

SF Series

Universal Flat Suction Cup

AIRBEST



RoHS

Features

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

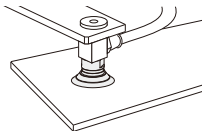
Advantages

- ◇ 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 $\phi 50$ -150mm, in order to avoid accidental vacuum leakage

- ◇ Note: The functional threaded hole is sealed with a plug when delivered. Seal the thread with thread glue or raw tape when connecting

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



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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

Suction Cup

SZ
SP3
SUF
SAN
SAO
SOFA
STP
SFT
SFA
SHT
SEL
SBLP
SBS
SFP
SEP
SXP
SGP
SGOF
STC
SFF
SOB
SOF
SDG
SFM
SOM
SEF
SDM
SPU
SEK
SHT
SEL
SPG
SFGT
SFD
SB
SBA
SF
SU
SP2P
SPA
SPD
SFF
SPC
SPJ
SPU
SH
SHB
SBB
SGP
SNP

SF Series

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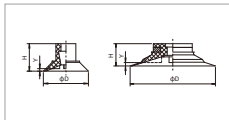
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Technical parameters

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

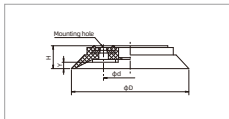
○ Note: Testing vacuum level -68kPa, workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces. Recommend the length of vacuum hose to be as short as possible, max 2m.

Dimensions(mm) - Suction cup only



SF15

SF20-50



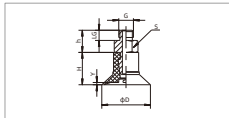
SF75-200

○ Note: The dimensional tolerance conforms to GB/T16723-2002-1 M3 rubber product dimensional tolerance standard

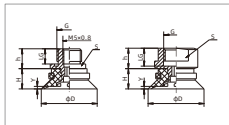
Model/Size	D	H	Y
SF15□	16.5	11	0.8
SF20□	22	8	1
SF25□	27	9	1
SF30□	32	10	1.2
SF40□	42	13	1.2
SF50□	53	17.5	3.2

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

Dimensions(mm) - Suction cup with fitting

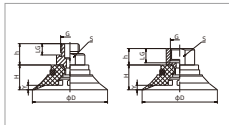


SF15-M5M Male thread connection



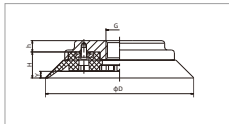
SF20-30 Male thread connection

SF20-30 Female thread connection



SF40-50 Male thread connection

SF40-50 Female thread connection



SF75-150 Female thread connection

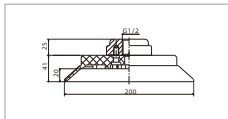
Model/Size	D	H	G	LG	h	S	Y
SF15-M5M	16.5	11	M5 × 0.8	3.5	7.5	7	0.8

Model/Size	D	H	G	LG	h	S	Y
SF20-M5M	22	8	G1/8	6	7.8	13	1
SF20-M5F	22	8	G1/8	7	8	13	1
SF25-M5M	27	9	G1/8	6	7.8	13	1
SF25-M5F	27	9	G1/8	7	8	13	1
SF30-M5M	32	10	G1/8	6	7.8	13	1.2
SF30-M5F	32	10	G1/8	7	8	13	1.2

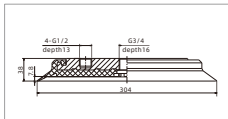
Model/Size	D	H	G	LG	h	S	Y
SF40-M5M	42	13	G1/8	6	12	17	1.2
SF40-M5F	42	13	G1/8	7	10	17	1.2
SF50-M5M	53	17.5	G1/4	9	17	24	3.2
SF50-M5F	53	17.5	G1/4	10	13	24	3.2
SF50-M3M	53	17.5	G3/8	10	18	24	3.2
SF50-M3F	53	17.5	G3/8	11	13	24	3.2

Model/Size	D	H	G	h	Y
SF75-M5F	77	13	G1/4	13	4
SF110-M5F	112	20	G1/2	9	6
SF150-M5F	152	26	G1/2	10	8

Dimensions(mm) - Suction cup with fitting

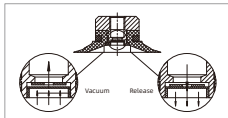


SF200 Female thread connection



SF300 Female thread connection

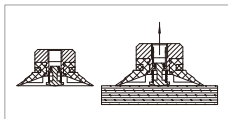
Accessories



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
- ◇ Note: The contact inductive valve should be used with PSPT-H, PSPH and PSPD series level compensators. Otherwise, the spring force of inductive valve is higher than that of the level compensator, which results in the failure to open the valve. Please contact us for more details.

