



Series | Flat vacuum cups SF

Bell shaped vacuum cups for dynamic handling of strongly curved metal sheets – SM-G

Bell shaped vacuum cups for dynamic handling of strongly curved metal sheets – SM-G



ESPECIALLY FOR STRONGLY CURVED SURFACES



Product notes

Flexible, round NBR bell shaped cup, 60° Shore A with vulcanized fitting made of aluminum for best adaptation to strongly curved metal sheets. Large area "anti-slip" cleats, various connection threads available. PWIS-conform to guideline VDMA 24364 test category A1.

Advantage

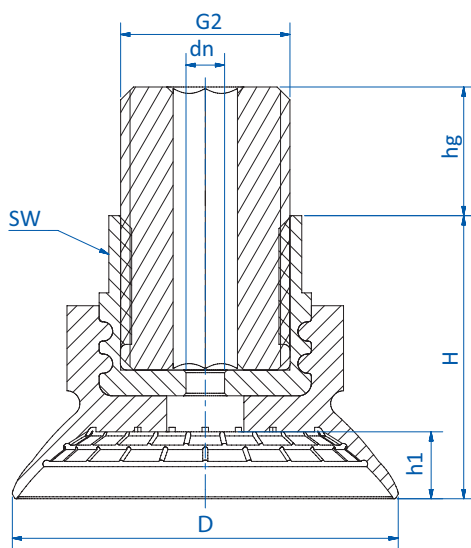
- > Reliable, non-slip handling of oily sheets due to "anti-slip" cleats. Good absorption of lateral forces.
- > Supports help to prevent deep-drawing or deformation of thin sheets
- > Leak-free suction even with strongly curved surfaces due to very flexible sealing lip
- > Vulcanized connection thread ensures a secure fit

Technical data

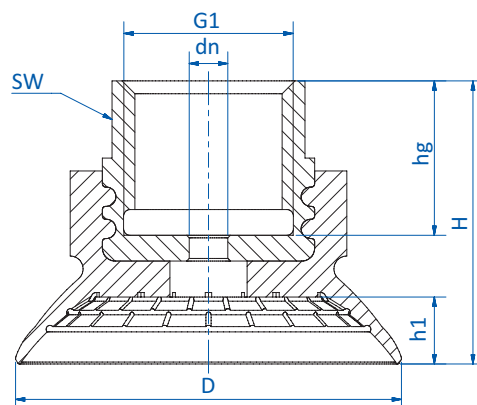
Model / Lip dimensions	Thread (Aluminum)				Volume [cm³]	Gripping force* [N]	
	G1/4-male	G1/4-female	G3/8-female	Rectangular adapter			
SM-G-22	103.022.143.1	103.022.142.1	103.022.148.1	103.022.151.1	1.13	19	4
SM-G-30	103.030.144.1	103.030.141.1	103.030.149.1	103.030.152.1	2.64	33	5.2
SM-G-45	103.045.145.1	103.045.137.1	103.045.150.1	103.045.153.1	9.38	72	7.8
SM-G-60	103.060.146.1	103.060.138.1	103.060.136.1	103.060.154.1	21.77	133	10.6
SM-G-80	103.080.147.1	103.080.139.1	103.080.090.1	103.080.155.1	47.86	218	12.8

* The gripping force specifications are theoretical guide values on dry, smooth and even workpiece surfaces at 60 % vacuum – they do not include a safety factor

Dimensions



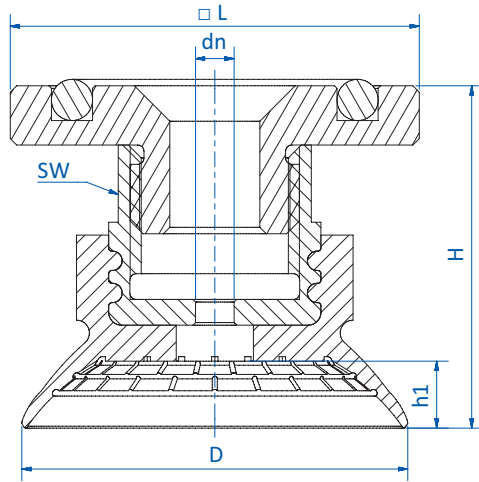
Drawing A



Drawing B



Dimensions



Drawing C

Item no.	Drawing	Ø D [mm]	Ø D max.* [mm]	Ø dn [mm]	G1 (female)	G2 (male)	□L [mm]	H [mm]	h1 [mm]	hg [mm]	SW
103.022.143.1	A	22	26.3	3	--	G1/4	--	22	4	12	15
103.022.142.1	B	22	26.3	3	G1/4	--	--	15	4	12	15
103.022.148.1	B	22	26.3	3	G3/8	--	--	38	4	10	15
103.022.151.1	C	22	26.3	3	--	--	31.8	26.6	4	--	15
103.030.144.1	A	30	34.1	3	--	G1/4	--	22	5.2	10	15
103.030.141.1	B	30	34.1	3	G1/4	--	--	22	5.2	12	15
103.030.149.1	B	30	34.1	3	G3/8	--	--	38	5.2	10	15
103.030.152.1	C	30	34.1	3	--	--	31.8	26.6	5.2	--	15
103.045.145.1	A	47	53.1	4	--	G1/4	--	24.5	7.8	10	17
103.045.137.1	B	47	53.1	4	G1/4	--	--	24.5	7.8	12	17
103.045.150.1	B	47	53.1	4	G3/8	--	--	40.5	7.8	10	17
103.045.153.1	C	47	53.1	4	--	--	31.8	29.1	7.8	--	17
103.060.146.1	A	63	71	6	--	G1/4	--	31	10.6	10	22
103.060.138.1	B	63	71	6	G1/4	--	--	36	10.6	20	22
103.060.136.1	B	63	71	6	G3/8	--	--	31	10.6	15	22
103.060.154.1	C	63	71	6	--	--	31.8	35.6	10.6	--	22
103.080.147.1	A	83	92.4	7.1	--	G1/4	--	35	12.8	10	22
103.080.139.1	B	83	92.4	7.1	G1/4	--	--	40	12.8	20	22
103.080.090.1	B	83	92.4	7.1	G3/8	--	--	35	12.8	15	22
103.080.155.1	C	83	92.4	7.1	--	--	31.8	39.6	12.8	--	22

* aspirated condition