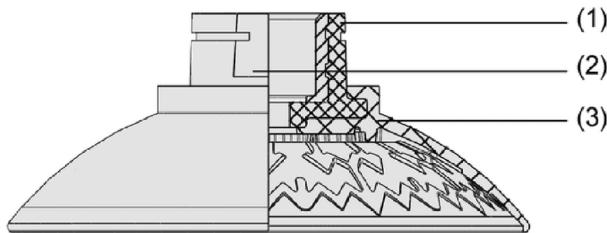


Bell-Shaped Suction Cups SAX

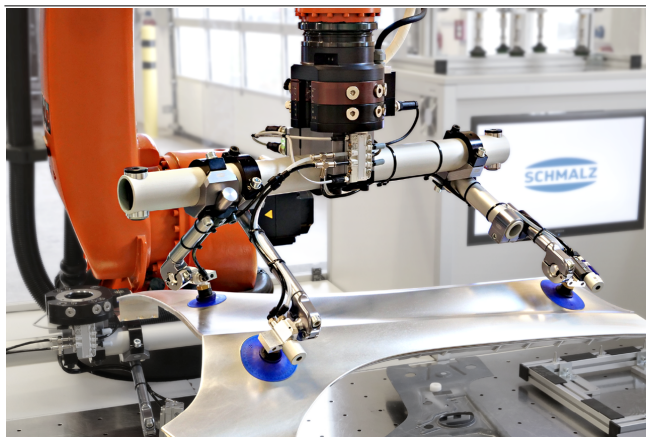
Suction area (Ø) from 30 mm to 115 mm



Bell-Shaped Suction Cups SAX



System design Bell-Shaped Suction Cups SAX



Bell-shaped suction cups SAX when handling formed sheet metal parts

Suitability for industry specific applications

Application

- High-speed suction cups with very low weight for high holding and lateral forces for fast handling of sheet metal and car body parts
- Handling of workpieces with oily surfaces
- Loading and unloading of CNC metalworking and laser cutting machines
- Handling of sheet metal blanks during destacking
- Handling of workpieces with convex surfaces

Design

- Lightweight, round bell-shaped suction cup with flexible sealing lip and optimal internal structure (3)
- Wear-resistant material Elastodur of suction cup (ED-85)
- Vulcanized connection nipple out of reinforced plastics (very high strength) (1)
- Key surface for easy and quick installation (2)
- Available as assembled suction cups with various connection types

Product highlights

- Bell-shaped, specially structured suction cup for maximum holding force at high accelerations, especially on oily metal sheets
- Lightweight design of the tooling ideal for high-speed applications
- Very good adaptation to different workpiece contours thanks to the significantly increased stroke of the suction cup
- Flexible sealing lip seals very well even on rough workpiece surfaces

Bell-Shaped Suction Cups SAX

Suction area (\emptyset) from 30 mm to 115 mm

Designation code Bell-Shaped Suction Cups SAX

SAX	–	80	–	ED-85	–	G3/8-IG
1		2		3		4

1 – Abbreviated designation

Code	Version
SAX	Bell-shaped

2 – Suction area

Code	Diameter in mm
30...115	\emptyset 30 to 115

3 – Material





























Code	Material
ED-85	Elastodur

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
M10-AG	M10-AG
M16-AG	M16-AG
NPT3/8-IG	NPT3/8-IG
RA	Rectangular adapter

Suction cup SAX, available in various diameters, is delivered with connection nipple vulcanized to elastomer part.

Ordering data Bell-Shaped Suction Cups SAX

Type		Vacuum connection:			
		G1/4"-M	G1/4"-F	G3/8"-M	G3/8"-F
SAX	30	10.01.19.00213 	10.01.19.00179 	10.01.19.00195 	10.01.19.00146 
SAX	40	10.01.19.00214 	10.01.19.00180 	10.01.19.00196 	10.01.19.00148 
SAX	50	10.01.19.00215 	10.01.19.00181 	10.01.19.00197 	10.01.19.00150 
SAX	60	10.01.19.00216 	10.01.19.00182 	10.01.19.00198 	10.01.19.00152 
SAX	80	10.01.19.00217 	10.01.19.00183 	10.01.19.00199 	10.01.19.00141 
SAX	100	10.01.19.00218 	10.01.19.00184 	10.01.19.00200 	10.01.19.00154 
SAX	115	10.01.19.00219 	10.01.19.00185 	10.01.19.00201 	10.01.19.00156 

Type		Vacuum connection:			
		M10-M	M16-M	NPT3/8-F	Rectangular adapter
SAX	30	10.01.19.00220	10.01.19.00229	10.01.19.00147	10.01.19.00172
SAX	40	10.01.19.00221	10.01.19.00230	10.01.19.00149	10.01.19.00173
SAX	50	10.01.19.00222	10.01.19.00231	10.01.19.00151	10.01.19.00174
SAX	60	10.01.19.00223	10.01.19.00232	10.01.19.00153	10.01.19.00175
SAX	80	10.01.19.00224	10.01.19.00233	10.01.19.00145	10.01.19.00176
SAX	100	10.01.19.00225	10.01.19.00234	10.01.19.00155	10.01.19.00177
SAX	115	10.01.19.00226	10.01.19.00235	10.01.19.00157	10.01.19.00178

Bell-Shaped Suction Cups SAX

Suction area (\emptyset) from 30 mm to 115 mm

Technical data Bell-Shaped Suction Cups SAX

Type		Suction force (-600 mbar) [N]*	Lateral force [N]**	Lateral force oily surface [N]***	Volume [cm ³]	Workpiece radius min. (convex) [mm]
SAX	30	39	38	41	3.2	18
SAX	40	69	49	71	8.5	25
SAX	50	109	74	110	15.2	25
SAX	60	154	107	155	25.2	30
SAX	80	270	192	269	51.0	33
SAX	100	412	284	414	96.0	40
SAX	115	549	390	584	142.0	50

*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

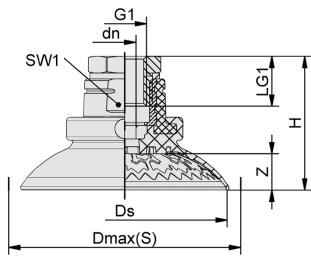
**The specified lateral forces are values measured at a vacuum of -0.6 bar with a dry, smooth, flat workpiece surface. Depending on the workpiece surface and its quality, the actual values may deviate from these values.

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

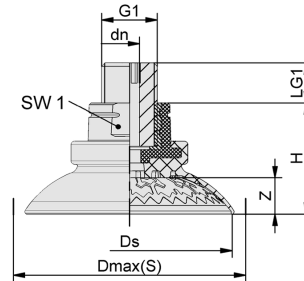
Bell-Shaped Suction Cups SAX

Suction area (\emptyset) from 30 mm to 115 mm

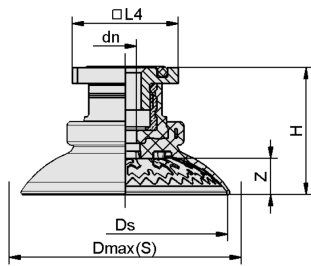
Design data Bell-Shaped Suction Cups SAX



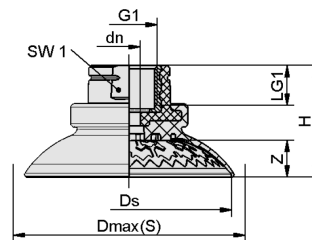
SAX G1/4-IG



SAX AG



SAX RA



SAX G3/8-IG, NPT3/8-IG

Bell-Shaped Suction Cups SAX

Suction area (\emptyset) from 30 mm to 115 mm

Design data Bell-Shaped Suction Cups SAX

Type*	dn [mm]	Dmax(S) [mm]**	Ds [mm]	G1	H [mm]	LG1 [mm]	L4 [mm]	SW1 [mm]	Z (Stroke) [mm]
SAX 30 ED-85 G1/4-AG	6.10	35.2	31.7	G1/4"-M	26.0	15	-	22	4.5
SAX 30 ED-85 G1/4-IG	6.75	35.2	31.7	G1/4"-F	32.8	15	-	22	4.5
SAX 30 ED-85 G3/8-AG	6.10	35.2	31.7	G3/8"-M	26.0	12	-	22	4.5
SAX 30 ED-85 G3/8-IG	6.75	35.2	31.7	G3/8"-F	26.0	12	-	22	4.5
SAX 30 ED-85 M10-AG	4.10	35.2	31.7	M10-M	26.0	15	-	22	4.5
SAX 30 ED-85 M16-AG	6.10	35.2	31.7	M16-M	28.0	12	-	22	4.5
SAX 30 ED-85 NPT3/8-IG	6.75	35.2	31.7	NPT3/8"-F	26.0	12	-	22	4.5
SAX 30 ED-85 RA	6.75	35.2	31.7	-	30.7	-	31.8	22	4.5
SAX 40 ED-85 G1/4-AG	6.10	45.4	41.3	G1/4"-M	29.3	15	-	22	7.1
SAX 40 ED-85 G1/4-IG	6.75	45.4	41.3	G1/4"-F	36.1	15	-	22	7.1
SAX 40 ED-85 G3/8-AG	6.10	45.4	41.3	G3/8"-M	29.3	12	-	22	7.1
SAX 40 ED-85 G3/8-IG	6.75	45.4	41.3	G3/8"-F	29.3	12	-	22	7.1
SAX 40 ED-85 M10-AG	4.10	45.4	41.3	M10-M	29.3	15	-	22	7.1
SAX 40 ED-85 M16-AG	6.10	45.4	41.3	M16-M	29.3	12	-	22	7.1
SAX 40 ED-85 NPT3/8-IG	6.75	45.4	41.3	NPT3/8"-F	29.3	12	-	22	7.1
SAX 40 ED-85 RA	6.75	45.4	41.3	-	34.0	-	31.8	22	7.1
SAX 50 ED-85 G1/4-AG	6.10	58.4	51.5	G1/4"-M	29.6	15	-	22	8.4
SAX 50 ED-85 G1/4-IG	6.75	58.4	51.5	G1/4"-F	36.4	15	-	22	8.4
SAX 50 ED-85 G3/8-AG	6.10	58.4	51.5	G3/8"-M	29.6	12	-	22	8.4
SAX 50 ED-85 G3/8-IG	6.75	58.4	51.5	G3/8"-F	29.6	12	-	22	8.4
SAX 50 ED-85 M10-AG	4.10	58.4	51.5	M10-M	29.6	15	-	22	8.4
SAX 50 ED-85 M16-AG	6.10	58.4	51.5	M16-M	29.6	12	-	22	8.4
SAX 50 ED-85 NPT3/8-IG	6.75	58.4	51.5	NPT3/8"-F	29.6	12	-	22	8.4
SAX 50 ED-85 RA	6.75	58.4	51.5	-	34.3	-	31.8	22	8.4
SAX 60 ED-85 G1/4-AG	6.10	69.7	61.5	G1/4"-M	33.4	15	-	22	10.9
SAX 60 ED-85 G1/4-IG	6.75	69.7	61.5	G1/4"-F	40.2	15	-	22	10.9
SAX 60 ED-85 G3/8-AG	6.10	69.7	61.5	G3/8"-M	33.4	12	-	22	10.9
SAX 60 ED-85 G3/8-IG	6.75	69.7	61.5	G3/8"-F	33.4	12	-	22	10.9
SAX 60 ED-85 M10-AG	4.10	69.7	61.5	M10-M	33.4	15	-	22	10.9

Bell-Shaped Suction Cups SAX

Suction area (Ø) from 30 mm to 115 mm

Type*	dn [mm]	Dmax(S) [mm]**	Ds [mm]	G1	H [mm]	LG1 [mm]	L4 [mm]	SW1 [mm]	Z (Stroke) [mm]
SAX 60 ED-85 M16-AG	6.10	69.7	61.5	M16-M	33.4	12	-	22	10.9
SAX 60 ED-85 NPT3/8-IG	6.75	69.7	61.5	NPT3/8"-F	33.4	12	-	22	10.9
SAX 60 ED-85 RA	6.75	69.7	61.5	-	38.1	-	31.8	22	10.9
SAX 80 ED-85 G1/4-AG	6.10	92.2	81.0	G1/4"-M	34.5	15	-	22	13.9
SAX 80 ED-85 G1/4-IG	6.75	92.2	81.0	G1/4"-F	41.3	15	-	22	13.9
SAX 80 ED-85 G3/8-AG	6.10	92.2	81.0	G3/8"-M	34.5	12	-	22	13.9
SAX 80 ED-85 G3/8-IG	6.75	92.2	81.0	G3/8"-F	34.5	12	-	22	13.9
SAX 80 ED-85 M10-AG	4.10	92.2	81.0	M10-M	34.5	15	-	22	13.9
SAX 80 ED-85 M16-AG	6.10	92.2	81.0	M16-M	34.5	12	-	22	13.9
SAX 80 ED-85 NPT3/8-IG	6.75	92.2	81.0	NPT3/8"-F	34.5	12	-	22	13.9
SAX 80 ED-85 RA	6.75	92.2	81.0	-	39.2	-	31.8	22	13.9
SAX 100 ED-85 G1/4-AG	6.10	111.1	100.1	G1/4"-M	39.7	15	-	22	17.3
SAX 100 ED-85 G1/4-IG	6.75	111.1	100.1	G1/4"-F	46.5	15	-	22	17.3
SAX 100 ED-85 G3/8-AG	6.10	111.1	100.1	G3/8"-M	39.7	12	-	22	17.3
SAX 100 ED-85 G3/8-IG	6.75	111.1	100.1	G3/8"-F	39.7	12	-	22	17.3
SAX 100 ED-85 M10-AG	4.10	111.1	100.1	M10-M	39.7	15	-	22	17.3
SAX 100 ED-85 M16-AG	6.10	111.1	100.1	M16-M	39.7	12	-	22	17.3
SAX 100 ED-85 NPT3/8-IG	6.75	111.1	100.1	NPT3/8"-F	39.7	12	-	22	17.3
SAX 100 ED-85 RA	6.75	111.1	100.1	-	44.4	-	31.8	22	17.3
SAX 115 ED-85 G1/4-AG	6.10	129.4	116.0	G1/4"-M	42.6	15	-	22	20.2
SAX 115 ED-85 G1/4-IG	6.75	129.4	116.0	G1/4"-F	49.4	15	-	22	20.2
SAX 115 ED-85 G3/8-AG	6.10	129.4	116.0	G3/8"-M	42.6	12	-	22	20.2
SAX 115 ED-85 G3/8-IG	6.75	129.4	116.0	G3/8"-F	42.6	12	-	22	20.2
SAX 115 ED-85 M10-AG	4.10	129.4	116.0	M10-M	42.6	15	-	22	20.2
SAX 115 ED-85 M16-AG	6.10	129.4	116.0	M16-M	42.6	12	-	22	20.2
SAX 115 ED-85 NPT3/8-IG	6.75	129.4	116.0	NPT3/8"-F	42.6	12	-	22	20.2
SAX 115 ED-85 RA	6.75	129.4	116.0	-	47.3	-	31.8	22	20.2

*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