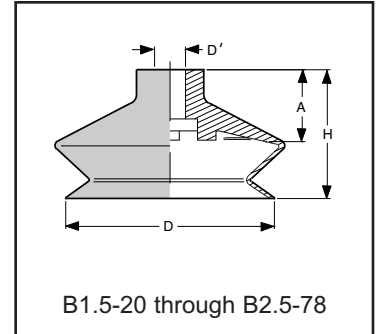
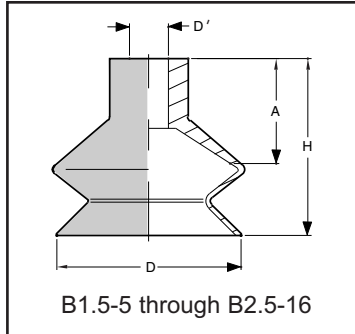




Single Bellows Suction Cups with Interchangeable Fittings For Horizontal and Vertical Handling of Concave and Convex Surfaces

1.5 Bellows Vacuum Suction Cups attach gently and easily with minimum pressure. Excellent for most concave and convex shapes, bellows suction cups attach to curvatures such as containers, bottles, cylinders, etc., and can be used in any orientation. Their spring action compensates for height variances in the load or machine inaccuracies. The bellows suction cup design duplicates the function of mechanical springs and ball-joint connectors in a much smaller and more economical package.

Note: Fittings are available for these cups. Please visit www.anver.com for specifications and more information.



PLEASE NOTE:

Nomathane versions of these cups are found at the end of this document.

| Vacuum Cup Part Number | D Dia. in. (mm) | d Dia. in. (mm) | H Height in. (mm) | A Attached Height in. (mm) | Volume in.3 (cm3) | Capacity * lb. (Kg) 2 to 1 | Weight (Grams) |
|------------------------|-----------------|-----------------|-------------------|----------------------------|-------------------|----------------------------|----------------|
| B1.5-5-NBR | 0.22 (5.5) | 0.16 (4.0) | 0.44 (11.1) | 0.31 (8.0) | 0.003 (0.04) | 0.02 (0.07) | 0.28 Grams |
| B1.5-5-SIT | 0.22 (5.5) | 0.16 (4.0) | 0.44 (11.1) | 0.31 (8.0) | 0.003 (0.04) | 0.02 (0.07) | 0.28 Grams |
| B1.5-11-NBR | 0.45 (11.4) | 0.16 (4.0) | 0.63 (16.0) | 0.41 (10.5) | 0.014 (0.23) | 0.54 (0.24) | 0.92 Grams |
| B1.5-11-SIT | 0.45 (11.4) | 0.16 (4.0) | 0.63 (16.0) | 0.41 (10.5) | 0.014 (0.23) | 0.54 (0.24) | 0.92 Grams |
| B1.5-11-NM | 0.45 (11.4) | 0.16 (4.0) | 0.63 (16.0) | 0.41 (10.5) | 0.014 (0.23) | 0.54 (0.24) | 0.92 Grams |
| B1.5-14-NBR | 0.52 (13.3) | 0.16 (4.0) | 0.62 (15.8) | 0.43 (11.0) | 0.026 (0.42) | 0.80 (0.36) | 1.29 Grams |
| B1.5-14-SIT | 0.52 (13.3) | 0.16 (4.0) | 0.62 (15.8) | 0.43 (11.0) | 0.026 (0.42) | 0.80 (0.36) | 1.29 Grams |
| B1.5-14-NM | 0.52 (13.3) | 0.16 (4.0) | 0.62 (15.8) | 0.43 (11.0) | 0.026 (0.42) | 0.80 (0.36) | 1.29 Grams |
| B1.5-16-NBR | 0.64 (16.3) | 0.16 (4.0) | 0.75 (19.0) | 0.41 (10.5) | 0.046 (0.75) | 1.10 (0.50) | 1.52 Grams |
| B1.5-16-SIT | 0.64 (16.3) | 0.20 (5.0) | 0.75 (19.0) | 0.41 (10.5) | 0.046 (0.75) | 1.10 (0.50) | 1.52 Grams |

Vacuum Cups and Suction Cups

Universal 1.5 Bellows Style Suction Cups



| Vacuum Cup Part Number | D Dia. in. (mm) | d Dia. in. (mm) | H Height in. (mm) | A Attached Height in. (mm) | Volume in.3 (cm3) | Capacity * lb. (Kg) 2 to 1 | Weight (Grams) |
|------------------------|-----------------|-----------------|-------------------|----------------------------|-------------------|----------------------------|----------------|
| B1.5-16-NM | 0.64 (16.3) | 0.20 (5.0) | 0.75 (19.0) | 0.41 (10.5) | 0.046 (0.75) | 1.10 (0.50) | 1.52 Grams |
| B1.5-20-NBR | 0.71 (18.0) | 0.16 (4.0) | 0.62 (15.8) | 0.41 (10.5) | 0.070 (1.20) | 1.70 (0.80) | 1.81 Grams |
| B1.5-20-SIT | 0.71 (18.0) | 0.16 (4.0) | 0.62 (15.8) | 0.41 (10.5) | 0.070 (1.20) | 1.70 (0.80) | 1.81 Grams |
| B1.5-20-NM | 0.71 (18.0) | 0.16 (4.0) | 0.62 (15.8) | 0.41 (10.5) | 0.070 (1.20) | 1.70 (0.80) | 1.81 Grams |
| B1.5-22-NBR | 0.89 (22.5) | 0.16 (4.0) | 0.77 (19.5) | 0.43 (11.0) | 0.090 (1.40) | 1.90 (0.90) | 2.18 Grams |
| B1.5-22-SIT | 0.89 (22.5) | 0.16 (4.0) | 0.77 (19.5) | 0.43 (11.0) | 0.090 (1.40) | 1.90 (0.90) | 2.18 Grams |
| B1.5-22-NM | 0.89 (22.5) | 0.19 (4.7) | 0.77 (19.5) | 0.43 (11.0) | 0.090 (1.40) | 1.90 (0.90) | 2.18 Grams |
| B1.5-25-NBR | 0.93 (23.5) | 0.16 (4.0) | 0.91 (23.0) | 0.43 (11.0) | 0.190 (3.20) | 2.50 (1.10) | 2.68 Grams |
| B1.5-25-SIT | 0.93 (23.5) | 0.16 (4.0) | 0.91 (23.0) | 0.43 (11.0) | 0.190 (3.20) | 2.50 (1.10) | 2.68 Grams |
| B1.5-25-NM | 0.93 (23.5) | 0.16 (4.0) | 0.91 (23.0) | 0.43 (11.0) | 0.190 (3.20) | 2.50 (1.10) | 2.68 Grams |
| B1.5-33-NBR | 1.32 (33.5) | 0.31 (8.0) | 1.10 (28.0) | 0.65 (16.5) | 0.290 (4.80) | 4.30 (2.00) | 8.20 Grams |
| B1.5-33-SIT | 1.32 (33.5) | 0.31 (8.0) | 1.10 (28.0) | 0.65 (16.5) | 0.290 (4.80) | 4.30 (2.00) | 8.20 Grams |
| B1.5-43-NBR | 1.67 (42.3) | 0.31 (8.0) | 1.10 (28.0) | 0.61 (15.5) | 0.560 (9.30) | 7.00 (3.30) | 12.4 Grams |
| B1.5-43-SIT | 1.67 (42.3) | 0.31 (8.0) | 1.10 (28.0) | 0.61 (15.5) | 0.560 (9.30) | 7.00 (3.30) | 12.4 Grams |
| B1.5-53-NBR | 2.07 (52.5) | 0.31 (8.0) | 1.34 (34.0) | 0.75 (19.0) | 1.600 (26.30) | 13.30 (6.00) | 20.7 Grams |
| B1.5-53-SIT | 2.07 (52.5) | 0.31 (8.0) | 1.34 (34.0) | 0.75 (19.0) | 1.600 (26.30) | 13.30 (6.00) | 20.7 Grams |
| B1.5-63-NBR | 2.49 (63.2) | 0.31 (8.0) | 1.32 (33.5) | 0.73 (18.5) | 2.400 (39.00) | 18.00 (8.20) | 28.0 Grams |
| B1.5-63-SIT | 2.49 (63.2) | 0.31 (8.0) | 1.32 (33.5) | 0.73 (18.5) | 2.400 (39.00) | 18.00 (8.20) | 28.0 Grams |
| B1.5-78-NBR | 3.07 (78.0) | 0.47 (12.0) | 1.85 (47.0) | 1.29 (32.8) | 4.640 (76.00) | 28.00 (13.10) | 65.8 Grams |

6003801 ➔ This spec sheet was adapted for print from our website. Additional information and photos are available at www.anver.com.

| Vacuum Cup Part Number | D Dia. in. (mm) | d Dia. in. (mm) | H Height in. (mm) | A Attached Height in. (mm) | Volume in.3 (cm3) | Capacity * lb. (Kg) 2 to 1 | Weight (Grams) |
|------------------------|-----------------|-----------------|-------------------|----------------------------|-------------------|----------------------------|----------------|
| B1.5-78-SIT | 3.07 (78.0) | 0.47 (12.0) | 1.85 (47.0) | 1.29 (32.8) | 4.640 (76.00) | 28.00 (13.10) | 65.8 Grams |

Notes:

The cup capacities shown above (*) are theoretical capacities based on 24"Hg at sea level with a safety factor of two (2) and a ± 5% margin of error. This is the US ANSI ASME Standard B30.20 for vacuum lifter specifications and is commonly used in North America as a design capacity for vacuum components. When used in vertical applications, take these values and divide again by 2 to obtain a 4 to 1 safety factor per the ANSI specifications. These are realistic working capacities when designing equipment.

Other manufacturers use a pull-off figure at 27"Hg to show a high capacity value for their cups. This is accurate, but requires users to do all the math themselves to build in safety factors. The values are basically the same, but it is necessary to calculate the working capacities with a safety factor via the following formula at sea level:

$$\text{Pull-off value (at 27"Hg)} = \text{ANVER's Listed Capacity} \times 2 \times 1.125 \text{ (at 24"Hg)}$$

For example: ANVER vacuum cup number F52 has a rated capacity of 15.10 lb at 24"Hg. The pull-off capacity at 27"Hg for this cup would be $15.10 \times 2 \times 1.125 = 33.98$ lbs. From this point, it is necessary to calculate the safety factor based on the vacuum level being used, and the altitude.

To ensure safety, 80% of actual overall diameter is used when determining Load Capacity.

