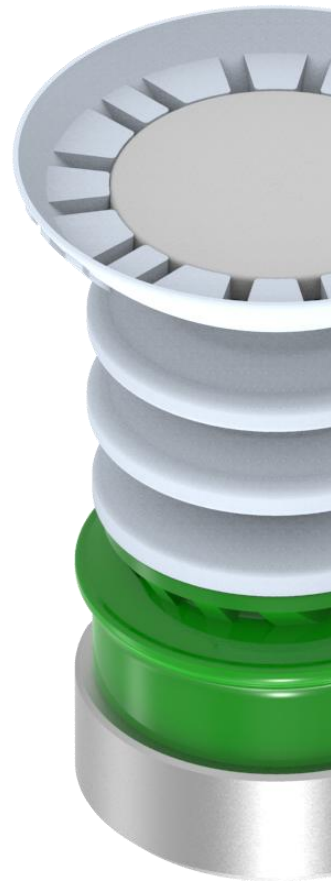
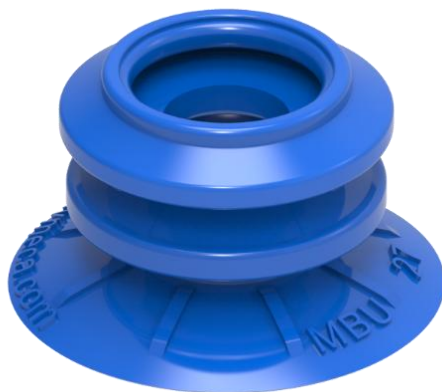
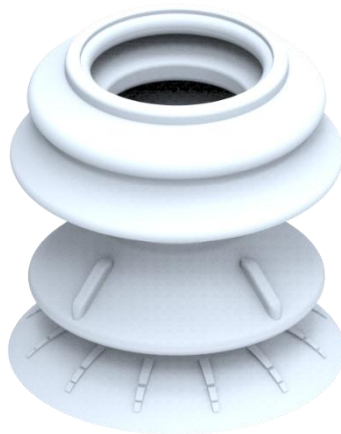


Magic 

Suction Cups



Multi-Stage Vacuum Cartridge

(High Quality Vacuum Technology)

Vacuum Flow & Quick Response

(Improving Productivity)



Check Valves

(Safety & Speed of Evacuation)

Minimal Compressed Air

(Energy Saving)

✓ **“V”** stands for Vacuum technology, and **“MECA”** comes from Mechanical technology.

✓ By using the vacuum cartridge icon and blue **VTEC** color, it clearly reminds that **“VMECA”** is the same brand as **VTEC**

✓ The **VMECA** reflects vacuum and mechanical technologies that combines well and supplies complement system to the customers



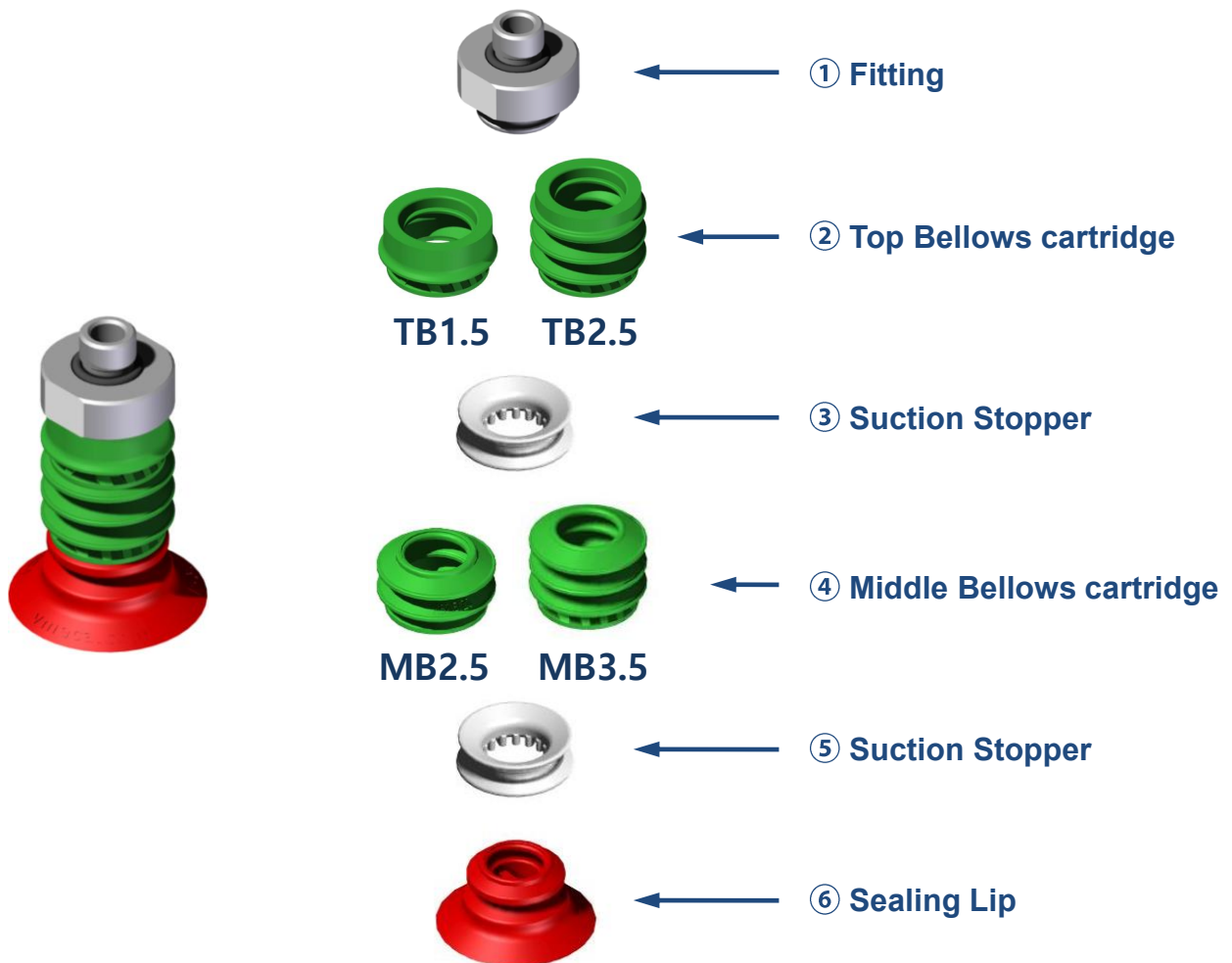
Introduction

■ Magic Suction Cups

Magic Suction Cups are customizable vacuum solutions designed to meet a wide range of application needs.

With various suction lips, bellows, and materials, users can configure the optimal suction cup for their process.

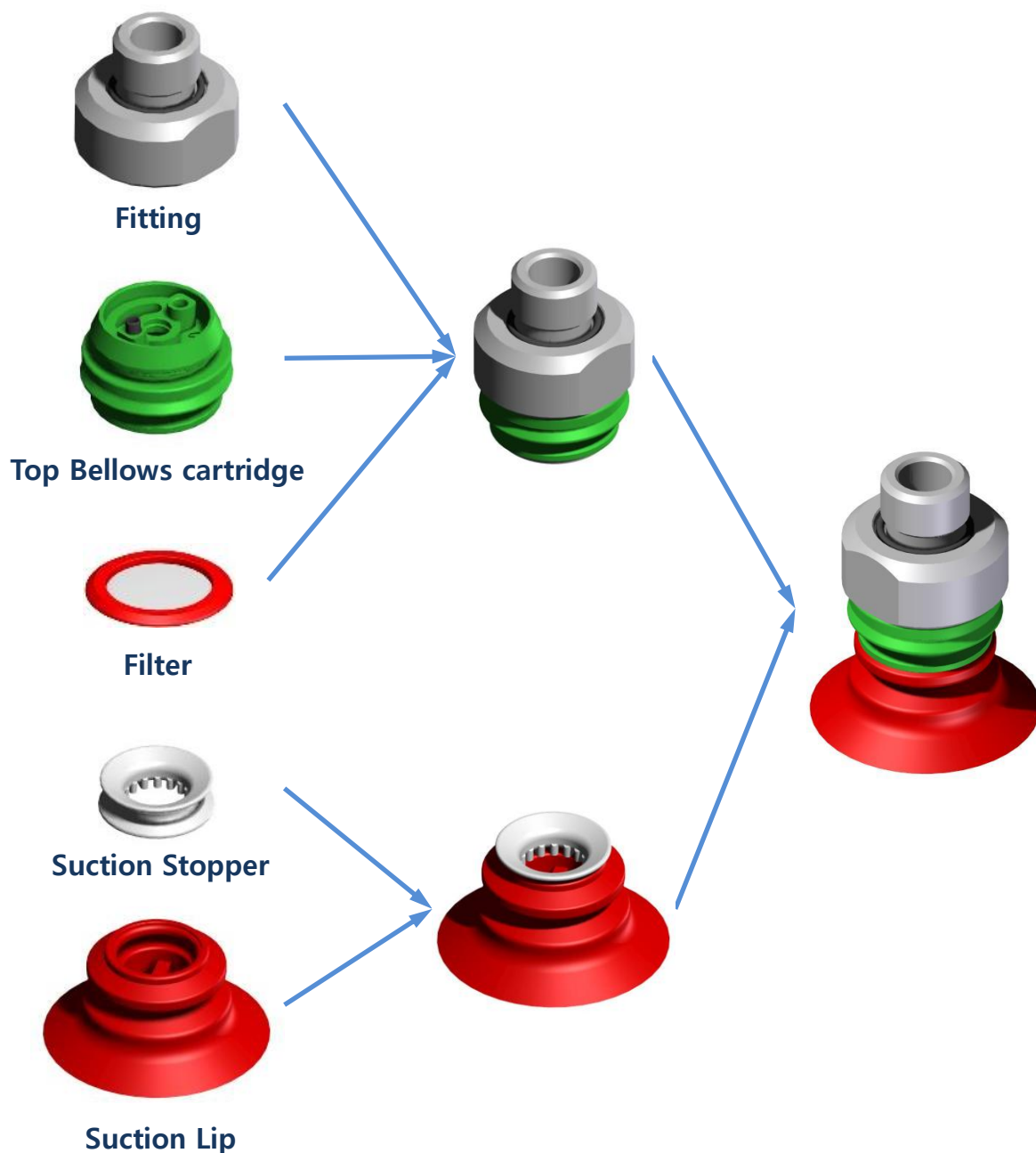
Its modular design allows easy replacement of individual components without tools, reducing costs and improving efficiency.



How to assemble and disassemble

■ Assembly Sequence

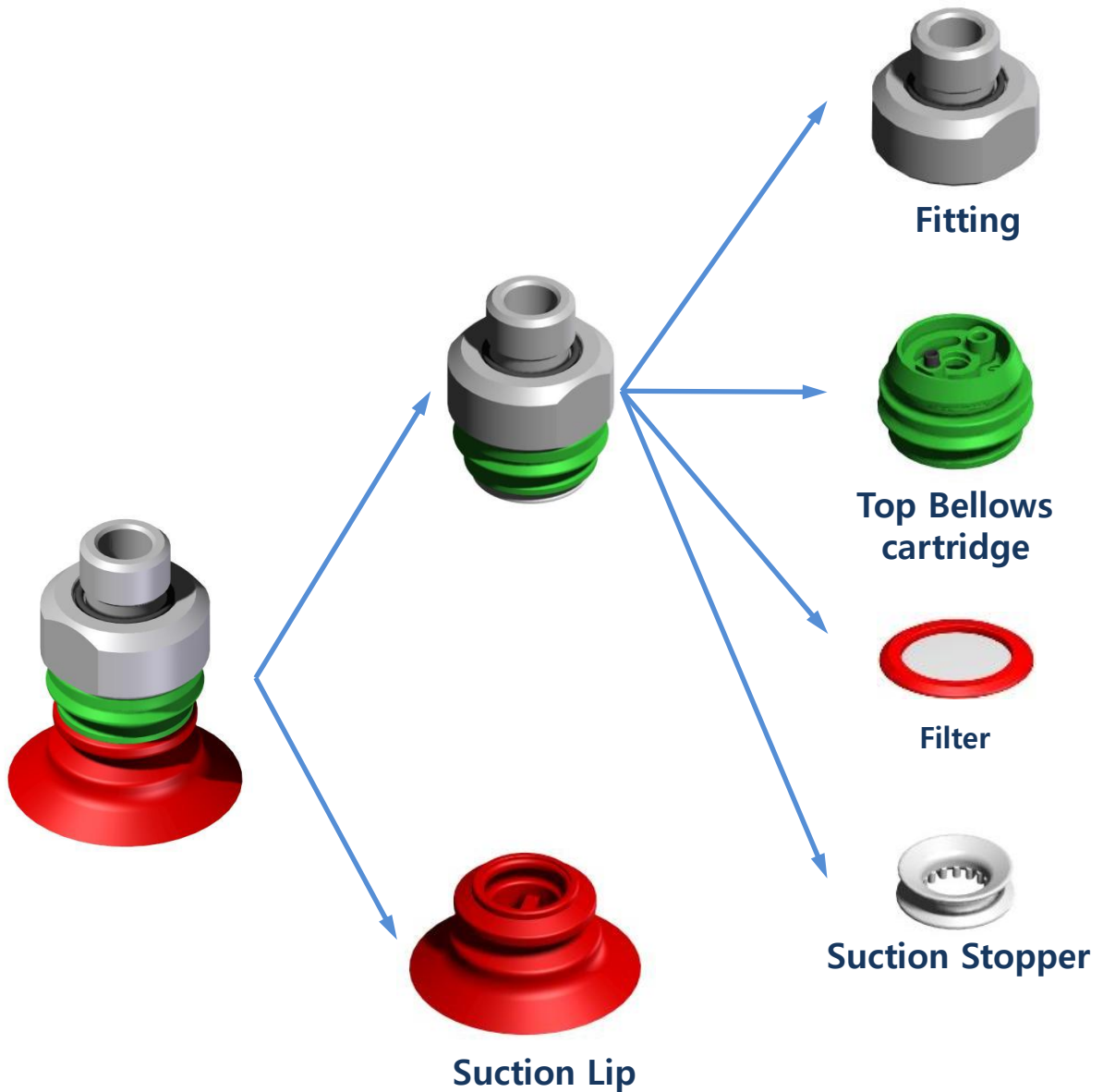
- 1) Assemble fitting, top bellows cartridge and filter together
- 2) Put stopper and suction lip together
- 3) Connect two parts assembled each other
 - ※ No need of any tools for assembly



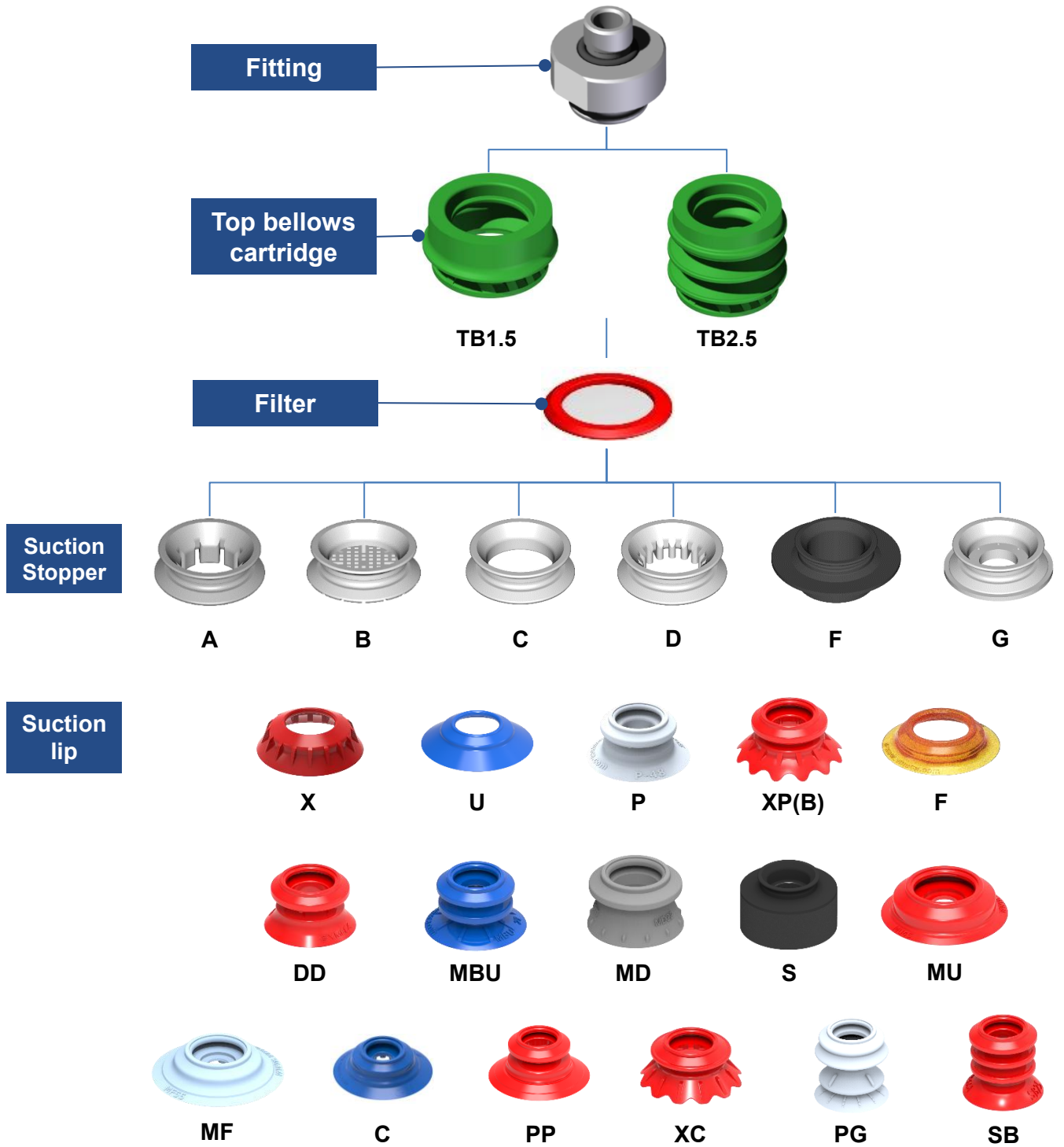
How to assemble and disassemble

■ Disassembly Sequence

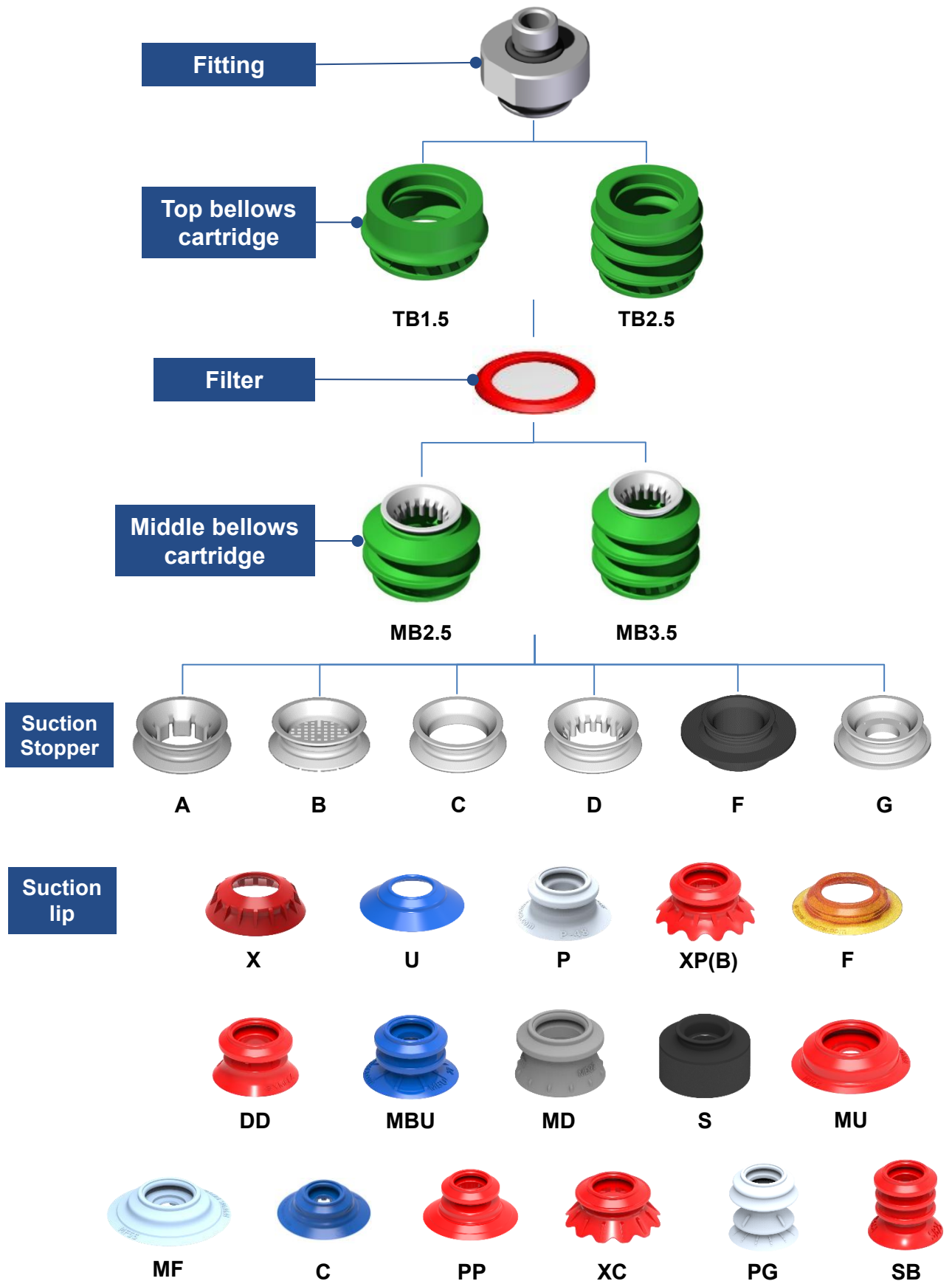
- 1) Disassemble sealing lip firstly
- 2) The put out fitting, bellow cartridge, filter and stopper
 - ※ No need of any tools for assembly



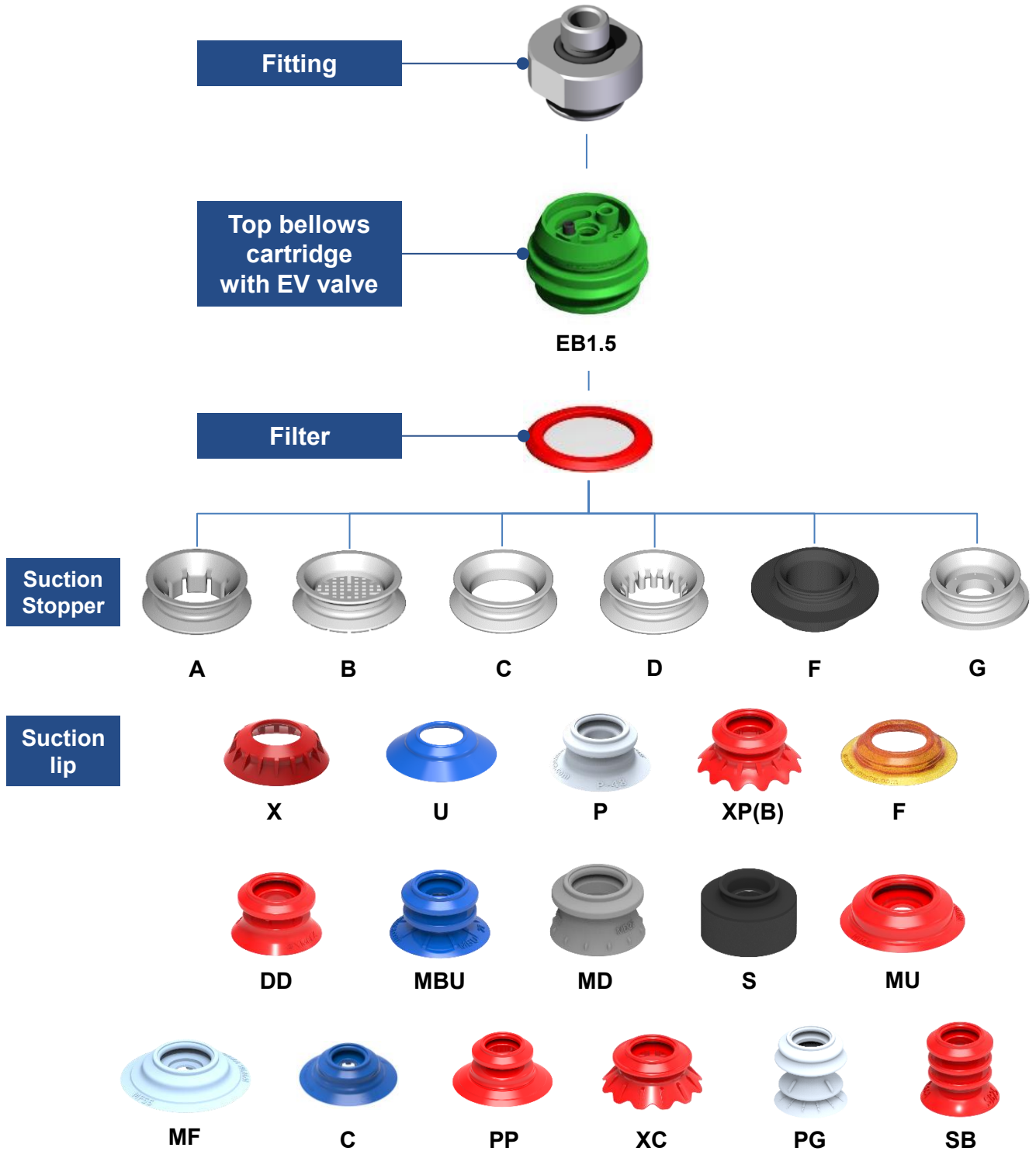
Structure – B1.5 & B2.5 series



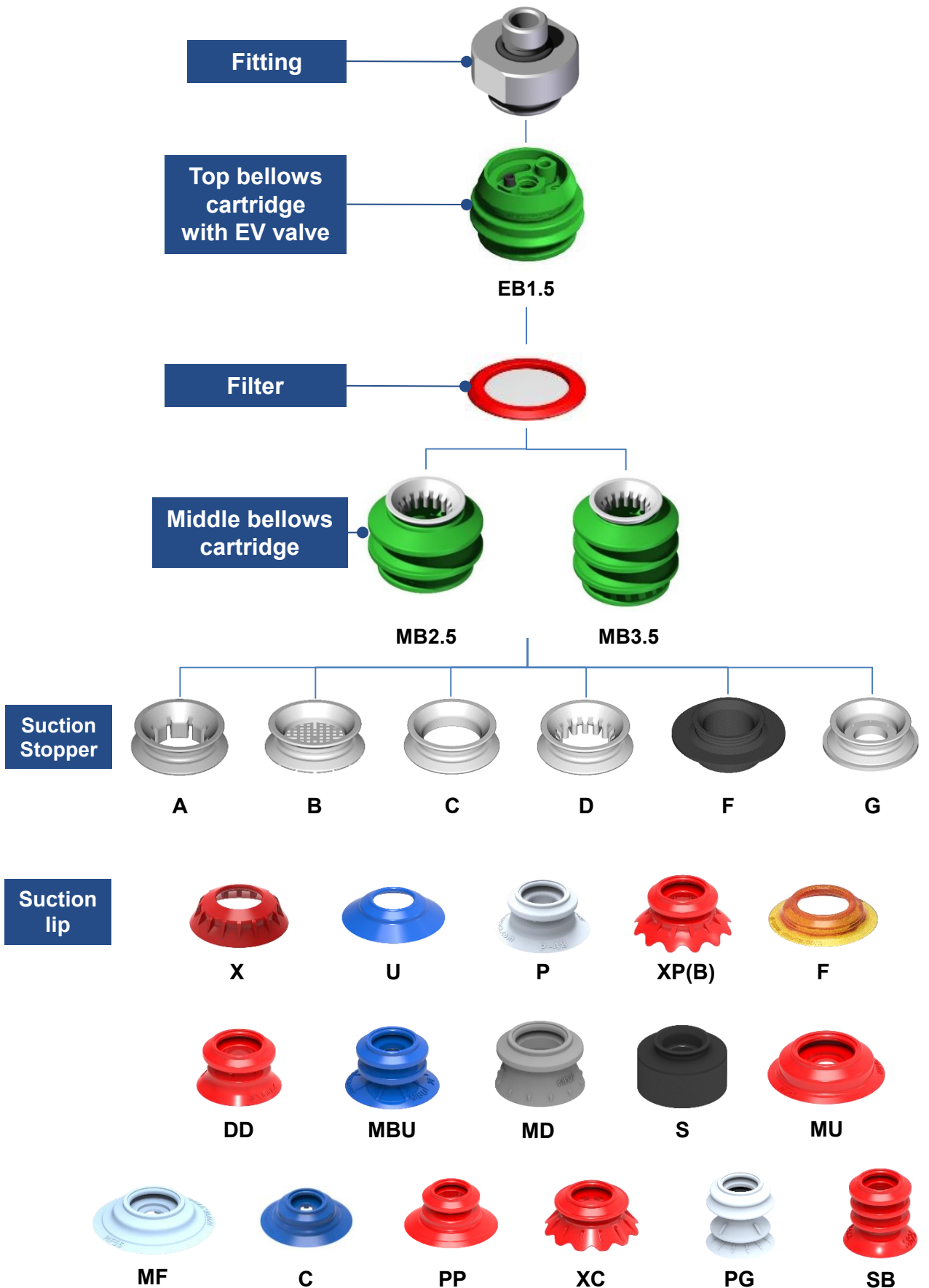
Structure – B4.0 & B5.0 & B6.0 series



Structure – EB1.5 series

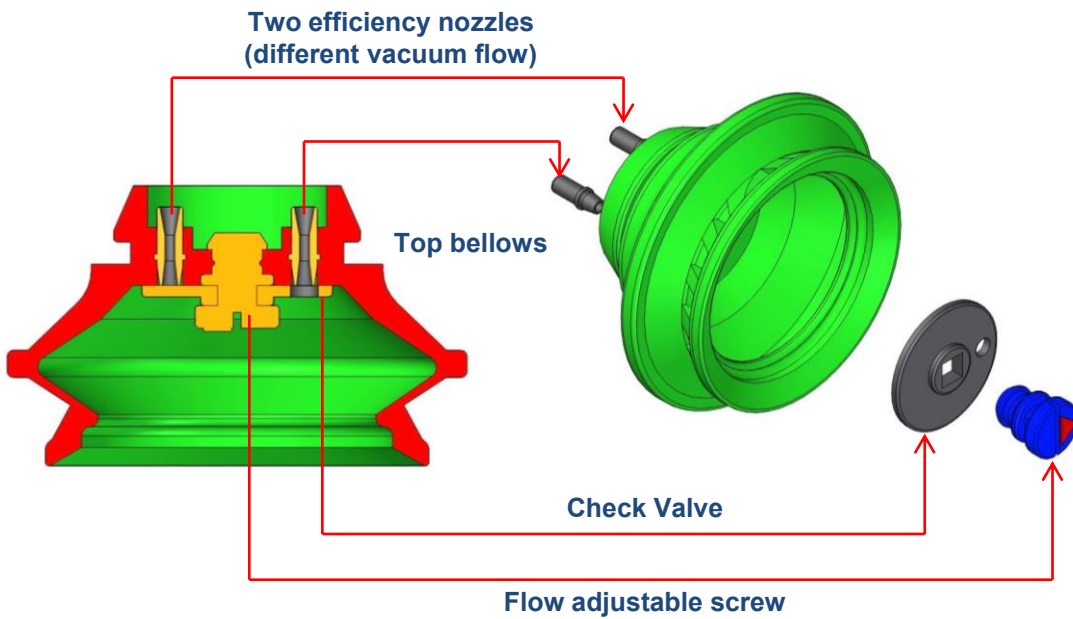
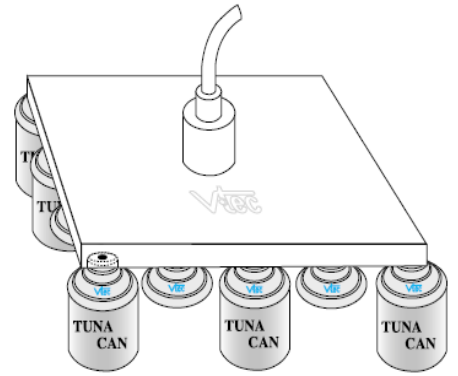


Structure – EB4.0 & EB5.0 series



Features of Efficiency valve (EB Type)

With EV Valve (EB)



Flow adjustment

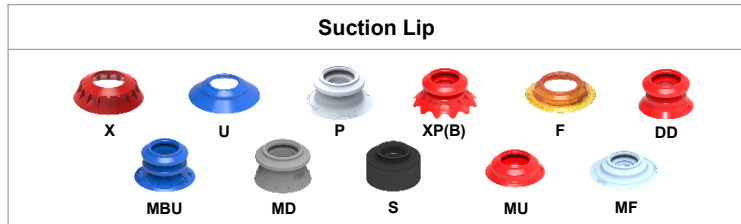
Hole size (0.5~1mm)	Hole size (2.3mm)	Max. Open	Close



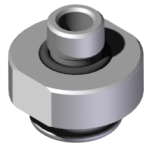
Adjustable suction flow by different position of check valve screw module

Bellows		
Model	Description	
	Top bellows	Middle bellows
B 1.5	1.5 folds	-
B 2.5	2.5 folds	-
B 4.0	1.5 folds	2.5 folds
B 5.0	1.5 folds	3.5 folds
B 6.0	2.5 folds	3.5 folds
EB 1.5	1.5 folds	-
EB 4.0	1.5 folds	2.5 folds
EB 5.0	1.5 folds	3.5 folds
BL 2.5	2.5 folds	-

Bellows Size	
Model	Description
20	For Sealing lip 15Ø~32
40	For Sealing lip 45Ø~60
60	For Sealing lip 65Ø~75



Suction Lip	Model		Description				
	Diameter	Material					
X	25 30 45 55 65 75	N6	NBR (Nitrile), Hardness 60°				
		S3	Silicone, Hardness 30°				
		S5	Silicone, Hardness 50°				
		W3	White Silicone, Hardness 30°				
		W5	White Silicone, Hardness 50°				
		W3(FDA)	White Silicone, Hardness 30° (FDA)				
		W5(FDA)	White Silicone, Hardness 50° (FDA)				
U	25 30 45 55 65 75	U6	Urethane, Hardness 60°				
		N6	NBR (Nitrile), Hardness 60°				
		S3	Silicone, Hardness 30°				
		S5	Silicone, Hardness 50°				
		W3	White Silicone, Hardness 30°				
		W5	White Silicone, Hardness 50°				
		W3(FDA)	White Silicone, Hardness 30° (FDA)				
P	15 17 20 27 32 48 60 72 85	U6	Urethane, Hardness 60°				
		N6	NBR (Nitrile), Hardness 60°				
		S3	Silicone, Hardness 30°				
		S5	Silicone, Hardness 50°				
		W3	White Silicone, Hardness 30°				
		W5	White Silicone, Hardness 50°				
		W3(FDA)	White Silicone, Hardness 30° (FDA)				
		W5(FDA)	White Silicone, Hardness 50° (FDA)				
		XP(B)	15 17 20 25 35 40 45 50 55 60 65 70	U6	Urethane, Hardness 60°		
				N6	NBR (Nitrile), Hardness 60°		
S3	Silicone, Hardness 30°						
S5	Silicone, Hardness 50°						
W3	White Silicone, Hardness 30°						
W5	White Silicone, Hardness 50°						
W3(FDA)	White Silicone, Hardness 30° (FDA)						
W5(FDA)	White Silicone, Hardness 50° (FDA)						
F	25 30 45 55			PU	Poleurethane		
				DD	4030	N6	NBR (Nitrile), Hardness 60°
		S3	Silicone, Hardness 30°				
		S5	Silicone, Hardness 50°				
		W3	White Silicone, Hardness 30°				
W5	White Silicone, Hardness 50°						
W3(FDA)	White Silicone, Hardness 30° (FDA)						
W5(FDA)	White Silicone, Hardness 50° (FDA)						
U6	Urethane, Hardness 60°						
MBU	17 23 27	N6	NBR (Nitrile), Hardness 60°				
		S3	Silicone, Hardness 30°				
		S5	Silicone, Hardness 50°				
		W3	White Silicone, Hardness 30°				
		W5	White Silicone, Hardness 50°				
		W3(FDA)	White Silicone, Hardness 30° (FDA)				
		W5(FDA)	White Silicone, Hardness 50° (FDA)				
		U6	Urethane, Hardness 60°				
		MD	22	N6	NBR (Nitrile), Hardness 60°		
				S3	Silicone, Hardness 30°		
S5	Silicone, Hardness 50°						
W3	White Silicone, Hardness 30°						
W5	White Silicone, Hardness 50°						
W3(FDA)	White Silicone, Hardness 30° (FDA)						
W5(FDA)	White Silicone, Hardness 50° (FDA)						
U6	Urethane, Hardness 60°						
S	30 45 50 60 61 70 80 100 110			NE	Insert NBR, Lip EPDM		
				SE	Insert Silicone 50° hardness, Lip EPDM		
		WSE	Insert White Silicone 50° hardness, Lip EPDM				
				MU	45 55 65 75 80	N6	NBR (Nitrile), Hardness 60°
						S3	Silicone, Hardness 30°
						S5	Silicone, Hardness 50°
						W3	White Silicone, Hardness 30°
						W5	White Silicone, Hardness 50°
						W3(FDA)	White Silicone, Hardness 30° (FDA)
						W5(FDA)	White Silicone, Hardness 50° (FDA)
U6	Urethane, Hardness 60°						
MF	45 55 65 75 80	N6	NBR (Nitrile), Hardness 60°				
		S3	Silicone, Hardness 30°				
		S5	Silicone, Hardness 50°				
		W3	White Silicone, Hardness 30°				
		W5	White Silicone, Hardness 50°				
		W3(FDA)	White Silicone, Hardness 30° (FDA)				
		W5(FDA)	White Silicone, Hardness 50° (FDA)				
		U6	Urethane, Hardness 60°				



Fitting



Top bellows



Filter



Middle bellows



Stopper



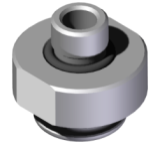
Suction lip

Suction Lip



Model		Description	
Suction Lip	Diameter	Material	
C	45 60 70 80	N6	NBR (Nitrile), Hardness 60°
		S3	Silicone, Hardness 30°
		S5	Silicone, Hardness 50°
		W3	White Silicone, Hardness 30°
		W5	White Silicone, Hardness 50°
		W3(FDA)	White Silicone, Hardness 30° (FDA)
		W5(FDA)	White Silicone, Hardness 50° (FDA)
PP	32	U6	Urethane, Hardness 60°
		N6	NBR (Nitrile), Hardness 60°
		S3	Silicone, Hardness 30°
		S5	Silicone, Hardness 50°
		W3	White Silicone, Hardness 30°
		W5	White Silicone, Hardness 50°
		W3(FDA)	White Silicone, Hardness 30° (FDA)
PG	34 42 48	W5(FDA)	White Silicone, Hardness 50° (FDA)
		N5C3	Special compound rubber NBR, 50° hardness
		U6	Urethane, Hardness 60°
		S3	Silicone, Hardness 30°
		S4	Silicone, Hardness 40°
		W3(FDA)	White Silicone, Hardness 30° (FDA)
		W4(FDA)	White Silicone, Hardness 40° (FDA)
XC	50 60	G3	Detectable Silicone, Hardness 30°
		G3(FDA)	Detectable Silicone, Hardness 30° (FDA)
		N6	NBR (Nitrile), Hardness 60°
		S3	Silicone, Hardness 30°
		S5	Silicone, Hardness 50°
		W3	White Silicone, Hardness 30°
		W5	White Silicone, Hardness 50°
SB	17 20 25 30	W3(FDA)	White Silicone, Hardness 30° (FDA)
		W5(FDA)	White Silicone, Hardness 50° (FDA)
		N5C3	Special compound rubber NBR, 50° hardness
		U6	Urethane, Hardness 60°
		N6	NBR (Nitrile), Hardness 60°
		S3	Silicone, Hardness 30°
		S5	Silicone, Hardness 50°

Fitting



Top bellows



Filter



Middle bellows



Stopper



Suction lip



Suction Stopper



Model	Description
Suction Stopper	
A	For "X" suction lip
B	For "X", "U", and "F" suction lip
C	For "X", "U", and "F" suction lip
D	For "X", "U", "F", "P", "DD", "MBU" and "MD" suction lip
F	For "S" suction lip
G	For "MU" and "MF" suction lip

Filter



Model	Description
Filter	
Blank	No Filter
F2	Mesh disk filter (200mesh)

Fitting



Model	Description
Fitting	
18M	G1/8" male fitting
18F	G1/8" female fitting
14M	G1/4" male fitting
14F	G1/4" female fitting
38M	G3/8" male fitting
38F	G3/8" female fitting

*Only for 60 bellows size

Ordering No. Example

B5.0/40 – X55 – S5 – D – F2 – 18M

①

②

③

④

⑤

⑥

Bellows

Suction Lip

Material

Suction Stopper

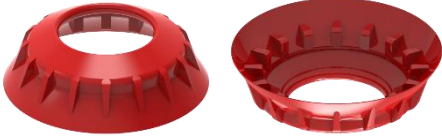
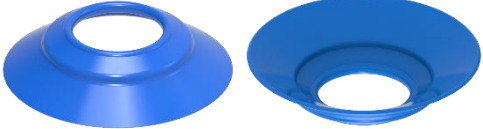



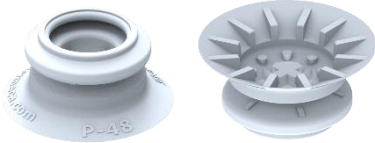


Filter

Fitting


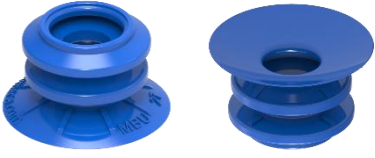






Magic Suction Cup Application






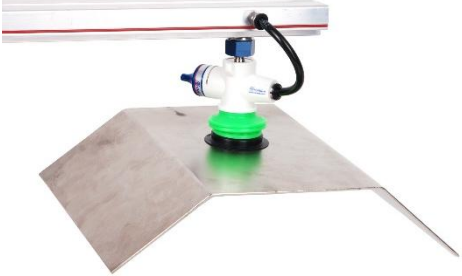




Suction lips

"X" lip	"U" lip
	
<ul style="list-style-type: none"> • X suction lip is excellent in handling thin, light and flexible plastic bag applications • Ice cream bags, Aluminum foil 	<ul style="list-style-type: none"> • U suction lip is excellent in handling flat and slightly curved object applications • Carton boxes, Flat objects
	
"F" lip	"P" lip
	
<ul style="list-style-type: none"> • F suction lip is excellent in handling flat object applications • Thin boxes, Wooden panel, glass 	<ul style="list-style-type: none"> • P suction lip is excellent in handling heavy or thick plastic bag applications • Liquid filled plastic bags, Powder filled plastic bags
	

Suction lips

"DD" lip	"MBU" lip
	
<ul style="list-style-type: none"> DD suction lip is excellent for irregular curved surface, rough surface, and dual lip design offers a safety factor against suction lip wear and tear. 	<ul style="list-style-type: none"> MBU suction lip is excellent in compensating the height difference for curved objects
	
"MD" lip	"S" lip
	
<ul style="list-style-type: none"> MD suction lip is suitable for curved or uneven surface with excellence performance for rounded corners and edges 	<ul style="list-style-type: none"> S suction lip is excellent in handling uneven surface and Mark free as optional material
	


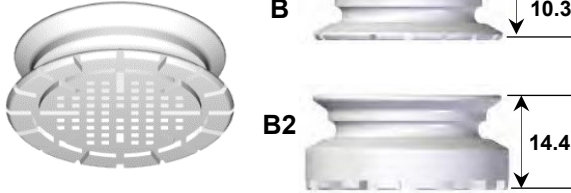
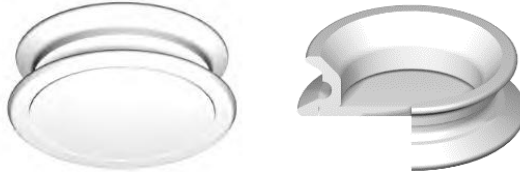
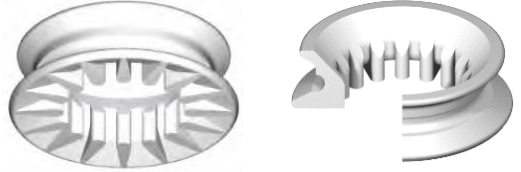


Suction lips

"MU" lip	"MF" lip
	
<ul style="list-style-type: none"> • MU suction lip offers great gripping force for flat and stable surfaces • Carton boxes, Glass, Veneer sheets 	<ul style="list-style-type: none"> • MF suction lip offers great gripping force for both horizontal and vertical applications • Metal sheets, Carton boxes, Glass, Veneer sheets
	
"XP(B)" lip	"PP" lip
	
<ul style="list-style-type: none"> • XP(B) suction lip is excellent in handling very thin and flexible plastic bags • Very thin plastic bags, Pouch bags 	<ul style="list-style-type: none"> • PP suction lip is excellent for thin plastic bags and thick plastic bag opening applications • Thin and thick plastic bags
	

Suction lips

"C" lip	"PG" lip
	
<ul style="list-style-type: none"> · C suction lip is excellent for cans with easy open end · Cans with easy open end 	<ul style="list-style-type: none"> · C suction lip is excellent for various pick and place applications of plastic packages · Thin plastic bag, liquid pouch, round produce
	
"XC" lip	"SB" lip
	
<ul style="list-style-type: none"> · XC suction lip is suitable for very thin and deformable (uneven) plastic package handling · Thin and flexible plastic bags 	<ul style="list-style-type: none"> · SB suction lip is designed to prevent the vacuum suction marks · Plastic pouch, thin film and sheet, copper plate
	

Suction Stoppers

Stopper A	Stopper B & B2
	
<ul style="list-style-type: none"> · Recommended with X suction lip · Suitable for thin and light plastic bags 	<ul style="list-style-type: none"> · Recommended with X, U & F suction lip · Suitable for plastic bags, flexible objects · Minimized mark for plastic bags
Stopper C	Stopper D
	
<ul style="list-style-type: none"> · Recommended with X, U & F suction lip · Vacuum filter (PE) integrated · No mark for film, aluminum foil, and thin sheets 	<ul style="list-style-type: none"> · Recommended with X,U,F,P,MBU,DD & MD suction lip · Use for connecting each bellows cartridge · Suitable for flat and thin objects
Stopper F	Stopper G
	
<ul style="list-style-type: none"> · Recommended with S suction lip · Sponge suction lip 	<ul style="list-style-type: none"> · Recommended with MU & MF suction lip · Stopper is not visible when used with suction lip "MU" and "MF" type

Height of before and after compression of bellows



[Unit : mm]

Model	Before Compression	After Compression
TB1.5/20	11	9.5
TB1.5/40	17.5	11
TB1.5/60	26	17
TB2.5/20	19	11
TB2.5/40	28	17
TB2.5/60	39.5	23
B4.0/20	22	15
B4.0/40	42	23
B5.0/20	27	18
B5.0/40	49	27.5
B5.0/60	71	36
B6.0/20	33	20
B6.0/40	56	33
B6.0/60	84	43
MB2.5/20	11	5.5
MB2.5/40	26	10
MB3.5/20	15.5	8
MB3.5/40	33.5	15
MB3.5/60	47.5	22.5
TBL2.5/20	22.5	10
TBL2.5/40	35	19
EB1.5/20	15.5	11
EB1.5/40	25	17
EB2.5/20	26	17
EB2.5/40	36	21
MBL2.5/20	23	11
MBL2.5/40	39	21

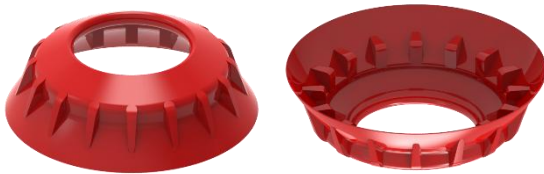
Magic 

Suction Cups

Magic Suction Cup – “X” type

Page 28

X-type Magic suction cups are excellent for handling thin plastic bag applications.



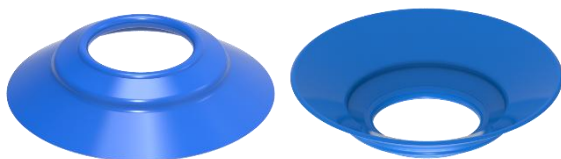
Example of Use

- Plastic bag opening
- Uneven surface products
- Packaging materials
- Plastic sheets
- Thin-film sheets

Magic Suction Cup – “U” type

Page 35

U-type Magic suction cups are excellent for handling flat and slightly curved surface objects



Example of Use

- Carton Boxes
- Thin metal sheets
- Glass
- Plastic sheets

Magic 

Suction Cups

Magic Suction Cup – “F” type

Page 40

F-type Magic suction cups are excellent for handling flat surface objects



Example of Use

- Carton boxes
- Thin metal sheets
- Glass
- Plastic sheets

Magic Suction Cup – “P” type

Page 44

P-type Magic suction cups are excellent for handling thin plastic bag applications.



Example of Use

- Heavy plastic bags
- Liquid filled plastic bags
- Powder filled plastic bags

Magic 

Suction Cups

Magic Suction Cup – “DD” type

Page 52

DD-type Magic suction cups are excellent for handling curved and rough-surface objects



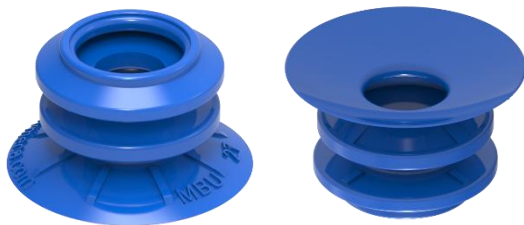
Example of Use

- Irregular curved products
- Rough surface products
- Food (Fruits, Eggs)
- Plastic products

Magic Suction Cup – “MBU” type

Page 56

MBU-type Magic suction cups are excellent for handling curved surface objects



Example of Use

- Concaved surface products
- Plastic bags
- Metal sheets
- Plywood

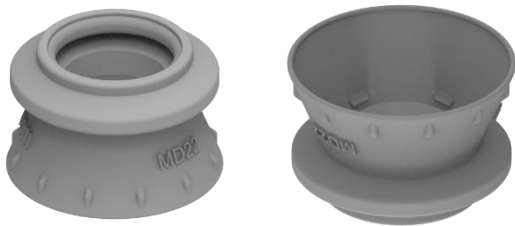
Magic 

Suction Cups

Magic Suction Cup – “MD” type

Page 60

MD-type Magic suction cups are excellent for handling irregular and curved surface objects



Example of Use

- Metal sheets
- Rough surface products
- Veneer sheets

Magic Suction Cup – “S” type

Page 64

P-type Magic suction cups are excellent for handling thin plastic bag applications.



Example of Use

- Uneven surface products
- Bricks
- Marbles
- Metal sheets
- Wood

Magic 

Suction Cups

Magic Suction Cup – “MU” type

Page 74

MU-type Magic suction cups are excellent for handling flat surface objects



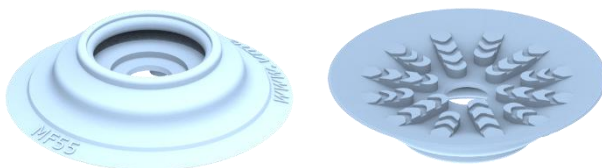
Example of Use

- Metal sheets
- Carton boxes
- Glass
- Plastic sheets

Magic Suction Cup – “MF” type

Page 79

MF-type magic suction cups have very strong suction power, so vertical transfer is possible



Example of Use

- Metal sheets
- Carton boxes
- Glass
- Plastic sheets

Magic 

Suction Cups

Magic Suction Cup – “XP” type

Page 84

XP(B)-type Magic suction cups are excellent for handling thin plastic bag applications



Example of Use

- Very thin plastic bags
- Pouch bags
- Packaging materials

Magic Suction Cup – “PP” type

Page 91

PP-type Magic suction cups are excellent for thin plastic bags handling and bag opening.



Example of Use

- Thin and thick plastic bags

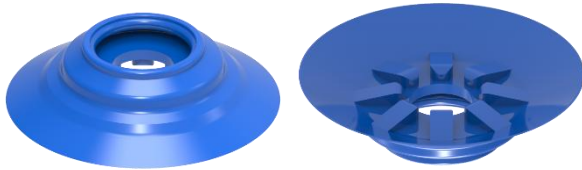
Magic 

Suction Cups

Magic Suction Cup – “C” type

Page 95

C-type Magic suction cups are excellent for cans with easy open end



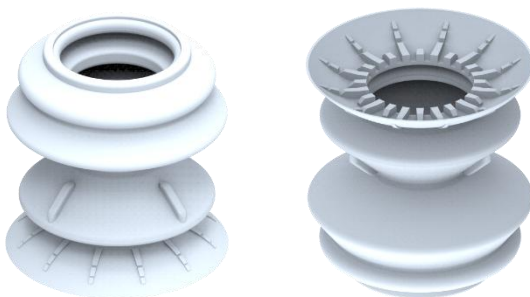
Example of Use

- Cans with easy open end
- Flexible thin & wide suction lips

Magic Suction Cup – “PG” type

Page 99

PG-type Magic suction cups are excellent for handling plastic packages



Example of Use

- Thin plastic bags
- Liquid pouch
- Round produce

Magic 

Suction Cups

Magic Suction Cup – “XC” type

Page 103

XC-type Magic suction cups are excellent for handling thin and flexible plastic bag applications



Example of Use

- Thin and flexible plastic bags
- Flexible pouch bags

Magic Suction Cup – “SB” type

Page 107

SB-series Magic suction cup designed to prevent the vacuum suction marks



Example of Use

- Plastic pouch
- Thin film and sheet, Copper plate

X type

■ Features and Strengths

- ✓ Excellent in handling very thin and flexible plastic bags
- ✓ Various stopper & lip material options to cover a wide range of vacuum applications



■ Example of use

- ✓ Very thin plastic bags, Pouch bags

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-XB12	2.2	0.14	0.31	0.42
B1.5/20-XB15	2.5	0.20	0.42	0.48
B1.5/20-XB17	2.6	0.27	0.44	0.54
B1.5/20-XB20	3.2	0.31	0.56	0.68
B1.5/20-X25	2.93	0.80	1.79	2.44
B1.5/20-X30	4.53	1.08	2.13	2.62
B1.5/40-X40	14.9	1.80	4.60	7.40
B1.5/40-X45	17.8	2.14	3.57	5.00
B1.5/40-X50	23.2	2.30	5.50	8.30
B1.5/40-X55	23.05	2.60	5.27	5.92
B1.5/60-X65	43	4.80	11.50	15.90
B1.5/60-X75	62.5	5.60	12.30	17.90
B2.5/20-XB12	3.9	0.14	0.31	0.42
B2.5/20-XB15	4.2	0.20	0.42	0.48
B2.5/20-XB17	4.4	0.27	0.44	0.54
B2.5/20-XB20	4.9	0.31	0.56	0.68
B2.5/20-X25	5.04	0.80	1.79	2.44
B2.5/20-X30	6.64	1.08	2.13	2.62
B2.5/40-X40	19.4	1.80	4.60	7.40
B2.5/40-X45	25.2	2.14	3.57	5.00
B2.5/40-X50	27.6	2.30	5.50	8.30
B2.5/40-X55	32.4	2.60	5.27	5.92
B2.5/60-X65	63.8	4.80	11.50	15.90
B2.5/60-X75	83.3	5.60	12.30	17.90
B4.0/20-XB12	3.9	0.14	0.31	0.42
B4.0/20-XB15	4.3	0.20	0.42	0.48
B4.0/20-XB17	4.4	0.27	0.44	0.54
B4.0/20-XB20	4.9	0.31	0.56	0.68
B4.0/20-X25	4.77	0.80	1.79	2.44
B4.0/20-X30	6.37	1.08	2.13	2.62
B4.0/40-X40	27.7	1.80	4.60	7.40
B4.0/40-X45	31	2.14	3.57	5.00

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B4.0/40-X50	35.9	2.30	5.50	8.30
B4.0/40-X55	38.2	2.60	5.27	5.92
B5.0/20-XB12	5.1	0.14	0.31	0.42
B5.0/20-XB15	5.4	0.20	0.42	0.48
B5.0/20-XB17	5.6	0.27	0.44	0.54
B5.0/20-XB20	6.1	0.31	0.56	0.68
B5.0/20-X25	5.93	0.80	1.79	2.44
B5.0/20-X30	7.53	1.08	2.13	2.62
B5.0/40-X40	34.5	1.80	4.60	7.40
B5.0/40-X45	37.8	2.14	3.57	5.00
B5.0/40-X50	42.7	2.30	5.50	8.30
B5.0/40-X55	45.0	2.60	5.27	5.92
B5.0/60-X65	104.8	4.80	11.50	15.90
B5.0/60-X75	124.3	5.60	12.30	17.90
B6.0/20-XB12	6.9	0.14	0.31	0.42
B6.0/20-XB15	7.2	0.20	0.42	0.48
B6.0/20-XB17	7.3	0.27	0.44	0.54
B6.0/20-XB20	7.9	0.31	0.56	0.68
B6.0/20-X25	8.02	0.80	1.79	2.44
B6.0/20-X30	9.62	1.08	2.13	2.62
B6.0/40-X40	39.0	1.80	4.60	7.40
B6.0/40-X45	45.1	2.14	3.57	5.00
B6.0/40-X50	47.2	2.30	5.50	8.30
B6.0/40-X55	52.3	2.60	5.27	5.92
B6.0/60-X65	126.6	4.80	11.50	15.90
B6.0/60-X75	146.1	5.60	12.30	17.90

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100
PU - Polyurethane	60	Translucent Orange	0~60

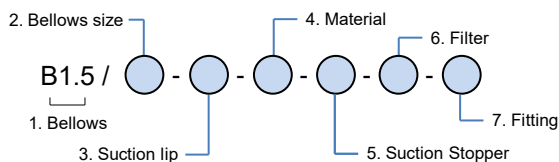
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C







** For additional materials, please contact us

Material Resistance

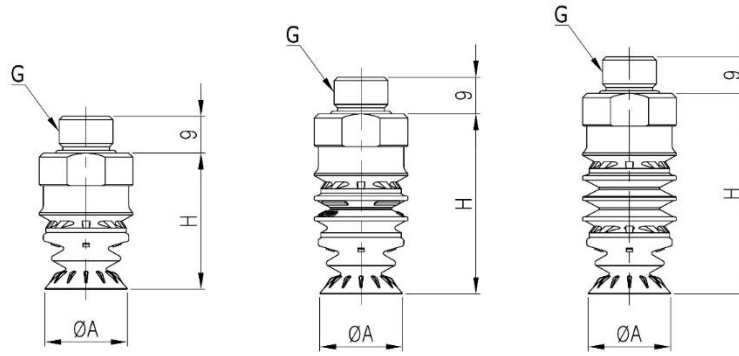
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane	Polyurethane
Wear Resistance	Excellent	Good	Good	Excellent	Excellent
Oil	Excellent	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair	Fair
Acid	Fair	Poor	Poor	Poor	Fair

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter: For XB12 & XB15 & XB17 & XB20 & X25 & X30	20
	40mm bellows diameter: For X40 & X45 & X50 & X55	40
	60mm bellows diameter: For X65 & X75	60
3. Suction lip	Description	Ordering No.
	XB type lip, 12mm diameter	XB12
	XB type lip, 15mm diameter	XB15
	XB type lip, 17mm diameter	XB17
	XB type lip, 20mm diameter	XB20
	X type lip, 25mm diameter	X25
	X type lip, 30mm diameter	X30
	X type lip, 40mm diameter	X40
	X type lip, 45mm diameter	X45
	X type lip, 50mm diameter	X50
	X type lip, 55mm diameter	X55
	X type lip, 65mm diameter	X65
X type lip, 75mm diameter	X75	
4. Materials	Description	Symbol
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
	Polyurethan: Available for X25 & X30 & X45 & X55 only	PU
5. Suction Stopper	Description	Ordering No.
	A type	A
	B type	B
	C type	C
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data



[B1.5/20 series]

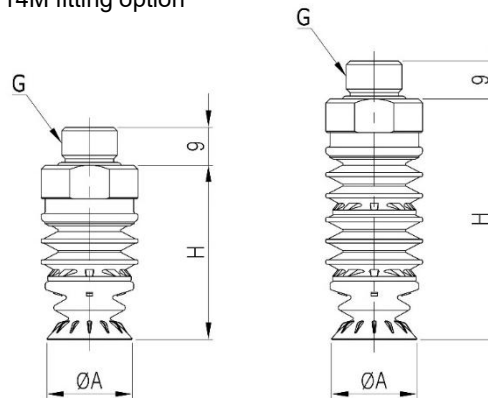
[B4.0/20 series]

[B5.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-XB12	12.3	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	30.9	22.1
B1.5/20-XB15	15.3		33	23.7
B1.5/20-XB17	17.3		32.5	22.2
B1.5/20-XB20	20.3		33.4	23.4
B4.0/20-XB12	12.3		42	30.2
B4.0/20-XB15	15.3		44.1	30.7
B4.0/20-XB17	17.3		43.6	29.1
B4.0/20-XB20	20.3		44.5	29.9
B5.0/20-XB12	12.3		47	33.2
B5.0/20-XB15	15.3		49.1	34.3
B5.0/20-XB17	17.3		48.6	33.3
B5.0/20-XB20	20.3		49.5	32.7

*Dimension "H" is measured with 14M fitting option



[Unit : mm]

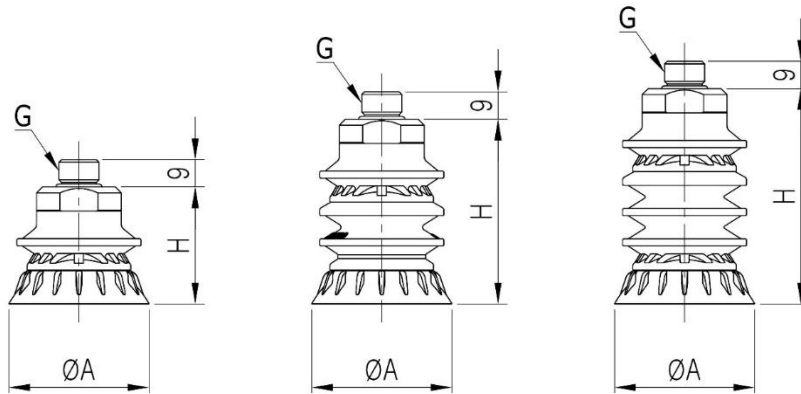
[B2.5/20 series]

[B6.0/20 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-XB12	12.3	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	38.8	27.3
B2.5/20-XB15	15.3		40.9	28
B2.5/20-XB17	17.3		40.4	26.6
B2.5/20-XB20	20.3		41.3	26.9
B6.0/20-XB12	12.3		54.5	35.2
B6.0/20-XB15	15.3		56.6	36.8
B6.0/20-XB17	17.3		56.1	36.3
B6.0/20-XB20	20.3		57	35.9

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B1.5/20&40&60 series]

[B4.0/20&40&60 series]

[B5.0/20&40&60 series]

[Unit : mm]

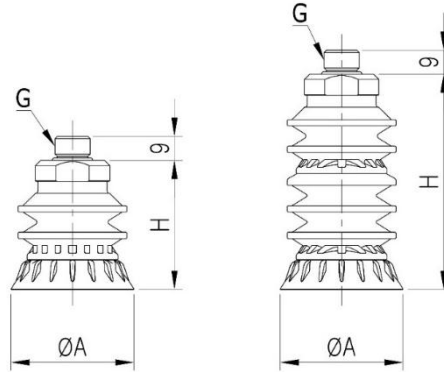
Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-X25	26		25.4	20.6
B1.5/20-X30	32		26.8	21
B1.5/40-X40	40		35.8	27.8
B1.5/40-X45	46		38.6	29.1
B1.5/40-X50	50		40.2	30
B1.5/40-X55	54.5		41.6	29.5
B1.5/60-X65	65		50.7	33.8
B1.5/60-X75	75		55.7	39
B4.0/20-X25	26		49.2	44.4
B4.0/20-X30	32		50.8	45
B4.0/40-X40	40		61.6	53.6
B4.0/40-X45	46		64.4	54.9
B4.0/40-X50	50		66	55.8
B4.0/40-X55	54.5		67.4	55.3
B4.0/60-X65	65		81	64.1
B4.0/60-X75	75	86	69.3	
B5.0/20-X25	26	41.1	36.3	
B5.0/20-X30	32	41.9	36.1	
B5.0/40-X40	40	72	64	
B5.0/40-X45	46	70.9	61.4	
B5.0/40-X50	50	76.4	66.2	
B5.0/40-X55	54.5	72.6	60.5	
B5.0/60-X65	65	97.2	80.3	
B5.0/60-X75	75	102.2	85.5	

[Bellows Ø20]
 Female thread : 1/8", 1/4"
 Male thread : 1/8", 1/4", 3/8"

[Bellows Ø40,Ø60]
 Female thread : 1/8", 1/4", 3/8"
 Male thread : 1/8", 1/4", 3/8"

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B2.5/20&40&60 series]

[B6.0/20&40&60 series]

[Unit : mm]

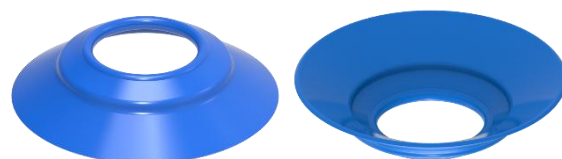
Model	ØA	G	Height		
			Before Compression	After Compression	
B2.5/20-X25	26	[Bellows Ø20] Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	33.3	28.5	
B2.5/20-X30	32		34.9	29.1	
B2.5/40-X40	40		45.7	37.7	
B2.5/40-X45	46		48.5	39	
B2.5/40-X50	50		50.1	39.9	
B2.5/40-X55	54.5		51.5	39.4	
B2.5/60-X65	65		65.1	48.2	
B2.5/60-X75	75		70.1	53.4	
B6.0/20-X25	26		[Bellows Ø40, Ø60] Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	49	44.2
B6.0/20-X30	32			50.5	44.7
B6.0/40-X40	40	77.7		69.7	
B6.0/40-X45	46	80.5		71	
B6.0/40-X50	50	82.1		71.9	
B6.0/40-X55	54.5	83.5		71.4	
B6.0/60-X65	65	111.6		94.7	
B6.0/60-X75	75	116.6		99.9	

*Dimension "H" is measured with 14M fitting option

U type

■ Features and Strengths

- ✓ Suitable for flat and slightly curved surface products



■ Example of use

- ✓ Thin metal sheets, Carton boxes, Veneer sheets, Glasses

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-U25	1.83	0.83	2.2	3.06
B1.5/20-U30	2.63	1.22	2.45	3.06
B1.5/40-U45	12.1	2.55	5.66	9.18
B1.5/40-U55	17	3.78	7.09	9.56
B1.5/60-U65	28.8	5.3	13.3	19.4
B1.5/60-U75	40.4	6.6	15	20.5
B2.5/20-U25	3.94	0.83	2.2	3.06
B2.5/20-U30	4.74	1.22	2.45	3.06
B2.5/40-U45	19.5	2.55	5.66	9.18
B2.5/40-U55	24.4	3.78	7.09	9.56
B2.5/60-U65	49.6	5.3	13.3	19.4
B2.5/60-U75	61.2	6.6	15	20.5
B4.0/20-U25	3.67	0.83	2.2	3.06
B4.0/20-U30	4.47	1.22	2.45	3.06
B4.0/40-U45	25.3	2.55	5.66	9.18
B4.0/40-U55	30.2	3.78	7.09	9.56
B5.0/20-U25	4.83	0.83	2.2	3.06
B5.0/20-U30	5.63	1.22	2.45	3.06
B5.0/40-U45	32.1	2.55	5.66	9.18
B5.0/40-U55	37	3.78	7.09	9.56
B5.0/60-U65	49.6	5.3	13.3	19.4
B5.0/60-U75	61.2	6.6	15	20.5
B6.0/20-U25	6.92	0.83	2.2	3.06
B6.0/20-U30	7.72	1.22	2.45	3.06
B6.0/40-U45	39.4	2.55	5.66	9.18
B6.0/40-U55	44.3	3.78	7.09	9.56
B6.0/60-U65	126.6	5.3	13.3	19.4
B6.0/60-U75	146.1	6.6	15	20.5

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100
PU - Polyurethane	60	Translucent Orange	0~60

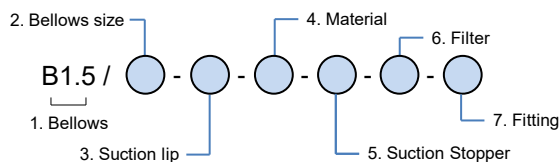
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C

** For additional materials, please contact us

Material Resistance

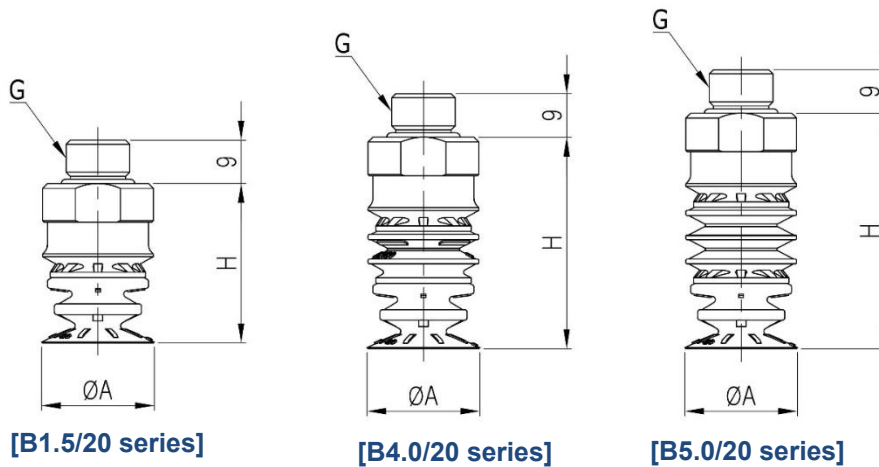
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane	Polyurethane
Wear Resistance	Excellent	Good	Good	Excellent	Excellent
Oil	Excellent	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair	Fair
Acid	Fair	Poor	Poor	Poor	Fair

Build an Ordering No.



1. Top bellows	Description	Symbol
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellow size	Description	Symbol
	20mm bellow diameter: For U25 & U30	20
	40mm bellow diameter: For U45 & U55	40
	60mm bellow diameter: For U65 & U75	60
3. Suction lips	Description	Symbol
	U type lip, 25mm diameter	U25
	U type lip, 30mm diameter	U30
	U type lip, 45mm diameter	U45
	U type lip, 55mm diameter	U55
	U type lip, 65mm diameter	U65
	U type lip, 75mm diameter	U75
4. Materials	Description	Symbol
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
	Polyurethan: Available for U25 & U30 & U45 & U55	PU
5. Suction Stoppers	Description	Symbol
	B type	B
	C type	C
	D type	D
6. Filter	Description	Symbol
	No filter	Blank
	Mesh disk filter (200mesh)	F2
7. Fittings	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data

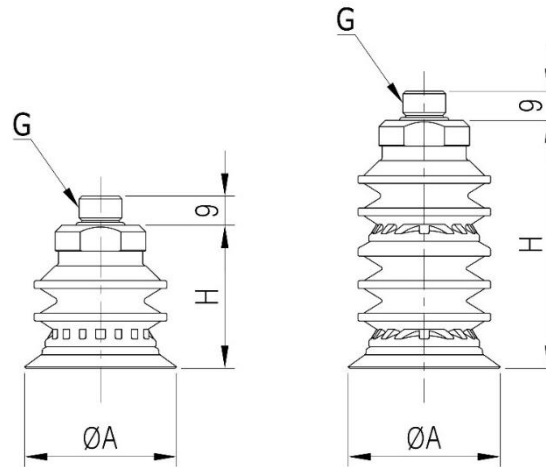


[Unit : mm]

Model	ØA	G	Height		
			Before Compression	After Compression	
B1.5/20-U25	26	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	22.9	18.4	
B1.5/20-U30	33		23.8	17.9	
B1.5/40-U45	47		34.1	26.1	
B1.5/40-U55	55		36.9	26.5	
B1.5/60-U65	65		45.4	32.1	
B1.5/60-U75	75		49.1	32.2	
B4.0/20-U25	26		Bellows Ø40, Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	33.5	29
B4.0/20-U30	33			34.5	28.6
B4.0/40-U45	47			56.2	48.2
B4.0/40-U55	55			59	48.6
B5.0/20-U25	26			38.5	34
B5.0/20-U30	33			39.5	33.6
B5.0/40-U45	47	66.4		58.4	
B5.0/40-U55	55	68.9		58.5	
B5.0/60-U65	65	91.9		78.6	
B5.0/60-U75	75	95.6		78.7	

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B2.5/20&40&60 series] [B6.0/20&40&60 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-U25	26	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	30.8	26.3
B2.5/20-U30	33		31.8	25.9
B2.5/40-U45	47		44	36
B2.5/40-U55	55		46	35.6
B2.5/60-U65	65		59.8	46.5
B2.5/60-U75	75		63.5	46.6
B6.0/20-U25	26		Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	46.5
B6.0/20-U30	33	47.6		41.7
B6.0/40-U45	47	76.5		68.5
B6.0/40-U55	55	79.3		68.9
B6.0/60-U65	65	106.3		93
B6.0/60-U75	75	110		93.1

*Dimension "H" is measured with 14M fitting option

F type

■ Features and Strengths

- ✓ Suitable for flat surface products



■ Example of use

- ✓ Yogurts, Thin metal sheets, Carton boxes, Veneer sheets, Glasses

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-F25	1.53	1.4	2.9	3.7
B1.5/20-F30	2.03	1.9	3.8	4.3
B1.5/40-F45	10.9	3.4	8	9.3
B1.5/40-F55	11.7	4.4	9.9	11.9
B2.5/20-F25	3.64	1.4	2.9	3.7
B2.5/20-F30	4.14	1.9	3.8	4.3
B2.5/40-F45	18.3	3.4	8	9.3
B2.5/40-F55	19.1	4.4	9.9	11.9
B4.0/20-F25	3.37	1.4	2.9	3.7
B4.0/20-F30	3.87	1.9	3.8	4.3
B4.0/40-F45	24.1	3.4	8	9.3
B4.0/40-F55	24.9	4.4	9.9	11.9
B5.0/20-F25	4.53	1.4	2.9	3.7
B5.0/20-F30	5.03	1.9	3.8	4.3
B5.0/40-F45	30.9	3.4	8	9.3
B5.0/40-F55	31.7	4.4	9.9	11.9
B6.0/20-F25	6.62	1.4	2.9	3.7
B6.0/20-F30	7.12	1.9	3.8	4.3
B6.0/40-F45	38.2	3.4	8	9.3
B6.0/40-F55	39.0	4.4	9.9	11.9

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
PU - Polyurethane	60	Translucent Orange	0~60

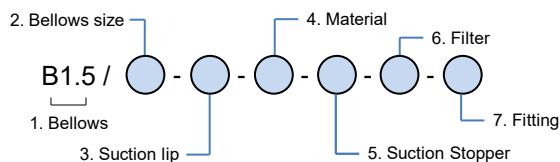
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C



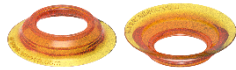



** For additional materials, please contact us

Material Resistance

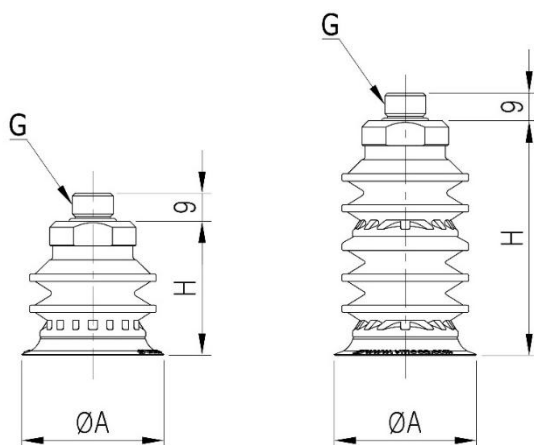
Description	Polyurethane
Wear Resistance	Excellent
Oil	Excellent
Weather / Ozone	Excellent
Alcohol	Fair
Acid	Fair

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellow diameter: For F25 & F30	20
	40mm bellow diameter: For F45 & F55	40
3. Suction lip	Description	Ordering No.
	F type lip, 25mm diameter	F25
	F type lip, 30mm diameter	F30
	F type lip, 45mm diameter	F45
	F type lip, 55mm diameter	F55
4. Material	Description	Ordering No.
	Polyurethane	PU
5. Suction Stopper	Description	Ordering No.
	B type	B
	C type	C
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M

Dimension Data



[Unit : mm]

[B2.5/20&40&60 series]

[B6.0/20&40&60 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-F25	26	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	30.3	27.2
B2.5/20-F30	33		31	26.1
B2.5/40-F45	47		43.3	37.1
B2.5/40-F55	55		43.3	37.1
B6.0/20-F25	26	Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	46	42.9
B6.0/20-F30	33		46.7	41.8
B6.0/40-F45	47		75.3	69.1
B6.0/40-F55	55		75.3	69.1

*Dimension "H" is measured with 14M fitting option

P type

■ Features and Strengths

- ✓ Excellent for thin plastic bags



■ Example of use

- ✓ Thin plastic bags

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-PB12	2.2	0.22	0.37	0.46
B1.5/20-P15	1.43	0.3	0.5	0.6
B1.5/20-P17	1.53	0.3	0.6	0.7
B1.5/20-P20	1.83	0.4	0.8	0.9
B1.5/20-P27	2.73	0.8	1.7	2.8
B1.5/20-P30	4.2	0.94	1.79	2.05
B1.5/20-P32	4.13	1.7	3.4	4.6
B1.5/40-P40	15.5	1.20	2.70	3.70
B1.5/40-P45	17.5	1.70	3.40	4.40
B1.5/40-P48	14.4	2.6	5.5	7.2
B1.5/40-P52	20.8	2.10	4.10	4.70
B1.5/40-P56	23.2	2.20	4.60	5.50
B1.5/60-P60	21.5	4.6	10.4	14.7
B1.5/60-P72	36.2	6.6	14.9	20.7
B1.5/60-P85	41.5	7.6	16.3	21.9
B2.5/20-PB12	4	0.22	0.37	0.46
B2.5/20-P15	3.54	0.3	0.5	0.6
B2.5/20-P17	3.64	0.3	0.6	0.7
B2.5/20-P20	3.94	0.4	0.8	0.9
B2.5/20-P27	4.84	0.8	1.7	2.8
B2.5/20-P30	6	0.94	1.79	2.05
B2.5/20-P32	6.24	1.7	3.4	4.6
B2.5/40-P40	19.9	1.20	2.70	3.70
B2.5/40-P45	22.0	1.70	3.40	4.40
B2.5/40-P48	21.8	2.6	5.5	7.2
B2.5/40-P52	25.2	2.10	4.10	4.70
B2.5/40-P56	27.6	2.20	4.60	5.50
B2.5/60-P60	28.9	4.6	10.4	14.7
B2.5/60-P72	38.7	6.6	14.9	20.7
B2.5/60-P85	44.1	7.6	16.3	21.9
B4.0/20-PB12	4	0.22	0.37	0.46
B4.0/20-P15	3.27	0.3	0.5	0.6
B4.0/20-P17	3.37	0.3	0.6	0.7
B4.0/20-P20	3.67	0.4	0.8	0.9

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B4.0/20-P27	4.57	0.8	1.7	2.8
B4.0/20-P30	6.0	0.94	1.79	2.05
B4.0/20-P32	5.97	1.7	3.4	4.6
B4.0/40-P40	28.3	1.20	2.70	3.70
B4.0/40-P45	30.3	1.70	3.40	4.40
B4.0/40-P48	21.8	2.6	5.5	7.2
B4.0/40-P52	33.6	2.10	4.10	4.70
B4.0/40-P56	35.9	2.20	4.60	5.50
B4.0/60-P60	28.9	4.6	10.4	14.7
B4.0/60-P72	36.2	6.6	14.9	20.7
B4.0/60-P85	41.5	7.6	16.3	21.9
B5.0/20-PB12	5.2	0.22	0.37	0.46
B5.0/20-P15	4.43	0.3	0.5	0.6
B5.0/20-P17	4.53	0.3	0.6	0.7
B5.0/20-P20	4.83	0.4	0.8	0.9
B5.0/20-P27	5.73	0.8	1.7	2.8
B5.0/20-P30	7.2	0.94	1.79	2.05
B5.0/20-P32	7.13	1.7	3.4	4.6
B5.0/40-P40	35.0	1.20	2.70	3.70
B5.0/40-P45	37.1	1.70	3.40	4.40
B5.0/40-P48	34.4	2.6	5.5	7.2
B5.0/40-P52	40.3	2.10	4.10	4.70
B5.0/40-P56	42.7	2.20	4.60	5.50
B5.0/60-P60	41.5	4.6	10.4	14.7
B5.0/60-P72	56.5	6.6	14.9	20.7
B5.0/60-P85	61.7	7.6	16.3	21.9
B6.0/20-PB12	7.0	0.22	0.37	0.46
B6.0/20-P15	6.52	0.3	0.5	0.6
B6.0/20-P17	6.62	0.3	0.6	0.7
B6.0/20-P20	6.92	0.4	0.8	0.9
B6.0/20-P27	7.82	0.8	1.7	2.8
B6.0/20-P30	8.9	0.94	1.79	2.05
B6.0/20-P32	9.22	1.7	3.4	4.6
B6.0/40-P40	39.5	1.20	2.70	3.70
B6.0/40-P45	41.5	1.70	3.40	4.40
B6.0/40-P48	41.4	2.6	5.5	7.2
B6.0/40-P52	44.8	2.10	4.10	4.70
B6.0/40-P56	47.2	2.20	4.60	5.50
B6.0/60-P60	48.5	4.6	10.4	14.7
B6.0/60-P72	58.9	6.6	14.9	20.7
B6.0/60-P85	61.7	7.6	16.3	21.9

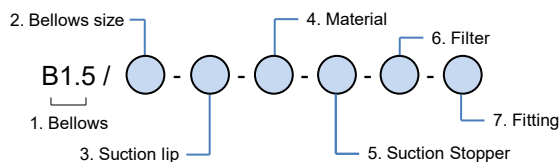
Material Specification



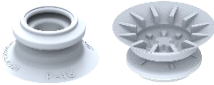



Material	Hardness Shore (°)	Color	Temperature (°C)
NBR (Nitrile)	60	Black	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
WS3 - White Silicone	30	Translucent White	-70~200
WS5 - White Silicone	50	Translucent White	-70~200
Urethane	60	Dark Grey	0~100

Material Resistance

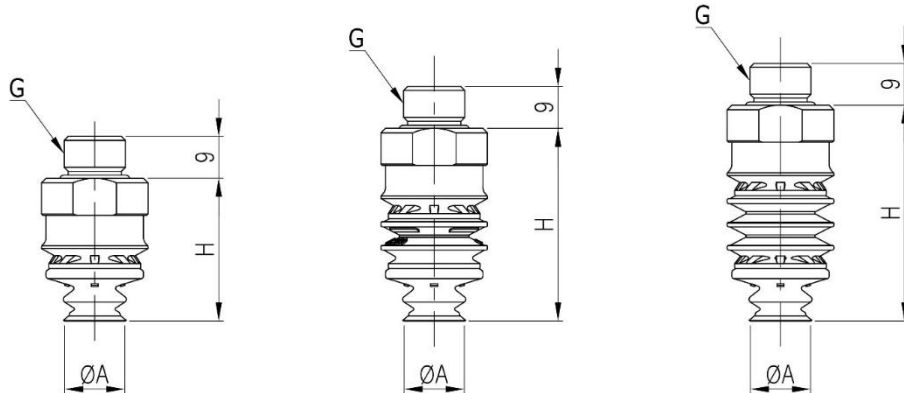
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellow diameter: For P15, P17, P20, P27 & P32	20
	40mm bellow diameter: For P48 & P60	40
	60mm bellow diameter: For P72 & P85	60
3. Suction lip	Description	Ordering No.
	PB type lip, 12mm diameter	PB12
	P type lip, 15mm diameter	P15
	P type lip, 17mm diameter	P17
	P type lip, 20mm diameter	P20
	P type lip, 27mm diameter	P27
	P type lip, 30mm diameter	P30
	P type lip, 32mm diameter	P32
	P type lip, 40mm diameter	P40
	P type lip, 45mm diameter	P45
	P type lip, 48mm diameter	P48
	P type lip, 52mm diameter	P52
	P type lip, 56mm diameter	P56
	P type lip, 60mm diameter	P60
P type lip, 72mm diameter	P72	
P type lip, 85mm diameter	P85	
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data



[B1.5/20 series]

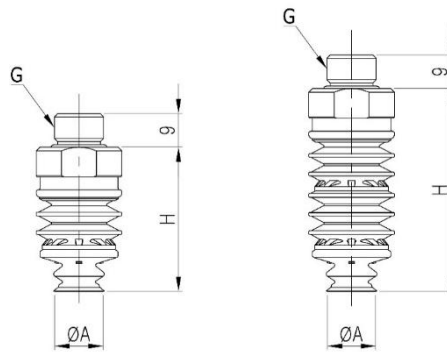
[B4.0/20 series]

[B5.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-PB12	13.6	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	30.3	21.5
B4.0/20-PB12	13.6		41.1	28.4
B5.0/20-PB12	13.6		46.1	30.5

*Dimension "H" is measured with 14M fitting option



[B2.5/20 series]

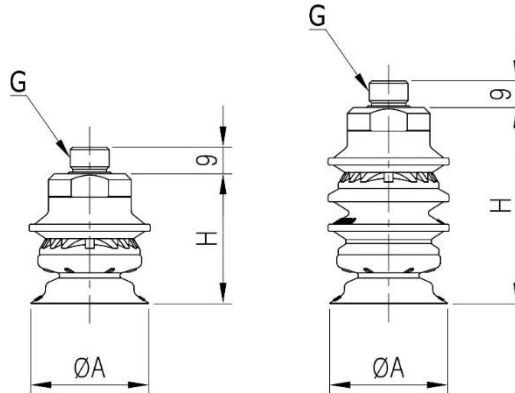
[B6.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-PB12	22	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	38.3	25.4
B6.0/20-PB12	22		54.1	34.9

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B1.5/20&40&60 series]

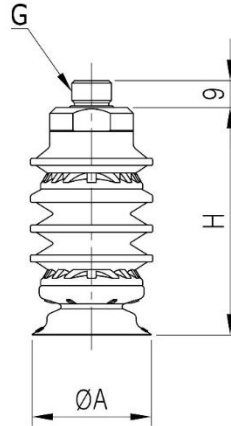
[B4.0/20&40&60 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20 – P15	15.5	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	28.1	5.2
B1.5/20 – P17	17		28.5	6.1
B1.5/20 – P20	20		29.4	4.7
B1.5/20 – P27	27		30.4	8.2
B1.5/20 – P30	30		31.8	8
B1.5/20 – P32	34		32.8	9.5
B1.5/40 – P40	40		44	11.1
B1.5/40 – P45	45		32.4	12.6
B1.5/40 – P48	48		35.8	10.2
B1.5/40 – P52	52		37	10.5
B1.5/40 – P56	56		37.6	10.9
B1.5/60 – P72	72		33.6	15.4
B1.5/60 – P85	85	36.6	17.6	
B4.0/20 – P15	15.5	Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	36	20.2
B4.0/20 – P17	17		38.9	9
B4.0/20 – P20	20		39.3	10.7
B4.0/20 – P27	27		40.2	9
B4.0/20 – P30	30		41.2	12.3
B4.0/20 – P32	34		42.6	12.4
B4.0/20 – P32	34		43.6	11.7
B4.0/40 – P40	40		66.4	21
B4.0/40 – P45	45		67.4	22.2
B4.0/40 – P48	48		68.4	21.5
B4.0/40 – P52	52		69.9	20.9
B4.0/40 – P56	56		71.9	22.1
B4.0/40 – P60	60	71.4	25.6	

*Dimension "H" is measured with 14M fitting option

Dimension Data



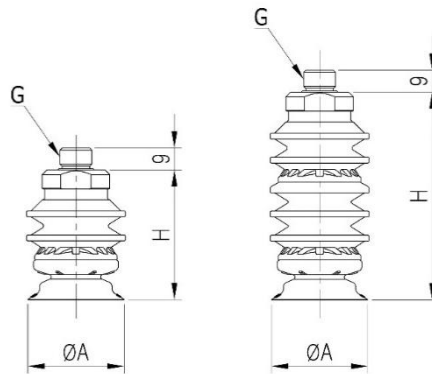
[Unit : mm]

[B5.0/20&40&60 series]

Model	ØA	G	Height		
			Before Compression	After Compression	
B5.0/20 – P15	15.5	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	43.9	12.8	
B5.0/20 – P17	17		44.3	13.6	
B5.0/20 – P20	20		45.2	13	
B5.0/20 – P27	27		46.2	14.2	
B5.0/20 – P30	30		47.6	14.2	
B5.0/20 – P32	34		48.6	13.1	
B5.0/40 – P40	40		Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	76.3	24.2
B5.0/40 – P45	45			77.3	26.9
B5.0/40 – P48	48			78.3	25.6
B5.0/40 – P52	52			79.8	25.3
B5.0/40 – P56	56	81.8		26.3	
B5.0/40 – P60	60	81.3		30.2	
B5.0/60 – P72	72	100.7		42.2	
B5.0/60 – P85	85	102.7		44.6	

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B2.5/20&40&60 series] [B6.0/20&40&60 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20 – P15	15.5	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	36.1	27.9
B2.5/20 – P17	17		36.5	26
B2.5/20 – P20	20		37.4	29
B2.5/20 – P27	27		38.4	26.8
B2.5/20 – P30	30		38.3	26.5
B2.5/20 – P32	34		40.8	30.3
B2.5/40 – P40	40		54	34.6
B2.5/40 – P45	45		55	34.9
B2.5/40 – P48	48		56	37.6
B2.5/40 – P52	52		57.5	38.8
B2.5/40 – P56	56		59.5	39.7
B2.5/40 – P60	60		59	37.1
B2.5/60 – P72	72		76.6	49.8
B2.5/60 – P85	85		78.6	48.7
B6.0/20 – P15	15.5	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	51.9	36.5
B6.0/20 – P17	17		52.3	34.9
B6.0/20 – P20	20		53.2	37.8
B6.0/20 – P27	27		54.2	36.8
B6.0/20 – P30	30		55.6	37.3
B6.0/20 – P32	34		56.6	40.4
B6.0/40 – P40	40		86.3	52.2
B6.0/40 – P45	45		87.3	53.4
B6.0/40 – P48	48		88.3	56.2
B6.0/40 – P52	52		89.8	56.9
B6.0/40 – P56	56		91.8	58.1
B6.0/40 – P60	60		91.3	53.5
B6.0/60 – P72	72		115.2	62.8
B6.0/60 – P85	85		117.2	62

*Dimension "H" is measured with 14M fitting option

DD type

■ Features and Strengths

- ✓ Excellent for irregular curved surface and rough surface
- ✓ Dual lip structure to increase safety caused by lip worn and torn



■ Example of use

- ✓ Food (Fruits), Eggs, Plastic products, Plastic bags

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/40-DD4030	17.36	1.07 / 1.84	2.1 / 3.8	2.76 / 4.79
B2.5/40-DD4030	24.76	1.07 / 1.84	2.1 / 3.8	2.76 / 4.79
B4.0/40-DD4030	30.56	1.07 / 1.84	2.1 / 3.8	2.76 / 4.79
B5.0/40-DD4030	37.36	1.07 / 1.84	2.1 / 3.8	2.76 / 4.79
B6.0/40-DD4030	44.66	1.07 / 1.84	2.1 / 3.8	2.76 / 4.79

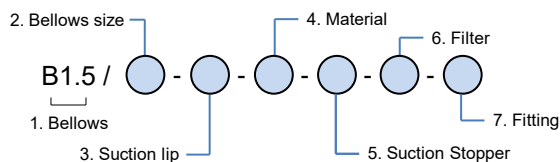
Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

Material Resistance

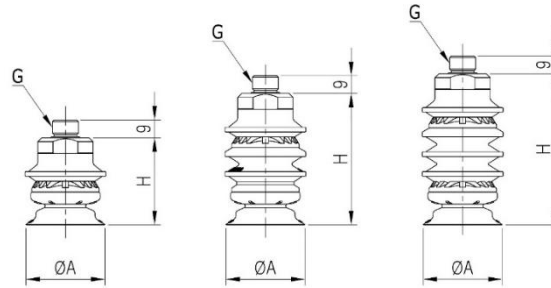
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	40mm bellows diameter:	40
3. Suction lip	Description	Ordering No.
	DD type lip, inner lip 30mm diameter, outer lip 41mm diameter	DD4030
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M

Dimension Data

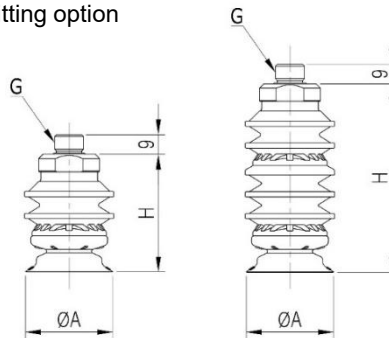


[B1.5/40 series] [B4.0/40 series] [B5.0/40 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/40-DD4030	41	Bellows Ø40	47.9	36.9
B4.0/40-DD4030	41	Female thread : 1/8", 1/4"	70.3	49
B5.0/40-DD4030	41	Male thread : 1/8", 1/4", 3/8"	80.2	55

*Dimension "H" is measured with 14M fitting option



[B2.5/40 series] [B6.0/40 series]

[Unit : mm]

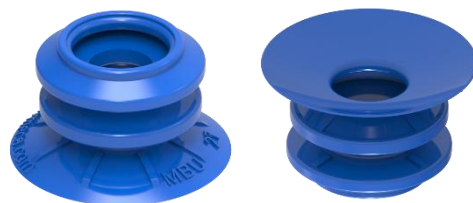
Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/40-DD4030	41	Bellows Ø40 Female thread : 1/8", 1/4"	57.9	43
B6.0/40-DD4030	41	Male thread : 1/8", 1/4", 3/8"	90.2	57.8

*Dimension "H" is measured with 14M fitting option

MBU type

■ Features and Strengths

- ✓ Widely cover for increased degree of height compensation
- ✓ Excellent for curved products



■ Example of use

- ✓ Concaved surface, Plastic bag, Metal sheets, Plywood, Carton box

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-MBU17	1.92	0.39	0.57	0.67
B1.5/20-MBU23	2.49	0.52	0.79	0.91
B1.5/20-MBU27	3.10	0.55	0.94	1.05
B2.5/20-MBU17	4.03	0.39	0.57	0.67
B2.5/20-MBU23	4.60	0.52	0.79	0.91
B2.5/20-MBU27	5.21	0.55	0.94	1.05
B4.0/20-MBU17	3.76	0.39	0.57	0.67
B4.0/20-MBU23	4.33	0.52	0.79	0.91
B4.0/20-MBU27	4.94	0.55	0.94	1.05
B5.0/20-MBU17	4.92	0.39	0.57	0.67
B5.0/20-MBU23	5.49	0.52	0.79	0.91
B5.0/20-MBU27	6.10	0.55	0.94	1.05
B6.0/20-MBU17	7.01	0.39	0.57	0.67
B6.0/20-MBU23	7.58	0.52	0.79	0.91
B6.0/20-MBU27	8.19	0.55	0.94	1.05

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

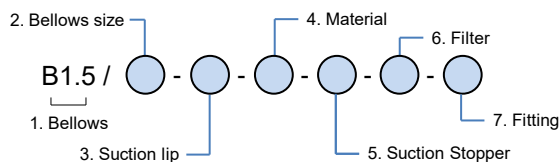
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C



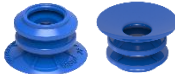



** For additional materials, please contact us

Material Resistance

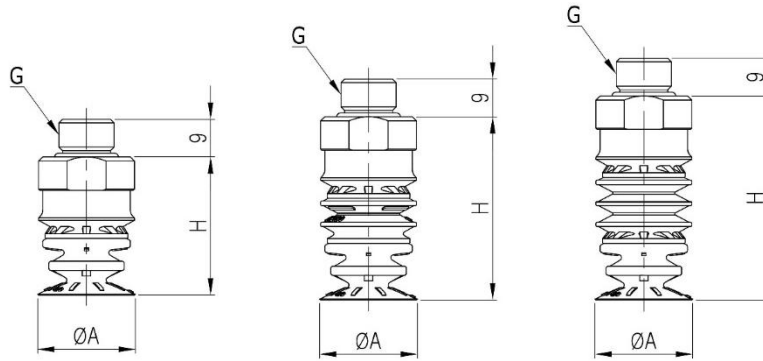
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter:	20
3. Suction lip	Description	Ordering No.
	MBU type lip, 17mm diameter	MBU17
	MBU type lip, 23mm diameter	MBU23
	MBU type lip, 27mm diameter	MBU27
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M

Dimension Data



[Unit : mm]

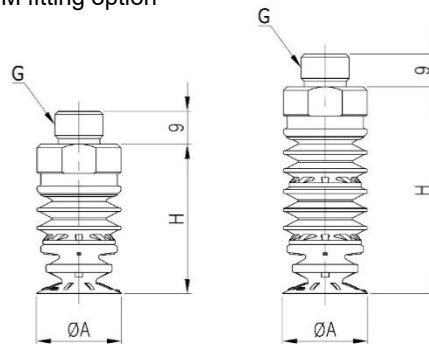
[B1.5/20 series]

[B4.0/20 series]

[B5.0/20 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-17	17	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4" , 3/8"	33	24.1
B1.5/20-MBU23	23		33	22.7
B1.5/20-MBU27	27		33	22.9
B4.0/20-MBU17	17		43.8	30.8
B4.0/20-MBU23	23		43.8	29.7
B4.0/20-MBU27	27		43.8	29.3
B5.0/20-MBU17	17		48.8	33.9
B5.0/20-MBU23	23		48.8	32.2
B5.0/20-MBU27	27		48.8	31

*Dimension "H" is measured with 14M fitting option



[Unit : mm]

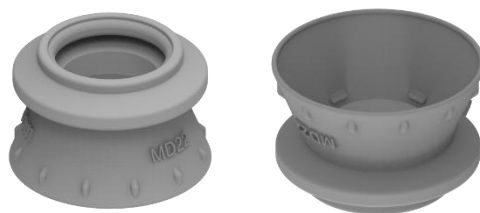
Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-17	17	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4" , 3/8"	33	24.1
B1.5/20-MBU23	23		33	22.7
B1.5/20-MBU27	27		33	22.9
B4.0/20-MBU17	17		43.8	30.8
B4.0/20-MBU23	23		43.8	29.7
B4.0/20-MBU27	27		43.8	29.3
B5.0/20-MBU17	17		48.8	33.9
B5.0/20-MBU23	23		48.8	32.2
B5.0/20-MBU27	27		48.8	31

*Dimension "H" is measured with 14M fitting option

MD type

■ Features and Strengths

- ✓ Suitable for curved or irregular surface
- ✓ Excellent performance for round corners and edges



■ Example of use

- ✓ Automobile roofs and doors, Metal sheets, Veneer sheets

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-MD22	2.67	0.71	1.61	2.20
B2.5/20-MD22	4.78	0.71	1.61	2.20
B4.0/20-MD22	4.51	0.71	1.61	2.20
B5.0/20-MD22	5.67	0.71	1.61	2.20
B6.0/20-MD22	7.76	0.71	1.61	2.20

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

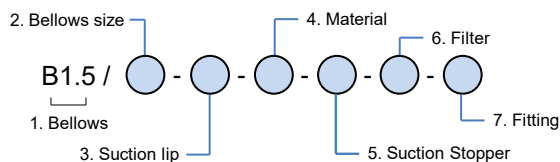
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C







** For additional materials, please contact us

Material Resistance

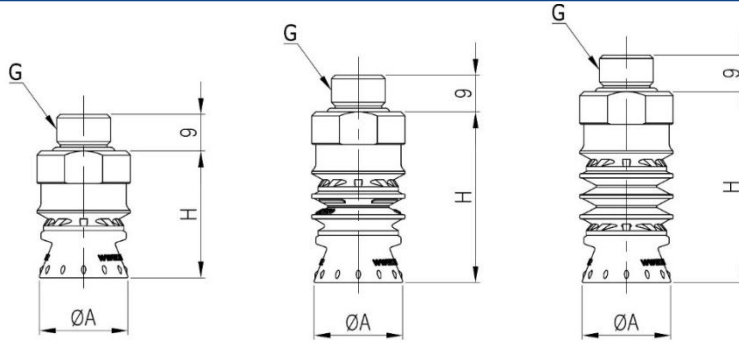
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter:	20
3. Suction lip	Description	Ordering No.
	MD type lip, 22mm diameter	MD22
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
Urethane, 60° hardness	U6	
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M

Dimension Data



[B1.5/20 series]

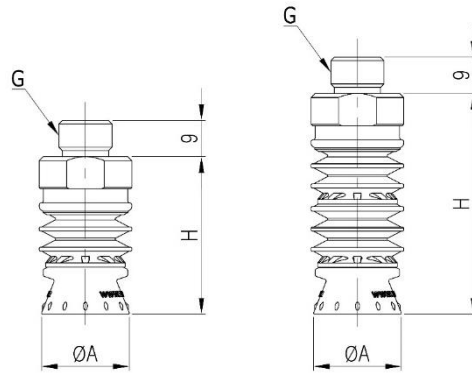
[B4.0/20 series]

[B5.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-MD22	22	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	31.1	25.7
B4.0/20-MD22	22		41.9	32.4
B5.0/20-MD22	22		46.9	34.1

*Dimension "H" is measured with 14M fitting option



[B2.5/20 series]

[B6.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-MD22	22	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	31.1	25.7
B6.0/20-MD22	22		54.9	39.2

*Dimension "H" is measured with 14M fitting option

S type

Features and Strengths

- ✓ Excellent performance for rough and uneven surface



Example of use

- ✓ Uneven surface products, Bricks, Marbles, Metal sheets, Wood

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
2S30-17T	3.96	0.8	1.9	2.2
2S45-15T	5.77	1.3	2.8	3.8
4S50-20T	11.58	1.8	3.8	4.6
4S60-22T	23.87	2.2	6.4	7.7
4S70-22T	33.41	2.8	8.1	11.4
4S85-22T	46.65	4.4	12.7	16.5
6S61-20T	17.46	1.9	5.3	7.1
6S70-25T	37.16	2.5	7.0	8.7
6S80-25T	48.95	3.4	10.1	13
6S100-25T	71.05	6.2	17.2	23.2
6S110-25T	88.72	7.7	22.7	28.1
2S45-20T	8.23	1.3	2.8	3.8
4S50-25T	15.11	1.8	3.8	4.6
4S60-27T	30.15	2.2	6.4	7.7
4S70-27T	43.94	2.8	8.1	11.4
4S85-27T	60.79	4.4	12.7	16.5
6S61-25T	22.83	1.9	5.3	7.1
6S70-30T	45.11	2.5	7.0	8.7
6S80-30T	60.83	3.4	10.1	13
6S100-30T	90.29	6.2	17.2	23.2
6S110-30T	113.86	7.7	22.7	28.1

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Parallel		
		- 20 kPa	- 60 kPa	- 90 kPa
2S30-17T	3.96	0.2	0.5	0.7
2S45-15T	5.77	0.4	1.3	1.5
4S50-20T	11.58	0.6	1.5	1.7
4S60-22T	23.87	1.0	2.9	3.8
4S70-22T	33.41	1.5	4.0	4.8
4S85-22T	46.65	2.6	6.2	8.5
6S61-20T	17.46	0.8	2.7	3.6
6S70-25T	37.16	1.3	3.6	4.6
6S80-25T	48.95	2.0	5.5	7.1
6S100-25T	71.05	3.6	10.9	13.4
6S110-25T	88.72	4.7	12.6	16.8
2S45-20T	8.23	0.4	1.3	1.5
4S50-25T	15.11	0.6	1.5	1.7
4S60-27T	30.15	1.0	2.9	3.8
4S70-27T	43.94	1.5	4.0	4.8
4S85-27T	60.79	2.6	6.2	8.5
6S61-25T	22.83	0.8	2.7	3.6
6S70-30T	45.11	1.3	3.6	4.6
6S80-30T	60.83	2.0	5.5	7.1
6S100-30T	90.29	3.6	10.9	13.4
6S110-30T	113.86	4.7	12.6	16.8

Material Specification

Sponge Lip

Material	Hardness Shore (°)	Color	Temperature (°C)
EPDM	15	Black	0~120

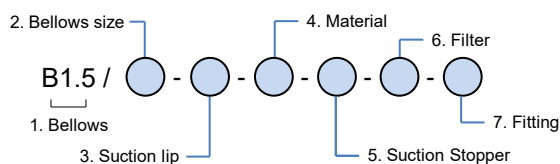
Insert Pad

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	50	Red	-70~200
White Silicone	50	Translucent White	-70~200

Material Resistance

Description	NBR (Nitrile)	Silicone	White Silicone
Wear Resistance	Excellent	Good	Good
Oil	Excellent	Poor	Poor
Weather / Ozone	Fair	Excellent	Excellent
Alcohol	Good	Good	Good
Acid	Fair	Poor	Poor

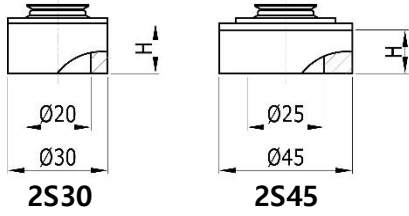
Build an Ordering No.



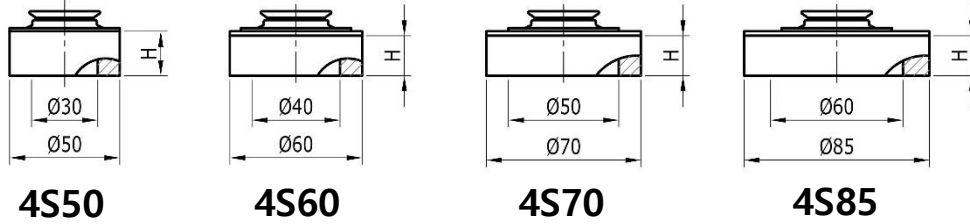
1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter : For 2S30,2S45	20
	40mm bellows diameter : For 4S50,4S60,4S70,4S85	40
	60mm bellows diameter : For 6S61,6S70,6S80,6S100,6S110	60
3. Suction lip	Description	Ordering No.
	S type lip, 30mm diameter, 20mm Inner diameter	2S30
	S type lip, 45mm Outer diameter, 25mm Inner diameter	2S45
	S type lip, 50mm diameter, 30mm Inner diameter	4S50
	S type lip, 60mm Outer diameter, 40mm Inner diameter	4S60
	S type lip, 70mm Outer diameter, 50mm Inner diameter	4S70
	S type lip, 85mm Outer diameter, 60mm Inner diameter	4S85
	S type lip, 61mm diameter, 37mm Inner diameter	6S61
	S type lip, 70mm Outer diameter, 46mm Inner diameter	6S70
	S type lip, 80mm Outer diameter, 56mm Inner diameter	6S80
	S type lip, 100mm Outer diameter, 70mm Inner diameter	6S100
	S type lip, 110mm Outer diameter, 80mm Inner diameter	6S110
4. Foam Thickness	Description	Ordering No.
	Foam Thickness 15T For 2S45	T15
	Foam Thickness 17T For 2S30	T17
	Foam Thickness 20T For 2S45,4S50	T20
	Foam Thickness 22T For 4S60,4S70,4S80	T22
	Foam Thickness 25T For 4S50,6S70,6S80,6S100,6S110	T25
	Foam Thickness 27T For 4S60,4S70,4S80	T27
	Foam Thickness 30T For 6S70,6S80,6S100,6S110	T30
5. Material (Insert pad)	Description	Ordering No.
	Insert pad NBR (Nitrile),sponge lip EPDM	NE
	Insert pad Silicone 50'hardness,sponge lip EPDM	SE
	Insert pad White Silicone 50'hardness,sponge lip EPDM	WSE
5. Suction Stopper	Description	Ordering No.
	F type : Only for S type	F
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data

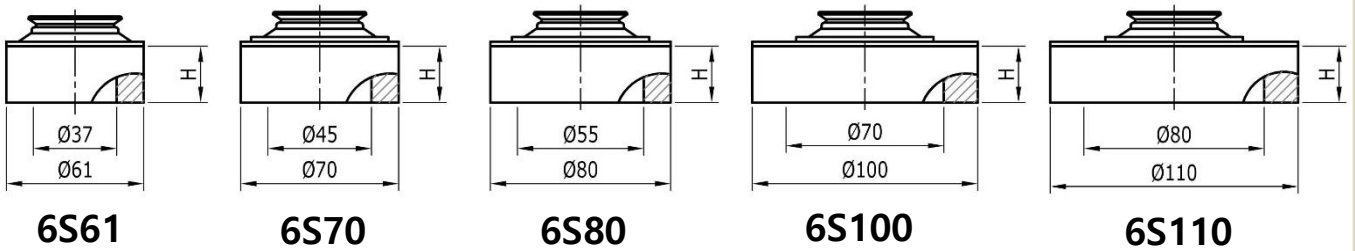
2S Series



4S Series



6S Series



2S Series

Model	Foam thickness(H)
2S30	17T
2S45	15T / 20T

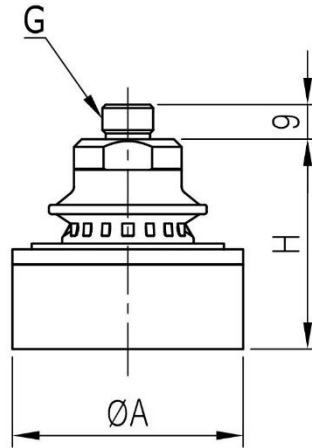
4S Series

Model	Foam thickness(H)
4S50	20T / 25T
4S60	22T / 27T
4S70	
4S85	

6S Series

Model	Foam thickness(H)
6S61	20T / 25T
6S70	25T / 30T
6S80	
6S100	
6S110	

Dimension Data

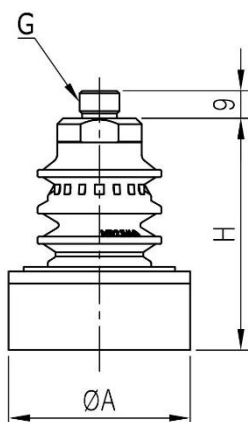


[B1.5/20&40&60 series]

Model	ØA	G	Height		
			Before Compression	After Compression	
B1.5/20 – 2S30-17T	30	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	38	29.7	
B1.5/20 – S245-15T	45		37	27.1	
B1.5/20 – S245-20T	45		42	27.8	
B1.5/40 – 4S50-20T	50		48.7	40	
B1.5/40 – 4S50-25T	50		53.7	40.4	
B1.5/40 – 4S60-22T	60		54.7	41.2	
B1.5/40 – 4S60-27T	60		59.7	42.2	
B1.5/40 – 4S70-22T	70		54.7	41.2	
B1.5/40 – 4S70-27T	70		59.7	42.2	
B1.5/40 – 4S85-22T	85		Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	54.7	41.2
B1.5/40 – 4S85-27T	85			59.7	42.2
B1.5/60 – 6S61-20T	61		Bellows Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	59.5	57.0
B1.5/60 – 6S61-25T	61	64.5		57.0	
B1.5/60 – 6S70-25T	70	70.5		57.5	
B1.5/60 – 6S70-30T	70	75.5		58.1	
B1.5/60 – 6S80-25T	80	70.5		57.5	
B1.5/60 – 6S80-30T	80	75.5		58.1	
B1.5/60 – 6S100-25T	100	70.5		57.5	
B1.5/60 – 6S100-30T	100	75.5		58.1	
B1.5/60 – 6S110-25T	110	70.5		57.5	
B1.5/60 – 6S110-30T	110	75.5		58.1	

*Dimension "H" is measured with 14M fitting option

Dimension Data

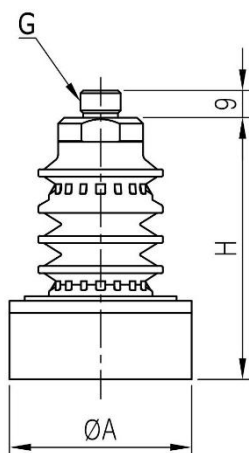


[B4.0/20&40&60 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B4.0/20 – 2S30-17T	30	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	48.8	40.5
B4.0/20 – S245-15T	45		47.8	37.9
B4.0/20 – S245-20T	45		52.8	38.6
B4.0/40 – 4S50-20T	50		70.8	62.1
B4.0/40 – 4S50-25T	50		75.8	62.5
B4.0/40 – 4S60-22T	60		76.8	63.3
B4.0/40 – 4S60-27T	60		81.8	64.3
B4.0/40 – 4S70-22T	70		76.8	63.3
B4.0/40 – 4S70-27T	70		81.8	64.3
B4.0/40 – 4S85-22T	85		Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	76.8
B4.0/40 – 4S85-27T	85	81.8		64.3
B4.0/60 – 6S61-20T	61	Bellows Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	90.5	88.0
B4.0/60 – 6S61-25T	61		95.5	88.0
B4.0/60 – 6S70-25T	70		101.5	88.5
B4.0/60 – 6S70-30T	70		106.5	89.1
B4.0/60 – 6S80-25T	80		101.5	88.5
B4.0/60 – 6S80-30T	80		106.5	89.1
B4.0/60 – 6S100-25T	100		101.5	88.5
B4.0/60 – 6S100-30T	100		106.5	89.1
B4.0/60 – 6S110-25T	110		101.5	88.5
B4.0/60 – 6S110-30T	110		106.5	89.1

*Dimension "H" is measured with 14M fitting option

Dimension Data

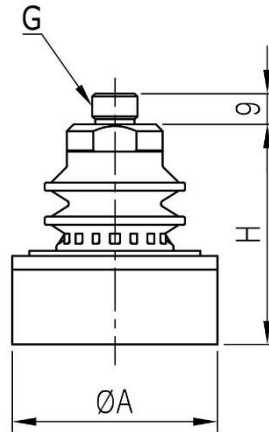


[B5.0/20&40&60 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B5.0/20 – 2S30-17T	30	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	53.8	45.5
B5.0/20 – S245-15T	45		52.8	42.9
B5.0/20 – S245-20T	45		57.8	43.6
B5.0/40 – 4S50-20T	50		80.7	72.0
B5.0/40 – 4S50-25T	50		85.7	72.4
B5.0/40 – 4S60-22T	60		86.7	73.2
B5.0/40 – 4S60-27T	60		91.7	74.2
B5.0/40 – 4S70-22T	70		86.7	73.2
B5.0/40 – 4S70-27T	70		91.7	74.2
B5.0/40 – 4S85-22T	85		86.7	73.2
B5.0/40 – 4S85-27T	85		91.7	74.2
B5.0/60 – 6S61-20T	61		Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	105.1
B5.0/60 – 6S61-25T	61	110.1		102.6
B5.0/60 – 6S70-25T	70	116.1		103.1
B5.0/60 – 6S70-30T	70	121.1		103.7
B5.0/60 – 6S80-25T	80	116.1		103.1
B5.0/60 – 6S80-30T	80	121.1		103.7
B5.0/60 – 6S100-25T	100	116.1		103.1
B5.0/60 – 6S100-30T	100	121.1		103.7
B5.0/60 – 6S110-25T	110	116.1		103.1
B5.0/60 – 6S110-30T	110	121.1		103.7

*Dimension "H" is measured with 14M fitting option

Dimension Data

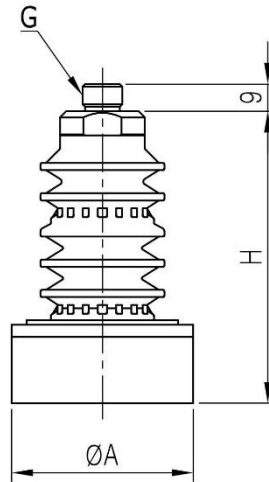


[B2.5/20&40&60 series]

Model	ØA	G	Height		
			Before Compression	After Compression	
B2.5/20 – 2S30-17T	30	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	46	37.7	
B2.5/20 – S245-15T	45		45	35.1	
B2.5/20 – S245-20T	45		50	35.8	
B2.5/40 – 4S50-20T	50		58.6	49.9	
B2.5/40 – 4S50-25T	50		63.6	50.3	
B2.5/40 – 4S60-22T	60		64.6	51.1	
B2.5/40 – 4S60-27T	60		69.6	52.1	
B2.5/40 – 4S70-22T	70		64.6	51.1	
B2.5/40 – 4S70-27T	70		69.6	52.1	
B2.5/40 – 4S85-22T	85		Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	64.6	51.1
B2.5/40 – 4S85-27T	85			69.6	52.1
B2.5/60 – 6S61-20T	61		Bellows Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	72.9	70.4
B2.5/60 – 6S61-25T	61	77.9		70.4	
B2.5/60 – 6S70-25T	70	83.9		70.9	
B2.5/60 – 6S70-30T	70	88.9		71.5	
B2.5/60 – 6S80-25T	80	83.9		70.9	
B2.5/60 – 6S80-30T	80	88.9		71.5	
B2.5/60 – 6S100-25T	100	83.9		70.9	
B2.5/60 – 6S100-30T	100	88.9		71.5	
B2.5/60 – 6S110-25T	110	83.9		70.9	
B2.5/60 – 6S110-30T	110	88.9		71.5	

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B6.0/20&40&60 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20 – 2S30-17T	30	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	61.8	53.5
B1.5/20 – S245-15T	45		60.8	50.9
B1.5/20 – S245-20T	45		65.8	51.6
B1.5/40 – 4S50-20T	50		90.6	81.9
B1.5/40 – 4S50-25T	50		95.6	82.3
B1.5/40 – 4S60-22T	60		96.6	83.1
B1.5/40 – 4S60-27T	60		101.6	84.1
B1.5/40 – 4S70-22T	70		96.6	83.1
B1.5/40 – 4S70-27T	70		101.6	84.1
B1.5/40 – 4S85-22T	85		96.6	83.1
B1.5/40 – 4S85-27T	85		101.6	84.1
B1.5/60 – 6S61-20T	61		Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	119.5
B1.5/60 – 6S61-25T	61	124.5		117.0
B1.5/60 – 6S70-25T	70	130.5		117.5
B1.5/60 – 6S70-30T	70	135.5		118.1
B1.5/60 – 6S80-25T	80	130.5		117.5
B1.5/60 – 6S80-30T	80	135.5		118.1
B1.5/60 – 6S100-25T	100	130.5		117.5
B1.5/60 – 6S100-30T	100	135.5		118.1
B1.5/60 – 6S110-25T	110	130.5		117.5
B1.5/60 – 6S110-30T	110	135.5		118.1

*Dimension "H" is measured with 14M fitting option

MU type

■ Features and Strengths

- ✓ Best gripping for flat and stable surfaces



■ Example of use

- ✓ Metal sheets, Carton boxes, Glass, Veneer sheets

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/40-MU45	9.93	3.1	8	11.7
B1.5/40-MU55	12.19	4.4	10.5	13.8
B1.5/60-MU65	26.9	6.5	16.2	22.5
B1.5/60-MU75	31.98	8.1	19	26.3
B1.5/60-MU80	33.66	8.6	20.5	27.5
B2.5/40-MU45	17.33	3.1	8	11.7
B2.5/40-MU55	19.58	4.4	10.5	13.8
B2.5/60-MU65	47.7	6.5	16.2	22.5
B2.5/60-MU75	52.78	8.1	19	26.3
B2.5/60-MU80	54.46	8.6	20.5	27.5
B4.0/40-MU45	23.13	3.1	8	11.7
B4.0/40-MU55	25.38	4.4	10.5	13.8
B5.0/40-MU45	29.93	3.1	8	11.7
B5.0/40-MU55	32.18	4.4	10.5	13.8
B5.0/60-MU65	88.7	6.5	16.2	22.5
B5.0/60-MU75	93.78	8.1	19	26.3
B5.0/60-MU80	95.46	8.6	20.5	27.5
B6.0/40-MU45	37.23	3.1	8	11.7
B6.0/40-MU55	39.48	4.4	10.5	13.8
B6.0/60-MU65	110.5	6.5	16.2	22.5
B6.0/60-MU75	115.58	8.1	19	26.3
B6.0/60-MU80	117.26	8.6	20.5	27.5

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

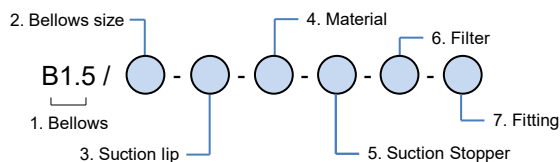
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C

** For additional materials, please contact us

Material Resistance

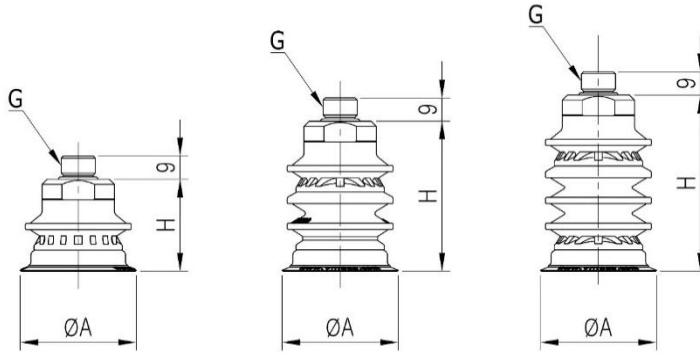
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	40mm bellow diameter: For MU45 & MU55	40
	60mm bellow diameter: For MU65 & MU75 & MU80	60
3. Suction lip	Description	Ordering No.
	MU type lip, 45mm diameter	MU45
	MU type lip, 55mm diameter	MU55
	MU type lip, 65mm diameter	MU65
	MU type lip, 75mm diameter	MU75
	MU type lip, 80mm diameter	MU80
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
5. Suction Stopper	Description	Ordering No.
	G type	G
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data



[Unit : mm]

[B1.5/40&60 series]

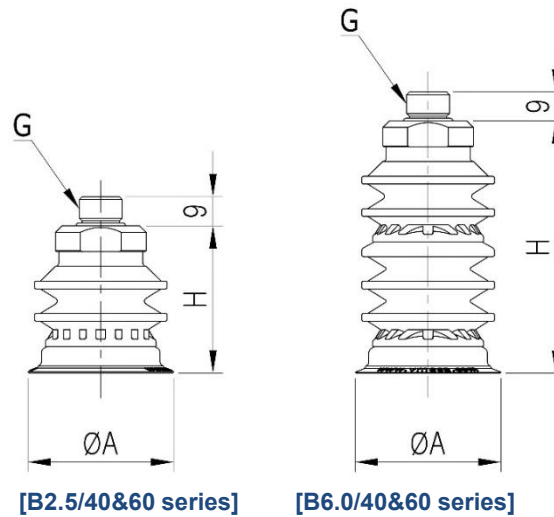
[B4.0/40&60 series]

[B5.0/40&60 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/40-MU45	45	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	35.9	31.8
B1.5/40-MU55	55		36.3	29.9
B1.5/60-MU65	65		47.1	35.3
B1.5/60-MU75	75		48.1	34.4
B1.5/60-MU80	80		49	35.4
B4.0/40-MU45	45		58.3	41.8
B4.0/40-MU55	55		58.7	41.9
B5.0/40-MU45	45		68.2	46.2
B5.0/40-MU55	55		68.6	46.2
B5.0/60-MU65	65		68.2	45.5
B5.0/60-MU75	75		68.6	46.6
B5.0/60-MU80	80		93.7	57.2

*Dimension "H" is measured with 14M fitting option

Dimension Data



[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/40-MU45	45	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	45.9	31.4
B2.5/40-MU55	55		46.3	32.3
B2.5/60-MU65	65		61.6	40.7
B2.5/60-MU75	75		62.6	40.3
B2.5/60-MU80	80		63.5	41
B6.0/40-MU45	45		78.2	49.6
B6.0/40-MU55	55		78.6	49.3
B6.0/60-MU65	65		78.2	49
B6.0/60-MU75	75		78.6	50
B6.0/60-MU80	80		108.1	62.1

*Dimension "H" is measured with 14M fitting option

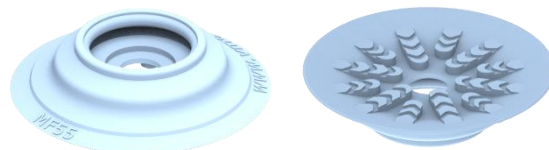
MF type

■ Features and Strengths

- ✓ Excellent lifting force for both horizontal and vertical application
- ✓ Good register and enhancing the adhesion to the surface by the feed inside

■ Example of use

- ✓ Metal sheets, Glass, Veneer sheets



Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/40-MF45	9.63	3.6	8.9	12.5
B1.5/40-MF55	12.19	4.6	10.8	14.6
B1.5/60-MF65	26.4	7.2	17.1	23.2
B1.5/60-MF75	31.58	8.8	20.1	27.1
B1.5/60-MF80	34.75	9.1	21.2	27.8
B2.5/40-MF45	17.03	3.6	8.9	12.5
B2.5/40-MF55	19.59	4.6	10.8	14.6
B2.5/60-MF65	47.2	7.2	17.1	23.2
B2.5/60-MF75	52.38	8.8	20.1	27.1
B2.5/60-MF80	55.55	9.1	21.2	27.8
B4.0/40-MF45	22.83	3.6	8.9	12.5
B4.0/40-MF55	25.39	4.6	10.8	14.6
B5.0/40-MF45	29.63	3.6	8.9	12.5
B5.0/40-MF55	32.19	4.6	10.8	14.6
B5.0/60-MF65	88.2	7.2	17.1	23.2
B5.0/60-MF75	93.38	8.8	20.1	27.1
B5.0/60-MF80	96.55	9.1	21.2	27.8
B6.0/40-MF45	36.93	3.6	8.9	12.5
B6.0/40-MF55	39.49	4.6	10.8	14.6
B6.0/60-MF65	110.04	7.2	17.1	23.2
B6.0/60-MF75	115.18	8.8	20.1	27.1
B6.0/60-MF80	118.35	9.1	21.2	27.8

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

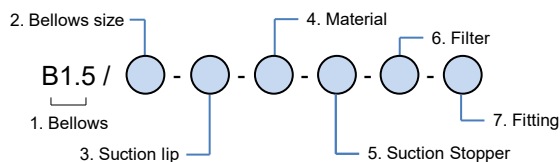
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C

** For additional materials, please contact us

Material Resistance

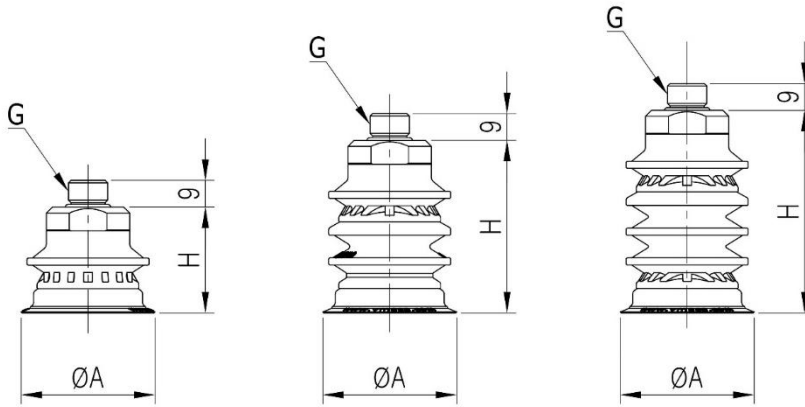
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	40mm bellow diameter: For MF45 & MF55	40
	60mm bellow diameter: For MF65 & MF75 & MF80	60
3. Suction lip	Description	Ordering No.
	MF type lip, 45mm diameter	MF45
	MF type lip, 55mm diameter	MF55
	MF type lip, 65mm diameter	MF65
	MF type lip, 75mm diameter	MF75
	MF type lip, 80mm diameter	MF80
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
5. Suction Stopper	Description	Ordering No.
	G type	G
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data



[B1.5/40&60 series]

[B4.0/40&60 series]

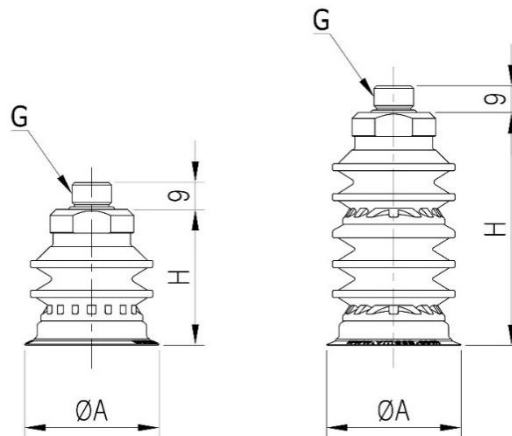
[B5.0/40&60 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compress ion	After Compress ion
B1.5/40-MF45	45	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	35.9	27.9
B1.5/40-MF55	55		36.3	31.9
B1.5/60-MF65	65		47.1	35
B1.5/60-MF75	75		48.1	38
B1.5/60-MF80	80		49	37.2
B4.0/40-MF45	45		58.3	40.5
B4.0/40-MF55	55		58.7	42.6
B5.0/40-MF45	45		94.7	56
B5.0/40-MF55	55		95.6	55.4
B5.0/60-MF65	65		93.7	57.1
B5.0/60-MF75	75		94.7	58.2
B5.0/60-MF80	80		95.6	59.3

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B2.5/40&60 series]

[B6.0/40&60 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/40-MF45	45	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	45.9	31.9
B2.5/40-MF55	55		46.3	33.2
B2.5/60-MF65	65		61.6	40.5
B2.5/60-MF75	75		62.6	41.1
B2.5/60-MF80	80		63.5	40.5
B6.0/40-MF45	45		109.1	60.3
B6.0/40-MF55	55		110	61
B6.0/60-MF65	65		108.1	61
B6.0/60-MF75	75		109.1	62.8
B6.0/60-MF80	80		110	63

*Dimension "H" is measured with 14M fitting option

XP type

■ Features and Strengths

- ✓ Excellent in handling very thin and flexible plastic bags
- ✓ Various stopper & lip material options to cover a wide range of vacuum applications

■ Example of use

- ✓ Very thin plastic bags, Pouch bags



Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-XPB15	2.5	0.20	0.37	0.43
B1.5/20-XPB17	2.6	0.26	0.47	0.57
B1.5/20-XPB20	3.2	0.31	0.54	0.74
B1.5/20-XP25	3.9	0.53	1.23	1.15
B1.5/20-XP35	6.2	1.11	2.14	2.43
B1.5/40-XP40	19.5	1.45	2.5	4.52
B1.5/40-XP45	18.0	1.40	2.80	4.30
B1.5/40-XP50	23.5	2.97	3.81	5.42
B1.5/40-XP55	26.3	3.3	4.3	5.8
B1.5/40-XP60	30.3	3.54	5.83	6.73
B1.5/40-XP65	35.9	3.8	6.1	7.9
B1.5/40-XP70	41.6	4.1	7.3	9.8
B2.5/20-XPB15	4.2	0.20	0.37	0.43
B2.5/20-XPB17	4.4	0.26	0.47	0.57
B2.5/20-XPB20	4.9	0.31	0.54	0.74
B2.5/20-XP25	5.6	0.53	1.23	1.15
B2.5/20-XP35	8.0	1.11	2.14	2.43
B2.5/40-XP40	24.0	1.45	2.5	4.52
B2.5/40-XP45	22.4	1.40	2.80	4.30
B2.5/40-XP50	28.0	2.97	3.81	5.42
B2.5/40-XP55	30.8	3.3	4.3	5.8
B2.5/40-XP60	34.7	3.54	5.83	6.73
B2.5/40-XP65	40.4	3.8	6.1	7.9
B2.5/40-XP70	46.0	4.1	7.3	9.8
B4.0/20-XPB15	4.3	0.20	0.37	0.43
B4.0/20-XPB17	4.4	0.26	0.47	0.57
B4.0/20-XPB20	5.0	0.31	0.54	0.74
B4.0/20-XP25	5.6	0.53	1.23	1.15
B4.0/20-XP35	8.0	1.11	2.14	2.43
B4.0/40-XP40	32.3	1.45	2.5	4.52
B4.0/40-XP45	30.8	1.40	2.80	4.30
B4.0/40-XP50	36.3	2.97	3.81	5.42

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B4.0/40-XP55	39.1	3.3	4.3	5.8
B4.0/40-XP60	43.1	3.54	5.83	6.73
B4.0/40-XP65	48.7	3.8	6.1	7.9
B4.0/40-XP70	54.4	4.1	7.3	9.8
B5.0/20-XPB15	5.4	0.20	0.37	0.43
B5.0/20-XPB17	5.6	0.26	0.47	0.57
B5.0/20-XPB20	6.1	0.31	0.54	0.74
B5.0/20-XP25	6.8	0.53	1.23	1.15
B5.0/20-XP35	9.2	1.11	2.14	2.43
B5.0/40-XP40	39.1	1.45	2.5	4.52
B5.0/40-XP45	37.5	1.40	2.80	4.30
B5.0/40-XP50	43.1	2.97	3.81	5.42
B5.0/40-XP55	45.9	3.3	4.3	5.8
B5.0/40-XP60	49.8	3.54	5.83	6.73
B5.0/40-XP65	55.5	3.8	6.1	7.9
B5.0/40-XP70	61.1	4.1	7.3	9.8
B6.0/20-XPB15	7.2	0.20	0.37	0.43
B6.0/20-XPB17	7.3	0.26	0.47	0.57
B6.0/20-XPB20	7.9	0.31	0.54	0.74
B6.0/20-XP25	8.6	0.53	1.23	1.15
B6.0/20-XP35	10.9	1.11	2.14	2.43
B6.0/40-XP40	43.6	1.45	2.5	4.52
B6.0/40-XP45	42.0	1.40	2.80	4.30
B6.0/40-XP50	47.5	2.97	3.81	5.42
B6.0/40-XP55	50.3	3.3	4.3	5.8
B6.0/40-XP60	54.3	3.54	5.83	6.73
B6.0/40-XP65	59.9	3.8	6.1	7.9
B6.0/40-XP70	65.6	4.1	7.3	9.8

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

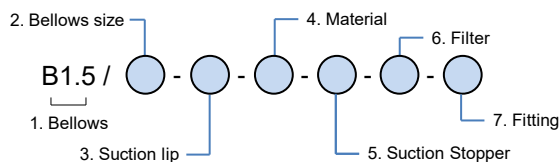
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C

** For additional materials, please contact us

Material Resistance

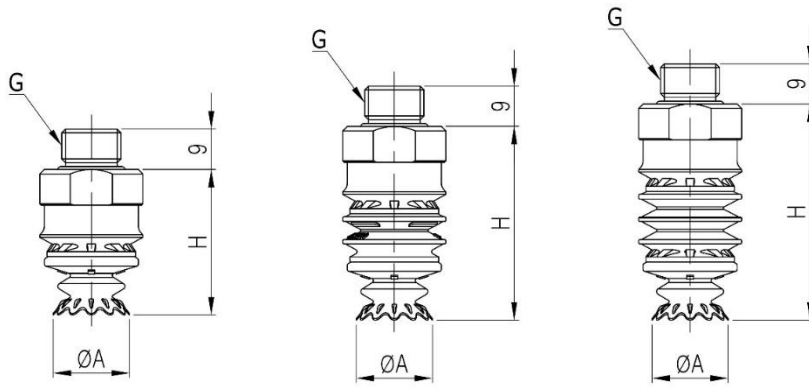
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter: For XB12 & XB15 & XB17 & XB20 & X25 & X30	20
	40mm bellows diameter: For X40 & X45 & X50 & X55	40
	60mm bellows diameter: For X65 & X75	60
3. Suction lip	Description	Ordering No.
	XPB type lip, 15mm diameter	XPB15
	XPB type lip, 17mm diameter	XPB17
	XPB type lip, 20mm diameter	XPB20
	XP type lip, 25mm diameter	XP25
	XP type lip, 35mm diameter	XP35
	XP type lip, 40mm diameter	XP40
	XP type lip, 45mm diameter	XP45
	XP type lip, 50mm diameter	XP50
	XP type lip, 55mm diameter	XP55
	XP type lip, 60mm diameter	XP60
	XP type lip, 65mm diameter	XP65
XP type lip, 70mm diameter	XP70	
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U
5. Suction Stopper	Description	Ordering No.
	A type	A
	B type	B
	C type	C
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data



[B1.5/20 series]

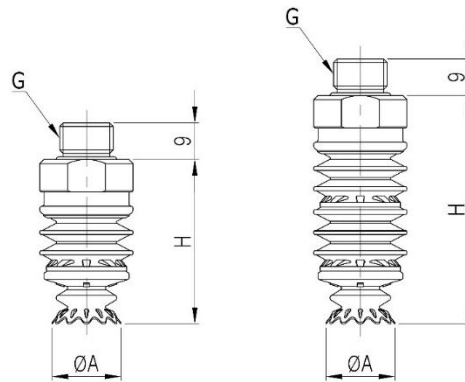
[B4.0/20 series]

[B5.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-XPB15	15	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	33.1	24.4
B1.5/20-XPB17	17		32.5	23.7
B1.5/20-XPB20	20		33.5	24.3
B4.0/20-XPB15	15		44.2	31.3
B4.0/20-XPB17	17		43.6	31.2
B4.0/20-XPB20	20		44.6	31.1
B5.0/20-XPB15	15		49.2	33.8
B5.0/20-XPB17	17		48.6	33
B5.0/20-XPB20	20		49.6	34.1

*Dimension "H" is measured with 14M fitting option



[Unit : mm]

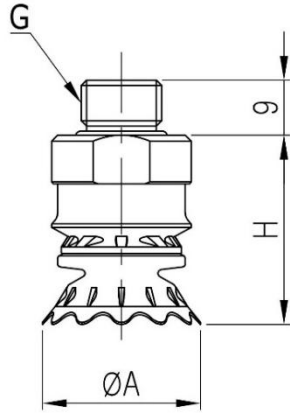
[B2.5/20 series]

[B6.0/20 series]

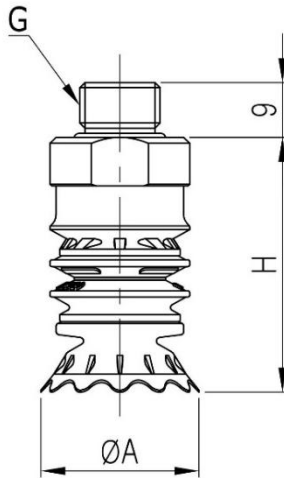
Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-XPB15	15	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	41	28
B2.5/20-XPB17	17		40.4	26.9
B2.5/20-XPB20	20		41.4	28.1
B6.0/20-XPB15	15		56.7	37.2
B6.0/20-XPB17	17		56.1	36.5
B6.0/20-XPB20	20		57.1	36.8

*Dimension "H" is measured with 14M fitting option

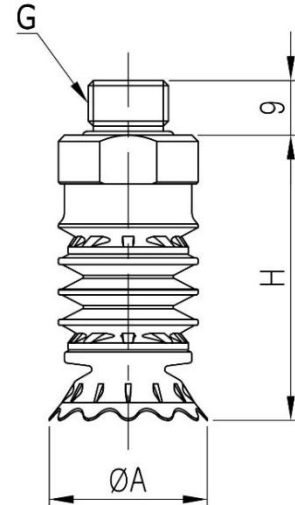
Dimension Data



[B1.5/20&40 series]



[B4.0/20&40 series]



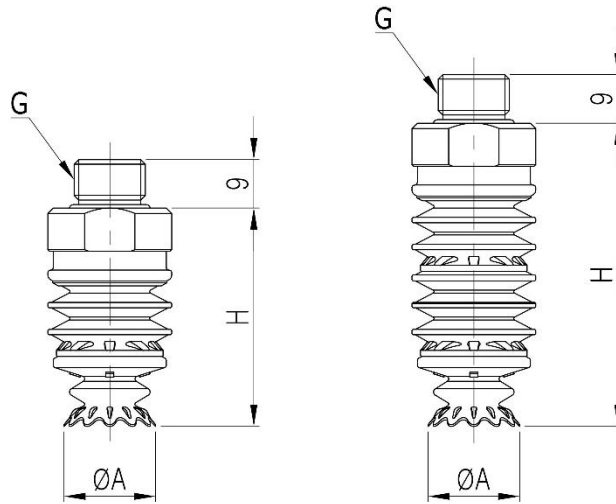
[B5.0/20&40 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-XP25	26	Bellows Ø20, Ø40 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	31.1	22.1
B1.5/20-XP35	35		32.1	23.7
B1.5/40-XP40	42		45	33.5
B1.5/40-XP45	45		46.2	33.5
B1.5/40-XP50	50		47	34.3
B1.5/40-XP55	55		48	35.6
B1.5/40-XP60	60		49	36.2
B1.5/40-XP65	65		51.7	41.7
B1.5/40-XP70	70		53.2	41.1
B4.0/20-XP25	26		41.9	29.1
B4.0/20-XP35	35		42.9	30.8
B4.0/40-XP40	42		67.4	46.5
B4.0/40-XP45	45		68.6	48
B4.0/40-XP50	50		69.4	48.2
B4.0/40-XP55	55		70.4	49.1
B4.0/40-XP60	60		71.4	49.6
B4.0/40-XP65	65		74.1	52
B4.0/40-XP70	70		75.6	54.7
B5.0/20-XP25	26		46.9	31.7
B5.0/20-XP35	35		47.9	33.5
B5.0/40-XP40	42		77.4	51
B5.0/40-XP45	45		79	53
B5.0/40-XP50	50		79.4	53.9
B5.0/40-XP55	55		80.4	52.8
B5.0/40-XP60	60		81.4	54.9
B5.0/40-XP65	65		84.1	56.8
B5.0/40-XP70	70		85.6	59.2

*Dimension "H" is measured with 14M fitting option

Dimension Data



[B2.5/20 series]

[B6.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-XP25	26	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	39.1	26.3
B2.5/20-XP35	35		40.1	28.3
B2.5/40-XP40	42		55	37.3
B2.5/40-XP45	45		56.2	38.2
B2.5/40-XP50	50		57	38.7
B2.5/40-XP55	55		58	39.7
B2.5/40-XP60	60		59	40.1
B2.5/40-XP65	65		61.7	42
B2.5/40-XP70	70		63.2	44.2
B6.0/20-XP25	26		Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	54.4
B6.0/20-XP35	35	55.9		37.1
B6.0/40-XP40	42	87.4		53.9
B6.0/40-XP45	45	88.6		55.9
B6.0/40-XP50	50	89.4		56.3
B6.0/40-XP55	55	90.4		57.6
B6.0/40-XP60	60	91.4		58.5
B6.0/40-XP65	65	94.1		61.3
B6.0/40-XP70	70	95.6		61

*Dimension "H" is measured with 14M fitting option

PP type

■ Features and Strengths

- ✓ Excellent for thin plastic bags
- ✓ Thick plastic bag opening applications



■ Example of use

- ✓ Thin and thick plastic bags

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-PP32	3.64	1.7	3.4	4.6
B2.5/20-PP32	5.75	1.7	3.4	4.6
B4.0/20-PP32	5.48	1.7	3.4	4.6
B5.0/20-PP32	6.64	1.7	3.4	4.6
B6.0/20-PP32	8.73	1.7	3.4	4.6

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
N5C3 - Special compound rubber NBR	50	Black	-40°C ~ 120°C
U6 - Urethane	60	Dark Grey	0~100

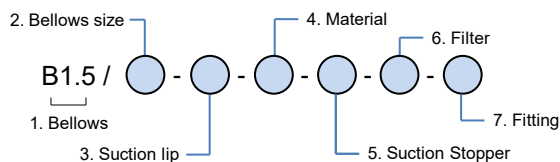
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C







** For additional materials, please contact us

Material Resistance

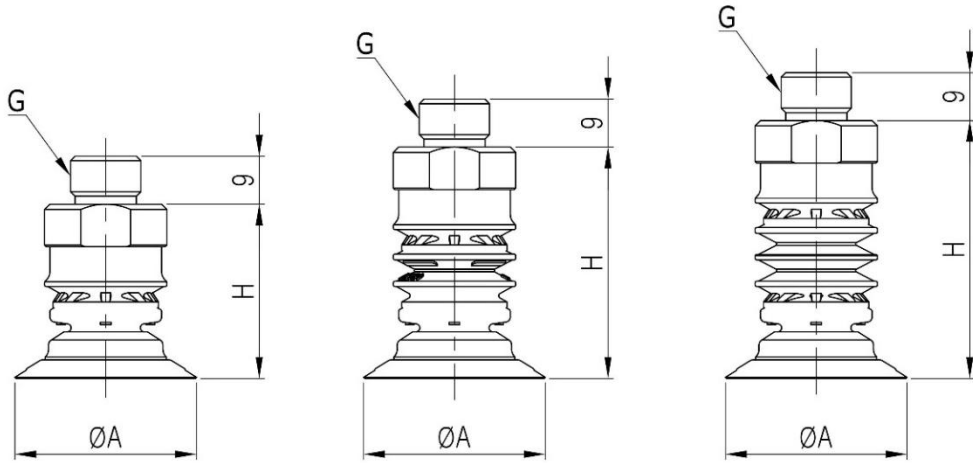
Description	NBR (Nitrile)	Silicone	White Silicone	N5C3	Urethane
Wear Resistance	Excellent	Good	Good	Excellent	Excellent
Oil	Excellent	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Fair	Excellent
Alcohol	Good	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Fair	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter:	20
3. Suction lip	Description	Ordering No.
	PP type lip, 34mm diameter	PP32
4. Materials	Description	Symbol
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
	Polyurethan: Available for X25 & X30 & X45 & X55 only	PU
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female	38F

Dimension Data



[B1.5/20 series]

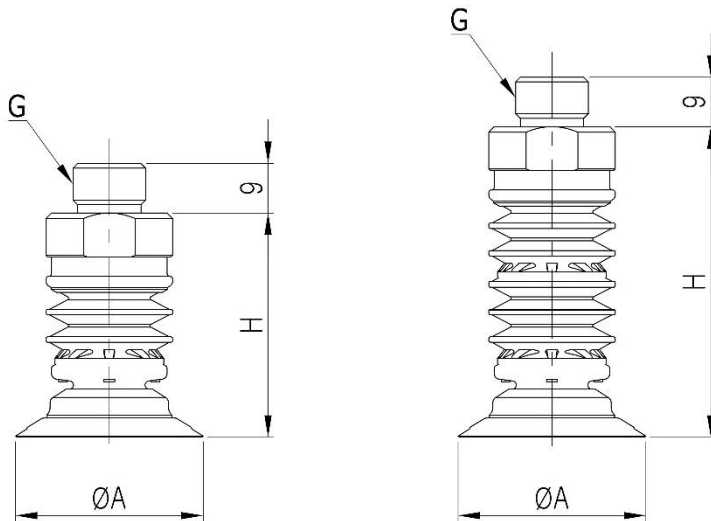
[B4.0/20 series]

[B5.0/20 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-PP32	34	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	32.7	24.8
B4.0/20-PP32	34		43.5	31.2
B5.0/20-PP32	34		48.4	32.5

*Dimension "H" is measured with 14M fitting option



[B2.5/20 series]

[B6.0/20 series]

[Unit : mm]

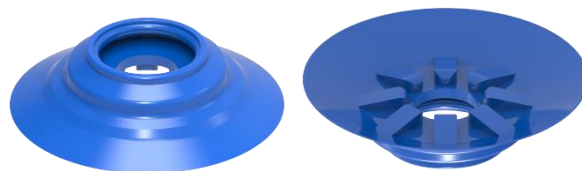
Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-PP32	34	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	40.8	32
B6.0/20-PP32	34		56.5	38.6

*Dimension "H" is measured with 14M fitting option

C type

■ Features and Strengths

- ✓ Cans with Easy Open End



■ Example of use

- ✓ Flexible thin & wide suction lips

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/40-C45	16.7	2.7	6.6	9.0
B2.5/40-C45	24.1	2.7	6.6	9.0
B4.0/40-C45	29.9	2.7	6.6	9.0
B5.0/40-C45	36.7	2.7	6.6	9.0
B6.0/40-C45	44.0	2.7	6.6	9.0
B1.5/40-C60	20.9	5.0	10.3	12.4
B2.5/40-C60	28.3	5.0	10.3	12.4
B4.0/40-C60	34.1	5.0	10.3	12.4
B5.0/40-C60	40.9	5.0	10.3	12.4
B6.0/40-C60	48.2	5.0	10.3	12.4
B1.5/60-C70	25.6	6.8	15.5	21.3
B2.5/60-C70	46.4	6.8	15.5	21.3
B4.0/60-C70	52.2	6.8	15.5	21.3
B5.0/60-C70	87.4	6.8	15.5	21.3
B6.0/60-C70	109.2	6.8	15.5	21.3
B1.5/60-C80	69.0	7.4	17.4	24.0
B2.5/60-C80	89.8	7.4	17.4	24.0
B4.0/60-C80	95.6	7.4	17.4	24.0
B5.0/60-C80	130.8	7.4	17.4	24.0
B6.0/60-C80	152.3	7.4	17.4	24.0

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

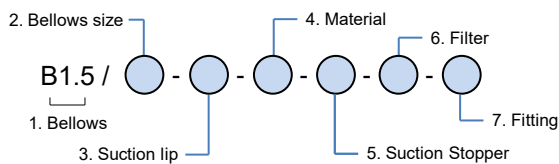
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C

** For additional materials, please contact us

Material Resistance

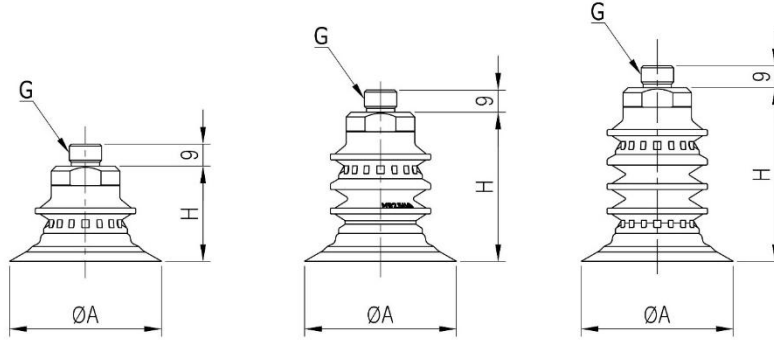
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	40mm bellows diameter: For C45 & C60	40
	60mm bellows diameter: For C70 & C80	60
3. Suction lip	Description	Ordering No.
	C type lip, 45m diameter	C45
	C type lip, 60mm diameter	C60
	C type lip, 70mm diameter	C70
	C type lip, 80mm diameter	C80
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female	38F

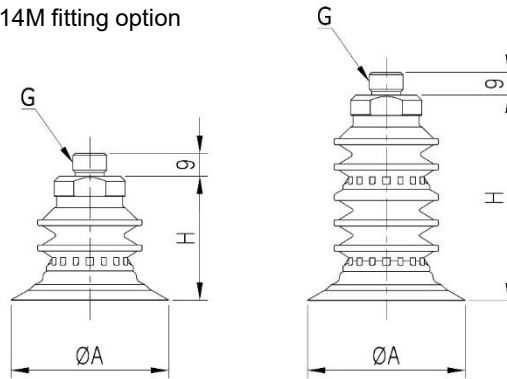
Dimension Data



[Unit : mm] **[B1.5/40&60 series]** **[B4.0/40&60 series]** **[B5.0/40&60 series]**

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/40-C45	46.5	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	39.5	29.1
B1.5/40-C60	62		39	29.1
B1.5/60-C70	70		51.2	37.6
B1.5/60-C80	80		53.4	37
B4.0/40-C45	46.5		61.6	44.8
B4.0/40-C60	62		61	41.6
B5.0/40-C45	46.5		71.5	46.2
B5.0/40-C60	62		70.1	45.3
B5.0/60-C70	70		97.8	59.3
B5.0/60-C80	80		99.9	59.1

*Dimension "H" is measured with 14M fitting option



[B2.5/40&60 series] **[B6.0/40&60 series]**

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/40-C45	46.5	Bellows Ø40,Ø60 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	49.4	32.6
B2.5/40-C60	62		48.9	32.6
B2.5/60-C70	70		65.6	42.8
B2.5/60-C80	80		67.8	42.2
B6.0/40-C45	46.5		81.4	49.1
B6.0/40-C60	62		80.9	49.1
B6.0/60-C70	70		112.2	64
B6.0/60-C80	80		114.4	62.3

*Dimension "H" is measured with 14M fitting option

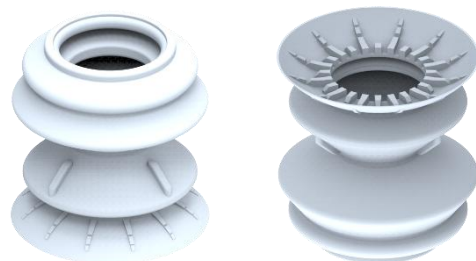
PG type

■ Features and Strengths

- ✓ Various pick and place application of plastic packages
- ✓ Strong suction gripping
- ✓ Optimal for high speed operations

■ Example of use

- ✓ Thin Plastic bag, Liquid pouch, Round produce



Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/40-PG34	18.24	1.0	2.1	2.6
B2.5/40-PG34	20.24	1.0	2.1	2.6
B4.0/40-PG34	20.04	1.0	2.1	2.6
B5.0/40-PG34	21.24	1.0	2.1	2.6
B6.0/40-PG34	23.32	1.0	2.1	2.6
B1.5/40-PG42	26.31	1.5	2.8	3.6
B2.5/40-PG42	28.31	1.5	2.8	3.6
B4.0/40-PG42	28.11	1.5	2.8	3.6
B5.0/40-PG42	29.31	1.5	2.8	3.6
B6.0/40-PG42	31.39	1.5	2.8	3.6
B1.5/40-PG48	36.86	2.6	4.4	4.9
B2.5/40-PG48	38.96	2.6	4.4	4.9
B4.0/40-PG48	38.7	2.6	4.4	4.9
B5.0/40-PG48	39.85	2.6	4.4	4.9
B6.0/40-PG48	41.94	2.6	4.4	4.9

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
S3 - Silicone	30	Translucent White	-70~200
S4 - Silicone	40	Red	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W4(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
G3 – Detectable Silicone	30	Blue	-70~200
G3(FDA) – Detectable Silicone(FDA)	30	Blue	-70~200

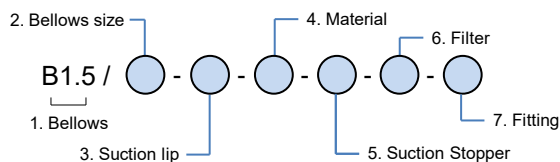
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C

** For additional materials, please contact us

Material Resistance

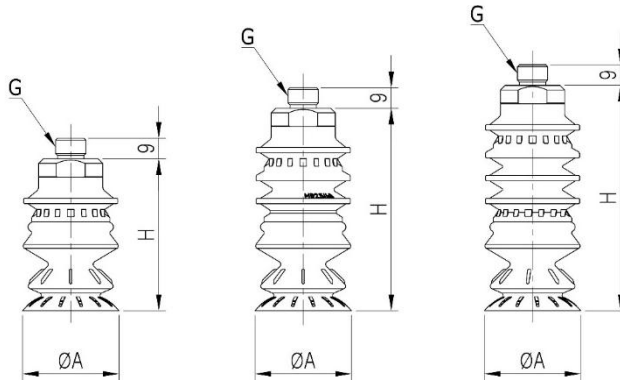
Description	Silicone	White Silicone	Detectable Silicone
Wear Resistance	Good	Good	Good
Oil	Poor	Poor	Poor
Weather / Ozone	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good
Acid	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	40mm bellows diameter	40
3. Suction lip	Description	Ordering No.
	PG type lip, 34mm diameter	PG34
	PG type lip, 42mm diameter	PG42
	PG type lip, 48mm diameter	PG48
4. Material	Description	Ordering No.
	Silicone, 30° hardness	S3
	Silicone, 40° hardness	S4
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 40° hardness (FDA)	W4(FDA)
	Detectable Silicone, 30° hardness	G3
	Detectable Silicone, 30° hardness (FDA)	G3(FDA)
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female	38F

Dimension Data

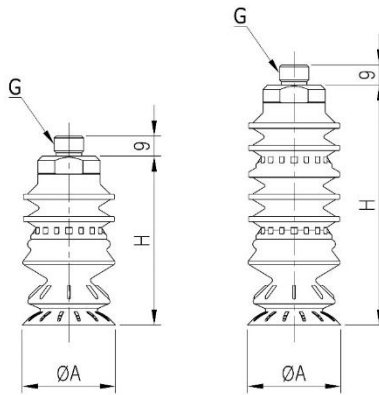


[B1.5/40 series] [B4.0/40 series] [B5.0/40 series]

[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/40-PG34	34.5	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	62.9	40.2
B1.5/40-PG42	42		66.1	38.4
B1.5/40-PG48	48.5		73.4	38.4
B4.0/40-PG34	34.5		85	50.3
B4.0/40-PG42	42		88.2	48.7
B4.0/40-PG48	48.5		95.5	53.3
B5.0/40-PG34	34.5		94.9	55.5
B5.0/40-PG42	42		98.1	52.7
B5.0/40-PG48	48.5		105.4	56.7

*Dimension "H" is measured with 14M fitting option



[Unit : mm]

[B2.5/40 series] [B6.0/40 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/40-PG34	34.5	Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	72.9	42.1
B2.5/40-PG42	42		76.1	40.9
B2.5/40-PG48	48.5		83.4	42.2
B6.0/40-PG34	34.5		104.8	57.9
B6.0/40-PG42	42		118	67.3
B6.0/40-PG48	48.5		115.3	58.3

*Dimension "H" is measured with 14M fitting option

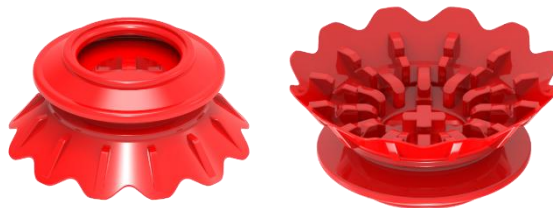
XC type

■ Features and Strengths

- ✓ Suitable for very thin and deformable (uneven) plastic package handling
- ✓ The lip edge of cup do not turn upside down even if the cup is compressed

■ Example of use

- ✓ Thin and flexible plastic bags
- ✓ Flexible Pouch Bags



Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/40-XC40	20.5	2.2	4.3	5.8
B2.5/40-XC40	27.9	2.2	4.3	5.8
B4.0/40-XC40	33.7	2.2	4.3	5.8
B5.0/40-XC40	40.5	2.2	4.3	5.8
B6.0/40-XC40	47.8	2.2	4.3	5.8
B1.5/40-XC50	26.6	2.6	5.5	7.2
B2.5/40-XC50	34	2.6	5.5	7.2
B4.0/40-XC50	39.8	2.6	5.5	7.2
B5.0/40-XC50	46.6	2.6	5.5	7.2
B6.0/40-XC50	53.9	2.6	5.5	7.2
B1.5/40-XC60	36.1	3.2	7.2	9.6
B2.5/40-XC60	43.5	3.2	7.2	9.6
B4.0/40-XC60	49.3	3.2	7.2	9.6
B5.0/40-XC60	56.1	3.2	7.2	9.6
B6.0/40-XC60	63.4	3.2	7.2	9.6

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100

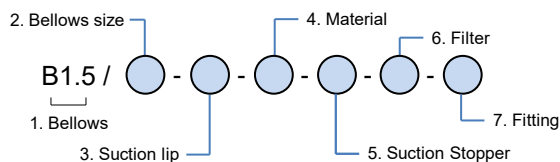
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C







** For additional materials, please contact us

Material Resistance

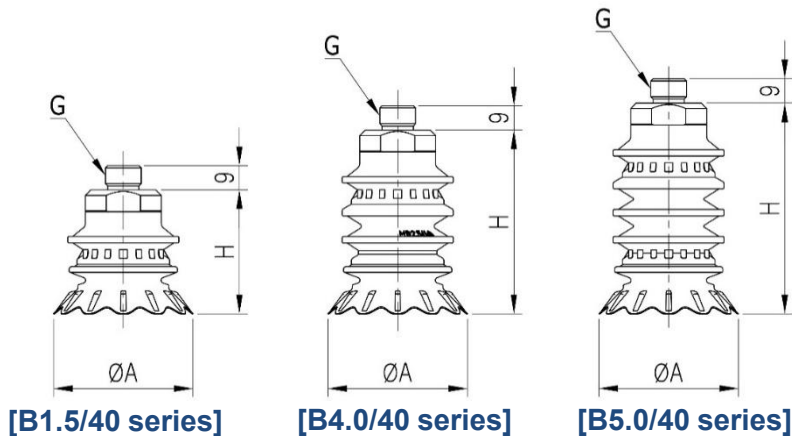
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane
Wear Resistance	Excellent	Good	Good	Excellent
Oil	Excellent	Poor	Poor	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair
Acid	Fair	Poor	Poor	Poor

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	40mm bellows diameter: For X40 & X45 & X50 & X55	40
3. Suction lip	Description	Ordering No.
	XC type lip, 40mm diameter	XC40
	XC type lip, 50mm diameter	XC50
	XC type lip, 60mm diameter	XC60
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U6
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female	38F

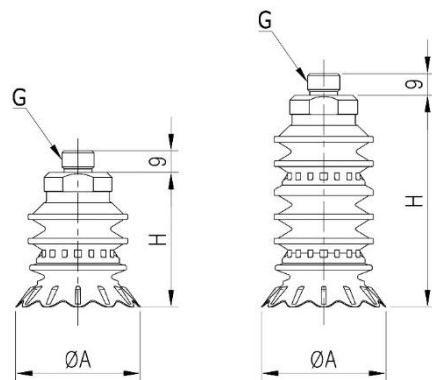
Dimension Data



[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/40-XC40	41.2	Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	45.6	36.3
B1.5/40-XC50	51.5		45.6	34.1
B1.5/40-XC60	61.4		47.6	30.8
B4.0/40-XC40	41.2		67.7	48.1
B4.0/40-XC50	51.5		67.7	46.9
B4.0/40-XC60	61.4		69.7	44.4
B5.0/40-XC40	41.2		77.6	52.2
B5.0/40-XC50	51.5		77.6	51.1
B5.0/40-XC60	61.4		79.6	48

*Dimension "H" is measured with 14M fitting option



[Unit : mm]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/40-XC40	41.2	Bellows Ø40 Female thread : 1/8", 1/4", 3/8" Male thread : 1/8", 1/4", 3/8"	55.5	37.4
B2.5/40-XC50	51.5		55.5	36.5
B2.5/40-XC60	61.4		57.5	36
B6.0/40-XC40	41.2		87.5	55.1
B6.0/40-XC50	51.5		87.5	53.8
B6.0/40-XC60	61.4		89.5	53.2

*Dimension "H" is measured with 14M fitting option

SB type

Features and Strengths

- ✓ Prevent the vacuum suction marks (Minimal mark)
- ✓ Evenly distribute the vacuum flow around edge of the suction lip
- ✓ Maximized the speed of the vacuum flow to quickly assist in cup sealing



Example of use

- ✓ Plastic pouch, Thin film and sheet, Copper plate

Recommend Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) – Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-SB17	3.32	1	1.5	1.7
B2.5/20-SB17	5.42	1	1.5	1.7
B4.0/20-SB17	5.16	1	1.5	1.7
B5.0/20-SB17	6.31	1	1.5	1.7
B6.0/20-SB17	8.4	1	1.5	1.7
B1.5/20-SB20	3.84	1.2	2.8	3
B2.5/20-SB20	5.95	1.2	2.8	3
B4.0/20-SB20	5.68	1.2	2.8	3
B5.0/20-SB20	6.84	1.2	2.8	3
B6.0/20-SB20	8.93	1.2	2.8	3
B1.5/20-SB25	4.97	1.5	3.7	4.1
B2.5/20-SB25	7.08	1.5	3.7	4.1
B4.0/20-SB25	6.82	1.5	3.7	4.1
B5.0/20-SB25	7.97	1.5	3.7	4.1
B6.0/20-SB25	10.06	1.5	3.7	4.1
B1.5/20-SB30	6.85	1.9	4	5.3
B2.5/20-SB30	8.95	1.9	4	5.3
B4.0/20-SB30	8.69	1.9	4	5.3
B5.0/20-SB30	9.84	1.9	4	5.3
B6.0/20-SB30	11.93	1.9	4	5.3

Material Specification

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Blue	-20~110
S3 - Silicone	30	Translucent White	-70~200
S5 - Silicone	50	Red	-70~200
W3 - White Silicone	30	Translucent White	-70~200
W5 - White Silicone	50	Translucent White	-70~200
W3(FDA) - White Silicone(FDA)	30	Translucent White	-70~200
W5(FDA) - White Silicone(FDA)	50	Translucent White	-70~200
U6 - Urethane	60	Dark Grey	0~100
PU - Polyurethane	60	Translucent Orange	0~60

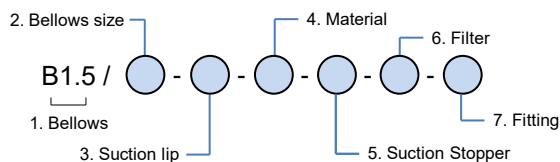
* The temperature data is only for suction lip. Please contact us if it is used in over 60°C







** For additional materials, please contact us

Material Resistance

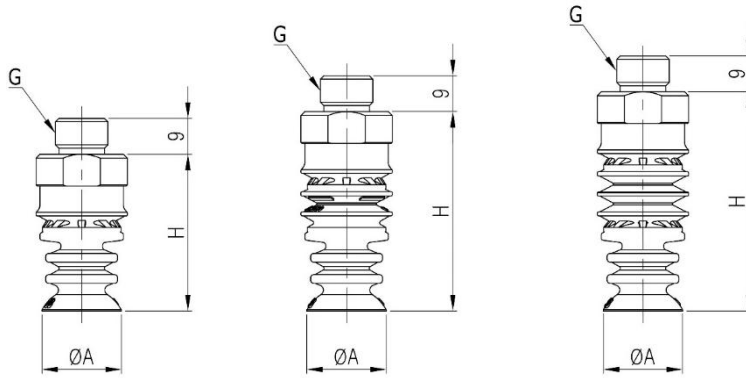
Description	NBR (Nitrile)	Silicone	White Silicone	Urethane	Polyurethane
Wear Resistance	Excellent	Good	Good	Excellent	Excellent
Oil	Excellent	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Fair	Fair
Acid	Fair	Poor	Poor	Poor	Fair

Build an Ordering No.



1. Bellows size	Description	Ordering No.
	Top bellows 1.5 folds	B1.5
	Top bellows 2.5 folds	B2.5
	Top bellows 1.5 folds + Middle bellows 2.5 folds	B4.0
	Top bellows 1.5 folds + Middle bellows 3.5 folds	B5.0
	Top bellows 2.5 folds + Middle bellows 3.5 folds	B6.0
2. Bellows size	Description	Ordering No.
	20mm bellows diameter:	20
3. Suction lip	Description	Ordering No.
	SB type lip, 17mm diameter	SB17
	SB type lip, 20mm diameter	SB20
	SB type lip, 25mm diameter	SB25
	SB type lip, 30mm diameter	SB30
4. Material	Description	Ordering No.
	NBR (Nitrile), 60° hardness	N6
	Silicone, 30° hardness	S3
	Silicone, 50° hardness	S5
	White Silicone, 30° hardness	W3
	White Silicone, 50° hardness	W5
	White Silicone, 30° hardness (FDA)	W3(FDA)
	White Silicone, 50° hardness (FDA)	W5(FDA)
	Urethane, 60° hardness	U
5. Suction Stopper	Description	Ordering No.
	D type	D
6. Filter	Description	Ordering No.
	No filter	Blank
	Filter (200mesh)	F2
7. Fitting	Description	Ordering No.
	Fitting, G1/8 female	18F
	Fitting, G1/4 female	14F
	Fitting, G1/8 male	18M
	Fitting, G1/4 male	14M
	Fitting, G3/8 male	38M
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Dimension Data



[Unit : mm]

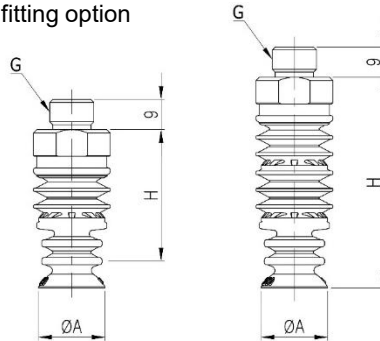
[B1.5/20 series]

[B4.0/20 series]

[B5.0/20 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B1.5/20-SB17	17.5	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	38.8	28.4
B1.5/20-SB20	20		39.4	29.7
B1.5/20-SB25	25		40.4	29.5
B1.5/20-SB30	30		43.4	30.1
B4.0/20-SB17	17.5		49.5	34.8
B4.0/20-SB20	20		50.1	36.6
B4.0/20-SB25	25		51.1	35.7
B4.0/20-SB30	30		54.1	36.8
B5.0/20-SB17	17.5		54.4	38.5
B5.0/20-SB20	20		55	38.3
B5.0/20-SB25	25		56	38.6
B5.0/20-SB30	30		59	39.5

*Dimension "H" is measured with 14M fitting option



[Unit : mm]

[B2.5/20 series] [B6.0/20 series]

Model	ØA	G	Height	
			Before Compression	After Compression
B2.5/20-SB17	17.5	Bellows Ø20 Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	46.8	31.9
B2.5/20-SB20	20		47.4	32.9
B2.5/20-SB25	25		48.4	32.5
B2.5/20-SB30	30		51.4	34.2
B6.0/20-SB17	17.5		62.5	41.5
B6.0/20-SB20	20		63.1	42.9
B6.0/20-SB25	25		64.1	42.5
B6.0/20-SB30	30		67.1	42.7

*Dimension "H" is measured with 14M fitting option

