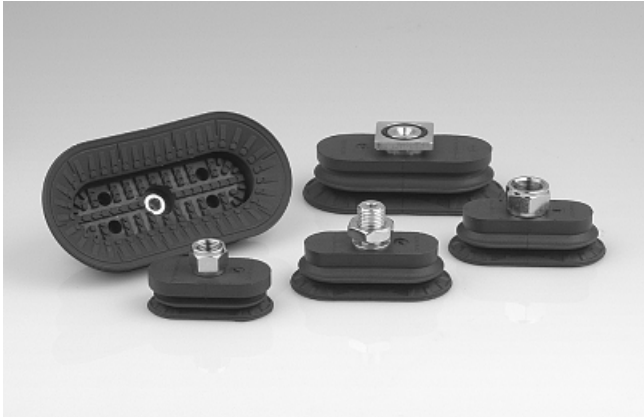


Suction pads for handling sheet metal

Bellows suction pads SAOB (oval, 1.5 folds)



Sheet-metal suction pads SAOB

Our highlights...

- Optimized oval shape with 1.5 folds
- Large-area structured inner support
- Wide range of sizes
- Very stiff top fold
- Soft and flexible sealing lip

Your advantages...

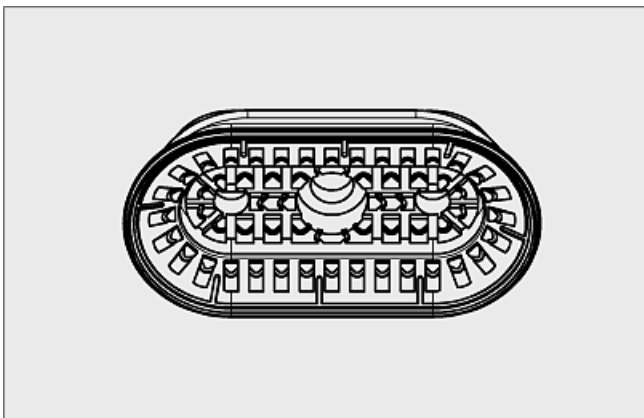
- >For long, narrow workpieces and for stamped bodywork components
- >Prevention of deep-drawing and handling of very high lateral forces for very dynamic movements, even with oily metal sheets
- >For a wide range of workpiece sizes and shapes
- >Very good resistance to lateral forces and high horizontal acceleration values
- >Very good sealing, even on slightly curved surfaces



Vacuum spider with bellows suction pads SAOB for handling bodywork parts in the automobile industry

Applications

- Handling of metal sheets with very dynamic movements (shorter cycle times)
- Handling of thin steel sheets and aluminum sheets without deformation
- For use e.g. in feeder systems for press lines in the automobile industry
- Handling of long, narrow workpieces such as reinforcing ribs and plates
- Special slot on the bottom prevents the oily metal sheets from slipping, permitting precise positioning in laser-cutting machines and stamping presses



Construction

- Robust and hard-wearing oval suction pad SAOB with 1.5 folds, single sealing lip, special slot and inner support
- Connection nipple glued to the suction pad with a reinforcing element (very high strength)
- Suction pads available with various connection types
- Suction pads are delivered assembled

Suction pads for handling sheet metal



Bellows suction pads SAOB (oval, 1.5 folds)



Suitability for branch-specific applications



Designation code Bellows suction pads SAOB (oval, 1.5 folds)

Short designation	Length x width in mm	Material and shore hardness	Connection thread
Example: SAOB	80x40	NBR-60	G1/4-AG
SAOB	60x30 to 140x70	NBR-60	G1/4-AG (AG = male) G1/4-IG (IG = female) G3/8-IG M10-AG M14x1.5-AG RA...Rectangular adapter



Ordering data Bellows suction pads SAOB (oval, 1.5 folds)

Type	Connection					
	G1/4" (male)	G1/4" (female)	G3/8" (female)	M10 (male)	M14x1.5 (male)	Rectang. adapt.
SAOB 60x30 NBR-60	10.01.06.00916	10.01.06.00891	10.01.06.00904	10.01.06.01024	10.01.06.01032	10.01.06.00908
SAOB 80x40 NBR-60	10.01.06.00918	10.01.06.00893	10.01.06.00906	10.01.06.01026	10.01.06.01034	10.01.06.00910
SAOB 110x55 NBR-60	10.01.06.00920	10.01.06.00900	10.01.06.00895	10.01.06.01028	10.01.06.01036	10.01.06.00912
SAOB 140x70 NBR-60	10.01.06.00922	10.01.06.00902	10.01.06.00897	10.01.06.01030	10.01.06.01038	10.01.06.00914



Technical data Bellows suction pads SAOB (oval, 1.5 folds)

Type	Suction force [N]*	Pull-off force [N]	Lateral force [N]**	Lateral force oily surface [N]**	Volume [cm ³]	Min. curve radius [mm] (convex)	Recom. internal hose diameter d [mm]
SAOB 60x30 NBR-60	38	55	57	52	9,6	30	4
SAOB 80x40 NBR-60	65	100	100	95	20,6	40	6
SAOB 110x55 NBR-60	110	185	180	161	50,8	50	6
SAOB 140x70 NBR-60	165	258	287	255	100,4	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

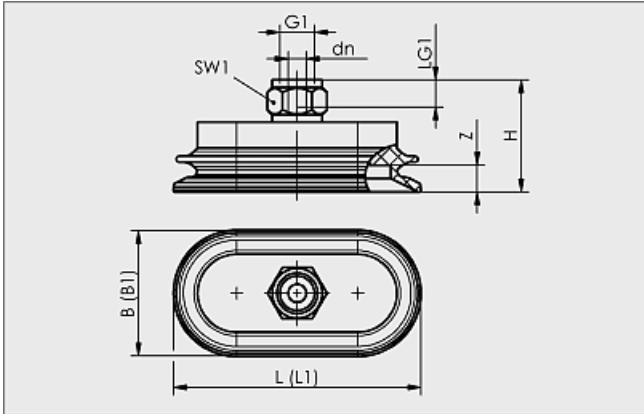
**The specified transverse forces are values measured at a vacuum of -0.6 bar with a dry or oily, smooth, flat workpiece surface. Depending on the workpiece surface and its quality, the actual values may deviate from these values.

Suction pads for handling sheet metal

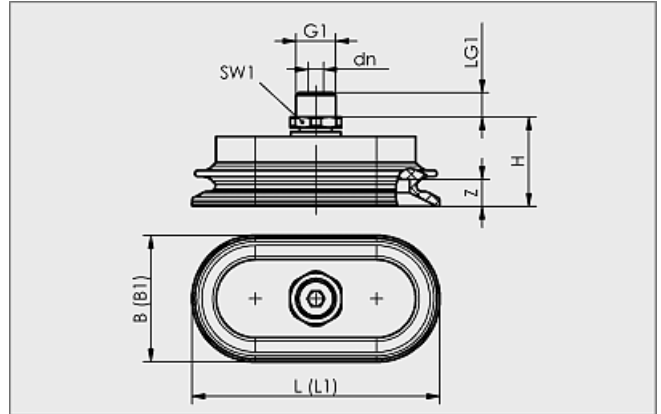
Bellows suction pads SAOB (oval, 1.5 folds)



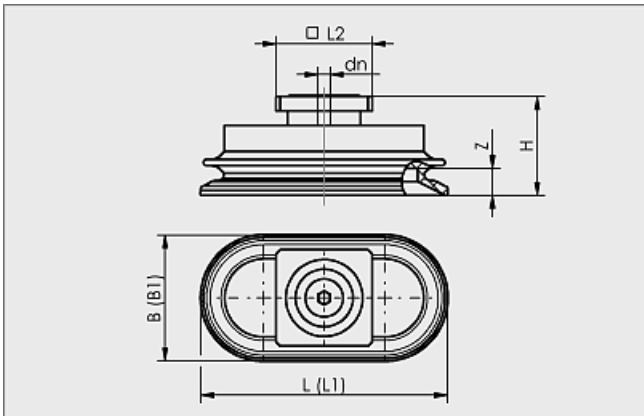
Design data Bellows suction pads SAOB (oval, 1.5 folds)



SAOB 60x30 to 140x70 IG



SAOB 60x30 to 140x70 AG



SAOB 60x30 to 140x70 RA (rectangular adapter)

Suction pads for handling sheet metal

Bellows suction pads SAOB (oval, 1.5 folds)



Design data Bellows suction pads SAOB (oval, 1.5 folds)

Type	Dimensions in mm*										
	B	B1**	dn	G1	H	L	L1**	L2	LG1	SW1	Z (Stroke)
SAOB 60x30 NBR-60 G1/4-AG	32	33	5	G1/4"-M	27,0	62	63	-	8	17	7,0
SAOB 60x30 NBR-60 G1/4-IG	32	33	6	G1/4"-F	34,5	62	63	-	8	17	7,0
SAOB 60x30 NBR-60 G3/8-IG	32	33	6	G3/8"-F	35,0	62	63	-	9	22	7,0
SAOB 60x30 NBR-60 M10-AG	32	33	4	M10-M	27,0	62	63	-	12	17	7,0
SAOB 60x30 NBR-60 M14x1.5-AG	32	33	5	M14x1.5-M	29,0	62	63	-	12	22	7,0
SAOB 60x30 NBR-60 RA	32	33	4	-	30,0	62	63	32	-	-	7,0
SAOB 80x40 NBR-60 G1/4-AG	42	43	5	G1/4"-M	29,7	82	83	-	8	17	9,0
SAOB 80x40 NBR-60 G1/4-IG	42	43	6	G1/4"-F	37,2	82	83	-	8	17	9,0
SAOB 80x40 NBR-60 G3/8-IG	42	43	6	G3/8"-F	37,7	82	83	-	9	22	9,0
SAOB 80x40 NBR-60 M10-AG	42	43	4	M10-M	29,7	82	83	-	12	17	9,0
SAOB 80x40 NBR-60 M14x1.5-AG	42	43	5	M14x1.5-M	31,7	82	83	-	12	22	9,0
SAOB 80x40 NBR-60 RA	42	43	4	-	32,7	82	83	32	-	-	9,0
SAOB 110x55 NBR-60 G1/4-AG	57	59	6	G1/4"-M	35,5	112	114	-	8	17	13,0
SAOB 110x55 NBR-60 G1/4-IG	57	59	8	G1/4"-F	43,0	112	114	-	8	17	13,0
SAOB 110x55 NBR-60 G3/8-IG	57	59	8	G3/8"-F	43,5	112	114	-	9	22	13,0
SAOB 110x55 NBR-60 M10-AG	57	59	4	M10-M	35,5	112	114	-	12	17	13,0
SAOB 110x55 NBR-60 M14x1.5-AG	57	59	6	M14x1.5-M	37,5	112	114	-	12	22	13,0
SAOB 110x55 NBR-60 RA	57	59	6	-	38,5	112	114	32	-	-	13,0
SAOB 140x70 NBR-60 G1/4-AG	72	75	6	G1/4"-M	39,5	143	146	-	8	17	16,5
SAOB 140x70 NBR-60 G1/4-IG	72	75	8	G1/4"-F	47,0	143	146	-	8	17	16,5
SAOB 140x70 NBR-60 G3/8-IG	72	75	8	G3/8"-F	47,5	143	146	-	9	22	16,5
SAOB 140x70 NBR-60 M10-AG	72	75	4	M10-M	39,5	143	146	-	12	17	16,5
SAOB 140x70 NBR-60 M14x1.5-AG	72	75	6	M14x1.5-M	41,5	143	146	-	12	22	16,5
SAOB 140x70 NBR-60 RA	72	75	6	-	42,5	143	146	32	-	-	16,5

*Acceptable dimensional tolerances for rubber parts concerning to M3 - DIN 7715

**D1 is the external dimension of the suction pad when it is pressed against the workpiece by the vacuum