



F type – Without efficiency valve

Features and Strengths

Suitable for flat surface products

Examples of use

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



Recommended 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

I Material Specifications

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

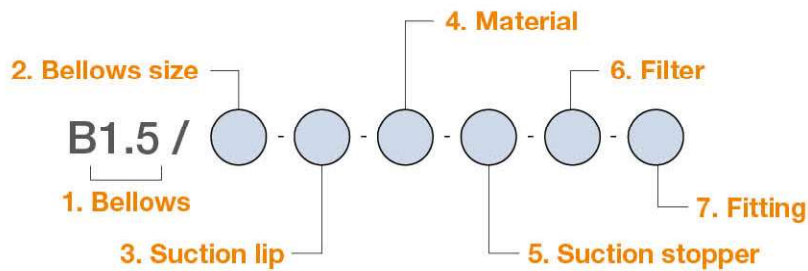
I Material Resistance







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

SUCTION CUPS / Magic suction cup



Build an Ordering No.



1. 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. Bellows size	Description	Symbol
	20mm bellows diameter: For F25 & F30	20
	40mm bellows diameter: For F45 & F55	40
3. Suction lip	Description	Symbol
	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	Symbol
	Polyurethane	PU
5. Suction stopper	Description	Symbol
	B type	B
	C type	C
	D type	D
6. Filter	Description	Symbol
	No filter	Blank
	Mesh disk filter (200mesh)	F2
7. Fitting	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

Spare Parts – Top Bellows

Part No.	Description
TB1.5/20	Top bellows 1.5 folds for F25 & F30 without efficiency valve
TB1.5/40	Top bellows 1.5 folds for F45 & F55 without efficiency valve
TB2.5/20	Top bellows 2.5 folds for F25 & F30 without efficiency valve
TB2.5/40	Top bellows 2.5 folds for F45 & F55 without efficiency valve

I Spare Parts – Middle Bellows

Part No.	Description	Part No.	Description
MB2.5/20	Middle bellows 2.5 folds for F25 & F30	MB3.5/20	Middle bellows 3.5 folds for F25 & F30
MB2.5/40	Middle bellows 2.5 folds for F45 & F55	MB3.5/40	Middle bellows 3.5 folds for F45 & F55

I Spare Parts – Suction Stoppers

Part No.	Description	Part No.	Description
MS20-B	Stopper B type for F25 & F30	MS40-B	Stopper B type for F45 & F55
MS20-C	Stopper C type for F25 & F30	MS40-C	Stopper C type for F45 & F55
MS20-D	Stopper D type for F25 & F30	MS40-D	Stopper D type for F45 & F55

I Spare Parts – Filters

Part No.	Description
VTFE20	Mesh disk filter (200mesh) for 20mm bellows diameter
VTFE40	Mesh disk filter (200mesh) for 40mm bellows diameter

I Spare Parts – Suction Lips

Part No.	Description
F25-PU	F type - 25mm diameter, Polyurethane
F30-PU	F type - 30mm diameter, Polyurethane
F45-PU	F type - 45mm diameter, Polyurethane
F55-PU	F type - 55mm diameter, Polyurethane

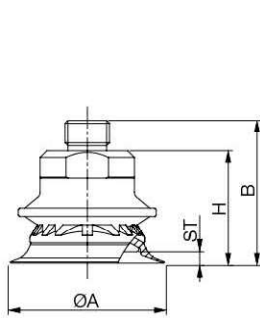
I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description
350 003 1101	18F	G1/8 female for 20mm bellows diameter
350 003 1501	14F	G1/4 female for 20mm bellows diameter
350 003 1201	18M	G1/8 male for 20mm bellows diameter
350 003 1301	14M	G1/4 male for 20mm bellows diameter
350 003 1401	38M	G3/8 male for 20mm bellows diameter
350 003 1102	18F	G1/8 female for 40mm bellows diameter
350 003 1502	14F	G1/4 female for 40mm bellows diameter
350 003 1202	18M	G1/8 male for 40mm bellows diameter
350 003 1302	14M	G1/4 male for 40mm bellows diameter
350 003 1402	38M	G3/8 male for 40mm bellows diameter

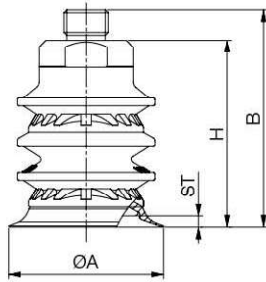
SUCTION CUPS / Magic suction cup



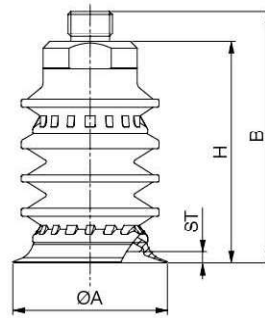
Dimensional Data



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



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



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

Fitting

18F

18M

14F

14M

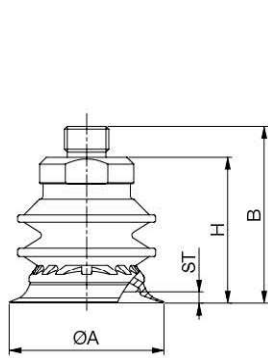
38M

[Unit : mm]

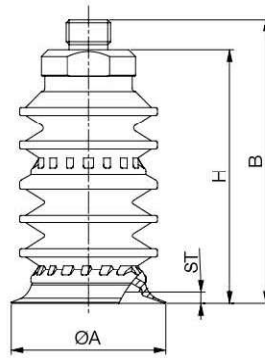
Model	Ø A	G	ST	H *	B *
B1.5/20-F25	26	Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	1.5	21.3	31.3
B1.5/20-F30	33		2.2	23	32
B1.5/40-F45	47		3.3	33.4	42.4
B1.5/40-F55	55		3.3	33.4	42.4
B4.0/20-F25	26		1.5	33.8	42.8
B4.0/20-F30	33		2.2	34.5	43.5
B4.0/40-F45	47		3.3	55.4	64.4
B4.0/40-F55	55		3.3	55.4	64.4
B5.0/20-F25	26		1.5	38	47
B5.0/20-F30	33		2.2	38.7	47.7
B5.0/40-F45	47		3.3	65.3	74.3
B5.0/40-F55	55		3.3	65.3	74.3

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

Dimensional Data



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



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

Fitting
18F
18M
14F
14M
38M

[Unit : mm]

Model	Ø A	G	ST	H *	B *
B2.5/20-F25	26	Female thread : 1/8", 1/4"	1.5	30.3	39.3
B2.5/20-F30	33		2.2	31	41.03
B2.5/40-F45	47		3.3	43.3	52.3
B2.5/40-F55	55		3.3	43.3	52.3
B6.0/20-F25	26	Male thread : 1/8", 1/4", 3/8"	1.5	46	55
B6.0/20-F30	33		2.2	46.7	55.7
B6.0/40-F45	47		3.3	75.3	84.3
B6.0/40-F55	55		3.3	75.3	84.3

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



F type – With efficiency valve (EB type)

Features and Strengths

Suitable for flat and slightly curved surface products

Examples of use

Thin metal sheets, Carton boxes, Veneer sheets, Glasses



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
EB1.5/20-F25	2.3	1.4	2.9	3.7
EB1.5/20-F30	2.8	1.9	3.8	4.3
EB1.5/40-F45	12.7	3.4	8	9.3
EB1.5/40-F55	13.5	4.4	9.9	11.9
EB4.0/20-F25	4.1	1.4	2.9	3.7
EB4.0/20-F30	4.6	1.9	3.8	4.3
EB4.0/40-F45	25.9	3.4	8	9.3
EB4.0/40-F55	26.7	4.4	9.9	11.9
EB5.0/20-F25	5.3	1.4	2.9	3.7
EB5.0/20-F30	5.8	1.9	3.8	4.3
EB5.0/40-F45	32.7	3.4	8	9.3
EB5.0/40-F55	33.5	4.4	9.9	11.9

※ The lifting force above does not include safety factor

I Material Specifications

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

※ For additional material, see page 32~33

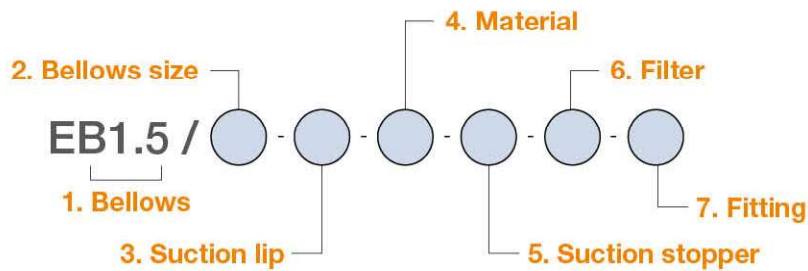
I Material Resistance







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

SUCTION CUPS / Magic suction cup



Build an Ordering No.



1. Bellows	Description	Symbol
	Top bellows 1.5 folds with efficiency valve	EB1.5
	Top bellows 1.5 folds with efficiency valve + Middle bellows 2.5 folds	EB4.0
	Top bellows 1.5 folds with efficiency valve + Middle bellows 3.5 folds	EB5.0
2. Bellows size	Description	Symbol
	20mm bellows diameter: For F25 & F30	20
	40mm bellows diameter: For F45 & F55	40
3. Suction lip	Description	Symbol
	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	Symbol
	Polyurethane	PU
5. Suction stopper	Description	Symbol
	B type	B
	C type	C
	D type	D
6. Filter	Description	Symbol
	No filter	Blank
	Mesh disk filter (200mesh)	F2
7. Fitting	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

Spare Parts – Top Bellows

Part No.	Description
EB1.5/20	Top bellows 1.5 folds for F25 & F30 with efficiency valve
EB1.5/40	Top bellows 1.5 folds for F45 & F55 with efficiency valve

I Spare Parts – Middle Bellows

Part No.	Description	Part No.	Description
MB2.5/20	Middle bellows 2.5 folds for F25 & F30	MB3.5/20	Middle bellows 3.5 folds for F25 & F30
MB2.5/40	Middle bellows 2.5 folds for F45 & F55	MB3.5/40	Middle bellows 3.5 folds for F45 & F55

I Spare Parts – Suction Stoppers

Part No.	Description	Part No.	Description
MS20-B	Stopper B type for F25 & F30	MS40-B	Stopper B type for F45 & F55
MS20-C	Stopper C type for F25 & F30	MS40-C	Stopper C type for F45 & F55
MS20-D	Stopper D type for F25 & F30	MS40-D	Stopper D type for F45 & F55

I Spare Parts – Filters

Part No.	Description
VTFE20	Filter (200mesh) for 20mm bellows diameter
VTFE40	Filter (200mesh) for 40mm bellows diameter

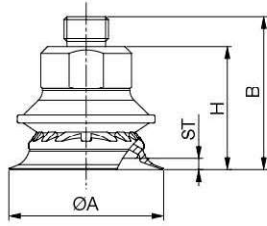
I Spare Parts – Suction lips

Part No.	Description
F25-PU	F type - 25mm diameter, Polyurethane
F30-PU	F type - 30mm diameter, Polyurethane
F45-PU	F type - 45mm diameter, Polyurethane
F55-PU	F type - 55mm diameter, Polyurethane

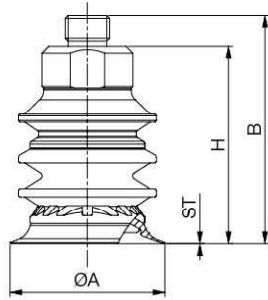
I Spare Parts – Fittings

Part No. (Code No.)	Fitting size	Description
350 006 1101	18F	EB type, G1/8 female for 20mm bellows diameter
350 006 1501	14F	EB type, G1/4 female for 20mm bellows diameter
350 006 1201	18M	EB type, G1/8 male for 20mm bellows diameter
350 006 1301	14M	EB type, G1/4 male for 20mm bellows diameter
350 006 1401	38M	EB type, G3/8 male for 20mm bellows diameter
350 006 1102	18F	EB type, G1/8 female for 40mm bellows diameter
350 006 1502	14F	EB type, G1/4 female for 40mm bellows diameter
350 006 1202	18M	EB type, G1/8 male for 40mm bellows diameter
350 006 1302	14M	EB type, G1/4 male for 40mm bellows diameter
350 006 1402	38M	EB type, G3/8 male for 40mm bellows diameter

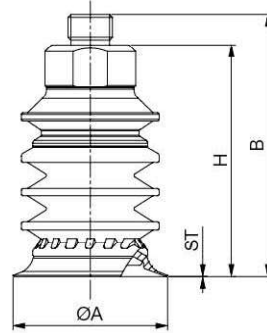
SUCTION CUPS / Magic suction cup



[EB1.5 / 20 & 40 series]



[EB4.0 / 20 & 40 series]



[EB5.0 / 20 & 40 series]

Fitting
18F
18M
14F
14M
38M

[Unit : mm]

Model	Ø A	G	ST	H *	B *
EB1.5/20-F25	26	Female thread : 1/8", 1/4" Male thread : 1/8", 1/4", 3/8"	1.5	22.8	31.8
EB1.5/20-F30	33		2.2	23.5	32.5
EB1.5/40-F45	47		3.31	36.5	45.5
EB1.5/40-F55	55		3.34	36.5	45.5
EB4.0/20-F25	26		1.5	33.5	42.5
EB4.0/20-F30	33		2.2	34	43.2
EB4.0/40-F45	47		3.31	59.1	68.1
EB4.0/40-F55	55		3.34	59.2	68.2
EB5.0/20-F25	26		1.5	38.5	47.5
EB5.0/20-F30	33		2.2	39.2	48.2
EB5.0/40-F45	47		3.31	69.1	78.1
EB5.0/40-F55	55		3.34	69.2	78.2

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