SOF Series

Oval Flat Suction Cup Speical for Metal Sheet


METAL SHEET


LONG AND NARROW OBJECT


SLIPPING RESISTANCE


OILY SURFACE

RoHS

Features

◇ Oval flat suction cup
◇ Internal large area pattern support structure
◇ Various sizes are available

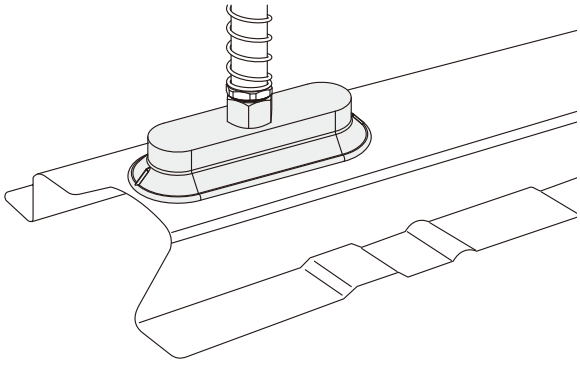


Advantages

◇ Handling long and narrow workpieces
◇ Effectively enhance friction force between suction cups and workpieces
◇ The max. temp of HK material is 250℃, it can be used to pick up high temp metal sheet
◇ The max. temp of HD material is 160℃, it can be used to pick up high temp glass without mark
◇ Suitable for workpieces with different sizes and shapes

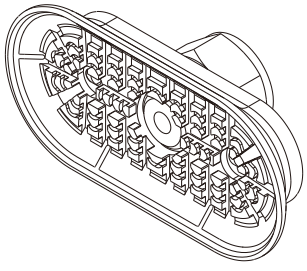
Applications

◇ Handling narrow and long metal parts in fast speed, short cycle time
◇ Handling metal sheet and aluminum plates without deformation
◇ Handling automotive stamping metal parts



Structure

◇ Suction cup and fitting are one-piece structure



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How to order

SOF 40×80 N - G3F
① ② ③ ④

① Series	② Size		③ Material & Hardness		④ Connection thread	
SOF	16×50	40×110	N - NBR	60	G2F - G1/4 female thread	M10M - M10×1.5 male thread
	20×80	50×100	NG - NBR	45	G3F - G3/8 female thread	M14M - M14×1.5 male thread
	23×60	60×120	HK - Extra high temp rubber	65	G2M - G1/4 male thread	RA - Rectangular adapter
	30×90	70×140	HD - High temp/mark free material	60		
	40×80					

Selection

Model	Connection thread G2M	M10M	M14M	G2F	G3F	RA
SOF16×50□-□	SOF16×50□-G2M	SOF16×50□-M10M	SOF16×50□-M14M	SOF16×50□-G2F	SOF16×50□-G3F	SOF16×50□-RA
SOF20×80□-□	SOF20×80□-G2M	SOF20×80□-M10M	SOF20×80□-M14M	SOF20×80□-G2F	SOF20×80□-G3F	SOF20×80□-RA
SOF23×60□-□	SOF23×60□-G2M	SOF23×60□-M10M	SOF23×60□-M14M	SOF23×60□-G2F	SOF23×60□-G3F	SOF23×60□-RA
SOF40×80□-□	SOF40×80□-G2M	SOF40×80□-M10M	SOF40×80□-M14M	SOF40×80□-G2F	SOF40×80□-G3F	SOF40×80□-RA
SOF30×90□-□	SOF30×90□-G2M	SOF30×90□-M10M	SOF30×90□-M14M	SOF30×90□-G2F	SOF30×90□-G3F	SOF30×90□-RA
SOF40×110□-□	SOF40×110□-G2M	SOF40×110□-M10M	SOF40×110□-M14M	SOF40×110□-G2F	SOF40×110□-G3F	SOF40×110□-RA
SOF50×100□-□	SOF50×100□-G2M	SOF50×100□-M10M	SOF50×100□-M14M	SOF50×100□-G2F	SOF50×100□-G3F	SOF50×100□-RA
SOF60×120□-□	SOF60×120□-G2M	SOF60×120□-M10M	SOF60×120□-M14M	SOF60×120□-G2F	SOF60×120□-G3F	SOF60×120□-RA
SOF70×140□-□	SOF70×140□-G2M	SOF70×140□-M10M	SOF70×140□-M14M	SOF70×140□-G2F	SOF70×140□-G3F	SOF70×140□-RA

Model	Connection thread G2M	G2F	G3F
SOF16×50HK-□	SOF16×50HK-G2M	SOF16×50HK-G2F	SOF16×50HK-G3F
SOF20×80HK-□	SOF20×80HK-G2M	SOF20×80HK-G2F	SOF20×80HK-G3F
SOF23×60HK-□	SOF23×60HK-G2M	SOF23×60HK-G2F	SOF23×60HK-G3F
SOF40×80HK-□	SOF40×80HK-G2M	SOF40×80HK-G2F	SOF40×80HK-G3F
SOF30×90HK-□	SOF30×90HK-G2M	SOF30×90HK-G2F	SOF30×90HK-G3F
SOF40×110HK-□	SOF40×110HK-G2M	SOF40×110HK-G2F	SOF40×110HK-G3F
SOF50×100HK-□	SOF50×100HK-G2M	SOF50×100HK-G2F	SOF50×100HK-G3F
SOF60×120HK-□	SOF60×120HK-G2M	SOF60×120HK-G2F	SOF60×120HK-G3F
SOF70×140HK-□	SOF70×140HK-G2M	SOF70×140HK-G2F	SOF70×140HK-G3F

Model	Connection thread G2M	G2F	G3F
SOF16×50HD-□	SOF16×50HD-G2M	SOF16×50HD-G2F	SOF16×50HD-G3F
SOF20×80HD-□	SOF20×80HD-G2M	SOF20×80HD-G2F	SOF20×80HD-G3F
SOF23×60HD-□	SOF23×60HD-G2M	SOF23×60HD-G2F	SOF23×60HD-G3F
SOF40×80HD-□	SOF40×80HD-G2M	SOF40×80HD-G2F	SOF40×80HD-G3F
SOF30×90HD-□	SOF30×90HD-G2M	SOF30×90HD-G2F	SOF30×90HD-G3F
SOF40×110HD-□	SOF40×110HD-G2M	SOF40×110HD-G2F	SOF40×110HD-G3F
SOF50×100HD-□	SOF50×100HD-G2M	SOF50×100HD-G2F	SOF50×100HD-G3F
SOF60×120HD-□	SOF60×120HD-G2M	SOF60×120HD-G2F	SOF60×120HD-G3F
SOF70×140HD-□	SOF70×140HD-G2M	SOF70×140HD-G2F	SOF70×140HD-G3F

Technical parameters

Model	Vertical pull-out force N	Lateral pull-out force N	Lateral pull-out force (Oily surface)N	Inner volume cm^3	Min.curve radius of workpiece mm	Weight g	Recommended hose dia. mm	MPQ pcs
SOF16×50	33	24	12	2	8	17	4	1
SOF20×80	78	38	35	5	25	23	4	1
SOF23×60	57	37	33	3	20	29	4	1
SOF30×90	125	77	60	10	30	24	4	1
SOF40×80	141	110	100	11	50	43	6	1
SOF40×110	200	188	118	25	35	47	6	1
SOF50×100	217	181	121	20	75	56	6	1
SOF60×120	312	254	170	35	75	70	6	1
SOF70×140	445	344	230	52	90	77	8	1

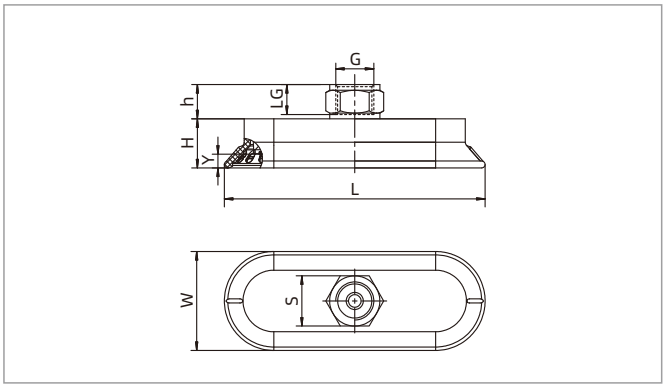
◇ Note: Testing vacuum level -60kPa, workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor.
The data may be different according to different workpiece surfaces.

SOF Series

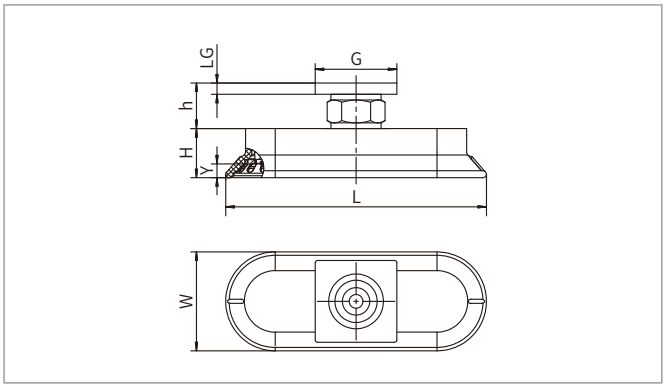
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AIRBEST

Dimensions(mm)



F - Female thread connection



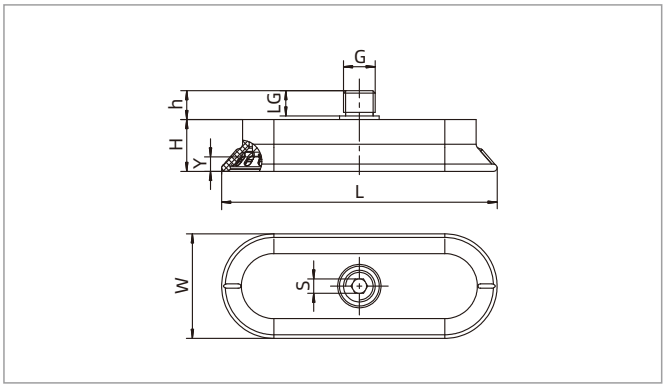
RA-Rectangular adapter

Model/Size	L	W	H	G	LG	h	S	Y
SOF16×50□-G2F	50	16	19.5	G1/4	11	14	17	3
SOF16×50□-G3F	50	16	19.5	G3/8	11	14	22	3
SOF16×50□-RA	50	16	19.5	31.8×31.8	4.7	18.7	-	3
SOF20×80□-G2F	84	24	15.5	G1/4	11	14	17	5
SOF20×80□-G3F	84	24	15.5	G3/8	11	14	22	5
SOF20×80□-RA	84	24	15.5	31.8×31.8	4.7	18.7	-	5
SOF23×60□-G2F	61.5	22.5	12	G1/4	11	14	17	3
SOF23×60□-G3F	61.5	22.5	12	G3/8	11	14	22	3
SOF23×60□-RA	61.5	22.5	12	31.8×31.8	4.7	18.7	-	3
SOF30×90□-G2F	93	33	16	G1/4	11	14	17	5
SOF30×90□-G3F	93	33	16	G3/8	11	14	22	5
SOF30×90□-RA	93	33	16	31.8×31.8	4.7	18.7	-	5
SOF40×80□-G2F	82	39	14	G1/4	11	14	17	4
SOF40×80□-G3F	82	39	14	G3/8	11	14	22	4
SOF40×80□-RA	82	39	14	31.8×31.8	4.7	18.7	-	4
SOF40×110□-G2F	113	43	21.5	G1/4	11	14	17	6
SOF40×110□-G3F	113	43	21.5	G3/8	11	14	22	6
SOF40×110□-RA	113	43	21.5	31.8×31.8	4.7	18.7	-	6
SOF50×100□-G2F	102	49	16	G1/4	11	14	17	5
SOF50×100□-G3F	102	49	16	G3/8	11	14	22	5
SOF50×100□-RA	102	49	16	31.8×31.8	4.7	18.7	-	5
SOF60×120□-G2F	123	58	18	G1/4	11	14	17	6
SOF60×120□-G3F	123	58	18	G3/8	11	14	22	6
SOF60×120□-RA	123	58	18	31.8×31.8	4.7	18.7	-	6
SOF70×140□-G2F	141	67.5	19	G1/4	11	14	17	7
SOF70×140□-G3F	141	67.5	19	G3/8	11	14	22	7
SOF70×140□-RA	141	67.5	19	31.8×31.8	4.7	18.7	-	7

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Dimensions(mm)



M - Male thread connection

Model/Size	L	W	H	G	LG	h	S	Y
SOF16×50□-G2M	50	16	19.5	G1/4	9	10.5	5	3
SOF16×50□-M10M	50	16	19.5	M10×1.5	12	13.5	5	3
SOF16×50□-M14M	50	16	19.5	M14×1.5	12	13.5	5	3
SOF20×80□-G2M	84	24	15.5	G1/4	9	10.5	5	5
SOF20×80□-M10M	84	24	15.5	M10×1.5	12	13.5	5	5
SOF20×80□-M14M	84	24	15.5	M14×1.5	12	13.5	5	5
SOF23×60□-G2M	61.5	22.5	12	G1/4	9	10.5	5	3
SOF23×60□-M10M	61.5	22.5	12	M10×1.5	12	13.5	5	3
SOF23×60□-M14M	61.5	22.5	12	M14×1.5	12	13.5	5	3
SOF30×90□-G2M	93	33	16	G1/4	9	10.5	5	5
SOF30×90□-M10M	93	33	16	M10×1.5	12	13.5	5	5
SOF30×90□-M14M	93	33	16	M14×1.5	12	13.5	5	5
SOF40×80□-G2M	82	39	14	G1/4	9	10.5	5	4
SOF40×80□-M10M	82	39	14	M10×1.5	12	13.5	5	4
SOF40×80□-M14M	82	39	14	M14×1.5	12	13.5	5	4
SOF40×110□-G2M	113	43	21.5	G1/4	9	11	5	6
SOF40×110□-M10M	113	43	21.5	M10×1.5	12	13.5	5	6
SOF40×110□-M14M	113	43	21.5	M14×1.5	12	13.5	5	6
SOF50×100□-G2M	102	49	16	G1/4	9	11	5	5
SOF50×100□-M10M	102	49	16	M10×1.5	12	13.5	5	5
SOF50×100□-M14M	102	49	16	M14×1.5	12	13.5	5	5
SOF60×120□-G2M	123	58	18	G1/4	9	11	5	6
SOF60×120□-M10M	123	58	18	M10×1.5	12	13.5	5	6
SOF60×120□-M14M	123	58	18	M14×1.5	12	13.5	5	6
SOF70×140□-G2M	141	67.5	19	G1/4	9	11	5	7
SOF70×140□-M10M	141	67.5	19	M10×1.5	12	13.5	5	7
SOF70×140□-M14M	141	67.5	19	M14×1.5	12	13.5	5	7

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