

SAO Series

Oval Flat Suction Cup

AIRBEST



ELECTRONICS

RoHS

Features

- ◇ Oval and Flat structure
- ◇ Conductive material available
- ◇ Various sizes available

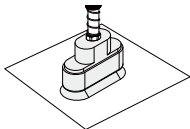
Advantages

- ◇ Small sizes, large suction force, suitable for handling of long and narrow workpieces
- ◇ Discharge static electricity gently to protect workpieces from damage
- ◇ Suitable for workpieces of various sizes and shapes



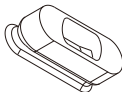
Applications

- ◇ Handling of long and narrow workpieces with even surface
- ◇ Handling of electronic components
- ◇ Conductive material is suitable for 3C industry



Structure

- ◇ Split structure for easy replacement of wearing parts



SAO Series

Oval Flat Suction Cup

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How to order

SAO 8×20 N

① ② ③

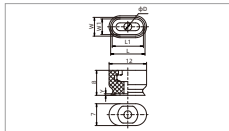
① Series	② Size	③ Material & Hardness
SAO	3.5×7	6×20
	4×10	8×20
	5×10	4×30
	6×10	5×30
	4×20	6×30
	5×20	8×30
		N - NBR 55
		WS - White silicone 50
		CN - Conductive NBR 55
		CS - Conductive silicone 55

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
SAO3.5×7	0.9	<0.1	6	0.5	4	10
SAO4×10	1.6	<0.1	7	0.4	4	10
SAO5×10	2	<0.1	9	0.4	4	10
SAO6×10	2.4	<0.1	13	0.5	4	10
SAO4×20	3.2	<0.1	8	0.8	4	10
SAO5×20	4.2	<0.1	11	0.7	4	10
SAO6×20	5	<0.1	14	0.9	4	10
SAO8×20	6.5	<0.1	16	0.9	4	10
SAO4×30	5.2	<0.1	8	1.3	4	10
SAO5×30	6.5	<0.1	10	1.1	4	10
SAO6×30	7.8	<0.1	14	1.2	4	10
SAO8×30	10.2	0.1	18	1.3	4	10

○ 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)



SAO

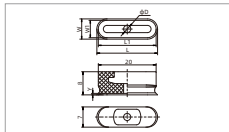
Model/Size	W	L	W1	L1	D	Y
SAO3.5×7□	4.5	8	3.5	7	2-1.5	0.5
SAO4×10□	5	11	4	10	2-1.5	0.5
SAO5×10□	6	11	5	10	2.5	0.5
SAO6×10□	7	11	6	10	2.5	0.5

SAO Series

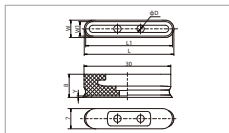
Oval Flat Suction Cup

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Dimensions(mm)



SAO



SAO

○ Note: The dimensional tolerance conforms to the GB/T 3672.1-2002-1 M3 rubber product dimensional tolerance standard

Model/Size	W	L	W1	L1	D	Y
SAO4×20□	5	21	4	20	2-1.8	0.5
SAO5×20□	6	21	5	20	2-2	0.5
SAO6×20□	7	21	6	20	2.5	0.5
SAO8×20□	9	21	8	20	3	0.8

Model/Size	W	L	W1	L1	D	Y
SAO4×30□	5	31	4	30	2-1.8	0.5
SAO5×30□	6	31	5	30	2-2.5	0.5
SAO6×30□	7	31	6	30	2-2.5	0.5
SAO8×30□	9	31	8	30	2-2.5	0.8

SAO Series

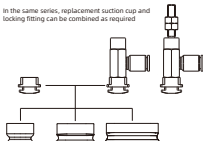
Suction Cup with Locking Fitting

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Structure

- Consisting of replacement suction cup and locking fitting
- Plug-in fitting for suction cup
- Vertical vacuum port, female thread for mounting
- Lateral vacuum port, male and female thread for mounting

In the same series, replacement suction cup and locking fitting can be combined as required



How to order

SAO5x20N - LA6 - M5F

①

②

③

① Model	② Vacuum port direction	③ Mounting thread
SAO5x20N	Nil - Vertical LA4 - Lateral, one-touch fitting $\phi 4$ hose LA6 - Lateral, one-touch fitting $\phi 6$ hose	MSM - M5x0.8 male thread M5F - M5x0.8 female thread

○ Please refer to page 179 for suction cup selection

Selection

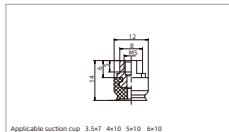
Connection thread M - Male thread		F - Female thread		
SAO3.5x7□-LA4-M5M	SAO3.5x7□-LA6-M5M	SAO3.5x7□-LA4-M5F	SAO3.5x7□-LA6-M5F	SAO3.5x7□-M5F
SAO4x10□-LA4-M5M	SAO4x10□-LA6-M5M	SAO4x10□-LA4-M5F	SAO4x10□-LA6-M5F	SAO4x10□-M5F
SAO5x10□-LA4-M5M	SAO5x10□-LA6-M5M	SAO5x10□-LA4-M5F	SAO5x10□-LA6-M5F	SAO5x10□-M5F
SAO6x10□-LA4-M5M	SAO6x10□-LA6-M5M	SAO6x10□-LA4-M5F	SAO6x10□-LA6-M5F	SAO6x10□-M5F
SAO4x20□-LA4-M5M	SAO4x20□-LA6-M5M	SAO4x20□-LA4-M5F	SAO4x20□-LA6-M5F	SAO4x20□-M5F
SAO5x20□-LA4-M5M	SAO5x20□-LA6-M5M	SAO5x20□-LA4-M5F	SAO5x20□-LA6-M5F	SAO5x20□-M5F
SAO6x20□-LA4-M5M	SAO6x20□-LA6-M5M	SAO6x20□-LA4-M5F	SAO6x20□-LA6-M5F	SAO6x20□-M5F
SAO8x20□-LA4-M5M	SAO8x20□-LA6-M5M	SAO8x20□-LA4-M5F	SAO8x20□-LA6-M5F	SAO8x20□-M5F
SAO4x30□-LA4-M5M	SAO4x30□-LA6-M5M	SAO4x30□-LA4-M5F	SAO4x30□-LA6-M5F	SAO4x30□-M5F
SAO5x30□-LA4-M5M	SAO5x30□-LA6-M5M	SAO5x30□-LA4-M5F	SAO5x30□-LA6-M5F	SAO5x30□-M5F
SAO6x30□-LA4-M5M	SAO6x30□-LA6-M5M	SAO6x30□-LA4-M5F	SAO6x30□-LA6-M5F	SAO6x30□-M5F
SAO8x30□-LA4-M5M	SAO8x30□-LA6-M5M	SAO8x30□-LA4-M5F	SAO8x30□-LA6-M5F	SAO8x30□-M5F

SAO Series

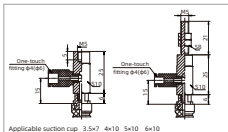
Suction Cup with Locking Fitting

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Dimensions(mm)

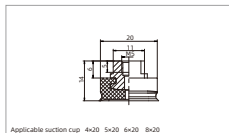


Vertical-Female thread connection

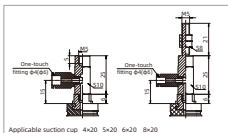


Lateral-Female thread connection

Lateral-Male thread connection

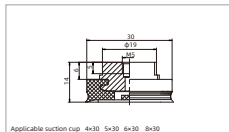


Vertical-Female thread connection

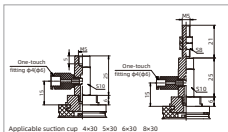


Lateral-Female thread connection

Lateral-Male thread connection



Vertical-Female thread connection



Lateral-Female thread connection

Lateral-Male thread connection

SAO Series

Suction Cup with Level Compensator

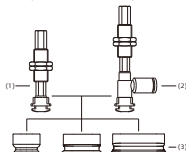
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Suction Cup

Structure

- Consisting of replacement suction cup(3) and level compensator
- Plug-in fitting for suction cup
- Vertical vacuum port(1), male thread for mounting
- Lateral vacuum port(2), male thread for mounting

In the same series, replacement suction cup and level compensator can be combined as required



How to order

SAO5×20N - E I 10 R A6 - M10

① ② ③ ④ ⑤ ⑥ ⑦

① Series	② Level compensator type	③ Buffer type	④ Buffer stroke	⑤ Rotary type	⑥ Vacuum port connection	⑦ Mounting thread
SAO5×20N	E - PSPE Series	I - Internal spring	10 40 20 50 30	R - Vertical non-rotating B - Lateral non-rotating	Nil - M5×0.8 female thread A4 - One-touch fitting φ4 hose A6 - One-touch fitting φ6 hose	M10 - M10×1

Please refer to page 179 for suction cup selection

Selection

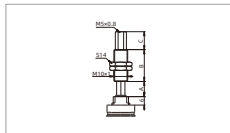
Rotary type/ Vacuum port connection	Nil	A4	A6
R - Vertical non-rotating	●	●	●
B - Lateral non-rotating	-	●	●

Note: "●" default, in stock, "-" unavailable

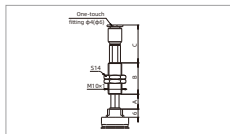
SAO Series

Suction Cup with Level Compensator

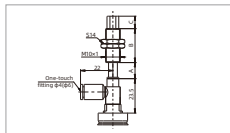
Dimensions(mm)



Vertical-Female thread connection



Vertical-One-touch fitting



Lateral-One-touch fitting

Model/Size	A	B	C	Buffer stroke	F1 (N)	F2 (N)
SAO □-EI10R-M10	11	23	13	10	1.0	3.0
SAO □-EI20R-M10	21	51	13	20	1.0	3.0
SAO □-EI30R-M10	31	51	13	30	1.0	3.0
SAO □-EI40R-M10	41	77	13	40	1.0	3.0
SAO □-EI50R-M10	51	77	13	50	1.0	3.0

Model/Size	A	B	C	Buffer stroke	F1 (N)	F2 (N)
SAO □-EI10R □-M10	11	23	28	10	1.0	3.0
SAO □-EI20R □-M10	21	51	28	20	1.0	3.0
SAO □-EI30R □-M10	31	51	28	30	1.0	3.0
SAO □-EI40R □-M10	41	77	28	40	1.0	3.0
SAO □-EI50R □-M10	51	77	28	50	1.0	3.0

Model/Size	A	B	C	Buffer stroke	F1 (N)	F2 (N)
SAO □-EI10B □-M10	11	23	8.5	10	1.0	3.0
SAO □-EI20B □-M10	21	51	8.5	20	1.0	3.0
SAO □-EI30B □-M10	31	51	8.5	30	1.0	3.0
SAO □-EI40B □-M10	41	77	8.5	40	1.0	3.0
SAO □-EI50B □-M10	51	77	8.5	50	1.0	3.0

○ Note: 1. Please refer to page 179 for suction cup selection
2. "F1" means spring force at 0 stroke, "F2" means spring force at max. Stroke