

Bellows Suction Cups SAOB HT1 (Oval, 1.5 Folds)

Suction area (LxW) from 60 x 30 mm to 140 x 70 mm



Suitability for industry specific applications

Application

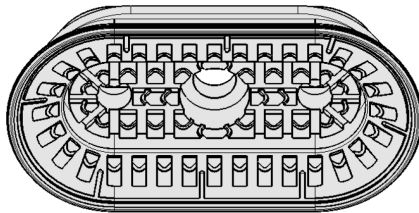
- Oval bellows suction cup with 1.5 folds for handling of elongated glass workpieces
- Handling of flat glass and formed glass pieces
- Use in automated production lines for automotive glasses such as windscreens and side windows, even after the bending process at temperatures up to 170 °C
- Exact positioning of workpieces in the production process due to displacement-free handling
- High lateral forces in use with separation powder on flat glass or on wet glass surfaces



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Design

- Robust wear-resistant oval bellows suction cup SAOB made of HT1 with 1.5 folds, with single sealing lip, special slot and inner support
- Connection nipple glued to the reinforcing element of the suction cup (very high strength)
- Special structure of the suction surface for high resistance to lateral forces



System design Bellows Suction Cups SAOB HT1 (Oval, 1.5 Folds)



Bellows Suction cups SAOB HT1 being used for handling hollow glass

Product highlights

- Minimal chemical influence on the workpiece surface thanks to the non-marking special material HT1
- Handling of hot workpieces thanks to high temperature resistance
- Structured inner support withstands the highest lateral forces, especially when used with separation powder and on wet workpieces

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Designation code Bellows Suction Cups SAOB HT1 (Oval, 1.5 Folds)

SAOB	-	110x55	-	HT1-60	-	G1/4-AG
1		2		3		4

1 – Abbreviated designation

Code	Version
SAOB	1.5 folds, oval

2 – Suction area

Code	LxW in mm
60x30...140x70	60x30 to 140x70

3 – Material

Code	Material
HT1-60	High temperature material

4 – Connection

Code	Connection
G1/4-AG	G1/4-AG (AG = male (M))
G1/4-IG	G1/4-IG (IG = female (F))
G3/8-AG	G3/8-AG
G3/8-IG	G3/8-IG

Suction cup SAOB HT1, available in various diameters, is delivered with connection nipple glued to elastomer part.

Ordering data Bellows Suction Cups SAOB HT1 (Oval, 1.5 Folds)

Type	Vacuum connection:	Vacuum connection:			
		G1/4"-M	G1/4"-F	G3/8"-M	G3/8"-F
SAOB	60x30	10.01.06.03156	10.01.06.03175	10.01.06.03201	10.01.06.03202
SAOB	80x40	10.01.06.03203	10.01.06.03176	10.01.06.03204	10.01.06.03205
SAOB	110x55	10.01.06.03206	10.01.06.03178	10.01.06.03207	10.01.06.03208
SAOB	140x70	10.01.06.03209	10.01.06.03177	10.01.06.03210	10.01.06.03211

Technical data Bellows Suction Cups SAOB HT1 (Oval, 1.5 Folds)

Type	Suction force (-600 mbar) [N]*	Pull-off force [N]	Lateral force [N]**	Volume [cm³]	Workpiece radius min. (convex) [mm]	Hose inner diameter (recom.) d [mm]***	
SAOB	60x30	38	70	81	10.5	18	4
SAOB	80x40	65	132	153	21.8	25	6
SAOB	110x55	110	234	300	53.1	50	6
SAOB	140x70	165	352	459	106.0	70	6

*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

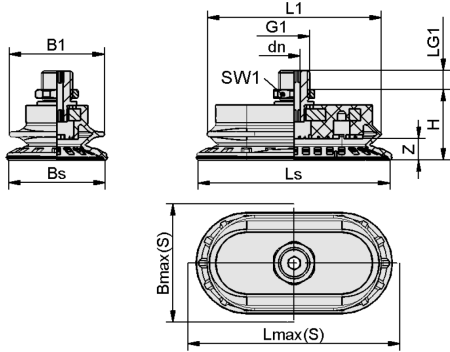
**The specified lateral forces are values measured at a vacuum of -0.6 bar with a dry, smooth, flat workpiece surface. Depending on the workpiece surface and its quality, the actual values may deviate from these values.

***The recommended hose diameter is based on a hose length of approx. 2 m

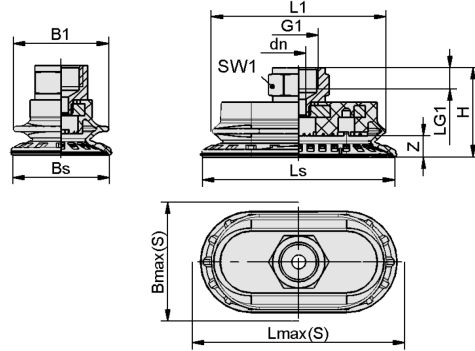
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SAOB HT1 AG



SAOB HT1 IG

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Type*	B1 [mm]	Bmax(S) [mm]**	Bs [mm]	dn [mm]	G1	H [mm]	L1 [mm]	LG1 [mm]	Lmax.(S) [mm]***	Ls [mm]	SW1 [mm]	Z (Stroke) [mm]
SAOB 60x30 HT1-60 G1/4-AG	31	33	30.6	5.0	G1/4"-M	27.0	55.7	8.0	63.0	61	17	7.0
SAOB 60x30 HT1-60 G1/4-IG	31	33	30.6	5.5	G1/4"-F	34.4	55.7	8.0	63.0	61	17	7.0
SAOB 60x30 HT1-60 G3/8-AG	31	33	30.6	5.2	G3/8"-M	27.5	55.7	7.4	63.0	61	22	7.0
SAOB 60x30 HT1-60 G3/8-IG	31	33	30.6	6.0	G3/8"-F	35.0	55.7	9.0	63.0	61	22	7.0
SAOB 80x40 HT1-60 G1/4-AG	40	43	40.6	5.0	G1/4"-M	29.7	73.3	8.0	83.0	81	17	9.0
SAOB 80x40 HT1-60 G1/4-IG	40	43	40.6	6.0	G1/4"-F	37.2	73.3	8.0	83.0	81	17	9.0
SAOB 80x40 HT1-60 G3/8-AG	40	43	40.6	5.2	G3/8"-M	27.7	73.3	8.0	83.0	81	22	9.0
SAOB 80x40 HT1-60 G3/8-IG	40	43	40.6	6.0	G3/8"-F	37.7	73.3	9.0	83.0	81	22	9.0
SAOB 110x55 HT1-60 G1/4-AG	53	59	55.1	6.0	G1/4"-M	35.5	98.8	8.0	114.0	111	17	12.0
SAOB 110x55 HT1-60 G1/4-IG	53	59	55.1	8.0	G1/4"-F	43.0	98.8	8.0	114.0	111	17	12.0
SAOB 110x55 HT1-60 G3/8-AG	53	59	55.1	6.1	G3/8"-M	33.5	98.8	8.0	114.0	111	22	12.0
SAOB 110x55 HT1-60 G3/8-IG	53	59	55.1	8.0	G3/8"-F	43.5	98.8	9.0	114.0	111	22	12.0
SAOB 140x70 HT1-60 G1/4-AG	67	75	70.1	6.0	G1/4"-M	39.5	126.0	8.0	146.0	142	17	16.5
SAOB 140x70 HT1-60 G1/4-IG	67	75	70.1	8.0	G1/4"-F	47.0	126.0	8.0	146.0	142	17	16.5
SAOB 140x70 HT1-60 G3/8-AG	67	75	70.1	6.0	G3/8"-M	37.5	126.0	10.0	146.0	142	19	16.5
SAOB 140x70 HT1-60 G3/8-IG	67	75	70.1	8.0	G3/8"-F	47.5	126.0	9.0	146.0	142	22	16.5

Suction Cups for Handling Glass



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*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

**External dimension of the suction cup when it is pressed against the workpiece by the vacuum

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