

Series BCC

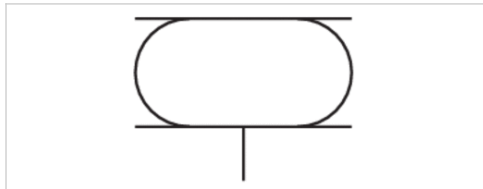


AVENTICS™ Series BCC



Series BCC

- single
- Stroke 15-125 mm



Version

Functional principle

Working pressure min./max.

Ambient temperature min./max.

Medium

Permissible angle of tilt max.

Pressure for determining forces

Weight

Bellow actuator with mounting ring and cover

Single-acting, retracted without pressure

0 ... 8 bar

See table below

Compressed air

20 °

6 bar

See table below

Technical data

Part No.	Cover diameter	Compressed air connection	Max. effective stroke
		G	
R412020583	78 mm	G 1/4	15 mm
R412020584	110 mm	G 3/8	35 mm
R414000177	152.5 mm	G 1/2	50 mm
R412020585	153.5 mm	G 1/2	45 mm
R412020586	184 mm	G 1/2	65 mm
R412020587	210 mm	G 1/2	85 mm
R412020588	260 mm	G 1/2	85 mm
R412020589	310 mm	G 1/2	100 mm
R412020590	310 mm	G 1/2	125 mm

Part No.	Min. radial installation space	Feature	Ambient temperature min./max.
R412020583	95 mm	2 3/4x1	-30 ... 90 °C
R412020584	140 mm	4 1/2x1	-30 ... 90 °C
R414000177	190 mm	6x1	-30 ... 90 °C
R412020585	190 mm	6x1	-30 ... 90 °C
R412020586	245 mm	8x1	-40 ... 70 °C
R412020587	300 mm	10x1	-40 ... 70 °C
R412020588	350 mm	12x1	-40 ... 70 °C
R412020589	425 mm	14 1/2x1	-40 ... 70 °C
R412020590	445 mm	16x1	-40 ... 70 °C

Part No.	Material	Material	Force min./max.	Weight
	Bellow	Cap		
R412020583	Chloroprene rubber	Aluminum	1300 ... 2600 N	0.45 kg
R412020584	Chloroprene rubber	Aluminum	1900 ... 5600 N	0.7 kg
R414000177	Chloroprene rubber	Aluminum	4900 ... 11900 N	1.6 kg
R412020585	Chloroprene rubber	Steel galvanized	4900 ... 11200 N	2.5 kg
R412020586	caoutchouc/butadiene caoutchouc	Steel galvanized	8000 ... 18000 N	3.1 kg
R412020587	caoutchouc/butadiene caoutchouc	Steel galvanized	12000 ... 25500 N	4.1 kg
R412020588	caoutchouc/butadiene caoutchouc	Steel galvanized	18000 ... 38000 N	5.4 kg
R412020589	caoutchouc/butadiene caoutchouc	Steel galvanized	28000 ... 58000 N	7.1 kg
R412020590	caoutchouc/butadiene caoutchouc	Steel galvanized	38000 ... 61000 N	7.6 kg

Part No.	Fig.
R412020583	Fig. 1
R412020584	Fig. 2
R414000177	Fig. 3
R412020585	Fig. 4
R412020586	Fig. 4
R412020587	Fig. 4
R412020588	Fig. 4
R412020589	Fig. 4
R412020590	Fig. 4

Technical information

Compliance with the minimum height $H_{min.}$ as well as the maximum height $H_{max.}$ must be ensured with end stops.

Use at operating height $\geq H_{max.}$: only permitted upon approval by AVENTICS

Further information on vibration isolation can be found in the "Technical information" document (available in the MediaCentre).

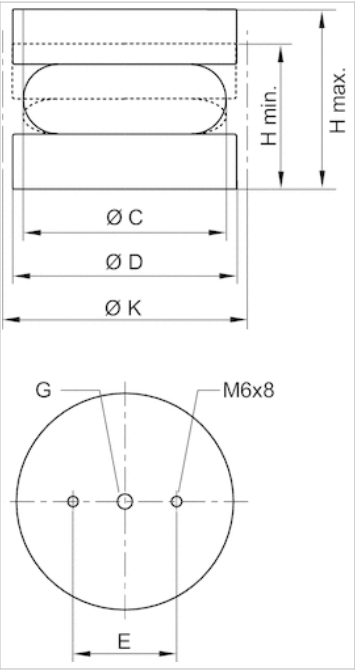
The bellow can be exchanged.

Technical information

Material	
Bellow	Chloroprene rubber caoutchouc/butadiene caoutchouc
Front cover	Aluminum Steel, galvanized
End cover	Aluminum Steel, galvanized

Dimensions

Fig. 1



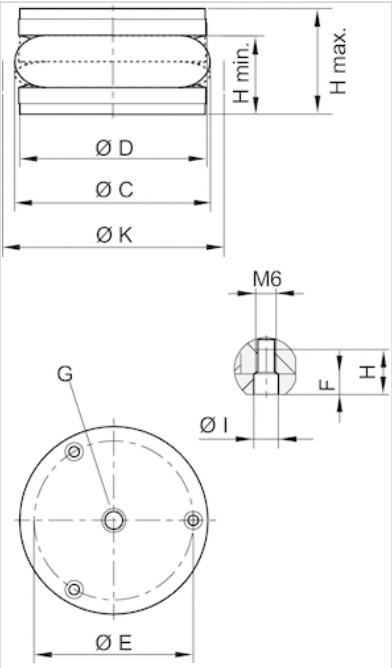
Dimensions

Part No.	Compressed air connection G	H min.	H max.	C	D	E $\pm 0,5$ mm
R412020583	G 1/4	50 mm	65 mm	80 mm	78 mm	36

K mm	Return force, min.
95 mm	400 N

Dimensions

Fig. 2



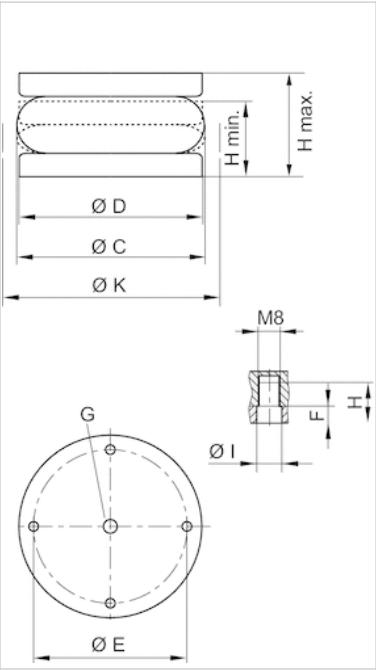
Dimensions

Part No.	Compressed air connection G	H min.	H max.	C	D	E $\pm 0,5$ mm
R412020584	G 3/8	50 mm	85 mm	125 mm	110 mm	93

F mm	H mm	I mm	K	Return force, min.
6	13	7	140 mm	150 N

Dimensions

Fig. 3



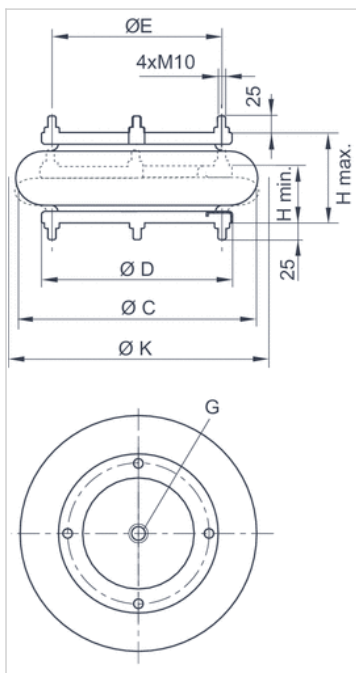
Dimensions

Part No.	Compressed air connection G	H min.	H max.	C	D
R414000177	G 1/2	55 mm	105 mm	175 mm	152.5 mm

E ±0,5 [mm] mm	F mm	H mm	I mm	K	Return force, min. N
127	6	14.5	9	190 mm	320 N

Dimensions

Fig. 4



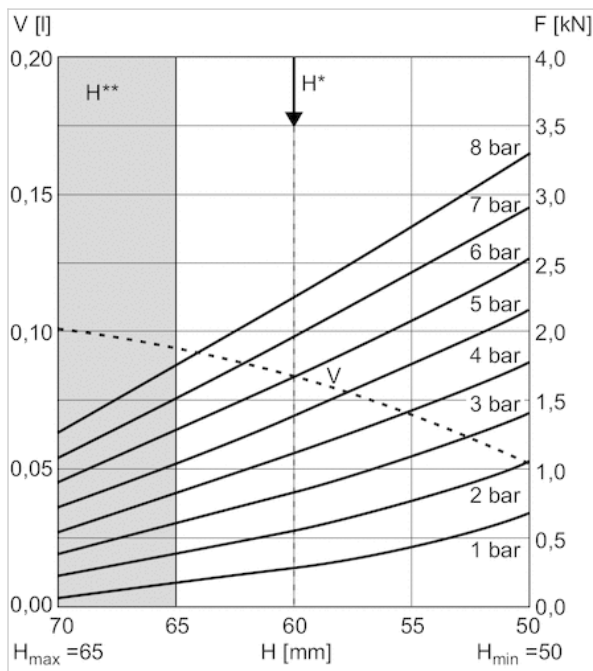
Dimensions

Part No.	Compressed air connection G	H min.	H max.	C	D	E mm
R412020585	G 1/2	50 mm	95 mm	175 mm	153.5 mm	127
R412020586	G 1/2	50 mm	115 mm	230 mm	184 mm	155.5
R412020587	G 1/2	50 mm	135 mm	270 mm	210 mm	181
R412020588	G 1/2	50 mm	135 mm	330 mm	260 mm	232
R412020589	G 1/2	50 mm	150 mm	400 mm	310 mm	282.5
R412020590	G 1/2	50 mm	175 mm	420 mm	310 mm	282.5

K	Return force, min.
190 mm	320 N
245 mm	290 N
300 mm	150 N
350 mm	200 N
425 mm	230 N
445 mm	30 N

Diagrams

Force-displacement diagram, R412020583



V = volume

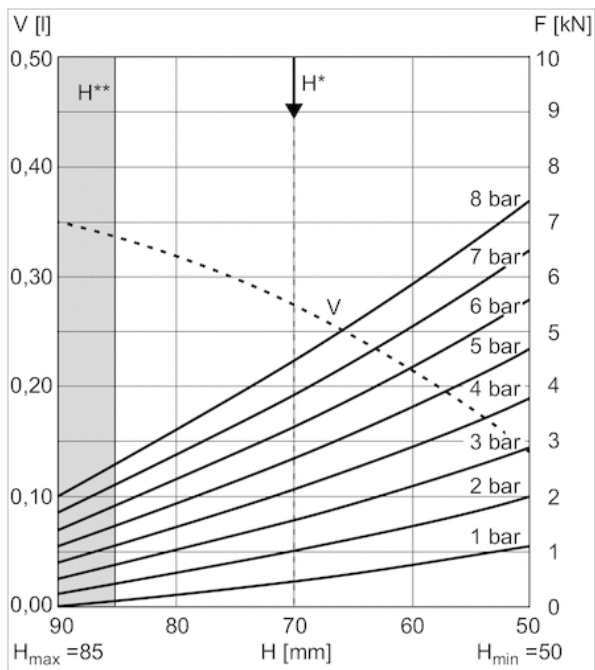
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020584



V = volume

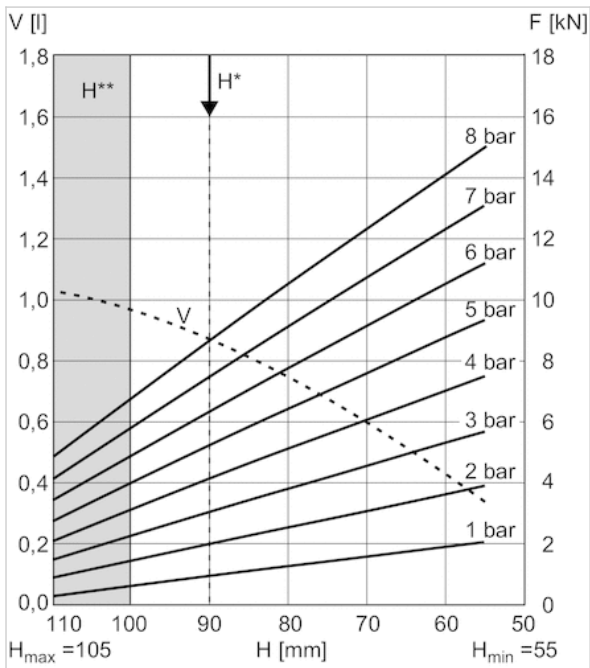
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R414000177



V = volume

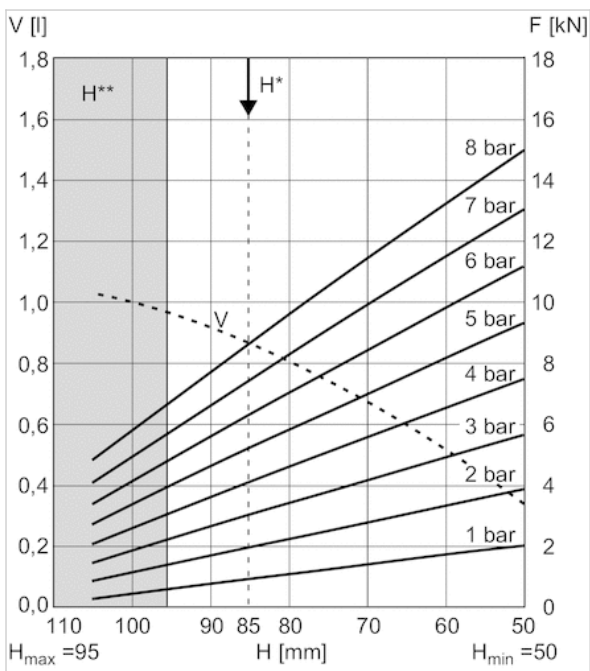
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020585



V = volume

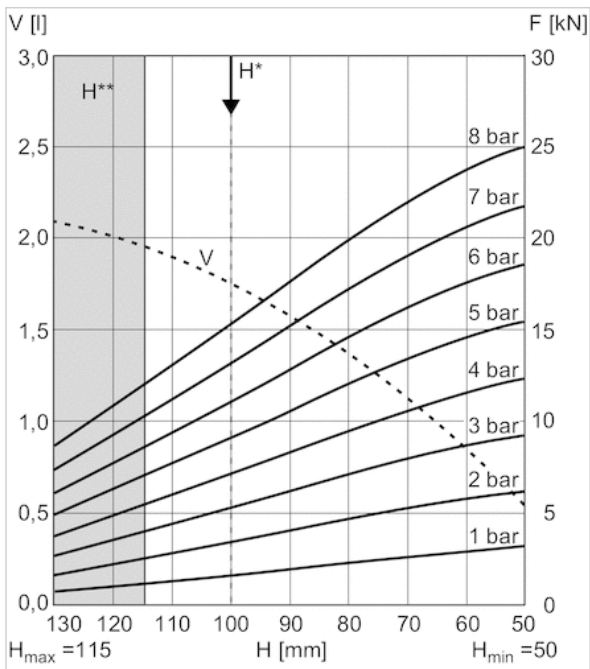
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020586



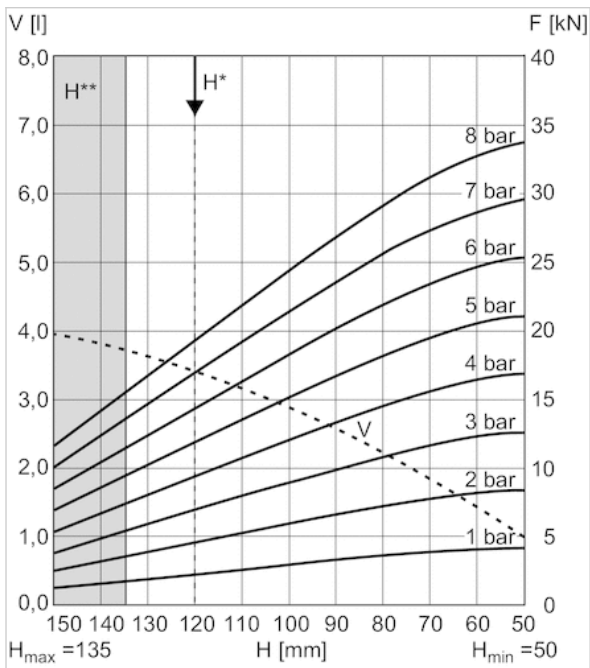
V = volume

H = height

 H^* = recommended operating height for vibration isolation H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020587



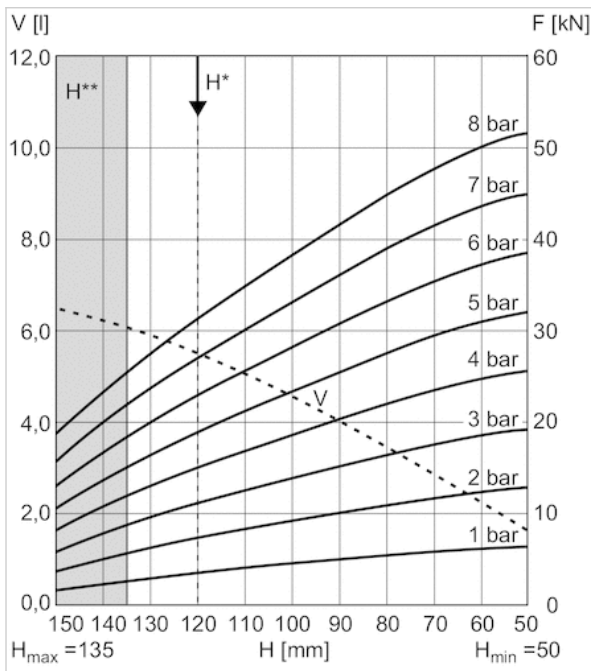
V = volume

H = height

 H^* = recommended operating height for vibration isolation H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020588



V = volume

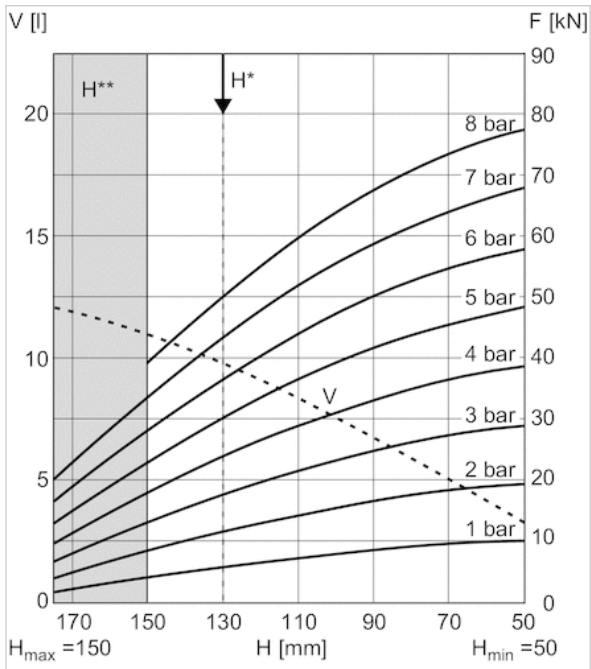
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020589



V = volume

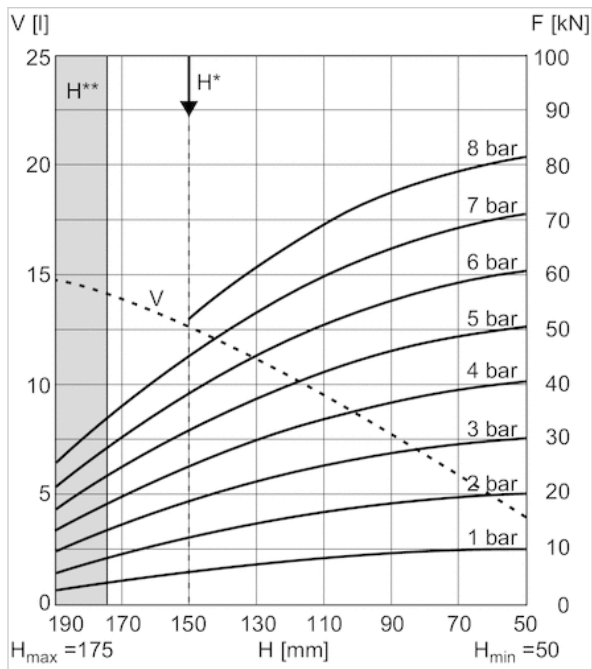
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020590



V = volume

H = height

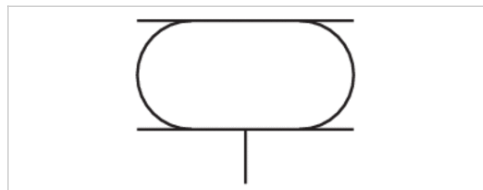
H^* = recommended operating height for vibration isolation

H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Series BCC

- double
- Stroke 39-275 mm



Version

Functional principle

Working pressure min./max.

Ambient temperature min./max.

Medium

Permissible angle of tilt max.

Pressure for determining forces

Weight

Bellow actuator with mounting ring and cover

Single-acting, retracted without pressure

0 ... 8 bar

See table below

Compressed air

25 °

6 bar

See table below

Technical data

Part No.	Cover diameter	Compressed air connection	Max. effective stroke
		G	
R412020591	78 mm	G 1/4	39 mm
R414000188	110 mm	G 3/8	75 mm
3999791030	152.5 mm	G 1/2	95 mm
R412020592	153.5 mm	G 1/2	95 mm
R412020593	184 mm	G 1/2	145 mm
R412020594	210 mm	G 1/2	170 mm
R412020595	260 mm	G 1/2	170 mm
R412020596	310 mm	G 1/2	215 mm
R412020597	310 mm	G 1/2	275 mm

Part No.	Min. radial installation space	Feature	Ambient temperature min./max.
R412020591	95 mm	2 3/4x2	-30 ... 90 °C
R414000188	140 mm	4 1/2x2	-30 ... 90 °C
3999791030	195 mm	6x2	-30 ... 90 °C
R412020592	195 mm	6x2	-30 ... 90 °C
R412020593	245 mm	8x2	-40 ... 70 °C
R412020594	300 mm	10x2	-40 ... 70 °C
R412020595	350 mm	12x2	-40 ... 70 °C
R412020596	425 mm	14 1/2x2	-40 ... 70 °C
R412020597	460 mm	16x2	-40 ... 70 °C

Part No.	Material	Material	Force min./max.	Weight
	Bellow	Cap		
R412020591	Chloroprene rubber	Aluminum	800 ... 2200 N	0.5 kg
R414000188	Chloroprene rubber	Aluminum	2400 ... 5700 N	1 kg
3999791030	Chloroprene rubber	Aluminum	4200 ... 11000 N	1.8 kg
R412020592	Chloroprene rubber	Steel galvanized	4800 ... 10800 N	2.6 kg
R412020593	caoutchouc/butadiene caoutchouc	Steel galvanized	6500 ... 18000 N	3.5 kg
R412020594	caoutchouc/butadiene caoutchouc	Steel galvanized	12000 ... 26000 N	4.7 kg
R412020595	caoutchouc/butadiene caoutchouc	Steel galvanized	20000 ... 39500 N	6.6 kg
R412020596	caoutchouc/butadiene caoutchouc	Steel galvanized	29000 ... 59500 N	8.3 kg
R412020597	caoutchouc/butadiene caoutchouc	Steel galvanized	36000 ... 62500 N	8.8 kg

Part No.	Fig.
R412020591	Fig. 1
R414000188	Fig. 2
3999791030	Fig. 3
R412020592	Fig. 4
R412020593	Fig. 4
R412020594	Fig. 4
R412020595	Fig. 4
R412020596	Fig. 4
R412020597	Fig. 4

Technical information

Compliance with the minimum height H min. as well as the maximum height H max. must be ensured with end stops.

Use at operating height $\geq H_{max}$: only permitted upon approval by AVENTICS

Further information on vibration isolation can be found in the "Technical information" document (available in the MediaCentre).

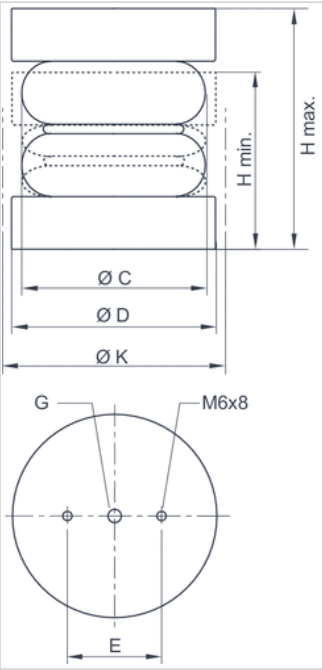
The bellow can be exchanged.

Technical information

Material	
Bellow	Chloroprene rubber caoutchouc/butadiene caoutchouc
Front cover	Aluminum Steel, galvanized
End cover	Aluminum Steel, galvanized

Dimensions

Fig. 1



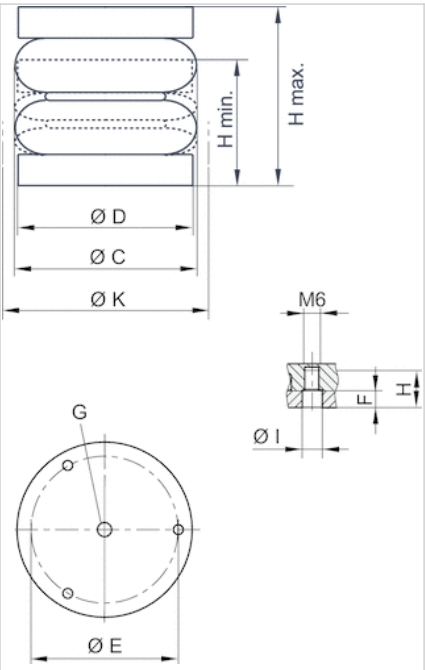
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R412020591	G 1/4	65 mm	104 mm	80 mm	78 mm

E ±0,5 [mm]	K mm	Return force, min. N
36	95 mm	200 N

Dimensions

Fig. 2



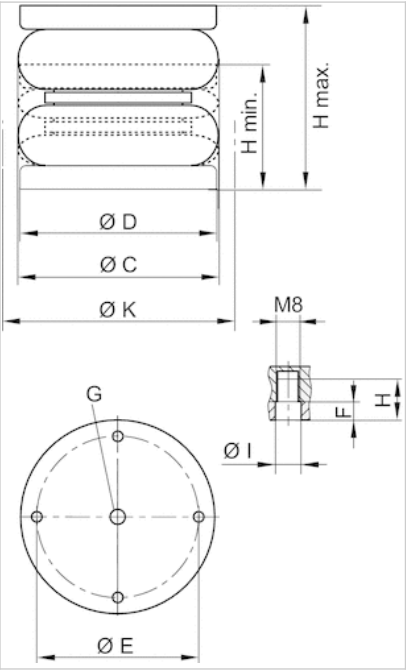
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R414000188	G 3/8	65 mm	140 mm	128 mm	110 mm

E ±0,5 [mm]	K mm	Return force, min. N
93	140 mm	150 N

Dimensions

Fig. 3



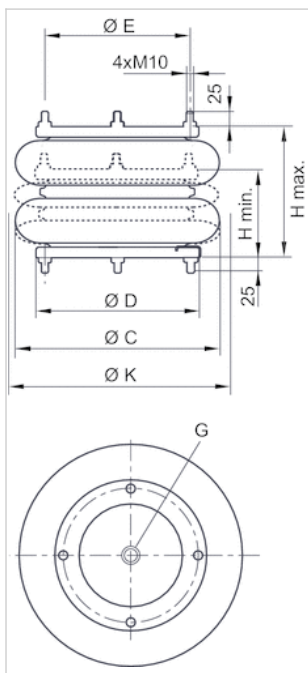
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
3999791030	G 1/2	80 mm	175 mm	178 mm	152.5 mm

E ±0,5 [mm]	F	H	I	K mm	Return force, min. N
127	6	14.5	9	195 mm	180 N

Dimensions

Fig. 4



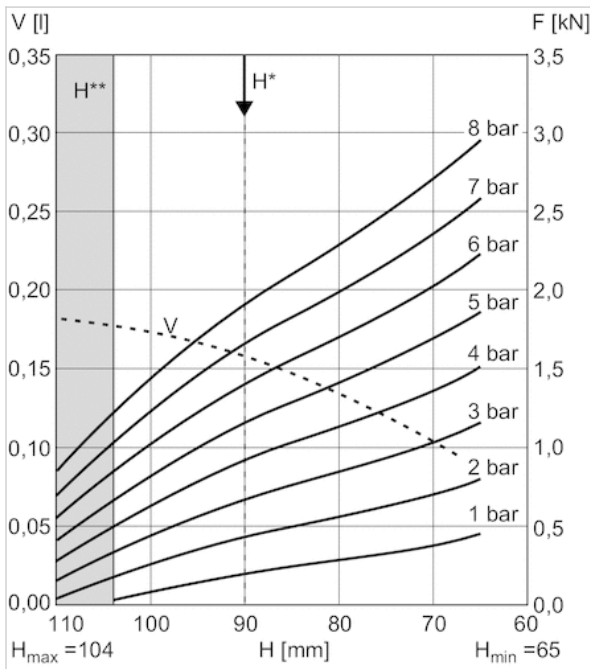
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R412020592	G 1/2	75 mm	170 mm	178 mm	153.5 mm
R412020593	G 1/2	75 mm	220 mm	230 mm	184 mm
R412020594	G 1/2	75 mm	245 mm	270 mm	210 mm
R412020595	G 1/2	75 mm	245 mm	330 mm	260 mm
R412020596	G 1/2	75 mm	290 mm	400 mm	310 mm
R412020597	G 1/2	75 mm	350 mm	435 mm	310 mm

E	K mm	Return force, min. N
127	195 mm	180 N
155.5	245 mm	300 N
181	300 mm	220 N
232	350 mm	250 N
282.5	425 mm	280 N
282.5	460 mm	250 N

Diagrams

Force-displacement diagram, R412020591



V = volume

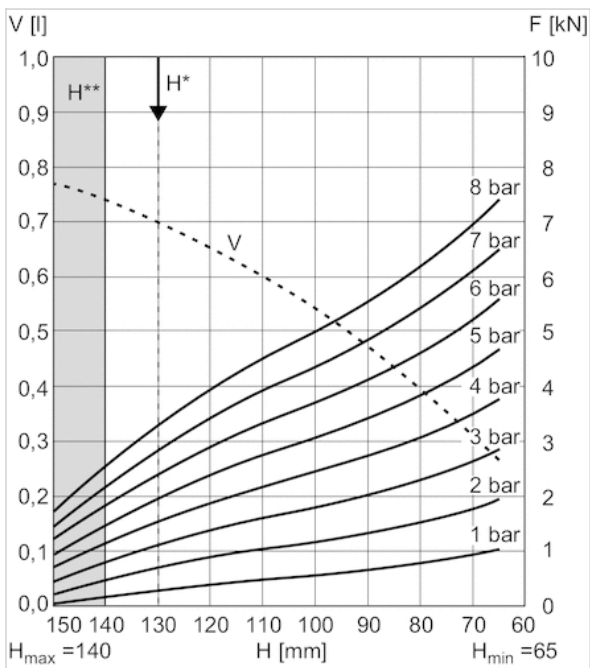
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R414000188



V = volume

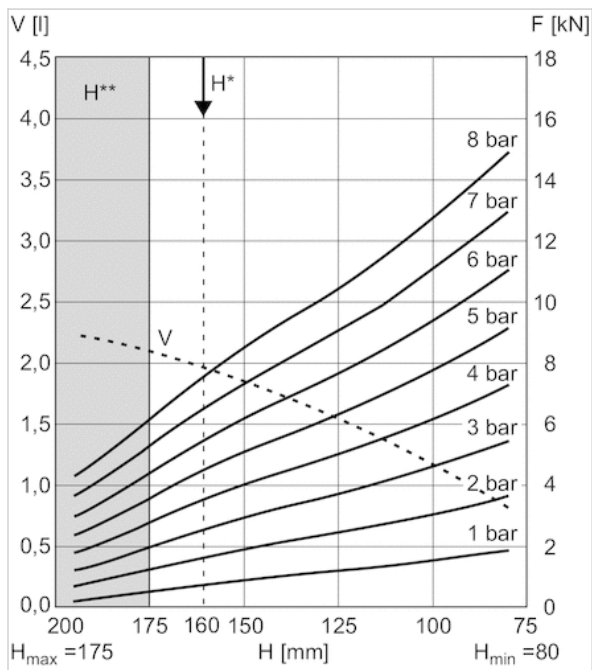
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, 3999791030



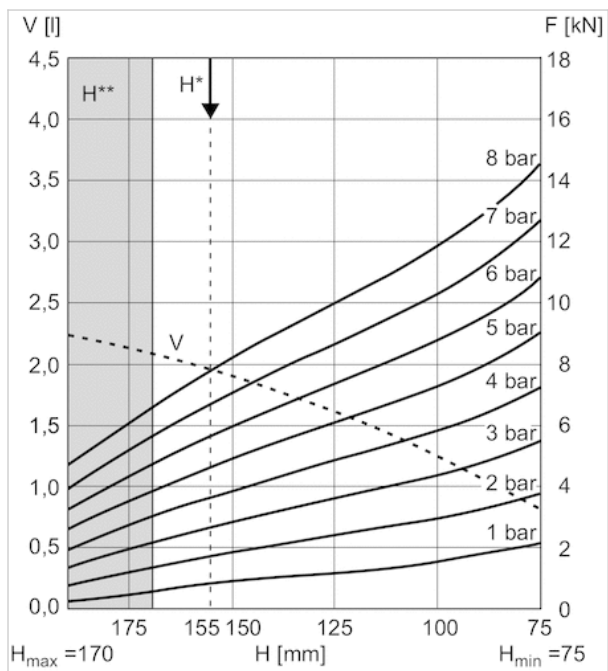
V = volume

H = height

 H^* = recommended operating height for vibration isolation H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020592



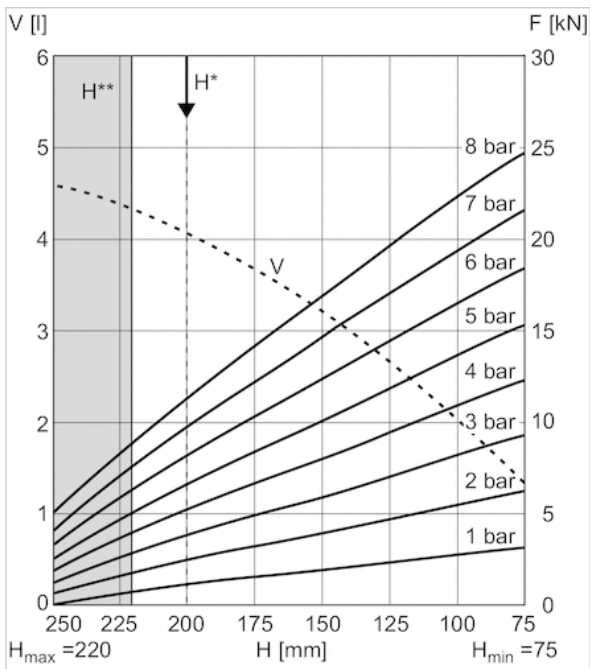
V = volume

H = height

 H^* = recommended operating height for vibration isolation H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020593



V = volume

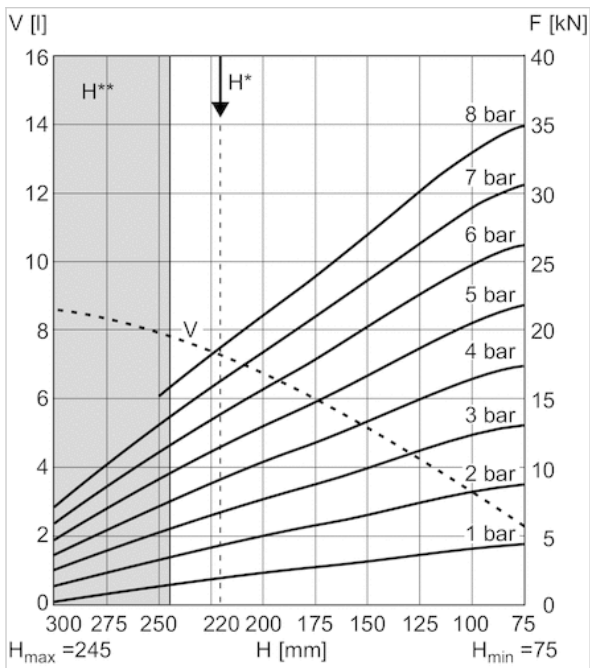
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020594



V = volume

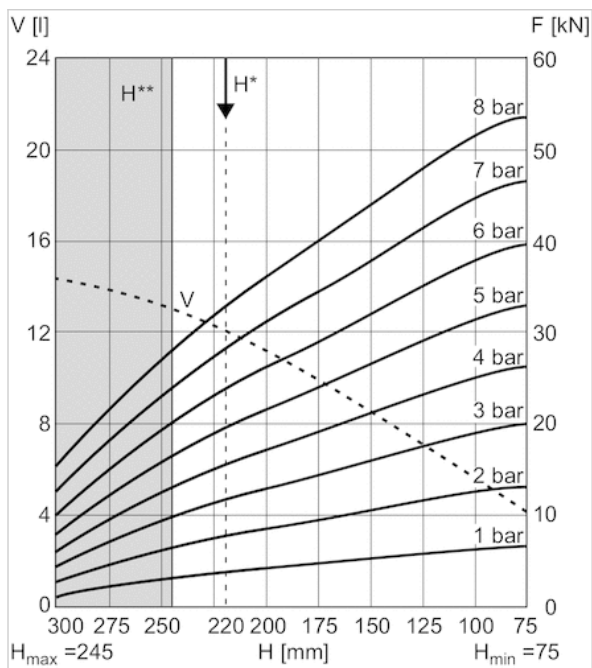
H = height

H* = recommended operating height for vibration isolation

H** = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020595



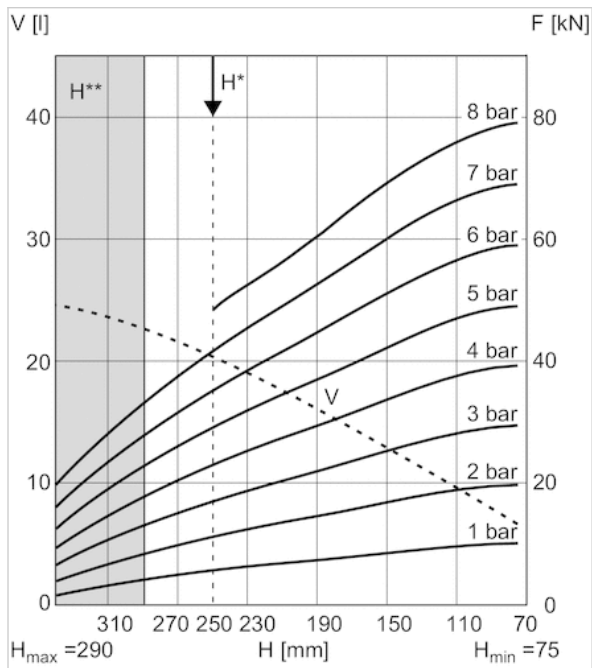
V = volume

H = height

 H^* = recommended operating height for vibration isolation H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020596



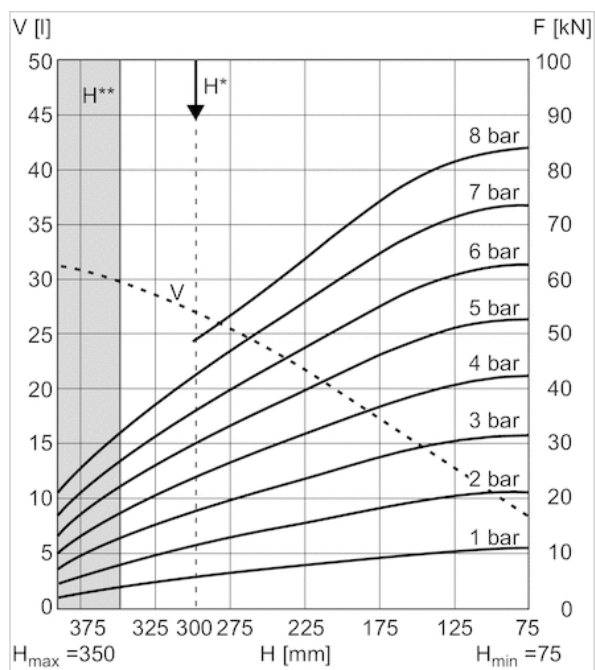
V = volume

H = height

 H^* = recommended operating height for vibration isolation H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020597



V = volume

H = height

H^* = recommended operating height for vibration isolation

H^{**} = use permitted only upon approval by AVENTICS

1 kN = 1000 N

Series BCC

- triple
- Stroke 50-355 mm



Version

Functional principle

Working pressure min./max.

Ambient temperature min./max.

Medium

Permissible angle of tilt max.

Pressure for determining forces

Weight

Bellow actuator with mounting ring and cover

Single-acting, retracted without pressure

0 ... 8 bar

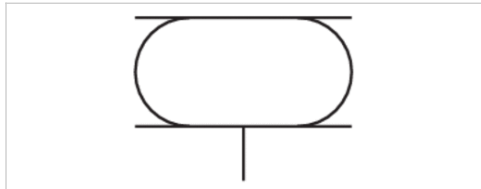
See table below

Compressed air

30 °

6 bar

See table below



Technical data

Part No.	Cover diameter	Compressed air connection	Max. effective stroke
		G	
R412020598	78 mm	G 1/4	50 mm
R412020599	110 mm	G 3/8	90 mm
R412019469	152.5 mm	G 1/2	160 mm
R412020600	153.5 mm	G 1/2	160 mm
R412020601	184 mm	G 1/2	205 mm
R412000012	210 mm	G 1/2	250 mm
R412020602	260 mm	G 1/2	250 mm
R412020603	310 mm	G 1/2	320 mm
R412020604	310 mm	G 1/2	355 mm

Part No.	Min. radial installation space	Feature	Ambient temperature min./max.
R412020598	95 mm	2 3/4x3	-30 ... 90 °C
R412020599	140 mm	4 1/2x3	-30 ... 90 °C
R412019469	195 mm	6x3	-30 ... 90 °C
R412020600	195 mm	6x3	-30 ... 90 °C
R412020601	245 mm	8x3	-40 ... 70 °C
R412000012	300 mm	10x3	-40 ... 70 °C
R412020602	350 mm	12x3	-40 ... 70 °C
R412020603	425 mm	14 1/2x3	-40 ... 70 °C
R412020604	455 mm	16x3	-40 ... 70 °C

Part No.	Material	Material	Force min./max.	Weight
	Bellow	Cap		
R412020598	Chloroprene rubber	Aluminum	900 ... 2050 N	0.55 kg
R412020599	Chloroprene rubber	Aluminum	2400 ... 5100 N	1.1 kg
R412019469	Chloroprene rubber	Aluminum	4000 ... 11000 N	2 kg
R412020600	Chloroprene rubber	Steel galvanized	3900 ... 11000 N	2.8 kg
R412020601	caoutchouc/butadiene caoutchouc	Steel galvanized	7500 ... 18000 N	4.2 kg
R412000012	caoutchouc/butadiene caoutchouc	Steel galvanized	12000 ... 26000 N	5.2 kg
R412020602	caoutchouc/butadiene caoutchouc	Steel galvanized	21000 ... 41000 N	6.9 kg
R412020603	caoutchouc/butadiene caoutchouc	Steel galvanized	25000 ... 59000 N	9.6 kg
R412020604	caoutchouc/butadiene caoutchouc	Steel galvanized	31000 ... 63000 N	10.4 kg

Part No.	Fig.
R412020598	Fig. 1
R412020599	Fig. 2
R412019469	Fig. 3
R412020600	Fig. 4
R412020601	Fig. 4
R412000012	Fig. 4
R412020602	Fig. 4
R412020603	Fig. 4
R412020604	Fig. 4

Technical information

Compliance with the minimum height H min. as well as the maximum height H max. must be ensured with end stops.

Use at operating height $\geq H_{max}$: only permitted upon approval by AVENTICS

Further information on vibration isolation can be found in the "Technical information" document (available in the MediaCentre).

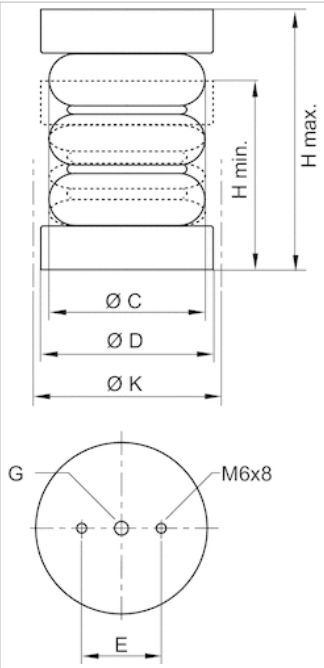
The bellow can be exchanged.

Technical information

Material	
Bellow	Chloroprene rubber caoutchouc/butadiene caoutchouc
Front cover	Aluminum Steel, galvanized
End cover	Aluminum Steel, galvanized

Dimensions

Fig. 1



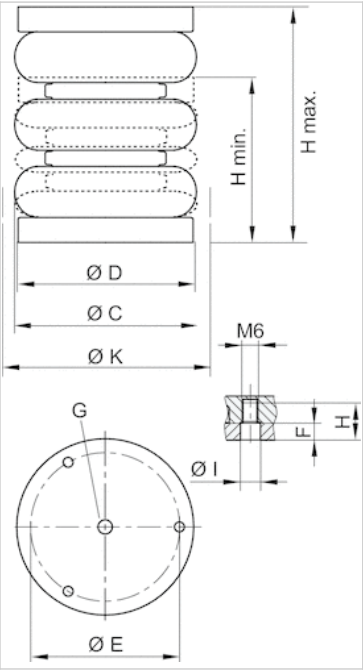
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R412020598	G 1/4	80 mm	130 mm	80 mm	78 mm

E $\pm 0,5$ [mm]	K mm	Return force, min. N
36	95 mm	100 N

Dimensions

Fig. 2



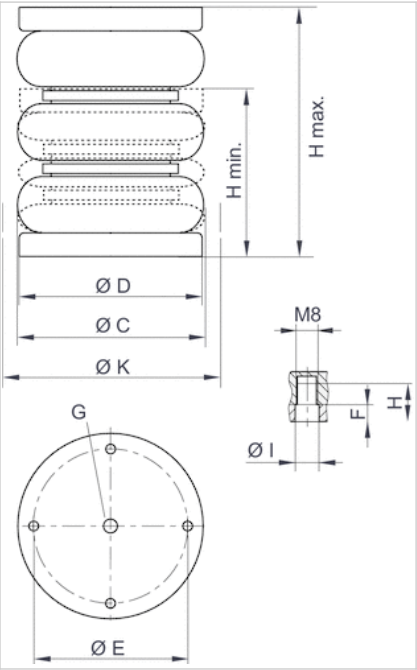
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R412020599	G 3/8	90 mm	180 mm	125 mm	110 mm

E ±0,5 [mm]	F	H	I	K mm	Return force, min. N
93	6	13	7	140 mm	100 N

Dimensions

Fig. 3



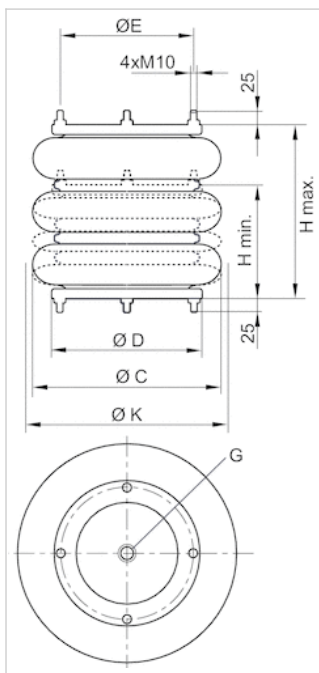
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R412019469	G 1/2	100 mm	260 mm	178 mm	152.5 mm

E ±0,5 [mm]	F	H	I	K mm	Return force, min. N
127	6	14.5	9	195 mm	250 N

Dimensions

Fig. 4



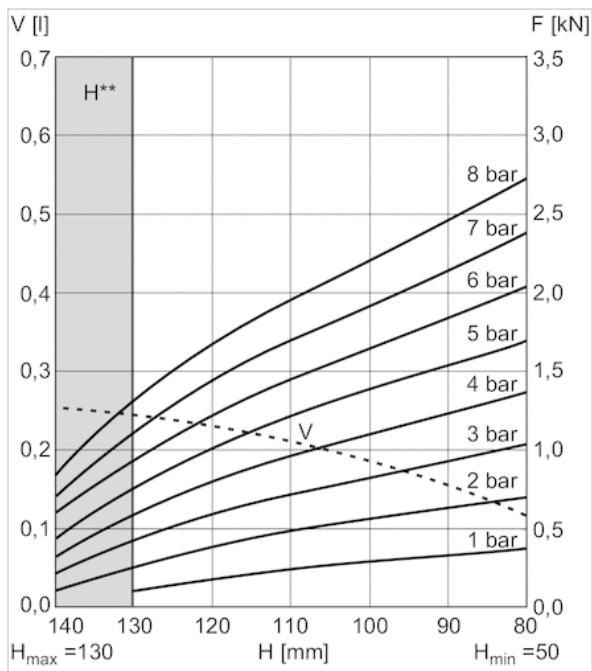
Dimensions

Part No.	Compressed air connection G	H min. mm	H max. mm	C mm	D mm
R412020600	G 1/2	95 mm	255 mm	178 mm	153.5 mm
R412020601	G 1/2	100 mm	305 mm	230 mm	184 mm
R412000012	G 1/2	100 mm	350 mm	270 mm	210 mm
R412020602	G 1/2	100 mm	350 mm	330 mm	260 mm
R412020603	G 1/2	100 mm	420 mm	400 mm	310 mm
R412020604	G 1/2	120 mm	475 mm	430 mm	310 mm

E	K mm	Return force, min. N
127	195 mm	250 N
155.5	245 mm	350 N
181	300 mm	250 N
232	350 mm	250 N
282.5	425 mm	330 N
282.5	455 mm	100 N

Diagrams

Force-displacement diagram, R412020598



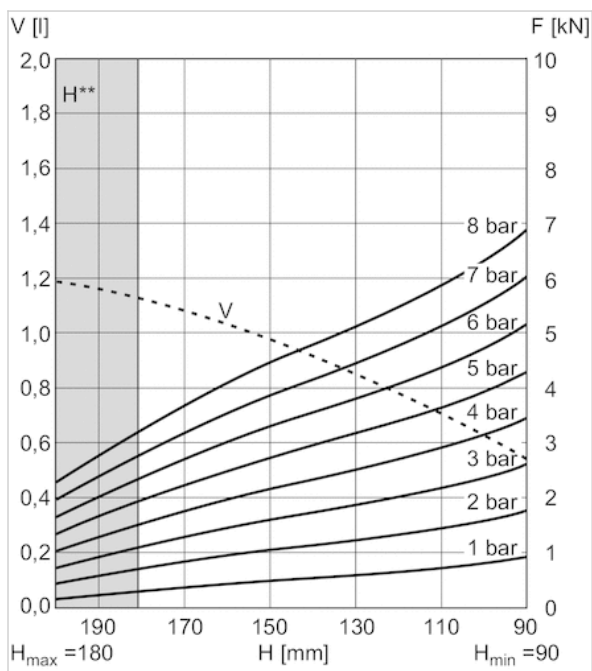
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020599



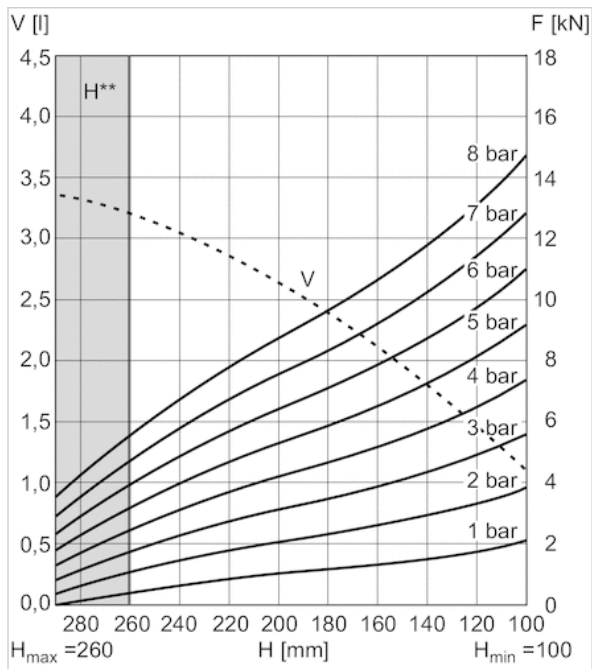
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412019469



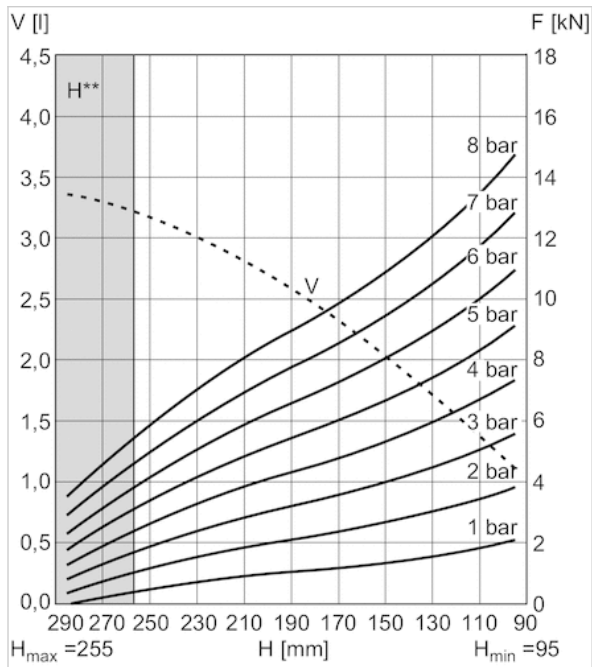
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020600



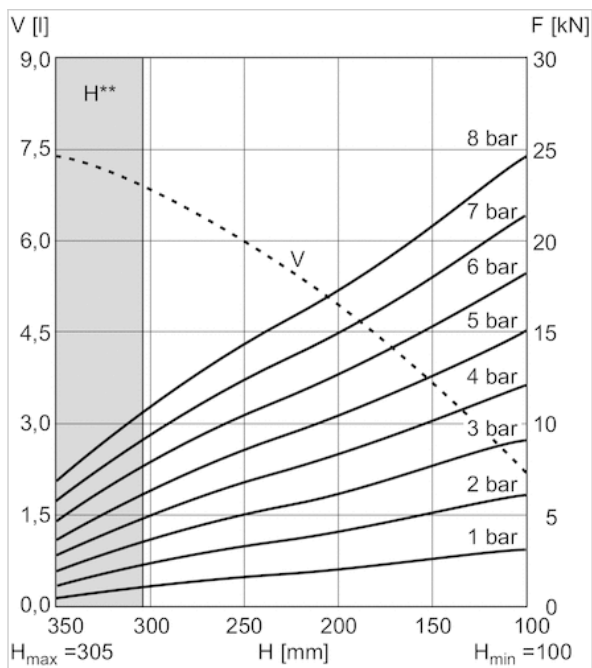
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020601



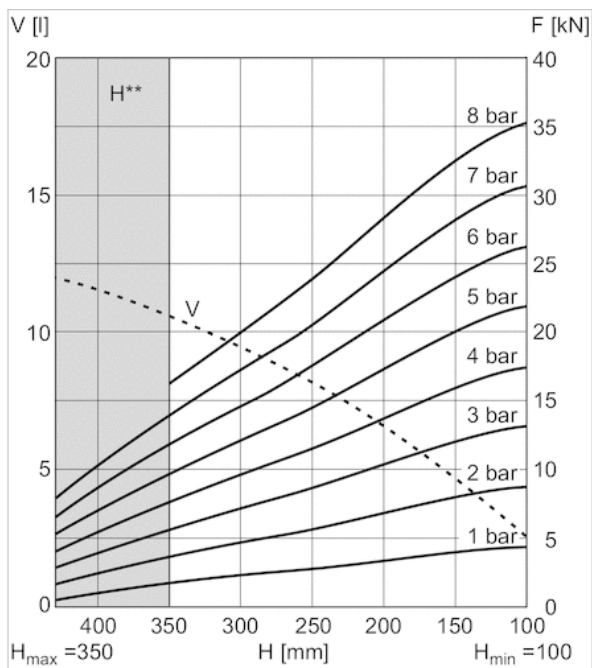
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412000012



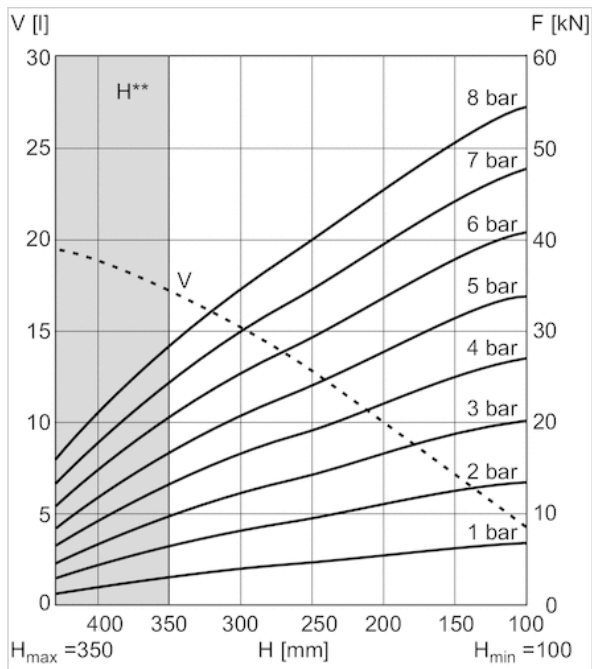
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020602



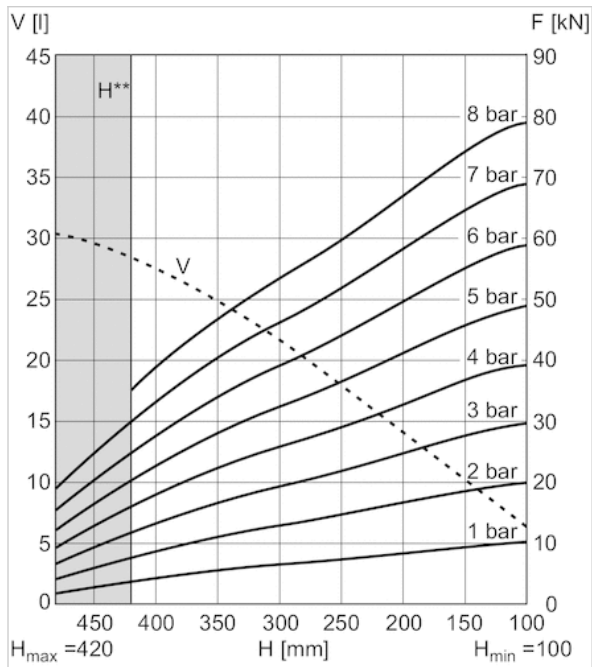
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020603



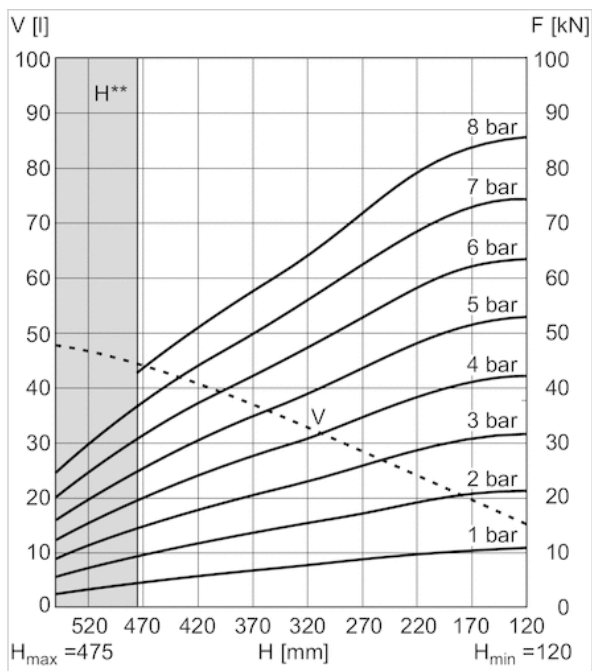
V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Force-displacement diagram, R412020604



V = volume

H = height

H**= use permitted only upon approval by AVENTICS

1 kN = 1000 N

Filler neck

- Enables use of bellow actuators for vibration isolation
- G 1/4 1/4 - 18 NPTF



Working pressure min./max.
Ambient temperature min./max.
Medium

0 ... 20 bar
-50 ... 130 °C
Compressed air

Technical data

Part No.	Port G	Fig.
3900040040	G 1/4	Fig. 2
R412010046	1/4 - 18 NPTF	Fig. 3

Technical information

Material	
Material	Brass

Dimensions

Fig. 1

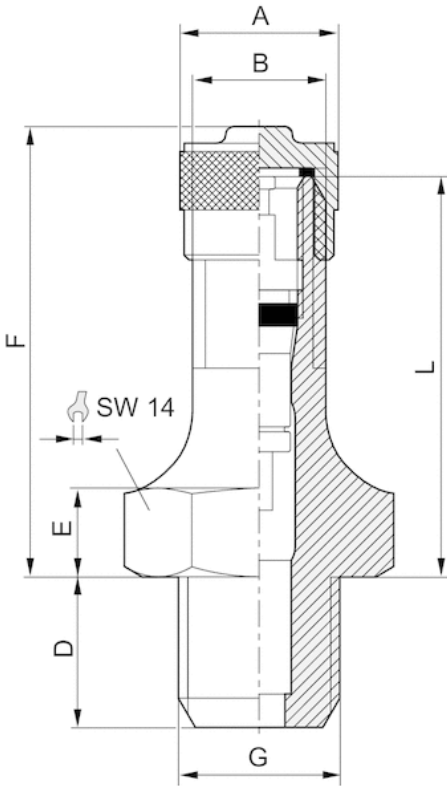


Fig. 2

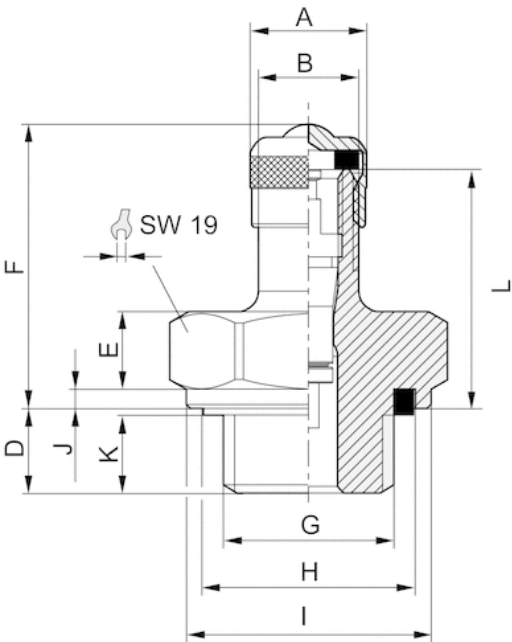
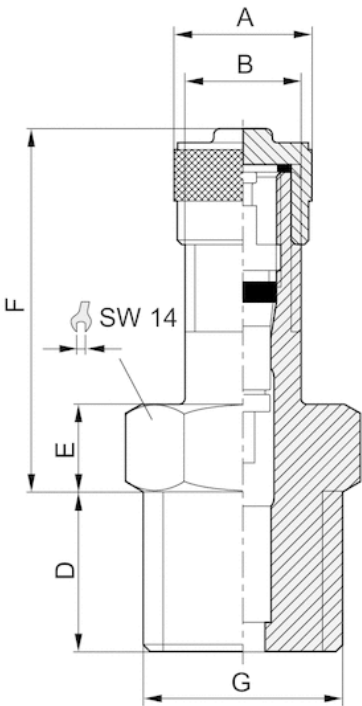


Fig. 3



Dimensions

Part No.	Port G	ØA	B 1)	D	E	F	H	I	J	K 2)	L	Fig.
3900040040	G 1/4	9	8	6.5	6	22	16.5	18.9	1.5	5.5	18.5	Fig. 2
R412010046	1/4 - 18 NPTF	9.5	8	11	6	25	-	-	-	-	-	Fig. 3

1) 8V1-1⇄ETRTO V0.07.3

2) Min.

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