

Rodless cylinders → Bellow actuator


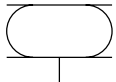

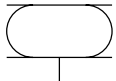

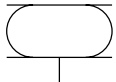
Bellow actuator with cover, series BCP

Brochure



Rodless cylinders → Bellow actuator

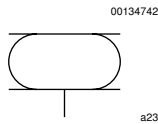
Bellow actuator with cover, series BCP

		Bellow actuator, Series BCP ▶ single ▶ Stroke: 34 - 107 mm	3
		Bellow actuator, Series BCP ▶ double ▶ Stroke: 95 - 580 mm	11
		Bellow actuator, Series BCP ▶ triple ▶ Stroke: 275 - 285 mm	19

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► single ► Stroke: 34 - 107 mm



Version	Bellow actuator with cover
Functional principle	Single-acting, retracted without pressure
Max. Angle of tilt	10 ° - 20 °
Working pressure min./max.	0 bar / 8 bar
Ambient temperature min./max.	-40 °C / +70 °C
Medium temperature	-40 °C / +70 °C
Medium	Compressed air
Pressure for determining forces	6 bar

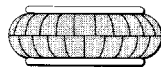
Materials:	
Bellow	caoutchouc/butadiene caoutchouc
Front cover	Steel, galvanized
End cover	Steel, galvanized

Technical Remarks

- Compliance with the min. height Hmin. (B) and max. stroke (A) must be ensured with end stops.
- Use at operating height ≥ Hmax: only permitted upon approval by Bosch Rexroth
- For information on vibration insulators, see "Technical Information"
- reduced service life at a temperature greater than: 50 °C

	Compressed air connection G	Stroke [mm]	Cover diameter [mm]	Min. installation space [mm]	Weight [kg]	Force min./max. [kN]	Fig.	Part No.
	G 1/8	50	90	160	0.9	2.5 - 5.5	Fig. 1	0822419001
	G 1/4	34	108	165	1.2	3.5 - 6.9	Fig. 2	R412010198
	G 1/4	54	108	180	1.2	4.5 - 7.5	Fig. 2	0822419002
	G 1/4	79	114	225	1.4	4.3 - 10.9	Fig. 2	R412010199
	G 3/4	75	141	230	2	6.1 - 13.6	Fig. 2	0822419003
	G 3/4	107	141	250	1.9	7 - 14	Fig. 2	R412010197
	G 3/4	74	161	265	2.3	9.3 - 17.3	Fig. 3	0822419004
	G 3/4	89	228	340	4.1	19.4 - 33.3	Fig. 3	1933091000
	G 3/4	104	287	400	5.9	26.1 - 50	Fig. 4	1938091000

bellow type



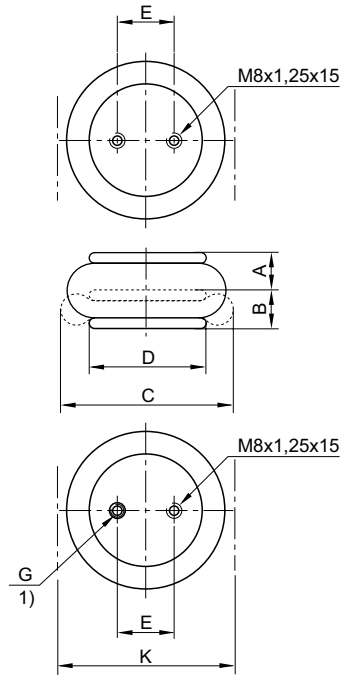
00133710

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ single ▶ Stroke: 34 - 107 mm

Fig. 1



00127836

1) air connection in the mounting hole

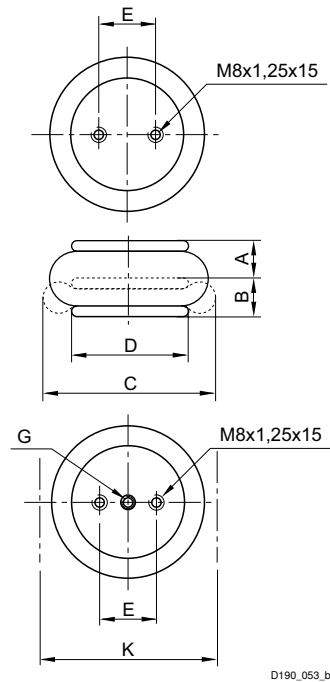
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	K [mm]	Return force, min. [N]			
0822419001	G 1/8	50	50	145	90	20	160	120			

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ single ▶ Stroke: 34 - 107 mm

Fig. 2



D190_053_b

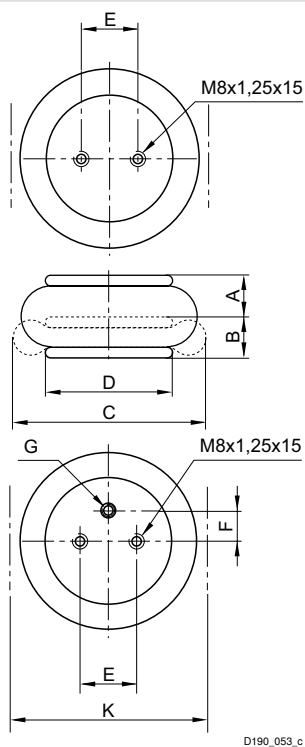
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	K [mm]	Return force, min. [N]			
R412010198	G 1/4	34	51	160	108	44.5	165	250			
0822419002	G 1/4	54	51	165	108	44.5	180	200			
R412010199	G 1/4	79	51	210	114	44.5	225	45			
0822419003	G 3/4	75	50	215	141	70	230	200			
R412010197	G 3/4	107	51	235	141	70	250	200			

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ single ▶ Stroke: 34 - 107 mm

Fig. 3



D190_053_c

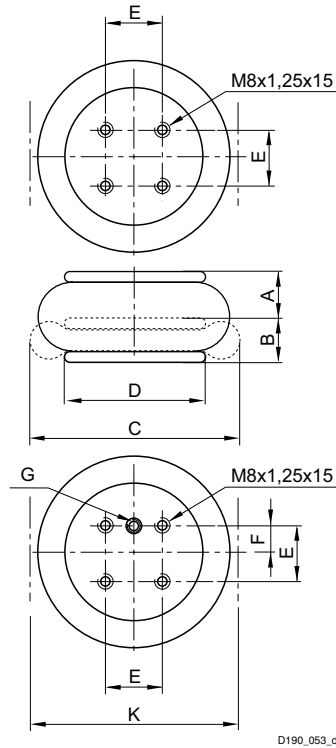
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
0822419004	G 3/4	74	51	250	161	89	38.1	265	200		
1933091000	G 3/4	89	51	325	228	157.5	73	340	300		

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

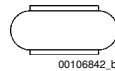
► single ► Stroke: 34 - 107 mm

Fig. 4



Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
1938091000	G 3/4	104	51	385	287	158.8	79.4	400	300		

force-displacement diagram for simple bellow actuators

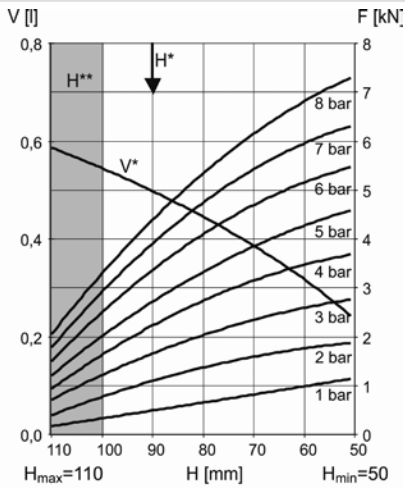


max. permissible parallel movement between the covers: 10 mm

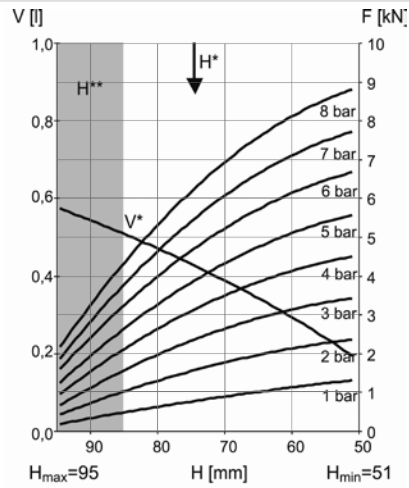
Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ single ▶ Stroke: 34 - 107 mm

force-displacement diagram, 0822419001

00112464_a

force-displacement diagram, R412010198

00112395_a

V* = volume

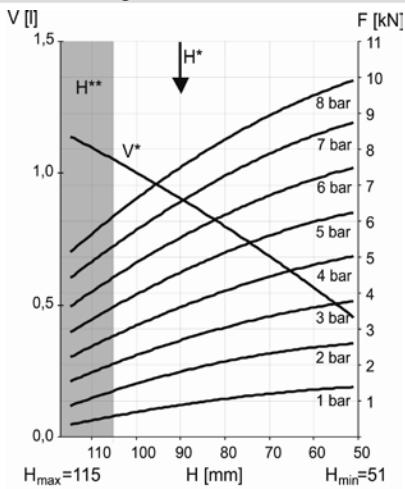
H* = recommended operating height for vibration insulators

H** = use permitted only upon approval by Bosch Rexroth

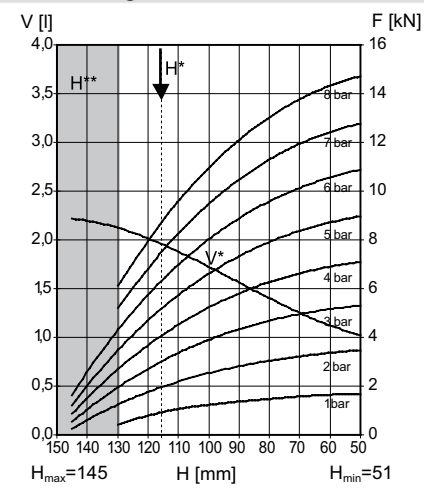
V* = volume

H* = recommended operating height for vibration insulators

H** = use permitted only upon approval by Bosch Rexroth

force-displacement diagram, 0822419002

00112396

force-displacement diagram, R412010199

00127762

V* = volume

H* = recommended operating height for vibration insulators

H** = use permitted only upon approval by Bosch Rexroth

V* = volume

H* = recommended operating height for vibration insulators

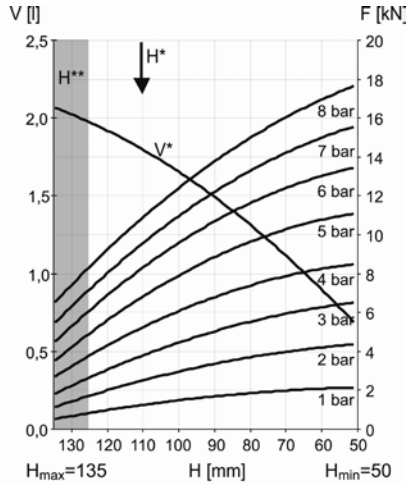
H** = use permitted only upon approval by Bosch Rexroth

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► single ► Stroke: 34 - 107 mm

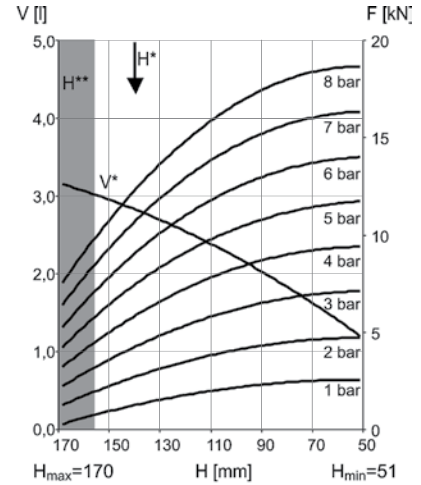
force-displacement diagram, 0822419003



00112466_a

V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

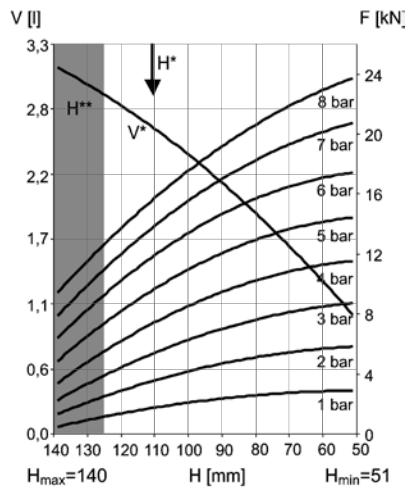
force-displacement diagram, R412010197



00112399

V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

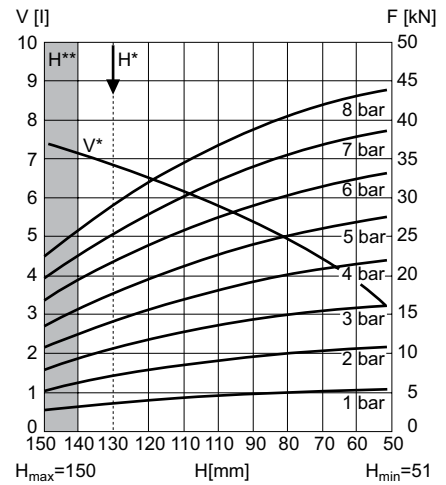
force-displacement diagram, 0822419004



00112467

V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

force-displacement diagram, 1933091000



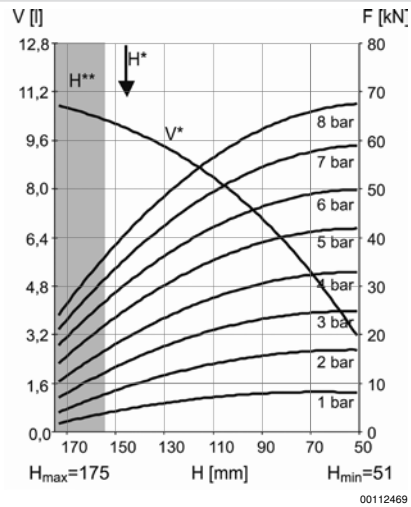
00127820

V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ single ▶ Stroke: 34 - 107 mm

force-displacement diagram, 1938091000

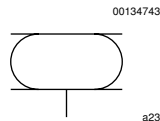
00112469

 V^* = volume H^* = recommended operating height for vibration insulators H^{**} = use permitted only upon approval by Bosch Rexroth

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ double ▶ Stroke: 95 - 580 mm



Version	Bellow actuator with cover
Functional principle	Single-acting, retracted without pressure
Working pressure min./max.	See table below
Ambient temperature min./max.	-40 °C / +70 °C
Medium temperature	-40 °C / +70 °C
Medium	Compressed air
Pressure for determining forces	6 bar
Materials:	
Bellow	caoutchouc/butadiene caoutchouc
Front cover	Steel, galvanized
End cover	Steel, galvanized

Technical Remarks

- Compliance with the min. height Hmin. (B) and max. stroke (A) must be ensured with end stops.
- Use at operating height ≥ Hmax: only permitted upon approval by Bosch Rexroth
- For information on vibration insulators, see "Technical Information"
- reduced service life at a temperature greater than: 50 °C

	Compressed air connection G	Angle of tilt	Stroke	Cover diameter	Min. installation space	Working pressure min./max.	Weight	Part No.
		[°]	[mm]	[mm]	[mm]		[kg]	
	G 1/8	15	95	90	160	0 - 8	1.1	0822419040
	G 1/4	15	108	108	180	0 - 8	1.5	0822419041
	G 3/4	15	153	141	235	0 - 8	2.3	1922161000
	G 3/4	15	223	161	275	0 - 8	3.5	2999619400
	G 3/4	15	223	228	355	0 - 8	5.1	2999638300
	G 3/4	15	223	287	415	0 - 8	7.3	R412010200
	G 3/4	1.5	580	420	700	0 - 6	28.5	R412010151

Part No.	Force min./max.	Fig.	Note
	[kN]		
0822419040	2.1 - 5.6	Fig. 1	-
0822419041	3.5 - 8.7	Fig. 2	-
1922161000	7.7 - 14.8	Fig. 2	-
2999619400	8.2 - 19.5	Fig. 3	-
2999638300	20.5 - 36.8	Fig. 3	-
R412010200	27.8 - 52.6	Fig. 4	-
R412010151	57 - 197	Fig. 5	1)

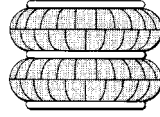
1) Permissible parallel movement 1.5 mm

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

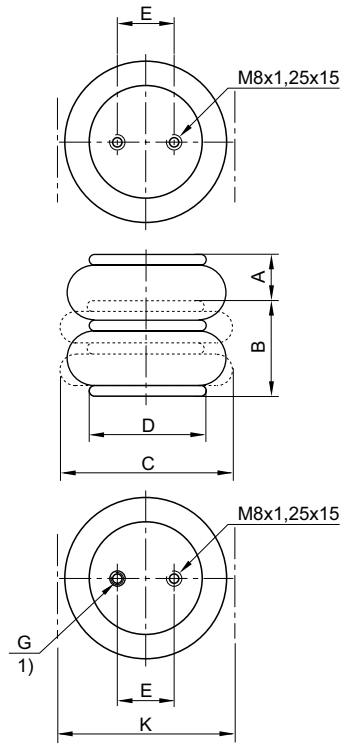
▶ double ▶ Stroke: 95 - 580 mm

bellow type



00133711

Fig. 1



00127836_A

1) air connection in the mounting hole

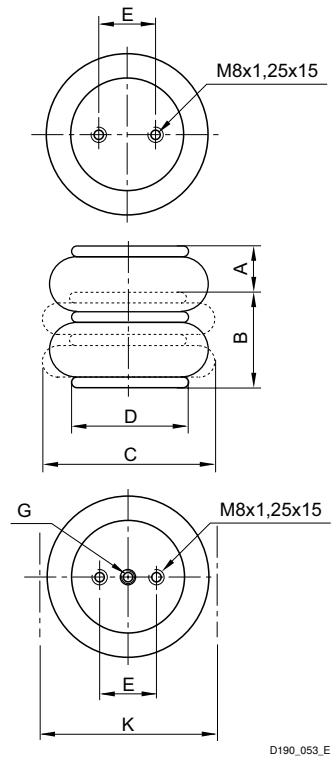
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	K [mm]	Return force, min. [N]			
0822419040	G 1/8	95	70	145	90	20	160	200			

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► double ► Stroke: 95 - 580 mm

Fig. 2



D190_053_E

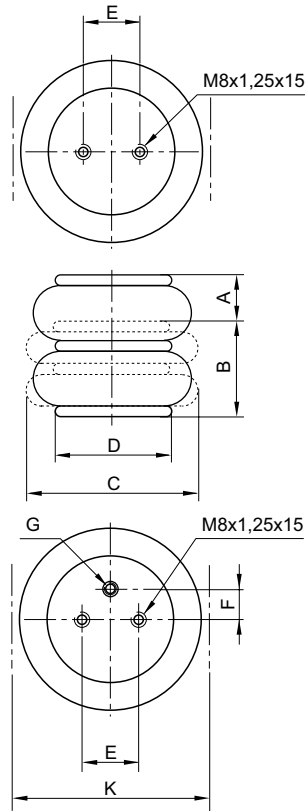
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	K [mm]	Return force, min. [N]			
0822419041	G 1/4	108	72	165	108	44.5	180	200			
1922161000	G 3/4	153	77	218	141	70	235	200			

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ double ▶ Stroke: 95 - 580 mm

Fig. 3



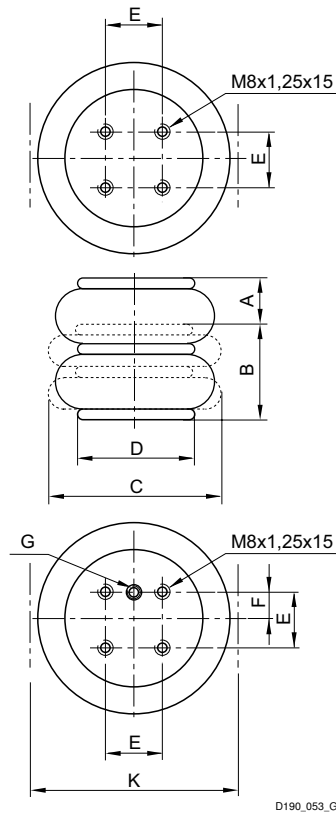
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
2999619400	G 3/4	223	77	260	161	89	38.1	275	250		
2999638300	G 3/4	223	77	340	228	157.5	73	355	300		

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► double ► Stroke: 95 - 580 mm

Fig. 4



D190_053_G

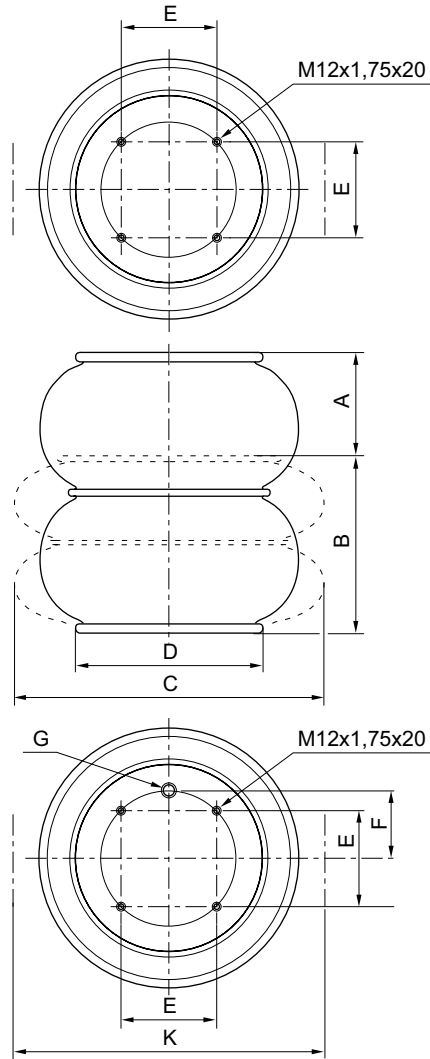
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
R412010200	G 3/4	223	77	400	287	158.8	79.4	415	400		

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► double ► Stroke: 95 - 580 mm

Fig. 5

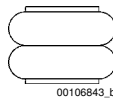


00138498

Flat connection surfaces, min. Ø 640 mm

Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
R412010151	G 3/4	580	120	640	420	215.7	152.5	700	4000		

force-displacement diagram for double bellow actuators



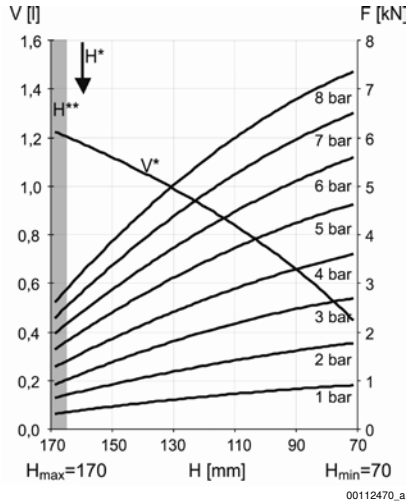
max. permissible parallel movement between the covers: 20 mm; R412010151: 1,5 mm
H = height

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

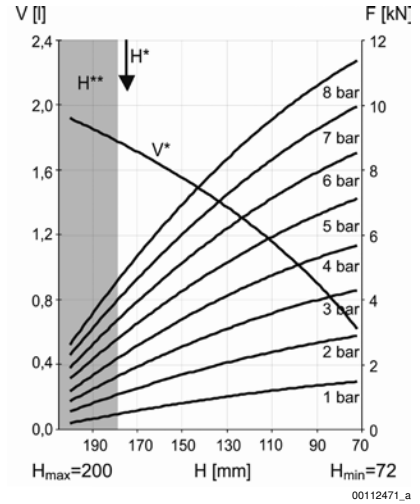
► double ► Stroke: 95 - 580 mm

force-displacement diagram, 0822419040



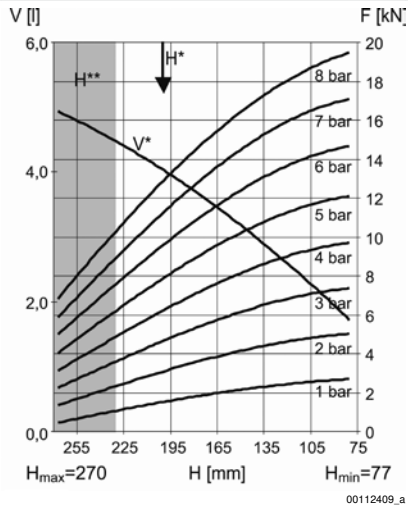
V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

force-displacement diagram, 0822419041



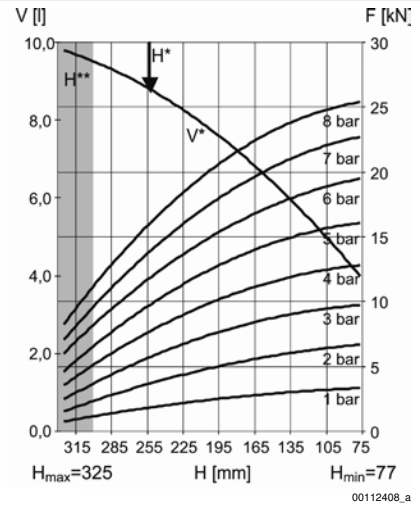
V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

force-displacement diagram, 1922161000



V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

force-displacement diagram, 2999619400



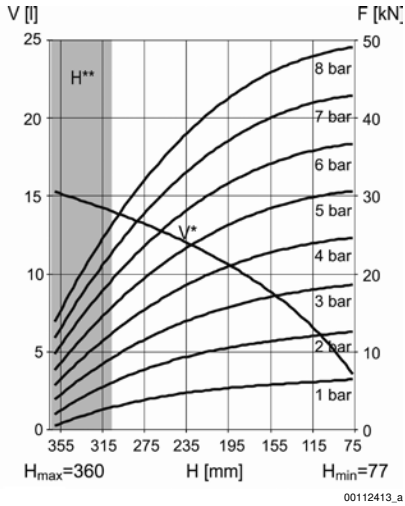
V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

Rodless cylinders → Bellow actuator

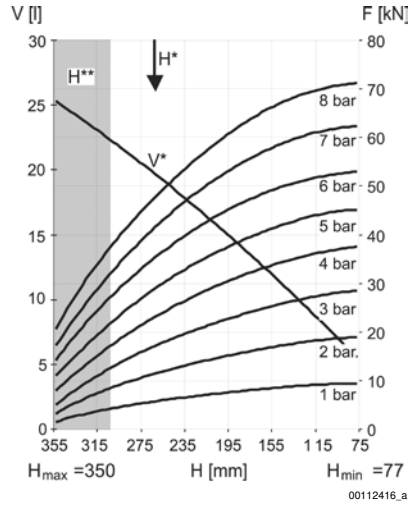
Bellow actuator, Series BCP

► double ► Stroke: 95 - 580 mm

force-displacement diagram, 2999638300



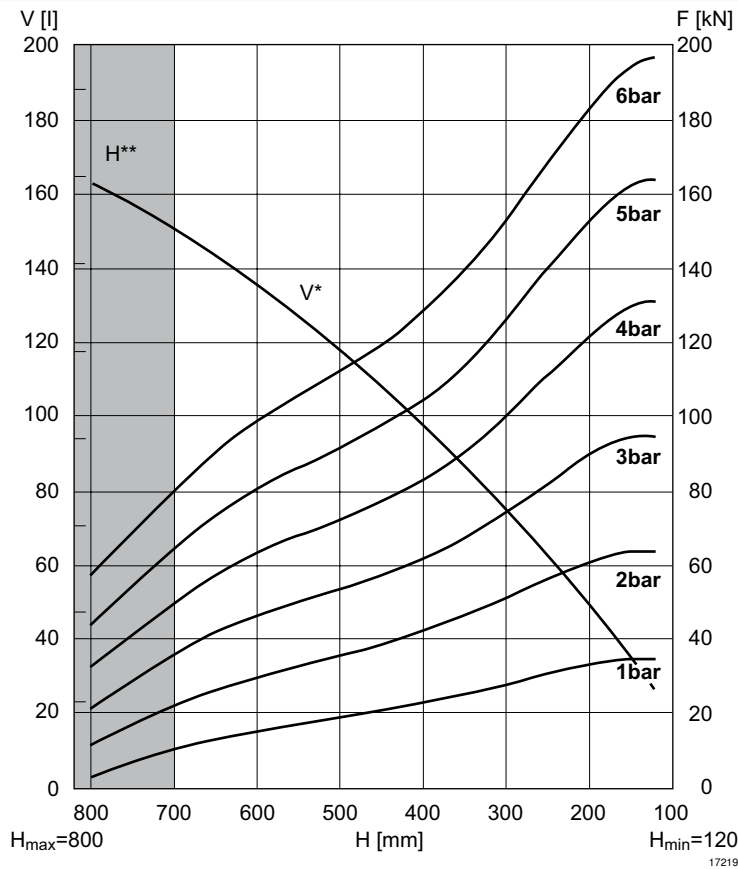
force-displacement diagram, R412010200



V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

V* = volume
 H* = recommended operating height for vibration insulators
 H** = use permitted only upon approval by Bosch Rexroth

force-displacement diagram, R412010151

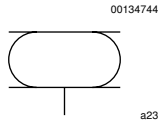


V* = volume
 H** = use permitted only upon approval by Bosch Rexroth

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► triple ► Stroke: 275 - 285 mm



Version	Bellow actuator with cover
Functional principle	Single-acting, retracted without pressure
Max. Angle of tilt	15 ° - 30 °
Working pressure min./max.	0 bar / 8 bar
Ambient temperature min./max.	-40°C / +70°C
Medium temperature	-40°C / +70°C
Medium	Compressed air
Pressure for determining forces	6 bar

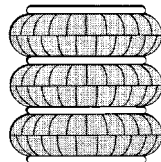
Materials:	
Bellow	caoutchouc/butadiene caoutchouc
Front cover	Steel, galvanized
End cover	Steel, galvanized

Technical Remarks

- Compliance with the min. height Hmin. (B) and max. stroke (A) must be ensured with end stops.
- Use at operating height ≥ Hmax: only permitted upon approval by Bosch Rexroth
- For information on vibration insulators, see "Technical Information"
- reduced service life at a temperature greater than: 50 °C

	Compressed air connection G	Stroke [mm]	Cover diameter [mm]	Min. installation space [mm]	Weight [kg]	Force min./max. [kN]	Fig.	Part No.
	G 3/4	285	228	345	5.9	17.1 - 34.5	Fig. 1	2999612800
		275	287	410	8	28.7 - 52.6	Fig. 2	1938281000

bellow type



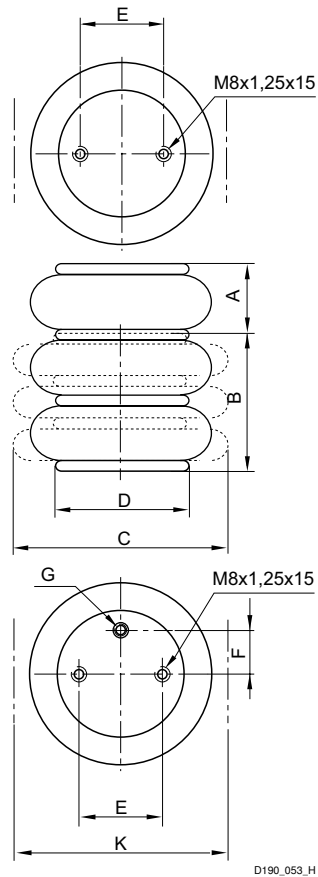
00133712

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ triple ▶ Stroke: 275 - 285 mm

Fig. 1



D190_053_H

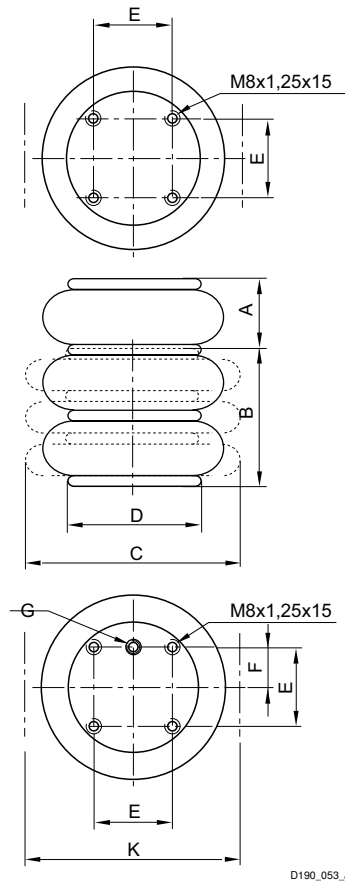
Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
2999612800	G 3/4	285	110	325	228	157.5	73	345	400		

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

► triple ► Stroke: 275 - 285 mm

Fig. 2



D190_053_J

Part No.	Compressed air connection G	A [mm]	B [mm]	C [mm]	D [mm]	E ±0,5 [mm]	F ±0,5 [mm]	K [mm]	Return force, min. [N]		
1938281000	G 3/4	275	110	384	287	158.8	79.4	410	500		

force-displacement diagrams for triple bellow actuators

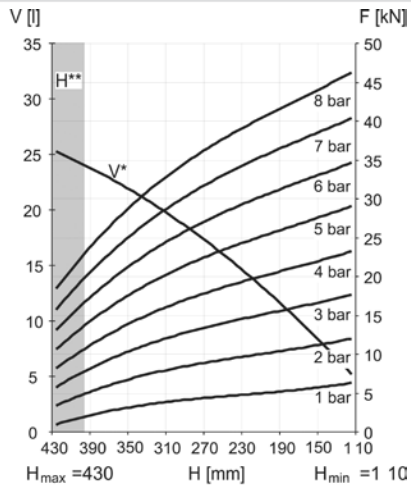
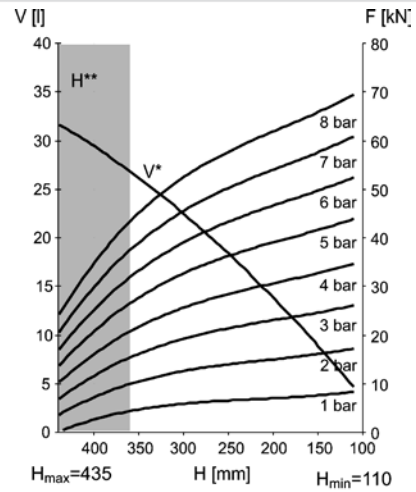


max. permissible parallel movement between the covers: 30 mm

Rodless cylinders → Bellow actuator

Bellow actuator, Series BCP

▶ triple ▶ Stroke: 275 - 285 mm

force-displacement diagram, 2999612800**force-displacement diagram, 1938281000**

V* = volume

H** = use permitted only upon approval by Bosch Rexroth

V* = volume

H** = use permitted only upon approval by Bosch Rexroth

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The data specified above 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 our products are subject to a natural process of wear and aging.

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