

Vacuum cups



useful information

Advantages and uses

... vacuum cups can be combined with various adapters ...
 ... adapter also with integrated vacuum ...

... large variety of models and materials!

- ▶ integrated tappets for tool recognition
 - ▶ high precision
 - ▶ any desired installation position
 - ▶ spring compensation

Characteristics

Material	Color	Hardness	Temperature tolerance	Characteristics
Neoprene	black	65 Shore (±3)	from -30° to 120 °C	oil tolerant
Silicon	blue	60 Shore (±5)	up to 200 °C	-
Silicon tempered	white	60 Shore (±5)	up to 200 °C	suitable for food

- Sommer-automatic
- Grippers
- Separators
- Swivel units
- Rotating jaws
- Axial compensators
- Tool changers
- Linear cylinders
- Shock absorbers
- Rotary cylinders
- Air vane motors
- Vacuum components**
- Accessories
- Quick finder

Basic explanations

Models with suction cup

Mini vacuum cup: round
 Vacuum cup: round
 Knobbed vacuum cup: round
 Folded vacuum cup with
 Short stroke: round
 Folded vacuum cup: round
 Annulus area vacuum: round
 Oval vacuum cup: oval
 Folded vacuum cup: oval

Models adapter

Adapter
 Adapter with vacuum
 Adapter with spring compensation
 Adapter with workpiece recognition
 Short-stroke cylinder

Accessories

Accessory recommendation:

- ▶ Vacuum sensing valve Page 422
- ▶ Vacuum generator Page 423
- ▶ Tubing Page 444

Combination possibilities

Adapter with external thread	Adapter with external thread and integrated vacuum generator	Adapter with external thread and spring-loaded compensation	Adapter with external thread, spring-loaded compensation and integr. vacuum generator	Adapter with external thread and workpiece identification	Adapter with external thread, workpiece identification and integr. vacuum generator	Adapter with internal thread	Adapter with internal thread and ball joint	Hand-held vacuum with integrated vacuum generator	For use with compact linear cylinder and integrated vacuum generator
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Mini vacuum cups page 402	Dimension [mm]								
SM	1	VGS-M	FA	FAV				HS10	
SM	2	VGS-M	FA	FAV				HS10	
SM	3	VGS-M	FA	FAV				HS10	
SM	4	VGS-M	FA	FAV				HS10	
SM	5	VGS-M	FA	FAV				HS10	
SM	6	VGS-M	FA	FAV				HS10	
SM	8		FB	FBV					
SM	10		FB	FBV					
SM	12		FB	FBV					
SM	15		FC	FCV					
SM	18		FC	FCV					
SM	20		FC	FCV					
SM	25		FD	FDV					
SM	30		FD	FDV					
SM	35		FD	FDV					

Vacuum cups page 403	Dimension [mm]								
SG	6	VGS-A							
SG	8	VGS-A							
SG	10	VGS-B							X
SG	12	VGS-B							X
SG	15	VGS-B							X
SG	18	VGS-B							X
SG	22	VGS-B							X
SG	25	VGS-B							X
SG	30	VGS-B							X
SG	35	VGS-B							X
SG	40	VGS-C							X
SG	60	VGS-C							X
SG	85	VGS-D							X
SG	130	VGS-D							X

Knobbed vacuum cups page 404	Dimension [mm]								
NS	10	SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
NS	15	SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
NS	18	SA1/8	SAV1/8	FC	FCV		SAVM16X1	SI1/8	
NS	24	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	30	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	40	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	50	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	60	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	70	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	85	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
NS	100	SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	

Knobbed vacuum cups page 405	Dimension [mm]								
PNS..A	100	SA22	SAV22						
PNS..A	125	SA22	SAV22						
PNS..A	150	SA22	SAV22						
KNS..A	100							SGA22	
KNS..A	125							SGA22	
KNS..A	150							SGA22	

Bellows cups short stroke page 406	Dimension [mm]								
SFK	24	SA1/4	SAV1/4	FE	FEV			SI1/4	
SFK	30	SA1/4	SAV1/4	FE	FEV			SI1/4	
SFK	40	SA1/4	SAV1/4	FE	FEV			SI1/4	

Adapter with external thread	Adapter with external thread and integrated vacuum generator	Adapter with external thread and spring-loaded compensation	Adapter with external thread, spring-loaded compensation and integr. vacuum generator	Adapter with external thread and work piece identification	Adapter with external thread, work piece identification and integr. vacuum generator	Adapter with internal thread	Adapter with internal thread and ball joint	Hand-held vacuum with integrated Vacuum generator	Compact Linear Cylinder with integrated vacuum generator
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Bellows cups page 407	Dimension [mm]								
SF 10		SA1/8	SAV1/8	FC	FCV			SI1/8	
SF 15		SA1/8	SAV1/8	FC	FCV			SI1/8	
SF 18		SA1/8	SAV1/8	FC	FCV			SI1/8	
SF 24		SA1/4	SAV1/4	FE	FEV			SI1/4	
SF 30		SA1/4	SAV1/4	FE	FEV			SI1/4	
SF 40		SA1/4	SAV1/4	FE	FEV			SI1/4	
SF 60		SA1/4	SAV1/4	FE	FEV			SI1/4	
SF 85		SA1/4	SAV1/4	FE	FEV			SI1/4	

Torus vacuum cups page 408	Dimension [mm]								
SR12/SK6		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR12/SK9		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR15/SK6		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR15/SK9		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR20/SK6		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR20/SK9		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR20/SK13		SA1/8	SAV1/8	FC	FCV			SI1/8	
SR25/SK11		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR25/SK19		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR30/SK11		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR30/SK19		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR35/SK11		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR35/SK19		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR35/SK25		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR40/SK11		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR40/SK19		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR40/SK25		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR50/SK11		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR50/SK19		SA1/4	SAV1/4	FE	FEV			SI1/4	
SR50/SK25		SA1/4	SAV1/4	FE	FEV			SI1/4	

Oval vacuum cups page 409	Dimension [mm]								
OV 3 x 10		SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
OV 5 x 15		SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
OV 6 x 18		SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
OV 8 x 24		SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
OV 10 x 30		SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
OV 12 x 36		SA1/8	SAV1/8	FC	FCV	SAM14X1	SAVM14X1	SI1/8	
OV 15 x 45		SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
OV 20 x 60		SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
OV 25 x 75		SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
OV 28 x 85		SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	
OV 35 x 100		SA1/4	SAV1/4	FE	FEV	SAM16X1	SAVM16X1	SI1/4	

Oval vacuum cups page 410	Dimension [mm]								
POV..A 50 x 150		SA22	SAV22						
POV..A 60 x 180		SA22	SAV22						
POV..A 70 x 210		SA22	SAV22						
KOV..A 50 x 150								SGA22	
KOV..A 60 x 180								SGA22	
KOV..A 70 x 210								SGA22	

Oval bellows vacuum cups page 411	Dimension [mm]								
SFO 8 x 25		SA1/8	SAV1/8	FC	FCV			SI1/8	
SFO 15 x 45		SA1/4	SAV1/4	FE	FEV			SI1/4	
SFO 25 x 75		SA1/4	SAV1/4	FE	FEV			SI1/4	

Vacuum cups			Adapter			Vacuum generator						
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO



Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder



• **ø1 mm to 35 mm**
 The SM1 to SM6 sized vacuum cups are delivered with a hollow stud fitting. The corresponding external thread is shown in the table as dimension "M".
 This series has a vacuum force of up to 0.8 bar and a smooth dry surface.

Mini vacuum-cups

Remember!
 Vacuum cup and support adapter are ordered as separate part numbers. All possible combinations clearly displayed on page 400.

Order no.:							
SM1	SM2	SM3	SM4	SM5	SM6	SM8	SM10
Vacuum force [N]:							
0,05	0,19	0,42	0,75	1,18	1,70	3,01	4,71
Dimension ø [mm]:							
1	2	3	4	5	6	8	10
Dimension A [mm]:							
7	7	7	7	7	7	10	10
Dimension B [mm]:							
3	3	3	3	3	3	10	10
Dimension E [mm]:							
4	4	4	4	4	4	4	5
Dimension L [mm]:							
4	4	4	4	4	4	4	4
Dimension M [mm]:							
M4	M4	M4	M4	M4	M4	-	-

Order no.:						
SM12	SM15	SM18	SM20	SM25	SM30	SM35
Vacuum force [N]:						
6,78	10,60	15,20	22,80	29,40	42,40	57,70
Dimension ø [mm]:						
12	15	18	20	25	30	35
Dimension A [mm]:						
10	12,5	12,5	12,5	16	16	16
Dimension B [mm]:						
10	12	12	12	16	16	16
Dimension E [mm]:						
5	10	10	9	12	10	8
Dimension L [mm]:						
4	4	4	4	6	6	6
Dimension M [mm]:						
-	-	-	-	-	-	-

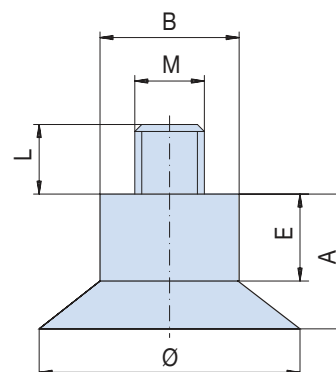
All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

Remember!
 Order vacuum cup and adapter separately.



Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L



Vacuum cups			Adapter			Vacuum generator						
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO



Vacuum cups

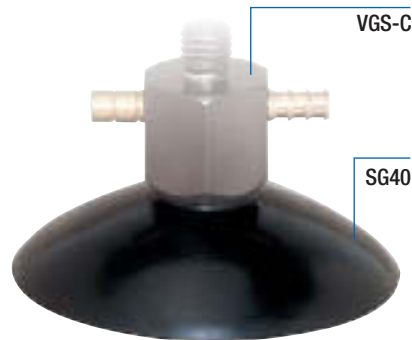
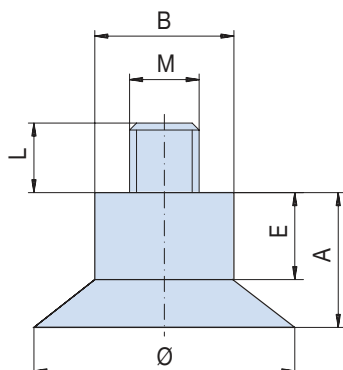
Remember!
 Vacuum cup and support adapter are ordered as separate part numbers.
 All possible combinations clearly displayed on page 400.

Order no.:						
SG6	SG8	SG10	SG12	SG15	SG18	SG22
Vacuum force [N]:						
1,70	3,01	4,71	6,78	10,60	15,20	22,80
Dimension ø [mm]:						
6	8	10	12	15	18	22
Dimension A [mm]:						
8	8	9	9	10	10	11
Dimension B [mm]:						
5	5	8	8	8	8	8
Dimension E [mm]:						
7	7	7	7	6	6	6
Dimension L [mm]:						
4	4	4	4	4	4	4
Dimension M [mm]:						
M4	M4	M5	M5	M5	M5	M5

Order no.:						
SG25	SG30	SG35	SG40	SG60	SG85	SG130
Vacuum force [N]:						
29,40	42,40	57,70	75,40	170	340	769
Dimension ø [mm]:						
25	30	35	40	60	85	130
Dimension A [mm]:						
11	12	12	14	16	36	42
Dimension B [mm]:						
8	8	8	15	15	25	25
Dimension E [mm]:						
6	6	6	4	4	12	12
Dimension L [mm]:						
6	6	6	10	10	10	10
Dimension M [mm]:						
M5	M5	M5	M8	M8	M12	M12

All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.



• ø6 mm to 130 mm
 The SG series vacuum cups are delivered with a hollow stud fitting. The corresponding external thread is shown in the table as dimension "M".
 This series has a vacuum force of up to 0.8 bar and a smooth dry surface.

Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder

Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L

Vacuum cups			Adapter			Vacuum generator								
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO		



Knobbed vacuum cups

- Sommer-automatic
- Grippers
- Separators
- Swivel units
- Rotating jaws
- Axial compensators
- Tool changers
- Linear cylinders
- Shock absorbers
- Rotary cylinders
- Air vane motors
- Vacuum components
- Accessories
- Quick finder



Remember!

Vacuum cup and support adapter are ordered as separate part numbers. All possible combinations clearly displayed on page 400.

Order no.:										
NS10	NS15	NS18	NS24	NS30	NS40	NS50	NS60	NS70	NS85	NS100
Vacuum force [N]:										
4,7	10,6	15,2	27,1	42,4	75,4	118	170	230	340	471
Dimension ϕ [mm]:										
10	15	18	24	30	40	50	60	70	85	100
Height [mm]:										
12	12	12	22	22	22	22	22	22	22	22

All data measured at 0.6 bar vacuum.

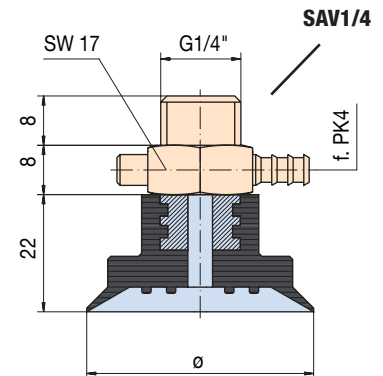
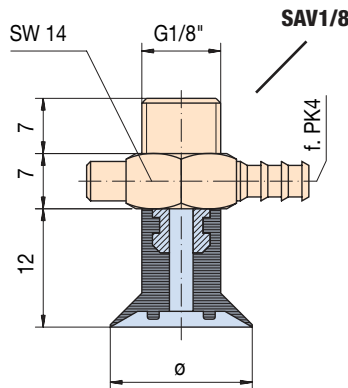
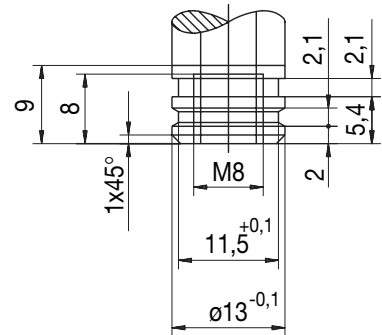
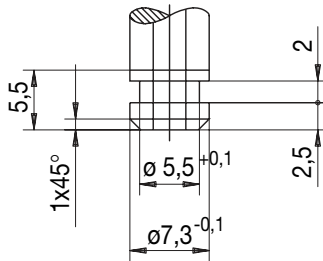
See Page 399 for Accessory list.

Plug-in-connection for Vacuum cups

NS10 - NS18

NS24 - NS100

The small knobs of the Knobbed Vacuum cup effectively maintain vacuum force while preventing total adhesion of the cups sealing lips during vacuum. The rigid sealing lips also offer greater stability against lateral forces. Like all of our vacuum cups these can be easily plugged in and replaced. The threaded connection are available with built-in vacuum generator (SAV).



Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L

Vacuum cups			Adapter			Vacuum generator						
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO



Knobbed vacuum cups

Remember!
Vacuum cup and support adapter are ordered as separate part numbers.
All possible combinations clearly displayed on page 400.

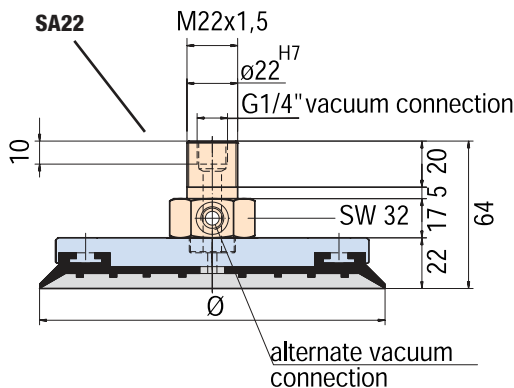
Order no.:					
PNS 100A	PNS 125A	PNS 150A	KNS 100A	KNS 125A	KNS 150A
Vacuum force i[N]:					
471	735	1055	471	735	1055
Dimension ø [mm]:					
100	125	150	100	125	150

All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

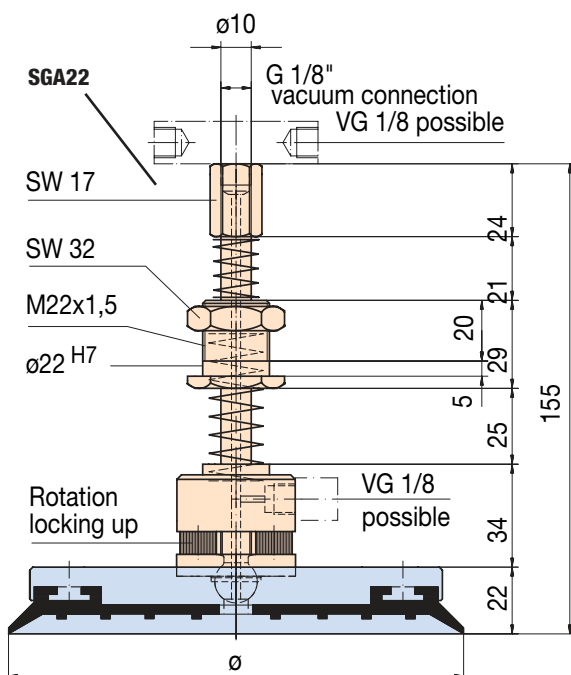


Sommer-automatic
Grippers
Separators
Swivel units
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Tool changers
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Vacuum components
Accessories
Quick finder



When handling large parts, large stable vacuum cups are necessary. There are two versions available: a) with an external thread for connecting to vacuum pumps; or b) with an external thread and a built-in vacuum generator. There are separate part numbers for the fittings (SA22 or SAV22) and the suction pad with aluminum backing plate (PNS...A)

Note: The knobbed vacuum cups is also available without the aluminum plate. Just leave out the "P"



• **with ball joint (±15°) and locking plate**

The Spring Loaded Knobbed Vacuum Cups (with ball joint) are characterized by their locking system. The upper spring ensures that there is no recoil when lifting the part. The return spring can extend 25 mm (a 50 mm version is currently being developed) and is secured against rotation. Consequently, parts can be picked up and placed accurately. A maximum compensation angle of +15° is provided by the ball joint.

Note: The rubberized vacuum cups can be ordered separately and easily replaced. This can save time and expense during assembly and disassembly. Just leave out the "K".

Spring Loaded Adapter sold separately, see pg 419.

Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L

Vacuum cups			Adapter			Vacuum generator								
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO		



- Sommer-automatic
- Grippers
- Separators
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Because of these flexible folds, it becomes more adaptable. The result is the Bellows Vacuum Cup. The folds expand and contract evenly, like an accordion. This guarantees high retaining power because the sealing surface adapts elastically to the workpiece in any position. In addition, in the case of lighter parts there is a lifting effect...once the part has been gripped, the folds close up and lift the part upwards. A clever designer can use these cups and do away with additional lifting cylinders.

Like all Sommer vacuum cups, there are also plug-in types and are very easy to replace.

Don't forget!
Order vacuum cup and adapter separately.



Bellows cup with short stroke (single pleat)

Remember!

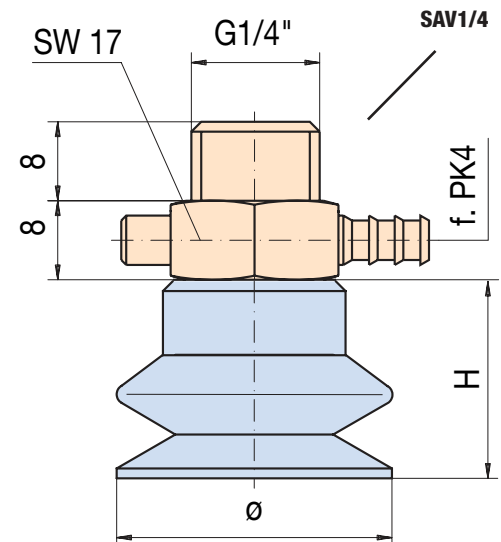
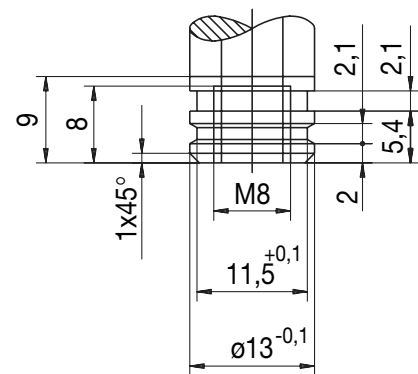
Vacuum cup and support adapter are ordered as separate part numbers. All possible combinations clearly displayed on page 400.

Order no.:					
SFK24	SFK30	SFK40			
Vacuum force [N]:					
27,10	42,40	75,40			
Lifting force at 0.8 bar vacuum [N]:					
9,8	13,2	25,1			
Dimension ø [mm]:					
24	30	40			
Dimension H max. [mm]:					
19	22	27			
Dimension H min. [mm]:					
13	15	20			

All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

Plug-in-connection for Vacuum cups



Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone	white	200° C	60 ±5	yes	L

Vacuum cups			Adapter			Vacuum generator											
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO					



Bellows cup

Remember!
 Vacuum cup and support adapter are ordered as separate part numbers.
 All possible combinations clearly displayed on page 400.

Order no.:							
SF10	SF15	SF18	SF24	SF30	SF40	SF60	SF85
Vacuum force [N]:							
4,7	10,6	15,2	27,1	42,2	75,4	170	340
Lifting force at 0.8 bar vacuum [N]:							
2,56	4,0	6,3	9,8	13,2	25,1	54,7	90,7
Dimension ø [mm]:							
10	15	18	24	30	40	60	85
Dimension H max. [mm]:							
14	16	18	26	34	45	55	80
Dimension H min. [mm]:							
10	10	10	18	22	27	35	50

All data measured at 0.6 bar vacuum.

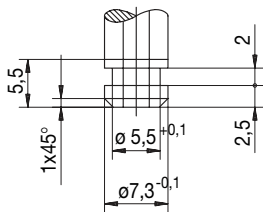
See Page 399 for Accessory list.

Sommer-automatic
Grippers
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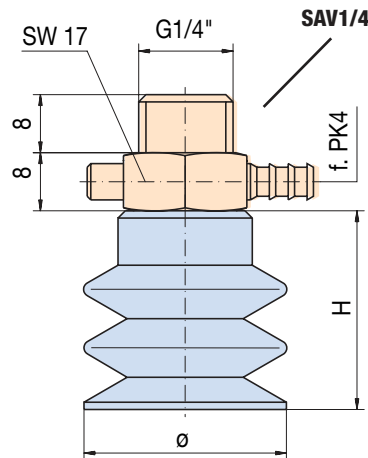
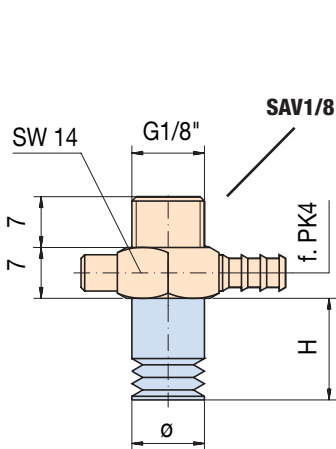
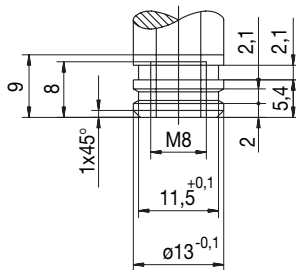


Plug-in-connection for Vacuum cups

SF10 - SF18



SF24 - SF85



Because of these flexible folds, it becomes more adaptable. The result is the Bellows Vacuum Cup. The folds expand and contract evenly, like an accordion. This guarantees high retaining power because the sealing surface adapts elastically to the workpiece in any position. In addition, in the case of lighter parts there is a lifting effect...once the part has been gripped, the folds close up and lift the part upwards. A clever designer can use these cups and do away with additional lifting cylinders.

Like all Sommer vacuum cups, there are also plug-in types and are very easy to replace.

Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L

Vacuum cups			Adapter			Vacuum generator						
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO



Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder

Torus vacuum cups



Remember!

Vacuum cup and support adapter are ordered as separate part numbers. All possible combinations clearly displayed on page 400.

Plug-in-connection for Vacuum cups

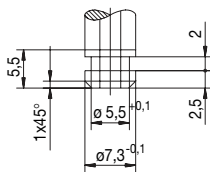
Order no.:									
SR12 + SK6	SR12 + SK9	SR15 + SK6	SR15 + SK9	SR20 + SK6	SR20 + SK9	SR20 + SK13	SR25 + SK11	SR25 + SK19	SR30 + SK11
Vacuum force [N]:									
5	3	9	7	17	15	11	23,5	12	36
Dimension outer ϕ [mm]:									
12	12	15	15	20	20	20	25	25	30
Dimension inner ϕ [mm]:									
6	9	6	9	6	9	13	11	19	11
Height [mm]:									
15	15	15	15	15	15	15	22	22	22

Order no.:									
SR30 + SK19	SR35 + SK11	SR35 + SK19	SR35 + SK25	SR40 + SK11	SR40 + SK19	SR40 + SK25	SR50 + SK11	SR50 + SK19	SR50 + SK25
Vacuum force [N]:									
25	52	40	28	69	58	46	110	100	88
Dimension outer ϕ [mm]:									
30	35	35	35	40	40	40	50	50	50
Dimension inner ϕ [mm]:									
19	11	19	25	11	19	25	11	19	25
Height [mm]:									
22	22	22	22	22	22	22	22	22	22

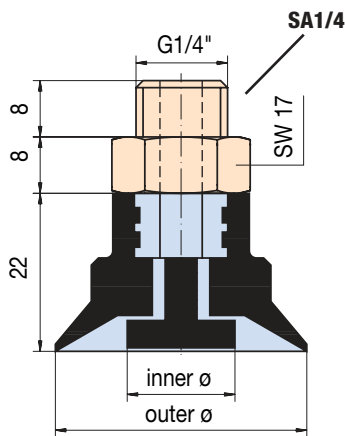
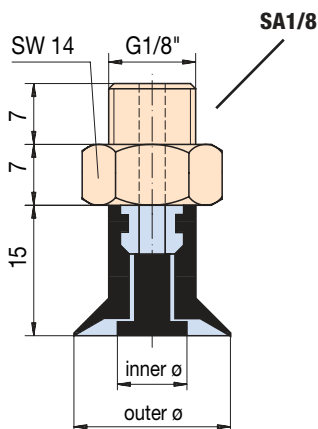
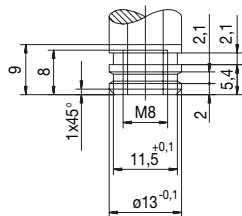
All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

SR12 - SR20



SR25 - SR50



• for picking up parts with holes (e.g. washers)

Several customers have approached up with the problem of picking up parts with holes. Seemingly, there was no way to compensate for the hole or holes in the middle of the part. Our solution: The Torus Vacuum Cup!

The design is ideal for picking up washers, seals, o-rings, CDs, tubes, perforated plates and more. The middle hole is covered by the insertion of a rubber core (SK) within the outer vacuum cup. The vacuum is pulled through slots on the side of the core. The rubber cores are available in different diameters to cover holes of different sizes. Outer vacuum cups are attachable to fittings with external or internal threads, with or without vacuum generator.

Ordering example: SR25+SK11, will draw vacuum between the $\phi 26$ mm outside and the $\phi 10$ mm inside.

Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 \pm 3	no	-
Heat-resistant	silicone	blue	200° C	60 \pm 5	no	SI
Food-handling	silicone tempered	white	200° C	60 \pm 5	yes	L

Vacuum cups			Adapter			Vacuum generator						
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO



Oval vacuum cups

Remember!
 Vacuum cup and support adapter are ordered as separate part numbers.
 All possible combinations clearly displayed on page 400.

Order no.:										
OV3/10	OV5/15	OV6/18	OV8/24	OV10/30	OV12/36	OV15/45	OV20/60	OV25/75	OV28/85	OV35/100
Vacuum force [N]:										
1,5	4,1	6	10,7	16,7	24	37,6	66,8	104,4	132,7	194
Dimension B/A [mm]:										
3/10	5/15	6/18	8/24	10/30	12/36	15/45	20/60	25/75	28/85	35/100
Height [mm]:										
12	12	12	12	12	12	21	21	21	21	21

All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

Don't forget!
 Order vacuum cup and adapter separately.



• (plug-in model)

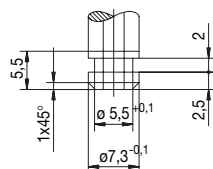
The elongated shape of these Oval Vacuum Cups make them suitable for applications in which heavy loads require a larger gripping surface. The Oval Vacuum Cups offer a greater area and vacuum power than round vacuum cups and are ideal for rectangular or oval-shaped workpieces.

The knobs on these oval cups prevent them from collapsing under vacuum and losing their effective surface areas.

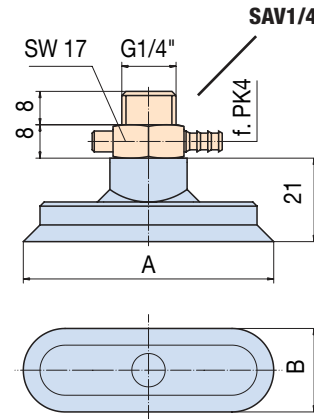
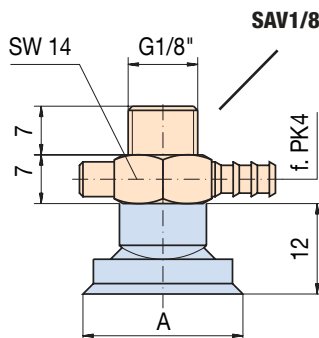
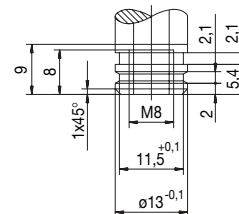


Plug-in-connection for Vacuum cups

OV3/10 - OV12/36



OV15/45 - OV35/100



Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L

- Sommer-automatic
- Grippers
- Separators
- Swivel units
- Rotating jaws
- Axial compensators
- Tool changers
- Linear cylinders
- Shock absorbers
- Rotary cylinders
- Air vane motors
- Vacuum components**
- Accessories
- Quick finder

Vacuum cups			Adapter			Vacuum generator							
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO	



Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder



Oval vacuum cups

Remember!

Vacuum cup and support adapter are ordered as separate part numbers. All possible combinations clearly displayed on page 400.

Order no.:						
POV 50/150A	POV 60/180A	POV 70/210A		KOV 50/150A	KOV 60/180A	KOV 70/210A
Vacuum force [N]:						
415	600	815		415	600	815
Dimension ø [mm]:						
50/150	60/180	70/210		50/150	60/180	70/210
Dimension A [mm]:						
150	180	210		150	180	210
Dimension B [mm]:						
50	60	70		50	60	70

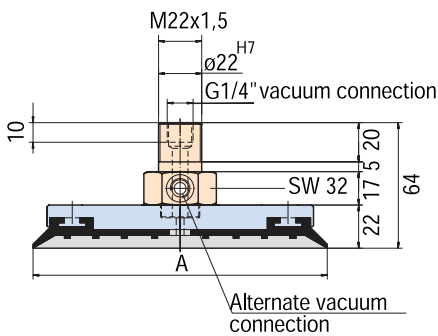
All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

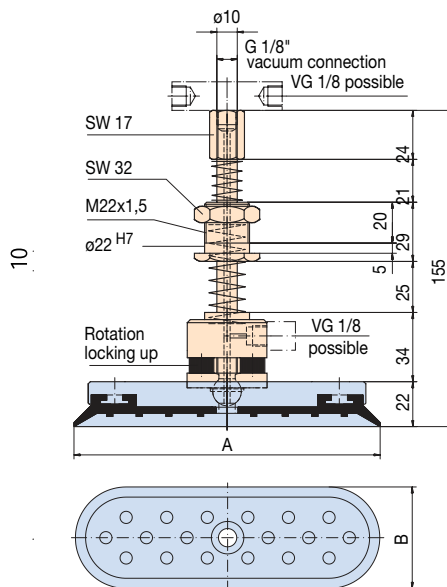
Don't forget!
Order vacuum cup and adapter separately.



SA22 + POV



SGA22 + KOV



• SA22+KOV

When handling large parts, large stable vacuum cups are necessary. There are two versions available: a) with an external thread for connecting to vacuum pumps; or b) with an external thread and a built-in vacuum generator. There are separate part numbers for the fittings (SA22 or SAV22) and the vacuum pad with aluminum backing plate (PV...A).

NOTE: The knobbed vacuum cup is also available without aluminum plate. Just leave out the "P" from the order number.

• SGA22+KOV

The Spring Loaded Oval Vacuum Cups (with ball joint) are characterized by their locking system. The upper spring ensures that there is no recoil when lifting the part. The return spring can extend 25 mm (a 50 mm version is currently being developed) and is secured against rotation. Consequently, parts can be picked up and placed accurately. A maximum compensation angle of ±15° is provided by the ball joint.

NOTE: The rubberized vacuum cups can be ordered separately and easily replaced. This can save time and money during assembly and disassembly. Just leave out the "K" from the order number.

Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30° - 120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone tempered	white	200° C	60 ±5	yes	L

Vacuum cups			Adapter			Vacuum generator							
SM	SG	NS	PNS	KNS	SFK	SF	SR	SK	OV	POV	KOV	SFO	



Oval bellow vacuum cups

Remember!
Vacuum cup and support adapter are ordered as separate part numbers.
All possible combinations clearly displayed on page 400.

Order no.:			
SFO 8/25	SFO 15/45	SFO 25/75	
Vacuum force [N]:			
11	37,6	104	
Lifting force at 0.8 bar vacuum [N]:			
2,56	4,0	6,3	
Dimension [mm]:			
8/24	15/45	25/75	
Dimension A [mm]:			
25	45	75	
Dimension B [mm]:			
8	15	25	
Dimension H max. [mm]:			
18,5	28,5	34,5	
Dimension H min. [mm]:			
14	18	22	

All data measured at 0.6 bar vacuum.

See Page 399 for Accessory list.

Oval bellows vacuum cups

- (plug-in model)

When vacuum is applied, the bellows "pleats" compress, lifting the workpiece.

Standard version: Black neoprene (silicone-free), oil and heat resistant from -30° C to 120 C°, durometer 65±3.

Heat-resistant version: Blue silicone, heat resistant to 200° C, durometer 60±3. Order suffix "SI"

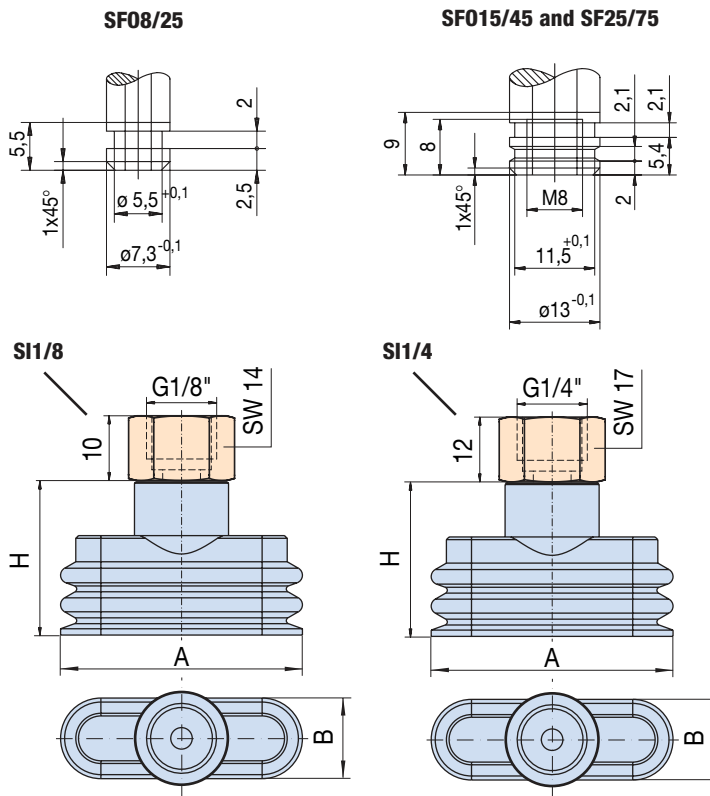
Food-handling version (special order version): Tempered white silicone, heat-resistant to 200° C.

Order suffix "L"



Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder

Plug-in-connection Vacuum cups



Version	Material	Color	Heat-resistant	Durometer	Extra charge	Add to part # when ordering
Standard	neoprene	black	-30°-120° C Oil tolerant	65 ±3	no	-
Heat-resistant	silicone	blue	200° C	60 ±5	no	SI
Food-handling	silicone	white	200° C	60 ±5	yes	L