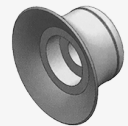




**Vacuum Cup Type Selection Guide**

**Flat Cups**

The flat suction cups provide accuracy in load gripping and speeds up the cycle process. Flat cups are used only on flat surfaces.



**1,5 Bellow Cups**

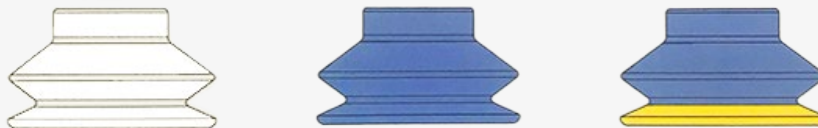
The 1,5 bellow cups combine the advantages of the flat suction cups (precision and positioning) with the freedom of bellows (angle and flexibility). They provide flexibility, precision and low internal volume suitable for high-speed applications.



**2,5 Bellow Cups** The suction cups with 2,5 bellow are recommended for gripping products with un-even surfaces (large deflection). The 2,5 bellow allow objects to be gripped from an angle (ball-joint effect).



**Vacuum Cup Type Selection Guide**



Application	Silicone	FlexTemp HT	Multiflex
Ozone resistance	✓✓✓	✓✓	✓✓✓
Oil resistance	✓	✓✓✓	✓✓
Wear resistance	✓✓	✓✓	✓✓✓
Tensile strength (lifting force)	✓	✓	✓✓✓
Leaves marks on products	✓	✓✓	✓✓✓
Temperature resistance	-70 to + 200°C	-40 to + 160°C	-20 to + 80°C
Shore hardness	30-60°	60°	30-60°

The holding force of the suction cups increases proportionally with the difference between the ambient pressure and the pressure inside the cup.

The holding force of a suction pad is calculated with the formula:

$$F = \Delta p \times A.$$

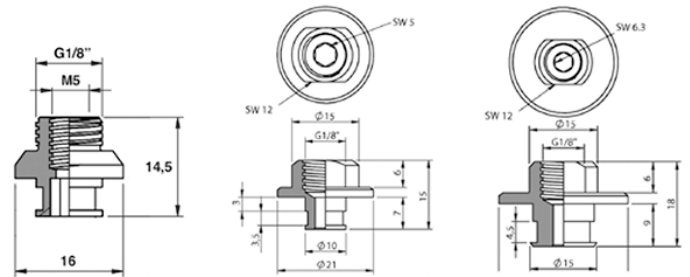
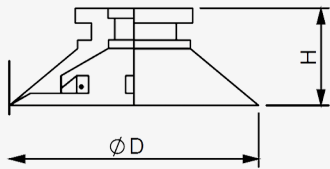
F = Holding force.

$\Delta p$  = Difference between ambient pressure and pressure of the system.

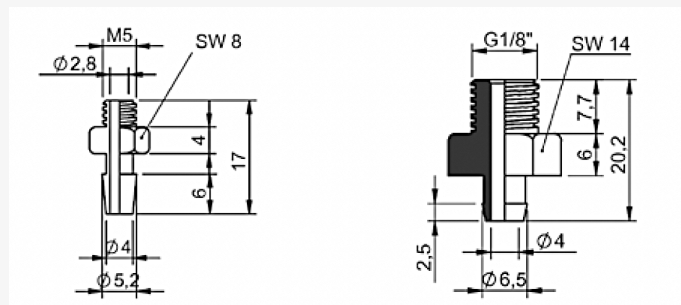
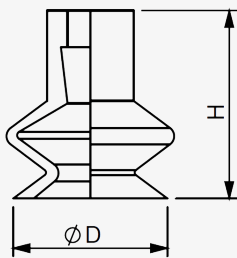
A = Effective suction area (the effective area of a suction pad under vacuum).

This means the holding force is proportional to the pressure difference and the suction area. The greater the difference between ambient pressure and pressure in the suction cup or the larger the effective suction area, the greater the holding force.

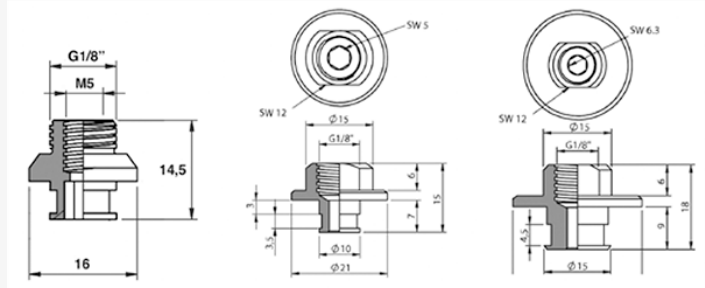
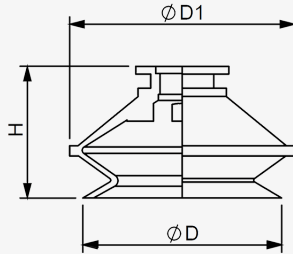
The force can vary depending on a change of the pressure difference and area parameters.



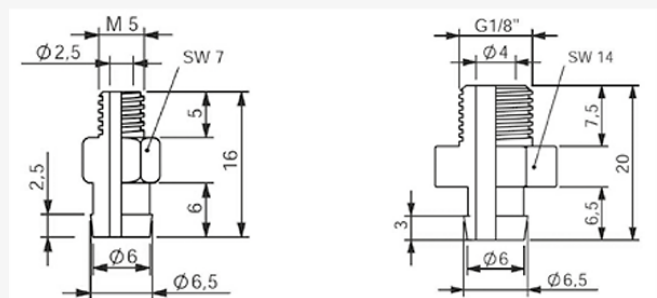
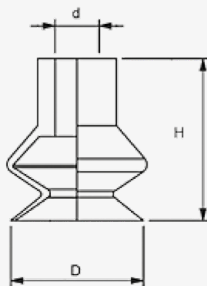
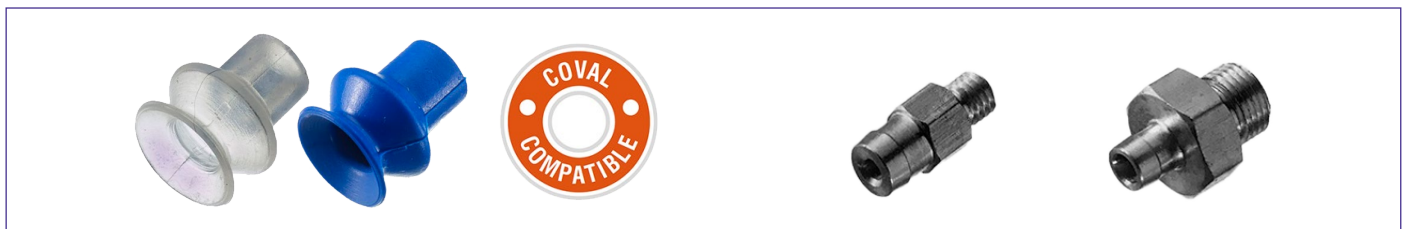
Product Code	Product Code	Holding Force	ØD	H	Retaining Ring No.	Product Code	Product Code	Product Code
Silicone	TempFlex HT					Fitting	Fitting	Fitting
F20S	F20HT	0,5	22	8	R.011	F250		
F25S	F25HT	1	28	9	R.011	F250		
F30S	F30HT	1.5	32	10	R.011	F250		
F40S	F40HT	2	42	13	R.012		F251	
F50S	F50HT	3	53	17.5	R.013			F252



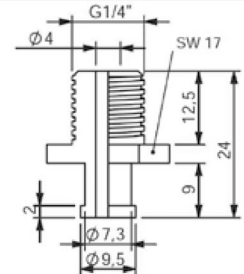
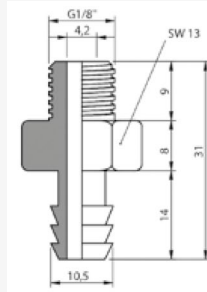
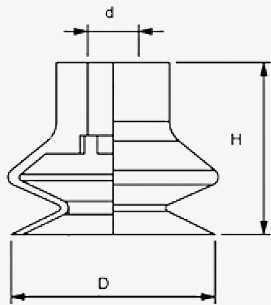
Product Code	Product Code	Holding Force	ØD	H	Product Code	Product Code
Silicone	TempFlex HT				Fitting	Fitting
B11S	B11HT	5	11	17	F134	130.003
B16S	B16HT	7	16	19	F134	130.003



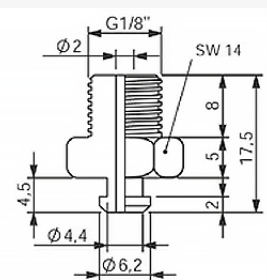
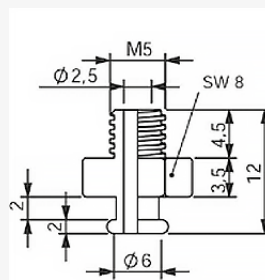
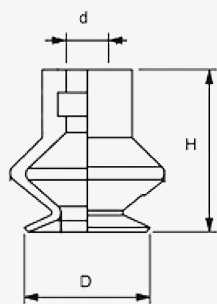
Product Code	Product Code	Holding Force	ØD	ØD1	H	Product Code	Product Code	Product Code
Silicone	TempFlex HT					Fitting	Fitting	Fitting
B20S	B20HT	9	21.5	24	20	F250		
B25S	B30HT	9	33	36	26	F250		
B30S	B40HT	9	42	46	28		F251	
B40S	B50HT	12	52	58	35			F252



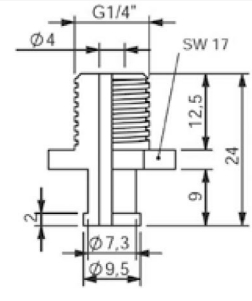
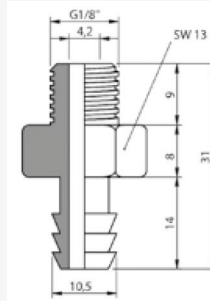
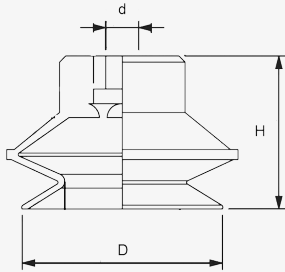
Product Code	Product Code	Bellow	D	d	H	Product Code	Product Code
Silicone	TempFlex HT					M5 Fitting	1/8 Fitting
CL-1.5-11-S	CL-1.5-11-HT	1,5	11	5	16	130.013	130.003
CL-1.5-14-S	CL-1.5-14-HT	1,5	14	5	16	130.013	130.003
CL-1.5-16-S	CL-1.5-16-HT	1,5	16	5	19	130.013	130.003
CL-1.5-20-S	CL-1.5-20-HT	1,5	20	5	16	130.013	130.003
CL-1.5-25-S	CL-1.5-25-HT	1,5	25	5	23	130.013	130.003



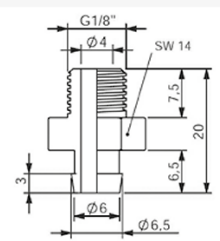
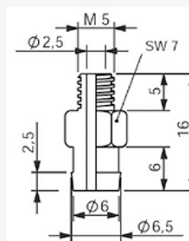
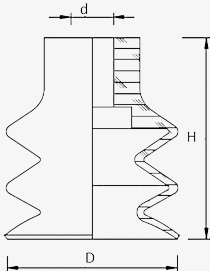
Product Code	Product Code	Bellow	D	d	H	Product Code	Product Code
Silicone	TempFlex HT					M5 Fitting	1/8 Fitting
CL-1.5-30-S	CL-1.5-30-HT	1,5	33	8	28	130.132	130.190
CL-1.5-43-S	CL-1.5-43-HT	1,5	43	8	28	130.132	130.190
CL-1.5-53-S	CL-1.5-53-HT	1,5	53	8	34	130.132	130.190



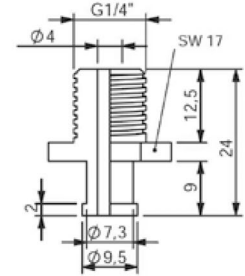
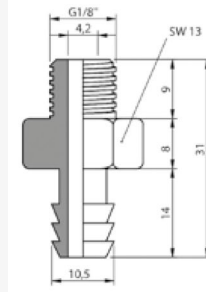
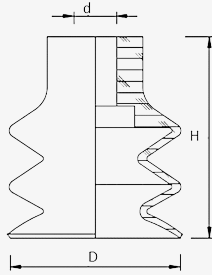
Product Code	Product Code	Bellow	D	d	H	Product Code	Product Code
Silicone	TempFlex HT					M5 Fitting	1/8 Fitting
CM-1.5-15-S	CL-1.5-1.5HT	1,5	15	4	16	130.301	130.009



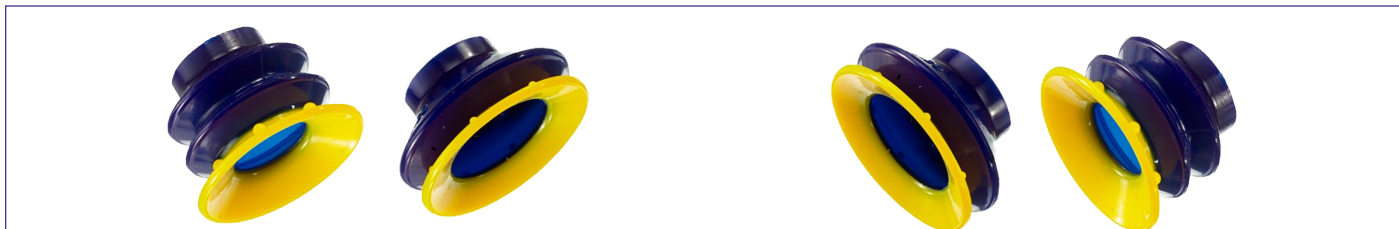
Product Code	Product Code	Bellow	D	d	H	Product Code	Product Code
Silicone	TempFlex HT					M5 Fitting	1/8 Fitting
CM-1.5-20-S	CM-1.5-20-HT	1,5	20	6	20	130.030	130.274
CM-1.5-30-S	CM-1.5-30-HT	1,5	30	6	30.5	130.030	130.274
CM-1.5-40-S	CM-1.5-40-HT	1,5	40	6	30.5	130.030	130.274



Product Code	Product Code	Bellow	D	d	H	Product Code	Product Code
Silicone	TempFlex HT					M5 Fitting	1/8 Fitting
CL-2.5-5-S	CL-2.5-5-HT	2,5	5	4	14	130.013	130.003
CL-2.5-7-S	CL-2.5-7-HT	2,5	7	3.8	14	130.013	130.003
CL-2.5-9-S	CL-2.5-9-HT	2,5	9	4.2	15	130.013	130.003
CL-2.5-12-S	CL-2.5-12-HT	2,5	12	5	21	130.013	130.003
CL-2.5-14-S	CL-2.5-14-HT	2,5	14	4	23	130.013	130.003
CL-2.5-20-S	CL-2.5-20-HT	2,5	20	5	22	130.013	130.003
CL-2.5-25-S	CL-2.5-25-HT	2,5	25	5	34	130.013	130.003



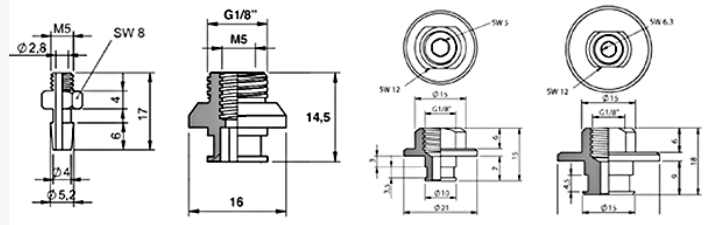
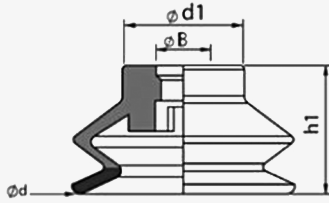
Product Code	Product Code	Bellow	D	d	H	Product Code	Product Code
Silicone	TempFlex HT					M5 Fitting	1/8 Fitting
CL-2.5-32-S	CL-2.5-32-HT	2,5	32	8	37	130.132	130.190
CL-2.5-42-S	CL-2.5-42-HT	2,5	42	8	46	130.132	130.190



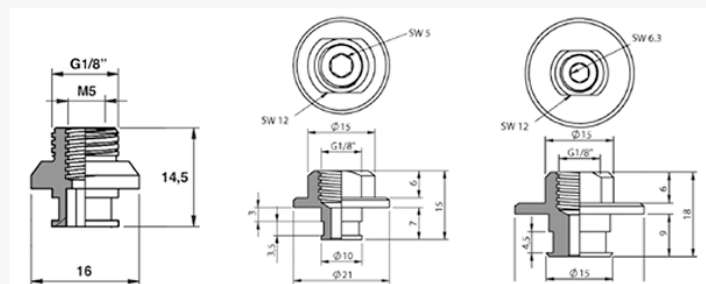
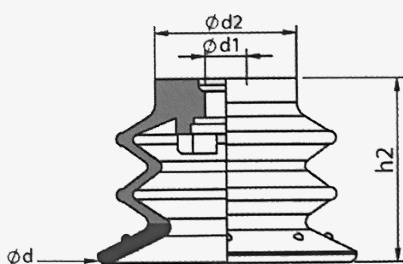
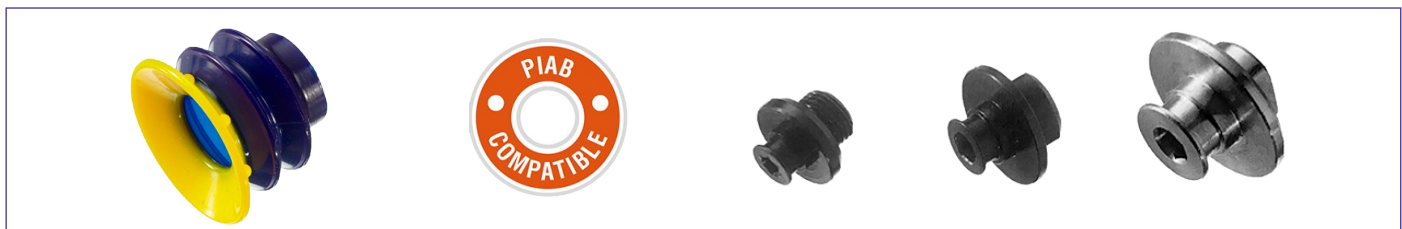
Multiflex vacuum cups offer outstanding advantages

- Extremely high wear resistance
- Very high lifting force
- Best static friction qualities
- No sticking tendency
- Elasticity remains unchanged for minus temperatures
- Working temperatures from -20°C to + 80°C
- Antimarking





Product Code	Holding Force	d	B	d1	h1	Hardness	Product Code	Product Code	Product Code
							Fitting	Fitting	Fitting
B15-10MF	5.5	10	3.9	9	16.5	40	F250		
B15-16MF	5.5	16	3.9	9	19	30/60	F250		
B15-20MF	7.6	21	5.2	12	18	30/60	F250		
B15-350MF	7.5	31	6.5	16.8	17	30/60		F251	
B15-40MF	9.3	41	6.3	22.4	22.4	30/60		F251	
B15-50MF	14.4	51	10.5	28	29.2	30/60			F252



Product Code	Holding Force	d	d1	d2	h2	Hardness	Product Code	Product Code	Product Code	Product Code
							Fitting	Fitting	Fitting	Fitting
B25-20MF	6.5	20.5	5	12	14.8	30/60	F134			
B25-25MF	8	26	5	15.4	18.9	30/60	F134			
B25-30MF	11	30	5	16.5	21.3	30/60		F250		
B25-35MF	11	35	6.5	21	25.63	30/60			F251	
B25-40MF	14.7	40	6.5	22	28.4	30/60			F251	
B25-50MF	20	50	10.5	27.5	35.5	30/60				F252