

SB Series Universal Bellows Suction Cup



UNIVERSAL

Suction Cup

Features

- ◇ 1.5 Bellows
- ◇ Support structure at the bottom
- ◇ Various sizes for option

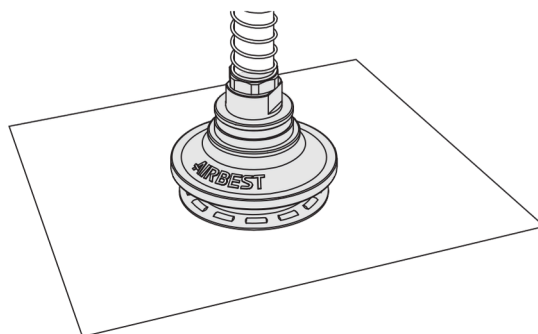
Advantages

- ◇ Easy to fit uneven surface of workpiece, and has buffer effect
- ◇ Handling thin workpiece without permanent deformation
- ◇ Suitable for workpieces with different sizes and shapes



Applications

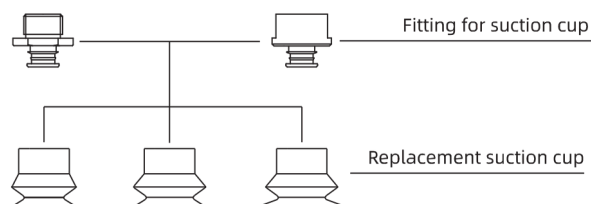
- ◇ Handling of workpieces with uneven surface, such as carton, cardboard, cambered workpiece, pipe, etc
- ◇ Handling fragile workpieces, such as electronic components, plastic injection parts, etc
- ◇ Handling smooth wood plate, smooth steel plate and so on



Structure

- ◇ 1.5 Bellows, large compressed stroke.
- ◇ Suction cup and fitting are split structure design, wearing parts can be replaced separately.

In same series, replacement suction cup and fitting can be combined on request.



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SPC
SPJ
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SH
SHB
SBB
SOP
SNP

How to order

SB 30 N - G1M - EW

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Special specification
SB	5 - ϕ 5mm	20 - ϕ 20mm	N - NBR	55 Nil - Suction cup only Nil - Standard
	6 - ϕ 6mm	30 - ϕ 30mm	S - Silicone	50 M5M - M5x0.8 male thread EW - With mesh filter
	8 - ϕ 8mm	40 - ϕ 40mm	WS - White silicone	50 G1M - G1/8 male thread EH - With throttle valve
	10 - ϕ 10mm	50 - ϕ 50mm	CS - Conductive silicone	55 G2M - G1/4 male thread
	12 - ϕ 12mm	75 - ϕ 75mm		G3M - G3/8 male thread
	15 - ϕ 15mm	110 - ϕ 110mm		G1F - G1/8 female thread
	17 - ϕ 17mm	150 - ϕ 150mm		G2F - G1/4 female thread
				G3F - G3/8 female thread
				G4F - G1/2 female thread

Selection

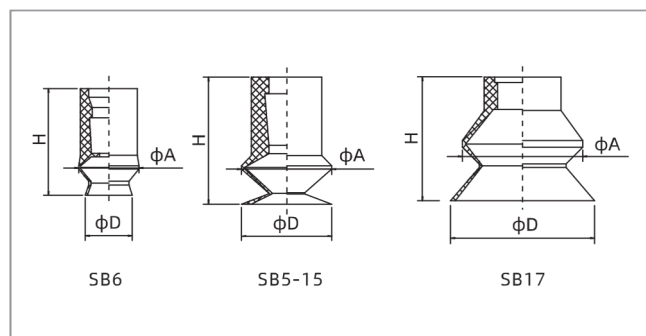
Model	Connection thread M - Male thread	F - Female thread
SB5□	SB5□-M5M	-
SB6□	SB6□-M5M	-
SB8□	SB8□-M5M	-
SB10□	SB10□-M5M	-
SB12□	SB12□-M5M	-
SB15□	SB15□-M5M	-
SB17□	SB17□-G1M(-EW/EH)	SB17□-G1F(-EW/EH)
SB20□	SB20□-G1M(-EW/EH)	SB20□-G1F(-EW/EH)
SB30□	SB30□-G1M(-EW/EH)	SB30□-G1F(-EW/EH)
SB40□	SB40□-G1M(-EW/EH)	SB40□-G1F(-EW/EH)
SB50□	SB50□-G2M(-EW/EH) SB50□-G3M(-EW/EH)	SB50□-G2F(-EW/EH) SB50□-G3F(-EW/EH)
SB75□	-	SB75□-G2F
SB110□	-	SB110□-G4F
SB150□	-	SB150□-G4F

Technical parameters

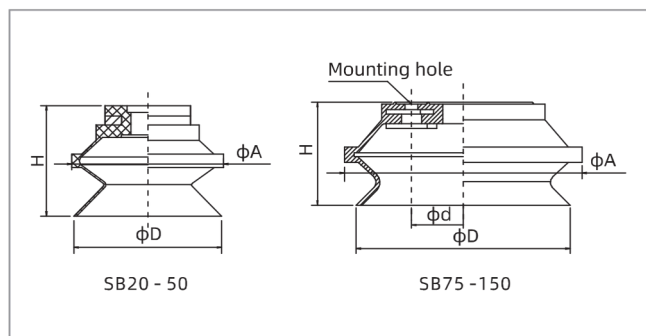
Model	Pull-out force N	Inner volume cm ³	Min.curve radius of workpiece mm	Weight g	Recommended hose dia. mm	MPQ pcs
SB5	0.8	<0.1	8	0.3	4	10
SB6	1.2	<0.1	8	0.5	4	10
SB8	2.1	<0.1	10	0.4	4	10
SB10	3.2	0.4	12	0.9	4	10
SB12	4.7	0.5	15	1.5	6	10
SB15	7.4	0.8	20	1.5	6	10
SB17	9.5	1.1	25	1	6	10
SB20	18	1.2	30	3	6	5
SB30	33	14	35	7.5	6	5
SB40	60	18	50	13	6	5
SB50	92	26	80	24	8	1
SB75	210	96	60	68	8	1
SB110	412	314	120	178	12	1
SB150	740	798	160	439.5	12	1

◇ Note: Testing vacuum level -60kPa, workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces. Recommend the length of vacuum hose to be as short as possible, max 2m.

Dimentions(mm) - Suction cup only



SB



SB

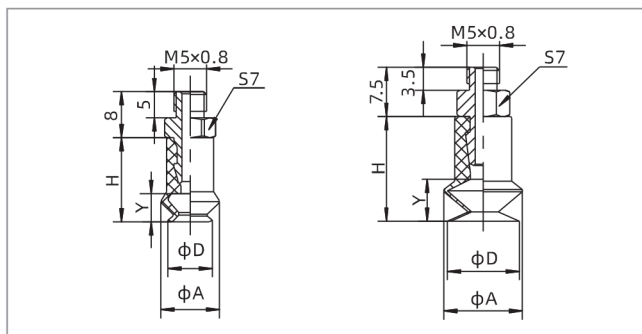
Model/Size	D	A	H
SB5□	5.8	6.2	9.2
SB6□	7	9	13.5
SB8□	8.8	9.6	11.9
SB10□	11	12	16
SB12□	12	14	16.5
SB15□	17.5	17.5	19.5
SB17□	18.5	16.6	15.6

Model/Size	D	A	H	d	Mounting hole
SB20□	22	24	19	-	-
SB30□	34	36	26	-	-
SB40□	43	46	28	-	-
SB50□	53	58	35	-	-
SB75□	78	83	37	35	4-φ6
SB110□	115	124	54	55	8-φ6
SB150□	155	166	71	70.5	8-φ6

SB Series

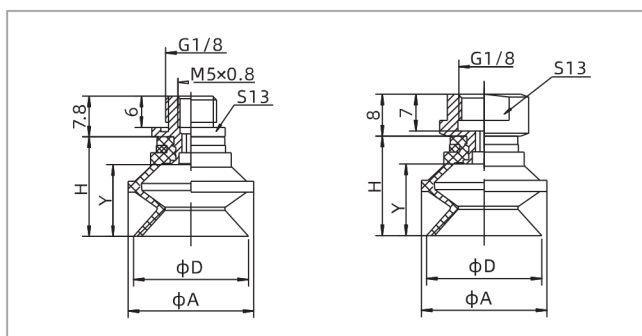
Universal Bellows Suction Cup

Dimensions(mm) - Suction cup with fitting



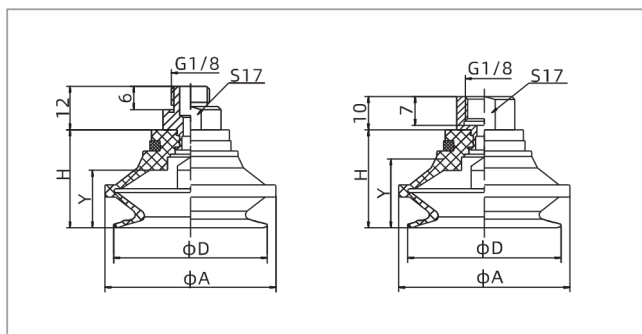
SB6□-M5M

SB□-M5M



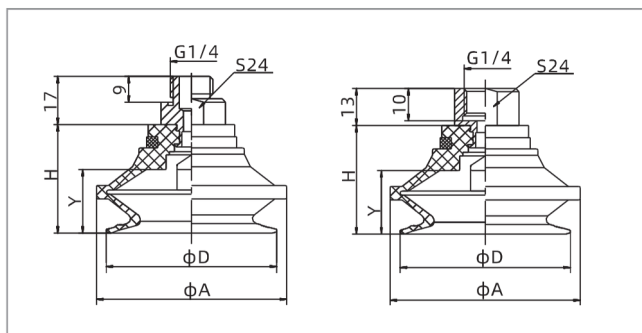
SB□-G1M

SB□-G1F



SB□-G1M

SB□-G1F



SB50□-G2M

SB50□-G2F

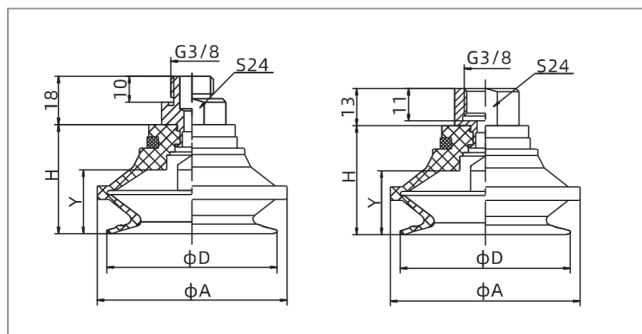
Model/Size	D	A	H	Y
SB5□-M5M	5.8	6.2	9.2	3.6
SB6□-M5M	7	9	13.5	4.5
SB8□-M5M	8.8	9.6	11.9	6.5
SB10□-M5M	11	12	16	7
SB12□-M5M	12	14	16.5	5.5
SB15□-M5M	15.5	17.5	19.5	10

Model/Size	D	A	H	Y
SB17□-G1M	18.5	16.6	15.6	10.5
SB17□-G1F	18.5	16.6	15.6	10.5
SB20□-G1M	22	24	19	9
SB20□-G1F	22	24	19	9

Model/Size	D	A	H	Y
SB30□-G1M	34	36	26	19
SB30□-G1F	34	36	26	19
SB40□-G1M	43	46	28	20
SB40□-G1F	43	46	28	20

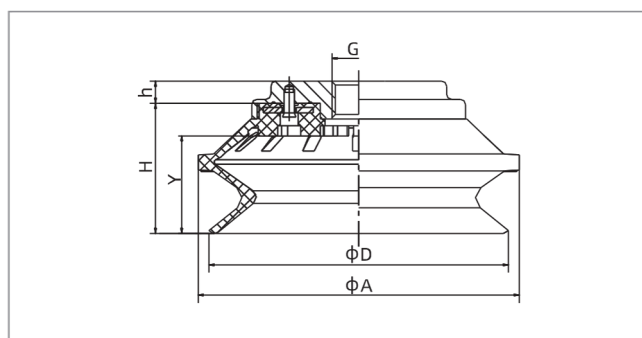
Model/Size	D	A	H	Y
SB50□-G2M	53	58	35	20
SB50□-G2F	53	58	35	20

Dimensions(mm) - Suction cup with fitting



SB50□-G3M

SB50□-G3F



SB75-150

◇ Note: The dimensional tolerance conforms to GBT3672.1-2002-1 M3 rubber product dimensional tolerance standard

Model/Size	D	A	H	Y
SB50□-G3M	53	58	35	20
SB50□-G3F	53	58	35	20

Model/Size	D	A	H	h	G	Y
SB75□-G2F	78	83	37	13	G1/4	27
SB110□-G4F	115	124	54	9	G1/2	38.5
SB150□-G4F	155	166	71	10	G1/2	44.5

Mounting parts

Item	Model M - Male thread	F - Female thread	Applicable suction cup
Fitting for suction cup	PJS-M5M-SC1	-	SB6
	PJS-M5M-SC2	-	SB5,8
	PJS-M5M-SC3	-	SB10,12,15
	PJS-G1M-SF1	PJS-G1F-SF1	SB17,20
	PJS-G1M-SF2	PJS-G1F-SF2	SB30,40
	PJS-G2M-SF3	PJS-G2F-SF3	SB50
	PJS-G3M-SF3	PJS-G3F-SF3	SB50
	-	PJS-G2F-SF75	SB75
	-	PJS-G4F-SF110	SB110
	-	PJS-G4F-SF150	SB150



Features

- ◇ Support structure at the bottom
- ◇ Small inner volume
- ◇ Various sizes are available

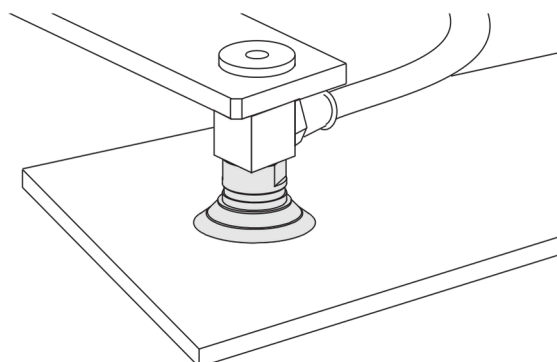
Advantages

- ◇ Handling thin workpiece without permanent deformation
- ◇ Short work cycle
- ◇ Suitable for workpieces with different sizes and shapes



Applications

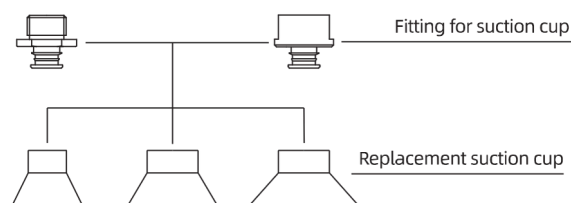
- ◇ Suitable for flat workpiece with smooth or slightly rough surfaces, such as smooth wood plate, smooth steel plate, plywood, plastic plate, etc.
- ◇ Suitable for handling electronic components, anti-static material can effectively prevent electrostatic damage to electronic products



Structure

- ◇ Suction cup and fitting are split structure design, wearing parts can be replaced separately
- ◇ Contact inductive valve is optional for suction cup with diameter $\phi 50-150\text{mm}$, in order to avoid accidental vacuum leakage

In same series, replacement suction cup and fitting can be combined on request.



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SPJ
SPU
SH
SHB
SBB
SOP
SNP

How to order

SF 50 N - G2F - EB

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Special specification
SF	15 - ϕ 15mm	N - NBR	55 Nil - Suction cup only	Nil - Standard
	20 - ϕ 20mm	S - Silicone	50 M5M - M5x0.8 male thread	EB - With contact inductive valve
	25 - ϕ 25mm	WS - White silicone	50 G1M - G1/8 male thread	EW - With mesh filter
	30 - ϕ 30mm	CS - Conductive silicone	55 G2M - G1/4 male thread	EH - With throttle valve
	40 - ϕ 40mm		G3M - G3/8 male thread	
	50 - ϕ 50mm		G1F - G1/8 female thread	
	75 - ϕ 75mm		G2F - G1/4 female thread	
	110 - ϕ 110mm		G3F - G3/8 female thread	
	150 - ϕ 150mm		G4F - G1/2 female thread	
	200 - ϕ 200mm		G6F - G3/4 female thread	
	300 - ϕ 300mm			

Selection

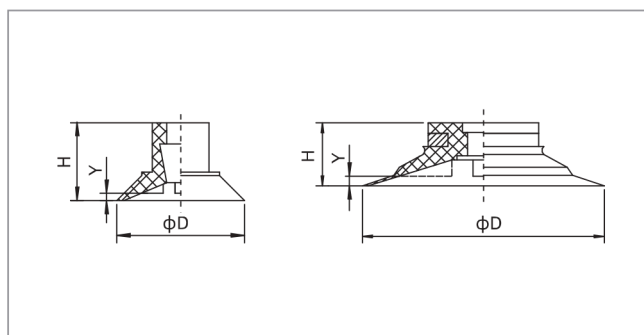
Model	Connection thread M - Male thread	F - Female thread
SF15□	SF15□-M5M	-
SF20□	SF20□-G1M(-EW/EH)	SF20□-G1F(-EW/EH)
SF25□	SF25□-G1M(-EW/EH)	SF25□-G1F(-EW/EH)
SF30□	SF30□-G1M(-EW/EH)	SF30□-G1F(-EW/EH)
SF40□	SF40□-G1M(-EW/EH)	SF40□-G1F(-EW/EH)
SF50□	SF50□-G2M(-EW/EH) SF50□-G3M(-EW/EH)	SF50□-G2F(-EW/EH/EB) SF50□-G3F(-EW/EH)
SF75□	-	SF75□-G2F SF75□-G2F-EB
SF110□	-	SF110□-G4F SF110□-G4F-EB
SF150□	-	SF150□-G4F SF150□-G4F-EB
SF200□	-	SF200□-G4F
SF300□	-	SF300□-G6F

Technical parameters

Model	Pull-out force N	Inner volume cm ³	Weight g	Recommended hose dia. mm	MPQ pcs
SF15	8	0.5	0.7	6	10
SF20	14.5	0.8	1.4	6	5
SF25	22	1.2	1.8	6	5
SF30	32	1.5	2.6	6	5
SF40	60	3	5.2	6	5
SF50	88	7	11.5	6	1
SF75	200	20	47.2	8	1
SF110	430	60	116	10	1
SF150	795	160	344.2	10	1
SF200	1,500	550	732.2	12	1
SF300	3,200	730	2,700	12	1

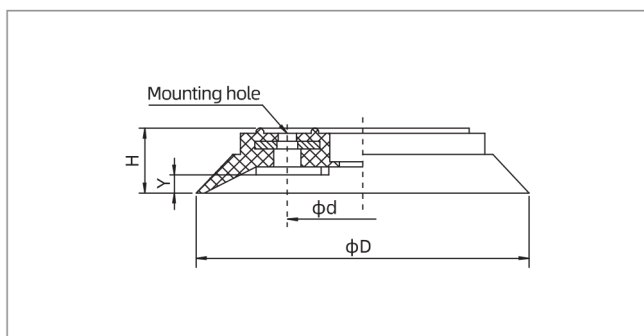
◇ Note: Testing vacuum level -60kPa, workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces. Recommend the length of vacuum hose to be as short as possible, max 2m.

Dimensions(mm) - Suction cup only



SF15

SF20-50



SF75-200

◇ Note: The dimensional tolerance conforms to GBT3672.1-2002-1 M3 rubber product dimensional tolerance standard

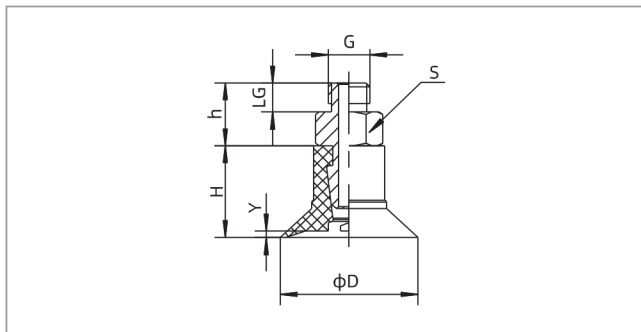
Model/Size	D	H	Y
SF15 □	16.5	11	0.8
SF20 □	22	8	1
SF25 □	27	9	1
SF30 □	32	10	1.2
SF40 □	42	13	1.2
SF50 □	53	17.5	3.2

Model/Size	D	H	d	Y	Mounting hole
SF75 □	77	13	35	4	4-φ6
SF110 □	112	20	55	6	8-φ6
SF150 □	152	26	70	8	8-φ6
SF200 □	200	45	40	20	4-φ9

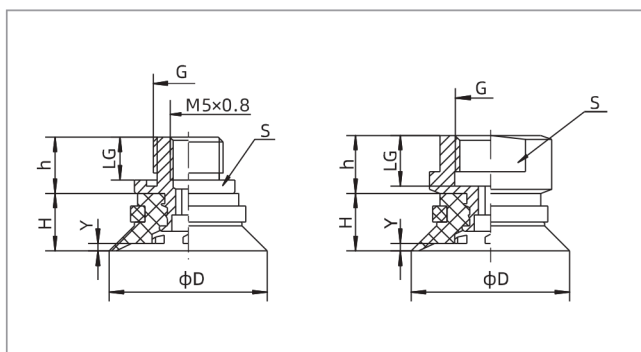
SF Series

Universal Flat Suction Cup

Dimensions(mm) - Suction cup with fitting

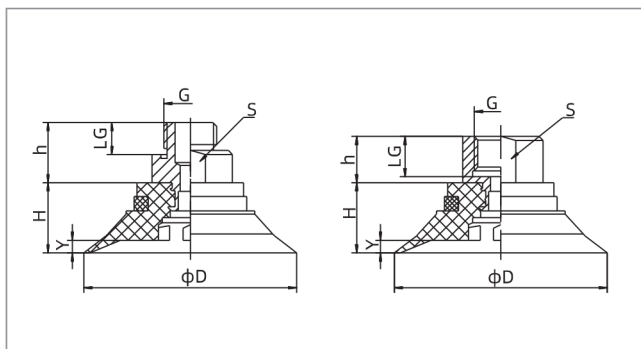


SF15□-M5M Male thread connection



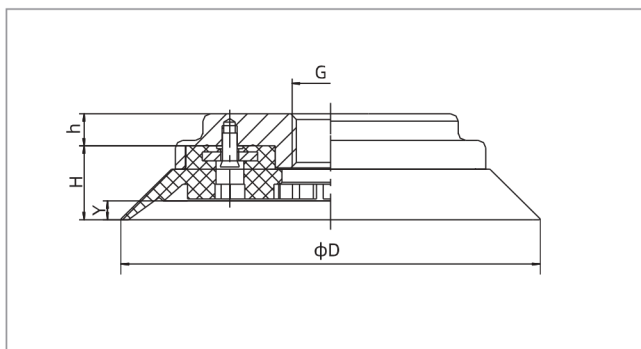
SF20-30 Male thread connection

SF20-30 Female thread connection



SF40-50 Male thread connection

SF40-50 Female thread connection



SF75-150 Female thread connection

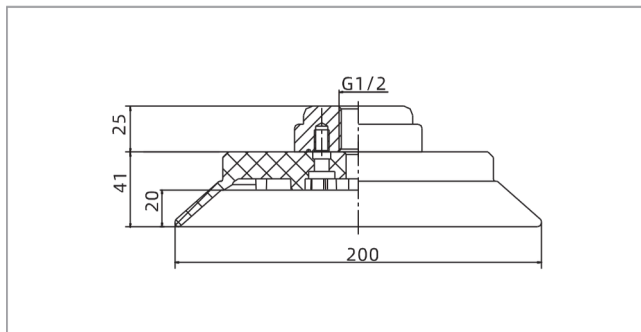
Model/Size	D	H	G	LG	h	S	Y
SF15□-M5M	16.5	11	M5 × 0.8	3.5	7.5	7	0.8

Model/Size	D	H	G	LG	h	S	Y
SF20□-G1M	22	8	G1/8	6	7.8	13	1
SF20□-G1F	22	8	G1/8	7	8	13	1
SF25□-G1M	27	9	G1/8	6	7.8	13	1
SF25□-G1F	27	9	G1/8	7	8	13	1
SF30□-G1M	32	10	G1/8	6	7.8	13	1.2
SF30□-G1F	32	10	G1/8	7	8	13	1.2

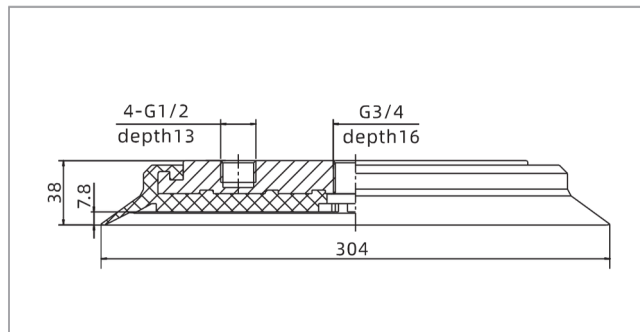
Model/Size	D	H	G	LG	h	S	Y
SF40□-G1M	42	13	G1/8	6	12	17	1.2
SF40□-G1F	42	13	G1/8	7	10	17	1.2
SF50□-G2M	53	17.5	G1/4	9	17	24	3.2
SF50□-G2F	53	17.5	G1/4	10	13	24	3.2
SF50□-G3M	53	17.5	G3/8	10	18	24	3.2
SF50□-G3F	53	17.5	G3/8	11	13	24	3.2

Model/Size	D	H	G	h	Y
SF75□-G2F	77	13	G1/4	13	4
SF110□-G4F	112	20	G1/2	9	6
SF150□-G4F	152	26	G1/2	10	8

Dimensions(mm) - Suction cup with fitting

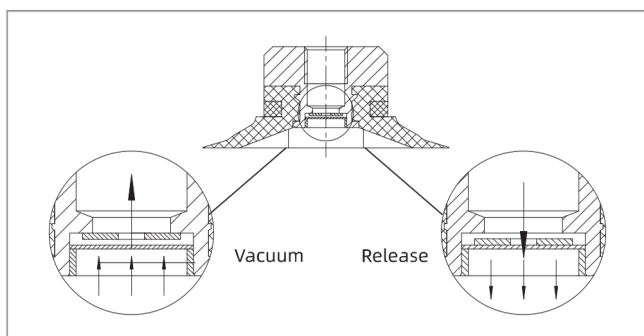


SF200 Female thread connection



SF300 Female thread connection

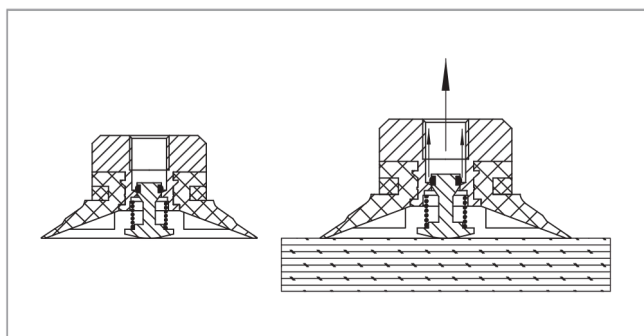
Accessories



EH - Throttle valve

EH - Throttle valve

- ◇ The flow through the vacuum port increases when the suction cup doesn't contact the workpiece, the valve plate fits the vacuum port, just little vacuum flow leaks from the small hole
- ◇ The flow through the vacuum port reduces when the suction cup sucks the workpiece, the valve plate leaves the vacuum port, suction cup works normally. (Suction cup must work vertically when it is equipped with throttle valve)



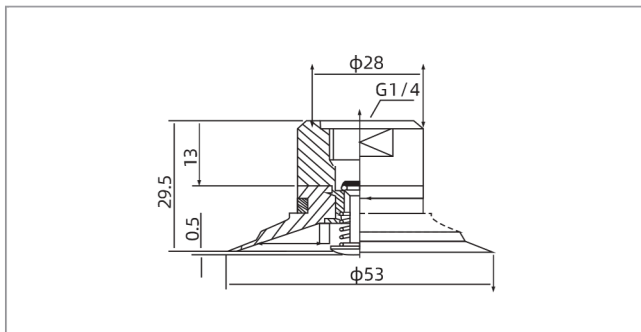
EB - Contact inductive valve

EB - Contact inductive valve

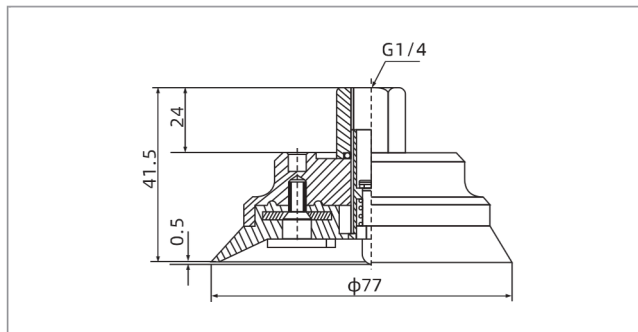
- ◇ When the suction cup doesn't contact the workpiece, the inductive valve closes the vacuum port to prevent the vacuum flow leakage
- ◇ When the suction cup contacts the workpiece, compresses the valve rod of the inductive valve, the vacuum port opens and the suction cup works normally

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SGP
SBOF
STC
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SOB
SOE
SOG
SFM
SOM
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SDM
SFU
SFK
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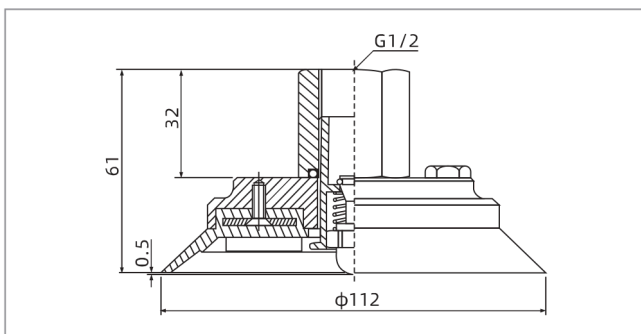
Dimensions(mm) - With contact inductive valve



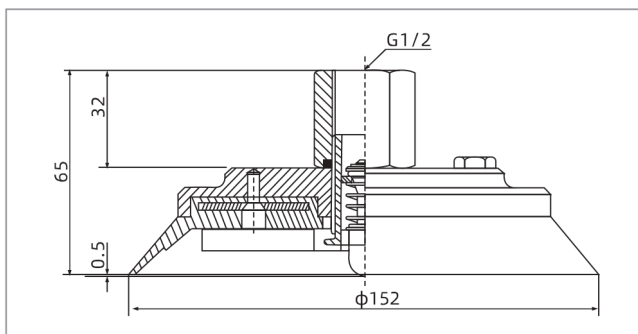
SF50□-G2F-EB



SF75□-G2F-EB



SF110□-G4F-EB



SF150□-G4F-EB

Mounting parts

Item	Model M - Male thread	F - Female thread	Applicable suction cup
Fitting for suction cup	PJS-M5M-SC3	-	SF15
	PJS-G1M-SF1	PJS-G1F-SF1	SF20, 25, 30
	PJS-G1M-SF2	PJS-G1F-SF2	SF40
	PJS-G2M-SF3	PJS-G2F-SF3	SF50
	PJS-G3M-SF3	PJS-G3F-SF3	SF50
	-	PJS-G2F-SF75	SF75
	-	PJS-G4F-SF110	SF110
	-	PJS-G4F-SF150	SF150
	-	PJS-G4F-SF200	SF200

SU Series

Universal Flat Suction Cup



Features

- ◇ Standard flat lip
- ◇ Small inner volume
- ◇ Various sizes are available

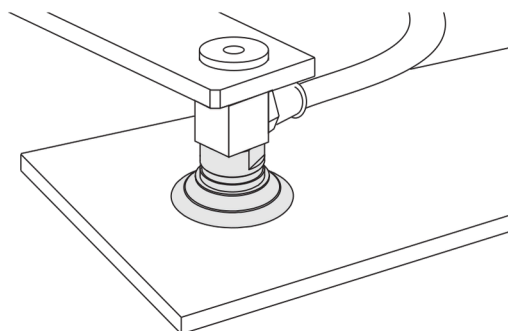
Advantages

- ◇ Suitable for handling most of workpieces with smooth and flat surface or slightly curved surface
- ◇ Short work cycle
- ◇ Suitable for workpieces with different sizes and shapes



Applications

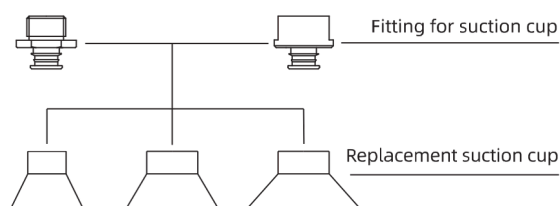
- ◇ Suitable for handling workpiece with smooth and flat surface or slightly curved surface, such as glass, wood plate, metal sheet, plastic plate, etc
- ◇ Suitable for handling automotive body parts



Structure

- ◇ Suction cup with diameter $\phi 6$ - $\phi 50$ mm and fitting are split structure design, wearing parts can be replaced separately
- ◇ For SU80, suction cup and fitting are one-piece structure

In same series, replacement suction cup and fitting can be combined on request



SZ
SP3
SUF
SAN
SAO
SOFA
STP
SFT
SFA
SBT
SBL
SBLP
SBS
SFP
SBP
SXP
SGP
SBOF
STC
SFF
SOB
SOF
SOG
SFM
SOM
SBF
SDM
SFU
SFK
SHT
SDL
SFG
SFGT
SFD
SB
SBA
SF
SU
SPA
SPD
SPF
SPC
SPJ
SPU
SH
SHB
SBB
SOP
SNP

SU Series

Universal Flat Suction Cup

How to order

SU 20 N - G1F - EW

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Special specification
SU	6 - φ6mm	25 - φ25mm N - NBR	55 Nil - Suction cup only	M5M - M5x0.8 male thread Nil - Standard
	8 - φ8mm	30 - φ30mm S - Silicone	50 G1F - G1/8 female thread	G1M - G1/8 male thread EW - With mesh filter
	10 - φ10mm	40 - φ40mm WS - White silicone	50 G2F - G1/4 female thread	G2M - G1/4 male thread EH - With throttle valve
	15 - φ15mm	50 - φ50mm CS - Conductive silicone	55 G3F - G3/8 female thread	G3M - G3/8 male thread
	20 - φ20mm	80 - φ80mm		

Selection

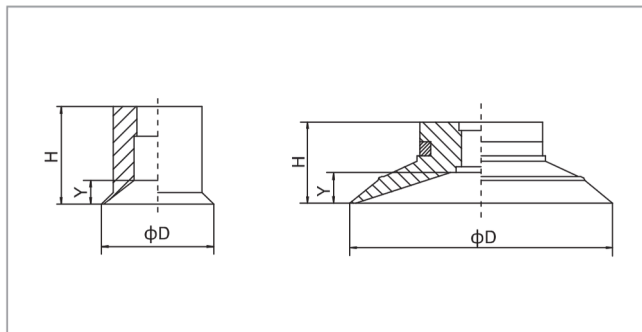
Model	Connection thread M - Male thread	F - Female thread
SU6□	SU6□-M5M	-
SU8□	SU8□-M5M	-
SU10□	SU10□-M5M	-
SU15□	SU15□-M5M	-
SU20□	SU20□-G1M(-EW/EH)	SU20□-G1F(-EW/EH)
SU25□	SU25□-G1M(-EW/EH)	SU25□-G1F(-EW/EH)
SU30□	SU30□-G1M(-EW/EH)	SU30□-G1F(-EW/EH)
SU40□	SU40□-G1M(-EW/EH)	SU40□-G1F(-EW/EH)
SU50□	SU50□-G2M(-EW/EH) SU50□-G3M(-EW/EH)	SU50□-G2F(-EW/EH) SU50□-G3F(-EW/EH)
SU80□	-	SU80□-G1F

Technical parameters

Model	Pull-out force N	Inner volume cm ³	Min.curve radius of workpiece mm	Weight g	Recommended hose dia. mm	MPQ pcs
SU6	2.1	<0.1	7.5	0.1	4	10
SU8	3.2	<0.1	10	0.2	4	10
SU10	4.7	<0.1	12	0.6	6	10
SU15	7.4	0.5	20	0.6	6	10
SU20	9.5	0.8	30	1.2	6	5
SU25	18	1.2	45	1.5	6	5
SU30	33	1.5	45	2.4	6	5
SU40	60	3	65	5.2	6	5
SU50	92	7	80	10.6	6	1
SU80	210	24	120	31	8	1

◇ Note: Testing vacuum level -60kPa, workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor.
The data may be different according to different workpiece surfaces. Recommend the length of vacuum hose to be as short as possible, max 2m.

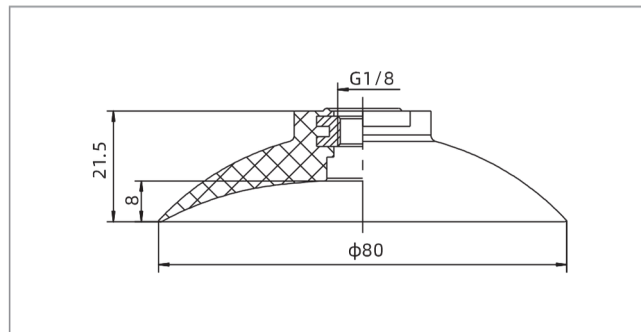
Dimensions(mm) - Suction cup only



SU6-15

SU20-50

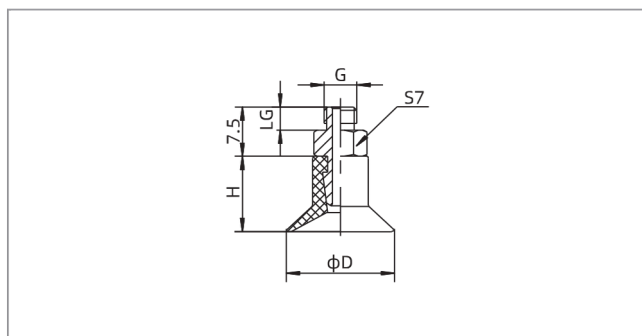
Model/Size	D	H	Y (Stroke)
SU6□	7	6.5	1.5
SU8□	9	7	2
SU10□	11	10.5	2
SF15□	16.5	11	3



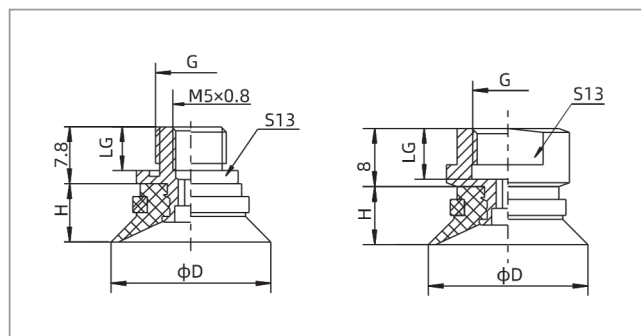
SU80

Model/Size	D	H	Y (Stroke)
SU20□	22	8	2.2
SU25□	27	9	2.9
SU30□	32	9.5	4.5
SU40□	42	13	5.2
SU50□	53	17.5	7

Dimensions(mm) - Suction cup with fitting



SU6-15 Male thread connection

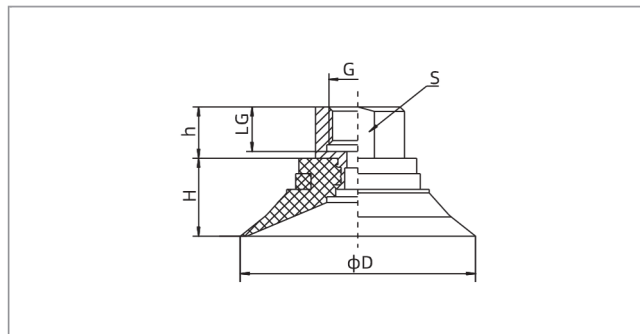
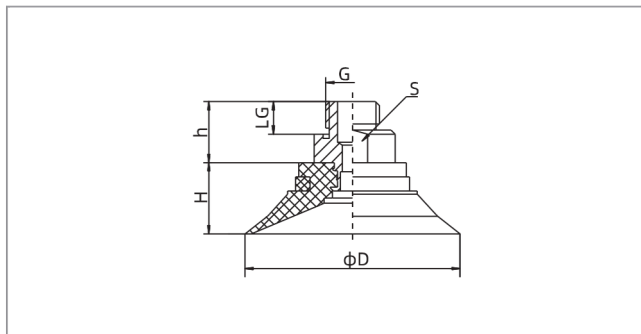


SU20-30 Male thread connection

SU20-30 Female thread connection

Model/Size	D	H	G	LG	h	S
SU6□-M5M	7	6.5	M5 × 0.8	3.5	7.5	7
SU8□-M5M	9	7	M5 × 0.8	3.5	7.5	7
SU10□-M5M	11	10.5	M5 × 0.8	3.5	7.5	7
SU15□-M5M	16.5	11	M5 × 0.8	3.5	7.5	7
SU20□-G1M	22	8	G1/8	6	7.8	13
SU20□-G1F	22	8	G1/8	7	8	13
SU25□-G1M	27	9	G1/8	6	7.8	13
SU25□-G1F	27	9	G1/8	7	8	13
SU30□-G1M	32	9.5	G1/8	6	7.8	13
SU30□-G1F	32	9.5	G1/8	7	8	13

Dimensions(mm) - Suction cup with fitting



SU40-50 Male thread connection

SU40-50 Female thread connection

Model/Size	D	H	G	LG	h	S
SU40□-G1M	42	13	G1/8	6	12	17
SU40□-G1F	42	13	G1/8	7	10	17
SU50□-G2M	53	17.5	G1/4	9	17	24
SU50□-G2F	53	17.5	G1/4	10	13	24
SU50□-G3M	53	17.5	G3/8	10	18	24
SU50□-G3F	53	17.5	G3/8	11	13	24

◇ Note: The dimensional tolerance conforms to GBT3672.1-2002-1 M3 rubber product dimensional tolerance standard

Mounting parts

Item	Model M - Male thread	F - Female thread	Applicable suction cup
Fitting for suction cup	PJS-M5M-SC2	-	SU6,8
	PJS-M5M-SC3	-	SU10,15
	PJS-G1M-SF1	PJS-G1F-SF1	SU20,25,30
	PJS-G1M-SF2	PJS-G1F-SF2	SU40
	PJS-G2M-SF3	PJS-G2F-SF3	SU50
	PJS-G3M-SF3	PJS-G3F-SF3	SU50