

SUCTION CUPS / Single Bellows

VB Series

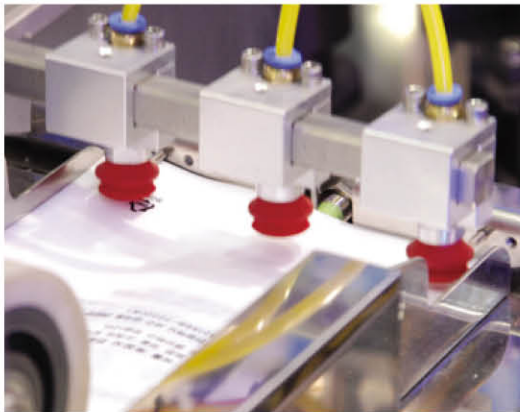
Features and Strengths

Compensating for a difference in level
Various materials for a wide range of applications

Advantages

Particularly good for use on curved surfaces and for separating thin sheets of materials in stacks.
The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

Application



Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets

Available size options

Model	Description	Model	Description
VB5	Single-bellows suction cup Ø5	VB30	Single-bellows suction cup Ø30
VB6X	Single-bellows suction cup Ø6	VB40	Single-bellows suction cup Ø40
VB8	Single-bellows suction cup Ø8	VB50	Single-bellows suction cup Ø50
VB10	Single-bellows suction cup Ø10	VB75	Single-bellows suction cup Ø75
VB12	Single-bellows suction cup Ø12	VB75B	Single-bellows suction cup Ø75
VB15	Single-bellows suction cup Ø15	VB110	Single-bellows suction cup Ø110
VB17	Single-bellows suction cup Ø17	VB110B	Single-bellows suction cup Ø110
VB20	Single-bellows suction cup Ø20	VB150	Single-bellows suction cup Ø150



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular			Page
		- 20 kPa	- 60 kPa	- 90 kPa	
VB5	0.05	0.03	0.08	0.10	178
VB6X	0.09	0.05	0.11	0.14	180
VB8	0.15	0.08	0.16	0.25	182
VB10	0.48	0.15	0.34	0.50	184
VB12	0.59	0.20	0.41	0.62	186
VB15	1.10	0.29	0.60	0.90	188
VB17	1.50	0.40	0.80	1.00	190
VB20	2.70	0.60	1.00	1.42	192
VB30	10.00	1.22	2.24	2.42	194
VB40	15.00	2.24	3.97	5.00	196
VB50	32.00	3.36	6.63	8.36	198
VB75	110.00	7.65	17.04	23.06	200
VB75B	110.00	7.65	17.04	23.06	202
VB110	310.00	13.97	35.00	47.04	204
VB110B	310.00	13.97	35.00	47.04	206
VB150	650.00	30.00	70.00	90.10	208

※ The lifting force above does not include safety factor

SUCTION CUPS / Single Bellows

VB5

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB5	0.05	0.03	0.08	0.10

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

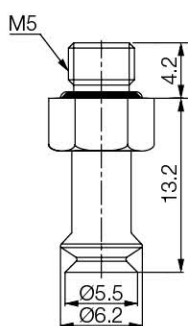
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

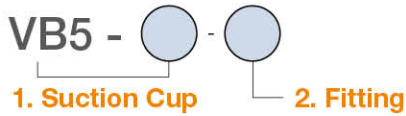
Dimension

[Unit : mm]



[With M5M fitting]

Build an Ordering No.

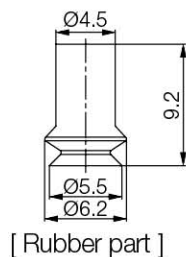


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 5mm diameter, Nitrile (NBR)	VB5-N
	Single-bellow suction cup, 5mm diameter, Silicone	VB5-S
	Single-bellow suction cup, 5mm diameter, White silicone	VB5-WS
	Single-bellow suction cup, 5mm diameter, White silicone (FDA)	VB5-WS(FDA)
	Single-bellow suction cup, 5mm diameter, High temperature silicone	VB5-HS
	Single-bellow suction cup, 5mm diameter, Conductive silicone	VB5-CS
	Single-bellow suction cup, 5mm diameter, Urethane	VB5-U
	Single-bellow suction cup, 5mm diameter, Mark free	VB5-A

2. Fitting	Description	Symbol
	No fitting	Blank
	Fitting, M5 male	M5M

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB5-N	Single-bellow suction cup, 5mm diameter, Nitrile (NBR)	0.16	Black
VB5-S	Single-bellow suction cup, 5mm diameter, Silicone	0.15	Red
VB5-WS	Single-bellow suction cup, 5mm diameter, White silicone	0.15	Translucent White
VB5-WS(FDA)	Single-bellow suction cup, 5mm diameter, White silicone(FDA)	0.15	Translucent White
VB5-HS	Single-bellow suction cup, 5mm diameter, High temperature silicone	0.15	Blue
VB5-CS	Single-bellow suction cup, 5mm diameter, Conductive silicone	0.15	Smoky Black
VB5-U	Single-bellow suction cup, 5mm diameter, Urethane	0.17	Dark Green
VB5-A	Single-bellow suction cup, 5mm diameter, Mark free	0.16	Black



[Unit : mm]

Spare Parts – Fitting

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3101	M5M	M5 male	1.84

SUCTION CUPS / Single Bellows

VB6X

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB6X	0.09	0.05	0.11	0.14

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

※ For additional material, see page 32~33

Material Resistance

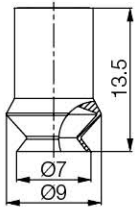
Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

Build an Ordering No.

VB6X -

1. Suction Cup

1. Suction cup	Description	Weight (g)	Symbol
	Single-bellow suction cup, 6mm diameter, Nitrile (NBR)	0.39	VB6X-N
	Single-bellow suction cup, 6mm diameter, Silicone	0.38	VB6X-S
	Single-bellow suction cup, 6mm diameter, White silicone	0.36	VB6X-WS
	Single-bellow suction cup, 6mm diameter, White silicone (FDA)	0.36	VB6X-WS(FDA)
	Single-bellow suction cup, 6mm diameter, High temperature silicone	0.36	VB6X-HS
	Single-bellow suction cup, 6mm diameter, Conductive silicone	0.39	VB6X-CS
	Single-bellow suction cup, 6mm diameter, Urethane	0.39	VB6X-U
	Single-bellow suction cup, 6mm diameter, Mark free	0.47	VB6X-A



[Rubber part]

[Unit : mm]

SUCTION CUPS / Single Bellows

VB8

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB8	0.15	0.08	0.16	0.25

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

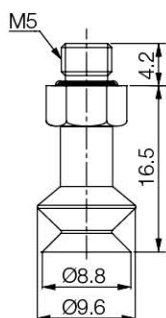
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Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

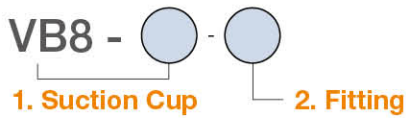
Dimension

[Unit : mm]



[With M5M fitting]

Build an Ordering No.

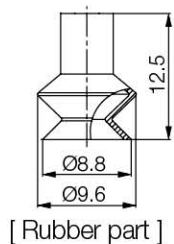


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 8mm diameter, Nitrile (NBR)	VB8-N
	Single-bellow suction cup, 8mm diameter, Silicone	VB8-S
	Single-bellow suction cup, 8mm diameter, White silicone	VB8-WS
	Single-bellow suction cup, 8mm diameter, White silicone (FDA)	VB8-WS(FDA)
	Single-bellow suction cup, 8mm diameter, High temperature silicone	VB8-HS
	Single-bellow suction cup, 8mm diameter, Conductive silicone	VB8-CS
	Single-bellow suction cup, 8mm diameter, Urethane	VB8-U
	Single-bellow suction cup, 8mm diameter, Mark free	VB8-A

2. Fitting	Description	Symbol
	Fitting, M5 male	M5M

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB8-N	Single-bellow suction cup, 8mm diameter, Nitrile (NBR)	0.37	Black
VB8-S	Single-bellow suction cup, 8mm diameter, Silicone	0.34	Red
VB8-WS	Single-bellow suction cup, 8mm diameter, White silicone	0.33	Translucent White
VB8-WS(FDA)	Single-bellow suction cup, 8mm diameter, White silicone (FDA)	0.33	Translucent White
VB8-HS	Single-bellow suction cup, 8mm diameter, High temperature silicone	0.33	Blue
VB8-CS	Single-bellow suction cup, 8mm diameter, Conductive silicone	0.28	Smoky Black
VB8-U	Single-bellow suction cup, 8mm diameter, Urethane	0.36	Dark Green
VB8-A	Single-bellow suction cup, 8mm diameter, Mark free	0.55	Black



[Unit : mm]

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3101	M5M	M5 male	1.84

SUCTION CUPS / Single Bellows

VB10

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB10	0.48	0.15	0.34	0.50

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

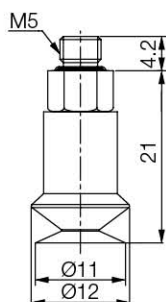
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Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

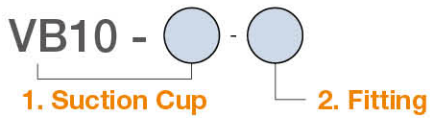
Dimension

[Unit : mm]



[With M5M fitting]

Build an Ordering No.

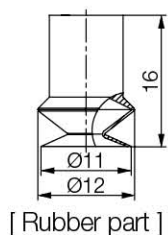


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 10mm diameter, Nitrile (NBR)	VB10-N
	Single-bellow suction cup, 10mm diameter, Silicone	VB10-S
	Single-bellow suction cup, 10mm diameter, White silicone	VB10-WS
	Single-bellow suction cup, 10mm diameter, White silicone (FDA)	VB10-WS(FDA)
	Single-bellow suction cup, 10mm diameter, High temperature silicone	VB10-HS
	Single-bellow suction cup, 10mm diameter, Conductive silicone	VB10-CS
	Single-bellow suction cup, 10mm diameter, Urethane	VB10-U
	Single-bellow suction cup, 10mm diameter, Mark free	VB10-A

2. Fitting	Description	Symbol
	Fitting, M5 male	M5M
	Efficiency valve, Fitting, M5 male	M5M-EV

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB10-N	Single-bellow suction cup, 10mm diameter, Nitrile (NBR)	0.92	Black
VB10-S	Single-bellow suction cup, 10mm diameter, Silicone	0.79	Red
VB10-WS	Single-bellow suction cup, 10mm diameter, White silicone	0.77	Translucent White
VB10-WS(FDA)	Single-bellow suction cup, 10mm diameter, White silicone (FDA)	0.77	Translucent White
VB10-HS	Single-bellow suction cup, 10mm diameter, High temperature silicone	0.81	Blue
VB10-CS	Single-bellow suction cup, 10mm diameter, Conductive silicone	0.88	Smoky Black
VB10-U	Single-bellow suction cup, 10mm diameter, Urethane	0.83	Dark Green
VB10-A	Single-bellow suction cup, 10mm diameter, Mark free	0.88	Black



[Unit : mm]

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3102	M5M	M5 male	2.52
350 010 3102	M5M-EV	Efficiency valve, M5 male	2.63

SUCTION CUPS / Single Bellows

VB12

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB12	0.59	0.20	0.41	0.62

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

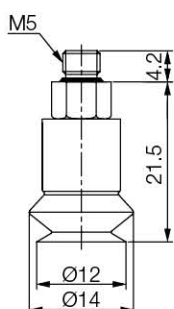
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

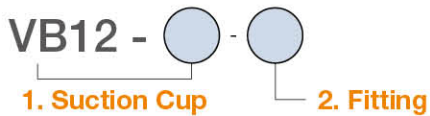
Dimension

[Unit : mm]



[With M5M fitting]

Build an Ordering No.



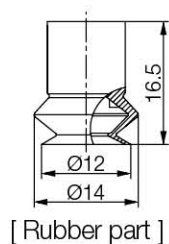
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 12mm diameter, Nitrile (NBR)	VB12-N
	Single-bellow suction cup, 12mm diameter, Silicone	VB12-S
	Single-bellow suction cup, 12mm diameter, White silicone	VB12-WS
	Single-bellow suction cup, 12mm diameter, White silicone (FDA)	VB12-WS(FDA)
	Single-bellow suction cup, 12mm diameter, High temperature silicone	VB12-HS
	Single-bellow suction cup, 12mm diameter, Conductive silicone	VB12-CS
	Single-bellow suction cup, 12mm diameter, Urethane	VB12-U
	Single-bellow suction cup, 12mm diameter, Mark free	VB12-A

2. Fitting	Description	Symbol
	Fitting, M5 male	M5M
	Efficiency valve, Fitting, M5 male	M5M-EV

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB12-N	Single-bellow suction cup, 12mm diameter, Nitrile (NBR)	1.31	Black
VB12-S	Single-bellow suction cup, 12mm diameter, Silicone	1.13	Red
VB12-WS	Single-bellow suction cup, 12mm diameter, White silicone	1.12	Translucent White
VB12-WS(FDA)	Single-bellow suction cup, 12mm diameter, White silicone (FDA)	1.12	Translucent White
VB12-HS	Single-bellow suction cup, 12mm diameter, High temperature silicone	1.13	Blue
VB12-CS	Single-bellow suction cup, 12mm diameter, Conductive silicone	1.13	Smoky Black
VB12-U	Single-bellow suction cup, 12mm diameter, Urethane	1.17	Dark Green
VB12-A	Single-bellow suction cup, 12mm diameter, Mark free	1.47	Black

[Unit : mm]



Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3102	M5M	M5 male	2.52
350 010 3102	M5M-EV	Efficiency valve, M5 male	2.63

SUCTION CUPS / Single Bellows

VB15

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB15	1.10	0.29	0.60	0.90

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100
Polyurethane	60	Translucent Orange	0~60

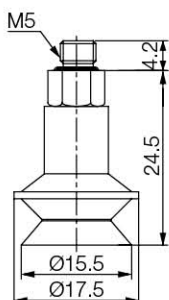
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

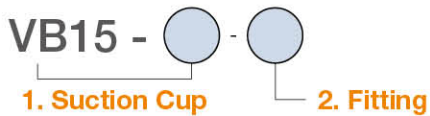
Dimension

[Unit : mm]



[With M5M fitting]

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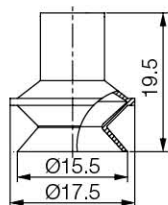


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 15mm diameter, Nitrile (NBR)	VB15-N
	Single-bellow suction cup, 15mm diameter, Silicone	VB15-S
	Single-bellow suction cup, 15mm diameter, White silicone	VB15-WS
	Single-bellow suction cup, 15mm diameter, White silicone (FDA)	VB15-WS(FDA)
	Single-bellow suction cup, 15mm diameter, High temperature silicone	VB15-HS
	Single-bellow suction cup, 15mm diameter, Conductive silicone	VB15-CS
	Single-bellow suction cup, 15mm diameter, Urethane	VB15-U
	Single-bellow suction cup, 15mm diameter, Mark free	VB15-A
	Single-bellow suction cup, 15mm diameter, Polyurethane	VB15-PU

2. Fitting	Description	Symbol
	Fitting, M5 male	M5M
	Efficiency valve, Fitting, M5 male	M5M-EV

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB15-N	Single-bellow suction cup, 15mm diameter, Nitrile (NBR)	1.42	Black
VB15-S	Single-bellow suction cup, 15mm diameter, Silicone	1.23	Red
VB15-WS	Single-bellow suction cup, 15mm diameter, White silicone	1.27	Translucent White
VB15-WS(FDA)	Single-bellow suction cup, 15mm diameter, White silicone (FDA)	1.27	Translucent White
VB15-HS	Single-bellow suction cup, 15mm diameter, High temperature silicone	1.29	Blue
VB15-CS	Single-bellow suction cup, 15mm diameter, Conductive silicone	1.39	Smoky Black
VB15-U	Single-bellow suction cup, 15mm diameter, Urethane	1.36	Dark Green
VB15-A	Single-bellow suction cup, 15mm diameter, Mark free	1.65	Black
VB15-PU	Single-bellow suction cup, 15mm diameter, Polyurethane	1.24	Translucent Orange



[Rubber part]

[Unit : mm]

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3102	M5M	M5 male	2.52
350 010 3102	M5M-EV	Efficiency valve, M5 male	2.63

SUCTION CUPS / Single Bellows

VB17

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB17	1.50	0.40	0.80	1.00

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

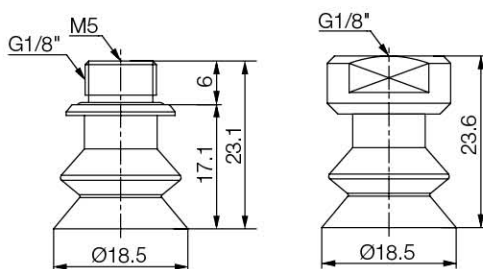
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

Dimension

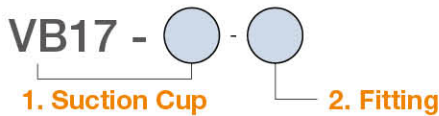
[Unit : mm]



[With M518MF fitting]

[With 18F fitting]

Build an Ordering No.



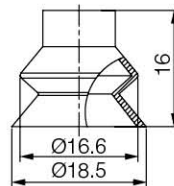
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 17mm diameter, Nitrile (NBR)	VB17-N
	Single-bellow suction cup, 17mm diameter, Silicone	VB17-S
	Single-bellow suction cup, 17mm diameter, White silicone	VB17-WS
	Single-bellow suction cup, 17mm diameter, White silicone (FDA)	VB17-WS(FDA)
	Single-bellow suction cup, 17mm diameter, High temperature silicone	VB17-HS
	Single-bellow suction cup, 17mm diameter, Conductive silicone	VB17-CS
	Single-bellow suction cup, 17mm diameter, Urethane	VB17-U
	Single-bellow suction cup, 17mm diameter, Mark free	VB17-A
2. Fitting	Description	Symbol
	Fitting, G1/8 male - M5 female	M518MF
	Fitting, G1/8 male - M5 female, Mesh filter	M-M518MF
	Efficiency valve, Fitting, G1/8 male - M5 female	M518MF-EV
	Fitting, G1/8 male - M5 female, Old profile	M518MFO
	Fitting, G1/8 male - M5 female, Old profile, Mesh filter	M-M518MFO
	Efficiency valve, Fitting, G1/8Male - M5 female, Old profile	M518MFO-EV
	Fitting, G1/8 male - M5 female, For silicone material	M518MFB*
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency valve, Fitting, G1/8 female	18F-EV

* M518MFB is available only for Silicone material.

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB17-N	Single-bellow suction cup, 17mm diameter, Nitrile (NBR)	1.01	Black
VB17-S	Single-bellow suction cup, 17mm diameter, Silicone	0.91	Red
VB17-WS	Single-bellow suction cup, 17mm diameter, White silicone	0.94	Translucent White
VB17-WS(FDA)	Single-bellow suction cup, 17mm diameter, White silicone (FDA)	0.94	Translucent White
VB17-HS	Single-bellow suction cup, 17mm diameter, High temperature silicone	0.97	Blue
VB17-CS	Single-bellow suction cup, 17mm diameter, Conductive silicone	0.99	Smoky Black
VB17-U	Single-bellow suction cup, 17mm diameter, Urethane	0.96	Dark Green
VB17-A	Single-bellow suction cup, 17mm diameter, Mark free	1.31	Black

[Unit : mm]



[Rubber part]

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3209	M518MF	G1/8 male-M5 female	1.82
350 000 5209	M518MF-F	G1/8 male-M5 female, Mesh filter	1.92
350 010 4209	M518MF-EV	Efficiency valve, G1/8 male-M5 female	1.94
350 000 1209	M518MFO	G1/8 male-M5 female, Old profile	2.88
350 000 1109	M518MFO-F	G1/8 male-M5 female, Old profile, Mesh filter	2.94
350 010 1209	M518MFO-EV	Efficiency valve, G1/8 male-M5 female, Old profile	2.87
350 000 3239	M518MFB	G1/8 male-M5 female, For silicone material	3.56
350 000 3310	18F	G1/8 female	3.20
350 000 4310	18F-F	G1/8 female, Mesh filter	3.26
350 010 3310	18F-EV	Efficiency valve, G1/8 female	3.31

SUCTION CUPS / Single Bellows

VB20

Features and Strengths

Suitable for curved surfaces products
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB20	2.70	0.60	1.00	1.42

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100
Polyurethane	60	Translucent Orange	0~60

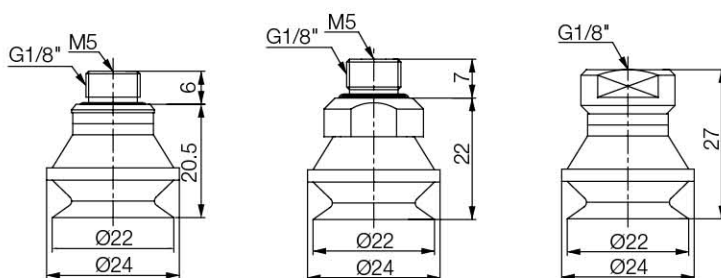
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free	Polyurethane
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good	Excellent
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good	Fair
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent	Fair

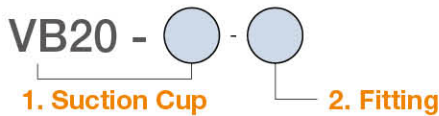
Dimension

[Unit : mm]



[With M518MF fitting] [With M518MFB fitting] [With 18F fitting]

Build an Ordering No.



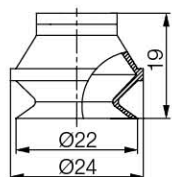
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 20mm diameter, Nitrile (NBR)	VB20-N
	Single-bellow suction cup, 20mm diameter, Silicone	VB20-S
	Single-bellow suction cup, 20mm diameter, White silicone	VB20-WS
	Single-bellow suction cup, 20mm diameter, White silicone (FDA)	VB20-WS(FDA)
	Single-bellow suction cup, 20mm diameter, High temperature silicone	VB20-HS
	Single-bellow suction cup, 20mm diameter, Conductive silicone	VB20-CS
	Single-bellow suction cup, 20mm diameter, Urethane	VB20-U
	Single-bellow suction cup, 20mm diameter, Mark free	VB20-A
	Single-bellow suction cup, 20mm diameter, Polyurethane	VB20-PU

2. Fitting	Description	Symbol
	Fitting, G1/8 male - M5 female	M518MF
	Fitting, G1/8 male - M5 female, Mesh filter	M-M518MF
	Efficiency valve, Fitting, G1/8 male - M5 female	M518MF-EV
	Fitting, G1/8 male - M5 female, Old profile	M518MFO
	Fitting, G1/8 male - M5 female, Old profile, Mesh filter	M-M518MFO
	Efficiency valve, Fitting, G1/8Male - M5 female, Old profile	M518MFO-EV
	Fitting, G1/8 male - M5 female, For silicone material	M518MFB*
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency valve, Fitting, G1/8 female	18F-EV

* M518MFB is available only for Silicone material.

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB20-N	Single-bellow suction cup, 20mm diameter, Nitrile (NBR)	3.11	Black
VB20-S	Single-bellow suction cup, 20mm diameter, Silicone	2.68	Red
VB20-WS	Single-bellow suction cup, 20mm diameter, White silicone	2.58	Translucent White
VB20-WS(FDA)	Single-bellow suction cup, 20mm diameter, White silicone (FDA)	2.58	Translucent White
VB20-HS	Single-bellow suction cup, 20mm diameter, High temperature silicone	3.16	Blue
VB20-CS	Single-bellow suction cup, 20mm diameter, Conductive silicone	3.01	Smoky Black
VB20-U	Single-bellow suction cup, 20mm diameter, Urethane	2.91	Dark Green
VB20-A	Single-bellow suction cup, 20mm diameter, Mark free	3.43	Black
VB20-PU	Single-bellow suction cup, 20mm diameter, Polyurethane	2.41	Translucent Orange



[Rubber part]

[Unit : mm]

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3209	M518MF	G1/8 male-M5 female	1.82
350 000 5209	M518MF-F	G1/8 male-M5 female, Mesh filter	1.92
350 010 4209	M518MF-EV	Efficiency valve, G1/8 male-M5 female	1.94
350 000 1209	M518MFO	G1/8 male-M5 female, Old profile	2.88
350 000 1109	M518MFO-F	G1/8 male-M5 female, Old profile, Mesh filter	2.94
350 010 1209	M518MFO-EV	Efficiency valve, G1/8 male-M5 female, Old profile	2.87
350 000 3239	M518MFB	G1/8 male-M5 female, For silicone material	3.56
350 000 3310	18F	G1/8 female	3.20
350 000 4310	18F-F	G1/8 female, Mesh filter	3.26
350 010 3310	18F-EV	Efficiency valve, G1/8 female	3.31

SUCTION CUPS / Single Bellows

VB30

Features and Strengths

Suitable for curved surfaces products
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB30	10.00	1.22	2.24	2.42

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100
Polyurethane	60	Translucent Orange	0~60

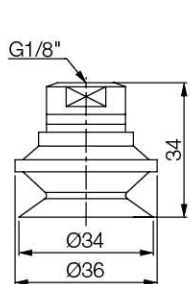
※ For additional material, see page 32~33

Material Resistance

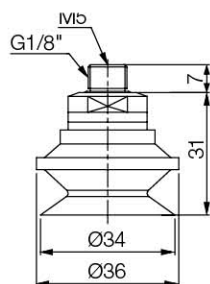
Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free	Polyurethane
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good	Excellent
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good	Fair
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent	Fair

Dimension

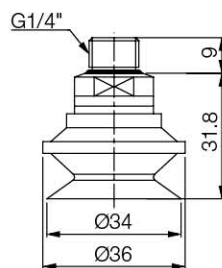
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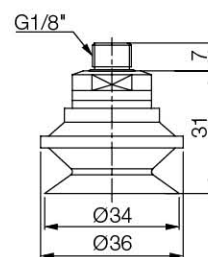
[With 18F fitting]



[With M5 fitting]

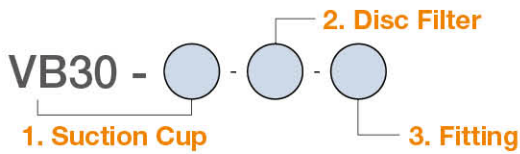


[With 14M fitting]



[With 18M fitting]

I Build an Ordering No.



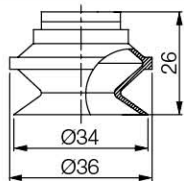
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 30mm diameter, Nitrile (NBR)	VB30-N
	Single-bellow suction cup, 30mm diameter, Silicone	VB30-S
	Single-bellow suction cup, 30mm diameter, White silicone	VB30-WS
	Single-bellow suction cup, 30mm diameter, White silicone (FDA)	VB30-WS(FDA)
	Single-bellow suction cup, 30mm diameter, High temperature silicone	VB30-HS
	Single-bellow suction cup, 30mm diameter, Conductive silicone	VB30-CS
	Single-bellow suction cup, 30mm diameter, Urethane	VB30-U
	Single-bellow suction cup, 30mm diameter, Mark free	VB30-A
	Single-bellow suction cup, 30mm diameter, Polyurethane	VB30-PU
2. Disc Filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F
3. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency valve, Fitting, G1/8 female	18F-EV
	Fitting, G1/8 female, For silicone material	18FB*
	Fitting, G1/8 female, Old profile	18FO
	Fitting, G1/8 female, Old profile, Mesh filter	M-18FO
	Fitting, G1/8 male	18M
	Fitting, G1/8 male, Mesh filter	M-18M
	Efficiency valve, Fitting, G1/8 male	18M-EV
	Fitting, G1/4 male	14M
	Fitting, G1/4 male, Mesh filter	M-14M
	Efficiency valve, Fitting, G1/4 male	14M-EV

* 18FB is available only for Silicone material.

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB30-N	Single-bellow suction cup, 30mm diameter, Nitrile (NBR)	7.2	Black
VB30-S	Single-bellow suction cup, 30mm diameter, Silicone	6.59	Red
VB30-WS	Single-bellow suction cup, 30mm diameter, White silicone	6.59	Translucent White
VB30-WS(FDA)	Single-bellow suction cup, 30mm diameter, White silicone (FDA)	6.59	Translucent White
VB30-HS	Single-bellow suction cup, 30mm diameter, High temperature silicone	6.59	Blue
VB30-CS	Single-bellow suction cup, 30mm diameter, Conductive silicone	6.65	Smoky Black
VB30-U	Single-bellow suction cup, 30mm diameter, Urethane	7.2	Dark Green
VB30-A	Single-bellow suction cup, 30mm diameter, Mark free	9.17	Black
VB30-PU	Single-bellow suction cup, 30mm diameter, Polyurethane	7.49	Translucent Orange

[Unit : mm]



[Rubber part]

I Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-B30	Disc filter, Polyethylene	0.50

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3311	18F	G1/8 female	5.68
350 000 4311	18F-F	G1/8 female, Mesh filter	5.73
350 010 3311	18F-EV	Efficiency valve, G1/8 female	5.63
350 000 3331	18FB	G1/8 female, For silicone material	9.78
350 000 2311	18FO	G1/8 female, Old profile	8.24
350 000 4811	18FO-F	G1/8 female, Old profile, Mesh filter	8.41
350 000 2304	18M	G1/8 male	4.93
350 000 4304	18M-F	G1/8 male, Mesh filter	5.04
350 010 2304	18M-EV	Efficiency valve, G1/8 male	5.08
350 000 3404	14M	G1/4 male	5.88
350 000 3804	14M-F	G1/4 male, Mesh filter	5.92
350 010 3404	14M-EV	Efficiency valve, G1/4 male	6.03

SUCTION CUPS / Single Bellows

VB40

Features and Strengths

Suitable for curved surfaces products
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB40	15.00	2.24	3.97	5.00

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100
Polyurethane	60	Translucent Orange	0~60

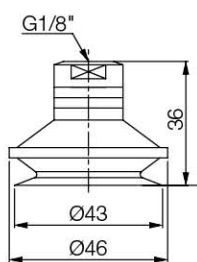
※ For additional material, see page 32~33

Material Resistance

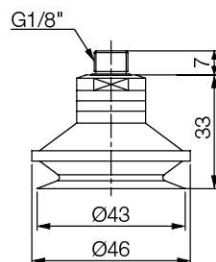
Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free	Polyurethane
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good	Excellent
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good	Fair
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent	Fair

Dimension

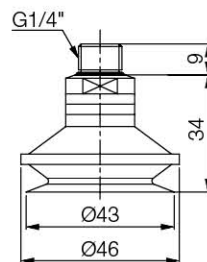
[Unit : mm]



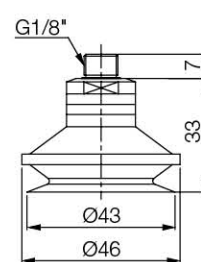
[With 18F fitting]



[With 18M fitting]

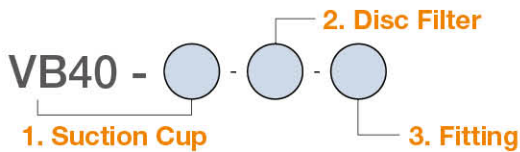


[With 14M fitting]



[With 18M fitting]

Build an Ordering No.



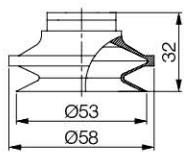
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 40mm diameter, Nitrile (NBR)	VB40-N
	Single-bellow suction cup, 40mm diameter, Silicone	VB40-S
	Single-bellow suction cup, 40mm diameter, White silicone	VB40-WS
	Single-bellow suction cup, 40mm diameter, White silicone (FDA)	VB40-WS(FDA)
	Single-bellow suction cup, 40mm diameter, High temperature silicone	VB40-HS
	Single-bellow suction cup, 40mm diameter, Conductive silicone	VB40-CS
	Single-bellow suction cup, 40mm diameter, Urethane	VB40-U
	Single-bellow suction cup, 40mm diameter, Mark free	VB40-A
	Single-bellow suction cup, 40mm diameter, Polyurethane	VB40-PU
2. Disc Filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F
3. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency valve, Fitting, G1/8 female	18F-EV
	Fitting, G1/8 female, For silicone material	18FB*
	Fitting, G1/8 female, Old profile	18FO
	Fitting, G1/8 female, Old profile, Mesh filter	M-18FO
	Fitting, G1/8 male	18M
	Fitting, G1/8 male, Mesh filter	M-18M
	Efficiency valve, Fitting, G1/8 male	18M-EV
	Fitting, G1/4 male	14M
	Fitting, G1/4 male, Mesh filter	M-14M
	Efficiency valve, Fitting, G1/4 male	14M-EV

* 18FB is available only for Silicone material.

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB40-N	Single-bellow suction cup, 40mm diameter, Nitrile (NBR)	12.92	Black
VB40-S	Single-bellow suction cup, 40mm diameter, Silicone	12.13	Red
VB40-WS	Single-bellow suction cup, 40mm diameter, White silicone	12.13	Translucent White
VB40-WS(FDA)	Single-bellow suction cup, 40mm diameter, White silicone (FDA)	12.13	Translucent White
VB40-HS	Single-bellow suction cup, 40mm diameter, High temperature silicone	12.13	Blue
VB40-CS	Single-bellow suction cup, 40mm diameter, Conductive silicone	12.18	Smoky Black
VB40-U	Single-bellow suction cup, 40mm diameter, Urethane	12.92	Dark Green
VB40-A	Single-bellow suction cup, 40mm diameter, Mark free	16.38	Black
VB40-PU	Single-bellow suction cup, 40mm diameter, Polyurethane	11.12	Translucent Orange

[Unit : mm]



[Rubber part]

Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-B40	Disc filter, Polyethylene	0.72

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3311	18F	G1/8 female	5.68
350 000 4311	18F-F	G1/8 female, Mesh filter	5.73
350 010 3311	18F-EV	Efficiency valve, G1/8 female	5.63
350 000 3331	18FB	G1/8 female, For silicone material	9.78
350 000 2311	18FO	G1/8 female, Old profile	8.24
350 000 4811	18FO-F	G1/8 female, Old profile, Mesh filter	8.41
350 000 2304	18M	G1/8 male	4.93
350 000 4304	18M-F	G1/8 male, Mesh filter	5.04
350 010 2304	18M-EV	Efficiency valve, G1/8 male	5.08
350 000 3404	14M	G1/4 male	5.88
350 000 3804	14M-F	G1/4 male, Mesh filter	5.92
350 010 3404	14M-EV	Efficiency valve, G1/4 male	6.03

SUCTION CUPS / Single Bellows

VB50

Features and Strengths

Suitable for curved surfaces products
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB50	32.00	3.36	6.63	8.36

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100
Polyurethane	60	Translucent Orange	0~60

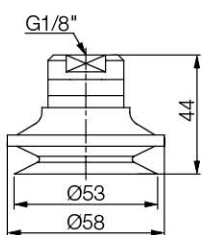
※ For additional material, see page 32~33

Material Resistance

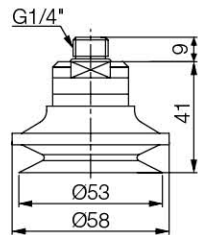
Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free	Polyurethane
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good	Excellent
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good	Fair
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent	Fair

Dimension

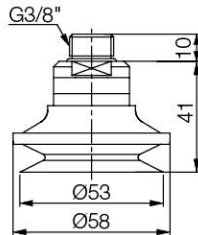
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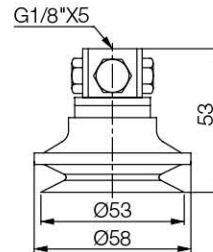
[With 18F fitting]



[With 14M fitting]

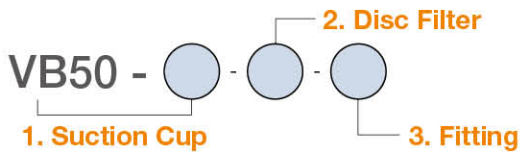


[With 38M fitting]



[With 18x5F fitting]

Build an Ordering No.

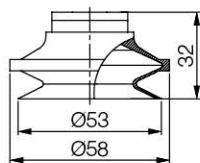


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 50mm diameter, Nitrile (NBR)	VB50-N
	Single-bellow suction cup, 50mm diameter, Silicone	VB50-S
	Single-bellow suction cup, 50mm diameter, White silicone	VB50-WS
	Single-bellow suction cup, 50mm diameter, White silicone (FDA)	VB50-WS(FDA)
	Single-bellow suction cup, 50mm diameter, High temperature silicone	VB50-HS
	Single-bellow suction cup, 50mm diameter, Conductive silicone	VB50-CS
	Single-bellow suction cup, 50mm diameter, Urethane	VB50-U
	Single-bellow suction cup, 50mm diameter, Mark free	VB50-A
	Single-bellow suction cup, 50mm diameter, Polyurethane	VB50-PU
2. Disc Filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F
3. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency valve, Fitting, G1/8 female	18F-EV
	Fitting, G1/8 female, Old profile	18FO
	Fitting, G1/8 female, Old profile, Mesh filter	M-18FO
	Efficiency valve, Fitting, G1/8 female, Old profile	18FO-EV
	Fitting, G1/4 male	14M
	Fitting, G1/4 male, Mesh filter	M-14M
	Efficiency valve, Fitting, G1/4 male	14M-EV
	Fitting, G3/8 male	38M
	Fitting, G3/8 male, Mesh filter	M-38M
	Efficiency valve, Fitting, G3/8 male	38M-EV

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB50-N	Single-bellow suction cup, 50mm diameter, Nitrile (NBR)	21.76	Black
VB50-S	Single-bellow suction cup, 50mm diameter, Silicone	20.31	Red
VB50-WS	Single-bellow suction cup, 50mm diameter, White silicone	20.31	Translucent White
VB50-WS(FDA)	Single-bellow suction cup, 50mm diameter, White silicone (FDA)	20.31	Translucent White
VB50-HS	Single-bellow suction cup, 50mm diameter, High temperature silicone	20.31	Blue
VB50-CS	Single-bellow suction cup, 50mm diameter, Conductive silicone	20.38	Smoky Black
VB50-U	Single-bellow suction cup, 50mm diameter, Urethane	21.76	Dark Green
VB50-A	Single-bellow suction cup, 50mm diameter, Mark free	26.08	Black
VB50-PU	Single-bellow suction cup, 50mm diameter, Polyurethane	22.36	Translucent Orange

[Unit : mm]



[Rubber part]

Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-B50	Disc filter, Polyethylene	1.38

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3312	18F	G1/8 female	14.47
350 000 4312	18F-F	G1/8 female, Mesh filter	14.58
350 010 3312	18F-EV	Efficiency valve, G1/8 female	15.81
350 000 1312	18FO	G1/8 female, Old profile	10.12
350 000 4919	18FO-F	G1/8 female, Old profile, Mesh filter	10.2
350 010 1312	18FO-EV	Efficiency valve, G1/8 female, Old profile	10.22
350 000 3405	14M	G1/4 male	14.18
350 000 3805	14M-F	G1/4 male, Mesh filter	14.42
350 010 3405	14M-EV	Efficiency valve, G1/4 male	14.38
350 000 3505	38M	G3/8 male	18.14
350 000 3905	38M-F	G3/8 male, Mesh filter	17.75
350 010 3505	38M-EV	Efficiency valve, G3/8 male	17.53

SUCTION CUPS / Single Bellows

VB75



Features and Strengths

Suitable for curved surfaces products
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB75	110.00	7.65	17.04	23.06

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100
Polyurethane	60	Translucent Orange	0~60

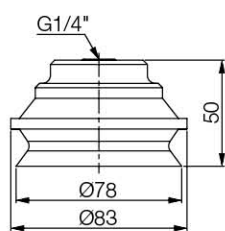
※ For additional material, see page 32~33

Material Resistance

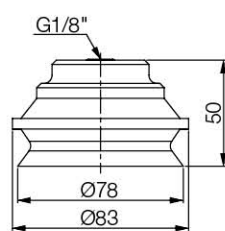
Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free	Polyurethane
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good	Excellent
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good	Fair
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent	Fair

Dimension

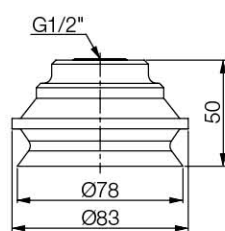
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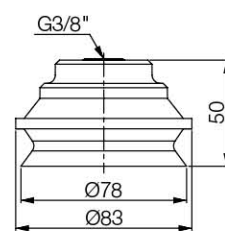
[With 14F fitting]



[With 18F fitting]

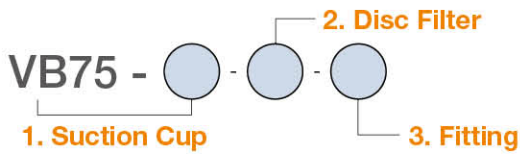


[With 12F fitting]



[With 38F fitting]

Build an Ordering No.



1. Suction cup	Description	Symbol
	Single-bellow suction cup, 75mm diameter, Nitrile (NBR)	VB75-N
	Single-bellow suction cup, 75mm diameter, Silicone	VB75-S
	Single-bellow suction cup, 75mm diameter, White silicone	VB75-WS
	Single-bellow suction cup, 75mm diameter, White silicone (FDA)	VB75-WS(FDA)
	Single-bellow suction cup, 75mm diameter, High temperature silicone	VB75-HS
	Single-bellow suction cup, 75mm diameter, Conductive silicone	VB75-CS
	Single-bellow suction cup, 75mm diameter, Urethane	VB75-U
	Single-bellow suction cup, 75mm diameter, Mark free	VB75-A
	Single-bellow suction cup, 75mm diameter, Polyurethane	VB75-PU

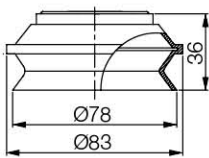
2. Disc Filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F

3. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Fitting, G1/4 female	14F
	Fitting, G1/4 female, Mesh filter	M-14F
	Fitting, G3/8 female	38F
	Fitting, G3/8 female, Mesh filter	M-38F
	Fitting, G1/2 female	12F
	Fitting, G1/2 female, Mesh filter	M-12F

Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB75-N	Single-bellow suction cup, 75mm diameter, Nitrile (NBR)	66.17	Black
VB75-S	Single-bellow suction cup, 75mm diameter, Silicone	63.28	Red
VB75-WS	Single-bellow suction cup, 75mm diameter, White silicone	63.28	Translucent White
VB75-WS(FDA)	Single-bellow suction cup, 75mm diameter, White silicone (FDA)	63.28	Translucent White
VB75-HS	Single-bellow suction cup, 75mm diameter, High temperature silicone	63.28	Blue
VB75-CS	Single-bellow suction cup, 75mm diameter, Conductive silicone	63.37	Smoky Black
VB75-U	Single-bellow suction cup, 75mm diameter, Urethane	66.17	Dark Green
VB75-A	Single-bellow suction cup, 75mm diameter, Mark free	75.44	Black
VB75-PU	Single-bellow suction cup, 75mm diameter, Polyurethane	68.89	Translucent Orange

[Unit : mm]



[Rubber part]

Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-B75	Disc filter, Polyethylene	4.25

Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3323	18F	G1/8 female	59.36
350 000 4323	18F-F	G1/8 female, Mesh filter	59.76
350 000 3423	14F	G1/4 female	56.92
350 000 3823	14F-F	G1/4 female, Mesh filter	57.32
350 000 3523	38F	G3/8 female	55.08
350 000 3923	38F-F	G3/8 female, Mesh filter	55.48
350 000 3623	12F	G1/2 female	51.50
350 000 4023	12F-F	G1/2 female, Mesh filter	51.90

SUCTION CUPS / Single Bellows

VB75B



Features and Strengths

Suitable for curved surfaces products
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB75B	110.00	7.65	17.04	23.06

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

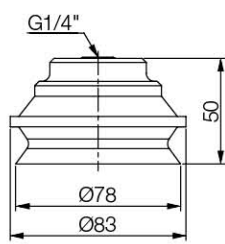
※ For additional material, see page 32~33

Material Resistance

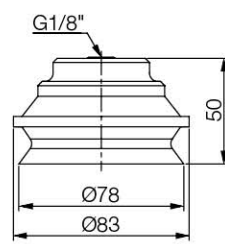
Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free	Polyurethane
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good	Excellent
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good	Fair
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent	Fair

Dimension

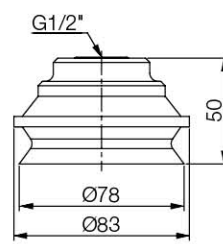
[Unit : mm]



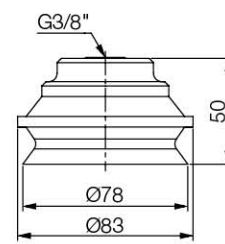
[With 14F fitting]



[With 18F fitting]

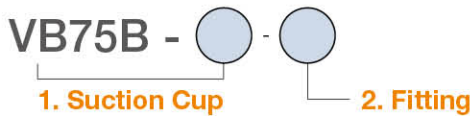


[With 12F fitting]



[With 38F fitting]

I Build an Ordering No.



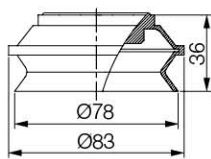
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 75mm diameter, Nitrile (NBR)	VB75B-N
	Single-bellow suction cup, 75mm diameter, Silicone	VB75B-S
	Single-bellow suction cup, 75mm diameter, White silicone	VB75B-WS
	Single-bellow suction cup, 75mm diameter, White silicone (FDA)	VB75B-WS(FDA)
	Single-bellow suction cup, 75mm diameter, High temperature silicone	VB75B-HS
	Single-bellow suction cup, 75mm diameter, Conductive silicone	VB75B-CS
	Single-bellow suction cup, 75mm diameter, Urethane	VB75B-U
	Single-bellow suction cup, 75mm diameter, Mark free	VB75B-A

2. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Fitting, G1/4 female	14F
	Fitting, G1/4 female, Mesh filter	M-14F
	Fitting, G3/8 female	38F
	Fitting, G3/8 female, Mesh filter	M-38F
	Fitting, G1/2 female	12F
	Fitting, G1/2 female, Mesh filter	M-12F

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB75B-N	Single-bellow suction cup, 75mm diameter, Nitrile (NBR)	73.03	Black
VB75B-S	Single-bellow suction cup, 75mm diameter, Silicone	66.56	Red
VB75B-WS	Single-bellow suction cup, 75mm diameter, White silicone	66.46	Translucent White
VB75B-WS(FDA)	Single-bellow suction cup, 75mm diameter, White silicone (FDA)	66.46	Translucent White
VB75B-HS	Single-bellow suction cup, 75mm diameter, High temperature silicone	66.49	Blue
VB75B-CS	Single-bellow suction cup, 75mm diameter, Conductive silicone	66.58	Smoky Black
VB75B-U	Single-bellow suction cup, 75mm diameter, Urethane	77.26	Dark Green
VB75B-A	Single-bellow suction cup, 75mm diameter, Mark free	80.81	Black

[Unit : mm]



[Rubber part]

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3323	18F	G1/8 female	59.36
350 000 4323	18F-F	G1/8 female, Mesh filter	59.76
350 000 3423	14F	G1/4 female	56.92
350 000 3823	14F-F	G1/4 female, Mesh filter	57.32
350 000 3523	38F	G3/8 female	55.08
350 000 3923	38F-F	G3/8 female, Mesh filter	55.48
350 000 3623	12F	G1/2 female	51.50
350 000 4023	12F-F	G1/2 female, Mesh filter	51.90

SUCTION CUPS / Single Bellows

VB110

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB110	310.00	13.97	35.00	47.04

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

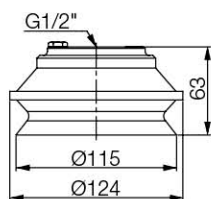
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

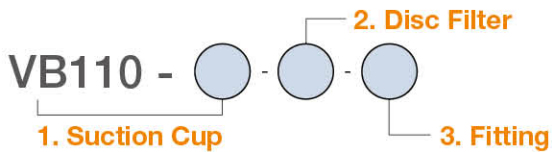
Dimension

[Unit : mm]



[With 12F fitting]

I Build an Ordering No.



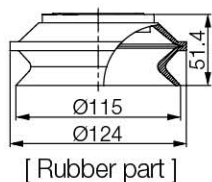
1. Suction cup	Description	Symbol
	Single-bellow suction cup, 110mm diameter, Nitrile (NBR)	VB110-N
	Single-bellow suction cup, 110mm diameter, Silicone	VB110-S
	Single-bellow suction cup, 110mm diameter, White silicone	VB110-WS
	Single-bellow suction cup, 110mm diameter, White silicone (FDA)	VB110-WS(FDA)
	Single-bellow suction cup, 110mm diameter, High temperature silicone	VB110-HS
	Single-bellow suction cup, 110mm diameter, Conductive silicone	VB110-CS
	Single-bellow suction cup, 110mm diameter, Urethane	VB110-U
	Single-bellow suction cup, 110mm diameter, Mark free	VB110-A

2. Disc Filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F

3. Fitting	Description	Symbol
	Fitting, G1/2 female	12F
	Fitting, G1/2 female, Mesh filter	M-12F

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB110-N	Single-bellow suction cup, 110mm diameter, Nitrile (NBR)	186.15	Black
VB110-S	Single-bellow suction cup, 110mm diameter, Silicone	120.5	Red
VB110-WS	Single-bellow suction cup, 110mm diameter, White silicone	121.12	Translucent White
VB110-WS(FDA)	Single-bellow suction cup, 110mm diameter, White silicone (FDA)	121.12	Translucent White
VB110-HS	Single-bellow suction cup, 110mm diameter, High temperature silicone	121.33	Blue
VB110-CS	Single-bellow suction cup, 110mm diameter, Conductive silicone	121.28	Smoky Black
VB110-U	Single-bellow suction cup, 110mm diameter, Urethane	186.13	Dark Green
VB110-A	Single-bellow suction cup, 110mm diameter, Mark free	134.17	Black



[Unit : mm]

I Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-B110	Disc filter, Polyethylene	10.15

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3614	12F	G1/2 female	103.70
350 000 4014	12F-F	G1/2 female, Mesh filter	104.50

SUCTION CUPS / Single Bellows

VB110B

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB110B	310.00	13.97	35.00	47.04

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

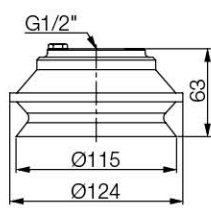
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

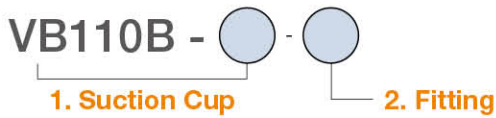
Dimension

[Unit : mm]



[With 12F fitting]

I Build an Ordering No.

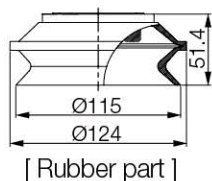


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 110mm diameter, Nitrile (NBR)	VB110B-N
	Single-bellow suction cup, 110mm diameter, Silicone	VB110B-S
	Single-bellow suction cup, 110mm diameter, White silicone	VB110B-WS
	Single-bellow suction cup, 110mm diameter, White silicone (FDA)	VB110B-WS(FDA)
	Single-bellow suction cup, 110mm diameter, High temperature silicone	VB110B-HS
	Single-bellow suction cup, 110mm diameter, Conductive silicone	VB110B-CS
	Single-bellow suction cup, 110mm diameter, Urethane	VB110B-U
	Single-bellow suction cup, 110mm diameter, Mark free	VB110B-A

2. Fitting	Description	Symbol
	Fitting, G1/2 female	12F
	Fitting, G1/2 female, Mesh filter	M-12F

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB110B-N	Single-bellow suction cup, 110mm diameter, Nitrile (NBR)	180.68	Black
VB110B-S	Single-bellow suction cup, 110mm diameter, Silicone	172.66	Red
VB110B-WS	Single-bellow suction cup, 110mm diameter, White silicone	174.87	Translucent White
VB110B-WS(FDA)	Single-bellow suction cup, 110mm diameter, White silicone (FDA)	174.87	Translucent White
VB110B-HS	Single-bellow suction cup, 110mm diameter, High temperature silicone	117.76	Blue
VB110B-CS	Single-bellow suction cup, 110mm diameter, Conductive silicone	117.71	Smoky Black
VB110B-U	Single-bellow suction cup, 110mm diameter, Urethane	180.66	Dark Green
VB110B-A	Single-bellow suction cup, 110mm diameter, Mark free	130.22	Black



[Unit : mm]

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3614	12F	G1/2 female	103.70
350 000 4014	12F-F	G1/2 female, Mesh filter	104.50

SUCTION CUPS / Single Bellows

VB150

Features and Strengths

Suitable for smaller objects
Compensating for a difference in level
Various materials for a wide range of applications

Examples of use

Cardboards, Veneer Sheets, Packaging Materials,
Plastic Sheets, Thin Film Sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VB150	650.00	30.00	70.00	90.10

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

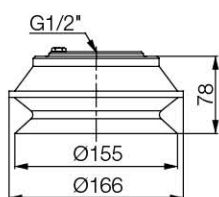
※ For additional material, see page 32~33

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

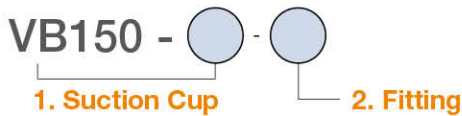
Dimension

[Unit : mm]



[With 12F fitting]

I Build an Ordering No.

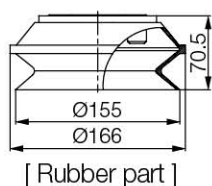


1. Suction cup	Description	Symbol
	Single-bellow suction cup, 150mm diameter, Nitrile (NBR)	VB150-N
	Single-bellow suction cup, 150mm diameter, Silicone	VB150-S
	Single-bellow suction cup, 150mm diameter, White silicone	VB150-WS
	Single-bellow suction cup, 150mm diameter, White silicone (FDA)	VB150-WS(FDA)
	Single-bellow suction cup, 150mm diameter, High temperature silicone	VB150-HS
	Single-bellow suction cup, 150mm diameter, Conductive silicone	VB150-CS
	Single-bellow suction cup, 150mm diameter, Urethane	VB150-U
	Single-bellow suction cup, 150mm diameter, Mark free	VB150-A

2. Fitting	Description	Symbol
	Fitting, G1/2 female	12F
	Fitting, G1/2 female, Mesh filter	M-12F

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VB150-N	Single-bellow suction cup, 150mm diameter, Nitrile (NBR)	460.00	Black
VB150-S	Single-bellow suction cup, 150mm diameter, Silicone	420.00	Red
VB150-WS	Single-bellow suction cup, 150mm diameter, White silicone	422.00	Translucent White
VB150-WS(FDA)	Single-bellow suction cup, 150mm diameter, White silicone (FDA)	422.00	Translucent White
VB150-HS	Single-bellow suction cup, 150mm diameter, High temperature silicone	443.00	Blue
VB150-CS	Single-bellow suction cup, 150mm diameter, Conductive silicone	440.00	Smoky Black
VB150-U	Single-bellow suction cup, 150mm diameter, Urethane	459.95	Dark Green
VB150-A	Single-bellow suction cup, 150mm diameter, Mark free	483	Black



[Unit : mm]

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3615	12F	G1/2 female	198.93
350 000 4015	12F-F	G1/2 female, Mesh filter	199.73