



S type – Without efficiency valve

Features and Strengths

Excellent performance for rough and uneven surface

Examples of use

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



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
B1.5/20-S30	3.35	0.94	2.53	3.30
B1.5/40-S50	13.75	1.74	4.36	6.12
B1.5/60-S60	34.17	2.87	7.30	10.34
B2.5/20-S30	5.48	0.94	2.53	3.30
B2.5/40-S50	21.02	1.74	4.36	6.12
B2.5/60-S60	54.93	2.87	7.30	10.34
B4.0/20-S30	5.22	0.94	2.53	3.30
B4.0/40-S50	26.87	1.74	4.36	6.12
B5.0/20-S30	6.37	0.94	2.53	3.30
B5.0/40-S50	33.75	1.74	4.36	6.12
B5.0/60-S60	95.93	2.87	7.30	10.34
B6.0/20-S30	8.46	0.94	2.53	3.30
B6.0/40-S50	41.09	1.74	4.36	6.12
B6.0/60-S60	117.76	2.87	7.30	10.34



I Material Specifications

Sponge Lip

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

Insert Pad

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Black	-20 ~ 110
S5 - Silicone	50	Red	-70 ~ 200
W5 - White Silicone	50	Translucent White	-70 ~ 200

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

** For additional materials, please contact us

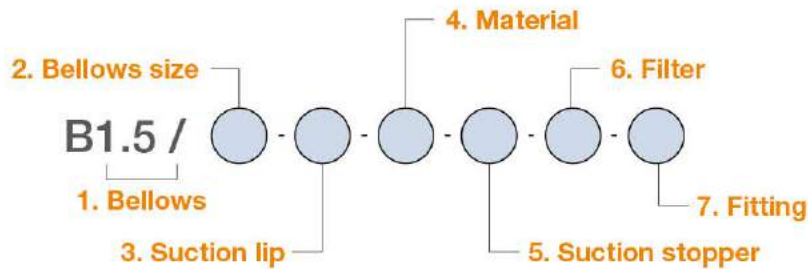
I Material Resistance

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

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 S30	20
	40mm bellows diameter: For S50	40
	60mm bellows diameter: For S60	60
3. Suction lip	Description	Symbol
	S type lip, 30mm diameter	S30
	S type lip, 50mm diameter	S50
	S type lip, 60mm diameter	S60
4. Material (Insert pad)	Description	Symbol
	Insert pad NBR (Nitrile), sponge lip EPDM	NE
	Insert pad Silicone 50° hardness, sponge lip EPDM	SE
	Insert pad White Silicone 50° hardness, sponge lip EPDM	WSE
5. Suction stopper	Description	Symbol
	F type : Only for S type	F
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
	Fitting, G3/8 female: Only for 60mm bellow diameter	38F

Spare Parts – Top Bellows

Part No.	Description
TB1.5/20	Top bellows 1.5 folds for S30 without efficiency valve
TB1.5/40	Top bellows 1.5 folds for S50 without efficiency valve
TB1.5/60	Top bellows 1.5 folds for S60 without efficiency valve
TB2.5/20	Top bellows 2.5 folds for S30 without efficiency valve
TB2.5/40	Top bellows 2.5 folds for S50 without efficiency valve
TB2.5/60	Top bellows 2.5 folds for S60 without efficiency valve



I Spare Parts – Middle Bellows

Part No.	Description	Part No.	Description
MB2.5/20	Middle bellows 2.5 folds for S30	MB3.5/20	Middle bellows 3.5 folds for S30
MB2.5/40	Middle bellows 2.5 folds for S50	MB3.5/40	Middle bellows 3.5 folds for S50
		MB3.5/60	Middle bellows 3.5 folds for S60

I Spare Parts – Suction Stoppers

Part No.	Description
MS20-F	Stopper F type for S30
MS40-F	Stopper F type for S50
MS60-F	Stopper F type for S60

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
VTFE60	Mesh disk filter (200mesh) for 60mm bellows diameter

I Spare Parts – Suction Lips

Part No.	Description	Part No.	Description
S3020-E	S type - 30mm diameter, EPDM	S6040-E	S type - 60mm diameter, EPDM
S5030-E	S type - 50mm diameter, EPDM		

I Spare Parts – Insert Pads

Part No.	Description	Part No.	Description
S30-IN	S type – Insert pad , NBR for S30	S30-IWS	S type – Insert pad , White Silicone, 50° hardness for S30
S50-IN	S type – Insert pad , NBR for S50	S50-IWS	S type – Insert pad , White Silicone, 50° hardness for S50
S60-IN	S type – Insert pad , NBR for S60	S60-IWS	S type – Insert pad , White Silicone, 50° hardness for S60
S30-IS	S type – Insert pad , Silicone, 50° hardness for S30		
S50-IS	S type – Insert pad , Silicone, 50° hardness for S50		
S60-IS	S type – Insert pad , Silicone, 50° hardness for S60		

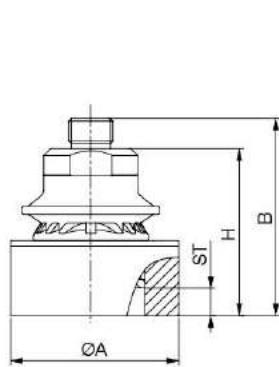
I Spare Parts – Fittings

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
350 003 1107	18F	G1/8 female for 60mm bellows diameter
350 003 1307	14M	G1/4 male for 60mm bellows diameter
350 003 1407	38M	G3/8 male for 60mm bellows diameter
350 003 1707	38F	G3/8 female for 60mm bellows diameter

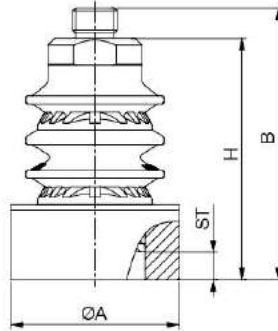
SUCTION CUPS / Magic suction cup



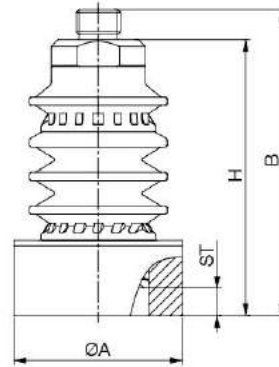
Dimensional Data



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



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



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

Fitting
18F
18M
14F
14M
38F
38M

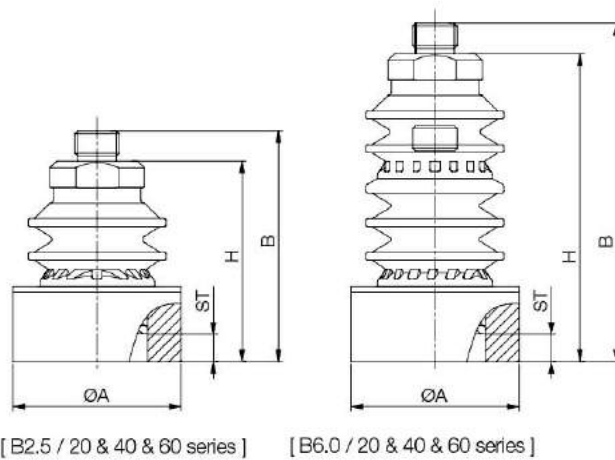
[Unit : mm]

Model	Ø A	Ø A'	G	ST	H*	B *
B1.5/20-S30	30	20	Female thread : 1/4", 1/8", 3/8" Male thread : 1/4", 1/8", 3/8"	4.5	32.5	41.5
B1.5/40-S50	50	30		7.5	48.3	57.3
B1.5/60-S60	61	37		11.5	64	73
B4.0/20-S30	30	20		4.5	43.2	52.2
B4.0/40-S50	50	30		7.5	70.7	79.7
B5.0/20-S30	30	20		4.5	49.8	58.8
B5.0/40-S50	50	30		7.5	78.3	87.3
B5.0/60-S60	61	37		11.5	110.6	119.6

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



Dimensional Data



Fitting
18F
18M
14F
14M
38F
38M

[Unit : mm]

Model	Ø A	Ø A'	G	ST	H*	B *
B2.5/20-S30	30	20	Female thread : 1/4", 1/8", 3/8" Male thread : 1/4", 1/8", 3/8"	4.5	40.5	49.5
B2.5/40-S50	50	30		7.5	58.2	67.2
B2.5/60-S60	61	37		11.5	78.4	87.4
B6.0/20-S30	30	20		4.5	56.2	65.2
B6.0/40-S50	50	30		7.5	90.4	99.4
B6.0/60-S60	61	37		11.5	125	134

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



S type – With efficiency valve (EB type)

Features and Strengths

Excellent performance for rough and uneven surface

Examples of use

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



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		
		- 20 kPa	- 60 kPa	- 90 kPa
EB1.5/20-S30	4.15	0.94	2.53	3.30
EB1.5/40-S50	15.55	1.74	4.36	6.12
EB4.0/20-S30	6.02	0.94	2.53	3.30
EB4.0/40-S50	28.67	1.74	4.36	6.12
EB5.0/20-S30	7.17	0.94	2.53	3.30
EB5.0/40-S50	35.55	1.74	4.36	6.12



I Material Specifications

Sponge Lip

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

Insert Pad

Material	Hardness Shore (°)	Color	Temperature (°C)
N6 - NBR (Nitrile)	60	Black	-20 ~ 110
S5 - Silicone	50	Red	-70 ~ 200
W5 - White Silicone	50	Translucent White	-70 ~ 200

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

** For additional materials, please contact us

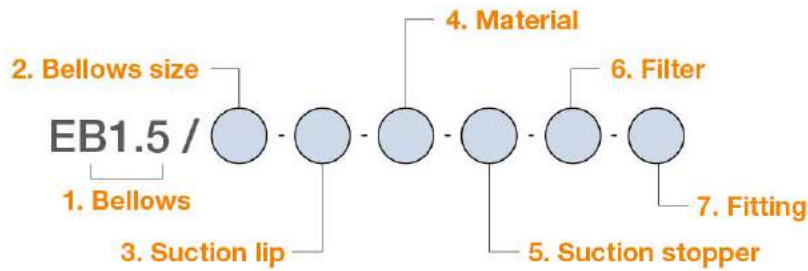
I Material Resistance


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

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 S30	20
	40mm bellows diameter: For S50	40
3. Suction lip	Description	Symbol
	S type lip, 30mm diameter	S30
	S type lip, 50mm diameter	S50
4. Material (Insert pad)	Description	Symbol
	Insert pad NBR (Nitrile), sponge lip EPDM	NE
	Insert pad Silicone 50° hardness, sponge lip EPDM	SE
	Insert pad White Silicone 50° hardness, sponge lip EPDM	WSE
5. Suction stopper	Description	Symbol
	F type : Only for S type	F
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 S30 with efficiency valve
EB1.5/40	Top bellows 1.5 folds for S50 with efficiency valve



I Spare Parts – Middle Bellows

Part No.	Description	Part No.	Description
MB2.5/20	Middle bellows 2.5 folds for S30	MB3.5/20	Middle bellows 3.5 folds for S30
MB2.5/40	Middle bellows 2.5 folds for S50	MB3.5/40	Middle bellows 3.5 folds for S50

I Spare Parts – Suction Stoppers

Part No.	Description
MS20-F	Stopper F type for S30
MS40-F	Stopper F type for S50

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
S3020-E	S type - 30mm diameter, EPDM
S5030-E	S type - 50mm diameter, EPDM

I Spare Parts – Insert Pads

Part No.	Description	Part No.	Description
S30-IN	S type – Insert pad , NBR for S30	S30-IWS	S type – Insert pad , White Silicone, 50° hardness for S30
S50-IN	S type – Insert pad , NBR for S50	S50-IWS	S type – Insert pad , White Silicone, 50° hardness for S50
S30-IS	S type – Insert pad , Silicone, 50° hardness for S30		
S50-IS	S type – Insert pad , Silicone, 50° hardness for S50		

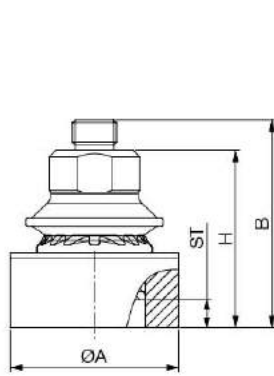
I Spare Parts – Fittings

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

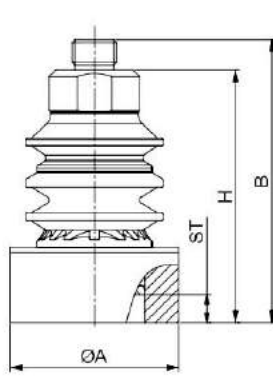
SUCTION CUPS / Magic suction cup



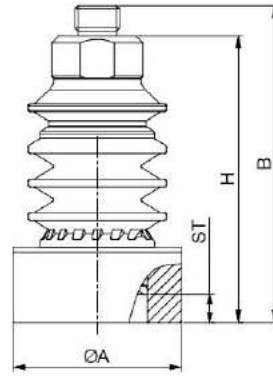
Dimensional Data



[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	Ø A'	G	ST	H*	B *
EB1.5/20-S30	30	20	Female thread : 1/4", 1/8" Male thread : 1/4", 1/8", 3/8"	4.5	33	42
EB1.5/40-S50	50	30		7.5	51.3	60.3
EB4.0/20-S30	30	20		4.5	45.2	54.2
EB4.0/40-S50	50	30		7.5	73.7	82.7
EB5.0/20-S30	30	20		4.5	50.2	59.2
EB5.0/40-S50	50	30		7.5	83.5	92.5

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

