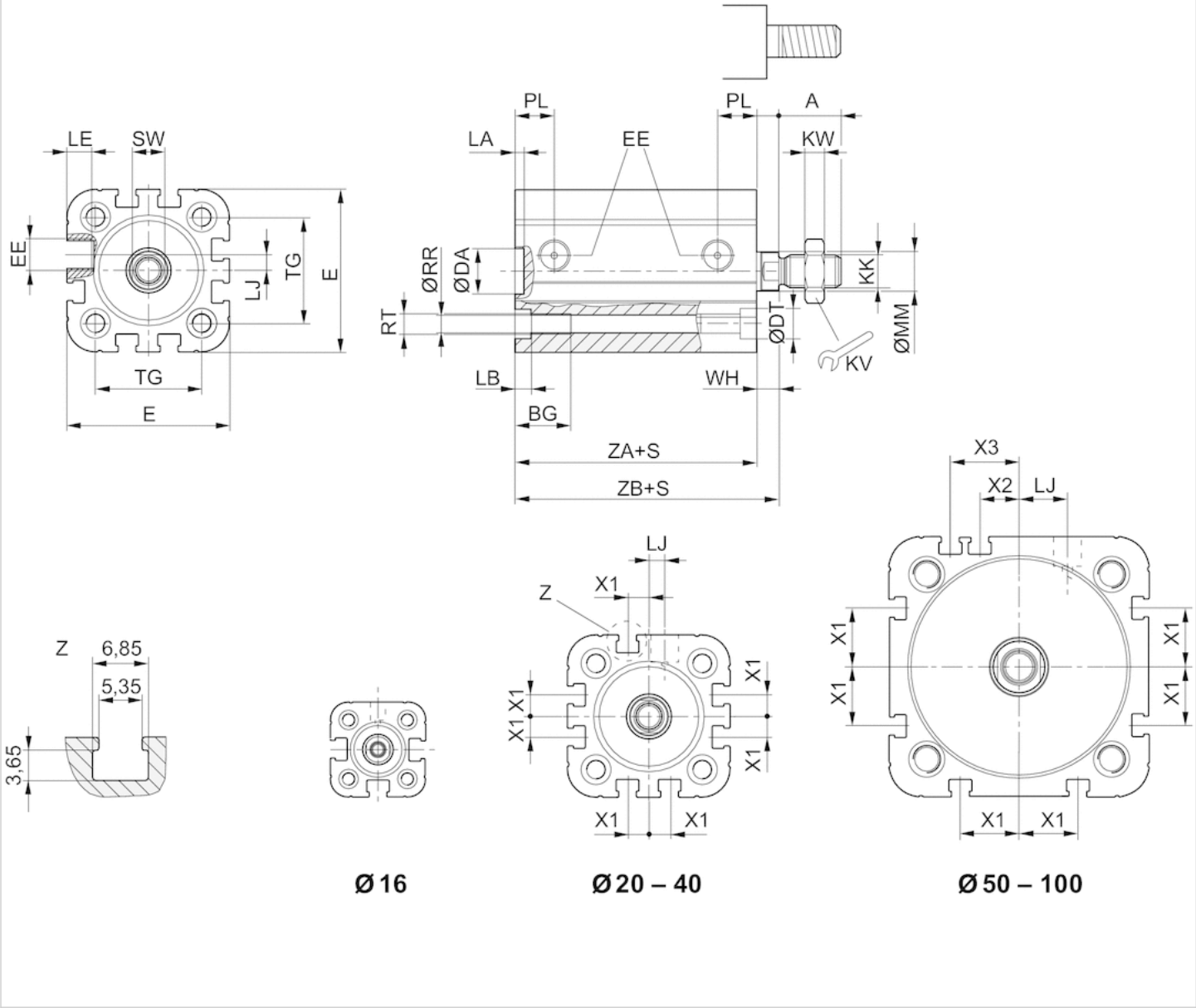
ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator.
The operating temperature range for ATEX-certified cylinders is -20°C ... 60°C.
With cylinders with external thread extension, dimension "A" is increased by the 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 ... 100 mm



S = stroke

Dimensions

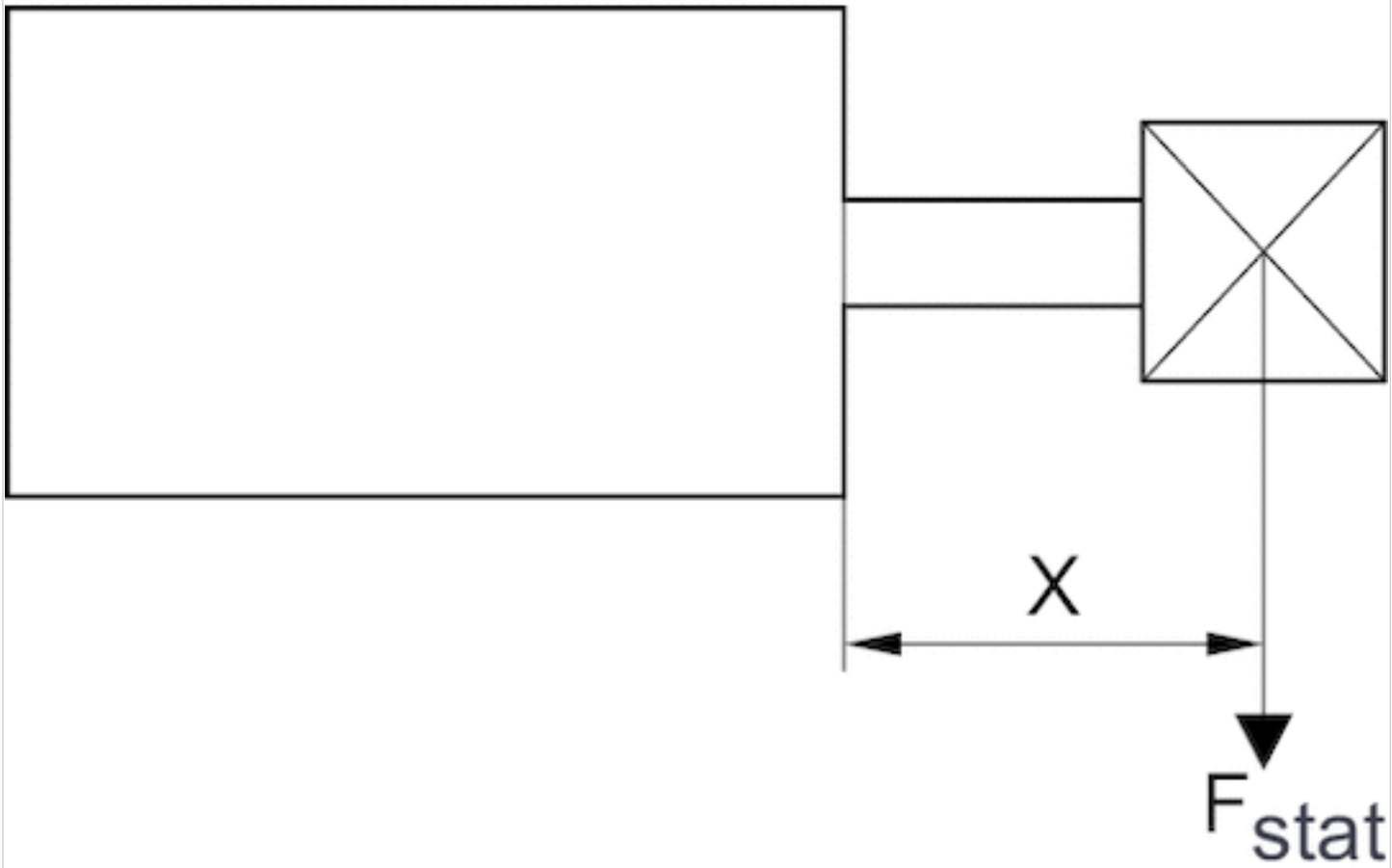
Piston Ø	A	BG	DA H11	DT	E	EE	KK	KV	KW	LA	LB	LE	LJ	MM f8	PL	RR
16 mm	12	15	10	6	29.3	M5	M6	10	3	2.5	3.5	4.5	–	8	8	3.3
20 mm	16	15.5	12	7.5	36.3	M5	M8	13	4	2.5	4.5	4.5	4.5	10	10	4.2
25 mm	16	15.5	12	8	40.3	M5	M8	13	4	2.5	4.5	4.5	4	10	10	4.2
32 mm	19	17	14	8.6	50	G 1/8	M10x1,25	17	5	2.5	5	7.5	4.85	12	12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

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

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

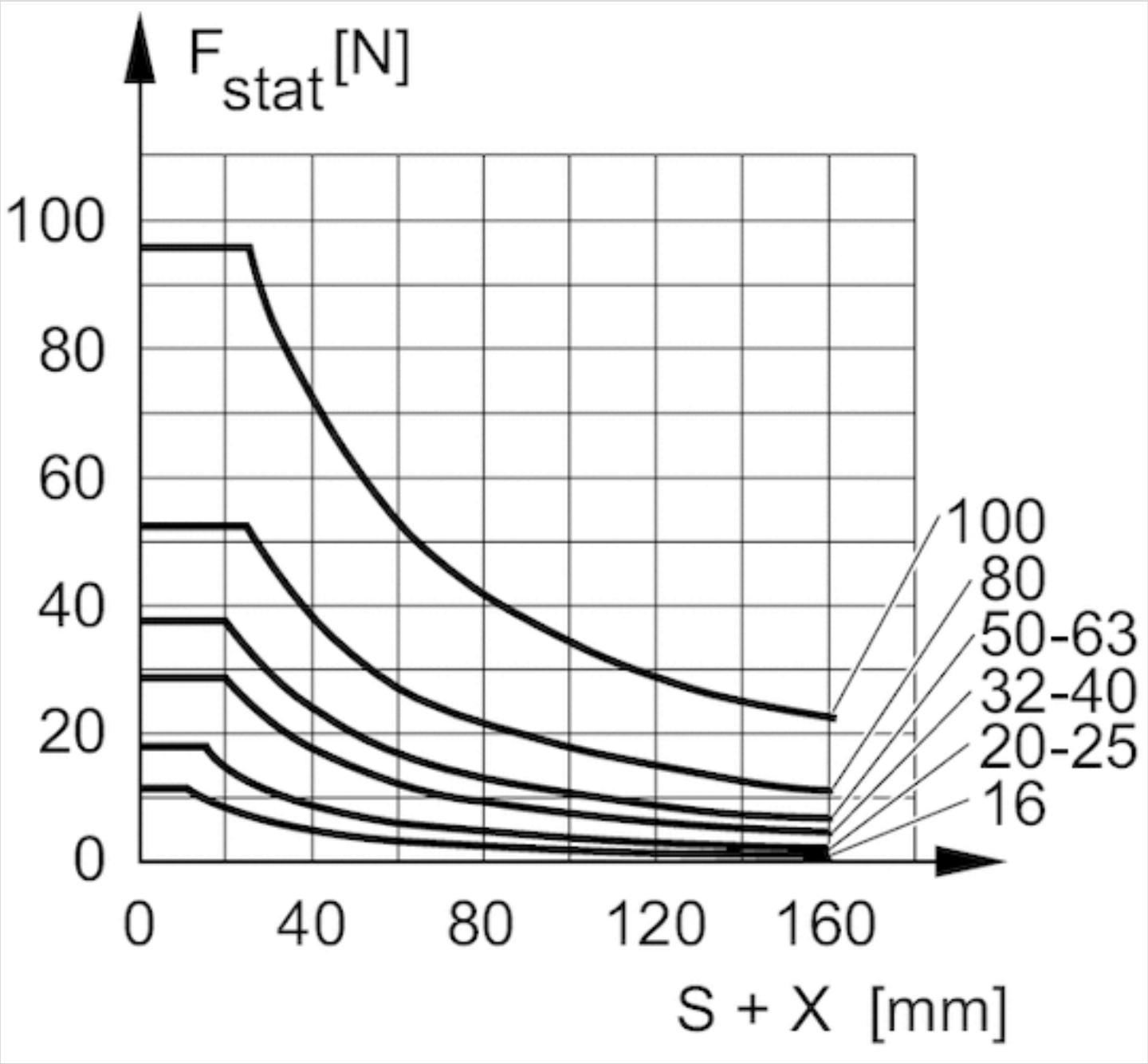
Diagrams

Maximum admissible lateral force, static



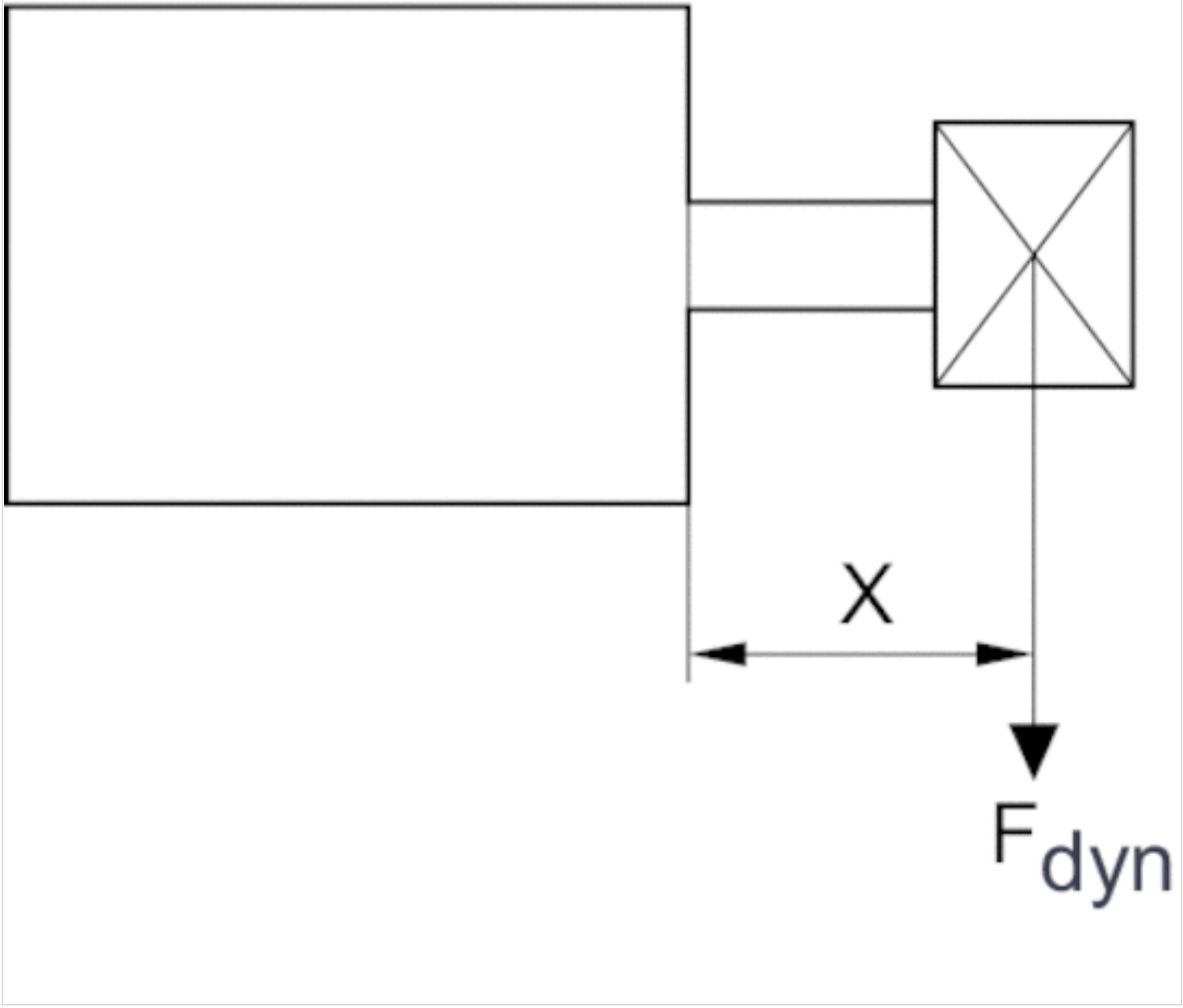
F stat. = static lateral force
X = distance between force application point and cylinder cover

Maximum admissible lateral force, static



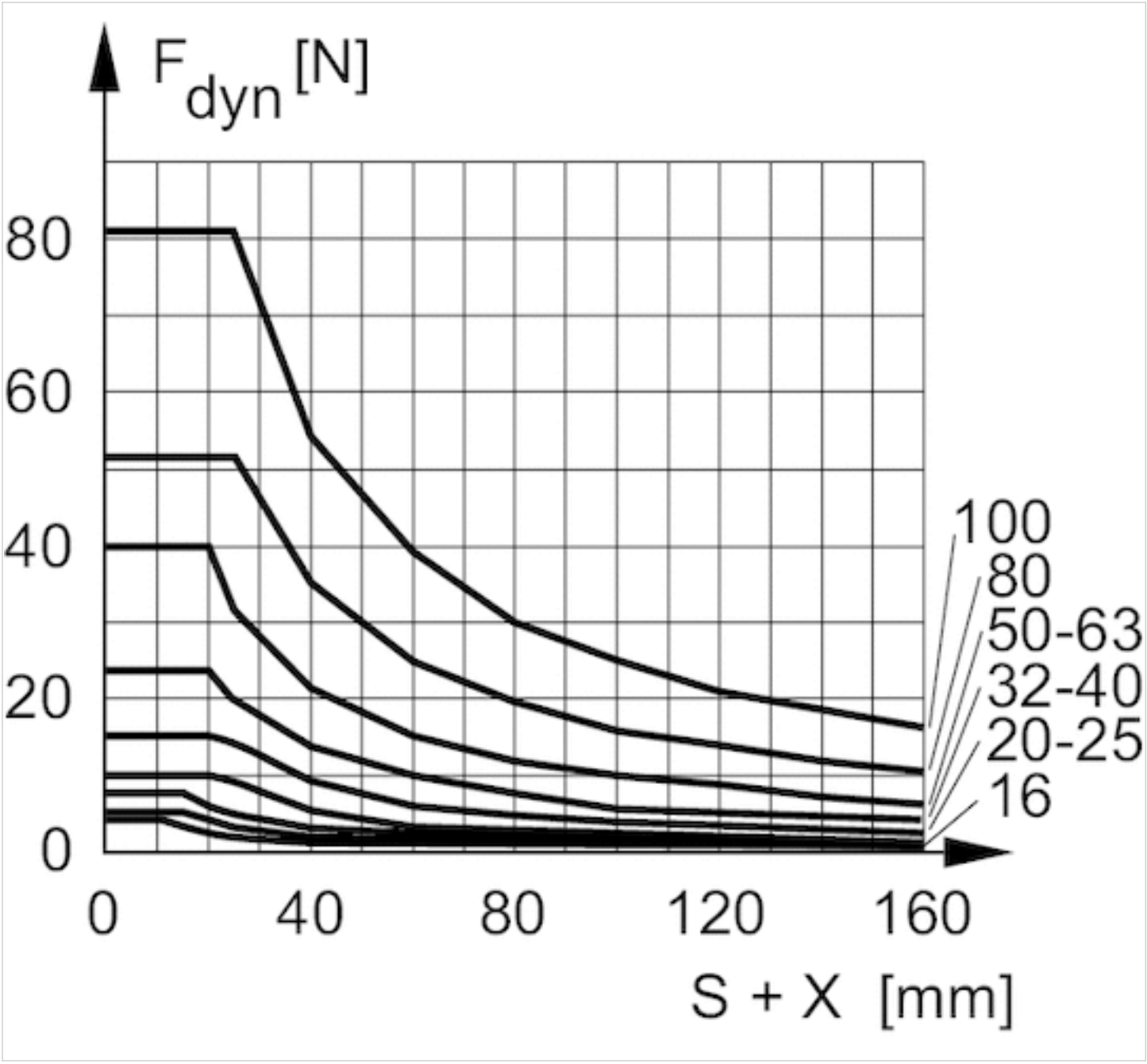
F stat. = static lateral force
X = distance between force application point and cylinder cover
S = stroke

Maximum admissible lateral force, dynamic



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

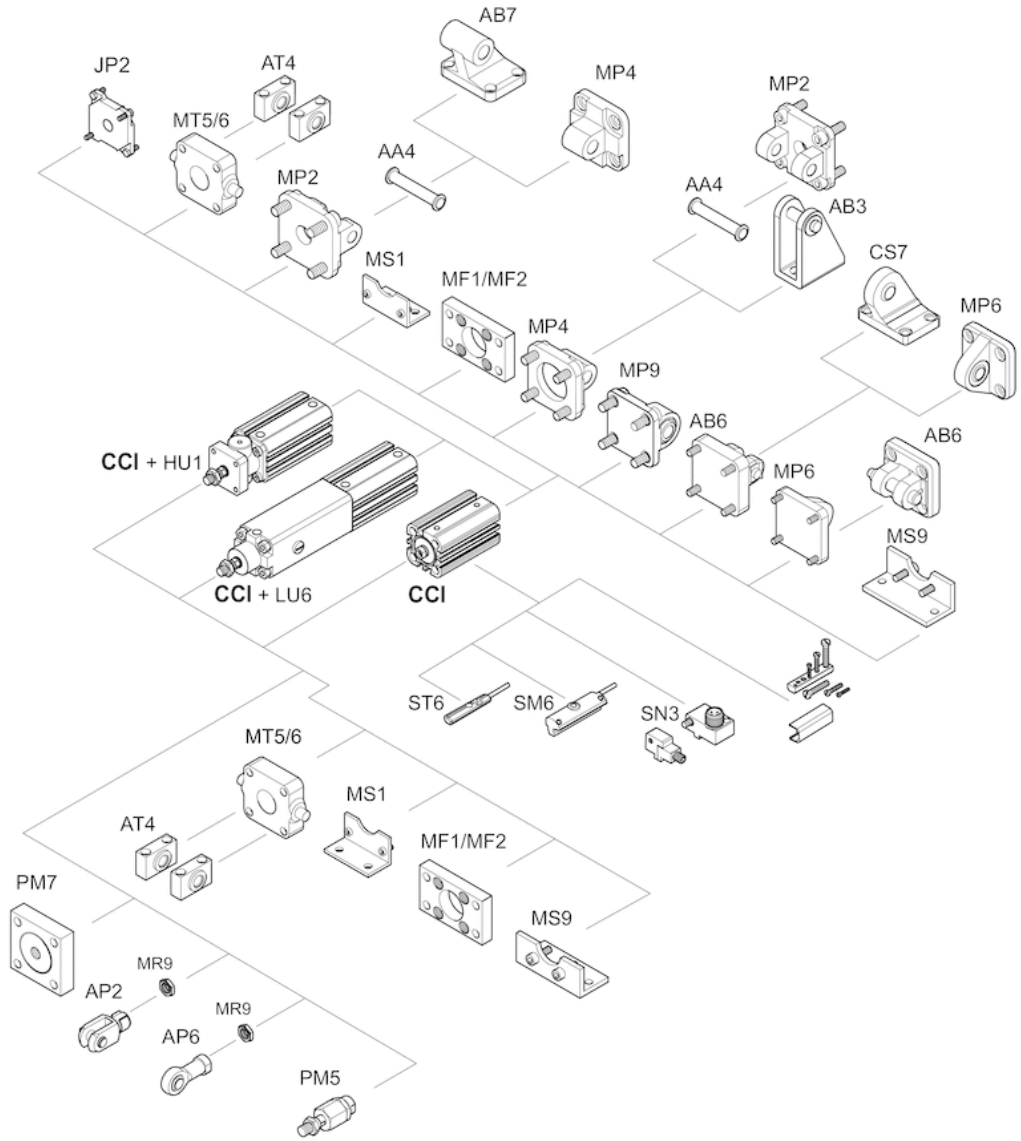
Maximum admissible lateral force, dynamic



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.

Efficient pneumatic solutions, our program: cylinders and drives, valves and valve systems, air supply management



Visit us: Emerson.com/Aventics

Your local contact: Emerson.com/contactus

Emerson.com

Facebook.com/EmersonAutomationSolutions

LinkedIn.com/company/Emerson-Automation-Solutions

Twitter.com/EMR_Automation

An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration. Subject to change. This Document, as well as the data, specifications and other information set forth in it, are the exclusive property of AVENTICS GmbH. It may not be reproduced or given to third parties without its consent. 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 judgement and verification. It must be remembered that the products are subject to a natural process of wear and aging.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Brand logotype are registered trademarks of one of the Emerson family of companies. All other marks are the property of their respective owners. © 2021 Emerson Electric Co. All rights reserved.
2021-05

EMERSON

CONSIDER IT SOLVED™