

SUCTION CUPS / Bellows & Cross Groove

VBX Series

Features and Strengths

Widely cover for increased degree of height compensation
Excellent for curved products and separating thin sheet in stocks

Advantages

Particularly good for use on curved surfaces and for separating thin sheets of materials in stacks with long bellows
Can cope with an increased degree of height compensation and is particularly good for handling fragile objects
The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece
Enhancing the adhesion to the surface

Application



Examples of use

Metal sheets, Plywood, Carton box, Cement sack,
Glasses, Veneer sheets

Available size options

Model	Description
VBX35	Double bellow – universal suction cup, Ø35
VBX45	Double bellow – universal suction cup, Ø45
VBX55	Double bellow – universal suction cup, Ø55



I Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular			Page
		- 20 kPa	- 60 kPa	- 90 kPa	
VBX35	5.80	2.63	4.38	6.95	252
VBX45	13.00	6.40	8.80	10.50	254
VBX55	29.50	7.60	10.10	12.20	256

※ The lifting force above does not include safety factor

SUCTION CUPS / Bellows & Cross Groove

VBX35

Features and Strengths

Widely cover for increased degree of height compensation
Excellent for curved products and separating thin sheet in stocks

Examples of use

Metal sheets, Plywood, Carton box, Cement sack,
Glasses, Veneer sheets



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VBX35	5.80	2.63	4.38	6.95

※ The lifting force above does not include safety factor

Material Specifications

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

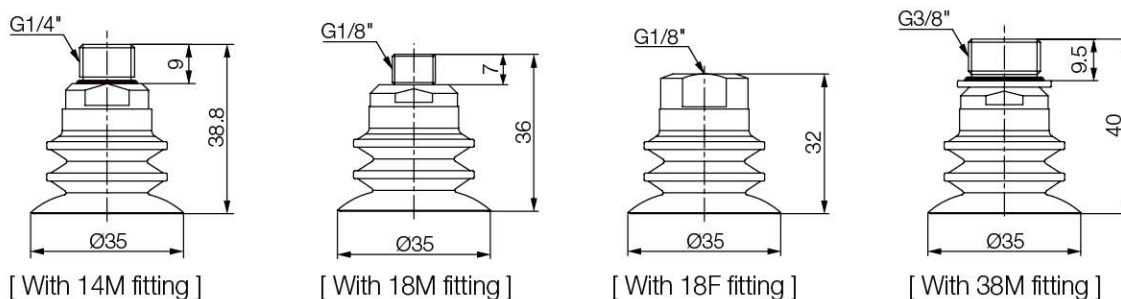
※ For additional material, see page 32~33

Material Resistance

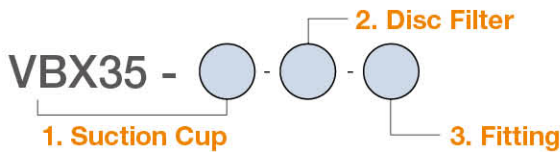
Description	Polyurethane
Wear Resistance	Excellent
Oil	Excellent
Weather / Ozone	Excellent
Alcohol	Fair
Acid	Fair

Dimension

[Unit : mm]



I Build an Ordering No.

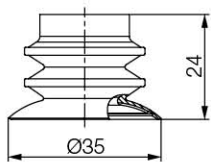


1. Suction cup	Description	Symbol
	Double bellow – cross groove suction cup, 35mm diameter, Polyurethane	VBX35-PU
2. Disc filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F
3. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency 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
	Fitting, G3/8 male	38M
	Fitting, G3/8 male, Mesh filter	M-38M
	Efficiency valve, Fitting, G3/8 male	38M-EV

* 18FB is available only for Silicone material.

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VBX35-PU	Double bellow – cross groove suction cup, 35mm diameter, Polyurethane	5.12	Translucent Orange



[Rubber part]

[Unit : mm]

I Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-BX35	Disc filter, Polyethylene	0.36

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	3.7
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
350 000 3504	38M	G3/8 male	9.16
350 000 3904	38M-F	G3/8 male, Mesh filter	9.56
350 010 3504	38M-EV	Efficiency valve, G3/8 male	5.93

SUCTION CUPS / Bellows & Cross Groove

VBX45

Features and Strengths

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

Examples of use

Veneer sheets, Metal sheets, Plywood, Carton box, Glasses



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VBX45	13.00	6.40	8.80	10.50

※ The lifting force above does not include safety factor

Material Specifications

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

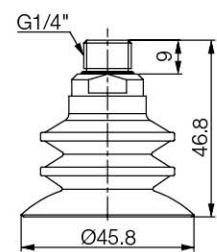
※ For additional material, see page 32~33

Material Resistance

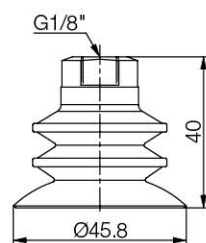
Description	Polyurethane
Wear Resistance	Excellent
Oil	Excellent
Weather / Ozone	Excellent
Alcohol	Fair
Acid	Fair

Dimension

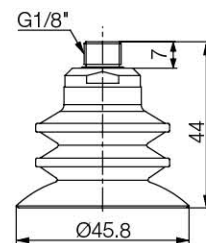
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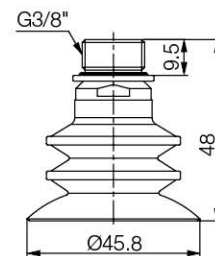
[With 14M fitting]



[With 18F fitting]

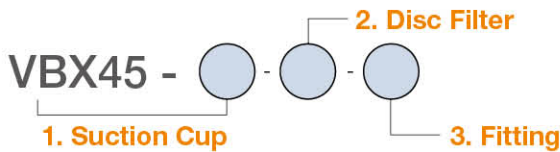


[With 18M fitting]



[With 38M fitting]

I Build an Ordering No.

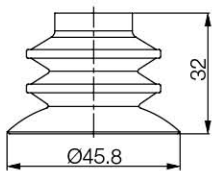


1. Suction cup	Description	Symbol
	Double bellow – cross groove suction cup, 45mm diameter, Polyurethane	VBX45-PU
2. Disc filter	Description	Symbol
	No disc filter	Blank
	Disc filter, Polyethylene	F
3. Fitting	Description	Symbol
	Fitting, G1/8 female	18F
	Fitting, G1/8 female, Mesh filter	M-18F
	Efficiency 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
	Fitting, G3/8 male	38M
	Fitting, G3/8 male, Mesh filter	M-38M
	Efficiency valve, Fitting, G3/8 male	38M-EV

* 18FB is available only for Silicone material.

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VBX45-PU	Double bellow – cross groove suction cup, 45mm diameter, Polyurethane	10.61	Translucent Orange



[Rubber part]

[Unit : mm]

I Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-BX45	Disc filter, Polyethylene	0.63

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	3.7
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
350 000 3504	38M	G3/8 male	9.16
350 000 3904	38M-F	G3/8 male, Mesh filter	9.56
350 010 3504	38M-EV	Efficiency valve, G3/8 male	5.93

SUCTION CUPS / Bellows & Cross Groove

VBX55

Features and Strengths

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

Examples of use

Veneer sheets, Metal sheets, Plywood, Carton box, Glasses



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
VBX55	29.50	7.60	10.10	12.20

※ The lifting force above does not include safety factor

Material Specifications

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

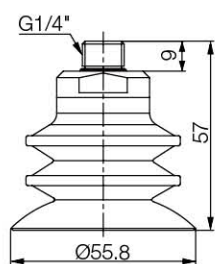
※ For additional material, see page 32~33

Material Resistance

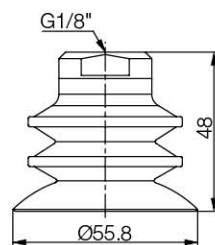
Description	Polyurethane
Wear Resistance	Excellent
Oil	Excellent
Weather / Ozone	Excellent
Alcohol	Fair
Acid	Fair

Dimension

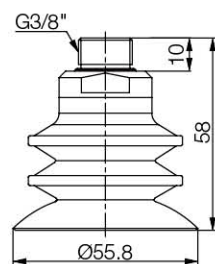
[Unit : mm]



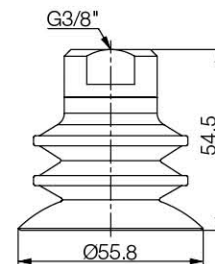
[With 14M fitting]



[With 18F fitting]

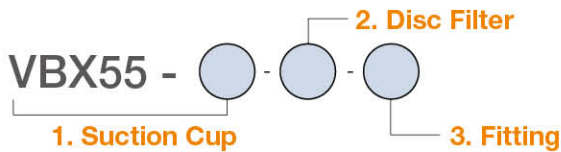


[With 38M fitting]



[With 38F fitting]

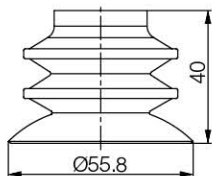
I Build an Ordering No.



1. Suction cup	Description	Symbol
	Double bellow – cross groove suction cup, 55mm diameter, Polyurethane	VBX55-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

I Spare Parts – Rubber Parts

Part No.	Description	Weight (g)	Color
VBX55-PU	Double bellow – cross groove suction cup, 55mm diameter, Polyurethane	20.72	Translucent Orange



[Rubber part]

[Unit : mm]

I Spare Parts – Disc Filter

Part No.	Description	Weight (g)
VTFE-BX55	Disc filter, Polyethylene	1.06

I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description	Weight (g)
350 000 3312	18F	G1/8 female	5.68
350 000 4312	18F-F	G1/8 female, Mesh filter	5.73
350 010 3312	18F-EV	Efficiency valve, G1/8 female	5.63
350 000 1312	18FO	G1/8 female, Old profile	10.12
350 000 4912	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	5.88
350 000 3805	14M-F	G1/4 male, Mesh filter	5.92
350 010 3405	14M-EV	Efficiency valve, G1/4 male	6.03
350 000 3505	38M	G3/8 male	9.16
350 000 3905	38M-F	G3/8 male, Mesh filter	9.56
350 010 3505	38M-EV	Efficiency valve, G3/8 male	9.41