



# CRIMPED BELLOW



From nominal diameter 6" (Ø135mm)  
to nominal diameter 16" (Ø350mm)

Low height of implantation

Durability and increased longevity

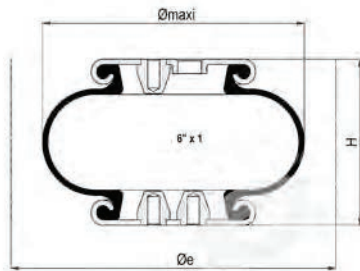
Maintenance free

Wide range (1, 2 convolutes and 3 convolutes  
depending on the diameter)

# Crimped bellow 6" x 1

DBS061002

INDUSTRY



## Technical characteristics

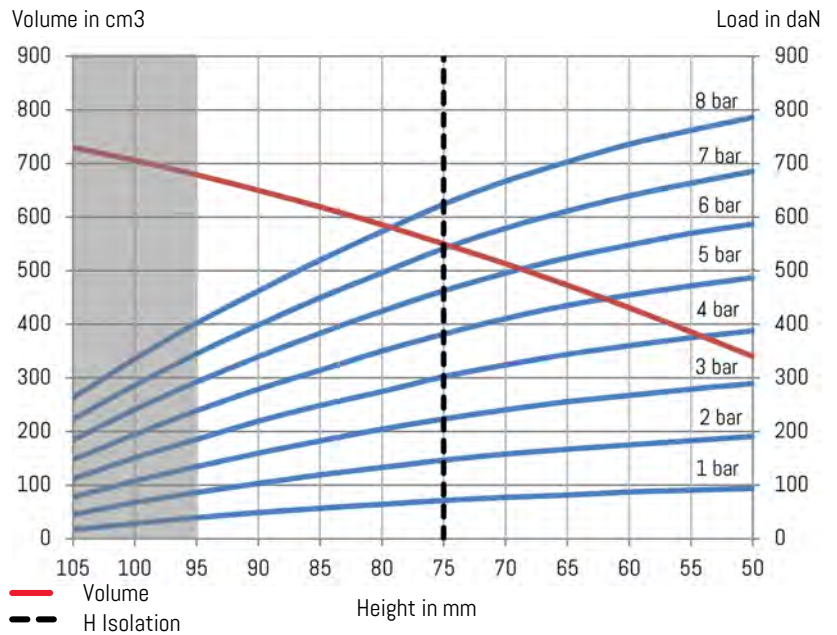
Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	135 mm
Maximum diameter	145 mm
Minimum overall diameter (Øe)	180 mm
Minimum height	50 mm
Static height (H)	80 mm
Maximum height	105 mm
Maximum recommended height	95 mm
Total stroke	55 mm
Effective area at static height	69 cm <sup>2</sup>
Stiffness at 4 bar	10,52 daN/mm
Natural frequency at 4 bar	3,09 Hz
Weight	0,85 kg

## Dynamic characteristics at H = 75mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	146	302	462
Volume (dm <sup>3</sup> )	0,55	0,55	0,55
Stiffness (daN/mm)	7,00	11,56	18,00
Natural frequency (Hz)	3,14	3,10	3,07
Isolation rate at 10Hz %	89,1	89,4	89,6

\* Recommended height for better isolation



## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS061002	Crimped bellow 1 convolute 6"x1 air inlet G1/4 shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
50 mm	191	289	388	487	587	685	786	340 cm <sup>3</sup>
55 mm	183	279	375	472	570	663	762	386 cm <sup>3</sup>
60 mm	175	267	360	455	548	640	736	431 cm <sup>3</sup>
65 mm	167	256	344	435	524	611	703	473 cm <sup>3</sup>
70 mm	158	240	324	411	495	579	667	513 cm <sup>3</sup>
75 mm	146	223	302	382	462	541	624	550 cm <sup>3</sup>
80 mm	133	204	274	350	424	496	573	586 cm <sup>3</sup>
85 mm	119	183	249	314	383	450	520	619 cm <sup>3</sup>
90 mm	103	159	219	279	339	399	462	650 cm <sup>3</sup>
95 mm	86	134	185	239	292	345	402	679 cm <sup>3</sup>
100 mm	67	108	151	194	241	286	335	706 cm <sup>3</sup>
105 mm	45	77	111	148	184	222	263	730 cm <sup>3</sup>

## Mounting instructions

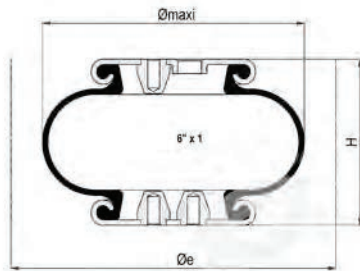
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 1,5 daN.

# Crimped bellow 6" x 1

DBS061003

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## Technical characteristics

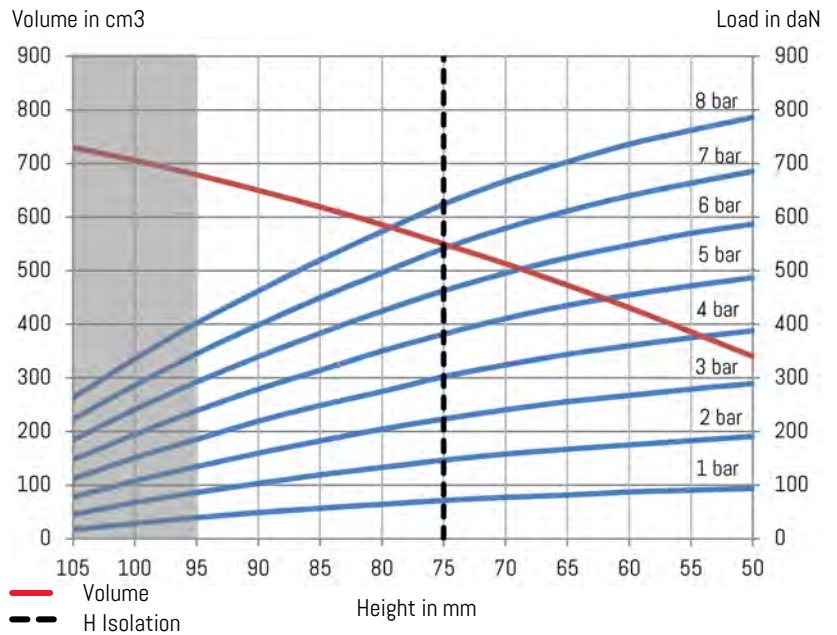
Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	135 mm
Maximum diameter	145 mm
Minimum overall diameter (Øe)	180 mm
Minimum height	50 mm
Static height (H)	80 mm
Maximum height	105 mm
Maximum recommended height	95 mm
Total stroke	55 mm
Effective area at static height	69 cm <sup>2</sup>
Stiffness at 4 bar	10,52 daN/mm
Natural frequency at 4 bar	3,09 Hz
Weight	0,85 kg

## Dynamic characteristics at H = 75mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	146	302	462
Volume (dm <sup>3</sup> )	0,55	0,55	0,55
Stiffness (daN/mm)	7,00	11,56	18,00
Natural frequency (Hz)	3,14	3,10	3,07
Isolation rate at 10Hz %	89,1	89,4	89,6

\* Recommended height for better isolation



## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS061003	Crimped bellow 1 convolute 6"x1 air inlet G1/4 shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
50 mm	191	289	388	487	587	685	786	340 cm <sup>3</sup>
55 mm	183	279	375	472	570	663	762	386 cm <sup>3</sup>
60 mm	175	267	360	455	548	640	736	431 cm <sup>3</sup>
65 mm	167	256	344	435	524	611	703	473 cm <sup>3</sup>
70 mm	158	240	324	411	495	579	667	513 cm <sup>3</sup>
75 mm	146	223	302	382	462	541	624	550 cm <sup>3</sup>
80 mm	133	204	274	350	424	496	573	586 cm <sup>3</sup>
85 mm	119	183	249	314	383	450	520	619 cm <sup>3</sup>
90 mm	103	159	219	279	339	399	462	650 cm <sup>3</sup>
95 mm	86	134	185	239	292	345	402	679 cm <sup>3</sup>
100 mm	67	108	151	194	241	286	335	706 cm <sup>3</sup>
105 mm	45	77	111	148	184	222	263	730 cm <sup>3</sup>

## Mounting instructions

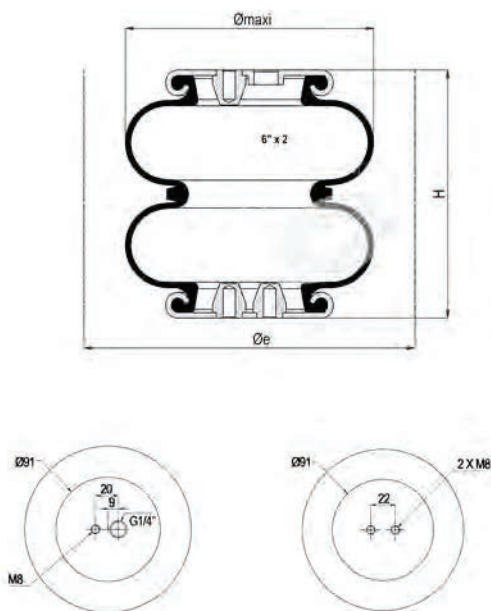
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 1,5 daN.

# Crimped bellow 6" x 2

DBS062002

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## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	150 mm
Maximum diameter	150 mm
Minimum overall diameter (Øe)	180 mm
Minimum height	80 mm
Static height (H)	135 mm
Maximum height	190 mm
Maximum recommended height	175 mm
Total stroke	110 mm
Effective area at static height	73 cm <sup>2</sup>
Stiffness at 4 bar	6,63 daN/mm
Natural frequency at 4 bar	2,34 Hz
Weight	1,1 kg

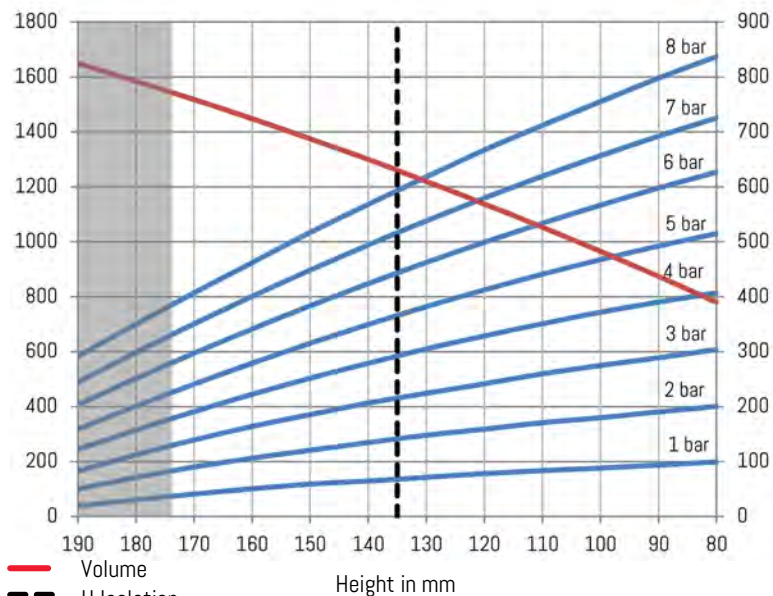
## Dynamic characteristics at H = 135mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	141	292	443
Volume (dm <sup>3</sup> )	12,6	12,6	12,6
Stiffness (daN/mm)	4,17	6,63	10,22
Natural frequency (Hz)	2,39	2,34	2,30
Isolation rate at 10Hz %	93,9	94,2	94,4

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS062002 Crimped bellow 2 convolutes 6"x2 air inlet G1/4 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
80 mm	200	304	407	515	627	725	837	780 cm <sup>3</sup>
90 mm	190	289	390	492	598	692	798	874 cm <sup>3</sup>
100 mm	180	275	372	468	567	657	755	965 cm <sup>3</sup>
110 mm	171	260	351	441	534	619	712	1053 cm <sup>3</sup>
120 mm	159	242	329	412	499	580	667	1138 cm <sup>3</sup>
130 mm	148	224	305	382	462	538	618	1220 cm <sup>3</sup>
135 mm	141	215	292	366	443	516	593	1260 cm <sup>3</sup>
140 mm	135	206	279	350	424	494	568	1300 cm <sup>3</sup>
150 mm	121	185	252	315	383	448	517	1375 cm <sup>3</sup>
160 mm	106	164	222	279	341	401	462	1448 cm <sup>3</sup>
170 mm	90	139	191	241	297	351	407	1518 cm <sup>3</sup>
175 mm	81	126	174	221	274	325	378	1551 cm <sup>3</sup>
180 mm	71	112	157	201	251	299	350	1584 cm <sup>3</sup>
190 mm	50	83	122	159	203	244	292	1650 cm <sup>3</sup>

## Mounting instructions

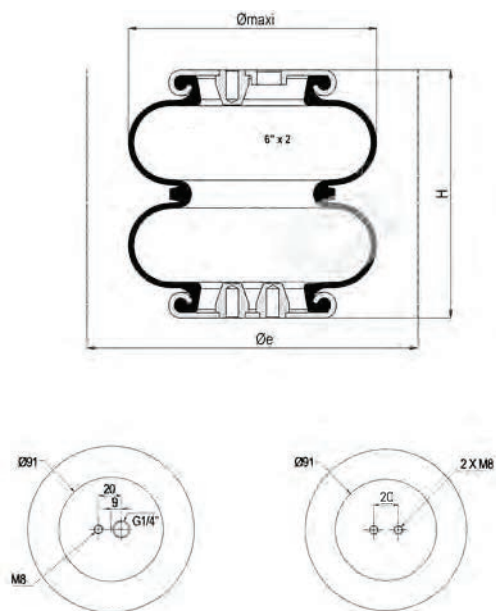
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 2,5 daN.

# Crimped bellow 6" x 2

DBS062003

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	150 mm
Maximum diameter	150 mm
Minimum overall diameter (Øe)	180 mm
Minimum height	80 mm
Static height (H)	135 mm
Maximum height	190 mm
Maximum recommended height	175 mm
Total stroke	110 mm
Effective area at static height	73 cm <sup>2</sup>
Stiffness at 4 bar	6,63 daN/mm
Natural frequency at 4 bar	2,34 Hz
Weight	1,1 kg

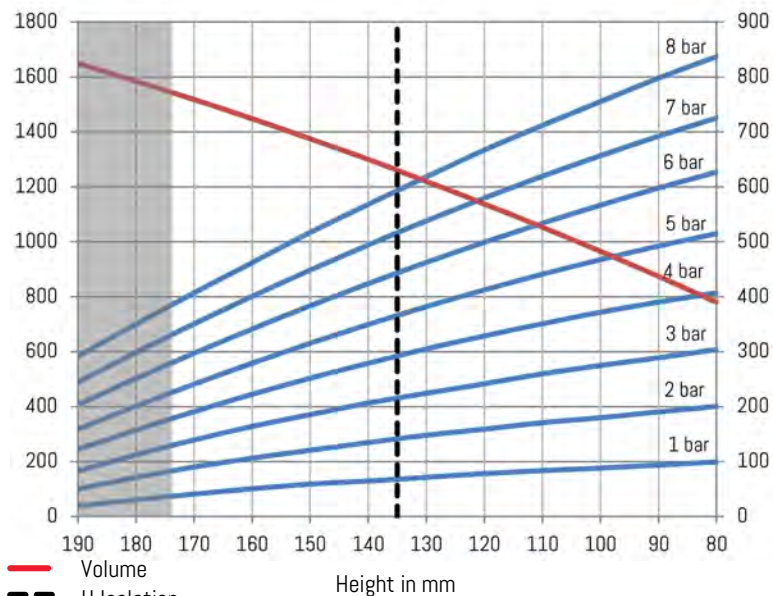
## Dynamic characteristics at H = 135mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	141	292	443
Volume (dm <sup>3</sup> )	12,6	12,6	12,6
Stiffness (daN/mm)	4,17	6,63	10,22
Natural frequency (Hz)	2,39	2,34	2,30
Isolation rate at 10Hz %	93,9	94,2	94,4

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS062003 Crimped bellow 2 convolutes 6"x2 air inlet G1/4 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
80 mm	200	304	407	515	627	725	837	780 cm <sup>3</sup>
90 mm	190	289	390	492	598	692	798	874 cm <sup>3</sup>
100 mm	180	275	372	468	567	657	755	965 cm <sup>3</sup>
110 mm	171	260	351	441	534	619	712	1053 cm <sup>3</sup>
120 mm	159	242	329	412	499	580	667	1138 cm <sup>3</sup>
130 mm	148	224	305	382	462	538	618	1220 cm <sup>3</sup>
135 mm	141	215	292	366	443	516	593	1260 cm <sup>3</sup>
140 mm	135	206	279	350	424	494	568	1300 cm <sup>3</sup>
150 mm	121	185	252	315	383	448	517	1375 cm <sup>3</sup>
160 mm	106	164	222	279	341	401	462	1448 cm <sup>3</sup>
170 mm	90	139	191	241	297	351	407	1518 cm <sup>3</sup>
175 mm	81	126	174	221	274	325	378	1551 cm <sup>3</sup>
180 mm	71	112	157	201	251	299	350	1584 cm <sup>3</sup>
190 mm	50	83	122	159	203	244	292	1650 cm <sup>3</sup>

## Mounting instructions

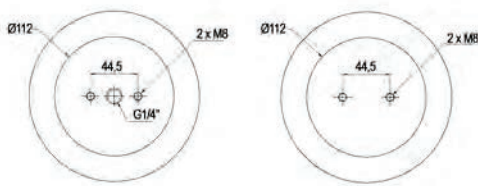
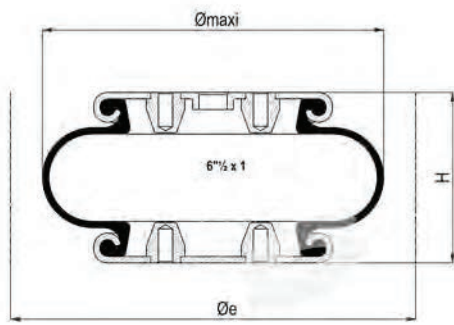
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 2,5 daN.

# Crimped bellow 6" 1/2 x 1

DBS0651001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	150 mm
Maximum diameter	160 mm
Minimum overall diameter (Øe)	190 mm
Minimum height	50 mm
Static height (H)	75 mm
Maximum height	95 mm
Maximum recommended height	85 mm
Total stroke	45 mm
Effective area at static height	101 cm <sup>2</sup>
Stiffness at 4 bar	16,58 daN/mm
Natural frequency at 4 bar	3,20 Hz
Weight	1,3 kg

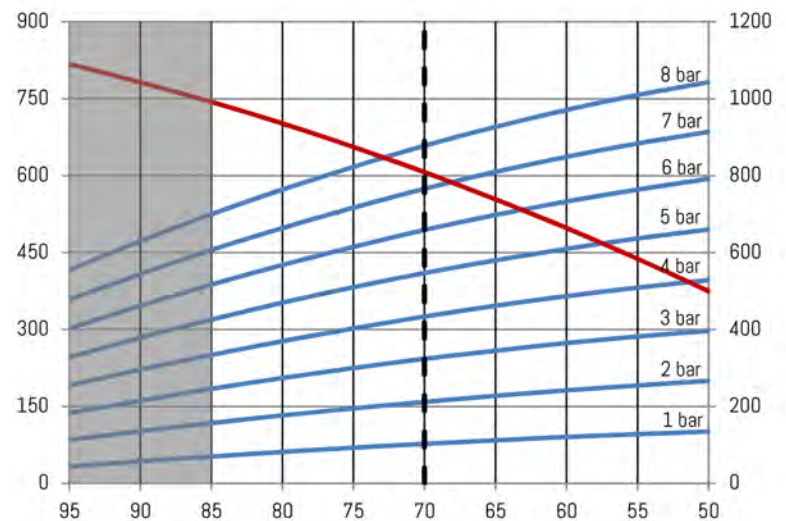
## Dynamic characteristics at H = 70mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	212	434	659
Volume (dm <sup>3</sup> )	0,61	0,61	0,61
Stiffness (daN/mm)	13,38	26,84	41,5
Natural frequency (Hz)	4,12	4,1	4,04
Isolation rate at 10Hz %	79,6	79,8	80,5

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS0651001 Crimped bellow 1 convolute 6"1/2x1 air inlet G 1/4 centered

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
50 mm	267	397	529	660	792	914	1043	375 cm <sup>3</sup>
55 mm	255	382	509	637	764	884	1010	438 cm <sup>3</sup>
60 mm	242	365	487	610	733	849	971	498 cm <sup>3</sup>
65 mm	228	345	462	580	698	810	927	554 cm <sup>3</sup>
70 mm	212	324	434	547	659	766	878	607 cm <sup>3</sup>
75 mm	195	300	403	510	615	717	823	656 cm <sup>3</sup>
80 mm	177	274	370	470	568	664	764	702 cm <sup>3</sup>
85 mm	157	246	334	426	517	607	700	744 cm <sup>3</sup>
90 mm	136	215	296	379	462	544	630	782 cm <sup>3</sup>
95 mm	113	183	255	328	403	478	555	818 cm <sup>3</sup>

## Mounting instructions

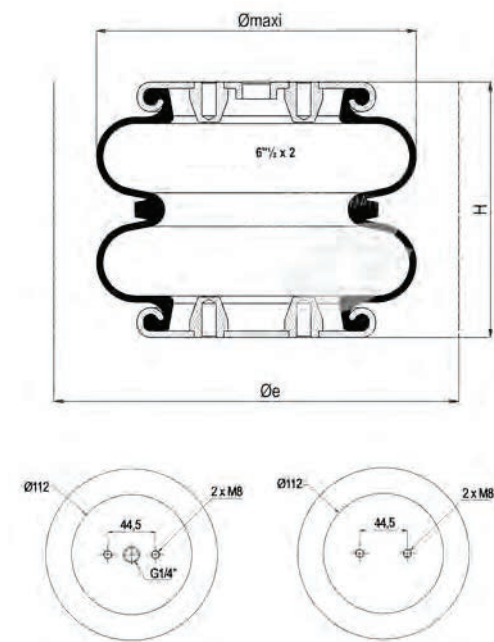
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 11 daN.

# Crimped bellow 6" ½ x 2

DBS0652001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	150 mm
Maximum diameter	160 mm
Minimum overall diameter (Øe)	190 mm
Minimum height	80 mm
Static height (H)	120 mm
Maximum height	160 mm
Maximum recommended height	145 mm
Total stroke	80 mm
Effective area at static height	108 cm <sup>2</sup>
Stiffness at 4 bar	12,27 daN/mm
Natural frequency at 4 bar	2,66 Hz
Weight	1,5 kg

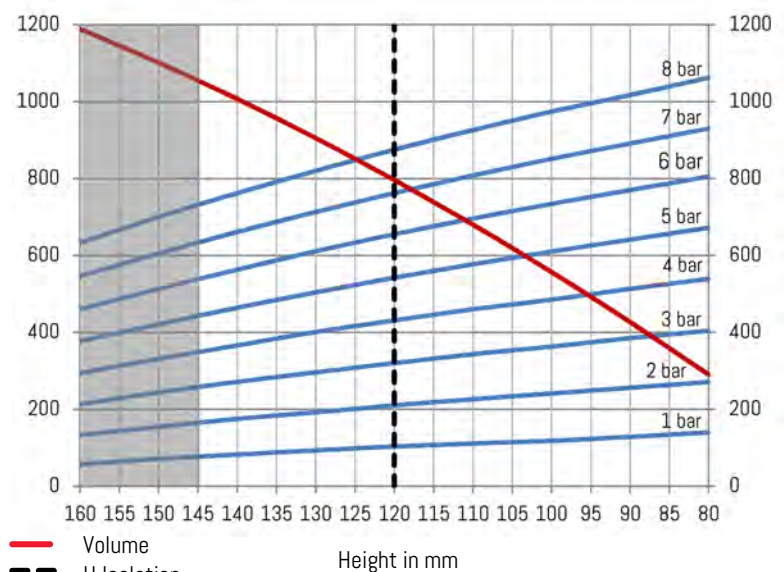
## Dynamic characteristics at H = 120mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	210	431	655
Volume (dm <sup>3</sup> )	8,0	8,0	8,0
Stiffness (daN/mm)	5,98	12,27	18
Natural frequency (Hz)	2,72	2,66	2,64
Isolation rate at 10Hz %	92	92,4	92,5

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS0652001 Crimped bellow 2 convolutes 6"1/2x2 air inlet G ¼ centered

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
80 mm	271	404	539	672	805	930	1062	290 cm <sup>3</sup>
90 mm	256	385	513	641	770	891	1017	427 cm <sup>3</sup>
100 mm	241	363	485	610	734	851	974	557 cm <sup>3</sup>
110 mm	226	343	460	577	696	808	926	680 cm <sup>3</sup>
120 mm	210	320	431	542	655	762	875	796 cm <sup>3</sup>
130 mm	192	296	401	504	611	713	820	905 cm <sup>3</sup>
140 mm	175	271	366	464	563	661	762	1007 cm <sup>3</sup>
145 mm	164	258	349	442	538	633	731	1054 cm <sup>3</sup>
150 mm	154	244	331	421	513	605	700	1101 cm <sup>3</sup>
160 mm	133	213	294	377	460	546	633	1189 cm <sup>3</sup>

## Mounting instructions

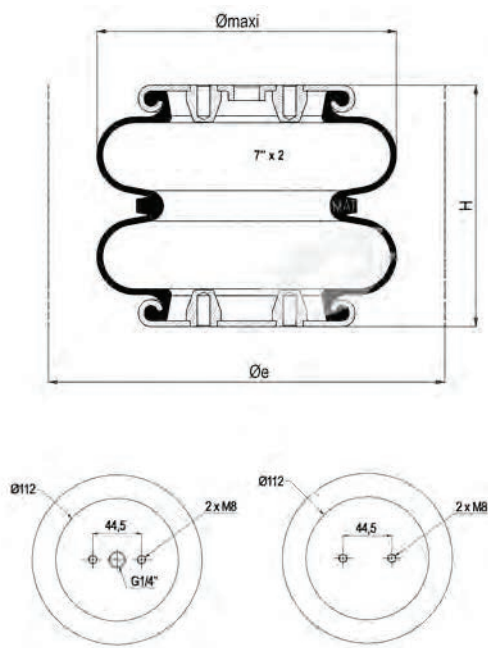
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 8 daN.

# Crimped bellow 7" x 2

DBS072002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	155 mm
Maximum diameter	160 mm
Minimum overall diameter (Øe)	205 mm
Minimum height	80 mm
Static height (H)	125 mm
Maximum height	185 mm
Maximum recommended height	170 mm
Total stroke	105 mm
Effective area at static height	114 cm <sup>2</sup>
Stiffness at 4 bar	9,24 daN/mm
Natural frequency at 4 bar	2,24 Hz
Weight	1,6 kg

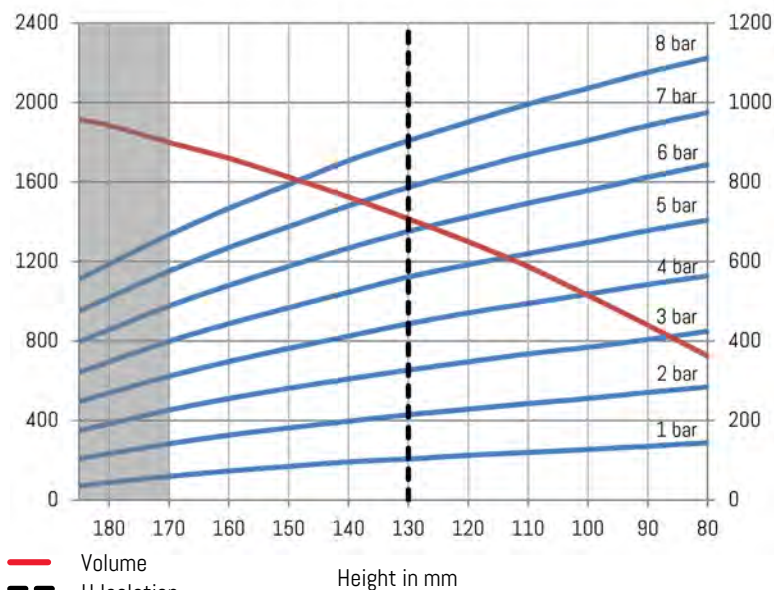
## Dynamic characteristics at H = 130mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	215	444	676
Volume (dm <sup>3</sup> )	14,2	14,2	14,2
Stiffness (daN/mm)	5,80	11,06	16,41
Natural frequency (Hz)	2,53	2,47	2,43
Isolation rate at 10Hz %	93,2	93,5	93,7

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS072002 Crimped bellow 2 convolutes 7" x 2 air inlet G 1/4 centered

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
80 mm	285	424	564	704	844	975	1112	725 cm <sup>3</sup>
90 mm	271	404	543	678	812	942	1076	880 cm <sup>3</sup>
100 mm	256	385	518	648	779	905	1036	1030 cm <sup>3</sup>
110 mm	243	368	495	620	747	869	996	1175 cm <sup>3</sup>
120 mm	229	348	471	592	712	829	951	1300 cm <sup>3</sup>
125 mm	222	337	457	576	694	808	927	1357 cm <sup>3</sup>
130 mm	215	327	444	561	676	787	904	1415 cm <sup>3</sup>
140 mm	199	305	413	523	634	740	854	1525 cm <sup>3</sup>
150 mm	182	281	382	484	588	688	794	1625 cm <sup>3</sup>
160 mm	163	255	348	444	540	635	734	1720 cm <sup>3</sup>
170 mm	142	227	312	400	488	576	667	1800 cm <sup>3</sup>
180 mm	117	192	269	348	428	510	594	1885 cm <sup>3</sup>
185 mm	104	175	248	322	398	476	556	1915 cm <sup>3</sup>

## Mounting instructions

Fastening torque M8 x 1,25 : 25 Nm

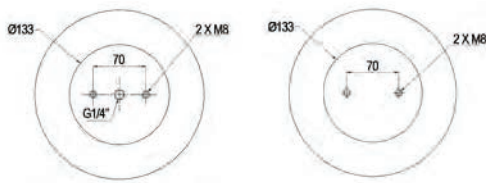
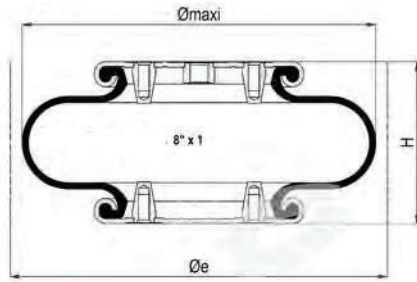
Indicative value of force to reach the minimum height at atmospheric pressure is 10 daN.



# Crimped bellow 8" x 1

DBS081001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	32 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	225 mm
Maximum diameter	225 mm
Minimum overall diameter (Øe)	240 mm
Minimum height	55 mm
Static height (H)	105 mm
Maximum height	150 mm
Maximum recommended height	140 mm
Total stroke	95 mm
Effective area at static height	200 cm <sup>2</sup>
Stiffness at 4 bar	20,49 daN/mm
Natural frequency at 4 bar	2,52 Hz
Weight	1,8 kg

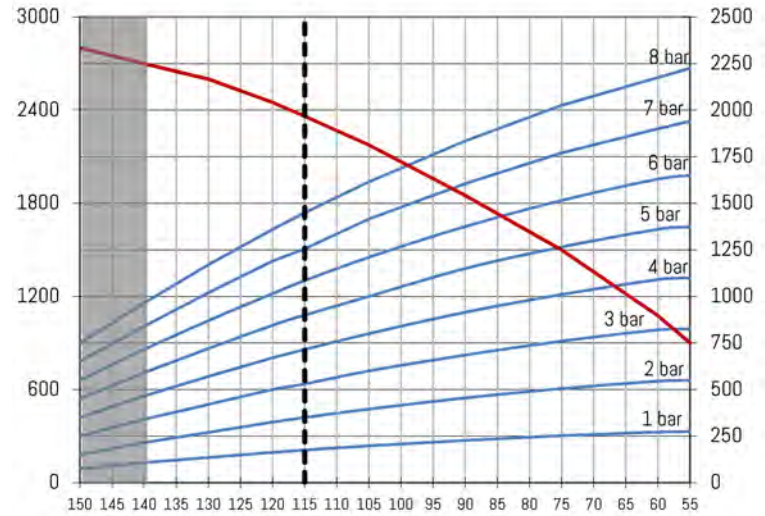
## Dynamic characteristics at H = 115 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	350	715	1080
Volume (dm <sup>3</sup> )	2,24	2,30	2,36
Stiffness (daN/mm)	10,35	18,57	26,53
Natural frequency (Hz)	2,72	2,54	2,47
Isolation rate at 10Hz %	92	93,1	93,1

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation  
Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS081001 Crimped bellow 1 convolute 8" x 1 air inlet G ¼ centered

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
55 mm	550	825	1100	1375	1650	1940	2225	900 cm <sup>3</sup>
60 mm	545	820	1090	1360	1630	1900	2175	1075 cm <sup>3</sup>
75 mm	505	760	1010	1265	1515	1770	2025	1500 cm <sup>3</sup>
90 mm	455	685	915	1150	1375	1605	1835	1850 cm <sup>3</sup>
105 mm	395	600	800	1000	1210	1415	1615	2175 cm <sup>3</sup>
115 mm	350	530	715	885	1085	1255	1450	2360 cm <sup>3</sup>
120 mm	325	500	670	845	1015	1190	1360	2450 cm <sup>3</sup>
130 mm	270	420	570	720	870	1020	1170	2600 cm <sup>3</sup>
140 mm	215	340	465	590	715	840	965	2700 cm <sup>3</sup>
150 mm	150	250	350	450	550	650	750	2800 cm <sup>3</sup>

## Mounting instructions

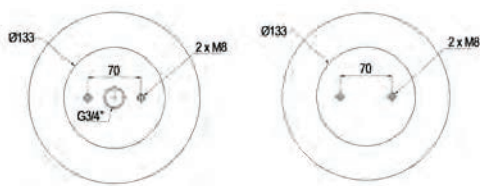
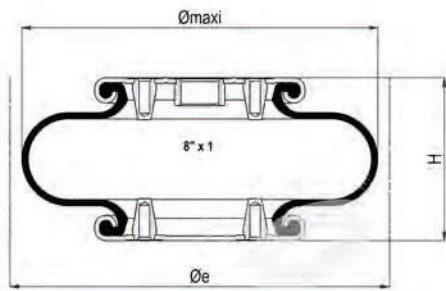
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 6 daN.

# Crimped bellow 8" x 1

DBS081002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	32 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	225 mm
Maximum diameter	225 mm
Minimum overall diameter (Øe)	240 mm
Minimum height	55 mm
Static height (H)	105 mm
Maximum height	150 mm
Maximum recommended height	140 mm
Total stroke	95 mm
Effective area at static height	200 cm <sup>2</sup>
Stiffness at 4 bar	20,49 daN/mm
Natural frequency at 4 bar	2,52 Hz
Weight	1,8 kg

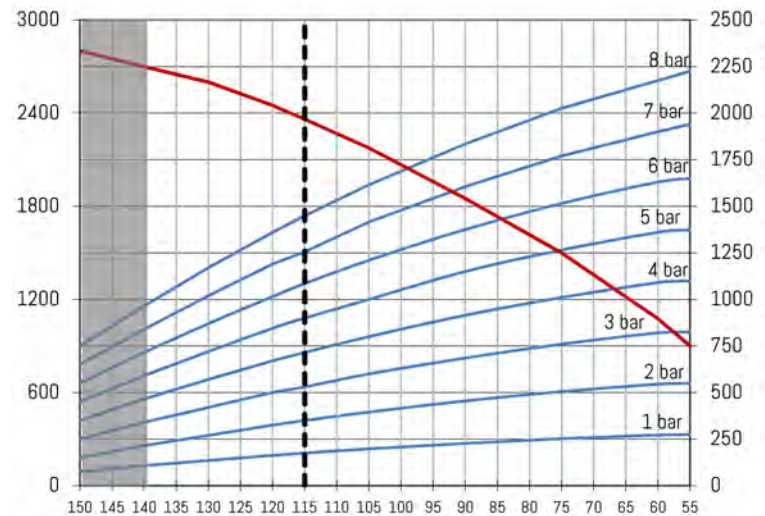
## Dynamic characteristics at H = 115 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	350	715	1080
Volume (dm <sup>3</sup> )	2,24	2,30	2,36
Stiffness (daN/mm)	10,35	18,57	26,53
Natural frequency (Hz)	2,72	2,54	2,47
Isolation rate at 10Hz %	92	93,1	93,1

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS081002 Crimped bellow 1 convolute 8" x 1 air inlet G 3/4 centered

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
55 mm	550	825	1100	1375	1650	1940	2225	900 cm <sup>3</sup>
60 mm	545	820	1090	1360	1630	1900	2175	1075 cm <sup>3</sup>
75 mm	505	760	1010	1265	1515	1770	2025	1500 cm <sup>3</sup>
90 mm	455	685	915	1150	1375	1605	1835	1850 cm <sup>3</sup>
105 mm	395	600	800	1000	1210	1415	1615	2175 cm <sup>3</sup>
115 mm	350	530	715	885	1085	1255	1450	2360 cm <sup>3</sup>
120 mm	325	500	670	845	1015	1190	1360	2450 cm <sup>3</sup>
130 mm	270	420	570	720	870	1020	1170	2600 cm <sup>3</sup>
140 mm	215	340	465	590	715	840	965	2700 cm <sup>3</sup>
150 mm	150	250	350	450	550	650	750	2800 cm <sup>3</sup>

## Mounting instructions

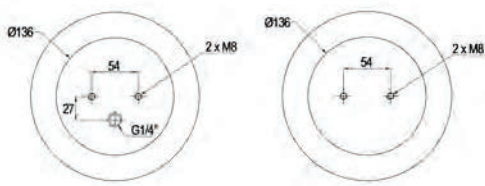
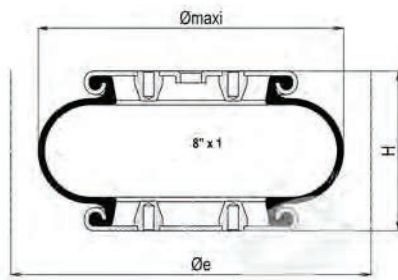
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 6 daN.

# Crimped bellow 8" x 1

DBS081003

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	185 mm
Maximum diameter	200 mm
Minimum overall diameter (Øe)	230 mm
Minimum height	50 mm
Static height (H)	90 mm
Maximum height	130 mm
Maximum recommended height	115 mm
Total stroke	80 mm
Effective area at static height	154 cm <sup>2</sup>
Stiffness at 4 bar	18,83 daN/mm
Natural frequency at 4 bar	2,81 Hz
Weight	1,7 kg

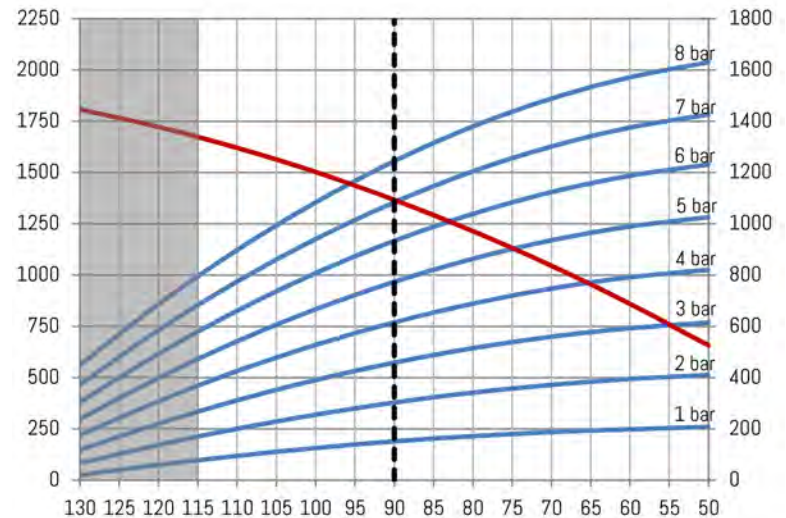
## Dynamic characteristics at H = 90mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	303	616	934
Volume (dm <sup>3</sup> )	1,4	1,4	1,4
Stiffness (daN/mm)	9,74	18,83	28,95
Natural frequency (Hz)	2,87	2,81	2,78
Isolation rate at 10Hz %	91	91,4	91,6

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS081003 Crimped bellow 1 convolute 8" x 1 air inlet G ¼ shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
50 mm	411	615	821	1026	1232	1427	1631	657 cm <sup>3</sup>
60 mm	395	593	792	990	1188	1376	1572	860 cm <sup>3</sup>
70 mm	372	560	748	936	1124	1302	1489	1046 cm <sup>3</sup>
80 mm	342	515	689	864	1039	1205	1380	1215 cm <sup>3</sup>
90 mm	303	459	616	774	934	1084	1245	1367 cm <sup>3</sup>
100 mm	256	391	528	667	808	941	1084	1503 cm <sup>3</sup>
110 mm	201	312	426	542	661	775	898	1621 cm <sup>3</sup>
115 mm	170	266	367	470	577	680	792	1672 cm <sup>3</sup>
120 mm	138	221	308	399	493	586	687	1723 cm <sup>3</sup>
130 mm	66	118	176	239	305	373	449	1808 cm <sup>3</sup>

## Mounting instructions

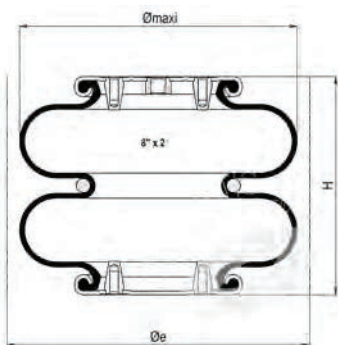
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 5 daN.

# Crimped bellow 8" x 2

DBS082001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	32 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	220 mm
Maximum diameter	220 mm
Minimum overall diameter (Øe)	240 mm
Minimum height	80 mm
Static height (H)	175 mm
Maximum height	265 mm
Maximum recommended height	250 mm
Total stroke	185 mm
Effective area at static height	174 cm <sup>2</sup>
Stiffness at 4 bar	10,81 daN/mm
Natural frequency at 4 bar	1,96 Hz
Weight	2,30 kg

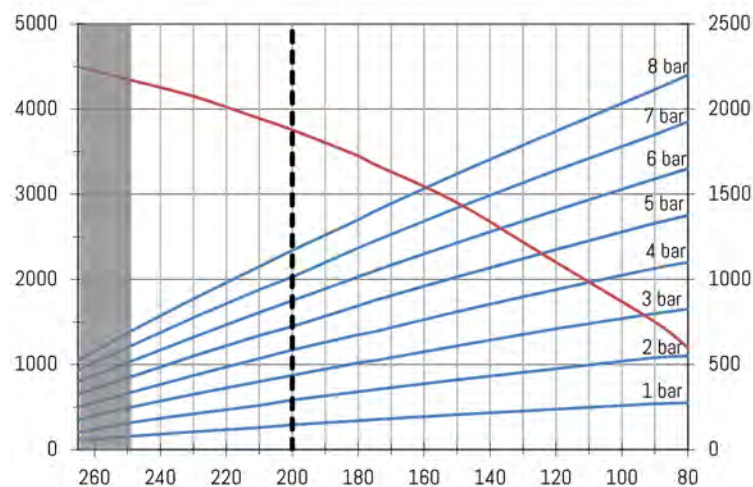
## Dynamic characteristics at H = 200 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	290	580	875
Volume (dm <sup>3</sup> )	3,65	3,70	3,76
Stiffness (daN/mm)	4,9	8,73	12,51
Natural frequency (Hz)	2,06	1,93	1,89
Isolation rate at 10Hz %	95,6	96,1	96,3

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS082001 Crimped bellow 2 convolutes 8" x 2 air inlet G 1/4 centered

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
80 mm	550	825	1100	1375	1650	1925	2200	1210 cm <sup>3</sup>
90 mm	540	800	1065	1330	1590	1850	2115	1480 cm <sup>3</sup>
120 mm	475	710	940	1175	1405	1640	1870	2230 cm <sup>3</sup>
150 mm	410	610	810	1015	1215	1420	1620	2285 cm <sup>3</sup>
175 mm	352	523	693	877	1050	1225	1400	3350 cm <sup>3</sup>
180 mm	340	510	675	845	1015	1185	1350	3440 cm <sup>3</sup>
200 mm	291	436	585	723	875	1014	1170	3755 cm <sup>3</sup>
210 mm	260	400	535	670	805	940	1075	3900 cm <sup>3</sup>
230 mm	210	325	435	550	660	775	885	4150 cm <sup>3</sup>
250 mm	155	245	330	420	510	600	685	4360 cm <sup>3</sup>
265 mm	100	175	250	325	400	465	525	4495 cm <sup>3</sup>

## Mounting instructions

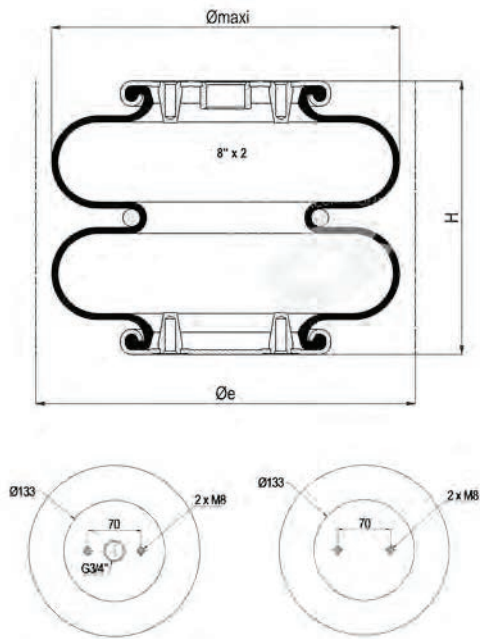
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 11 daN.

# Crimped bellow 8" x 2

DBS082002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	32 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	220 mm
Maximum diameter	220 mm
Minimum overall diameter (Øe)	240 mm
Minimum height	80 mm
Static height (H)	175 mm
Maximum height	265 mm
Maximum recommended height	250 mm
Total stroke	185 mm
Effective area at static height	174 cm <sup>2</sup>
Stiffness at 4 bar	10,81 daN/mm
Natural frequency at 4 bar	1,96 Hz
Weight	2,30 kg

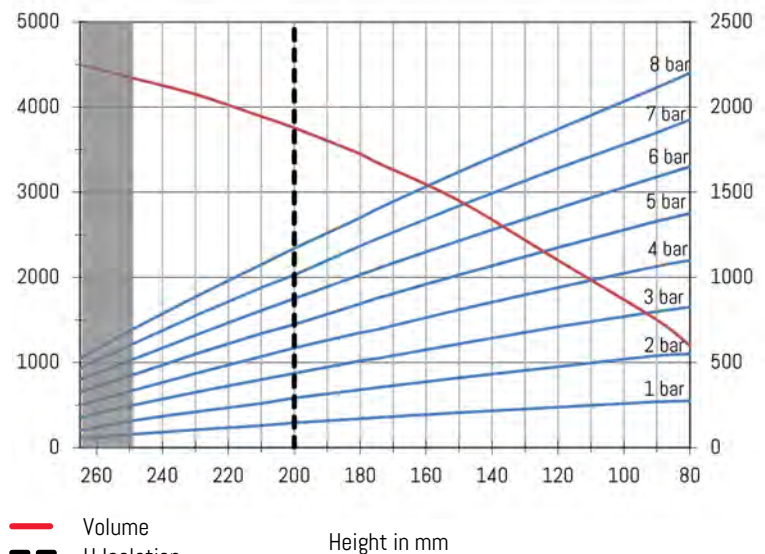
## Dynamic characteristics at H = 200 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	290	580	875
Volume (dm <sup>3</sup> )	3,65	3,70	3,76
Stiffness (daN/mm)	4,9	8,73	12,51
Natural frequency (Hz)	2,06	1,93	1,89
Isolation rate at 10Hz %	95,6	96,1	96,3

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS082002	Crimped bellow 2 convolutes 8" x 2 air inlet G <sup>3/4</sup> centered
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
80 mm	550	825	1100	1375	1650	1925	2200	1210 cm <sup>3</sup>
90 mm	540	800	1065	1330	1590	1850	2115	1480 cm <sup>3</sup>
120 mm	475	710	940	1175	1405	1640	1870	2230 cm <sup>3</sup>
150 mm	410	610	810	1015	1215	1420	1620	2885 cm <sup>3</sup>
175 mm	352	523	693	877	1050	1225	1400	3350 cm <sup>3</sup>
180 mm	340	510	675	845	1015	1185	1350	3440 cm <sup>3</sup>
200 mm	291	436	585	723	875	1014	1170	3755 cm <sup>3</sup>
210 mm	260	400	535	670	805	940	1075	3900 cm <sup>3</sup>
230 mm	210	325	435	550	660	775	885	4150 cm <sup>3</sup>
250 mm	155	245	330	420	510	600	685	4360 cm <sup>3</sup>
265 mm	100	175	250	325	400	465	525	4495 cm <sup>3</sup>

## Mounting instructions

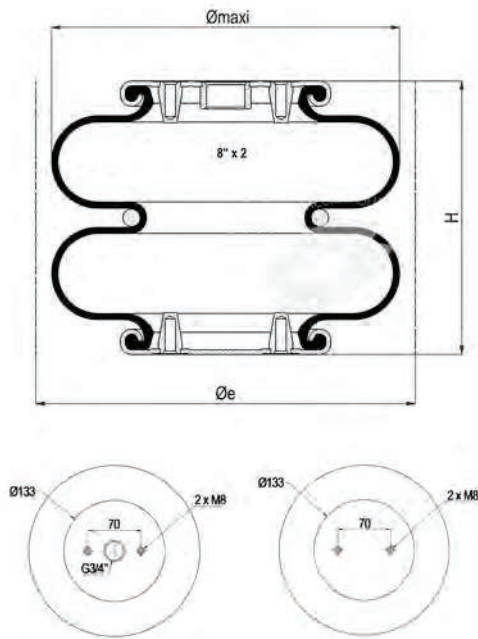
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 11 daN.

# Crimped bellow 8" x 2 (HT°)

DBS082002/E

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	32 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	220 mm
Maximum diameter	220 mm
Minimum overall diameter (Øe)	240 mm
Minimum height	80 mm
Static height (H)	175 mm
Maximum height	265 mm
Maximum recommended height	250 mm
Total stroke	185 mm
Effective area at static height	174 cm <sup>2</sup>
Stiffness at 4 bar	10,81 daN/mm
Natural frequency at 4 bar	1,96 Hz
Weight	2,30 kg

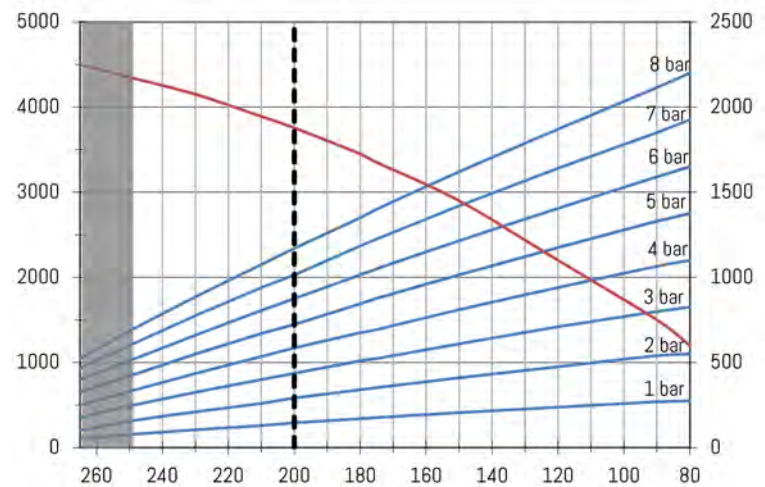
## Dynamic characteristics at H = 200 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	290	580	875
Volume (dm <sup>3</sup> )	3,65	3,70	3,76
Stiffness (daN/mm)	4,9	8,73	12,51
Natural frequency (Hz)	2,06	1,93	1,89
Isolation rate at 10Hz %	95,6	96,1	96,3

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Epichlore	-20°C (-30°C static)	+115°C (+120°C static)
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## References

DBS082002/E	Crimped bellow 2 convolutes Epichlore 8" x 2 air inlet G <sup>3/4</sup> centered
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
80 mm	550	825	1100	1375	1650	1925	2200	1210 cm <sup>3</sup>
90 mm	540	800	1065	1330	1590	1850	2115	1480 cm <sup>3</sup>
120 mm	475	710	940	1175	1405	1640	1870	2230 cm <sup>3</sup>
150 mm	410	610	810	1015	1215	1420	1620	2885 cm <sup>3</sup>
175 mm	352	523	693	877	1050	1225	1400	3350 cm <sup>3</sup>
180 mm	340	510	675	845	1015	1185	1350	3440 cm <sup>3</sup>
200 mm	291	436	585	723	875	1014	1170	3755 cm <sup>3</sup>
210 mm	260	400	535	670	805	940	1075	3900 cm <sup>3</sup>
230 mm	210	325	435	550	660	775	885	4150 cm <sup>3</sup>
250 mm	155	245	330	420	510	600	685	4360 cm <sup>3</sup>
265 mm	100	175	250	325	400	465	525	4495 cm <sup>3</sup>

## ⚙ Mounting instructions

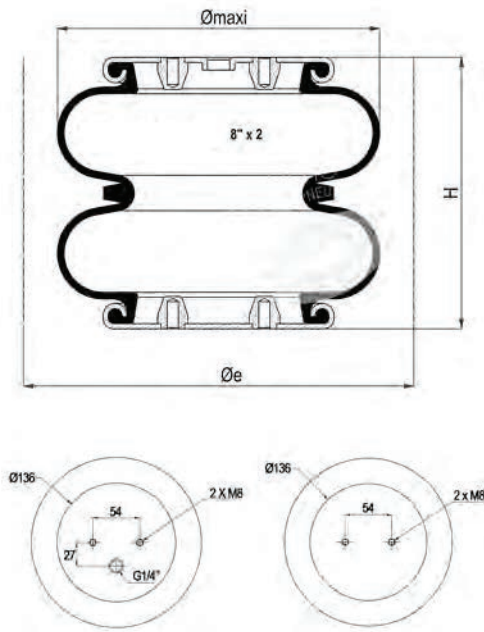
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 11 daN.

# Crimped bellow 8" x 2

DBS082003

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	185 mm
Maximum diameter	200 mm
Minimum overall diameter (Øe)	230 mm
Minimum height	95 mm
Static height (H)	160 mm
Maximum height	220 mm
Maximum recommended height	200 mm
Total stroke	125 mm
Effective area at static height	150 cm <sup>2</sup>
Stiffness at 4 bar	10,14 daN/mm
Natural frequency at 4 bar	2,07 Hz
Weight	2 kg

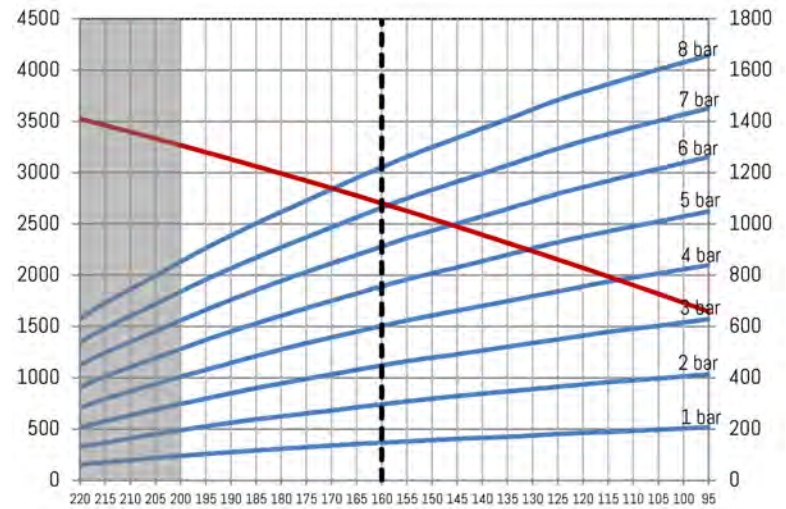
## Dynamic characteristics at H = 160mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	296	602	912
Volume (dm <sup>3</sup> )	27	27	27
Stiffness (daN/mm)	5,42	10,14	15,11
Natural frequency (Hz)	2,14	2,07	2,03
Isolation rate at 10Hz %	95,2	95,5	95,7

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
— H Isolation  
— Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS082003	Crimped bellow 2 convolutes 8" x 2 air inlet G 1/4 shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
95 mm	414	629	840	1049	1262	1452	1658	1646 cm <sup>3</sup>
105 mm	398	603	807	1010	1215	1402	1603	1819 cm <sup>3</sup>
115 mm	383	579	775	971	1168	1351	1545	1989 cm <sup>3</sup>
125 mm	365	550	737	929	1118	1294	1484	2155 cm <sup>3</sup>
135 mm	347	521	699	880	1059	1229	1409	2316 cm <sup>3</sup>
145 mm	329	492	662	831	1002	1165	1336	2474 cm <sup>3</sup>
155 mm	308	465	624	784	945	1100	1262	2627 cm <sup>3</sup>
160 mm	296	448	602	756	912	1063	1220	2702 cm <sup>3</sup>
165 mm	285	431	580	729	879	1026	1179	2777 cm <sup>3</sup>
175 mm	261	396	535	672	813	948	1091	2922 cm <sup>3</sup>
185 mm	238	360	485	612	742	869	1002	3063 cm <sup>3</sup>
195 mm	211	319	431	548	665	783	906	3201 cm <sup>3</sup>
205 mm	180	277	376	477	582	688	798	3334 cm <sup>3</sup>
215 mm	147	231	318	406	498	593	692	3463 cm <sup>3</sup>
220 mm	132	207	283	363	450	539	631	3526 cm <sup>3</sup>

## Mounting instructions

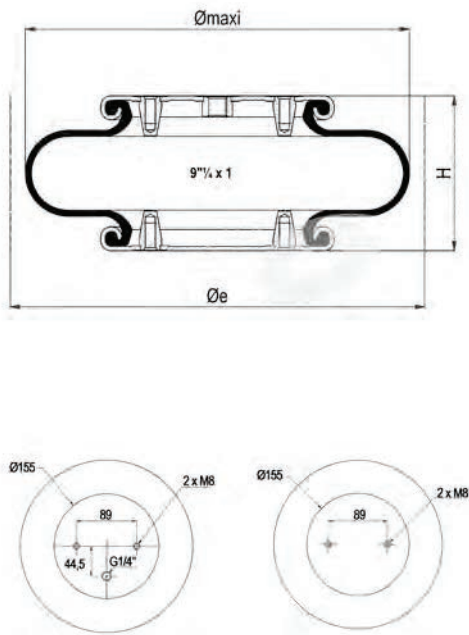
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 3 daN.

# Crimped bellow 9" 1/4 x 1

DBS091001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	55 mm
Static height (H)	105 mm
Maximum height	160 mm
Maximum recommended height	150 mm
Total stroke	105 mm
Effective area at static height	263 cm <sup>2</sup>
Stiffness at 4 bar	20,56 daN/mm
Natural frequency at 4 bar	2,21 Hz
Weight	2,30 kg

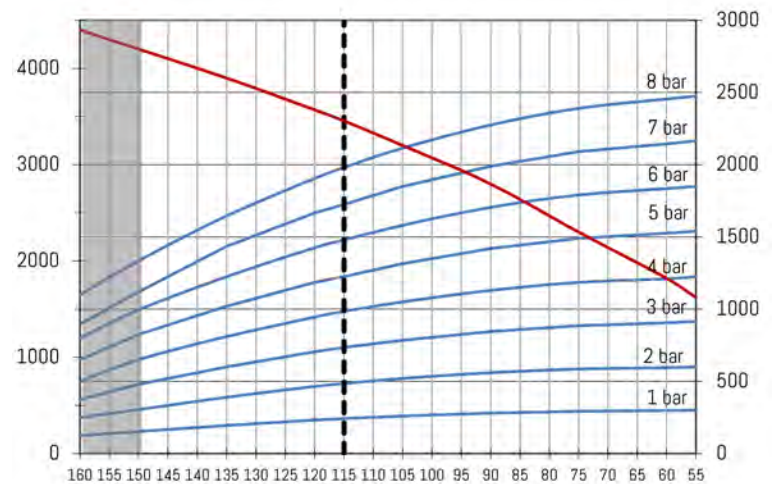
## Dynamic characteristics at H = 115 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	485	985	1480
Volume (dm <sup>3</sup> )	3,16	3,30	3,43
Stiffness (daN/mm)	11,57	20,07	28,14
Natural frequency (Hz)	2,44	2,25	2,17
Isolation rate at 10Hz %	93,7	94,7	95,0

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
 - - - H Isolation  
 Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS091001 Crimped bellow 1 convolute 9" 1/4 x 1 air inlet G 1/4 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
55 mm	600	915	1225	1540	1850	2165	2475	1620 cm <sup>3</sup>
60 mm	590	900	1210	1525	1835	2145	2455	1820 cm <sup>3</sup>
75 mm	585	885	1185	1490	1790	2090	2390	2300 cm <sup>3</sup>
90 mm	560	845	1130	1420	1705	1990	2275	2800 cm <sup>3</sup>
105 mm	520	785	1050	1315	1580	1850	2115	3200 cm <sup>3</sup>
115 mm	485	735	985	1225	1480	1725	1980	3455 cm <sup>3</sup>
120 mm	465	705	945	1185	1425	1665	1905	3570 cm <sup>3</sup>
135 mm	390	600	810	1020	1225	1435	1645	3900 cm <sup>3</sup>
150 mm	305	480	650	825	995	1165	1335	4200 cm <sup>3</sup>
160 mm	250	375	500	650	800	950	1100	4400 cm <sup>3</sup>

## Mounting instructions

Fastening torque M8 x 1,25 : 25 Nm

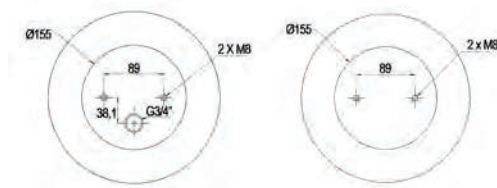
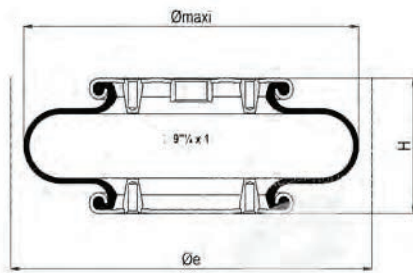
Indicative value of force to reach the minimum height at atmospheric pressure is 15 daN.



# Crimped bellow 9" 1/4 x 1

DBS091002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	55 mm
Static height (H)	105 mm
Maximum height	160 mm
Maximum recommended height	150 mm
Total stroke	105 mm
Effective area at static height	263 cm <sup>2</sup>
Stiffness at 4 bar	20,56 daN/mm
Natural frequency at 4 bar	2,21 Hz
Weight	2,30 kg

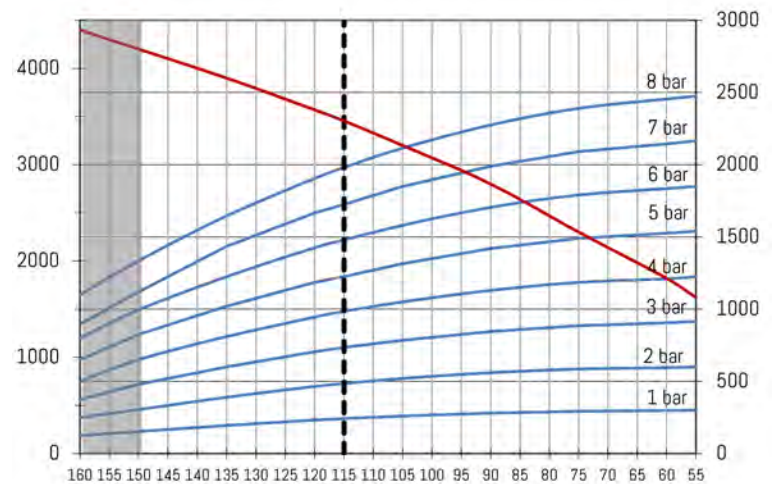
## Dynamic characteristics at H = 115 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	485	985	1480
Volume (dm <sup>3</sup> )	3,16	3,30	3,43
Stiffness (daN/mm)	11,57	20,07	28,14
Natural frequency (Hz)	2,44	2,25	2,17
Isolation rate at 10Hz %	93,7	94,7	95,0

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS091002	Crimped bellow 1 convolute 9" 1/4 x 1 air inlet G 3/4 shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
55 mm	600	915	1225	1540	1850	2165	2475	1620 cm <sup>3</sup>
60 mm	590	900	1210	1525	1835	2145	2455	1820 cm <sup>3</sup>
75 mm	585	885	1185	1490	1790	2090	2390	2300 cm <sup>3</sup>
90 mm	560	845	1130	1420	1705	1990	2275	2800 cm <sup>3</sup>
105 mm	520	785	1050	1315	1580	1850	2115	3200 cm <sup>3</sup>
115 mm	485	735	985	1225	1480	1725	1980	3455 cm <sup>3</sup>
120 mm	465	705	945	1185	1425	1665	1905	3570 cm <sup>3</sup>
135 mm	390	600	810	1020	1225	1435	1645	3900 cm <sup>3</sup>
150 mm	305	480	650	825	995	1165	1335	4200 cm <sup>3</sup>
160 mm	250	375	500	650	800	950	1100	4400 cm <sup>3</sup>

## Mounting instructions

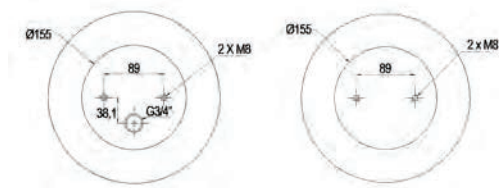
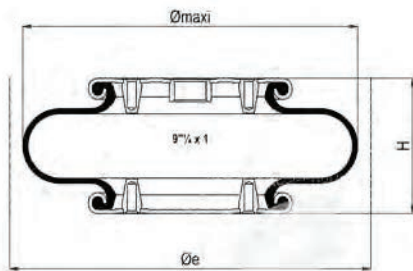
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 15 daN.

# Crimped bellow 9" ¼ x 1 (HT°)

DBS091002/E

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	55 mm
Static height (H)	105 mm
Maximum height	160 mm
Maximum recommended height	150 mm
Total stroke	105 mm
Effective area at static height	263 cm <sup>2</sup>
Stiffness at 4 bar	20,56 daN/mm
Natural frequency at 4 bar	2,21 Hz
Weight	2,30 kg

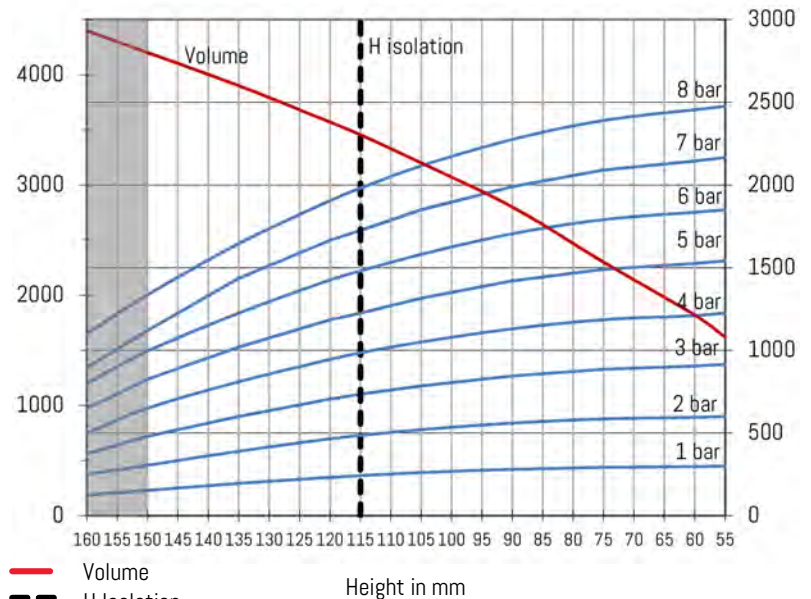
## Dynamic characteristics at H = 115 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	485	985	1480
Volume (dm <sup>3</sup> )	3,16	3,30	3,43
Stiffness (daN/mm)	11,57	20,07	28,14
Natural frequency (Hz)	2,44	2,25	2,17
Isolation rate at 10Hz %	93,7	94,7	95,0

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



Temperatures

Epichlore	-20°C (-30°C static)	+115°C (+120°C static)
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## References

DBS091002/E	Crimped bellow 1 convolute Epichlore 9"¼ x 1 air inlet G ¾ shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
55 mm	600	915	1225	1540	1850	2165	2475	1620 cm <sup>3</sup>
60 mm	590	900	1210	1525	1835	2145	2455	1820 cm <sup>3</sup>
75 mm	585	885	1185	1490	1790	2090	2390	2300 cm <sup>3</sup>
90 mm	560	845	1130	1420	1705	1990	2275	2800 cm <sup>3</sup>
105 mm	520	785	1050	1315	1580	1850	2115	3200 cm <sup>3</sup>
115 mm	485	735	985	1225	1480	1725	1980	3455 cm <sup>3</sup>
120 mm	465	705	945	1185	1425	1665	1905	3570 cm <sup>3</sup>
135 mm	390	600	810	1020	1225	1435	1645	3900 cm <sup>3</sup>
150 mm	305	480	650	825	995	1165	1335	4200 cm <sup>3</sup>
160 mm	250	375	500	650	800	950	1100	4400 cm <sup>3</sup>

## Mounting instructions

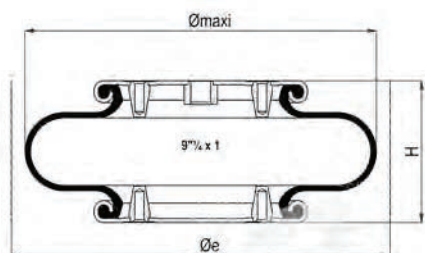
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 15 daN.

# Crimped bellow 9" 1/4 x 1

DBS091003

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	55 mm
Static height (H)	105 mm
Maximum height	160 mm
Maximum recommended height	150 mm
Total stroke	105 mm
Effective area at static height	263 cm <sup>2</sup>
Stiffness at 4 bar	20,56 daN/mm
Natural frequency at 4 bar	2,21 Hz
Weight	2,30 kg

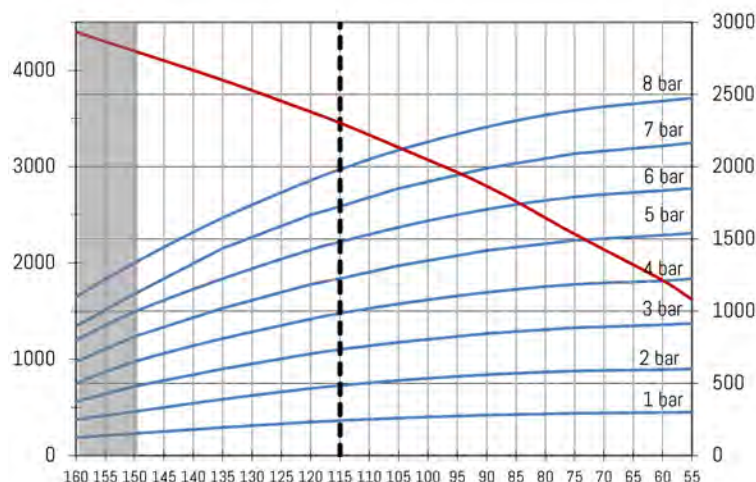
## Dynamic characteristics at H = 115 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	485	985	1480
Volume (dm <sup>3</sup> )	3,16	3,30	3,43
Stiffness (daN/mm)	11,57	20,07	28,14
Natural frequency (Hz)	2,44	2,25	2,17
Isolation rate at 10Hz %	93,7	94,7	95,0

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
 - - - H Isolation  
 Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS091003 Crimped bellow 1 convolute 9"1/4 x 1 air inlet M16x1,5 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
55 mm	600	915	1225	1540	1850	2165	2475	1620 cm <sup>3</sup>
60 mm	590	900	1210	1525	1835	2145	2455	1820 cm <sup>3</sup>
75 mm	585	885	1185	1490	1790	2090	2390	2300 cm <sup>3</sup>
90 mm	560	845	1130	1420	1705	1990	2275	2800 cm <sup>3</sup>
105 mm	520	785	1050	1315	1580	1850	2115	3200 cm <sup>3</sup>
115 mm	485	735	985	1225	1480	1725	1980	3455 cm <sup>3</sup>
120 mm	465	705	945	1185	1425	1665	1905	3570 cm <sup>3</sup>
135 mm	390	600	810	1020	1225	1435	1645	3900 cm <sup>3</sup>
150 mm	305	480	650	825	995	1165	1335	4200 cm <sup>3</sup>
160 mm	250	375	500	650	800	950	1100	4400 cm <sup>3</sup>

## Mounting instructions

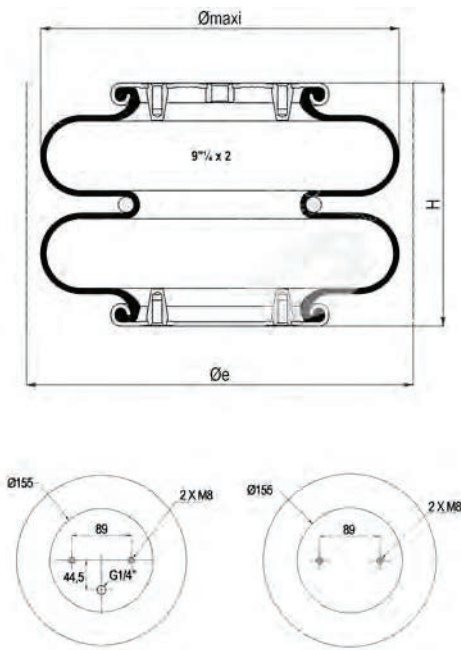
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 15 daN.

# Crimped bellow 9" 1/4 x 2

DBS092001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	80 mm
Static height (H)	175 mm
Maximum height	310 mm
Maximum recommended height	295 mm
Total stroke	230 mm
Effective area at static height	271 cm²
Stiffness at 4 bar	12,61 daN/mm
Natural frequency at 4 bar	1,70 Hz
Weight	3,10 kg

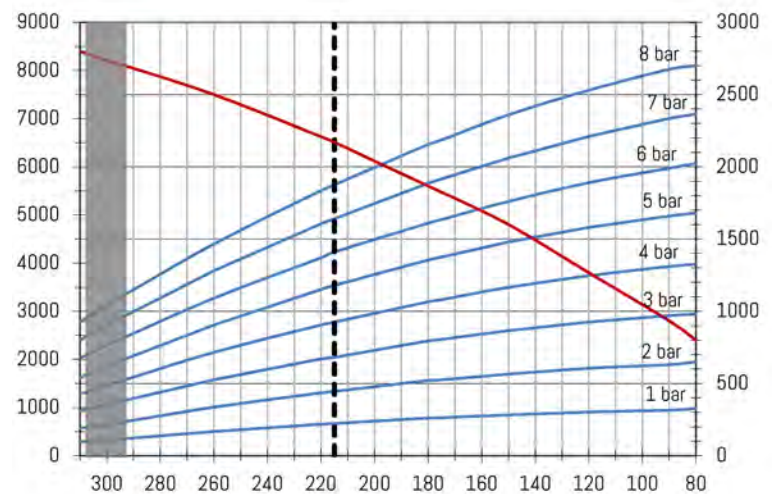
## Dynamic characteristics at H = 215 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	445	925	1380
Volume (dm³)	6,08	6,30	6,52
Stiffness (daN/mm)	3,36	7,84	12,06
Natural frequency (Hz)	1,83	1,71	1,65
Isolation rate at 10Hz %	96,5	97,0	97,2

\* Recommended height for better isolation

Volume in cm³

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS092001 Crimped bellow 2 convolutes 9"1/4 x 2 air inlet G1 1/4 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
80 mm	640	980	1325	1680	2025	2365	2720	2400 cm³
90 mm	630	970	1310	1660	1990	2335	2675	2800 cm³
120 mm	605	925	1245	1580	1890	2210	2530	3800 cm³
150 mm	564	865	1165	1480	1760	2060	2360	4750 cm³
175 mm	525	805	1080	1375	1635	1915	2185	5475 cm³
180 mm	520	795	1065	1355	1610	1885	2155	5600 cm³
215 mm	445	680	925	1180	1410	1640	1875	6510 cm³
220 mm	435	670	905	1150	1370	1605	1835	6630 cm³
260 mm	335	525	715	905	1090	1280	1465	7500 cm³
295 mm	230	375	515	655	805	950	1095	8130 cm³
300 mm	215	355	490	620	765	905	1040	8200 cm³
310 mm	190	310	425	540	675	800	925	8375 cm³

## Mounting instructions

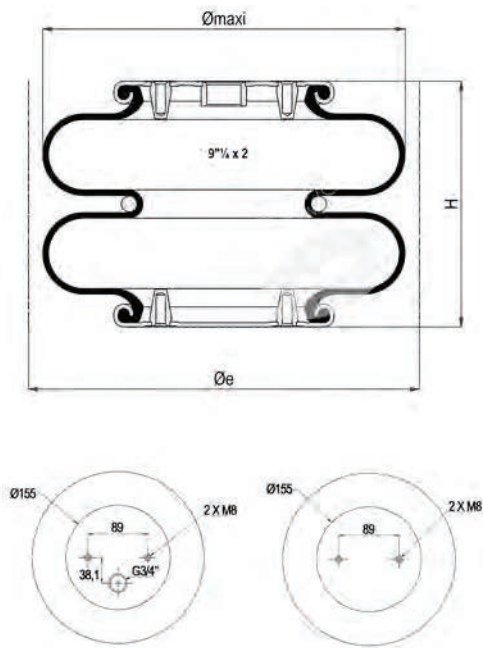
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 17 daN.

# Crimped bellow 9" 1/4 x 2

DBS092002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	80 mm
Static height (H)	175 mm
Maximum height	310 mm
Maximum recommended height	295 mm
Total stroke	230 mm
Effective area at static height	271 cm <sup>2</sup>
Stiffness at 4 bar	12,61 daN/mm
Natural frequency at 4 bar	1,70 Hz
Weight	3,10 kg

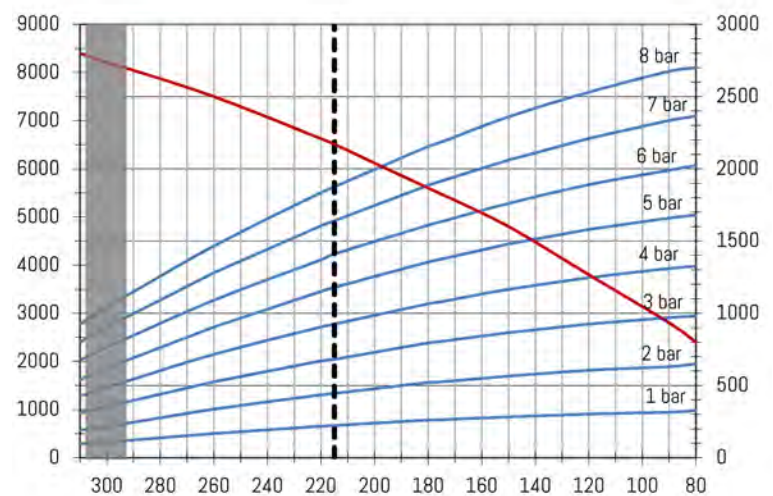
## Dynamic characteristics at H = 215 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	250	670	1340
Volume (dm <sup>3</sup> )	6,08	6,30	6,52
Stiffness (daN/mm)	3,36	7,84	12,06
Natural frequency (Hz)	1,83	1,71	1,65
Isolation rate at 10Hz %	96,5	97,0	97,2

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
 - - - H Isolation  
 Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS092002 Crimped bellow 2 convolutes 9"1/4 x 2 air inlet G3/4 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
80 mm	650	990	1325	1675	2025	2365	2700	2400 cm <sup>3</sup>
90 mm	630	970	1310	1650	1990	2335	2675	2800 cm <sup>3</sup>
120 mm	605	925	1245	1570	1890	2210	2530	3800 cm <sup>3</sup>
150 mm	564	865	1165	1565	1760	2060	2360	4800 cm <sup>3</sup>
175 mm	525	805	1080	1360	1635	1915	2190	5475 cm <sup>3</sup>
180 mm	520	795	1065	1340	1610	1885	2155	5600 cm <sup>3</sup>
215 mm	445	680	925	1150	1380	1615	1845	6507 cm <sup>3</sup>
220 mm	435	670	905	1140	1370	1605	1835	6600 cm <sup>3</sup>
260 mm	335	525	715	905	1090	1280	1465	7500 cm <sup>3</sup>
295 mm	230	375	515	660	805	950	1095	8130 cm <sup>3</sup>
300 mm	215	355	490	630	765	905	1040	8200 cm <sup>3</sup>
310 mm	190	310	425	550	675	800	925	8400 cm <sup>3</sup>

## Mounting instructions

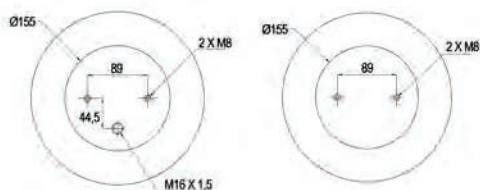
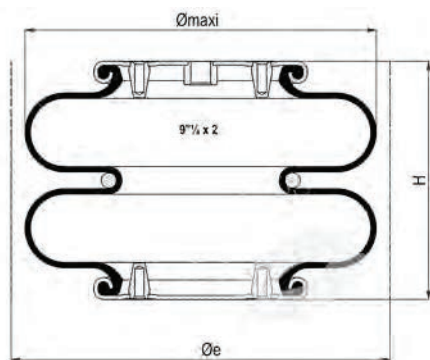
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 17 daN.

# Crimped bellow 9" 1/4 x 2

DBS092003

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	30 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	255 mm
Maximum diameter	255 mm
Minimum overall diameter (Øe)	275 mm
Minimum height	80 mm
Static height (H)	175 mm
Maximum height	310 mm
Maximum recommended height	295 mm
Total stroke	230 mm
Effective area at static height	271 cm <sup>2</sup>
Stiffness at 4 bar	12,61 daN/mm
Natural frequency at 4 bar	1,70 Hz
Weight	3,10 kg

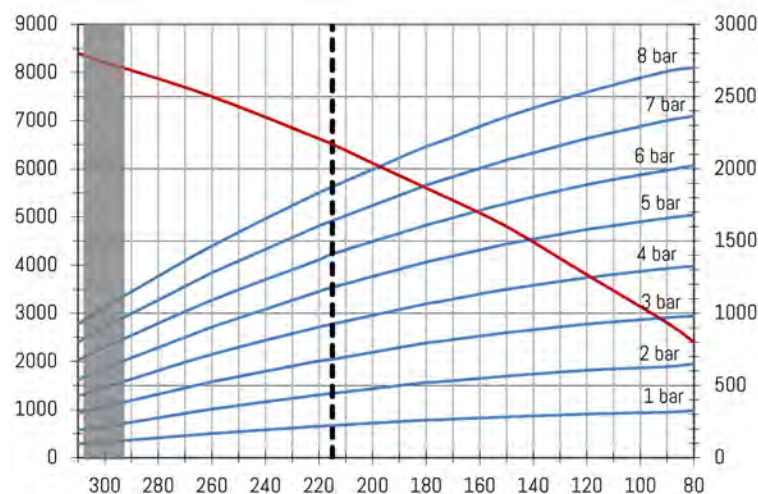
## Dynamic characteristics at H = 215 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	250	670	1340
Volume (dm <sup>3</sup> )	6,08	6,30	6,52
Stiffness (daN/mm)	3,36	7,84	12,06
Natural frequency (Hz)	1,83	1,71	1,65
Isolation rate at 10Hz %	96,5	97,0	97,2

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS092003 Crimped bellow 2 convolutes 9"1/4 x 2 air inlet M16x1,5 shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
80 mm	650	990	1325	1675	2025	2365	2700	2400 cm <sup>3</sup>
90 mm	630	970	1310	1650	1990	2335	2675	2800 cm <sup>3</sup>
120 mm	605	925	1245	1570	1890	2210	2530	3800 cm <sup>3</sup>
150 mm	564	865	1165	1565	1760	2060	2360	4800 cm <sup>3</sup>
175 mm	525	805	1080	1360	1635	1915	2190	5475 cm <sup>3</sup>
180 mm	520	795	1065	1340	1610	1885	2155	5600 cm <sup>3</sup>
215 mm	445	680	925	1150	1380	1615	1845	6507 cm <sup>3</sup>
220 mm	435	670	905	1140	1370	1605	1835	6600 cm <sup>3</sup>
260 mm	335	525	715	905	1090	1280	1465	7500 cm <sup>3</sup>
295 mm	230	375	515	660	805	950	1095	8130 cm <sup>3</sup>
300 mm	215	355	490	630	765	905	1040	8200 cm <sup>3</sup>
310 mm	190	310	425	550	675	800	925	8400 cm <sup>3</sup>

## Mounting instructions

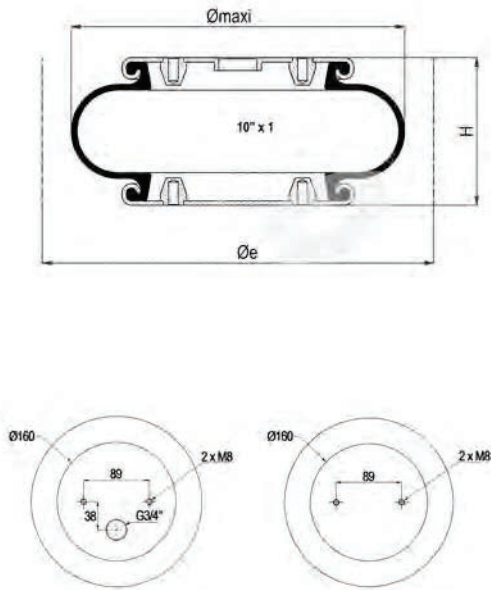
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 17 daN.

# Crimped bellow 10" x 1

DBS101001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	220 mm
Maximum diameter	240 mm
Minimum overall diameter (Øe)	270 mm
Minimum height	50 mm
Static height (H)	100 mm
Maximum height	150 mm
Maximum recommended height	135 mm
Total stroke	100 mm
Effective area at static height	227 cm <sup>2</sup>
Stiffness at 4 bar	22,81 daN/mm
Natural frequency at 4 bar	2,37 Hz
Weight	2,2 kg

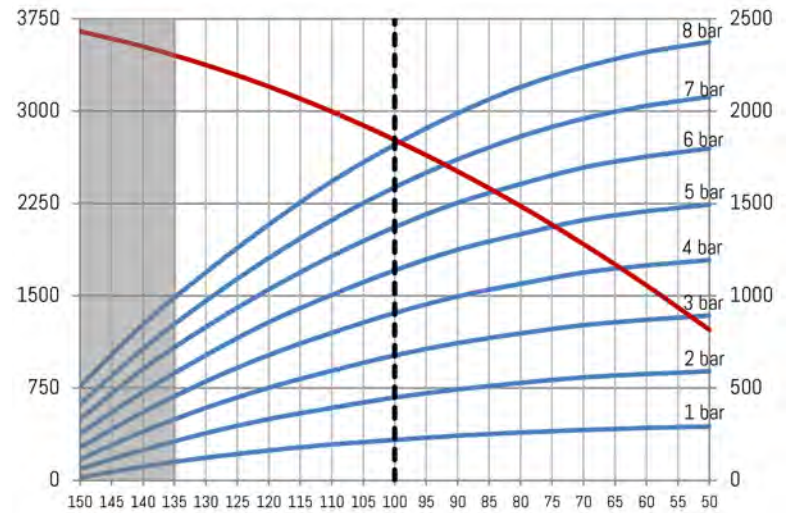
## Dynamic characteristics at H = 100mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	449	907	1372
Volume (dm <sup>3</sup> )	27,7	27,7	27,7
Stiffness (daN/mm)	11,54	22,81	34,25
Natural frequency (Hz)	2,42	2,37	2,33
Isolation rate at 10Hz %	93,8	94,0	94,3

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - - H Isolation  
Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS101001	Crimped bellow 1 convolute 10" x 1 air inlet G <sup>3/4</sup> shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
50 mm	591	893	1194	1494	1798	2078	2375	1224 cm <sup>3</sup>
60 mm	576	870	1164	1458	1754	2029	2320	1585 cm <sup>3</sup>
70 mm	558	841	1126	1410	1695	1960	2239	1920 cm <sup>3</sup>
80 mm	528	796	1065	1334	1605	1863	2131	2229 cm <sup>3</sup>
90 mm	493	744	997	1250	1504	1739	1989	2511 cm <sup>3</sup>
100 mm	449	677	907	1138	1372	1588	1818	2767 cm <sup>3</sup>
110 mm	393	594	799	1005	1215	1410	1620	2997 cm <sup>3</sup>
120 mm	332	502	679	857	1034	1205	1386	3200 cm <sup>3</sup>
130 mm	256	393	536	678	831	972	1127	3376 cm <sup>3</sup>
140 mm	165	264	369	478	603	713	844	3526 cm <sup>3</sup>
150 mm	62	114	179	254	331	414	510	3650 cm <sup>3</sup>

## Mounting instructions

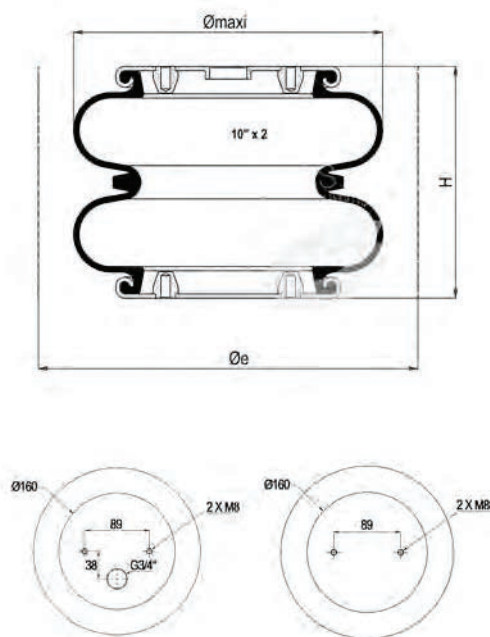
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 5 daN.

# Crimped bellow 10" x 2

DBS102001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	220 mm
Maximum diameter	240 mm
Minimum overall diameter (Øe)	270 mm
Minimum height	90 mm
Static height (H)	165 mm
Maximum height	240 mm
Maximum recommended height	215 mm
Total stroke	150 mm
Effective area at static height	240 cm <sup>2</sup>
Stiffness at 4 bar	14,39 daN/mm
Natural frequency at 4 bar	1,83 Hz
Weight	2,7 kg

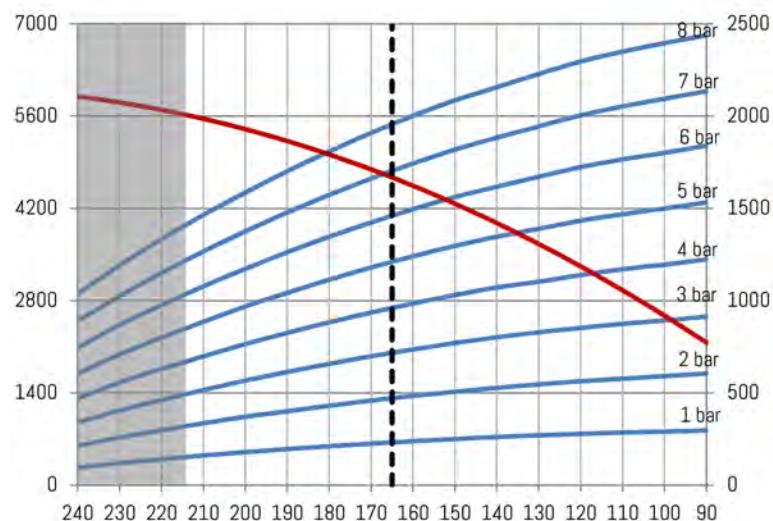
## Dynamic characteristics at H = 165mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	471	960	1460
Volume (dm <sup>3</sup> )	46,7	46,7	46,7
Stiffness (daN/mm)	7,04	14,39	20,69
Natural frequency (Hz)	1,89	1,83	1,80
Isolation rate at 10Hz %	96,3	96,5	96,7

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS102001 Crimped bellow 2 convolutes 10" x 2 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
90 mm	606	914	1224	1533	1840	2135	2439	2166 cm <sup>3</sup>
100 mm	592	893	1196	1500	1802	2095	2396	2574 cm <sup>3</sup>
120 mm	564	853	1139	1434	1724	2005	2297	3322 cm <sup>3</sup>
140 mm	528	802	1072	1347	1618	1884	2157	3979 cm <sup>3</sup>
160 mm	484	736	985	1241	1496	1744	2002	4545 cm <sup>3</sup>
165 mm	471	717	960	1210	1460	1703	1955	4669 cm <sup>3</sup>
170 mm	459	699	936	1180	1424	1662	1909	4793 cm <sup>3</sup>
180 mm	431	658	883	1114	1347	1573	1809	5020 cm <sup>3</sup>
190 mm	401	614	826	1043	1263	1478	1702	5223 cm <sup>3</sup>
200 mm	371	567	765	969	1173	1376	1586	5404 cm <sup>3</sup>
210 mm	336	516	699	886	1078	1267	1465	5562 cm <sup>3</sup>
215 mm	317	459	665	843	1027	1209	1400	5630 cm <sup>3</sup>
220 mm	298	462	630	800	976	1151	1334	5697 cm <sup>3</sup>
230 mm	259	405	557	709	869	1025	1191	5810 cm <sup>3</sup>
240 mm	214	340	470	605	744	890	1040	5900 cm <sup>3</sup>

## Mounting instructions

Fastening torque M8 x 1,25 : 25 Nm

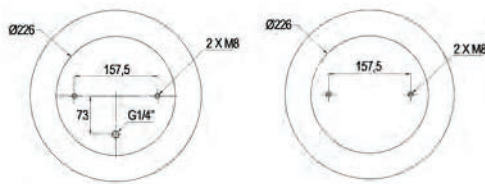
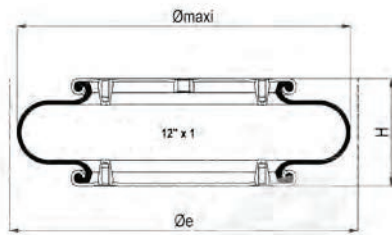
Indicative value of force to reach the minimum height at atmospheric pressure is 6 daN.



# Crimped bellow 12" x 1

DBS121001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	335 mm
Maximum diameter	335 mm
Minimum overall diameter (Øe)	360 mm
Minimum height	60 mm
Static height (H)	110 mm
Maximum height	165 mm
Maximum recommended height	155 mm
Total stroke	105 mm
Effective area at static height	490 cm <sup>2</sup>
Stiffness at 4 bar	43,18 daN/mm
Natural frequency at 4 bar	2,34 Hz
Weight	3,80 kg

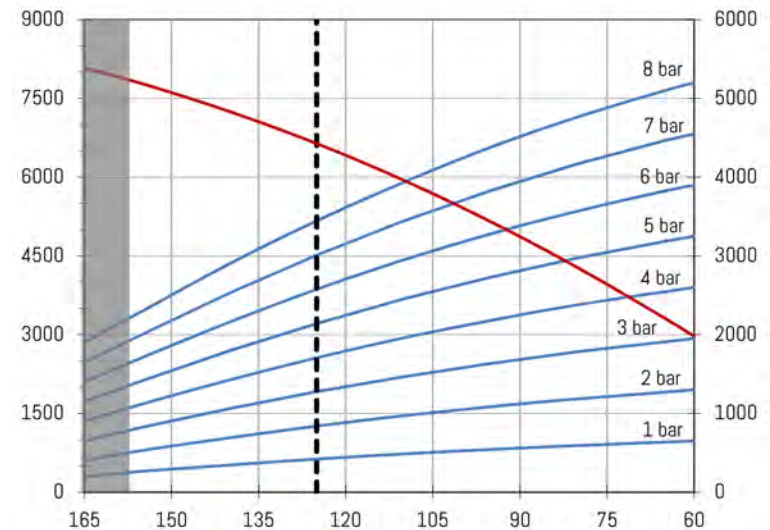
## Dynamic characteristics at H = 125 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	840	1705	2575
Volume (dm <sup>3</sup> )	6,36	6,50	6,64
Stiffness (daN/mm)	20,7	37,0	53,0
Natural frequency (Hz)	2,48	2,32	2,26
Isolation rate at 10Hz %	93,5	94,3	94,6

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS121001	Crimped bellow 1 convolute 12" x 1 air inlet G <sup>1/4</sup> shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
60 mm	1300	1950	2600	3250	3900	4550	5200	2970 cm <sup>3</sup>
65 mm	1270	1910	2545	3185	3825	4465	5100	3310 cm <sup>3</sup>
80 mm	1185	1785	2380	2975	3570	4170	4765	4275 cm <sup>3</sup>
95 mm	1085	1635	2180	2730	3280	3830	4380	5150 cm <sup>3</sup>
110 mm	970	1465	1960	2455	2950	3445	3935	5940 cm <sup>3</sup>
125 mm	840	1275	1705	2140	2575	3010	3445	6640 cm <sup>3</sup>
140 mm	690	1060	1425	1795	2160	2530	2900	7250 cm <sup>3</sup>
155 mm	530	825	1120	1415	1710	2005	2300	7780 cm <sup>3</sup>
165 mm	400	650	900	1150	1400	1650	1900	8080 cm <sup>3</sup>

## Mounting instructions

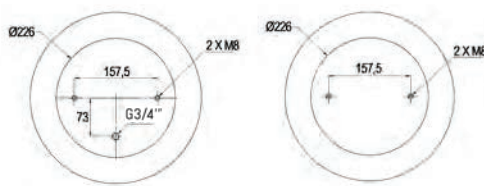
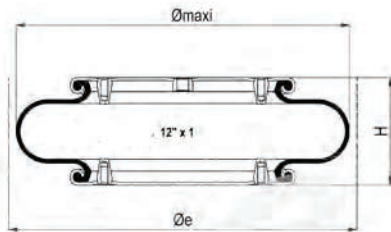
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 5 daN.

# Crimped bellow 12" x 1

DBS121002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	335 mm
Maximum diameter	335 mm
Minimum overall diameter (Øe)	360 mm
Minimum height	60 mm
Static height (H)	110 mm
Maximum height	165 mm
Maximum recommended height	155 mm
Total stroke	105 mm
Effective area at static height	490 cm <sup>2</sup>
Stiffness at 4 bar	43,18 daN/mm
Natural frequency at 4 bar	2,34 Hz
Weight	3,80 kg

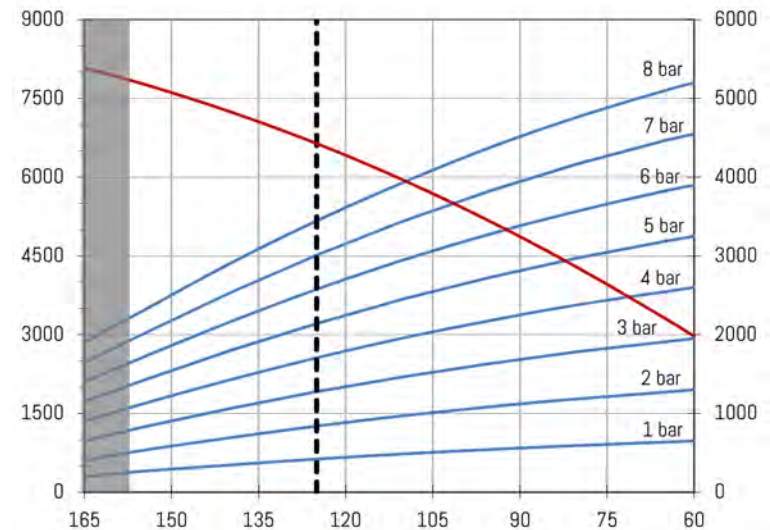
## Dynamic characteristics at H = 125 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	840	1705	2575
Volume (dm <sup>3</sup> )	6,36	6,50	6,64
Stiffness (daN/mm)	20,7	37,0	53,0
Natural frequency (Hz)	2,48	2,32	2,26
Isolation rate at 10Hz %	93,5	94,3	94,6

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - - H Isolation

Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS121002 Crimped bellow 1 convolute 12" x 1 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
60 mm	1300	1950	2600	3250	3900	4550	5200	2970 cm <sup>3</sup>
65 mm	1270	1910	2545	3185	3825	4465	5100	3310 cm <sup>3</sup>
80 mm	1185	1785	2380	2975	3570	4170	4765	4275 cm <sup>3</sup>
95 mm	1085	1635	2180	2730	3280	3830	4380	5150 cm <sup>3</sup>
110 mm	970	1465	1960	2455	2950	3445	3935	5940 cm <sup>3</sup>
125 mm	840	1275	1705	2140	2575	3010	3445	6640 cm <sup>3</sup>
140 mm	690	1060	1425	1795	2160	2530	2900	7250 cm <sup>3</sup>
155 mm	530	825	1120	1415	1710	2005	2300	7780 cm <sup>3</sup>
165 mm	400	650	900	1150	1400	1650	1900	8080 cm <sup>3</sup>

## Mounting instructions

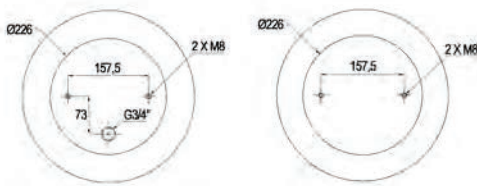
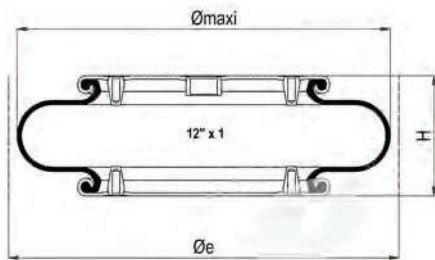
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 5 daN.

# Crimped bellow 12" x 1 (HT°)

DBS121002/E

INDUSTRY



## Technical characteristics

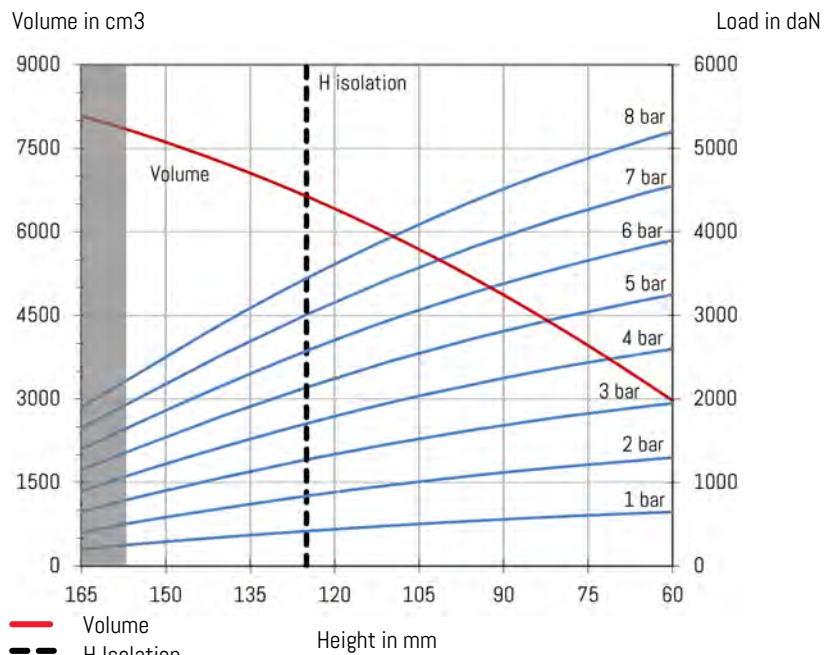
Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	335 mm
Maximum diameter	335 mm
Minimum overall diameter (Øe)	360 mm
Minimum height	60 mm
Static height (H)	110 mm
Maximum height	165 mm
Maximum recommended height	155 mm
Total stroke	105 mm
Effective area at static height	490 cm <sup>2</sup>
Stiffness at 4 bar	43,18 daN/mm
Natural frequency at 4 bar	2,34 Hz
Weight	3,80 kg

## Dynamic characteristics at H = 125 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	840	1705	2575
Volume (dm <sup>3</sup> )	6,36	6,50	6,64
Stiffness (daN/mm)	20,7	37,0	53,0
Natural frequency (Hz)	2,48	2,32	2,26
Isolation rate at 10Hz %	93,5	94,3	94,6

\* Recommended height for better isolation



— Volume  
- - H Isolation

## Temperatures

Epichlore	-20°C (-30°C static)	+115°C (+120°C static)
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## References

DBS121002/E	Crimped bellow 1 convolute Epichlore 12" x 1 air inlet G <sup>3/4</sup> shifted
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## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
60 mm	1300	1950	2600	3250	3900	4550	5200	2970 cm <sup>3</sup>
65 mm	1270	1910	2545	3185	3825	4465	5100	3310 cm <sup>3</sup>
80 mm	1185	1785	2380	2975	3570	4170	4765	4275 cm <sup>3</sup>
95 mm	1085	1635	2180	2730	3280	3830	4380	5150 cm <sup>3</sup>
110 mm	970	1465	1960	2455	2950	3445	3935	5940 cm <sup>3</sup>
125 mm	840	1275	1705	2140	2575	3010	3445	6640 cm <sup>3</sup>
140 mm	690	1060	1425	1795	2160	2530	2900	7250 cm <sup>3</sup>
155 mm	530	825	1120	1415	1710	2005	2300	7780 cm <sup>3</sup>
165 mm	400	650	900	1150	1400	1650	1900	8080 cm <sup>3</sup>

## ⚙ Mounting instructions

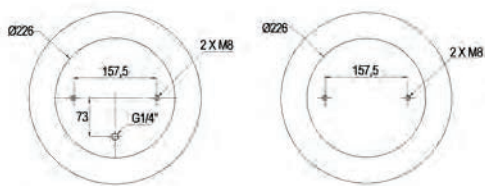
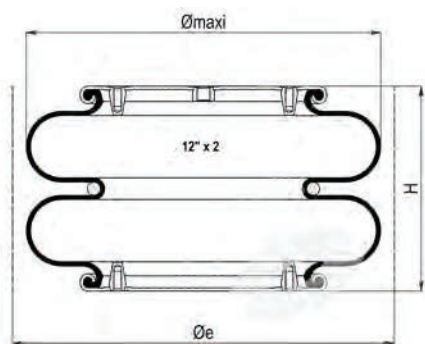
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 5 daN.

# Crimped bellow 12" x 2

DBS122001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	325 mm
Maximum diameter	325 mm
Minimum overall diameter (Øe)	350 mm
Minimum height	85 mm
Static height (H)	190 mm
Maximum height	300 mm
Maximum recommended height	285 mm
Total stroke	215 mm
Effective area at static height	468 cm <sup>2</sup>
Stiffness at 4 bar	22,59 daN/mm
Natural frequency at 4 bar	1,73 Hz
Weight	5,20 kg

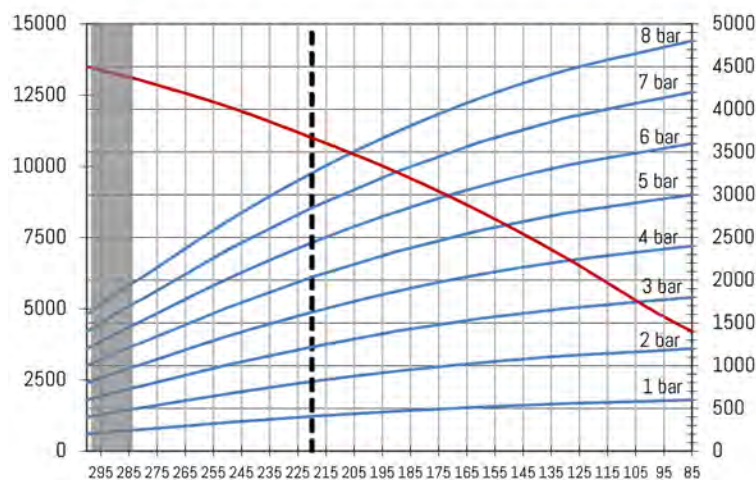
## Dynamic characteristics at H = 220 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	815	1625	2440
Volume (dm <sup>3</sup> )	10,32	10,68	11,04
Stiffness (daN/mm)	11,0	19,40	27,6
Natural frequency (Hz)	1,83	1,72	1,68
Isolation rate at 10Hz %	95,5	96,9	97,1

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS122001 Crimped bellow 2 convolutes 12" x 2 air inlet G<sup>1/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
85 mm	1200	1800	2400	3000	3600	4200	4800	4200 cm <sup>3</sup>
100 mm	1170	1758	2345	2930	3515	4105	4690	5000 cm <sup>3</sup>
130 mm	1115	1670	2225	2785	3340	3900	4455	6800 cm <sup>3</sup>
160 mm	1035	1555	2070	2585	3100	3620	4135	8400 cm <sup>3</sup>
190 mm	935	1405	1870	2335	2800	3270	3735	9800 cm <sup>3</sup>
220 mm	815	1220	1625	2035	2440	2850	3255	11000 cm <sup>3</sup>
250 mm	670	1010	1345	1680	2015	2355	2690	12100 cm <sup>3</sup>
280 mm	510	765	1020	1275	1530	1785	2040	13000 cm <sup>3</sup>
285 mm	485	730	975	1215	1450	1700	1945	13130 cm <sup>3</sup>
300 mm	400	600	800	1000	1200	1400	1600	13500 cm <sup>3</sup>

## Mounting instructions

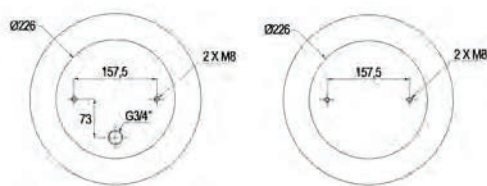
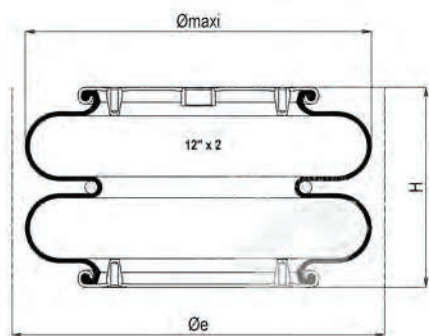
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 10 daN.

# Crimped bellow 12" x 2

DBS122002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	325 mm
Maximum diameter	325 mm
Minimum overall diameter (Øe)	350 mm
Minimum height	85 mm
Static height (H)	190 mm
Maximum height	300 mm
Maximum recommended height	285 mm
Total stroke	215 mm
Effective area at static height	468 cm <sup>2</sup>
Stiffness at 4 bar	22,59 daN/mm
Natural frequency at 4 bar	1,73 Hz
Weight	5,20 kg

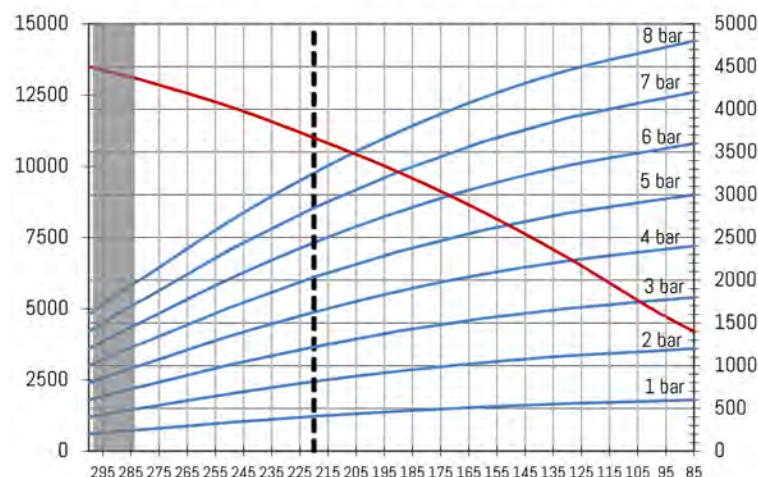
## Dynamic characteristics at H = 220 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	815	1625	2440
Volume (dm <sup>3</sup> )	10,32	10,68	11,04
Stiffness (daN/mm)	11,0	19,40	27,6
Natural frequency (Hz)	1,83	1,72	1,68
Isolation rate at 10Hz %	95,5	96,9	97,1

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
 - - - H Isolation  
 Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS122002 Crimped bellow 2 convolutes 12" x 2 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
85 mm	1200	1800	2400	3000	3600	4200	4800	4200 cm <sup>3</sup>
100 mm	1170	1758	2345	2930	3515	4105	4690	5000 cm <sup>3</sup>
130 mm	1115	1670	2225	2785	3340	3900	4455	6800 cm <sup>3</sup>
160 mm	1035	1555	2070	2585	3100	3620	4135	8400 cm <sup>3</sup>
190 mm	935	1405	1870	2335	2800	3270	3735	9800 cm <sup>3</sup>
220 mm	815	1220	1625	2035	2440	2850	3255	11000 cm <sup>3</sup>
250 mm	670	1010	1345	1680	2015	2355	2690	12100 cm <sup>3</sup>
280 mm	510	765	1020	1275	1530	1785	2040	13000 cm <sup>3</sup>
285 mm	485	730	975	1215	1450	1700	1945	13130 cm <sup>3</sup>
300 mm	400	600	800	1000	1200	1400	1600	13500 cm <sup>3</sup>

## Mounting instructions

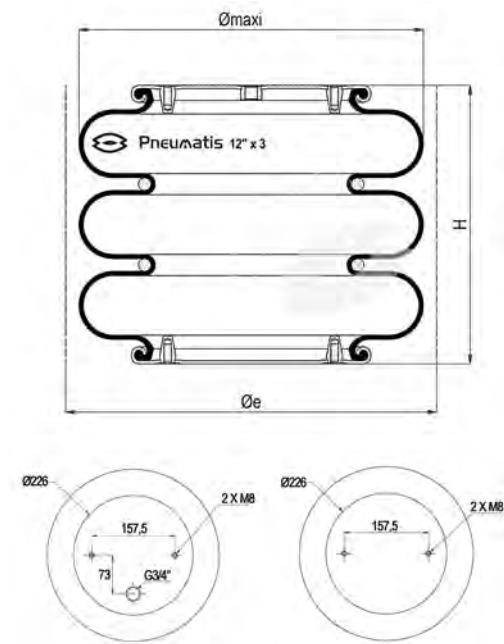
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 10 daN.

# Crimped bellow 12" x 3

DBS123001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	325 mm
Maximum diameter	325 mm
Minimum overall diameter (Øe)	350 mm
Minimum height	120 mm
Static height (H)	265 mm
Maximum height	435 mm
Maximum recommended height	415 mm
Total stroke	315 mm
Effective area at static height	450 cm <sup>2</sup>
Stiffness at 4 bar	16,24 daN/mm
Natural frequency at 4 bar	1,50 Hz
Weight	7,00 kg

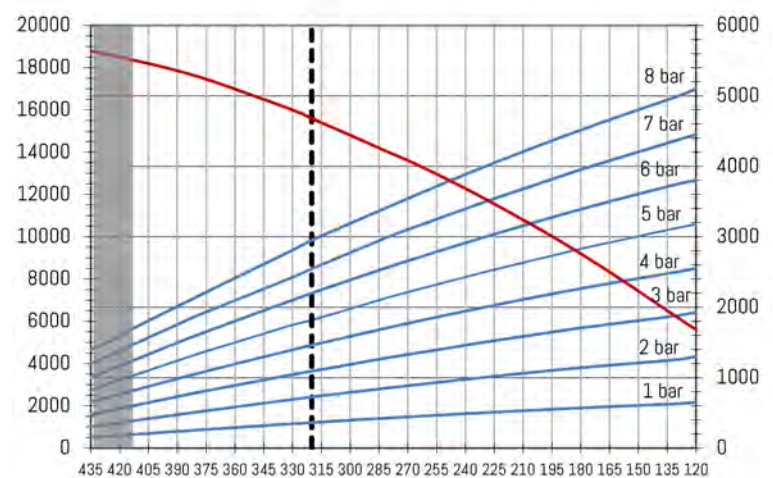
## Dynamic characteristics at H = 320 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	725	1460	2200
Volume (dm <sup>3</sup> )	15,37	15,50	15,62
Stiffness (daN/mm)	6,9	12,4	17,8
Natural frequency (Hz)	1,54	1,45	1,42
Isolation rate at 10Hz %	97,6	97,8	97,9

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS123001 Crimped bellow 3 convolutes 12" x 3 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
120 mm	1300	1925	2550	3175	3800	4450	5100	5600 cm <sup>3</sup>
130 mm	1255	1880	2500	3125	3745	4370	4990	6200 cm <sup>3</sup>
180 mm	1140	1705	2265	2830	3390	3955	4515	9200 cm <sup>3</sup>
230 mm	1005	1505	2000	2500	2995	3495	3995	11800 cm <sup>3</sup>
265 mm	900	1350	1800	2250	2700	3150	3600	13400 cm <sup>3</sup>
280 mm	855	1285	1710	2140	2570	3000	3425	14000 cm <sup>3</sup>
320 mm	725	1090	1460	1815	2200	2545	2905	15600 cm <sup>3</sup>
330 mm	690	1045	1395	1750	2100	2455	2810	16000 cm <sup>3</sup>
380 mm	510	785	1055	1330	1600	1875	2145	17600 cm <sup>3</sup>
415 mm	380	590	800	1010	1220	1445	1670	18400 cm <sup>3</sup>
420 mm	355	560	765	970	1170	1375	1580	18500 cm <sup>3</sup>
435 mm	300	475	650	825	1000	1200	1400	18800 cm <sup>3</sup>

## Mounting instructions

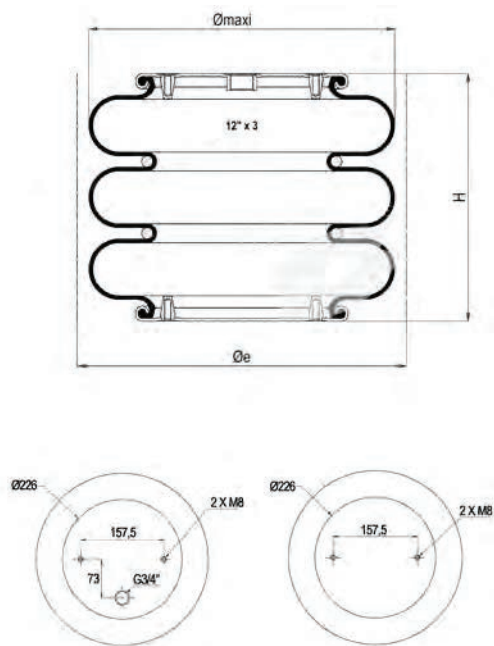
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 14 daN.

# Crimped bellow 12" x 3

DBS123002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	27 bar
Maximum angular capacity	10°
Maximum out of alignment	10 mm

Static diameter	325 mm
Maximum diameter	325 mm
Minimum overall diameter (Øe)	350 mm
Minimum height	120 mm
Static height (H)	265 mm
Maximum height	435 mm
Maximum recommended height	415 mm
Total stroke	315 mm
Effective area at static height	450 cm <sup>2</sup>
Stiffness at 4 bar	16,24 daN/mm
Natural frequency at 4 bar	1,50 Hz
Weight	7,00 kg

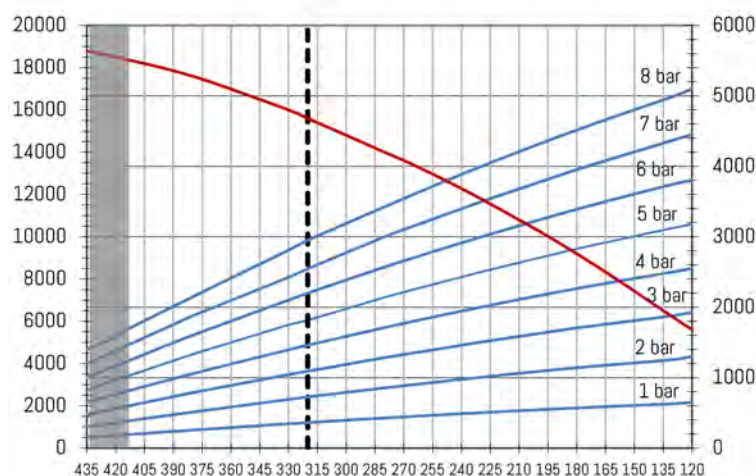
## Dynamic characteristics at H = 320 mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	725	1460	2200
Volume (dm <sup>3</sup> )	15,37	15,50	15,62
Stiffness (daN/mm)	6,9	12,4	17,8
Natural frequency (Hz)	1,54	1,45	1,42
Isolation rate at 10Hz %	97,6	97,8	97,9

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation  
Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS123002 Crimped bellow 3 convolutes 12" x 3 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 6 bar
120 mm	1300	1925	2550	3175	3800	4450	5100	5600 cm <sup>3</sup>
130 mm	1255	1880	2500	3125	3745	4370	4990	6200 cm <sup>3</sup>
180 mm	1140	1705	2265	2830	3390	3955	4515	9200 cm <sup>3</sup>
230 mm	1005	1505	2000	2500	2995	3495	3995	11800 cm <sup>3</sup>
265 mm	900	1350	1800	2250	2700	3150	3600	13400 cm <sup>3</sup>
280 mm	855	1285	1710	2140	2570	3000	3425	14000 cm <sup>3</sup>
320 mm	725	1090	1460	1815	2200	2545	2905	15600 cm <sup>3</sup>
330 mm	690	1045	1395	1750	2100	2455	2810	16000 cm <sup>3</sup>
380 mm	510	785	1055	1330	1600	1875	2145	17600 cm <sup>3</sup>
415 mm	380	590	800	1010	1220	1445	1670	18400 cm <sup>3</sup>
420 mm	355	560	765	970	1170	1375	1580	18500 cm <sup>3</sup>
435 mm	300	475	650	825	1000	1200	1400	18800 cm <sup>3</sup>

## Mounting instructions

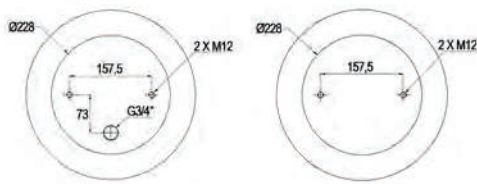
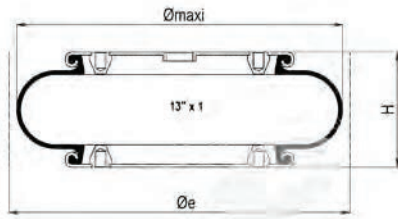
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 14 daN.

# Crimped bellow 13" x 1

DBS131001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	300 mm
Maximum diameter	325 mm
Minimum overall diameter (Øe)	340 mm
Minimum height	60 mm
Static height (H)	115 mm
Maximum height	170 mm
Maximum recommended height	150 mm
Total stroke	110 mm
Effective area at static height	457 cm <sup>2</sup>
Stiffness at 4 bar	34,44 daN/mm
Natural frequency at 4 bar	2,09 Hz
Weight	3,9 kg

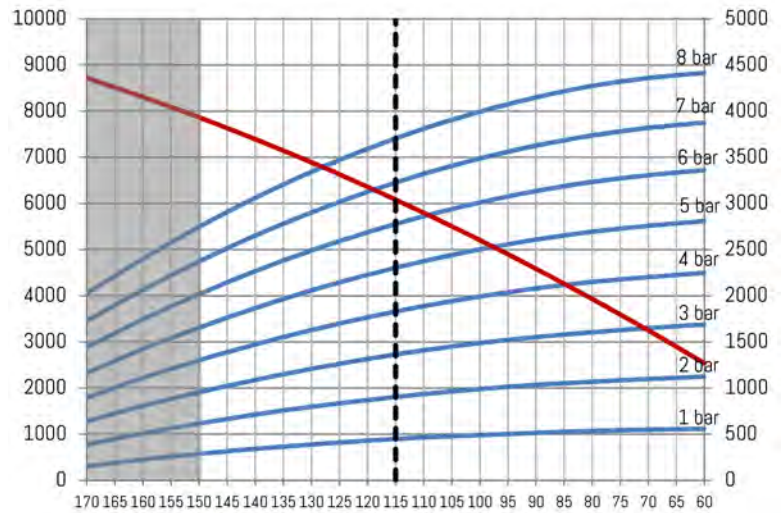
## Dynamic characteristics at H = 115mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	903	1827	2776
Volume (dm <sup>3</sup> )	60,8	60,8	60,8
Stiffness (daN/mm)	17,89	34,44	51,36
Natural frequency (Hz)	2,13	2,09	2,05
Isolation rate at 10Hz %	95,2	95,4	95,6

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - - H Isolation

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS131001 Crimped bellow 1 convolute 13" x 1 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
60 mm	1125	1689	2248	2811	3362	3877	4416	2538 cm <sup>3</sup>
70 mm	1098	1650	2203	2758	3307	3819	4360	3250 cm <sup>3</sup>
80 mm	1069	1604	2150	2694	3234	3737	4274	3933 cm <sup>3</sup>
90 mm	1035	1553	2080	2609	3135	3627	4150	4585 cm <sup>3</sup>
100 mm	991	1488	1992	2503	3011	3488	3995	5207 cm <sup>3</sup>
110 mm	936	1409	1888	2375	2863	3321	3811	5799 cm <sup>3</sup>
115 mm	905	1362	1827	2301	2776	3223	3701	6080 cm <sup>3</sup>
120 mm	870	1316	1767	2227	2689	3126	3592	6361 cm <sup>3</sup>
130 mm	798	1208	1628	2058	2490	2903	3343	6893 cm <sup>3</sup>
140 mm	713	1088	1473	1867	2267	2652	3062	7394 cm <sup>3</sup>
150 mm	616	954	1301	1655	2018	2372	2747	7866 cm <sup>3</sup>
160 mm	509	807	1111	1423	1745	2064	2400	8308 cm <sup>3</sup>
170 mm	388	639	895	1164	1444	1728	2027	8719 cm <sup>3</sup>

## Mounting instructions

Fastening torque M8 x 1,25 : 25 Nm

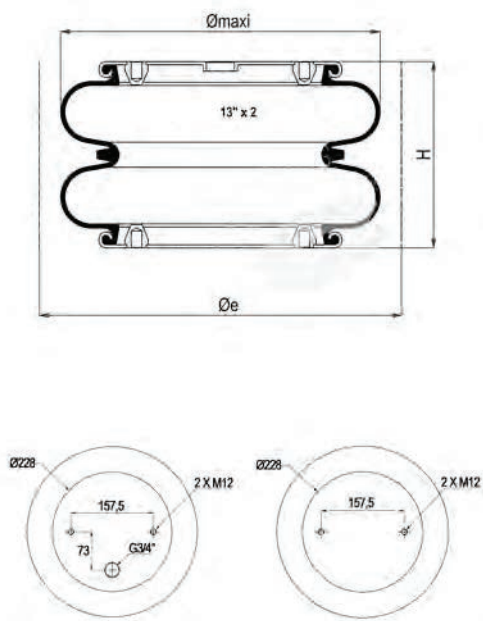
Indicative value of force to reach the minimum height at atmospheric pressure is 15 daN.



# Crimped bellow 13" x 2

DBS132001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	300 mm
Maximum diameter	310 mm
Minimum overall diameter (Øe)	340 mm
Minimum height	90 mm
Static height (H)	175 mm
Maximum height	260 mm
Maximum recommended height	230 mm
Total stroke	170 mm
Effective area at static height	462 cm <sup>2</sup>
Stiffness at 4 bar	21,33 daN/mm
Natural frequency at 4 bar	1,71 Hz
Weight	4,6 kg

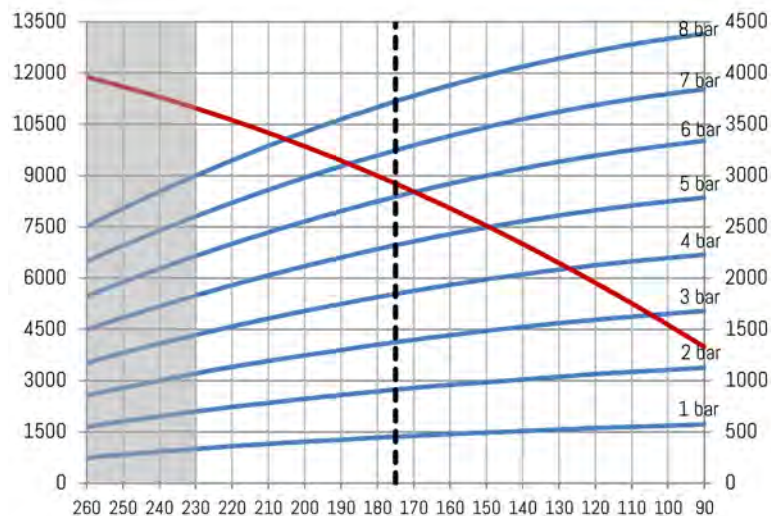
## Dynamic characteristics at H = 175mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	912	1847	2797
Volume (dm <sup>3</sup> )	87,8	87,8	87,8
Stiffness (daN/mm)	11,23	21,33	29,69
Natural frequency (Hz)	1,75	1,71	1,67
Isolation rate at 10Hz %	96,8	97	97,2

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation

Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS132001 Crimped bellow 2 convolutes 13" x 2 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
90 mm	1126	1682	2230	2786	3340	3844	4384	3989 cm <sup>3</sup>
105 mm	1096	1639	2182	2730	3275	3774	4310	4954 cm <sup>3</sup>
120 mm	1065	1595	2127	2663	3196	3689	4216	5866 cm <sup>3</sup>
135 mm	1025	1544	2062	2585	3105	3589	4105	6727 cm <sup>3</sup>
150 mm	986	1487	1989	2496	3000	3474	3977	7536 cm <sup>3</sup>
165 mm	946	1423	1907	2396	2882	3344	3832	8293 cm <sup>3</sup>
175 mm	912	1376	1847	2322	2797	3248	3725	8776 cm <sup>3</sup>
180 mm	897	1352	1816	2284	2750	3198	3669	8999 cm <sup>3</sup>
195 mm	843	1274	1716	2161	2606	3038	3490	9653 cm <sup>3</sup>
210 mm	784	1193	1607	2028	2448	2862	3292	10255 cm <sup>3</sup>
225 mm	723	1105	1489	1883	2277	2671	3076	10806 cm <sup>3</sup>
230 mm	696	1064	1445	1828	2218	2602	3000	10987 cm <sup>3</sup>
240 mm	652	1000	1362	1726	2093	2464	2845	11305 cm <sup>3</sup>
255 mm	579	896	1226	1559	1895	2243	2595	11753 cm <sup>3</sup>
260 mm	548	854	1170	1495	1821	2160	2505	11891 cm <sup>3</sup>

## Mounting instructions

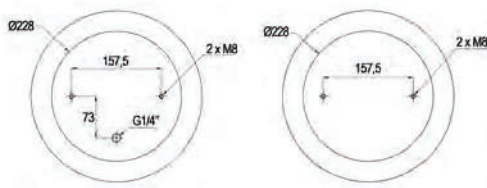
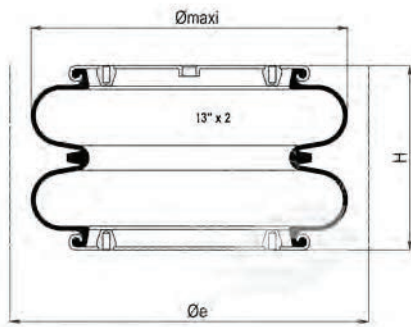
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 10 daN.

# Crimped bellow 13" x 2

DBS132002

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	300 mm
Maximum diameter	310 mm
Minimum overall diameter (Øe)	340 mm
Minimum height	90 mm
Static height (H)	175 mm
Maximum height	260 mm
Maximum recommended height	230 mm
Total stroke	170 mm
Effective area at static height	462 cm <sup>2</sup>
Stiffness at 4 bar	21,33 daN/mm
Natural frequency at 4 bar	1,71 Hz
Weight	4,6 kg

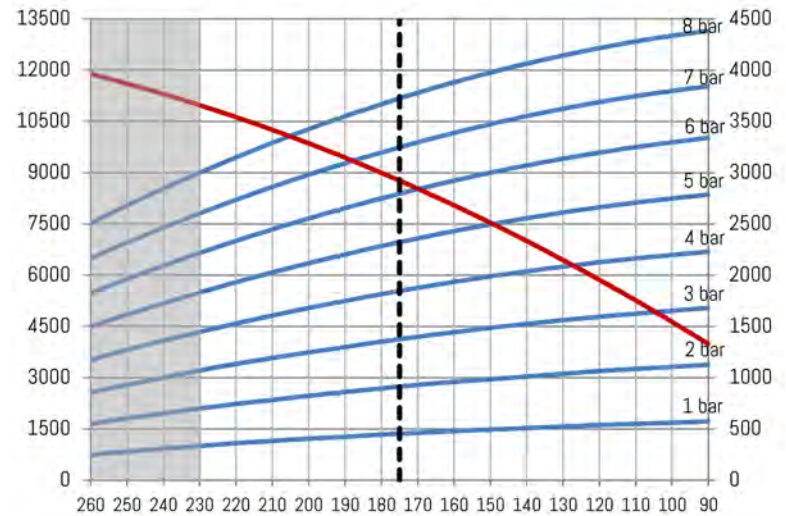
## Dynamic characteristics at H = 175mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	912	1847	2797
Volume (dm <sup>3</sup> )	87,8	87,8	87,8
Stiffness (daN/mm)	11,23	21,33	29,69
Natural frequency (Hz)	1,75	1,71	1,67
Isolation rate at 10Hz %	96,8	97	97,2

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation  
Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS132002 Crimped bellow 2 convolutes 13" x 2 air inlet G<sup>1/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
90 mm	1126	1682	2230	2786	3340	3844	4384	3989 cm <sup>3</sup>
105 mm	1096	1639	2182	2730	3275	3774	4310	4954 cm <sup>3</sup>
120 mm	1065	1595	2127	2663	3196	3689	4216	5866 cm <sup>3</sup>
135 mm	1025	1544	2062	2585	3105	3589	4105	6727 cm <sup>3</sup>
150 mm	986	1487	1989	2496	3000	3474	3977	7536 cm <sup>3</sup>
165 mm	946	1423	1907	2396	2882	3344	3832	8293 cm <sup>3</sup>
175 mm	912	1376	1847	2322	2797	3248	3725	8776 cm <sup>3</sup>
180 mm	897	1352	1816	2284	2750	3198	3669	8999 cm <sup>3</sup>
195 mm	843	1274	1716	2161	2606	3038	3490	9653 cm <sup>3</sup>
210 mm	784	1193	1607	2028	2448	2862	3292	10255 cm <sup>3</sup>
225 mm	723	1105	1489	1883	2277	2671	3076	10806 cm <sup>3</sup>
230 mm	696	1064	1445	1828	2218	2602	3000	10987 cm <sup>3</sup>
240 mm	652	1000	1362	1726	2093	2464	2845	11305 cm <sup>3</sup>
255 mm	579	896	1226	1559	1895	2243	2595	11753 cm <sup>3</sup>
260 mm	548	854	1170	1495	1821	2160	2505	11891 cm <sup>3</sup>

## Mounting instructions

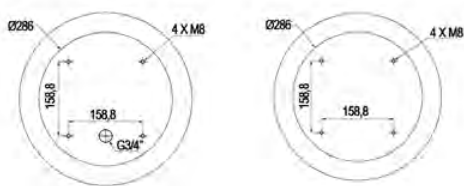
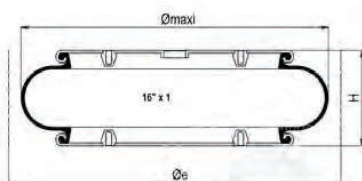
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 10 daN.

# Crimped bellow 16" x 1

DBS161001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	350 mm
Maximum diameter	370 mm
Minimum overall diameter (Øe)	400 mm
Minimum height	60 mm
Static height (H)	115 mm
Maximum height	170 mm
Maximum recommended height	150 mm
Total stroke	110 mm
Effective area at static height	462 cm <sup>2</sup>
Stiffness at 4 bar	54,06 daN/mm
Natural frequency at 4 bar	2,07 Hz
Weight	5,4 kg

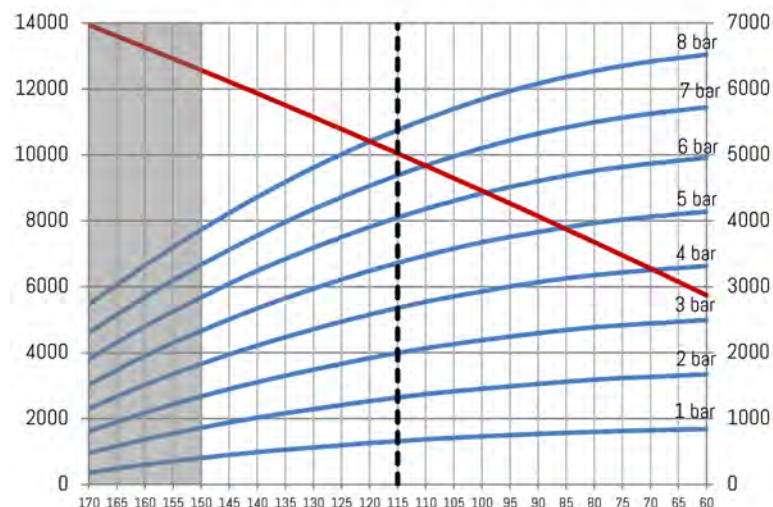
## Dynamic characteristics at H = 115mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	1265	2578	3906
Volume (dm <sup>3</sup> )	104	104	104
Stiffness (daN/mm)	28,08	54,06	77,11
Natural frequency (Hz)	2,11	2,07	2,04
Isolation rate at 10Hz %	95,3	95,5	95,7

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation  
Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS161001 Crimped bellow 1 convolute 16" x 1 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
60 mm	1672	2496	3315	4139	4956	5722	6520	5743 cm <sup>3</sup>
70 mm	1633	2444	3252	4061	4868	5625	6416	6555 cm <sup>3</sup>
80 mm	1591	2384	3176	3967	4758	5496	6271	7354 cm <sup>3</sup>
90 mm	1524	2295	3070	3829	4601	5323	6081	8139 cm <sup>3</sup>
100 mm	1452	2188	2928	3674	4414	5104	5842	8911 cm <sup>3</sup>
110 mm	1370	2067	2771	3475	4181	4840	5542	9670 cm <sup>3</sup>
115 mm	1317	1991	2674	3357	4043	4685	5371	10042 cm <sup>3</sup>
120 mm	1265	1916	2578	3240	3906	4531	5200	10415 cm <sup>3</sup>
130 mm	1143	1743	2355	2971	3591	4177	4806	11147 cm <sup>3</sup>
140 mm	1014	1552	2109	2672	3242	3777	4360	11866 cm <sup>3</sup>
150 mm	861	1336	1828	2329	2837	3333	3862	12572 cm <sup>3</sup>
160 mm	683	1087	1512	1950	2399	2843	3322	13264 cm <sup>3</sup>
170 mm	480	808	1148	1511	1901	2302	2729	13943 cm <sup>3</sup>

## Mounting instructions

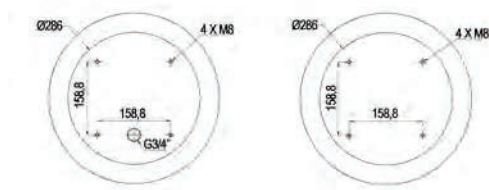
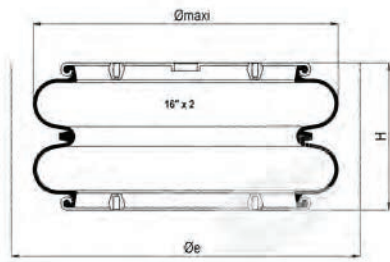
Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 8 daN.

# Crimped bellow 16" x 2

DBS162001

INDUSTRY



## Technical characteristics

Maximum pressure	8 bar
Burst pressure	24 bar
Maximum angular capacity	15°
Maximum out of alignment	10 mm

Static diameter	350 mm
Maximum diameter	370 mm
Minimum overall diameter (Øe)	400 mm
Minimum height	90 mm
Static height (H)	175 mm
Maximum height	260 mm
Maximum recommended height	230 mm
Total stroke	170 mm
Effective area at static height	715 cm <sup>2</sup>
Stiffness at 4 bar	39,13 daN/mm
Natural frequency at 4 bar	1,85 Hz
Weight	6,2 kg

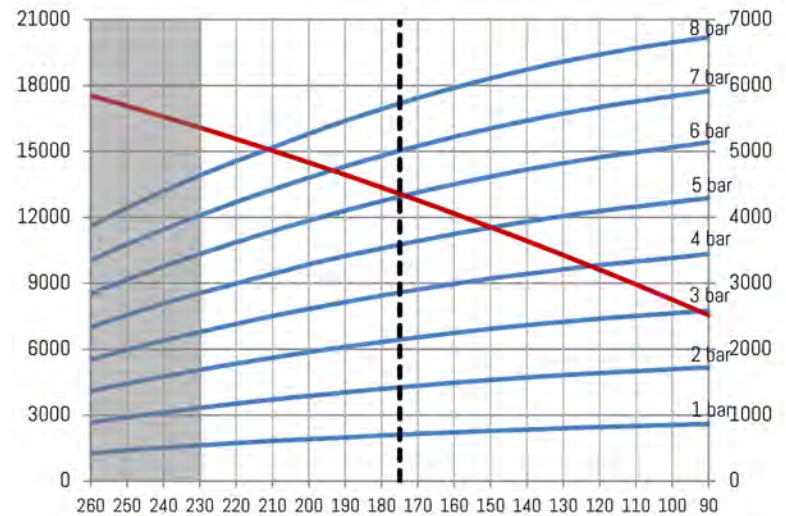
## Dynamic characteristics at H = 175mm\*

Pressure	2 bar	4 bar	6 bar
Load (daN)	1423	2860	4314
Volume (dm <sup>3</sup> )	130,8	130,8	130,8
Stiffness (daN/mm)	20,2	39,13	58,09
Natural frequency (Hz)	1,88	1,85	1,83
Isolation rate at 10Hz %	96,3	96,5	96,5

\* Recommended height for better isolation

Volume in cm<sup>3</sup>

Load in daN



— Volume  
- - H Isolation  
Height in mm

## Temperatures

Standard	-40°C (-50°C static)	+70°C (+90°C static)
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## References

DBS162001 Crimped bellow 2 convolutes 16" x 2 air inlet G<sup>3/4</sup> shifted

## Characteristics in static condition (daN)

Height	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	Vol 5 bar
90 mm	1723	2583	3443	4295	5137	5913	6733	7551 cm <sup>3</sup>
105 mm	1681	2524	3356	4194	5026	5799	6611	8602 cm <sup>3</sup>
120 mm	1638	2463	3275	4095	4910	5672	6470	9619 cm <sup>3</sup>
135 mm	1589	2390	3175	3978	4774	5522	6304	10604 cm <sup>3</sup>
150 mm	1532	2308	3072	3845	4618	5349	6109	11556 cm <sup>3</sup>
165 mm	1468	2224	2949	3695	4441	5152	5889	12476 cm <sup>3</sup>
175 mm	1423	2156	2860	3588	4314	5008	5727	13071 cm <sup>3</sup>
180 mm	1397	2110	2813	3528	4245	4932	5643	13363 cm <sup>3</sup>
195 mm	1318	1996	2663	3353	4028	4688	5367	14217 cm <sup>3</sup>
210 mm	1236	1870	2502	3142	3791	4421	5059	15039 cm <sup>3</sup>
225 mm	1142	1734	2321	2924	3533	4131	4746	15827 cm <sup>3</sup>
230 mm	1107	1824	2255	2845	3439	4024	4625	16085 cm <sup>3</sup>
240 mm	1039	1584	2130	2690	3256	3817	4396	16584 cm <sup>3</sup>
255 mm	927	1423	1918	2428	2948	3473	4008	17307 cm <sup>3</sup>
260 mm	886	1362	1838	2330	2834	3342	3862	17541 cm <sup>3</sup>

## Mounting instructions

Fastening torque M8 x 1,25 : 25 Nm

Indicative value of force to reach the minimum height at atmospheric pressure is 10 daN.