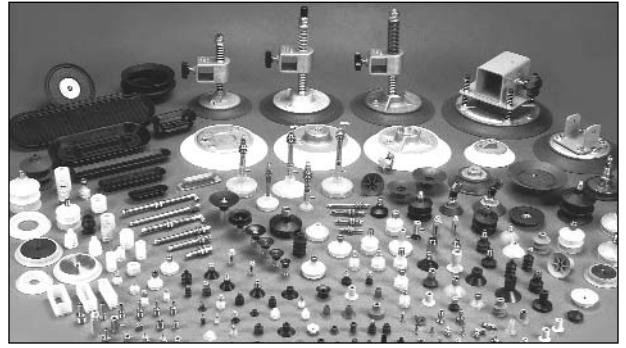


The Vacuum Resource[®] Book

From **ANVER** 





1

Section

Vacuum Cups and Accessories



The Best Solution for Material Handling.

Vacuum suction cups can hold, lift or turn virtually any kind of material in the production process. The contact between a suction cup and the object to be handled is soft and light, and the technique is simple and safe.

Choosing the Right Suction Cup.

It is very important to choose the most appropriate type of vacuum suction cup, to obtain optimal results. ANVER has cups suitable for round, inclined, curved and irregular surfaces, and with our range of products you can find the best solution for every task.

The selection of a suction cup depends on particular conditions such as surface quality and structural stability of the work piece to be lifted and the desired material, shape, etc. of the suction cup. However, a simplified formula can be used to generate a theoretical estimate based on a few known values.

The diameter of the suction cup can be determined using the following formula:

How to Calculate the Diameter of Suction Cup Needed

U.S. Units

$$D = 0.44 \times \sqrt{\frac{a/2.2 \times s}{v/29.5 \times c}}$$

D = Diameter - inches
a = Mass lbs.
c = Number of Cups
v = Vacuum - in. of Hg
s = Safety Factor (at least 2)

Metric Units

$$D = 11.2 \times \sqrt{\frac{m \times s}{b \times c}}$$

D = Diameter - mm
m = Mass - Kg
c = Number of Cups
b = Vacuum - bar
s = Safety Factor (at least 2)

Lifting Capacity:

The lifting capacity of a vacuum cup can be theoretically determined at sea level by using the following formula:

$$C = \frac{.393 \times D^2 \times V}{N}$$

C = Lifting Capacity (lbs.)
D = Cup Diameter (in.)
V = Vacuum Level (in. Hg)
N = Desired Safety Factor

Safety factor for horizontal lifting applications should be at least (2). Vertical lifting applications should have a safety factor of at least (4).

NOTE: This formula will give theoretical lifting capacity only. Actual lifting capacity should always be verified by user.



NOTE: A safety factor of at least 2 for horizontal lifts should always be used to compensate for numerous variables surrounding lifting applications while a safety factor of at least 4 should be used for vertical or tilting applications. A pull-off test should be performed at our factory to determine the absolute suction cup for your particular application. Contact one of our application engineers for more information.

The Widest Range of Cups.

You can find many types of vacuum suction cups, with different dimensions and forms, on our web site. Our technical department is at your disposal to consult in choosing the most suitable solution for your particular needs.

Advantages of ANVER Vacuum Suction Cups:

- The widest selection
- Different materials for various kinds of use
- Various temperature resistance levels
- Perfect adherence even in the presence of edges and angles



Vacuum Cups and Suction Cups

Material Selection Guide

ANVER Material Blend Code	Common Material Name	Shore A Hardness* (Durometer) + / - 5	Temperature Range ** °F (°C)	Abrasion Wear Resistance	Oil, Grease Resistance	UV Weather Aging Resistance	Typical Color (Depends on Cup Style)
For most General Purpose Industrial Applications							
NBR	Nitrile (Buna-N)	40 - 60	-40° to +230° F (-40° to +110° C)	● ● ● ●	● ● ● ●	● ● ●	Black, Blue
	NBR is an excellent all around material for general industry. High overall value due to its top performance in many categories. Our proprietary blend which features the latest name brand ingredients have greatly increased the performance of this proven material.						
CR, NEO, NE, N50	Neoprene (Chloroprene)	40 - 60	-40° to +230° F (-40° to +110° C)	● ● ● ●	● ● ● ●	● ● ●	Blue, Red or Black
	N50 is an excellent hard wearing all around material for general industry with a nice rubber feel and memory.						
PUR	Polyurethane Anverflex™	30 - 65	-13° to +176° F (-25° to +80° C)	● ● ● ●	● ● ● ●	● ● ●	Blue, Green, White, all colors
	PUR is a tough, long wearing material. Suitable for many applications where heat is not a factor. Shiny gloss finish.						
For High Heat, Non-Marring Packaging and Food Use							
SIT	Silicone	40 - 60	-94° to +600° F (-70° to +316° C)	● ●	● ● ● ●	● ● ● ●	Translucent Clear
	SIT is excellent for high heat or food packaging. Soft and pliable, meets FDA Title 21 and German spec. BGVV (BGA) Part XV for contaminant-free load handling. Contains no dyes that can leach out when handling baked goods, drugs, glassware, hot products from molds, etc.						
SI	Silicone	40 - 60	-94° to +392° F (-70° to +200° C)	● ●	● ● ● ●	● ● ● ●	Solid White, Orange, Red
	SI is excellent for high heat applications such as mold part removal or where heat resistance is required for large cups/seals.						
S45, S60	Silicone	40 - 60	-58° to +401° F (-50° to +205° C)	● ●	● ● ● ●	● ● ● ●	Orange, Red
	S45 and S60 are excellent for EOAT high heat applications such as mold part removal from plastic injection machines requiring a soft touch. Higher durometer for bellows cups.						
For the Printing, Paper and Wood Industries							
NR	Natural (Gum) Rubber	35 - 50	-40° to +176° F (-40° to +80° C)	● ● ● ●	●	●	Tan, Grey, Green, Orange or Black
	NR is widely used in the printing/paper/wood industries. Low cost, wears well and does not gum up with ink or cut paper dust. Not for general use.						
Specialty Elastomers							
SSD	Static Dissipative Silicone	50 - 60	-76° to +401° F (-60° to +205° C)	● ●	● ●	● ●	Black, Grey (Carbon Filled)
	SSD is a specialized silicone with carbon that can handle heat and is static dissipative for high tech industries. It actually loses any static build-up out through a ground of the machine or other ground designed into the system.						
TPU	Thermal Polyurethane	75	-13° to +176° F (-25° to +80° C)	● ● ● ●	● ● ● ●	● ● ● ●	Translucent Brown (Darkens w/ Age)
	TPU is an extremely tough material which darkens with UV exposure. Long wearing but usually too expensive to justify its use. While initially promising a few years ago, TPU's expense premium has proven to far outweigh its increased performance over other recently improved materials.						
FPM	Viton® Fluorocarbon	60 - 65	-4° to +482° F (-20° to +250° C)	●	● ● ● ●	● ● ● ●	Usually Black, Blue
	FPM is specialized for high heat jobs. It has a stiff, somewhat dead feel for vacuum cups, and is relatively expensive which limits its vacuum cup use. High Heat Silicone has replaced Viton for most applications.						
VYL	Vinyl***	30 - 70	+32° to +158° F (0° to +70° C)	● ● ● ●	● ●	● ●	Clear Base Blue / other colors
	VYL is soft, low cost, and readily available in many grades for general light-duty use. The injection molded vinyl ANVER uses in its industrial vacuum cups is high quality, but you lose a key advantage of low cost to other materials.						
NM	ANVER Nomathane™	50 - 70	-32° to +356° F (-0° to +180° C)	● ● ● ●	● ● ● ●	● ● ●	Blue, Purple others
	NM is a new ANVER proprietary blend which is high wearing even in hot conditions. It is a silicone-free hybrid material which is non marking and will not leave any residue, mold release agent or ghost-mark on products which need to be painted after handling. This material also handles high temperature and is extremely long wearing making it ideal for the plastic injection molding industry. This material is priced similar to other top quality urethanes but it offers high overall value due to its excellent performance in many categories.						

CODE: Poor ● Good ● ● Very Good ● ● ● Excellent ● ● ● ●

Notes: * Various cup designs have different Durometers. Also note that a variance of +/- 5 in Shore Hardness or Durometer is the industry standard for all rubber products.
 ** The maximum temperature given is always for a momentary pick and place lift and not for a constant attach situation.
 *** Some materials such as Urethane or Vinyl have more general names which is like saying Rubber or Plastic. Within that name there are dozens of types and grades and it is difficult to make comparisons. For example, Vinyl is used for children's toys, wall hanging cups, soap dish mounts, but also high end products. It is often difficult to determine the quality you are receiving. We have found that only injection molded, pressurized and vulcanized vinyl is suitable for industrial-duty vacuum cups.



ANVER® Proprietary Designed Elastomer Materials for Vacuum Cups and Suction Cups

Our success as a leader and innovator in Vacuum Technology is due to the many important advances that we have made and continue to make in the selection of the elastomers used in our Vacuum Cups.

What is an Elastomer Vacuum Cup?

An elastomer is any type of polymer that has rubber-like properties of which there are dozens of material names. An elastomeric compound, consisting of a blend of a base polymer and other ingredients, is a material that has been designed to meet specific functional requirements.

A Vacuum Cup is only as good as its specific recipe or mixture of elastomeric compounds. The more expensive materials, available from the chemical product market leaders, usually result in the highest quality product consistency, which is why we stick with only ingredients from these suppliers. Each compound listed below is a specific blend of approx. a dozen line items, not a single ingredient as many people have come to believe. The following ingredients make up a typical Vacuum Cup formulation:

- Polymers** the basic gum-like component of a compound, provide certain chemical and mechanical properties in the final product.
- Fillers** reinforcing agents that enhance chemical and mechanical properties; adding carbon for example
- Vulcanization agents** to cross-link the polymers.
- Accelerators** to modify the rate of vulcanization.
- Activators** to initiate the vulcanization.
- Plasticizers** to soften or improve processing.
- Processing aids** to ease handling during mixing, extrusion, calendaring, or molding; and various mold release agents, sprays etc.
- Age-resistors** to reduce or retard aging.
Keep in mind that all rubber products have a defined working shelf life.
- Miscellaneous ingredients** such as blowing agents, pigments, retarders and odorants, all have specific purposes but are not necessarily required.

Consistent Quality Control

At ANVER, we take measures to control quality throughout every phase of the development process. By specifying the highest quality ingredients, auditing incoming raw materials, establishing good relationships with our suppliers, and insisting on quality and uniformity in the goods we purchase, we can ensure the consistency of our elastomeric Vacuum Cups, from initial development to final production. You will find that all of our vacuum cups offer high quality and top value in every market segment.

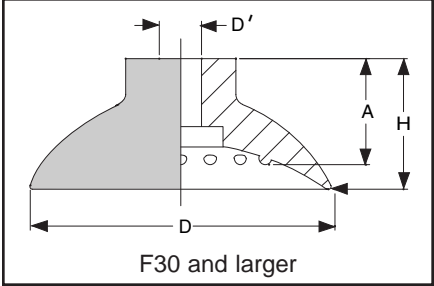
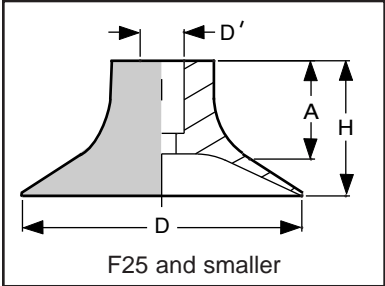
We mold with many other specialty materials, including Ethylene Propylene Diene Methylene (EPDM) and Electro Static Limiting ESD, (this is a plastic blend material which acts to limit the build-up of static charge by virtue of a more slippery surface, which reduces surface friction). Contact the factory for details.
Viton® is a registered trademark of DuPont Dow Elastomers.



Flat Vacuum Suction Cups

Flat vacuum suction cups attach quickly due to the small volume of air to be evacuated. They feature patterned knobs on the bottom to maximize capacity and are excellent for holding flat, flexible materials without deformation. Relatively stiff, the cup bodies retain their shape well in production applications. They are excellent for use on fast cycle transfer systems. Use on flat or slightly curved surfaces, and for horizontal or vertical lifting.

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



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	Item Weight (Grams)
F3-SI	0.12 (3.0)	0.05 (1.3)	0.28 (7)	-	-	-	-
F3.5-SI	0.14 (3.5)	0.09 (2.2)	0.28 (7.0)	-	-	-	-
F4-SI	0.16 (4.0)	0.05 (1.3)	0.28 (7)	-	-	-	-
F4.5-SI	0.18 (4.5)	0.09 (2.2)	0.28 (7)	-	-	-	-
F5-NBR	0.21 (5.4)	0.15 (3.8)	0.35 (9.0)	0.31 (8.0)	0.002 (0.03)	0.20 (0.0)	0.24 Grams
F5.5-SI	0.22 (5.5)	0.09 (2.2)	0.28 (7.0)	-	-	-	-
F5-SIT	0.21 (5.4)	0.15 (3.8)	0.35 (9.0)	0.31 (8.0)	0.002 (0.03)	0.20 (0.0)	0.24 Grams
F6.5-SI	0.26 (6.5)	0.09 (2.2)	0.28 (7.0)	-	-	-	-
F7-SI	0.28 (7.0)	0.16 (4.0)	0.47 (12.0)	-	-	-	-
F7.5-SI	0.30 (7.5)	0.09 (2.2)	0.28 (7.0)	-	-	-	-
F8-SI	0.31 (8.0)	0.16 (4.0)	0.47 (12.0)	-	-	-	-
F9-SI	0.35 (9.0)	0.16 (4.0)	0.47 (12.0)	-	-	-	-

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Vacuum Cups and Suction Cups



Universal Style Flat Vacuum 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	Item Weight (Grams)
F9-SI-E	0.35 (9.0)	0.16 (4.0)	0.47 (12.0)	-	-	-	-
PF9-SI	0.35 (9.0)	0.18 (4.5)	0.47 (12.0)	-	-	-	-
PF9-ESD	0.35 (9.0)	0.18 (4.5)	0.47 (12.0)	-	-	-	-
PF9-NM	0.35 (9.0)	0.18 (4.5)	0.47 (12.0)	-	-	-	-
F10-NBR	0.40 (10.1)	0.19 (4.7)	0.42 (10.6)	0.37 (9.4)	0.003 (0.05)	0.60 (0.3)	0.51 Grams
F10-SIT	0.40 (10.1)	0.16 (4.0)	0.42 (10.6)	0.37 (9.4)	0.003 (0.05)	0.60 (0.3)	0.51 Grams
F10-NM	0.40 (10.1)	0.19 (4.7)	0.42 (10.6)	0.37 (9.4)	0.003 (0.05)	0.60 (0.3)	0.51 Grams
F13-SI	0.51 (13.0)	0.16 (4.0)	0.47 (12.0)	-	-	-	-
PFL13-SI	0.53 (13.35)	0.31 (8)	0.48 (12.25)	-	-	-	-
PFL13-ESD	0.53 (13.35)	0.31 (8)	0.48 (12.25)	-	-	-	-
PFL13-NM	0.53 (13.35)	0.31 (8)	0.48 (12.25)	-	-	-	-
PF13-SI	0.51 (13)	0.18 (4.5)	0.48 (12)	-	-	-	-
PF13-ESD	0.51 (13)	0.18 (4.5)	0.48 (12)	-	-	-	-
PF13-NM	0.51 (13)	0.18 (4.5)	0.48 (12)	-	-	-	-
F15-NBR	0.58 (14.7)	0.19 (4.9)	0.43 (10.9)	0.36 (9.1)	0.011 (0.18)	1.40 (0.6)	0.72 Grams
F15-SIT	0.58 (14.7)	0.19 (4.9)	0.43 (10.9)	0.36 (9.1)	0.011 (0.18)	1.40 (0.6)	0.72 Grams
F15-NM	0.58 (14.7)	0.19 (4.9)	0.43 (10.9)	0.36 (9.1)	0.011 (0.18)	1.40 (0.6)	0.51 Grams
PFL16-SI	0.65 (16.5)	0.31 (8)	0.48 (12.25)	-	-	-	-
PFL16-ESD	0.65 (16.5)	0.31 (8)	0.48 (12.25)	-	-	-	-

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Vacuum Cups and Suction Cups



Universal Style Flat Vacuum 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	Item Weight (Grams)
PFL16-NM	0.65 (16.5)	0.31 (8)	0.48 (12.25)	-	-	-	-
F20-NBR	0.79 (20.0)	0.16 (4.0)	0.45 (11.5)	0.33 (8.5)	0.027 (0.44)	2.20 (1.0)	1.13 Grams
F20-SIT	0.79 (20.0)	0.16 (4.0)	0.45 (11.5)	0.33 (8.5)	0.027 (0.44)	2.20 (1.0)	1.13 Grams
F20-NM	0.79 (20.0)	0.18 (4.5)	0.45 (11.5)	0.33 (8.5)	0.027 (0.44)	2.20 (1.0)	1.13 Grams
F25-NBR	0.99 (25.1)	0.16 (4.0)	0.48 (12.1)	0.38 (9.7)	0.430 (0.70)	3.10 (1.4)	1.50 Grams
F25-SIT	0.99 (25.1)	0.16 (4.0)	0.48 (12.1)	0.38 (9.7)	0.430 (0.70)	3.10 (1.4)	1.50 Grams
F25-NM	0.99 (25.1)	0.15 (3.8)	0.48 (12.1)	0.38 (9.7)	0.430 (0.70)	3.10 (1.4)	1.50 Grams
F30-NBR	1.17 (29.7)	0.31 (7.8)	0.75 (19.1)	0.63 (16.0)	0.177 (2.90)	4.90 (2.2)	4.40 Grams
F30-SIT	1.17 (29.7)	0.31 (7.8)	0.75 (19.1)	0.63 (16.0)	0.177 (2.90)	4.90 (2.2)	4.40 Grams
F35-NBR	1.42 (36.0)	0.31 (7.8)	0.79 (20.0)	0.63 (16.0)	0.165 (2.70)	7.00 (3.2)	6.30 Grams
F35-SIT	1.42 (36.0)	0.31 (7.8)	0.79 (20.0)	0.63 (16.0)	0.165 (2.70)	7.00 (3.2)	6.30 Grams
F40-NBR	1.56 (39.6)	0.31 (7.8)	0.79 (20.0)	0.63 (16.0)	0.250 (4.00)	9.50 (4.3)	7.50 Grams
F40-SIT	1.56 (39.6)	0.31 (7.8)	0.79 (20.0)	0.63 (16.0)	0.250 (4.00)	9.50 (4.3)	7.50 Grams
F52-NBR	2.05 (52.0)	0.31 (7.8)	0.87 (22.0)	0.69 (17.5)	0.427 (7.00)	15.10 (6.8)	13.4 Grams
F52-SIT	2.05 (52.0)	0.31 (7.8)	0.87 (22.0)	0.69 (17.5)	0.427 (7.00)	15.10 (6.8)	13.4 Grams
F60-NBR	2.36 (60.0)	0.31 (7.9)	0.87 (22.0)	0.69 (17.5)	0.752 (12.00)	23.00 (10.4)	17.3 Grams
F60-SIT	2.36 (60.0)	0.31 (7.9)	0.87 (22.0)	0.69 (17.5)	0.752 (12.00)	23.00 (10.4)	17.3 Grams
F77-NBR	2.94 (74.7)	0.46 (11.7)	1.24 (31.5)	1.02 (26.0)	0.976 (16.00)	36.20 (16.4)	35.0 Grams
F77-SIT	2.94 (74.7)	0.46 (11.7)	1.24 (31.5)	1.02 (26.0)	0.976 (16.00)	36.20 (16.4)	35.0 Grams

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Vacuum Cups and Suction Cups



Universal Style Flat Vacuum 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	Item Weight (Grams)
F85-NBR	3.30 (85.0)	0.48 (12.0)	1.20 (31.0)	1.02 (26.0)	1.85 (30.32)	39.00 (17.8)	40.9 Grams
F85-SIT	3.30 (85.0)	0.48 (12.0)	1.20 (31.0)	1.02 (26.0)	1.85 (30.32)	39.00 (17.8)	40.9 Grams
F95-NBR	3.74 (95.0)	0.47 (12.0)	1.46 (37.0)	1.02 (26.0)	2.899 (47.50)	42.30 (19.2)	49.0 Grams
F95-SIT	3.74 (95.0)	0.47 (12.0)	1.46 (37.0)	1.02 (26.0)	2.899 (47.50)	42.30 (19.2)	49.0 Grams

Notes:

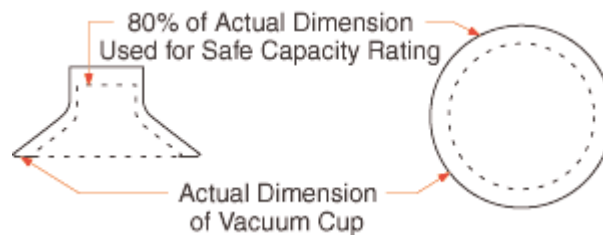
The cup capacities shown above (*) are theoretical capacities based on 24"Hg at sea level with a safety factor of two (2) and a $\pm 5\%$ margin of error. This is the US ANSI ASME Standard B30.20 for vacuum lifter specifications and is commonly used in North America as a design capacity for vacuum components. 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 $15.10 \times 2 \times 1.25 = 37.75$ 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.

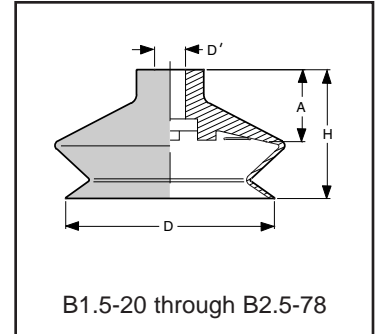
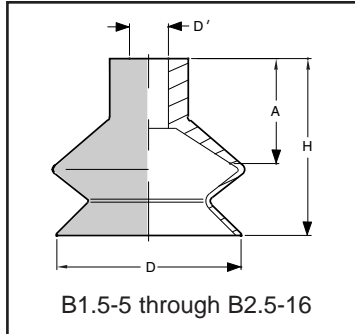




Single Bellows Suction Cups with Interchangeable Fittings For Horizontal and Vertical Handling of Concave and Convex Surfaces

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

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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:

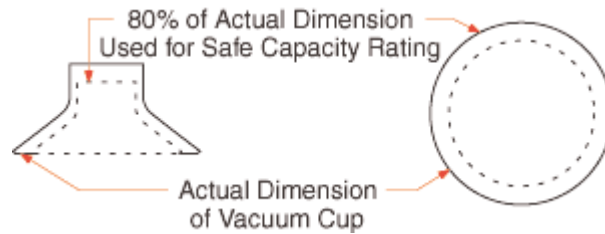
The cup capacities shown above (*) are theoretical capacities based on 24"Hg at sea level with a safety factor of two (2) and a ± 5% margin of error. This is the US ANSI ASME Standard B30.20 for vacuum lifter specifications and is commonly used in North America as a design capacity for vacuum components. 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 $15.10 \times 2 \times 1.25 = 37.75$ 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.



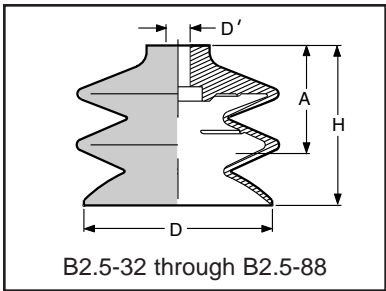
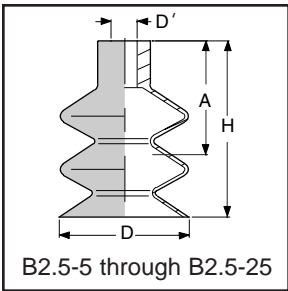


Double Bellows Suction Cups with Interchangeable Fittings For Horizontal and Vertical Handling of Concave and Convex Surfaces

Bellows Suction Cups are Excellent for Concave and Convex Surfaces and Eliminate the Need for Spring Suspensions in many cases

2.5 Bellows Vacuum Suction Cups attach gently and easily with minimum pressure. They are excellent for concave and convex shapes as well as on slanted surfaces. Their design can replace mechanical springs, ball swivels and height compensators, allowing for less complicated and more economical installations. Keeping vacuum levels a bit lower extends the life of the suction cups.

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



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)
PBA4-ESD	0.16 (4.0)	0.16 (4.0)	0.59 (15.0)	-	-	-	-
PBA4-SI	0.16 (4.0)	0.16 (4.0)	0.59 (15.0)	-	-	-	-
B2.5-5-NBR	0.22 (5.7)	0.16 (4.0)	0.53 (13.5)	0.41 (10.5)	0.002 (0.04)	0.15 (0.07)	0.35 Grams
B2.5-5-SIT	0.22 (5.7)	0.16 (4.0)	0.53 (13.5)	0.41 (10.5)	0.002 (0.04)	0.15 (0.07)	0.35 Grams
B2.5-7-NBR	0.28 (7.0)	0.16 (4.0)	0.56 (14.2)	0.39 (10.0)	0.003 (0.05)	0.20 (0.10)	0.59 Grams
B2.5-7-SIT	0.28 (7.0)	0.16 (4.0)	0.56 (14.2)	0.39 (10.0)	0.003 (0.05)	0.20 (0.10)	0.59 Grams
B2.5-7-NM	0.28 (7.0)	0.16 (4.0)	0.56 (14.2)	0.39 (10.0)	0.003 (0.05)	0.20 (0.10)	0.59 Grams
PBL8-SI	0.31 (8.0)	0.31 (8.0)	0.83 (21.0)	-	-	-	-
B2.5-9-NBR	0.35 (9.0)	0.16 (4.0)	0.59 (15)	0.47 (12.0)	0.009 (0.15)	0.34 (0.15)	0.77 Grams
B2.5-9-SIT	0.35 (9.0)	0.16 (4.0)	0.59 (15)	0.47 (12.0)	0.009 (0.15)	0.34 (0.15)	0.77 Grams

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Vacuum Cups and Suction Cups



Universal 2.5 Bellows Style Vacuum 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)
B2.5-9-NM	0.35 (9.0)	0.16 (4.0)	0.59 (15)	0.47 (12.0)	0.009 (0.15)	0.34 (0.15)	0.77 Grams
PBL10-SI	0.39 (10.0)	0.31 (8.0)	0.85 (21.5)	-	-	-	-
B2.5-14-NBR	0.59 (15.0)	0.16 (4.0)	0.92 (23.3)	0.51 (13.0)	0.059 (0.98)	0.70 (0.34)	1.59 Grams
B2.5-14-SIT	0.59 (15.0)	0.16 (4.0)	0.92 (23.3)	0.51 (13.0)	0.059 (0.98)	0.70 (0.34)	1.59 Grams
B2.5-14-NM	0.59 (15.0)	0.16 (4.0)	0.92 (23.3)	0.51 (13.0)	0.059 (0.98)	0.70 (0.34)	1.59 Grams
PBL16-SI	0.63 (16)	0.31 (8.0)	0.83 (21)	-	-	-	-
B2.5-18-NBR	0.72 (18.3)	0.16 (4.0)	0.90 (22.8)	0.51 (13.0)	0.082 (1.35)	1.37 (0.62)	1.93 Grams
B2.5-18-SIT	0.72 (18.3)	0.16 (4.0)	0.90 (22.8)	0.51 (13.0)	0.082 (1.35)	1.37 (0.62)	1.93 Grams
B2.5-18-NM	0.72 (18.3)	0.16 (4.0)	0.90 (22.8)	0.51 (13.0)	0.082 (1.35)	1.37 (0.62)	1.93 Grams
B2.5-20-NBR	0.79 (20.0)	0.16 (4.0)	0.91 (23.0)	0.51 (13.0)	0.122 (2.00)	1.44 (0.65)	2.39 Grams
B2.5-20-SIT	0.79 (20.0)	0.16 (4.0)	0.91 (23.0)	0.51 (13.0)	0.122 (2.00)	1.44 (0.65)	2.39 Grams
B2.5-20-NM	0.79 (20.0)	0.16 (4.0)	0.91 (23.0)	0.51 (13.0)	0.122 (2.00)	1.44 (0.65)	2.39 Grams
PBL22-SI	0.87 (22)	0.31 (8.0)	0.85 (21.5)	-	-	-	-
B2.5-25-NBR	0.98 (25.0)	0.16 (4.0)	1.34 (34.0)	0.63 (16.0)	0.330 (5.40)	2.00 (0.90)	4.09 Grams
B2.5-25-SIT	0.98 (25.0)	0.16 (4.0)	1.34 (34.0)	0.63 (16.0)	0.330 (5.40)	2.00 (0.90)	4.09 Grams
B2.5-25-NM	0.98 (25.0)	0.16 (4.0)	1.34 (34.0)	0.63 (16.0)	0.330 (5.40)	2.00 (0.90)	4.09 Grams
B2.5-32-NBR	1.26 (32.0)	0.31 (8.0)	1.48 (37.5)	0.91 (23.0)	0.610 (10.00)	3.80 (1.70)	11.40 Grams
B2.5-32-SIT	1.26 (32.0)	0.31 (8.0)	1.48 (37.5)	0.91 (23.0)	0.610 (10.00)	3.80 (1.70)	11.40 Grams
B2.5-42-NBR	1.69 (43.0)	0.31 (8.0)	1.81 (46.0)	0.94 (24.0)	1.190 (19.50)	5.50 (2.60)	21.00 Grams

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Universal 2.5 Bellows Style Vacuum Cups - Nomathane Versions

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)
B2.5-42-SIT	1.69 (43.0)	0.31 (8.0)	1.81 (46.0)	0.94 (24.0)	1.190 (19.50)	5.50 (2.60)	21.00 Grams
B2.5-62-NBR	2.36 (60.0)	0.31 (8.0)	2.13 (54.0)	0.94 (24.0)	4.420 (72.50)	13.00 (6.10)	46.90 Grams
B2.5-62-SIT	2.36 (60.0)	0.31 (8.0)	2.13 (54.0)	0.94 (24.0)	4.420 (72.50)	13.00 (6.10)	46.90 Grams
B2.5-88-NBR	3.46 (88.0)	0.47 (12.0)	3.35 (85.0)	1.54 (39.0)	10.100 (165.00)	36.00 (16.80)	190.40 Grams
B2.5-88-SIT	3.46 (88.0)	0.47 (12.0)	3.35 (85.0)	1.54 (39.0)	10.100 (165.00)	36.00 (16.80)	190.40 Grams

Notes:

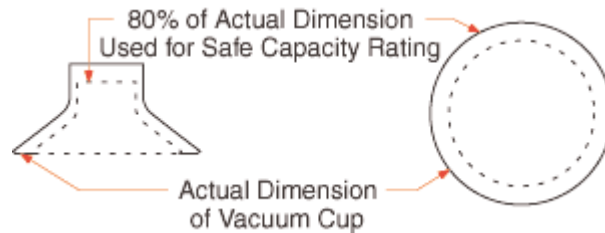
The cup capacities shown above (*) are theoretical capacities based on 24"Hg at sea level with a safety factor of two (2) and a ± 5% margin of error. This is the US ANSI ASME Standard B30.20 for vacuum lifter specifications and is commonly used in North America as a design capacity for vacuum components. 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.

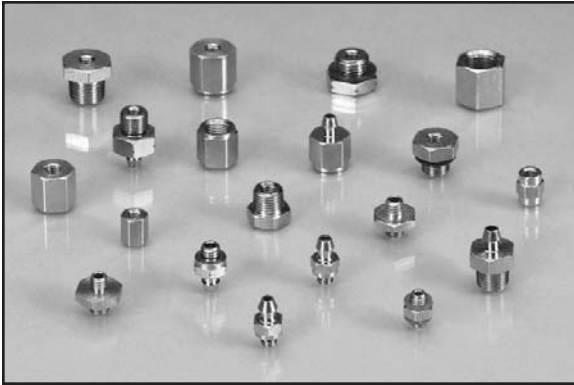
Other manufacturers use a pull-off figure at 27"Hg to show a high capacity value for their cups. This is accurate, but requires users to do all the math themselves to build in safety factors. The values are basically the same, but it is necessary to calculate the working capacities with a safety factor 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 $15.10 \times 2 \times 1.25 = 37.75$ lbs. From this point, it is necessary to calculate the safety factor based on the vacuum level being used, and the altitude.

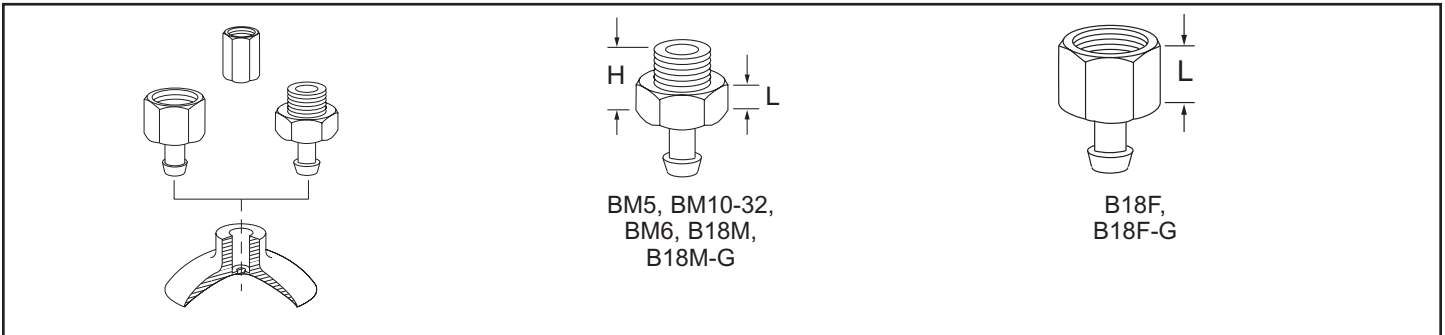
To ensure safety, 80% of actual overall diameter is used when determining Load Capacity.



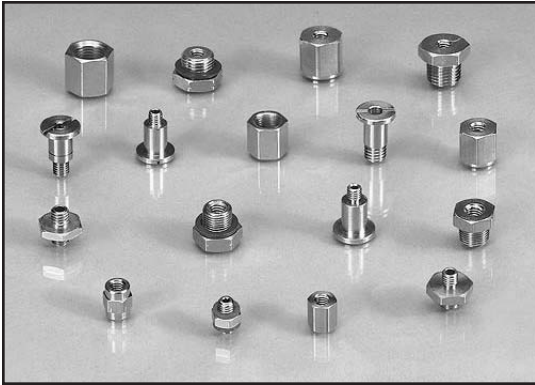


Barbed Vacuum Cup Fittings which Push In from the Top

- ANVER divides small universal vacuum suction cups into three groups based on mounting specifications and style. The Group 1 Fittings shown here are simple barbed fittings that push in from the top of the cup.
- Within each vacuum fitting group, the hardware is interchangeable with all other cups within the group. Any Group 1 fitting will fit any Group 1 cup. It may also fit other cups with similarly sized holes in the cups' centers. Contact the factory to verify suitability.
- These all-metal, electro-less nickel-plated brass fittings are reusable. Once you buy the cups with fittings you only need to buy replacement rubber cups in the future.
- The cup is simply pressed onto the end of the barbed fitting to hold tight. Replacement takes only a few seconds, and does not require unscrewing the fitting.

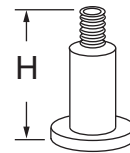
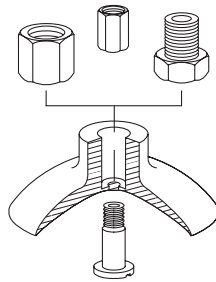


ANVER Item No.	Connection Thread Size	Thru Hole Dia. or Thread in. (mm)	Hex Size in. (mm)	L Height Added to Assembly in. (mm)	H Height in. (mm)
BM5	M5 (5 mm) male	0.09 (2.3)	0.31 (8)	0.20 (5)	0.35 (9.0)
BM10-32	10-32 UNF male	0.10 (2.5)	0.31 (8)	0.20 (5)	0.35 (9.0)
BM6	M6 (6 mm) male	0.13 (3.4)	0.38 (9.5)	0.20 (5)	0.39 (10.0)
B18F-G	G1/8" female	0.13 (3.6)	0.55 (14)	0.47 (12)	-
B18F	1/8" NPT female	0.17 (4.2)	0.5 (12.6)	0.47 (12)	-
B18M	1/8" NPT male 10-32 UNF female	0.17 (4.2)	0.5 (12.6)	0.21 (5.2)	0.51 (13.0)
B18M-G	G1/8" male M5 (5 mm) female	0.14 (3.5)	0.55 (14)	0.24 (6)	0.53 (13.5)



Barbed Fittings which Push In from the Bottom for ANVER Universal Group 2 Suction Cups

- ANVER divides small universal vacuum suction cups into three groups based on mounting specifications and style. The Group Two Fittings shown here are those that push in from the bottom, exposing a male thread at the top of the cup.
- Within each vacuum fitting group, the hardware is interchangeable with all other cups within the group. Any Group 2 fitting will fit any Group 2 cup.
- These all-metal, electro-less nickel-plated brass fittings are reusable. Once you buy the cups with fittings you only need to buy replacement rubber cups in the future.
- The cup is held from the bottom flange of the fitting which is screwed into a female connection above the cup to hold it tight. Replacement takes only a few seconds and requires that you unscrew the fitting, replace the cup, and screw the fitting back on. You can usually do this by hand, by grasping the rubber cup and fitting and turning. However, should you desire, you can also use a screw driver from below the cup.



HS5, HS6,
HS10-32, HS8

ANVER Item No.	Connection Thread Size	Thru Hole Dia. or Thread in. (mm)	H Height in. (mm)
HS5	M5 (5 mm) male	0.11 (2.7)	0.71 (18)
HS6	M6 (6 mm) male	0.14 (3.5)	0.79 (20)
HS10-32	10-32 UNF male	0.10 (2.5)	0.71 (18)
HS8	M8 (8 mm) male	0.20 (5.1)	0.79 (20)

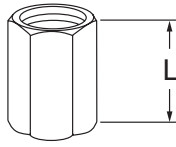


Barbed Fittings which Push In from the Bottom for ANVER Universal Group 3 Suction Cups

- ANVER divides small universal vacuum suction cups into three groups based on mounting specifications and style. The Group 3 Fittings shown here are those that push in from the bottom, exposing a male thread at the top of the cup.
- Within each vacuum fitting group, the hardware is interchangeable with all other cups within the group. Any Group 3 fitting will fit any Group 3 cup.
- These all-metal, electro-less nickel-plated brass fittings are reusable. Once you buy the cups with fittings you only need to buy replacement rubber cups in the future.
- The cup is held from the bottom flange of the fitting which is screwed into a female connection above the cup to hold it tight. Replacement takes only a few seconds and requires that you unscrew the fitting, replace the cup, and screw the fitting back on. You can usually do this by hand, by grasping the rubber cup and fitting and turning. However, should you desire, you can also use a screw driver from below the cup.

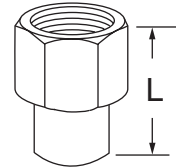


ANVER Item No.	Connection Thread Size	Thru Hole Dia. in. (mm)	H Height in. (mm)
HS18	1/8" NPT male	0.23 (5.9)	1.14 (29)
HS18-SV-SS	1/8" NPT male	0.23 (5.9)	1.14 (29)
HS18-SV-LL	1/8" NPT male	0.23 (5.9)	1.14 (29)
HS18G	G 1/8" male	0.23 (5.9)	1.14 (29)
HS18-G-SV-SS	G 1/8" male	0.23 (5.9)	1.14 (29)
HS18-G-SV-LL	G 1/8" male	0.23 (5.9)	1.14 (29)



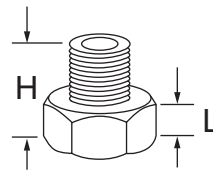
HS5-5F,
HS6-18F,
HS6-18F-G,
HS6-14F,

HS6-14F-G,
HS1032-1032F,
HS18-18F,
HS18G-18F-G

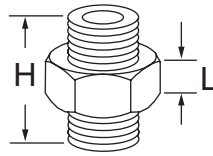


HS18-14F,
HS18-38F,
HS18-12F

ANVER Item No.	Connection Thread Size	Thru Hole Dia. or Thread in. (mm)	Hex Size in. (mm)	L Height Added to Assembly in. (mm)
HS5-5F	M5 (5 mm) female to M5 (5 mm) female	0.17 (4.3)	0.31 (8)	0.43 (11.0)
HS1032-1032F	10-32 UNF female to 10-32 UNF female	0.16 (4)	0.31 (8)	0.37 (9.5)
HS6-18F	M6 (6 mm) female to 1/8" NPT female	0.2 (5)	0.51 (13)	0.51 (13)
HS6-18F-G	M6 (6 mm) female to G1/8" female	0.2 (5)	0.51 (13)	0.51 (13)
HS6-14F	M6 (6 mm) female to 1/4" NPT female	0.2 (5)	0.63 (16)	0.63 (16)
HS6-14F-G	M6 (6 mm) female to G1/4" female	0.2 (5)	0.67 (17)	0.63 (16)
HS18-18F	1/8" NPT female to 1/8" NPT female	-	0.56 (14.2)	0.75 (19)
HS18G-18F-G	G 1/8" female to G 1/8" female	-	0.56 (14.2)	0.75 (19)
HS18-14F	1/8" NPT female to 1/4" NPT female	-	0.69 (17.5)	0.81 (20.6)
HS18-38F	1/8" NPT female to 3/8" NPT female	-	0.81 (20.6)	0.98 (25)
HS18-12F	1/8" NPT female to 1/2" NPT female	-	0.94 (23.9)	1.18 (30)



ANVER Item No.	Connection Thread Size	Thru Hole Dia. or Thread in. (mm)	Hex Size in. (mm)	L Height Added to Assembly in. (mm)	H Height in. (mm)
HS6-18M	M6 (6 mm) female to 1/8" NPT male	0.2 (5)	0.51 (13)	0.17 (4.3)	0.47 (12)
HS6-18M-G	M6 (6 mm) female to G1/8" male	0.2 (5)	0.56 (14)	0.22 (5.6)	0.51 (13)
HS6-14M	M6 (6 mm) female to 1/4" NPT male	0.2 (5)	0.63 (16)	0.22 (5.5)	0.63 (16)
HS6-14M-G	M6 (6 mm) female to G1/4" male	0.2 (5)	0.63 (16)	0.26 (6.4)	0.63 (16)
HS18-14M	1/8" NPT female to 1/4" NPT male	-	0.63 (16)	0.19 (4.8)	0.67 (17)
HS18-38M	1/8" NPT female to 3/8" NPT male	-	0.69 (17.5)	0.19 (4.8)	0.75 (19)
HS18-12M	1/8" NPT female to 1/2" NPT male	-	0.88 (22.4)	0.37 (9.5)	1.00 (25.4)
HS18-18M-G	1/8" NPT - female to G1/8" male	-	0.55 (14)	0.43 (11)	0.67 (17)
HS14-14M-G	1/4" NPT female to G1/4" male	-	0.67 (17)	0.56 (14)	0.87 (22)
HS14-38M	1/4" NPT female to 3/8" NPT male	-	-	0.12 (3)	0.87 (22)
HS38-38M-G	3/8" NPT female to G3/8" male	-	0.94 (24)	0.92 (24)	1.37 (35)
HS12-12M-G	1/2" NPT female to G1/2" male	-	1.12 (28)	1.18 (30)	1.70 (43)
HS34-34M-G	3/4" NPT female to G3/4" male	-	1.38 (35)	1.15 (29)	1.78 (45)

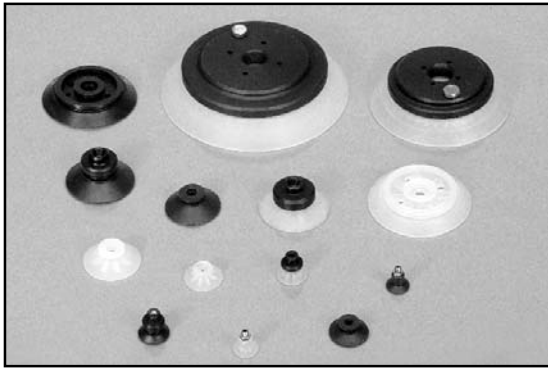


ANVER Item No.	Connection Thread Size	Thru Hole Dia. or Thread in. (mm)	Hex Size in. (mm)	L Height Added to Assembly in. (mm)	H Height in. (mm)
HSHN5	M5 (5 mm) male to M5 (5 mm) male	0.09 (2.3)	0.31 (8.0)	0.18 (4.6)	0.45 (11.0)
HSHN6	M6 (6 mm) male to M6 (6 mm) male	0.14 (3.5)	0.51 (13)	0.11 (3.0)	0.52 (13.2)
HSHN5X6	M6 (6 mm) male to M5 (5 mm) male	0.11 (2.7)	0.50 (13.0)	0.13 (3.3)	0.51 (13.0)



Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Vacuum Cups



ANVER-Made Generic Replacements of P-Style Vacuum Cups and Suction Cups

Ideal for use on plane surfaces, where minimum movement is required to maintain the pick-up area, and for support of pliable materials. Available in sizes from 0.65 to 6.13 inches (16.6 to 155.6mm).

VacuumCup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F15 Cups						
F15-NEO A-3150125		0.65 (16.6)	0.40 (11.0)	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
F15-SIT A-3150125S		0.65 (16.6)	0.40 (11.0)	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
F15 Cups with 10-15 Fitting						
F15-NEO/ FITTING A-3150014		0.65 (16.5)	0.8 (20.0)	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
F15-SIT/ FITTING A-3150014S		0.65 (16.5)	0.8 (20.0)	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
Fittings for F15 Cups						
BM5 FITTING M5 MALE Replaces 10-15 FITTING A-3107030		The BM5 FITTING M5 MALE is an improved 5 mm male fitting with captured O-ring which replaces the older 10-15 FITTING M5 MALE. It allows you to screw directly into any of the SLSA-1 Suspensions.				SLSA-1 Suspensions
10-32 FITTING UNF MALE BM10-32		The 10-32 Fitting UNF Male is a 10-32 UNF Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Fits all the same cups as the 10-15 Fitting above, but in a 10-32 UNF version. Comes with captured O-ring for a vacuum tight seal. Popular alternate fitting for the North American market.				SLSA-1 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F20 Cups						
F20-NEO A-3150126		0.87 (22.1)	0.30 (8.0)	1.87 (0.85)	4.20 (1.91)	SLSA-1 or 2 Suspensions
F20-SIT A-3150126S		0.87 (22.1)	0.30 (8.0)	1.87 (0.85)	4.20 (1.91)	SLSA-1 or 2 Suspensions
F20 Cups with 20-30 Fitting						
F20-NEO/1PC FITTING A-3150015A		0.87 (22.1)	0.70 (18.0)	1.87 (0.85)	4.20 (1.91)	SLSA-1 or 2 Suspensions
F20-SIT/1PC FITTING A-3150015SA		0.87 (22.1)	0.70 (18.0)	1.87 (0.85)	4.20 (1.91)	SLSA-1 or 2 Suspensions
F20 Cups with 20-30 Connection Plate						
F20-NEO/FIT/ SCREEN A-3150015		0.87 (22.1)	0.60 (16.0)	1.87 (0.85)	4.20 (1.91)	SLSA-1 or 2 Suspensions
F20-SIT/FIT/ SCREEN A-3150015S		0.87 (22.1)	0.60 (16.0)	1.87 (0.85)	4.20 (1.91)	SLSA-1 or 2 Suspensions
Fittings for F20 Cups						
20-30 FITTING A-3150196		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.				SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084		The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.				SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
Fittings for F20 Cups						
20-30 CONNECTION PLATE A-3150141				For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.		SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140				The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.		SLSA-1 or 2 Suspensions
F25 Cups						
F25-NEO A-3150127		1.08 (27.5)	0.30 (9.0)	2.49 (1.13)	5.60 (2.54)	SLSA-1 or 2 Suspensions
F25-SIT A-3150127S		1.08 (27.5)	0.30 (9.0)	2.49 (1.13)	5.60 (2.54)	SLSA-1 or 2 Suspensions
F25 Cups with 20-30 Fitting						
F25-NEO/1PC FITTING A-3150016A		1.08 (27.5)	0.70 (19.0)	2.49 (1.13)	5.60 (2.54)	SLSA-1 or 2 Suspensions
F25-SIT/1PC FITTING A-3150016SA		1.08 (27.5)	0.70 (19.0)	2.49 (1.13)	5.60 (2.54)	SLSA-1 or 2 Suspensions
F25 Cups with 20-30 Connection Plate						
F25-NEO/FIT/SCREEN A-3150016		1.08 (27.5)	0.70 (17.0)	2.49 (1.13)	5.60 (2.54)	SLSA-1 or 2 Suspensions
F25-SIT/FIT/SCREEN A-3150016S		1.08 (27.5)	0.70 (17.0)	2.49 (1.13)	5.60 (2.54)	SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
Fittings for F25 Cups						
20-30 FITTING A-3150196				For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.		SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084				The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.		SLSA-1 or 2 Suspensions
20-30 CONNECTION PLATE A-3150141				For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.		SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140				The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.		SLSA-1 or 2 Suspensions
F30 Cups						
F30-NEO A-3150239		1.25 (31.6)	0.40 (10.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
F30-SIT A-3150239S		1.25 (31.6)	0.40 (10.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
F30 Cups with 20-30 Fitting						
F30-NEO/1 PC FITTING A-3250036A		1.25 (31.6)	0.70 (17.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
F30-SIT/1PC FITTING A-3250036SA		1.25 (31.6)	0.70 (17.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F30 Cups with 20-30 Connection Plate						
F30-NEO/FIT/SCREEN A-3250036		1.25 (31.6)	0.70 (18.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
F30-SIT/FIT/SCREEN A-3250036S		1.25 (31.6)	0.70 (18.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
Fittings for F30 Cups						
20-30 FITTING A-3150196		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.				SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084		The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.				SLSA-1 or 2 Suspensions
20-30 CONNECTION PLATE A-3150141		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.				SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140		The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.				SLSA-1 or 2 Suspensions
F40 Cups						
F40-NEO A-3150129P		1.66 (42.1)	0.50 (13.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
F40-SIT A-3150129S		1.66 (42.1)	0.50 (13.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / F Series Flat Vacuum Cups

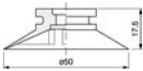
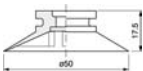
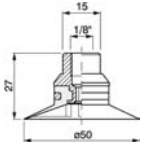
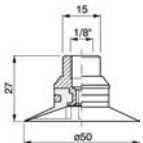
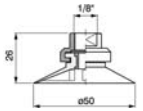
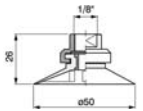
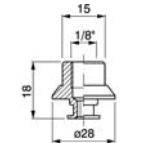
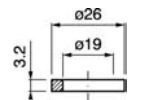
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F40 Cups with 40/30-2/BL30 Fitting						
F40-NEO/1PC FITTING A-3150018PA		1.66 (42.1)	0.80 (21.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
F40-SIT/1PC FITTING A-3150018SA		1.66 (42.1)	0.80 (21.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
F40 Cups with 40 Connection Plate						
F40-NEO/FIT/ SCREEN A-3150018P		1.66 (42.1)	0.90 (22.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
F40-SIT/FIT/ SCREEN A-3150018S		1.66 (42.1)	0.90 (22.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
Fittings for F40 Cups						
40/30-2/BL30 FITTING A-3250001		The 40/30-2/BL30 FITTING uses a Strengthening Ring 40. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" NPS Thread.				SLSA-2 Suspensions
STRENGTHENING RING SILICONE 40 A-0101085		The Strengthening Ring 40 is used with the above 40/30-2/BL30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.				SLSA-2 Suspensions
40 CONNECTION PLATE A-3150143		The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.				SLSA-2 Suspensions
40 LOCKING SPACER A-3150142		The 40 Locking Spacer is used with the above 40 Connection Plate. It presses in from the bottom.				SLSA-2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F50 Cups						
F50-NEO A-3150130P		2.10 (52.8)	0.70 (17.5)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions
F50-SIT A-3150130S		2.10 (52.8)	0.70 (17.5)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions
F50 Cups with 50 Fitting						
F50-NEO/1PC FITTING A-3150019PA		2.10 (52.8)	1.10 (27.0)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions
F50-SIT/1PC FITTING A-3150019SA		2.10 (52.8)	1.10 (27.0)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions
F50 Cups with 50 Connection Plate						
F50-NEO/FIT/ SCREEN A-3150019P		2.10 (52.8)	1.00 (26.0)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions
F50-SIT/FIT/ SCREEN A-3150019S		2.10 (52.8)	1.00 (26.0)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions
Fittings for F50 Cups						
50/50-2 FITTING A-05AG		The 50/50-2 Fitting is utilized with a Strengthening Ring 50. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.				SLSA-2 Suspensions
STRENGTHENING RING SILICONE 50 A-0101086		The Strengthening Ring 50 is used with the above 50/50-2 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.				SLSA-2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
Fittings for F50 Cups						
50 CONNECTION PLATE A-3150145				The 50 Connection Plate uses a 50 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.		SLSA-2 Suspensions
50 LOCKING SPACER A-3150144				The 50 Locking Spacer is used with the above 50 Connection Plate. It presses in from the bottom.		SLSA-2 Suspensions
F75 Cups						
F75-NEO A-3150131P		3.02 (76.5)	0.60 (14.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions
F75-SIT A-3150131S		3.02 (76.5)	0.60 (14.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions
F75 Cups with 75 Fitting						
F75-NEO/FIT/SCREEN 1/8 A-3250032P		3.02 (76.5)	0.80 (20.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions
F75-SIT/FIT/SCREEN 1/8 A-3250032S		3.03 (77.0)	0.80 (20.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions



Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F75 Cups with 75 Connection Plate						
F75-NEO/CON PLATE A-3150037P		3.02 (76.5)	0.60 (14.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions
F75-SIT/CON PLATE A-3150037S		3.02 (76.5)	0.60 (14.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions
Fittings for F75 Cups						
75 CONNECTION PLATE 1/8 A-3150043		The 75 Connection Plate 1/8 is to be imbedded in the 75 Series suction cup's rubber portion allowing the 75 Fitting 1/8" to be held in place.				SLSA-2 Suspensions
75 FITTING 1/8" A-3250006		The 75 Fitting 1/8" with 1/8" female center port connection with optional M5 (10/32) female port often used as a blow-off port.				SLSA-2 Suspensions
F110 Cups						
F110-NEO A-3150132P		4.30 (112.5)	0.70 (19.0)	56.00 (25.40)	126.00 (57.15)	SLSA-2 Suspensions
F110-SIT A-3150132S		4.30 (112.5)	0.70 (19.0)	56.00 (25.40)	126.00 (57.15)	SLSA-2 Suspensions
F110 Cups with 110 Fitting						
F110-NEO/FIT/SCREEN A-3150021P		4.30 (112.5)	1.00 (26.0)	56.00 (25.40)	126.00 (57.15)	SLSA-2 Suspensions
F110-SIT/FIT/SCREEN A-3150021S		4.30 (112.5)	1.00 (26.0)	56.00 (25.40)	126.00 (57.15)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups




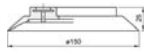
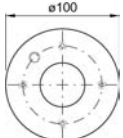
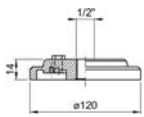
Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F110 Cups with 110 Connection Plate						
F110-NEO/CON PLATE A-3150038P		4.30 (112.5)	0.70 (19.0)	56.00 (25.40)	126.00 (57.15)	SLSA-2 Suspensions
F110-SIT/CON PLATE A-3150038S		4.30 (112.5)	0.60 (14.0)	56.00 (25.40)	126.00 (57.15)	SLSA-2 Suspensions
Fittings for 110 Cups						
110 FITTING 1/2" A-3250007		The 110 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.				SLSA-2 Suspensions
110 CONNECTION PLATE A-3150044		The 110 Connection Plate is to be imbedded in the 110 Series suction cup's rubber portion allowing the 110 Fitting 1/2" to be held in place.				SLSA-2 Suspensions
F150 Cups						
F150-NEO A-3150133P		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)	SLSA-2 Suspensions
F150-SIT A-3150133S		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)	SLSA-2 Suspensions
F150 Cups with 150 Fitting						
F150-NEO/FIT/SCREEN A-3150022P		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)	SLSA-2 Suspensions
F150-SIT/FIT/SCREEN A-3150022S		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)	SLSA-2 Suspensions



Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
F150 Cups with 150 Connection Plate						
F150-NEO/CON PLATE A-3150039P		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)	SLSA-2 Suspensions
F150-SIT/CON PLATE A-3150039S		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)	SLSA-2 Suspensions
Fittings for F150 Cups						
150 CONNECTION PLATE A-3150045		The 150 Connection Plate is to be imbedded in the 150 Series suction cup's rubber portion allowing the 150 Fitting 1/2" to be held in place.				SLSA-2 Suspensions
150 FITTING 1/2" A-3250008		The 150 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.				SLSA-2 Suspensions

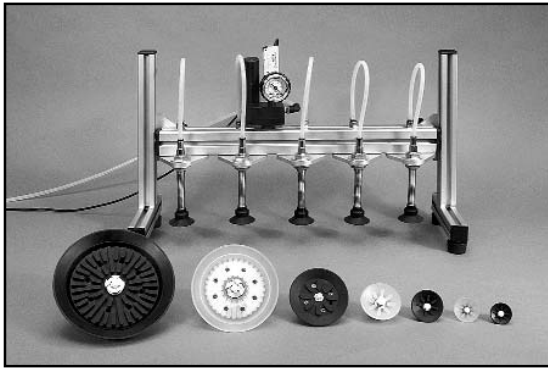
* All cups shown above are identical in size and shape to other manufacturers' cups. The 'static' columns represent the cup dimensions without a load as given by other manufacturers.

Note: The "G" thread is a straight pipe thread also known as BSPP, BSP, NPS or "G", commonly used in Europe, Asia and most of the world. For more information about the common pipe threads used by ANVER, please [Click Here](#).



Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Cups with Valves



Flat Vacuum Cups and Suction Cups with Valves

Vacuum Cup Description and Part Number	Dimensional Drawing	Static Diameter* in. (mm)	Static Height* in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) [2:1 Safety Factor] lb (kg)	Pull-Off Capacity at 27 in. Hg (685.8mm Hg) [1:1 Safety Factor] lb (kg)	Level Compensator Suspensions
F30 Cups with Valves						
F30-NEO/VALVE A-3150049 31.50.049		1.25 (31.6)	0.40 (10.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 Suspensions SLSA-2 Suspensions
F30-SIT/VALVE A-3150049S 31.50.049S		1.25 (31.6)	0.40 (10.0)	3.11 (1.41)	7.00 (3.18)	SLSA-1 Suspensions SLSA-2 Suspensions
Fittings for F30 Cups with Valves						
20-30 CONNECTION PLATE A-3150141 31.50.141		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18G-18FG Double Female G 1/8" adapter.				SLSA-1 Suspensions SLSA-2 Suspensions
30 BUTTON VALVE A-3150055 31.50.055		The 30 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.				SLSA-1 Suspensions SLSA-2 Suspensions
F40 Cups with Valves						
F40-NEO/VALVE A-3150050P 31.50.050P		1.66 (42.1)	0.80 (21.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
F40-SIT/VALVE A-3150050S 31.50.050S		1.66 (42.1)	0.80 (21.0)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / F Series Flat Cups with Valves

Vacuum Cup Description and Part Number	Dimensional Drawing	Static Diameter* in. (mm)	Static Height* in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) [2:1 Safety Factor] lb (kg)	Pull-Off Capacity at 27 in. Hg (685.8mm Hg) [1:1 Safety Factor] lb (kg)	Level Compensator Suspensions	
Fittings for F40 Cups with Valves							
40 CONNECTION PLATE A-3150143 31.50.143						The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.	SLSA-2 Suspensions
40 BUTTON VALVE A-3150056 31.50.056						The 40 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.	SLSA-2 Suspensions
F50 Cups with Valves							
F50-NEO/VALVE A-3150051P 31.50.051P		2.10 (52.8)	1.10 (27.0)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions	
F50-SIT/VALVE A-3150051S 31.50.051S		2.10 (52.8)	1.10 (27.0)	9.33 (4.23)	21.00 (9.53)	SLSA-2 Suspensions	
Fittings for F50 Cups with Valves							
50 CONNECTION PLATE A-3150145 31.50.145						The 50 Connection Plate uses a 50 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.	SLSA-2 Suspensions
50 BUTTON VALVE A-3150057 31.50.057						The 50 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.	SLSA-2 Suspensions
F75 Cups with Valves							
F75-NEO/VALVE A-3150078P 31.50.078P		3.02 (76.5)	0.60 (14.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions	
F75-SIT/VALVE A-3150078S 31.50.078S		3.02 (76.5)	0.60 (14.0)	26.67 (12.10)	60.00 (27.22)	SLSA-2 Suspensions	

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Vacuum Cups and Suction Cups

Generic P-Style / F Series Flat Cups with Valves

Vacuum Cup Description and Part Number	Dimensional Drawing	Static Diameter* in. (mm)	Static Height* in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) [2:1 Safety Factor] lb (kg)	Pull-Off Capacity at 27 in. Hg (685.8mm Hg) [1:1 Safety Factor] lb (kg)	Level Compensator Suspensions	
Fitting and Valve for F75 Cups							
75 FITTING 1/8" A-3250006 32.50.006						The 75 Fitting 1/8" with 1/8" female center port connection with optional M5 (10/32) female port often used as a blow-off port.	SLSA-2 Suspensions
75 BUTTON VALVE A-3350033 33.50.033						The 75 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.	SLSA-2 Suspensions
F110 Cups with Valves							
F110-NEO/VALVE A-3150079P 31.50.079P		4.30 (112.5)	0.70 (19.0)	56.00 (25.40)	126.00 (57.15)		SLSA-3 Suspensions
F110-SIT/VALVE A-3150079S 31.50.079S		4.30 (112.5)	0.70 (19.0)	56.00 (25.40)	126.00 (57.15)		SLSA-3 Suspensions
Fitting and Valve for F110 Cups							
110 FITTING 1/2" A-3250007 32.50.007						The 110 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.	SLSA-3 Suspensions
110/150 BUTTON VALVE A-3350034 33.50.034						The 110/150 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.	SLSA-3 Suspensions
F150 Cups with Valves							
F150-NEO/VALVE A-3150080P 31.50.080P		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)		SLSA-3 Suspensions
F150-SIT/VALVE A-3150080S 31.50.080S		6.13 (155.6)	1.00 (25.0)	106.67 (48.38)	240.00 (108.86)		SLSA-3 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / F Series Flat Cups with Valves

Vacuum Cup Description and Part Number	Dimensional Drawing	Static Diameter* in. (mm)	Static Height* in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) [2:1 Safety Factor] lb (kg)	Pull-Off Capacity at 27 in. Hg (685.8mm Hg) [1:1 Safety Factor] lb (kg)	Level Compensator Suspensions	
Fitting and Valve for F150 Cups							
150 FITTING 1/2" A-3250008 32.50.008						The 150 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.	SLSA-3 Suspensions
110/150 BUTTON VALVE A-3350034 33.50.034						The 110/150 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.	SLSA-3 Suspensions

Anver Valve Cup Assemblies

Please Note:

Many new Valve Cup Assembly Options are now available from Anver by combining select Anver cups and Anver fittings to form Anver Valve Cup Assemblies. The chart below describes these possible cup/valve combinations.

For more information please visit:

[anver.com/document/vacuum components/vacuum cups/Generic cups/cups-f-valves.htm#anver_valve_cup_assys](http://anver.com/document/vacuum%20components/vacuum%20cups/Generic%20cups/cups-f-valves.htm#anver_valve_cup_assys)

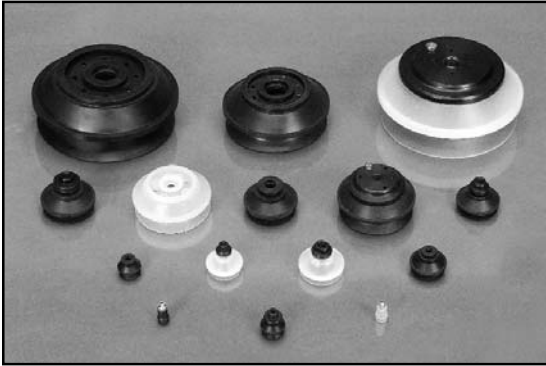
F77-NBR and Fitting HS18-SV-SS
F77-SIT and Fitting HS18-SV-SS
F85-NBR and Fitting HS18-SV-SS
F85-SIT and Fitting HS18-SV-SS
F95-NBR and Fitting HS18-SV-LL
F95-SIT and Fitting HS18-SV-LL
F77-NBR and Fitting HS18-G-SV-SS
F77-SIT and Fitting HS18-G-SV-SS
F85-NBR and Fitting HS18-G-SV-SS
F85-SIT and Fitting HS18-G-SV-SS
F95-NBR and Fitting HS18-G-SV-LL
F95-SIT and Fitting HS18-G-SV-LL





Vacuum Cups and Suction Cups

Generic P-Style / B Series Bellows Cups



ANVER made Generic Replacements of P-Style Vacuum Cups and Suction Cups

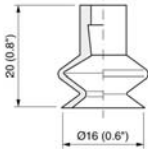
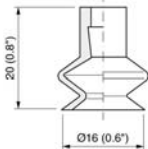
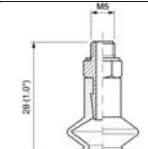
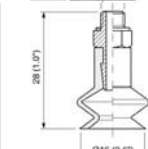
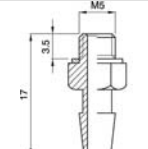
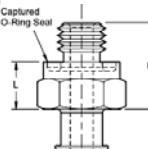
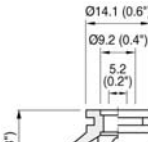
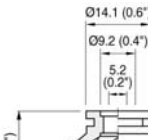
Ideal for use where level compensation is desired on an irregularly shaped object, where a vertical offset motion is involved, for use on curved surfaces, or for separating thin work pieces. Available in sizes from 0.40 to 6.10 inches (11.0 to 156.0mm).

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
B10 Cups								
B10-NEO A-3150101		0.43 (11.0)	0.42 (10.6)	0.60 (16.0)	0.52 (13.2)	0.49 (0.22)	1.10 (0.50)	SLSA-1 Suspensions
B10-SIT A-3150101S		0.43 (11.0)	0.42 (10.6)	0.60 (16.0)	0.52 (13.2)	0.49 (0.22)	1.10 (0.50)	SLSA-1 Suspensions
B10 Cups with Fitting								
B10-NEO/FIT A-3150023		0.43 (11.0)	0.42 (10.6)	1.00 (25.0)	0.92 (23.4)	0.49 (0.22)	1.10 (0.50)	SLSA-1 Suspensions
B10-SIT/FIT A-3150023S		0.43 (11.0)	0.42 (10.6)	1.00 (25.0)	0.92 (23.4)	0.49 (0.22)	1.10 (0.50)	SLSA-1 Suspensions
Fittings for B10 Cups								
BM5 FITTING M5 MALE Replaces 10-15 FITTING A-3107030		The 10-15 Fitting M5 Male is a 5 mm Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Comes with washer.						SLSA-1 Suspensions
10-32 FITTING UNF MALE BM10-32		The 10-32 Fitting UNF Male is a 10-32 UNF Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Fits all the same cups as the 10-15 Fitting above, but in a 10-32 UNF version. Comes with captured O-ring for a vacuum tight seal. Popular alternate fitting for the North American market.						SLSA-1 Suspensions

Vacuum Cups and Suction Cups



Generic P-Style / B Series Bellows Cups

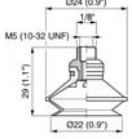
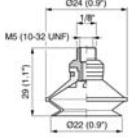
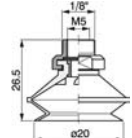
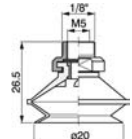
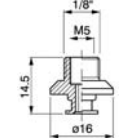
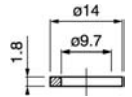
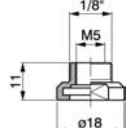
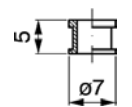
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B15 Cups								
B15-NEO A-3150230		0.60 (16.0)	0.66 (16.8)	0.80 (20.0)	0.59 (14.8)	0.89 (0.40)	2.00 (0.91)	SLSA-1 Suspensions
B15-SIT A-3150230S		0.60 (16.0)	0.66 (16.8)	0.80 (20.0)	0.59 (14.8)	0.89 (0.40)	2.00 (0.91)	SLSA-1 Suspensions
B15 Cups with Fitting								
B15-NEO/FIT A-3250037		0.60 (16.0)	0.66 (16.8)	1.00 (28.0)	0.79 (20.1)	0.89 (0.40)	2.00 (0.91)	SLSA-1 Suspensions
B15-SIT/FIT A-3250037S		0.60 (16.0)	0.66 (16.8)	1.00 (28.0)	0.79 (20.1)	0.89 (0.40)	2.00 (0.91)	SLSA-1 Suspensions
Fittings for B15 Cups								
BM5 FITTING M5 MALE Replaces 10-15 FITTING A-3107030		The 10-15 Fitting M5 Male is a 5 mm Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Comes with washer.						SLSA-1 Suspensions
10-32 FITTING UNF MALE BM10-32		The 10-32 Fitting UNF Male is a 10-32 UNF Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Comes with captured O-ring. Popular alternate fitting for North America.						SLSA-1 Suspensions
B20 Cups								
B20-NEO A-3150103		0.90 (22.0)	0.85 (21.5)	0.80 (20.0)	0.49 (12.5)	1.38 (0.62)	3.10 (1.41)	SLSA-1 or 2 Suspensions
B20-SIT A-3150103S		0.90 (22.0)	0.85 (21.5)	0.80 (20.0)	0.49 (12.5)	1.38 (0.62)	3.10 (1.41)	SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B20 Cups with 20-30 Fitting								
B20-NEO/1PC FIT A-3150025A		0.90 (22.0)	0.85 (21.5)	1.10 (29.0)	0.79 (20.1)	1.38 (0.62)	3.10 (1.41)	SLSA-1 or 2 Suspensions
B20-SIT/1PC FIT A-3150025SA		0.90 (22.0)	0.85 (21.5)	1.10 (29.0)	0.79 (20.1)	1.38 (0.62)	3.10 (1.41)	SLSA-1 or 2 Suspensions
B20 Cups with 20-30 Connection Plate								
B20-NEO/FIT /SCREEN A-3150025		0.90 (22.0)	0.85 (21.5)	1.00 (26.0)	0.69 (17.5)	1.38 (0.62)	3.10 (1.41)	SLSA-1 or 2 Suspensions
B20-SIT/FIT /SCREEN A-3150025S		0.90 (22.0)	0.85 (21.5)	1.00 (26.0)	0.69 (17.5)	1.38 (0.62)	3.10 (1.41)	SLSA-1 or 2 Suspensions
Fittings for B20 Cups								
20-30 FITTING A-3150196		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.						SLSA-1 or 2 Suspensions
STRENGTHENING RING SILICONE 20/30 A-0101084		The Strengthening Ring 20/30 is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-1 or 2 Suspensions
20-30 CONNECTION PLATE A-3150141		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.						SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140		The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.						SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B30 Cups								
B30-NEO A-3150104		1.30 (34.0)	1.34 (34.0)	1.00 (26.0)	0.75 (19.0)	2.09 (0.95)	4.70 (2.13)	SLSA-1 or 2 Suspensions
B30-SIT A-3150104S		1.30 (34.0)	1.34 (34.0)	1.00 (26.0)	0.75 (19.0)	2.09 (0.95)	4.70 (2.13)	SLSA-1 or 2 Suspensions
B30 Cups with 20-30 Fitting								
B30-NEO/1PC FIT A-3150026A		1.30 (34.0)	1.34 (34.0)	1.30 (34.0)	1.05 (26.7)	2.09 (0.95)	4.70 (2.13)	SLSA-1 or 2 Suspensions
B30-SIT/1PC FIT A-3150026SA		1.30 (34.0)	1.34 (34.0)	1.30 (34.0)	1.05 (26.7)	2.09 (0.95)	4.70 (2.13)	SLSA-1 or 2 Suspensions
B30 Cups with 20-30 Connection Plate								
B30-NEO/FIT /SCREEN A-3150026		1.30 (34.0)	1.30 (34.0)	1.30 (34.0)	1.05 (26.7)	2.09 (0.95)	4.70 (2.13)	SLSA-1 or 2 Suspensions
B30-SIT/FIT /SCREEN A-3150026S		1.30 (34.0)	1.30 (34.0)	1.30 (34.0)	1.05 (26.7)	2.09 (0.95)	4.70 (2.13)	SLSA-1 or 2 Suspensions
Fittings for B30 Cups								
20-30 FITTING A-3150196		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.						SLSA-1 or 2 Suspensions
STRENGTHENING RING SILICONE 20/30 A-0101084		The Strengthening Ring 20/30 is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-1 or 2 Suspensions



Vacuum Cups and Suction Cups

Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension	
20-30 CONNECTION PLATE A-3150141								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140								The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.	SLSA-1 or 2 Suspensions
B40 Cups									
B40-NEO A-3150105		1.70 (43.0)	1.70 (43.0)	1.10 (28.0)	0.70 (17.7)	2.67 (1.21)	6.00 (2.72)	SLSA-2 Suspensions	
B40-SIT A-3150105S		1.70 (43.0)	1.70 (43.0)	1.10 (28.0)	0.70 (17.7)	2.67 (1.21)	6.00 (2.72)	SLSA-2 Suspensions	
B40 Cups with 40/30-2/BL30 Fitting									
B40-NEO/1PC FIT A-3150027A		1.70 (43.0)	1.70 (43.0)	1.40 (36.0)	1.00 (25.4)	2.67 (1.21)	6.00 (2.72)	SLSA-2 Suspensions	
B40-SIT/1PC FIT A-3150027SA		1.70 (43.0)	1.70 (43.0)	1.40 (36.0)	1.00 (25.4)	2.67 (1.21)	6.00 (2.72)	SLSA-2 Suspensions	
B40 Cups with 40 Connection Plate									
B40-NEO/FIT /SCREEN A-3150027		1.70 (43.0)	1.70 (43.0)	1.40 (35.0)	1.00 (25.4)	2.67 (1.21)	6.00 (2.72)	SLSA-2 Suspensions	
B40-SIT/FIT/SCREEN A-3150027S		1.70 (43.0)	1.70 (43.0)	1.40 (35.0)	1.00 (25.4)	2.67 (1.21)	6.00 (2.72)	SLSA-2 Suspensions	

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Vacuum Cups and Suction Cups



Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
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Fittings for B40 Cups

40/30-2/BL30 FITTING A-3250001		The 40/30-2/BL30 FITTING uses a Strengthening Ring 40. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.					SLSA-2 Suspensions	
STRENGTHENING RING SILICONE 40 A-0101085		The Strengthening Ring 40 is used with the above 40/30-2/BL30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.					SLSA-2 Suspensions	
40 CONNECTION PLATE A-3150143		The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.					SLSA-2 Suspensions	
40 LOCKING SPACER A-3150142		The 40 Locking Spacer is used with the above 40 Connection Plate. It presses in from the bottom.					SLSA-2 Suspensions	

B50 Cups

B50-NEO A-3150233P		2.00 (52.0)	2.12 (53.8)	1.40 (35.0)	0.93 (23.6)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
B50-SIT A-3150233S		2.00 (52.0)	2.12 (53.8)	1.40 (35.0)	0.93 (23.6)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions

B50 Cups with 50 Fitting

B50-NEO/1PC FIT A-3250035PA		2.00 (52.0)	2.12 (53.8)	1.70 (44.0)	1.23 (31.2)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
B50-SIT/1PC FIT A-3250035SA		2.00 (52.0)	2.12 (53.8)	1.70 (44.0)	1.23 (31.2)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B50 Cups with 50 Connection Plate								
B50-NEO/FIT /SCREEN A-3250035P		2.00 (52.0)	2.12 (53.8)	1.70 (43.0)	1.23 (31.2)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
B50-SIT/FIT /SCREEN A-3250035S		2.00 (52.0)	2.12 (53.8)	1.70 (43.0)	1.23 (31.2)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
Fittings for B50 Cups								
50/50-2 FITTING A-05AG		The 50/50-2 Fitting is utilized with a Strengthening Ring 50. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
STRENGTHENING RING SILICONE 50 A-0101086		The Strengthening Ring 50 is used with the above 50/50-2 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-2 Suspensions
50 CONNECTION PLATE A-3150145		The 50 Connection Plate uses a 50 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
50 LOCKING SPACER A-3150144		The 50 Locking Spacer is used with the above 50 Connection Plate. It presses in from the bottom						SLSA-2 Suspensions
B75 Cups								
B75-NEO A-3250096P		3.10 (78.0)	3.21 (81.5)	1.50 (37.0)	1.19 (30.2)	22.22 (10.08)	50.00 (22.68)	SLSA-2 Suspensions
B75-SIT A-3250096S		3.10 (78.0)	3.21 (81.5)	1.50 (37.0)	1.19 (30.2)	22.22 (10.08)	50.00 (22.68)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / B Series Bellows Cups

VacuumCup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B75 Cups with 75 Fitting								
B75-NEO/FIT/SCREEN A-3250023P		3.10 (78.0)	3.21 (81.5)	2.00 (50.0)	1.48 (37.6)	22.22 (10.08)	50.00 (22.68)	SLSA-2 Suspensions
B75-SIT/FIT/SCREEN A-3250023S		3.10 (78.0)	3.21 (81.5)	2.00 (50.0)	1.48 (37.6)	22.22 (10.08)	50.00 (22.68)	SLSA-2 Suspensions
B75 Cups with 75 Connection Plate								
B75-NEO/CON PLATE A-3150096P		3.10 (78.0)	3.21 (81.5)	2.00 (50.0)	1.48 (37.6)	22.22 (10.08)	50.00 (22.68)	SLSA-2 Suspensions
B75-SIT/CON PLATE A-3150096S		3.10 (78.0)	3.21 (81.5)	2.00 (50.0)	1.48 (37.6)	22.22 (10.08)	50.00 (22.68)	SLSA-2 Suspensions
Fittings for B75 Cups								
75 CONNECTION PLATE 1/8 A-3150043		The 75 Connection Plate 1/8 is to be imbedded in the 75 Series suction cup's rubber portion allowing the 75 Fitting 1/8" to be held in place.						SLSA-2 Suspensions
75 FITTING 1/8" A-3250006		The 75 Fitting 1/8" with 1/8" female center port connection with optional M5 (10/32) female port often used as a blow-off port.						SLSA-2 Suspensions
B110 Cups								
B110-NEO A-3150108P		4.50 (115.0)	4.76 (120.9)	2.10 (54.0)	0.84 (21.2)	45.78 (20.76)	103.00 (46.72)	SLSA-3 Suspensions
B110-SIT A-3150108S		4.50 (115.0)	4.76 (120.9)	2.10 (54.0)	0.84 (21.2)	45.78 (20.76)	103.00 (46.72)	SLSA-3 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B110 Cups with 110 Fitting								
B110-NEO/FIT A-3150030P		4.50 (115.0)	4.76 (120.9)	2.50 (63.0)	1.23 (31.1)	45.78 (20.76)	103.00 (46.72)	SLSA-3 Suspensions
B110-SIT/FIT A-3150030S		4.50 (115.0)	4.76 (120.9)	2.50 (63.0)	1.23 (31.2)	45.78 (20.76)	103.00 (46.72)	SLSA-3 Suspensions
B110 Cups with 110 Connection Plate								
B110-NEO/CON PLATE A-3150035P		4.50 (115.0)	4.76 (120.9)	2.10 (54.0)	0.84 (21.2)	45.78 (20.76)	103.00 (46.72)	SLSA-3 Suspensions
B110-SIT/CON PLATE A-3150035S		4.50 (115.0)	4.76 (120.9)	2.10 (54.0)	0.84 (21.2)	45.78 (20.76)	103.00 (46.72)	SLSA-3 Suspensions
Fittings for B110 Cups								
110 FITTING 1/2" A-3250007		The 110 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.						SLSA-3 Suspensions
110 CONNECTION PLATE A-3150044		The 110 Connection Plate is to be imbedded in the 110 Series suction cup's rubber portion allowing the 110 Fitting 1/2" to be held in place.						SLSA-3 Suspensions
B150 Cups								
B150-NEO A-3150109P		6.10 (156.0)	6.50 (165.1)	2.80 (71.0)	1.05 (26.5)	88.00 (39.92)	198.00 (89.81)	SLSA-3 Suspensions
B150-SIT A-3150109S		6.10 (156.0)	6.50 (165.1)	2.10 (54.0)	1.05 (26.5)	88.00 (39.92)	198.00 (89.81)	SLSA-3 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / B Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
B150 Cups with 150 Fitting								
B150-NEO/FIT A-3150031P		6.10 (156.0)	6.50 (165.1)	3.10 (78.0)	1.44 (36.6)	88.00 (39.92)	198.00 (89.81)	SLSA-3 Suspensions
B150-SIT/FIT A-3150031S		6.10 (156.0)	6.50 (165.1)	3.10 (78.0)	1.44 (36.6)	88.00 (39.92)	198.00 (89.81)	SLSA-3 Suspensions
B150 Cups with 150 Connection Plate								
B150-NEO/CON PLATE A-3150036P		6.10 (156.0)	6.50 (165.1)	2.80 (71.0)	1.05 (26.5)	88.00 (39.92)	198.00 (89.81)	SLSA-3 Suspensions
B150-SIT/CON PLATE A-3150036S		6.10 (156.0)	6.50 (165.1)	2.80 (71.0)	1.05 (26.5)	88.00 (39.92)	198.00 (89.81)	SLSA-3 Suspensions
Fittings for B150 Cups								
150 CONNECTION PLATE A-3150045		The 150 Connection Plate is to be imbedded in the 150 Series suction cup's rubber portion allowing the 150 Fitting 1/2" to be held in place.						SLSA-3 Suspensions
150 FITTING 1/2" A-3250008		The 150 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.						SLSA-3 Suspensions

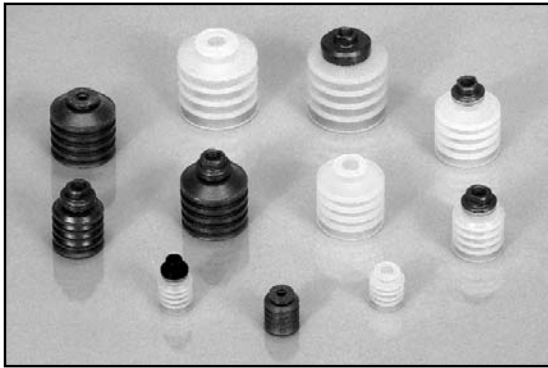
* All cups shown above are identical in size and shape to other manufacturers' cups. The 'static' columns represent the cup dimensions without a load as given by other manufacturers. The 'compressed' column specifications are important in making sure that everything fits, and represent the actual size of the cup after full compression (being flattened out) on a level load. (This difference is negligible in the F series.) The bigger the cup the greater the enlargement of the diameter. A lower vacuum level will lessen this compression (or flattening out); however, make sure to leave enough room for the static height of the cup in your design.

Note: The "G" thread is a straight pipe thread also known as BSPP, BSP, NPS or "G", commonly used in Europe, Asia and most of the world.



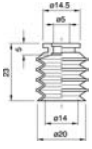
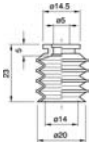
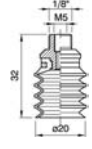
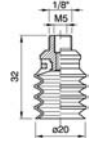
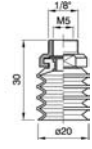
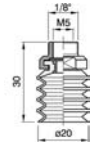
Vacuum Cups and Suction Cups

Generic P-Style / BL Series Bellows Cups



ANVER-Made Generic Replacements of P-Style Vacuum Cups and Suction Cups

For use where longer cup movement is required than is possible with "B" series single bellows cups. Ideal for use where level compensation is desired on irregularly shaped objects, where a vertical offset motion is involved, or for use on curved surfaces, especially in the food industry. Available in sizes from 0.78 to 1.97 inches (20.0 to 50.0mm)

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension
BL20 Cups								
BL20-NEO A-3150110		0.78 (20.0)	0.82 (21.0)	0.91 (23.0)	0.67 (17.0)	0.86 (0.39)	1.10 (0.50)	SLSA-1 or 2 Suspensions
BL20-SIT A-3150110S		0.78 (20.0)	0.82 (21.0)	0.91 (23.0)	0.67 (17.0)	0.86 (0.39)	1.40 (0.64)	SLSA-1 or 2 Suspensions
BL20 Cups with 20-30 Fitting								
BL20-NEO/1PC FIT A-3150061A		0.78 (20.0)	0.82 (21.0)	1.32 (33.6)	1.08 (27.4)	0.86 (0.39)	1.40 (0.64)	SLSA-1 or 2 Suspensions
BL20-SIT/ 1PC FIT A-3150061SA		0.78 (20.0)	0.82 (21.0)	1.32 (33.6)	1.08 (27.4)	0.86 (0.39)	1.40 (0.64)	SLSA-1 or 2 Suspensions
BL20 Cups with 20-30 Connection Plate								
BL20-NEO/FIT/SCREEN A-3150061		0.78 (20.0)	0.82 (21.0)	1.19 (30.2)	0.95 (24.1)	0.86 (0.39)	1.40 (0.64)	SLSA-1 or 2 Suspensions
BL20-SIT/FIT/SCREEN A-3150061S		0.78 (20.0)	0.82 (21.0)	1.19 (30.2)	0.95 (24.1)	0.86 (0.39)	1.40 (0.64)	SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / BL Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension	
Fittings for BL20 Cups									
20-30 FITTING A-3150196								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084								The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting	SLSA-2 Suspensions
20-30 CONNECTION PLATE A-3150141								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-2 Suspensions
20-30 LOCKING SPACER A-3150140								The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.	SLSA-2 Suspensions
BL30 Cups									
BL30-NEO A-3150111		1.18 (30.0)	1.21 (30.7)	1.31 (33.3)	1.02 (25.9)	2.40 (1.09)	3.60 (1.63)	SLSA-2 Suspensions	
BL30-SIT A-3150111S		1.18 (30.0)	1.21 (30.7)	1.31 (33.3)	1.02 (25.9)	2.40 (1.09)	3.60 (1.63)	SLSA-2 Suspensions	
BL30 Cups with 40/30-2/BL30 Fitting									
BL30-NEO/1PC FIT A-3150062A		1.18 (30.0)	1.21 (30.7)	1.65 (41.9)	1.36 (34.5)	2.40 (1.09)	3.60 (1.63)	SLSA-2 Suspensions	
BL30-SIT/1PC FIT A-3150062SA		1.18 (30.0)	1.21 (30.7)	1.65 (41.9)	1.36 (34.5)	2.40 (1.09)	3.60 (1.63)	SLSA-2 Suspensions	



Vacuum Cups and Suction Cups

Generic P-Style / BL Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
BL30 Cups with 40 Connection Plate								
BL30-NEO/FIT/SCREEN A-3150062		1.18 (30.0)	1.21 (30.7)	1.61 (40.8)	1.32 (33.5)	2.40 (1.09)	3.60 (1.63)	SLSA-2 Suspensions
BL30-SIT/FIT/SCREEN A-3150062S		1.18 (30.0)	1.21 (30.7)	1.61 (40.8)	1.32 (33.5)	2.40 (1.09)	3.60 (1.63)	SLSA-2 Suspensions
Fittings for BL30 Cups								
40/30-2/BL30 FITTING A-3250001		The 40/30-2/BL30 FITTING uses a Strengthening Ring 40. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
STRENGTHENING RING SILICONE 40 A-0101085		The Strengthening Ring 40 is used with the above 40/30-2/BL30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-2 Suspensions
40 CONNECTION PLATE A-3150143		The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
40 LOCKING SPACER A-3150142		The 40 Locking Spacer is used with the above 40 Connection Plate. It presses in from the bottom.						SLSA-2 Suspensions
BL40 Cups								
BL40-NEO A-3150112		1.59 (40.3)	1.64 (41.5)	1.32 (33.6)	1.10 (27.9)	3.27 (1.48)	4.90 (2.22)	SLSA-2 Suspensions
BL40-SIT A-3150112S		1.59 (40.3)	1.64 (41.5)	1.32 (33.6)	1.10 (27.9)	3.27 (1.48)	4.90 (2.22)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / BL Series Bellows Cups

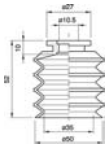
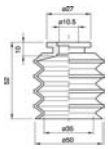
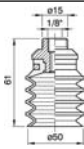
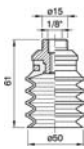
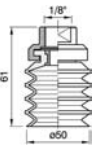
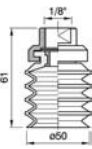
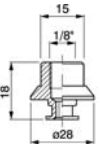
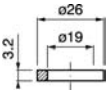
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
BL40 Cups with 40/30-2/BL30 Fitting								
BL40-NEO/1PC FIT A-3150063A		1.59 (40.3)	1.64 (41.5)	1.96 (49.7)	1.74 (44.2)	3.27 (1.48)	4.90 (2.22)	SLSA-2 Suspensions
BL40-SIT/1PC FIT A-3150063SA		1.59 (40.3)	1.64 (41.5)	1.96 (49.7)	1.74 (44.2)	3.27 (1.48)	4.90 (2.22)	SLSA-2 Suspensions
BL40 Cups with 40 Connection Plate								
BL40-NEO/FIT/SCREEN A-3150063		1.59 (40.3)	1.64 (41.5)	1.95 (49.5)	1.73 (43.9)	3.27 (1.48)	4.90 (2.22)	SLSA-2 Suspensions
BL40-SIT/FIT/SCREEN A-3150063S		1.59 (40.3)	1.64 (41.5)	1.95 (49.5)	1.73 (43.9)	3.27 (1.48)	4.90 (2.22)	SLSA-2 Suspensions
Fittings for BL40 Cups								
40/30-2/BL30 FITTING A-3250001		The 40/30-2/BL30 FITTING uses a Strengthening Ring 40. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
STRENGTHENING RING SILICONE 40 A-0101085		The Strengthening Ring 40 is used with the above 40/30-2/BL30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-2 Suspensions
40 CONNECTION PLATE A-3150143		The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
40 LOCKING SPACER A-3150142		The 40 Locking Spacer is used with the above 40 Connection Plate. It presses in from the bottom.						SLSA-2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / BL Series Bellows Cups

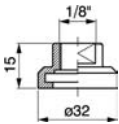

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
BL50 Cups								
BL50-NEO A-3150113		1.97 (50.0)	2.03 (51.5)	2.04 (51.8)	1.60 (40.0)	6.40 (2.90)	9.60 (4.35)	SLSA-2 Suspensions
BL50-SIT A-3150113S		1.97 (50.0)	2.03 (51.5)	2.04 (51.8)	1.60 (40.0)	6.40 (2.90)	9.60 (4.35)	SLSA-2 Suspensions
BL50 Cups with 50/50-2 Fitting								
BL50-NEO/1PC FIT VA-3150064A		1.97 (50.0)	2.03 (51.5)	2.48 (62.9)	2.04 (51.8)	6.40 (2.90)	9.60 (4.35)	SLSA-2 Suspensions
BL50-SIT/1PC FIT A-3150064SA		1.97 (50.0)	2.03 (51.5)	2.48 (62.9)	2.04 (51.8)	6.40 (2.90)	9.60 (4.35)	SLSA-2 Suspensions
BL50 Cups with 50 Connection Plate								
BL50-NEO/FIT/SCREEN A-3150064		1.97 (50.0)	2.03 (51.5)	2.39 (60.7)	1.95 (49.5)	6.40 (2.90)	9.60 (4.35)	SLSA-2 Suspensions
BL50-SIT/FIT/SCREEN A-3150064S		1.97 (50.0)	2.03 (51.5)	2.39 (60.7)	1.95 (49.5)	6.40 (2.90)	9.60 (4.35)	SLSA-2 Suspensions
Fittings for BL50 Cups								
50/50-2 FITTING A-05AG		<p>The 50/50-2 Fitting uses a 50 Strengthening Ring. The 50/50-2 Fitting allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.</p>						SLSA-2 Suspensions
50 STRENGTHENING RING SILICONE A-0101086		<p>The 50 Strengthening Ring is used with the above 50/50-2 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.</p>						SLSA-2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / BL Series Bellows Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension	
50 CONNECTION PLATE A-3150145								The 50 Connection Plate uses a 50 Locking Spacer. The A-3150145 50 Connection Plate allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.	SLSA-2 Suspensions
50 LOCKING SPACER A-3150144								The 50 Locking Spacer is used with the above 50 Connection Plate. It presses in from the bottom.	SLSA-2 Suspensions

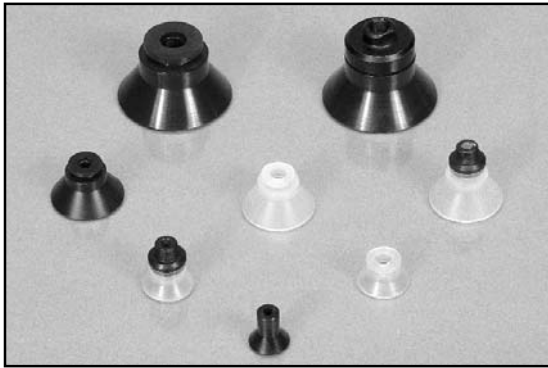
* All cups shown above are identical in size and shape to other manufacturers' cups. The 'static' columns represent the cup dimensions without a load as given by other manufacturers. The 'compressed' column specifications are important in making sure that everything fits, and represent the actual size of the cup after full compression (being flattened out) on a level load. (This difference is negligible in the F series.) The bigger the cup the greater the enlargement of the diameter. A lower vacuum level will lessen this compression (or flattening out); however, make sure to leave enough room for the static height of the cup in your design.

Note: The "G" thread is a straight pipe thread also known as BSPP, BSP, NPS or "G", commonly used in Europe, Asia and most of the world.



Vacuum Cups and Suction Cups

Generic P-Style / D Series Deep Vacuum Cups



ANVER-Made Generic Replacements of P-Style Vacuum Cups and Suction Cups

Ideal for use on curved or irregular surfaces or for lifting across corners and edges. Available in sizes from 0.65 to 2.10 inches (16.5 to 53.0mm).

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension	
D15 Cups									
D15-NEO A-3150135		0.65 (16.5)	0.78 (20.0)	0.65 (16.5)	0.49 (12.4)	1.02 (0.46)	2.50 (1.13)	SLSA-1 Suspensions	
D15-SIT A-3150135S		0.65 (16.5)	0.78 (20.0)	0.65 (16.5)	0.49 (12.4)	1.02 (0.46)	2.50 (1.13)	SLSA-1 Suspensions	
D15 Cups with Fitting									
D15-NEO/ FITTING A-3150010		0.65 (16.5)	0.78 (20.0)	1.01 (25.5)	0.85 (21.6)	1.02 (0.46)	2.50 (1.13)	SLSA-1 Suspensions	
D15-SIT/ FITTING A-3150010S		0.65 (16.5)	0.78 (20.0)	1.01 (25.5)	0.85 (21.6)	1.02 (0.46)	2.50 (1.13)	SLSA-1 Suspensions	
Fittings for D15 Cups									
BM5 FITTING M5 MALE Replaces 10-15 FITTING A-3107030		The BM5 FITTING M5 MALE is an improved 5 mm male fitting with captured O-ring which replaces the older 10-15 FITTING M5 MALE. It allows you to screw directly into any of the SLSA-1 Suspensions.					SLSA-1 Suspensions		
10-32 FITTING UNF MALE BM10-32		The 10-32 Fitting UNF Male is a 10-32 UNF Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Fits all the same cups as the 10-15 Fitting above, but in a 10-32 UNF version. Comes with captured O-ring for a vacuum tight seal. Popular alternate fitting for the North American market.					SLSA-1 Suspensions		

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Vacuum Cups and Suction Cups



Generic P-Style / D Series Deep Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
D20 Cups								
D20-NEO A-3150136		0.90 (22.0)	1.10 (28.0)	0.50 (13.0)	0.38 (9.5)	1.78 (0.81)	4.00 (1.81)	SLSA-1 or 2 Suspensions
D20-SIT A-3150136S		0.90 (22.0)	1.10 (28.0)	0.50 (13.0)	0.38 (9.5)	1.78 (0.81)	4.00 (1.81)	SLSA-1 or 2 Suspensions
D20 Cups with 20-30 Fitting								
D20-NEO/1PC FITTING A-3150011A		0.90 (22.0)	1.10 (28.0)	0.90 (23.0)	0.78 (19.8)	1.78 (0.81)	4.00 (1.81)	SLSA-1 or 2 Suspensions
D20-SIT/1PC FITTING A-3150011SA		0.90 (22.0)	1.10 (28.0)	0.90 (23.0)	0.78 (19.8)	1.78 (0.81)	4.00 (1.81)	SLSA-1 or 2 Suspensions
D20 Cups with 20-30 Connection Plate								
D20-NEO/FIT/SCREEN A-3150011		0.90 (22.0)	1.10 (28.0)	1.01 (25.5)	0.85 (21.6)	1.78 (0.81)	4.00 (1.81)	SLSA-1 or 2 Suspensions
D20-SIT/FIT/SCREEN A-3150011		0.90 (22.0)	1.10 (28.0)	1.01 (25.5)	0.85 (21.6)	1.78 (0.81)	4.00 (1.81)	SLSA-1 or 2 Suspensions
Fittings for D20 Cups								
20-30 FITTING A-3150196		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.						SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084		The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / D Series Deep Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
20-30 CONNECTION PLATE A-3150141								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.
20-30 LOCKING SPACER A-3150140								The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.
D30 Cups								
D30-NEO A-3150137		1.30 (32.0)	1.57 (40.0)	0.70 (19.0)	0.53 (13.5)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
D30-SIT A-3150137S		1.30 (32.0)	1.57 (40.0)	0.70 (19.0)	0.53 (13.5)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
D30 Cups with 20-30 Fitting								
D30-NEO/1PC FITTING A-3150012A		1.30 (32.0)	1.57 (40.0)	1.12 (28.0)	0.99 (25.1)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
D30-SIT/1PC FITTING A-3150012SA		1.30 (32.0)	1.57 (40.0)	1.12 (28.0)	0.99 (25.1)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
D30 Cups with 20-30 Connection Plate								
D30-NEO/FIT/SCREEN A-3150012		1.30 (32.0)	1.57 (40.0)	1.10 (27.0)	0.93 (23.6)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions
D30-SIT/FIT/SCREEN A-3150012S		1.30 (32.0)	1.57 (40.0)	1.10 (27.0)	0.93 (23.6)	3.11 (1.41)	7.00 (3.18)	SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / D Series Deep Vacuum Cups

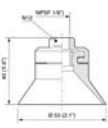
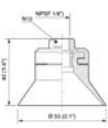
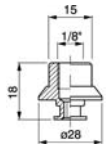
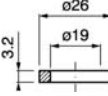
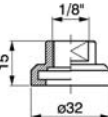
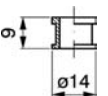
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension	
Fittings for D30 Cups									
20-30 FITTING A-3150196								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084								The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.	SLSA-1 or 2 Suspensions
20-30 CONNECTION PLATE A-3150141								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140								The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.	SLSA-1 or 2 Suspensions
D50 Cups									
D50-NEO A-3150138		2.10 (53.0)	2.40 (61.0)	1.20 (31.0)	0.99 (25.1)	9.78 (4.44)	22.00 (9.98)	SLSA-2 Suspensions	
D50-SIT A-3150138S		2.10 (53.0)	2.40 (61.0)	1.20 (31.0)	0.99 (25.1)	9.78 (4.44)	22.00 (9.98)	SLSA-2 Suspensions	
D50 Cups with 50/50-2 Fitting									
D50-NEO/1PC FITTING A-3150013A		2.10 (53.0)	2.40 (61.0)	1.60 (40.0)	0.99 (25.1)	1.39 (35.3)	22.00 (9.98)	SLSA-2 Suspensions	
D50-SIT/1PC FITTING A-3150013SA		2.10 (53.0)	2.40 (61.0)	1.60 (40.0)	0.99 (25.1)	1.39 (35.3)	22.00 (9.98)	SLSA-2 Suspensions	

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Vacuum Cups and Suction Cups

Generic P-Style / D Series Deep Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
D30 Cups with 20-30 Connection Plate								
D50-NEO/FIT/SCREEN A-3150013		2.10 (53.0)	2.40 (61.0)	1.60 (40.0)	1.39 (35.1)	9.78 (4.44)	22.00 (9.98)	SLSA-2 Suspensions
D50-SIT/FIT/SCREEN A-3150013S		2.10 (53.0)	2.40 (61.0)	1.10 (27.0)	0.93 (23.6)	9.78 (4.44)	22.00 (9.98)	SLSA-2 Suspensions
Fittings for D50 Cups								
50/50-2 FITTING A-05AG		The 50/50-2 Fitting uses a 50 Strengthening Ring. The 50/50-2 Fitting allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-1 or 2 Suspensions
50 STRENGTHENING RING SILICONE A-0101086		The 50 Strengthening Ring is used with the above 50/50-2 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-1 or 2 Suspensions
50 CONNECTION PLATE A-3150145		The 50 Connection Plate uses a 50 Locking Spacer. The A-3150145 50 Connection Plate allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-1 or 2 Suspensions
50 LOCKING SPACER A-3150144		The 50 Locking Spacer is used with the above 50 Connection Plate. It presses in from the bottom.						SLSA-1 or 2 Suspensions

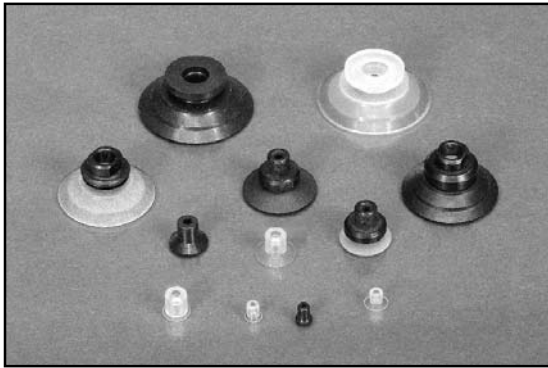
* All cups shown above are identical in size and shape to other manufacturers' cups. The 'static' columns represent the cup dimensions without a load as given by other manufacturers. The 'compressed' column specifications are important in making sure that everything fits, and represent the actual size of the cup after full compression (being flattened out) on a level load. (This difference is negligible in the F series.) The bigger the cup the greater the enlargement of the diameter. A lower vacuum level will lessen this compression (or flattening out); however, make sure to leave enough room for the static height of the cup in your design.

Note: The "G" thread is a straight pipe thread also known as BSPP, BSP, NPS or "G", commonly used in Europe, Asia and most of the world.



Vacuum Cups and Suction Cups

Generic P-Style / U Series Universal Vacuum Cups



ANVER-Made Generic Replacements of P-Style Vacuum Cups and Suction Cups

For general purpose use on flat or slightly curved surfaces.

Available in sizes from 0.21 to 2.03 inches (5.2 to 51.6 mm).

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator/ Suspension	
U4 Cups									
U4-NEO A-3150114		0.21 (5.2)	0.22 (5.5)	0.26 (6.6)	0.25 (6.4)	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions	
U4-SIT A-3150114S		0.21 (5.2)	0.22 (5.5)	0.26 (6.6)	0.25 (6.4)	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions	
U4 Cups with 4-8 Fitting									
U4-NEO/ FITTING A-3150059		0.21 (5.2)	0.22 (5.5)	N/A	N/A	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions	
U4-SIT/ FITTING A-3150059S		0.21 (5.2)	0.22 (5.5)	N/A	N/A	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions	
Fittings for U4 Cups									
4-8 FITTING M5 MALE A-3107031		The 4-8 Fitting M5 Male fitting is a 5 mm Male. It allows you to screw directly into any of the SLSA-1 Suspensions. Comes with washer.					SLSA-1 Suspensions		
4-8 BARBED 10/32 MALE A-3107031-10/32		The 4-8 Barbed Fitting Male allows you to screw directly into any of the SLSA-1 Suspensions which are 5 mm female. Featuring an improved barb design, it fits all the same cups as the 4-8 Fitting, but in a 10-32 UNF version. Comes with a captured O-ring for a vacuum tight seal. A popular fitting for the North American market.					SLSA-1 Suspensions		

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Vacuum Cups and Suction Cups



Generic P-Style / U Series Universal Vacuum Cups

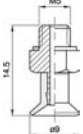
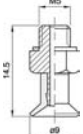
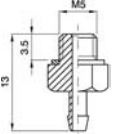
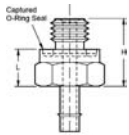
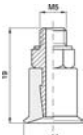
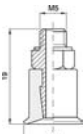
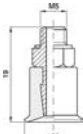
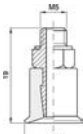
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
U6 Cups								
U6-NEO A-3150115		0.21 (5.2)	0.22 (5.5)	0.26 (6.6)	0.25 (6.4)	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions
U6-SIT A-3150115S		0.21 (5.2)	0.22 (5.5)	0.26 (6.6)	0.25 (6.4)	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions
U6 Cups with 4-8 Fitting								
U6-NEO/ FITTING A-3150003		0.21 (5.2)	0.22 (5.5)	N/A	N/A	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions
U6-SIT/ FITTING A-3150003S		0.21 (5.2)	0.22 (5.5)	N/A	N/A	0.13 (0.06)	0.29 (0.13)	SLSA-1 Suspensions
Fitting for U6 Cups								
4-8 FITTING M5 MALE A-3107031		The 4-8 Fitting M5 Male fitting is a 5 mm Male. It allows you to screw directly into any of the SLSA-1 Suspensions. Comes with washer.						SLSA-1 Suspensions
4-8 BARBED 10/32 MALE A-3107031-10/32		The 4-8 Barbed Fitting Male allows you to screw directly into any of the SLSA-1 Suspensions which are 5 mm female. Featuring an improved barb design, it fits all the same cups as the 4-8 Fitting, but in a 10-32 UNF version. Comes with a captured O-ring for a vacuum tight seal. A popular fitting for the North American market.						SLSA-1 Suspensions
U8 Cups								
U8-NEO A-3150116		0.38 (9.5)	0.39 (10.0)	0.28 (7.1)	0.23 (5.8)	0.39 (0.18)	0.87 (0.39)	SLSA-1 Suspensions
U8-SIT A-3150116S		0.38 (9.5)	0.39 (10.0)	0.28 (7.1)	0.23 (5.8)	0.39 (0.18)	0.87 (0.39)	SLSA-1 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / U Series Universal Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
U8 Cups with 4-8 Fitting								
U8-NEO/ FITTING A-3150004		0.38 (9.5)	0.39 (10.0)	N/A	N/A	0.39 (0.18)	0.87 (0.39)	SLSA-1 Suspensions
U8-SIT/ FITTING A-3150004S		0.38 (9.5)	0.39 (10.0)	N/A	N/A	0.39 (0.18)	0.87 (0.39)	SLSA-1 Suspensions
Fitting for U8 Cups								
4-8 FITTING M5 MALE A-3107031		The 4-8 Fitting M5 Male fitting is a 5 mm Male. It allows you to screw directly into any of the SLSA-1 Suspensions. Comes with washer.						SLSA-1 Suspensions
4-8 BARBED 10/32 MALE A-3107031-10/32		The 4-8 Barbed Fitting Male allows you to screw directly into any of the SLSA-1 Suspensions which are 5 mm female. Featuring an improved barb design, it fits all the same cups as the 4-8 Fitting, but in a 10-32 UNF version. Comes with a captured O-ring for a vacuum tight seal. A popular fitting for the North American market.						SLSA-1 Suspensions
U10 Cups								
U10-NEO A-3150117		0.44 (11.1)	0.44 (11.1)	0.42 (10.5)	0.37 (9.4)	0.67 (0.30)	1.50 (0.68)	SLSA-1 Suspensions
U10-SIT A-3150117S		0.44 (11.1)	0.44 (11.1)	0.42 (10.5)	0.37 (9.4)	0.67 (0.30)	1.50 (0.68)	SLSA-1 Suspensions
U10 Cups with 10-15 Fitting								
U10-NEO/ FITTING A-3150005		0.44 (11.1)	0.44 (11.1)	N/A	N/A	0.67 (0.30)	1.50 (0.68)	SLSA-1 Suspensions
U10-SIT/ FITTING A-3150005S		0.44 (11.1)	0.44 (11.1)	N/A	N/A	0.67 (0.30)	1.50 (0.68)	SLSA-1 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / U Series Universal Vacuum Cups

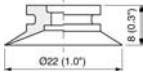
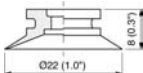
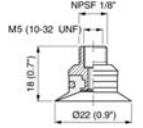
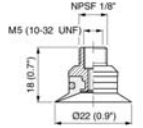
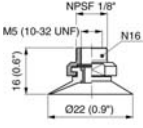
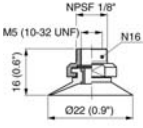
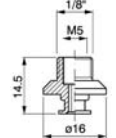
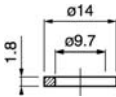
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
Fitting for U10 Cups								
BM5 FITTING M5 MALE Replaces 10-15 FITTING A-3107030		The BM5 FITTING M5 MALE is an improved 5 mm male fitting with captured O-ring which replaces the older 10-15 FITTING M5 MALE. It allows you to screw directly into any of the SLSA-1 Suspensions.						SLSA-1 Suspensions
10-32 FITTING UNF MALE BM10-32		The 10-32 Fitting UNF Male is a 10-32 UNF Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Fits all the same cups as the 10-15 Fitting above, but in a 10-32 UNF version. Comes with captured O-ring for a vacuum tight seal. Popular alternate fitting for the North American market.						SLSA-1 Suspensions
U15 Cups								
U15-NEO A-3150118		00.66 (16.8)	0.70 (17.6)	0.48 (12.0)	0.38 (9.5)	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
U15-SIT A-3150118S		0.66 (16.8)	0.70 (17.6)	0.48 (12.0)	0.38 (9.5)	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
U15 Cups with Fitting								
U15-NEO/ FITTING A-3150006		00.66 (16.8)	0.70 (17.6)	N/A	N/A	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
U15-SIT/ FITTING A-3150006S		0.66 (16.8)	0.70 (17.6)	N/A	N/A	1.11 (0.50)	2.50 (1.13)	SLSA-1 Suspensions
Fitting for U15 Cups								
BM5 FITTING M5 MALE Replaces 10-15 FITTING A-3107030		The BM5 FITTING M5 MALE is an improved 5 mm male fitting with captured O-ring which replaces the older 10-15 FITTING M5 MALE. It allows you to screw directly into any of the SLSA-1 Suspensions.						SLSA-1 Suspensions
10-32 FITTING UNF MALE BM10-32		The 10-32 Fitting UNF Male is a 10-32 UNF Male fitting. It allows you to screw directly into any of the SLSA-1 Suspensions. Fits all the same cups as the 10-15 Fitting above, but in a 10-32 UNF version. Comes with captured O-ring for a vacuum tight seal. Popular alternate fitting for the North American market.						SLSA-1 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / U Series Universal Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
U20 Cups								
U20-NEO A-3150119		0.86 (21.8)	0.90 (22.9)	0.30 (7.6)	0.20 (5.0)	1.60 (0.73)	1.60 (0.73)	SLSA-1 or 2 Suspensions
U20-SIT A-3150119S		0.86 (21.8)	0.90 (22.9)	0.30 (7.6)	0.20 (5.0)	1.60 (0.73)	1.60 (0.73)	SLSA-1 or 2 Suspensions
U20 Cups with 20-30 Fitting								
U20-NEO/1PC FITTING A-3150007A		0.86 (21.8)	0.90 (22.9)	N/A	N/A	1.60 (0.73)	1.60 (0.73)	SLSA-1 or 2 Suspensions
U20-SIT/1PC FITTING A-3150007SA		0.86 (21.8)	0.90 (22.9)	N/A	N/A	1.60 (0.73)	1.60 (0.73)	SLSA-1 or 2 Suspensions
U20 Cups with 20-30 Connection Plate								
U20-NEO/FIT/SCREEN A-3150007		0.86 (21.8)	0.90 (22.9)	N/A	N/A	1.60 (0.73)	1.60 (0.73)	SLSA-1 or 2 Suspensions
U20-SIT/FIT/SCREEN A-3150007S		0.86 (21.8)	0.90 (22.9)	N/A	N/A	1.60 (0.73)	1.60 (0.73)	SLSA-1 or 2 Suspensions
Fittings for U20 Cups								
20-30 FITTING A-3150196		For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.						SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084		The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-1 or 2 Suspensions

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Vacuum Cups and Suction Cups



Generic P-Style / U Series Universal Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension	
Fitting for U20 Cups									
20-30 CONNECTION PLATE A-3150141								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140								The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.	SLSA-1 or 2 Suspensions
U30 Cups									
U30-NEO A-3150120P		1.26 (31.9)	1.29 (32.7)	0.40 (10.1)	0.21 (5.3)	2.98 (1.35)	6.70 (3.04)	SLSA-1 or 2 Suspensions	
U30-SIT A-3150120S		1.26 (31.9)	1.29 (32.7)	0.40 (10.1)	0.21 (5.3)	2.98 (1.35)	6.70 (3.04)	SLSA-1 or 2 Suspensions	
U30 Cups with 20-30 Fitting									
U30-NEO/1PC FITTING A-3150008PA		1.26 (31.9)	1.29 (32.7)	N/A	N/A	2.98 (1.35)	6.70 (3.04)	SLSA-1 or 2 Suspensions	
U30-SIT/1PC FITTING A-3150008SA		1.26 (31.9)	1.29 (32.7)	N/A	N/A	2.98 (1.35)	6.70 (3.04)	SLSA-1 or 2 Suspensions	
U30 Cups with 20-30 Connection Plate									
U30-NEO/FIT/SCREEN A-3150008		1.26 (31.9)	1.29 (32.7)	N/A	N/A	2.98 (1.35)	6.70 (3.04)	SLSA-1 or 2 Suspensions	
U30-SIT/FIT/SCREEN A-3150008S		1.26 (31.9)	1.29 (32.7)	N/A	N/A	2.98 (1.35)	6.70 (3.04)	SLSA-1 or 2 Suspensions	

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Vacuum Cups and Suction Cups

Generic P-Style / U Series Universal Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension	
Fittings for U30 Cups									
20-30 FITTING A-3150196								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-1 or 2 Suspensions
20-30 STRENGTHENING RING SILICONE A-0101084								The 20-30 Strengthening Ring is used with the above 20-30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.	SLSA-1 or 2 Suspensions
20-30 CONNECTION PLATE A-3150141								For SLSA-1 Suspensions, use the HSHN5 Double Male 5 mm adapter. For SLSA-2 Suspensions, use the HS18-18F-G Double Female G 1/8" adapter.	SLSA-1 or 2 Suspensions
20-30 LOCKING SPACER A-3150140								The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.	SLSA-1 or 2 Suspensions
U40 Cups									
U40-NEO A-3150122P		1.65 (41.9)	1.73 (43.9)	0.53 (13.3)	0.30 (7.6)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions	
U40-SIT A-3150122S		1.65 (41.9)	1.73 (43.9)	0.53 (13.3)	0.30 (7.6)	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions	
U40 Cups with 40/30-2/BL30 Fitting									
U40-NEO/1PC FITTING A-3150032PA		1.65 (41.9)	1.73 (43.9)	N/A	N/A	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions	
U40-SIT/1PC FITTING A-3150032SA		1.65 (41.9)	1.73 (43.9)	N/A	N/A	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions	

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Vacuum Cups and Suction Cups



Generic P-Style / U Series Universal Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
U40 Cups with 40 Connection Plate								
U40-NEO/FIT/SCREEN A-3150032P		1.65 (41.9)	1.73 (43.9)	N/A	N/A	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
U40-SIT/FIT/SCREEN A-3150032S		1.65 (41.9)	1.73 (43.9)	N/A	N/A	4.89 (2.22)	11.00 (4.99)	SLSA-2 Suspensions
Fittings for U40 Cups								
40/30-2/BL30 FITTING A-3250001		The 40/30-2/BL30 FITTING uses a Strengthening Ring 40. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
STRENGTHENING RING SILICONE 40 A-0101085		The Strengthening Ring 40 is used with the above 40/30-2/BL30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-2 Suspensions
40 CONNECTION PLATE A-3150143		The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
40 LOCKING SPACER A-3150142		The 40 Locking Spacer is used with the above 40 Connection Plate. It presses in from the bottom.						SLSA-2 Suspensions
U50 Cups								
U50-NEO A-3150121P		2.03 (51.6)	2.12 (53.8)	0.70 (17.7)	0.40 (10.1)	8.89 (4.03)	20.00 (9.07)	SLSA-2 Suspensions
U50-SIT A-3150121S		2.03 (51.6)	2.12 (53.8)	0.70 (17.7)	0.40 (10.1)	8.89 (4.03)	20.00 (9.07)	SLSA-2 Suspensions

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Vacuum Cups and Suction Cups

Generic P-Style / U Series Universal Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Compressed* Dia. in. (mm)	Static* Height in. (mm)	Compressed* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)	Associated Level Compensator Suspension
U50 Cups with 50/50-2 Fitting								
U50-NEO/1PC FITTING A-3150009PA		2.03 (51.6)	2.12 (53.8)	N/A	N/A	8.89 (4.03)	20.00 (9.07)	SLSA-2 Suspensions
U50-SIT/1PC FITTING A-3150009SA		2.03 (51.6)	2.12 (53.8)	N/A	N/A	8.89 (4.03)	20.00 (9.07)	SLSA-2 Suspensions
U50 Cups with 50 Connection Plate								
U50-NEO/FIT/SCREEN A-3150009P		2.03 (51.6)	2.12 (53.8)	N/A	N/A	8.89 (4.03)	20.00 (9.07)	SLSA-2 Suspensions
U50-SIT/FIT/SCREEN A-3150009S		2.03 (51.6)	2.12 (53.8)	N/A	N/A	8.89 (4.03)	20.00 (9.07)	SLSA-2 Suspensions
Fittings for U50 Cups								
50/50-2 FITTING A-05AG		The 50/50-2 Fitting is utilized with a Strengthening Ring 50. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
STRENGTHENING RING SILICONE 50 A-0101086		The Strengthening Ring 50 is used with the above 50/50-2 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.						SLSA-2 Suspensions
50 CONNECTION PLATE A-3150145		The 50 Connection Plate uses a 50 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" Thread.						SLSA-2 Suspensions
50 LOCKING SPACER A-3150144		The 50 Locking Spacer is used with the above 50 Connection Plate. It presses in from the bottom.						SLSA-2 Suspensions

* All cups shown above are identical in size and shape to other manufacturers' cups. The 'static' columns represent the cup dimensions without a load as given by other manufacturers. The 'compressed' column specifications are important in making sure that everything fits, and represent the actual size of the cup after full compression (being flattened out) on a level load. (This difference is negligible in the F series.) The bigger the cup the greater the enlargement of the diameter. A lower vacuum level will lessen this compression (or flattening out); however, make sure to leave enough room for the static height of the cup in your design. Note: The "G" thread is a straight pipe thread also known as BSPP, BSP, NPS or "G", commonly used in Europe, Asia and most of the world.



Vacuum Cups and Suction Cups

Generic P-Style / FP Series Flat Vacuum Cups



ANVER-Made Generic Replacements of P-Style Vacuum Cups and Suction Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)
FP Cups					
FP200 SEALING RING A-3350148		9.0 (228)	0.8 (20)	266 (27)	600 (27)
FP300 SEALING RING A-3350153		13.3 (338)	0.9 (24)	622 (27)	1400 (27)
FP Cups with Fitting					
FP200 CUP & FITTING A-3350072		9.4 (240)	1.1 (27)	266 (27)	600 (27)
FP300 CUP & FITTING A-3350073		13.8 (350)	1.2 (31)	622 (27)	1400 (27)

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Vacuum Cups and Suction Cups

Generic P-Style / P Series EPDM Foam Vacuum Cups



P Series EPDM (Ethylene-Propylene) Foam Vacuum Cups and Suction Cups

Ideal for use on plane surfaces, where minimum movement is required to maintain the pick-up area, and for support of pliable materials. Available in sizes from 0.65 to 6.13 inches (16.6 to 155.6mm).

Vacuum Cup Description and Part Number	Dimensional Drawing	Static* Diameter in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)
P-35 CUP & FITTING A-3350045		1.67 (42.5)	0.61 (15.5)	7.5 (3.4)
P-35 CUP & VALVE A-3350038		1.67 (42.5)	1.28 (32.5)	7.5 (3.4)
P-35 SEALING RING A-3350023		1.50 (38.0)	0.41 (10.5)	N/A
P-60 CUP & FITTING A-3350046		2.66 (67.5)	0.61 (15.5)	22.0 (10.0)
P-60 CUP & VALVE A-3350039		2.66 (67.5)	1.28 (32.5)	22.0 (10.0)
P-60 SEALING RING A-3350024		2.36 (60.0)	0.41 (10.5)	N/A

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Vacuum Cups and Suction Cups



Generic P-Style / P Series EPDM Foam Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Drawing	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)
P-100 CUP & FITTING A-3350047		4.23 (107.5)	0.75 (19.0)	65.0 (29.5)
P-100 CUP & VALVE A-3350040		4.23 (107.5)	2.01 (51.0)	65.0 (29.5)
P-100 SEALING RING A-3350025		3.94 (100.0)	0.41 (10.5)	N/A
P-200 CUP & FITTING A-3350048		8.46 (215.0)	1.34 (34.0)	275 (124.7)
P-200 SEALING RING A-3350026		8.27 (210.0)	1.04 (26.5)	N/A
P-300 CUP & FITTING A-3350049		12.40 (315.0)	1.34 (34.0)	600 (272.2)
P-300 SEALING RING A-3350027		12.20 (310.0)	1.04 (26.5)	N/A
OP-20X100 CUP & SEAL A-3350050		4.37 [L] 1.19 [W] (111.0 [L] 30.1 [W])	0.71 (18.0)	21 (9.5)
OP-20X100 SEALING RING A-3350028		4.20 [L] 1.16 [W] (106.7 [L] 29.4 [W])	0.41 (10.4)	N/A



Vacuum Cups and Suction Cups

Generic P-Style / P Series EPDM Foam Vacuum Cups

VacuumCup Description and Part Number	Dimensional Drawing	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)
OP-40X200 CUP & SEAL A-3150051		8.25 [L] 1.97 [W] (210.0 [L] 50.0) [W]	0.85 (21.4)	70 (31.8)
OP-40X200 SEALING RING A-3350029		8.13 [L] 1.89 [W] (207.0 [L] 47.8) [W]	0.41 (10.4)	N/A

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Vacuum Cups and Suction Cups



Generic P-Style / Vacuum and Suction Cup Fittings

Vacuum Cup Description and Part Number	Dimensional Drawing	Connection Thread Size	Fitting Material	Notes
20-30 FILTER SCREEN A-3150163 31.50.163		N/A	-	The 20-30 Filter Screen is used with 3-piece fitting for 20-30 Series cups and with the above 20-30 Connection Plate. Protects the vacuum system from incoming debris.
20-30 LOCKING SPACER A-3150140 31.50.140		N/A	Aluminum	The 20-30 Locking Spacer is used with the above 20-30 Connection Plate. It presses in from the bottom.
30 BUTTON VALVE A-3150055 31.50.055		N/A	Aluminum	The 30 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.
40/30-2/BL30 FITTING A-3250001 32.50.001		G 1/8" female	Black Anodized Aluminum	The 40/30-2/BL30 Fitting uses a Strengthening Ring 40. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" thread.
STRENGTHENING RING SILICONE 40 A-0101085 01.01.085		N/A	Silicone	The Strengthening Ring 40 is used with the above 40/30-2/BL30 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.
40 BUTTON VALVE A-3150056 31.50.056		N/A	Aluminum	The 40 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.
40 CONNECTION PLATE A-3150143 31.50.143		G 1/8" female	Black Anodized Aluminum	The 40 Connection Plate uses a 40 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" thread.
40 FILTER SCREEN A-3150164 31.50.164		N/A	-	The 40 Filter Screen is used with 3-piece fitting for 40 Series suction cups and with the above 40 Connection Plate. Protects the vacuum system from incoming debris.
40 LOCKING SPACER A-3150142 31.50.142		N/A	Aluminum	The 40 Locking Spacer is used with the above 40 Connection Plate. It presses in from the bottom.

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Vacuum Cups and Suction Cups

Generic P-Style / Vacuum and Suction Cup Fittings


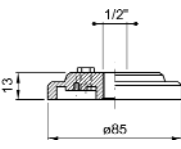

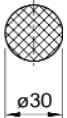
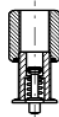

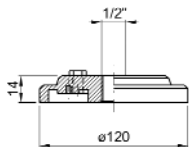
Vacuum Cup Description and Part Number	Dimensional Drawing	Connection Thread Size	Fitting Material	Notes
50/50-2 FITTING A-05AG 05AG (Replaces A-3250002) 32.50.002		G 1/8" female	Black Anodized Aluminum	The 50/50-2 Fitting is utilized with a Strengthening Ring 50. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" thread.
STRENGTHENING RING SILICONE 50 A-0101086 01.01.086		N/A	Silicone	The Strengthening Ring 50 is used with the above 50/50-2 Fitting. It simply stretches on and snaps in place. Included with cups which use the one-piece fitting.
50 BUTTON VALVE A-3150057 31.50.057		N/A	Aluminum	The 50 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.
50 CONNECTION PLATE A-3150145 31.50.145		G 1/8" female	Black Anodized Aluminum	The 50 Connection Plate uses a 50 Locking Spacer. It allows you to screw directly into any of the SLSA-2 Suspensions which have a male G 1/8" thread.
50 FILTER SCREEN A-3150165 31.50.165		N/A	-	The 50 Filter Screen is used with 3-piece fitting for 50 Series suction cups and with the above 50 Connection Plate. Protects the vacuum system from incoming debris.
50 LOCKING SPACER A-3150144 31.50.144		N/A	Aluminum	The 50 Locking Spacer is used with the above 50 Connection Plate. It presses in from the bottom.
75 BUTTON VALVE A-3350033 33.50.033		N/A	Aluminum	The 75 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.
75 CONNECTION PLATE 1/8 A-3150043 31.50.043		N/A	Aluminum	The 75 Connection Plate 1/8 is to be imbedded in the 75 Series suction cup's rubber portion allowing the 75 Fitting 1/8" to be held in place.
75 FITTING 1/8" A-3250006 32.50.006		G 1/8" female	Black Anodized Aluminum	The 75 Fitting 1/8" with 1/8" female center port connection with optional M5 (10/32) female port often used as a blow-off port.

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Vacuum Cups and Suction Cups



Generic P-Style / Vacuum and Suction Cup Fittings

Vacuum Cup Description and Part Number	Dimensional Drawing	Connection Thread Size	Fitting Material	Notes
75 FILTER SCREEN A-3150215 31.50.215		N/A	-	The 75 Filter Screen is used with 3-piece fitting for 75 Series suction cups and with the above 75 Fitting 1/8". Protects the vacuum system from incoming debris.
110 FITTING 1/2" A-3250007 32.50.007		G 1/2" female	Black Anodized Aluminum	The 110 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.
110 CONNECTION PLATE A-3150044 31.50.044		N/A	Aluminum	The 110 Connection Plate is to be imbedded in the 110 Series suction cup's rubber portion allowing the 110 Fitting 1/2" to be held in place.
110/150 FILTER SCREEN A-3150167 31.50.167		N/A	-	The 110/150 Filter Screen is used with 3-piece fitting for 110 Series suction cups with the 110 Fitting 1/2" or 150 Series suction cups with the 150 Fitting 1/2". Protects the vacuum system from incoming debris.
110/150 BUTTON VALVE A-3350034 33.50.034		N/A	Aluminum	The 110/150 Button Valve is used in multiple cup applications. If a single cup does not contact the load, that cup's valve will not open, causing no loss of vacuum while the other cups pick up the load.
150 CONNECTION PLATE A-3150045 31.50.045		N/A	Aluminum	The 150 Connection Plate is to be imbedded in the 150 Series suction cup's rubber portion allowing the 150 Fitting 1/2" to be held in place.
150 FITTING 1/2" A-3250008 32.50.008		G 1/2" female	Black Anodized Aluminum	The 150 Fitting 1/2" with 1/2" female center port connection with optional NPSF 1/8" female port often used as a blow-off port.

Vacuum Cup Suspension Assemblies



SLSA-1 Series (M5-10/32 UNF Thread)



ANVER Vacuum Suction Cups can be mounted to most vacuum systems using Spring Loaded Suspension Assemblies. These are high quality, well finished and designed for high speed automation applications. Adjustable bulkhead fittings mount to almost any lifting frame while a variety of tube fittings are available to connect to the vacuum generating system. These unique mounting systems act as extensions while providing support while handling a load. Some of the advantages of Suspension Assemblies include:

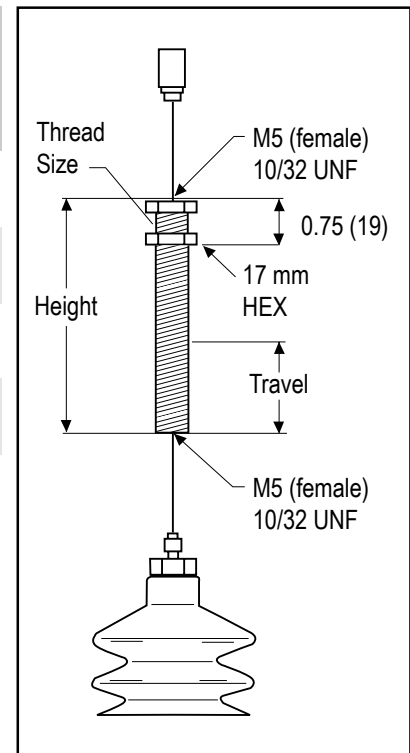
- Suspensions reduce machine indexing when picking up material from a stack.
- They compensate for variations in object height and offer a soft touch attach.
- Shock and noise to an object and machine is minimized.
- Cup pressure is consistent on each pick up which increases the cups life.
- Suspensions can provide an easy way to interface the vacuum cup and vacuum lines to the machine tooling.

Our SLSA-1 Series connect to the vacuum system via M5, 10/32 UNF female threads. For 1/8" NPT male threads use our SLSA-2 series.

ANVER can adapt these vacuum cup suspensions to your particular needs with tube fittings, mini vacuum generators, sensing valves and custom adapters. Please contact our technical sales department for assistance.

Components	Rotating	Non-Rotating
Suspension Tube:	Nickel-Plated Steel	Nickel-Plated Steel
Springs:	Stainless Steel	Stainless Steel
Bulkhead Thread:	Nickel-Plated Brass	Stainless Steel
Panel Nuts:	Nickel-Plated Brass	Stainless Steel

ANVER Item No.	Connection Thread Size	Fitting Group	Travel in. (mm)	Height in. (mm)	Required Panel Hole Dia. in. (mm)	Max. Panel Thickness in. (mm)
SLSA-105NR Non-Rotating	M5 (female) 10/32 UNF	1 & 2	0.20 (5)	1.14 (29)	0.51 (13)	0.43 (11)
A-3350068 Rotating	M5 (female) 10/32 UNF	1 & 2	0.39 (10)	1.69 (43)	0.39 (10)	0.56 (14)
SLSA-110NR Non-Rotating	M5 (female) 10/32 UNF	1 & 2	0.39 (10)	1.54 (39)	0.51 (13)	0.43 (11)
SLSA-120NR Non-Rotating	M5 (female) 10/32 UNF	1 & 2	0.79 (20)	2.32 (59)	0.51 (13)	0.43 (11)
SLSA-130NR Non-Rotating	M5 (female) 10/32 UNF	1 & 2	1.18 (30)	3.11 (79)	0.51 (13)	0.43 (11)



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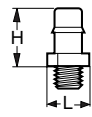
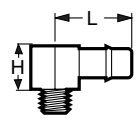
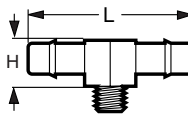
Vacuum System Accessories



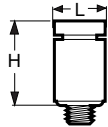
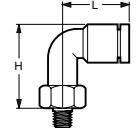
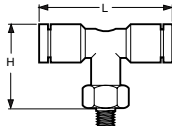
Tube Fittings for SLSA-1 Series Suspensions

Tube fittings are purchased separately to connect the spring loaded suspension assembly to the vacuum hose. They are available in barbed, push-in, and compression connections, with straight, elbow, and tee configurations. These fittings accept tubes with standard inside and outside diameters.

Barbed Fittings

Fitting Type	ANVER Item No.	Connection Thread Size	Tube I.D. in. (mm)	Recommended Tubing Part No.	L in (mm)	H in. (mm)
	BTC1-18S	M5 10/32 UNF	0.095 (1.98)	PC-T532	0.25 (6.3)	0.31 (8)
	BTC1-14S	M5 10/32 UNF	0.175 (4.44)	PC-T14	0.25 (6.3)	0.39 (10)
	BTC1-18E	M5 10/32 UNF	0.095 (1.98)	PC-T532	0.35 (9)	0.20 (5)
	BTC1-14E	M5 10/32 UNF	0.175 (4.44)	PC-T14	0.51 (13)	0.28 (7)
	BTC1-18T	M5 10/32 UNF	0.095 (1.98)	PC-T532	0.67 (17)	0.20 (5)
	BTC1-14T	M5 10/32 UNF	0.175 (4.44)	PC-T14	0.98 (25)	0.28 (7)

Push-In Fittings

Fitting Type	ANVER Item No.	Connection Thread Size	Tube O.D. in. (mm)	Recommended Tubing Part No.	L in (mm)	H in. (mm)
	PTC1-18S	M5 10/32 UNF	1/8 (3.18)	-	0.35 (9)	0.55 (14)
	PTC1-532S	M5 10/32 UNF	5/32 (3.97)	PC-T532	0.55 (14)	0.43 (11)
	PTC1-14S	M5 10/32 UNF	1/4 (6.35)	PC-T14	0.67 (17)	0.39 (10)
	PTC1-18E	M5 10/32 UNF	1/8 (3.18)	-	0.75 (19)	0.91 (23)
	PTC1-532E	M5 10/32 UNF	5/32 (3.97)	PC-T532	0.55 (14)	0.51 (13)
	PTC1-18T	M5 10/32 UNF	1/8 (3.18)	-	1.46 (37)	0.91 (23)
	PTC1-532T	M5 10/32 UNF	5/32 (3.97)	PC-T532	1.10 (28)	0.59 (15)

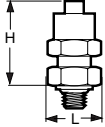
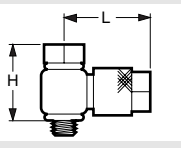
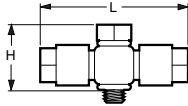
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Vacuum System Accessories



Tube Fittings for SLSA-1 Series Suspensions

Compression Fittings

Fitting Type	ANVER Item No.	Connection Thread Size	Tube I.D. in. (mm)	Tube O.D. in. (mm)	Recommended Tubing Part No.	L in (mm)	H in. (mm)
	TC1-14S	M5 10/32 UNF	0.175 (4.44)	1/4 (6.35)	PC-T14	0.35 (9)	0.79 (20)
	TC1-14E	M5 10/32 UNF	0.175 (4.44)	1/4 (6.35)	PC-T14	0.55 (14)	0.59 (15)
	TC1-14T	M5 10/32 UNF	0.175 (4.44)	1/4 (6.35)	PC-T14	1.30 (33)	0.61 (15.5)

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Vacuum Cup Suspension Assemblies



SLSA-2 Series (G 1/8" Thread)



ANVER Vacuum Suction Cups can be mounted to most vacuum systems using Spring Loaded Suspension Assemblies. These are high quality, well finished and designed for high speed automation applications. Adjustable bulkhead fittings mount to almost any lifting frame while a variety of tube fittings are available to connect to the vacuum generating system. These unique mounting systems act as extensions while providing support while handling a load. Some of the advantages of Suspension Assemblies include:

- Suspensions reduce machine indexing when picking up material from a stack.
- They compensate for variations in object height and offer a soft touch attach.
- Shock and noise to an object and machine is minimized.
- Cup pressure is consistent on each pick up which increases the cups life.
- Suspensions can provide an easy way to interface the vacuum cup and vacuum lines to the machine tooling.

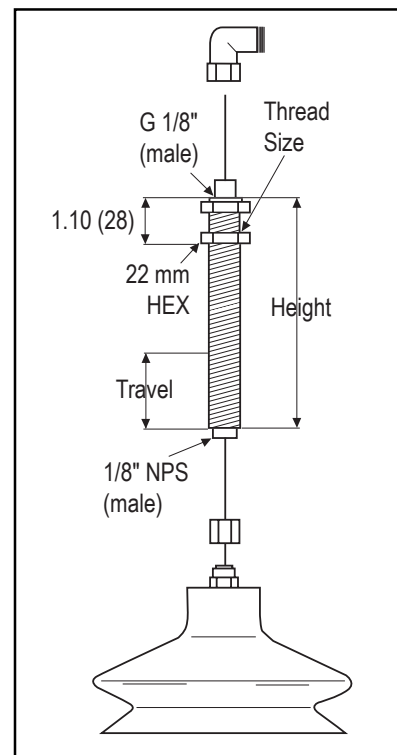
The SLSA-2 Series connects to the vacuum system via 1/8" NPT Male thread. For M5 Threads, see our SLSA-1 Series.

Materials:

Components	Rotating	Non-Rotating
Suspension Tube:	Nickel-Plated Steel	Nickel-Plated Steel
Springs:	Stainless Steel	Stainless Steel
Bulkhead Thread:	Nickel-Plated Brass	Stainless Steel
Panel Nuts:	Nickel-Plated Brass	Stainless Steel

ANVER can adapt these vacuum cup suspensions to your particular needs with tube fittings, mini vacuum generators, sensing valves and custom adapters. Please contact our technical sales department for assistance.

ANVER Item No.	Fitting Group	Travel in. (mm)	Height in. (mm)	Required Panel Hole Dia. in. (mm)	Max. Panel Thickness in. (mm)
SLSA-210NR	2 & 3	0.39 (10)	1.85 (47)	0.63 (16)	0.51 (13)
A-3350069	2 & 3	0.79 (20)	3.15 (80)	0.63 (16)	1.06 (27)
SLSA-230NR	2 & 3	1.18 (30)	3.45 (88)	0.63 (16)	0.51 (13)
SLSA-250NR	2 & 3	1.97 (50)	4.99 (127)	0.63 (16)	0.51 (13)
SLSA-270NR	2 & 3	2.76 (70)	6.61 (168)	0.63 (16)	0.51 (13)



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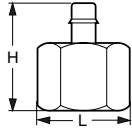
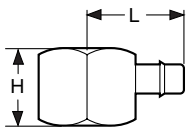
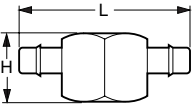
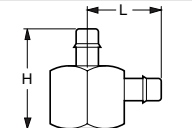
Vacuum System Accessories



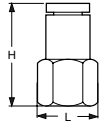
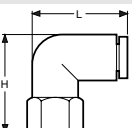
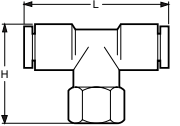
Tube Fittings for SLSA-2 Series Suspensions

Tube fittings are purchased separately to connect the spring loaded suspension assembly to the vacuum hose. They are available in barbed, push-in, and compression connections, with straight, elbow, and tee configurations. These fittings accept tubes with standard inside and outside diameters.

Barbed Fittings

Fitting Type	ANVER Item No.	Connection Thread Size	Tube I.D. in. (mm)	Recommended Tubing Part No.	L in (mm)	H in. (mm)
	BTC2-14S	1/8" NPT	0.175 (4.44)	PC-T14	0.55 (14)	0.83 (21)
	BTC2-38S	1/8" NPT	1/4 (6.35)	-	0.55 (14)	1.10 (28)
	BTC2-14E	1/8" NPT	0.175 (4.44)	PC-T14	0.63 (16)	0.51 (13)
	BTC2-38E	1/8" NPT	1/4 (6.35)	-	0.83 (21)	0.51 (13)
	BTC2-14T	1/8" NPT	0.175 (4.44)	PC-T14	1.26 (32)	0.51 (13)
	BTC2-38T	1/8" NPT	1/4 (6.35)	-	1.69 (43)	0.51 (13)
	BTC2-14BT	1/8" NPT	0.175 (4.44)	PC-T14	0.63 (16)	0.83 (21)
	BTC2-38BT	1/8" NPT	1/4 (6.35)	-	0.83 (21)	1.10 (28)

Push-In Fittings

Fitting Type	ANVER Item No.	Connection Thread Size	Tube O.D. in. (mm)	Recommended Tubing Part No.	L in (mm)	H in. (mm)
	PTC2-14S	1/8" NPT	1/4 (6.35)	PC-T14	0.51 (13)	0.98 (25)
	PTC2-516S	1/8" NPT	5/16 (7.94)	-	0.51 (13)	1.14 (29)
	PTC2-14E	1/8" NPT	1/4 (6.35)	PC-T14	1.18 (30)	0.94 (24)
	PTC2-516E	1/8" NPT	5/16 (7.94)	-	1.18 (30)	1.06 (27)
	PTC2-14T	1/8" NPT	1/4 (6.35)	PC-T14	1.42 (36)	0.94 (24)
	PTC2-516T	1/8" NPT	5/16 (7.94)	-	1.81 (46)	1.18 (30)

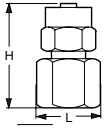
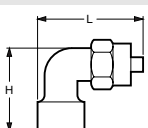
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Vacuum System Accessories



Tube Fittings for SLSA-2 Series Suspensions

Compression Fittings

Fitting Type	ANVER Item No.	Connection Thread Size	Tube I.D. in. (mm)	Tube O.D. in. (mm)	Recommended Tubing Part No.	L in (mm)	H in. (mm)
	TC2-14S	1/8" NPT	0.175 (4.44)	1/4 (6.35)	PC-T14	0.55 (14)	1.02 (26)
	TC2-516S	1/8" NPT	-	5/16 (7.94)	-	0.55 (14)	1.02 (26)
	TC2-14E	1/8" NPT	0.175 (4.44)	1/4 (6.35)	PC-T14	1.18 (30)	0.98 (25)
	TC2-516E	1/8" NPT	-	5/16 (7.94)	-	1.18 (30)	0.98 (25)

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Vacuum Cup Suspension Assemblies



SLSA-3 Series



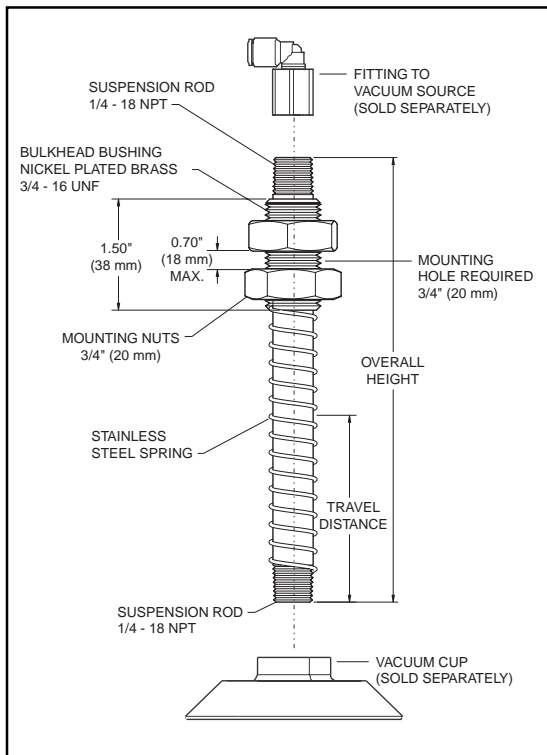
ANVER can adapt these vacuum cup suspensions to your particular needs with tube fittings, mini vacuum generators, sensing valves and custom adapters. Please contact our technical sales department for assistance.

ANVER Vacuum Suction Cups can be mounted to most vacuum systems using Spring Loaded Suspension Assemblies. These are high quality, well finished and designed for high speed automation applications. Adjustable bulkhead fittings mount to almost any lifting frame while a variety of tube fittings are available to connect to the vacuum generating system. These unique mounting systems act as extensions while providing support while handling a load. Some of the advantages of Suspension Assemblies include:

- Suspensions reduce machine indexing when picking up material from a stack.
- They compensate for variations in object height and offer a soft touch attach.
- Shock and noise to an object and machine is minimized.
- Cup pressure is consistent on each pick up which increases the cups life.
- Suspensions can provide an easy way to interface the vacuum cup and vacuum lines to the machine tooling.

Materials:

Suspension Rod:	Stainless Steel
Springs:	Stainless Steel
Bulkhead Thread:	Nickel-Plated Brass
Mounting Nuts:	Plated Steel



ANVER Item No.	Connection Thread Size	Travel in. (mm)	Height in. (mm)	Required Panel Hole Dia. in. (mm)	Maximum Panel Thickness in. (mm)
SLSA-330	1/4" 18 NPT male	1.94 (49)	4.00 (102)	3/4 (20)	0.70 (18 mm)
SLSA-370	1/4" 18 NPT male	3.10 (79)	6.00 (152)	3/4 (20)	0.70 (18 mm)
SLSA-399	1/4" 18 NPT male	4.75 (120)	8.00 (203)	3/4 (20)	0.70 (18 mm)








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Vacuum System Accessories



Tube Fittings for SLSA-3 Series Suspensions

Tube fittings are purchased separately to connect the spring loaded suspension assembly to the vacuum hose. They are available in barbed, push-in, and compression connections, with straight, elbow, and tee configurations. These fittings accept tubes with standard inside and outside diameters. All fittings are electro-less nickel-plated.

Fitting Type	ANVER Item No.	Description	L in (mm)	H in. (mm)
	A1414B	Hose Barb, 1/4" NPT to 1/4" ID Hose	0.83 (21)	2.52 (64)
	HS14-14F	1/4" NPT Female Coupling		
	PCE14F-14F	Push Connect Elbow 1/4" NPT (Female) to 1/4" OD Tube (Female)	1.18 (30)	1.18 (30)
	PCT14FB-14F	Push Connect Tee 1/4" NPT (Female Bottom) to 1/4" OD Tube (Female)	1.18 (30)	1.18 (30)
	HS18-14F	Reducing Coupling 1/4" NPT (Female) to 1/8" NPT (Female)	0.87 (22)	0.98 (25)
	HS14-38M	Reducing Bushing 3/8" NPT (Male) to 1/4" NPT (Female)	0.87 (22)	0.75 (19)
	2200P-4-4	Elbow, 90° 1/4" NPT (Female)	1.18 (30)	1.18 (30)
	HS14-14M-G	Adapter G 1/4" - male to 1/4" NPT - female	0.75 (19)	0.91 (23)

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Vacuum Cup Suspension Assemblies

Level Compensators



Spring Loaded Vacuum Cup Suspension Assemblies

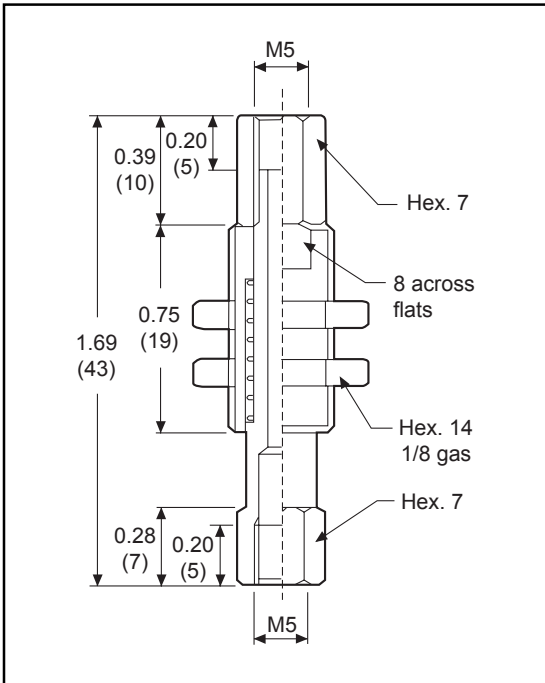
ANVER Level Compensators are used to compensate differences in cup height, particularly on lifting devices with several suction cups on one frame. When a vacuum cup is used in handling robots or similar devices, a level compensator is often advantageous because it places fewer demands on exact vertical positioning. These level compensators also provide a certain amount of shock absorption.

Specifications:

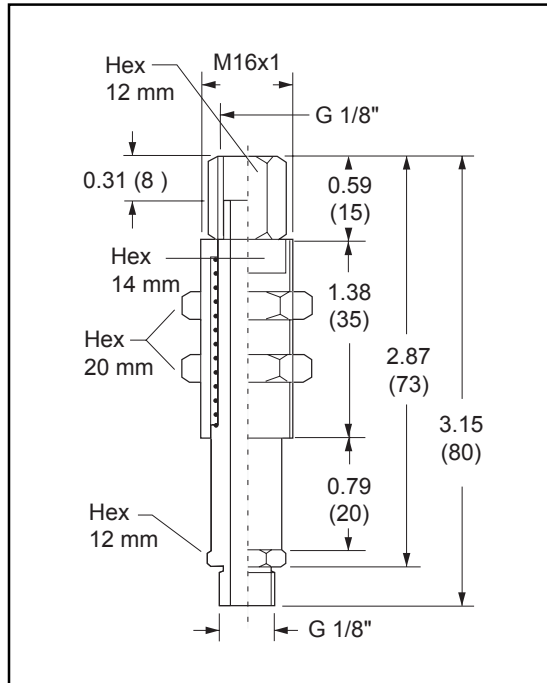
- Stroke = 7mm
- Force = 0.68 N/mm Spring, 1.3 N at Rest

Features:

- Stainless Steel Spring
- Nickel Plated Slider
- Brass Nut



A-3350068



A-3350069

ANVER Item No.	Connection Thread Size	Travel in. (mm)	Height in. (mm)	Required Panel Hole Dia. in. (mm)	Maximum Panel Thickness in. (mm)
A-3350068	M5 (female) 10-32 UNF	0.28 (7)	1.69 (43)	0.39 (10)	0.56 (14)
A-3350069	G 1/8"	0.79 (20)	3.15 (80)	0.63 (16)	1.06 (27)

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Vacuum Cup Suspension Assemblies



Suspension Rod to Cup Connectors

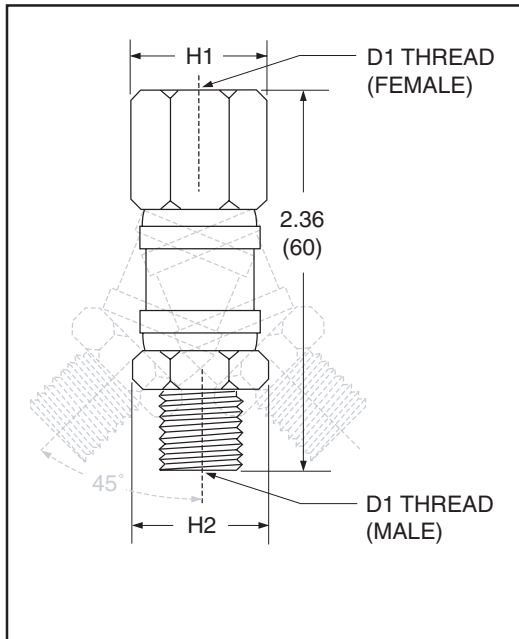


Ball Swivel Connectors

Various small ANVER suction cups can be connected to their suspensions with vacuum-tight ball swivels. These are available with 1/4" and 3/8" NPT threads.

- Design provides 360° rotation with up to 45° swivel
- Precision-plated steel construction
- Two rotating joints
- Large degree of articulation

ANVER Item No.	D1 Thread	H1 Hex Size in. (mm)	H2 Hex Size in. (mm)	Overall Length in. (mm)
SW14F-14M	1/4" NPT	0.75 (19)	0.75 (19)	2.36 (60)
SW38F-38M	3/8" NPT	0.83 (21)	0.75 (19)	2.36 (60)



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Vacuum Cup Suspension Assemblies



Level Compensators



ANVER Level Compensators are used to compensate differences in cup height, particularly on lifting devices with several suction cups on one frame. When a vacuum cup is used in handling robots or similar devices, a level compensator is often advantageous because it places fewer demands on exact vertical positioning. These level compensators also provide a certain amount of shock absorption.

These particular level compensators are highly specialized and made of Delrin plastic and designed for very light loads and miniature cups.

ANVER Item No.	Exact Competitor's Replacement Number	Stroke in. (mm)	Mounting
A-100J	A100J	0.81 (20.6)	Flanged for Direct Cup Mount
A-101IPB	A101IPB	0.81 (20.6)	1/8 - 27 NPT Female
A-102EPB	A102EPB	0.81 (20.6)	1/8 - 27 NPT Male
A-C375	N/A	0.86 (21.9)	10/32 NPT Female

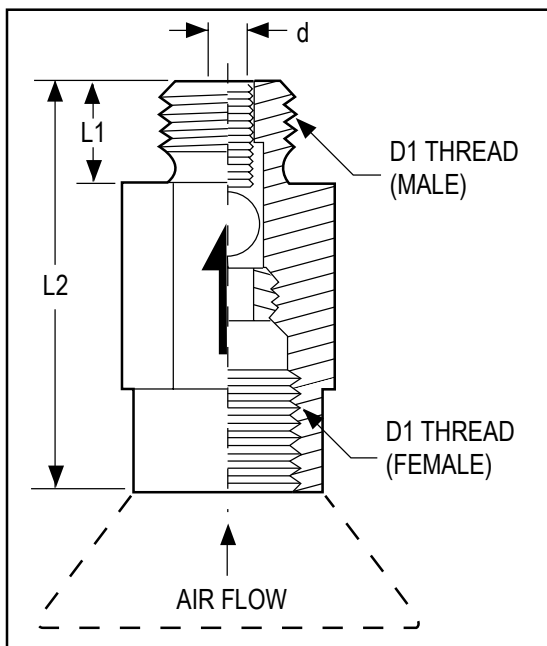
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Automatic Sensing Valves or Flow Sensing Valves

ANVER stocks a large number of accessories for our small vacuum cup and suction cup lines. Automatic Flow Sensing Valves are available for all universal style vacuum cups and suction cups and are best used in applications where the vacuum cup does not fully cover the load or is leaking air for other reasons. A float inside the valve seals air passage from the cup that it is attached to and prevents vacuum loss throughout the rest of the vacuum system. These valves are really effective only on non-porous loads and a blow-off system is recommended to ensure that unwanted debris is purged after each cycle. They can be used in any orientation on the cup or in-line. The vacuum system needs enough capacity to close all ASV's when open to atmosphere. Vacuum level is not as important as flow so the vacuum system needs to be airtight and a filter is recommended. Using a flow meter the valves can be adjusted. The valve is normally open and closes when flow becomes excessive.

ANVER Item No.	"d" Diameter in. (mm)	"D1" Thread	"L1" Length in. (mm)	"L2" Length in. (mm)	Hex Size in. (mm)
ASVM5	0.08 (2)	M5	0.18 (4.5)	0.57 (15)	0.32 (8)
ASV18	0.16 (4)	1/8" BSPP	0.26 (6.5)	1.42 (36)	0.51 (13)
ASV14	0.16 (4)	1/4" BSPP	0.33 (8.5)	1.50 (38)	0.67 (17)
ASV38	0.16 (4)	3/8" BSPP	0.47 (12)	1.65 (42)	0.87 (22)





These Vacuum Cups and Suction Cups are Directly Interchangeable for OEMs

Features:

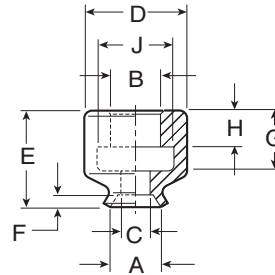
- Flat Design Handles Most Smooth Surface Applications
- Suitable for both Vertical and Horizontal Lifting
- Low Profile Design Offers Fast Response Time for Short Cycles
- Diameters from 0.08" to 7.87" (2mm to 200mm)

Applications:

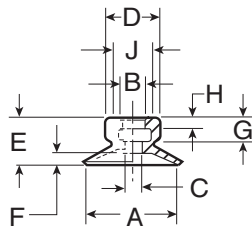
Any Flat, Smooth Surface that needs stability and a fast response time. Versatile for use in numerous industries. Specific typical applications could include: computer chips, electrical components, semiconductor chips, sheet metal, glass, injection molding, woodworking, etc.

Material Codes:

NBR: Nitrile SIT: Silicone
 PUR: Urethane FPM: Viton®



ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)	øJ in. (mm)
C-F2-NBR PFG2-NBR	0.08 (2)	0.08 (2)	0.05 (1.2)	0.16 (4)	0.16 (4)	0.02 (0.5)	0.10 (2.5)	0.06 (1.5)	0.12 (3)
C-F2-SIT PFG2-SIT	0.08 (2)	0.08 (2)	0.05 (1.2)	0.16 (4)	0.16 (4)	0.02 (0.5)	0.10 (2.5)	0.06 (1.5)	0.12 (3)
C-F3.5A-NBR PFG3.5A-NBR	0.14 (3.5)	0.08 (2)	0.05 (1.2)	0.16 (4)	0.16 (4)	0.02 (0.5)	0.10 (2.5)	0.06 (1.5)	0.12 (3)
C-F3.5A-SIT PFG3.5A-SIT	0.14 (3.5)	0.08 (2)	0.05 (1.2)	0.16 (4)	0.16 (4)	0.02 (0.5)	0.10 (2.5)	0.06 (1.5)	0.12 (3)
C-F3.5A-FPM PFG3.5A-FPM	0.14 (3.5)	0.08 (2)	0.05 (1.2)	0.16 (4)	0.16 (4)	0.02 (0.5)	0.10 (2.5)	0.06 (1.5)	0.12 (3)



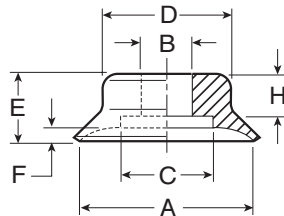
ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)	øJ in. (mm)
C-F5-NBR PFG5-NBR	0.20 (5)	0.16 (4)	0.06 (1.4)	0.30 (7.5)	0.26 (6.5)	0.03 (0.8)	0.16 (4)	0.08 (2)	0.24 (6)
C-F5-SIT PFG5-SIT	0.20 (5)	0.16 (4)	0.06 (1.4)	0.30 (7.5)	0.26 (6.5)	0.03 (0.8)	0.16 (4)	0.08 (2)	0.24 (6)

Vacuum Cups and Suction Cups



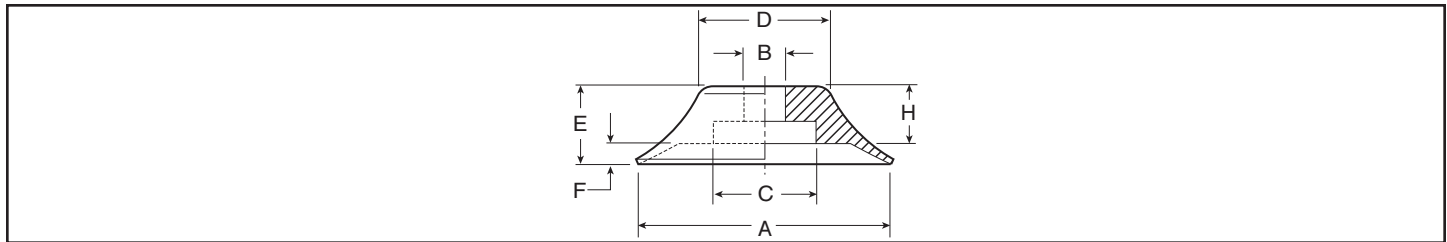
C-F Flat Vacuum Cups

ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)	øJ in. (mm)
C-F6-NBR PFG6-NBR	0.24 (6)	0.16 (4)	0.08 (2)	0.30 (7.5)	0.26 (6.5)	0.03 (0.8)	0.16 (4)	0.08 (2)	0.24 (6)
C-F6-SIT PFG6-SIT	0.24 (6)	0.16 (4)	0.08 (2)	0.30 (7.5)	0.26 (6.5)	0.03 (0.8)	0.16 (4)	0.08 (2)	0.24 (6)
C-F8-NBR PFG8-NBR	0.31 (8)	0.16 (4)	0.08 (2)	0.31 (8)	0.28 (7)	0.05 (1.2)	0.16 (4)	0.08 (2)	0.24 (6)
C-F8-SIT PFG8-SIT	0.31 (8)	0.16 (4)	0.08 (2)	0.31 (8)	0.28 (7)	0.05 (1.2)	0.16 (4)	0.08 (2)	0.24 (6)
C-F8-PUR PFG8-PUR	0.31 (8)	0.16 (4)	0.08 (2)	0.31 (8)	0.28 (7)	0.05 (1.2)	0.16 (4)	0.08 (2)	0.24 (6)
C-F10-NBR PFG10-NBR	0.39 (10)	0.16 (4)	0.08 (2)	0.33 (8.5)	0.30 (7.5)	0.06 (1.5)	0.16 (4)	0.08 (2)	0.24 (6)
C-F10-SIT PFG10-SIT	0.39 (10)	0.16 (4)	0.08 (2)	0.33 (8.5)	0.30 (7.5)	0.06 (1.5)	0.16 (4)	0.08 (2)	0.24 (6)
C-F10-PUR PFG10-PUR	0.39 (10)	0.16 (4)	0.08 (2)	0.33 (8.5)	0.30 (7.5)	0.06 (1.5)	0.16 (4)	0.08 (2)	0.24 (6)
C-F10-FPM PFG10-FPM	0.39 (10)	0.16 (4)	0.08 (2)	0.33 (8.5)	0.30 (7.5)	0.06 (1.5)	0.16 (4)	0.08 (2)	0.24 (6)
C-F15-NBR PFG15-NBR	0.59 (15)	0.16 (4)	0.08 (2)	0.35 (9)	0.31 (8)	0.08 (2)	-	0.08 (2)	-
C-F15-SIT PFG15-SIT	0.59 (15)	0.16 (4)	0.08 (2)	0.35 (9)	0.31 (8)	0.08 (2)	-	0.08 (2)	-

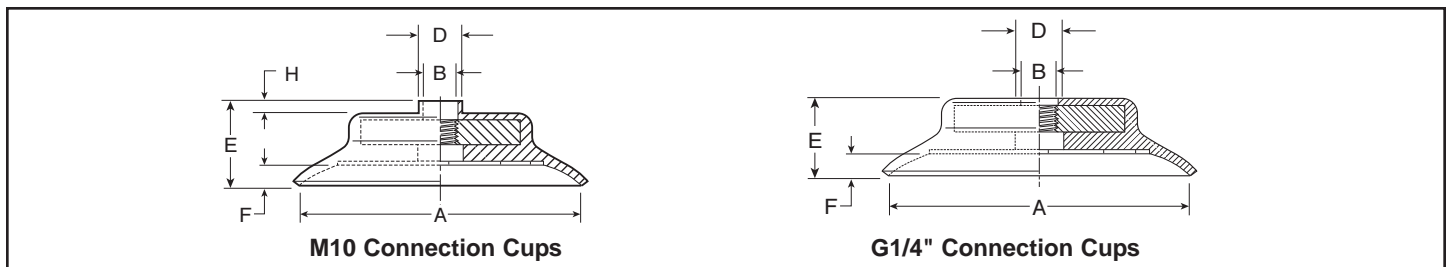


ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-F20-NBR PFG20-NBR	0.79 (20)	0.18 (4.6)	0.43 (11)	0.59 (15)	0.39 (10)	0.09 (2.3)	0.18 (4.5)
C-F20-SIT PFG20-SIT	0.79 (20)	0.18 (4.6)	0.43 (11)	0.59 (15)	0.39 (10)	0.09 (2.3)	0.18 (4.5)
C-F30-NBR PFG30-NBR	1.18 (30)	0.24 (6)	0.43 (11)	0.55 (14)	0.47 (12)	0.08 (2)	0.28 (7)
C-F30-SIT PFG30-SIT	1.18 (30)	0.24 (6)	0.43 (11)	0.55 (14)	0.47 (12)	0.08 (2)	0.28 (7)

ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-F35-NBR PFG35-NBR	1.38 (35)	0.24 (6)	0.43 (11)	0.83 (21)	0.55 (14)	0.12 (3)	0.28 (7)
C-F35-SIT PFG35-SIT	1.38 (35)	0.24 (6)	0.43 (11)	0.83 (21)	0.55 (14)	0.12 (3)	0.28 (7)
C-F40-NBR PFG40-NBR	1.57 (40)	0.24 (6)	0.43 (11)	0.94 (24)	0.55 (14)	0.16 (4)	0.28 (7)
C-F40-SIT PFG40-SIT	1.57 (40)	0.24 (6)	0.43 (11)	0.94 (24)	0.55 (14)	0.16 (4)	0.28 (7)



ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-F50-NBR PFG50-NBR	1.97 (50)	0.31 (8)	0.79 (20)	1.06 (27)	0.59 (15)	0.14 (3.5)	0.28 (7)
C-F50-SIT PFG50-SIT	1.97 (50)	0.31 (8)	0.79 (20)	1.06 (27)	0.59 (15)	0.14 (3.5)	0.28 (7)



M10 Connection Cups

G1/4" Connection Cups

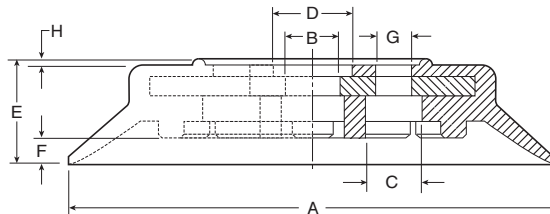
ANVER Item No.	øA in. (mm)	øB	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-F60-NBR-M10 PFG60-NBR-M10	2.36 (60)	M10 x 1.25	0.79 (12.5)	0.73 (18.5)	0.20 (5)	0.10 (2.5)
C-F60-SIT-M10 PFG60-SIT-M10	2.36 (60)	M10 x 1.25	0.79 (12.5)	0.73 (18.5)	0.20 (5)	0.10 (2.5)
C-F60-PUR-M10 PFG60-PUR-M10	2.36 (60)	M10 x 1.25	0.79 (12.5)	0.73 (18.5)	0.20 (5)	0.10 (2.5)
C-F60-NBR-G14 PFG60-NBR-G14	2.36 (60)	G1/4" female	0.79 (12.5)	0.61 (15.5)	0.20 (5)	-

Vacuum Cups and Suction Cups



C-F Flat Vacuum Cups

ANVER Item No.	øA in. (mm)	øB in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-F60-SIT-G14 PFG60-SIT-G14	2.36 (60)	G1/4" female	0.79 (12.5)	0.61 (15.5)	0.20 (5)	-
C-F60-PUR-G14 PFG60-PUR-G14	2.36 (60)	G1/4" female	0.79 (12.5)	0.61 (15.5)	0.20 (5)	-
C-F80-NBR-M10 PFG80-NBR-M10	3.15 (80)	M10 x 1.25	0.79 (12.5)	0.81 (20.5)	0.24 (6)	0.10 (2.5)
C-F80-SIT-M10 PFG80-SIT-M10	3.15 (80)	M10 x 1.25	0.79 (12.5)	0.81 (20.5)	0.24 (6)	0.10 (2.5)
C-F80-NBR-G14 PFG80-NBR-G14	3.15 (80)	G1/4" female	0.79 (12.5)	0.67 (17)	0.24 (6)	-
C-F80-SIT-G14 PFG80-SIT-G14	3.15 (80)	G1/4" female	0.79 (12.5)	0.67 (17)	0.24 (6)	-
C-F95-NBR-M10 PFG95-NBR-M10	3.74 (95)	M10 x 1.25	0.79 (12.5)	0.83 (21)	0.24 (6)	0.10 (2.5)
C-F95-SIT-M10 PFG95-SIT-M10	3.74 (95)	M10 x 1.25	0.79 (12.5)	0.83 (21)	0.24 (6)	0.10 (2.5)
C-F95-NBR-G14 PFG95-NBR-G14	3.74 (95)	G1/4" female	0.79 (12.5)	0.71 (18)	0.24 (6)	-
C-F95-SIT-G14 PFG95-SIT-G14	3.74 (95)	G1/4" female	0.79 (12.5)	0.71 (18)	0.24 (6)	-



ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)
C-F120-NBR PFG120-NBR	4.72 (120)	0.55 (14)	0.55 (14)	0.79 (20)	1.00 (25.4)	0.24 (6)	4x ø8.7 x ø40	0.59 (1.5)
C-F120-SIT PFG120-SIT	4.72 (120)	0.55 (14)	0.55 (14)	0.79 (20)	1.00 (25.4)	0.24 (6)	4 x ø8.7 x ø40	0.59 (1.5)
C-F150-NBR PFG150-NBR	5.91 (150)	0.51 (13)	0.55 (14)	0.79 (20)	1.28 (32.5)	0.35 (9)	4 x ø8.7 x ø40	0.59 (1.5)
C-F150-SIT PFG150-SIT	5.91 (150)	0.51 (13)	0.55 (14)	0.79 (20)	1.28 (32.5)	0.35 (9)	4 x ø8.7 x ø40	0.59 (1.5)
C-F200-NBR PFG200-NBR	7.87 (200)	0.51 (13)	0.47 (12)	0.79 (20)	1.48 (37.5)	0.51 (13)	4 x ø8.7 x ø40	0.59 (1.5)
C-F200-SIT PFG200-SIT	7.87 (200)	0.51 (13)	0.47 (12)	0.79 (20)	1.48 (37.5)	0.51 (13)	4 x ø8.7 x ø40	0.59 (1.5)

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Vacuum Cups and Suction Cups

C-BS1.5 Short Bellows Vacuum Cups



Features:

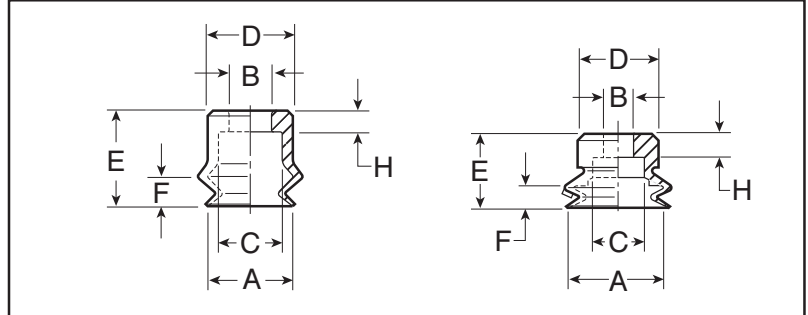
- Short Bellows Design for Fast Response
- More Lip Seal Handles Most Corrugated, Textured Applications
- Soft Sealing Lip
- Diameters from 0.08" to 3.15" (2mm to 80mm)

Applications:

Handling both slightly textured and smooth surfaces. Offers a faster response time than traditional bellows cups because of the shorter stroke and the extra soft sealing lip.

Material Codes:

NBR: Nitrile SIT: Silicone
 PUR: Urethane FPM: Viton®



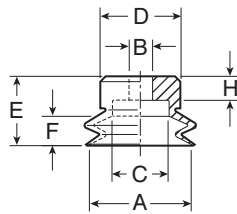
ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-BS1.5-6-NBR PJK-6-NBR	0.24 (6)	0.16 (4)	0.22 (5.5)	0.30 (7.5)	0.35 (9)	0.12 (3)	0.08 (2)
C-BS1.5-6-SIT PJK-6-SIT	0.24 (6)	0.16 (4)	0.22 (5.5)	0.30 (7.5)	0.35 (9)	0.12 (3)	0.08 (2)
C-BS1.5-6-PUR PJK-6-PUR	0.24 (6)	0.16 (4)	0.22 (5.5)	0.30 (7.5)	0.35 (9)	0.12 (3)	0.08 (2)
C-BS1.5-8-NBR PJK-8-NBR	0.31 (8)	0.16 (4)	0.24 (6)	0.31 (8)	0.35 (9)	0.16 (4)	0.08 (2)
C-BS1.5-8-SIT PJK-8-SIT	0.31 (8)	0.16 (4)	0.24 (6)	0.31 (8)	0.35 (9)	0.16 (4)	0.08 (2)
C-BS1.5-8-PUR PJK-8-PUR	0.31 (8)	0.16 (4)	0.24 (6)	0.31 (8)	0.35 (9)	0.16 (4)	0.08 (2)
C-BS1.5-10-NBR PJK-10-NBR	0.39 (10)	0.18 (4.6)	0.31 (7.8)	0.43 (11)	0.37 (9.5)	0.12 (3)	0.14 (3.5)
C-BS1.5-10-SIT PJK-10-SIT	0.39 (10)	0.18 (4.6)	0.31 (7.8)	0.43 (11)	0.37 (9.5)	0.12 (3)	0.14 (3.5)
C-BS1.5-10-PUR PJK-10-PUR	0.39 (10)	0.18 (4.6)	0.31 (7.8)	0.43 (11)	0.37 (9.5)	0.12 (3)	0.14 (3.5)
C-BS1.5-15-NBR PJK-15-NBR	0.59 (15)	0.18 (4.6)	0.31 (7.8)	0.47 (12)	0.43 (11)	0.13 (3.3)	0.14 (3.5)
C-BS1.5-15-SIT PJK-15-SIT	0.59 (15)	0.18 (4.6)	0.31 (7.8)	0.47 (12)	0.43 (11)	0.13 (3.3)	0.14 (3.5)
C-BS1.5-15-PUR PJK-15-PUR	0.59 (15)	0.18 (4.6)	0.31 (7.8)	0.47 (12)	0.43 (11)	0.13 (3.3)	0.14 (3.5)

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Vacuum Cups and Suction Cups

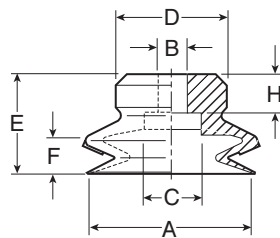


C-BS1.5 Short Bellows Vacuum Cups



C-PJG-20

ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-BS1.5-20-NBR PJG-20-NBR	0.79 (20)	0.18 (4.6)	0.43 (10.8)	0.59 (15)	0.51 (13)	0.22 (5.5)	0.18 (4.5)
C-BS1.5-20-SIT PJG-20-SIT	0.79 (20)	0.18 (4.6)	0.43 (10.8)	0.59 (15)	0.51 (13)	0.22 (5.5)	0.18 (4.5)
C-BS1.5-20-PUR PJG-20-PUR	0.79 (20)	0.18 (4.6)	0.43 (10.8)	0.59 (15)	0.51 (13)	0.22 (5.5)	0.18 (4.5)



**C-PJG-30 thru
C-PJG-40**

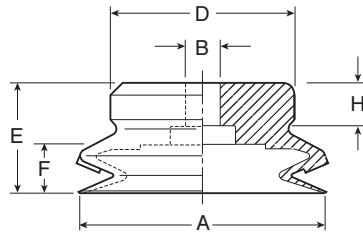
ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-BS1.5-30-NBR PJG-30-NBR	1.18 (30)	0.23 (5.8)	0.43 (10.8)	0.78 (20)	0.71 (18)	0.28 (7)	0.28 (7)
C-BS1.5-30-SIT PJG-30-SIT	1.18 (30)	0.23 (5.8)	0.43 (10.8)	0.78 (20)	0.71 (18)	0.28 (7)	0.28 (7)
C-BS1.5-30-PUR PJG-30-PUR	1.18 (30)	0.23 (5.8)	0.43 (10.8)	0.78 (20)	0.71 (18)	0.28 (7)	0.28 (7)
C-BS1.5-40-NBR PJG-40-NBR	1.57 (40)	0.23 (5.8)	0.43 (10.8)	1.18 (30)	0.71 (18)	0.28 (7.2)	0.28 (7)
C-BS1.5-40-SIT PJG-40-SIT	1.57 (40)	0.23 (5.8)	0.43 (10.8)	1.18 (30)	0.71 (18)	0.28 (7.2)	0.28 (7)
C-BS1.5-40-PUR PJG-40-PUR	1.57 (40)	0.23 (5.8)	0.43 (10.8)	1.18 (30)	0.71 (18)	0.28 (7.2)	0.28 (7)

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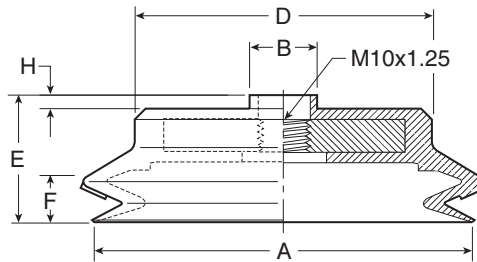
Vacuum Cups and Suction Cups

C-BS1.5 Short Bellows Vacuum Cups



C-PJG-50

ANVER Item No.	øA in. (mm)	øB in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-BS1.5-50-NBR C-PJG-50-NBR	1.97 (50)	0.31 (7.8)	1.57 (40)	0.79 (20)	0.35 (9)	0.28 (7)
C-BS1.5-50-SIT C-PJG-50-SIT	1.97 (50)	0.31 (7.8)	1.57 (40)	0.79 (20)	0.35 (9)	0.28 (7)
C-BS1.5-50-PUR C-PJG-50-PUR	1.97 (50)	0.31 (7.8)	1.57 (40)	0.79 (20)	0.35 (9)	0.28 (7)



**C-PJG-60 thru
C-PJG-80**

ANVER Item No.	øA in. (mm)	øB in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-BS1.5-60-NBR C-PJG-60-NBR	2.36 (60)	0.49 (12.5)	1.77 (45)	0.89 (22.5)	0.31 (8)	0.10 (2.5)
C-BS1.5-60-SIT C-PJG-60-SIT	2.36 (60)	0.49 (12.5)	1.77 (45)	0.89 (22.5)	0.31 (8)	0.10 (2.5)
C-BS1.5-60-PUR C-PJG-60-PUR	2.36 (60)	0.49 (12.5)	1.77 (45)	0.89 (22.5)	0.31 (8)	0.10 (2.5)
C-BS1.5-70-NBR C-PJG-70-NBR	2.75 (70)	0.49 (12.5)	2.17 (55)	0.93 (23.5)	0.37 (9.5)	0.10 (2.5)
C-BS1.5-70-SIT C-PJG-70-SIT	2.75 (70)	0.49 (12.5)	2.17 (55)	0.93 (23.5)	0.37 (9.5)	0.10 (2.5)
C-BS1.5-70-PUR C-PJG-70-PUR	2.75 (70)	0.49 (12.5)	2.17 (55)	0.93 (23.5)	0.37 (9.5)	0.10 (2.5)

Vacuum Cups and Suction Cups



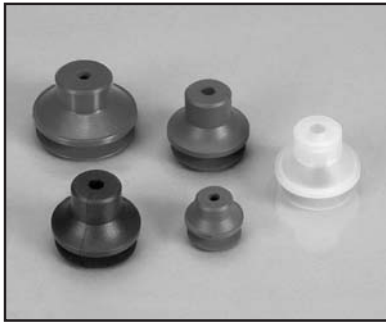
C-BS1.5 Short Bellows Vacuum Cups

ANVER Item No.	øA in. (mm)	øB in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-BS1.5-80-NBR C-PJG-80-NBR	3.15 (80)	0.49 (12.5)	2.68 (68)	0.93 (23.5)	0.37 (9.5)	0.10 (2.5)
C-BS1.5-80-SIT C-PJG-80-SIT	3.15 (80)	0.49 (12.5)	2.68 (68)	0.93 (23.5)	0.37 (9.5)	0.10 (2.5)
C-BS1.5-80-PUR C-PJG-80-PUR	3.15 (80)	0.49 (12.5)	2.68 (68)	0.93 (23.5)	0.37 (9.5)	0.10 (2.5)



Vacuum Cups and Suction Cups

C-B1.5 Bellows Vacuum Cups



Material Codes:

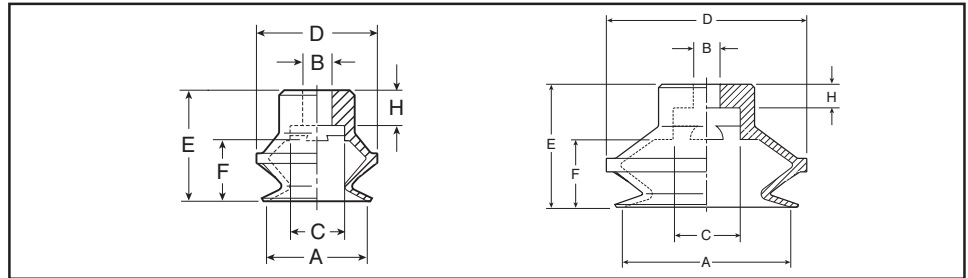
NBR: Nitrile SIT: Silicone
 PUR: Urethane FPM: Viton®

Features

Bellows Design Offers Level Compensation for Low Head-Room Applications Soft Seal Lip Handles Flexible and Stacked Loads Diameters from 0.79" to 2.95" (20mm to 75mm)

Applications:

Ideal for curved, lightly textured/corrugated or flexible loads. For loads with various stacked heights or uneven surfaces. Not for vertical loads.



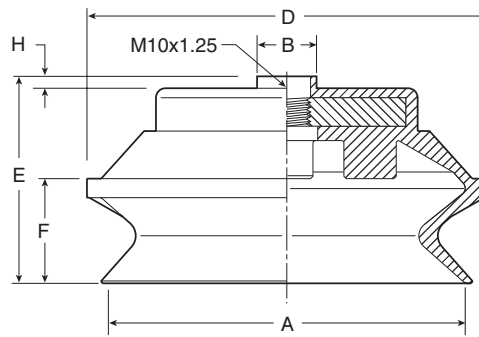
ANVER Item No.	øA in. (mm)	øB in. (mm)	øC in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-B1.5-20-NBR PBG-20-NBR	0.79 (20)	0.18 (4.6)	0.43 (10.8)	0.94 (24)	0.77 (19.5)	0.47 (12)	0.18 (4.5)
C-B1.5-20-SIT PBG-20-SIT	0.79 (20)	0.18 (4.6)	0.43 (10.8)	0.94 (24)	0.77 (19.5)	0.47 (12)	0.18 (4.5)
C-B1.5-20-PUR PBG-20-PUR	0.79 (20)	0.18 (4.6)	0.43 (10.8)	0.94 (24)	0.77 (19.5)	0.47 (12)	0.18 (4.5)
C-B1.5-30-NBR PBG-30-NBR	1.18 (30)	0.23 (5.8)	0.43 (10.8)	1.42 (36)	1.20 (30.5)	0.67 (17)	0.28 (7)
C-B1.5-30-SIT PBG-30-SIT	1.18 (30)	0.23 (5.8)	0.43 (10.8)	1.42 (36)	1.20 (30.5)	0.67 (17)	0.28 (7)
C-B1.5-30-PUR PBG-30-PUR	1.18 (30)	0.23 (5.8)	0.43 (10.8)	1.42 (36)	1.20 (30.5)	0.67 (17)	0.28 (7)
C-B1.5-40-NBR PBG-40-NBR	1.57 (40)	0.23 (5.8)	0.43 (10.8)	1.81 (46)	1.20 (30.5)	0.61 (15.5)	0.28 (7)
C-B1.5-40-SIT PBG-40-SIT	1.57 (40)	0.23 (5.8)	0.43 (10.8)	1.81 (46)	1.20 (30.5)	0.61 (15.5)	0.28 (7)
C-B1.5-40-PUR PBG-40-PUR	1.57 (40)	0.23 (5.8)	0.43 (10.8)	1.81 (46)	1.20 (30.5)	0.61 (15.5)	0.28 (7)
C-B1.5-50-NBR PBG-50-NBR	1.97 (50)	0.31 (7.8)	0.78 (19.8)	2.34 (59.5)	1.44 (36.5)	0.79 (20)	0.28 (7)
C-B1.5-50-SIT PBG-50-SIT	1.97 (50)	0.31 (7.8)	0.78 (19.8)	2.34 (59.5)	1.44 (36.5)	0.79 (20)	0.28 (7)
C-B1.5-50-PUR PBG-50-PUR	1.97 (50)	0.31 (7.8)	0.78 (19.8)	2.34 (59.5)	1.44 (36.5)	0.79 (20)	0.28 (7)

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Vacuum Cups and Suction Cups



C-B1.5 Bellows Vacuum Cups



ANVER Item No.	øA in. (mm)	øB in. (mm)	øD in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)
C-B1.5-75-NBR PBG-75-NBR	2.95 (75)	0.49 (12.5)	3.31 (84)	1.71 (43.5)	0.87 (22)	0.10 (2.5)
C-B1.5-75-SIT PBG-75-SIT	2.95 (75)	0.49 (12.5)	3.31 (84)	1.71 (43.5)	0.87 (22)	0.10 (2.5)
C-B1.5-75-PUR PBG-75-PUR	2.95 (75)	0.49 (12.5)	3.31 (84)	1.71 (43.5)	0.87 (22)	0.10 (2.5)



Vacuum Cups and Accessories

Suction Cups



Cups for the Packaging Industry

These suction cups are another type of small vacuum cup. They are excellent for paper and carton handling equipment, where they are used for gripping, pulling, or feeding stock. Some feature cleats on the bottom of the cup to eliminate puckering and residual vacuum for quick, even release on fast production machinery. Others are smooth for handling more rigid materials.

Mounting is simple - they push onto a pipe or hose barb. The relatively large diameter orifice provides maximum flow and rapid attach/release. Natural rubber is recommended for use on freshly inked or coated surfaces and where there is cut paper fiber debris. Several cups are also available in neoprene, for extended life.

ANVER separates these cups into three groups, by application. The first set of cups is designed for handling thin paper and foil. These cups have a thin, flexible lip to ensure a consistent pick in high-speed applications.

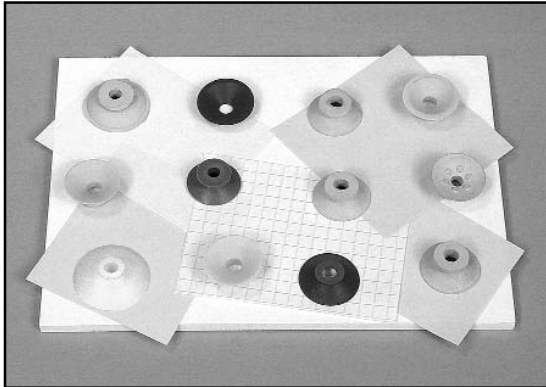
The next group of cups is best for applications handling paper and light cardboard. A thicker, more rigid lip is used for these applications, to increase cup life. The final group is the most durable, and should be used for handling heavier cardboard.

All of these suction cups are very economical and are excellent replacements on OEM equipment.

Vacuum Cups and Suction Cups



Flange Mount Series Cups for the Packaging Industry

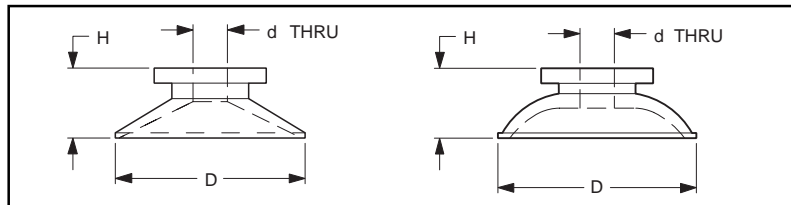


Flange Mount Series Suction Cups

ANVER Flange Mount Series suction cups are excellent for paper and carton handling equipment, where they are used for gripping, pulling, or feeding stock. They mount easily into flange-type fittings for maximum versatility and convenience.

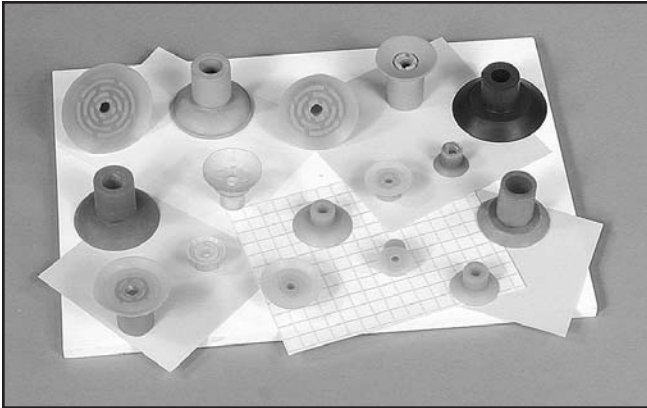
Features:

- Large diameter orifice for maximum flow and rapid attach/release.
- Available in non-marking natural rubber and long-lasting neoprene.
- Flange mount adapts easily to existing systems. Excellent for OEM replacement use.
- Available with cleated bottom to eliminate puckering or smooth bottom for more rigid materials.



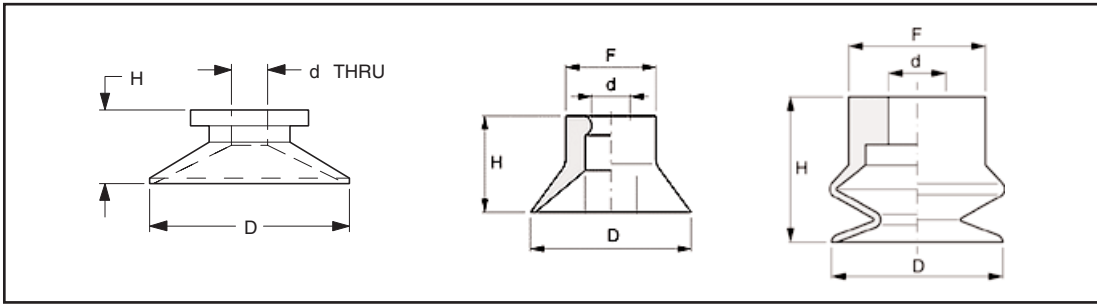
ANVER Item No.	D dia. in. (mm)	d dia. in. (mm)	H in. (mm)	F in. (mm)	Bottom Surface	Material
SUF25NR	0.98 (25)	0.24 (6)	0.39 (10)	0.63 (16.0)	Cleats	Natural Rubber
SUF26NR	1.02 (26)	0.28 (7)	0.39 (10)	0.62 (15.7)	Smooth	Natural Rubber
SUF27NR	1.06 (27)	0.28 (7)	0.39 (10)	0.62 (15.7)	Smooth	Natural Rubber
SUF28NR	1.10 (28)	0.28 (7)	0.24 (6)	N/A	Smooth	Natural Rubber
SUF30LNR	1.18 (30)	0.24 (6)	0.32 (8)	N/A	Cleats	Natural Rubber
SUF30SIT	1.18 (30)	0.24 (6)	0.32 (8)	N/A	Smooth	Silicone
SUF32NR	1.26 (32)	0.24 (6)	0.39 (10)	0.65 (16.5)	Smooth	Natural Rubber
SUF44NR	1.80 (44.7)	0.31 (7.7)	0.45 (11.5)	N/A	Cleats	Natural Rubber

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Push-In Mount Series Suction Cups
 ANVER packaging series suction cups are excellent for paper and carton handling equipment, where they are used for gripping, pulling, or feeding stock.

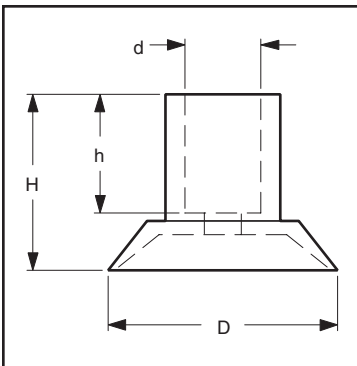
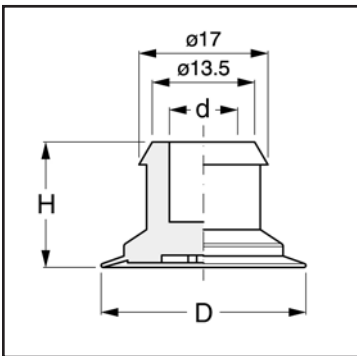
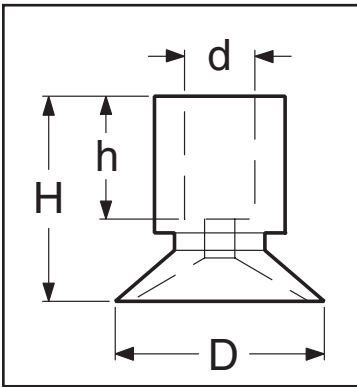
- Features:**
- Simple Mounting - Attach directly to pipe or a hose barb.
 - Large diameter orifice for maximum flow.
 - Rapid attach/release.
 - Available in non-marring natural rubber or long-lasting neoprene.
 - Available with cleated bottom to eliminate puckering or smooth for rigid materials.
 - Economical and reliable replacements for OEM equipment.



ANVER Item No.	D dia. in. (mm)	d dia. in. (mm)	H in. (mm)	Bottom Surface	Material
SUM020	0.79 (20)	0.31 (8)	0.59 (15)	Smooth	Natural Rubber
SUM025	0.98 (25)	0.24 (6)	0.59 (15)	Smooth	Natural Rubber
FO25-NR	0.98 (25)	0.24 (6)	0.59 (15)	Smooth	Natural Rubber
BO1.5-20-TPU	0.79 (20)	0.28 (7)	0.67 (17)	Smooth	Natural Rubber

Vacuum Cups and Suction Cups

Push-in Mount Style Cups For the Packaging Industry



ANVER Item No.	D Dia. in (mm)	d Dia. in (mm)	H in (mm)	h in (mm)	Bottom Surface	Material
SUB24NR	0.94 (24)	0.39 (10)	1.02 (26)	0.63 (16)	Smooth	Natural Rubber
SUB25LNR	0.98 (25)	0.39 (10)	0.98 (25)	0.63 (16)	Cleats	Natural Rubber
SUB27SIT	1.06 (27)	0.36 (9)	0.65 (16.5)	N/A	Cleats	Silicone
SUB34NR	1.34 (34)	0.39 (10)	0.94 (24)	0.59 (15)	Cleats	Natural Rubber
SUB34NE	1.34 (34)	0.39 (10)	0.94 (24)	0.59 (15)	Cleats	Neoprene
SUB40NE	1.57 (40)	0.31 (8)	0.79 (20)	0.59 (15)	Cleats	Neoprene

ANVER Item No.	D Dia. in (mm)	d Dia. in (mm)	H in (mm)	h in (mm)	Bottom Surface	Material
SUB25NR	0.98 (25)	0.22 (5.5)	0.79 (20)	0.24 (6)	Cleats	Natural Rubber
SUB26NR	1.02 (26)	0.39 (10)	1.02 (26)	0.63 (16)	Smooth	Natural Rubber
SUB30NR	1.18 (30)	0.43 (11)	0.91 (23)	0.63 (16)	Cleats	Natural Rubber
SUB32NR	1.26 (32)	0.39 (10)	0.98 (25)	0.63 (16)	Cleats	Natural Rubber
SUB33NR	1.30 (33)	0.39 (10)	0.98 (25)	0.63 (16)	Smooth	Natural Rubber

Vacuum Cups and Suction Cups

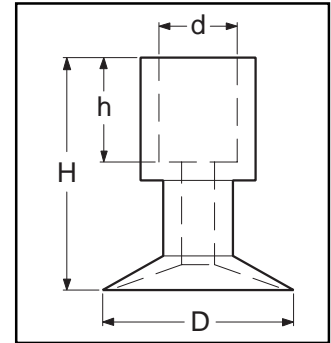


Push-In Type Vacuum Cups for the Packaging Industry



Push-In Type Suction Cups for Handling Cartons and Lightweight Sheets

- These vacuum suction cups are simply pushed over a large hose barb or pipe and can be secured with a clamping band.
- The narrow necks allow the cups to 'flex' with the load and to attach to non-level surfaces.



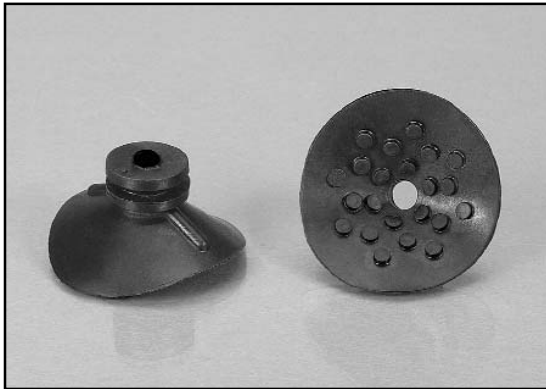
ANVER Item No.	D diameter in. (mm)	d diameter in. (mm)	H height in. (mm)	h height in. (mm)	Bottom Surface	Material
SUP16-NBR	0.63 (16)	0.20 (5)	0.79 (20)	N/A	Smooth	Nitrile
SUP16-SIT	0.63 (16)	0.20 (5)	0.79 (20)	N/A	Smooth	Silicone
SUB38NR	1.50 (38)	0.63 (16)	1.46 (37)	0.79 (20)	Smooth	Natural Rubber
SUB39NR	1.54 (39)	0.63 (16)	1.89 (48)	0.79 (20)	Smooth	Natural Rubber
SUB39NE	1.54 (39)	0.63 (16)	1.89 (48)	0.79 (20)	Smooth	Neoprene
SUB45NE	1.77 (45)	0.47 (12)	1.77 (45)	N/A	Cleats	Neoprene
SUB61NR	2.40 (61)	0.35 (9)	1.34 (34)	N/A	Cleats	Natural Rubber
SUB64NR	2.52 (64)	0.63 (16)	1.97 (50)	0.79 (20)	Cleats	Natural Rubber
SUB64NE	2.52 (64)	0.63 (16)	1.97 (50)	0.79 (20)	Cleats	Neoprene
SUB65NE	2.56 (65)	0.47 (12)	1.77 (45)	N/A	Cleats	Neoprene

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Vacuum Cups and Suction Cups



Oval Suction Cups for Paper Handling



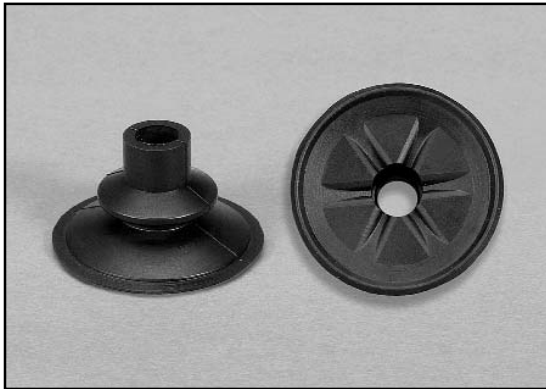
ANVER packaging series suction cups are excellent for paper, where they are used for gripping, pulling, or feeding stock.

ANVER Item No.	Width in (mm)	Length in (mm)	Hole Dia. in (mm)	Height in. (mm)	Bottom Surface	Material
OC125	1.18 (30)	1.46 (37)	0.24 (6)	0.43 (11)	Cleated	Natural Rubber
OC215	1.50 (38)	1.73 (44)	0.24 (6)	0.43 (11)	Cleated	Natural Rubber

Vacuum Cups and Suction Cups



Suction Cups for the Printing Industry



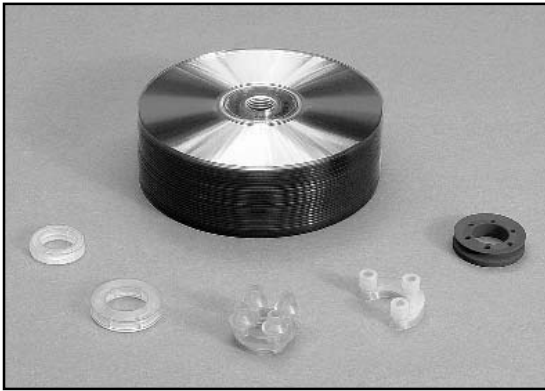
These ANVER suction cups are excellent for handling paper, where they are used for gripping, pulling, or feeding stock.

ANVER Item No.	Dia. in (mm)	Hole Dia. in (mm)	Height in (mm)	Bottom Surface	Material
SUBB41NR	1.61 (41)	0.31 (8)	0.87 (22)	Cleated	Natural Rubber

Vacuum Cups & Suction Cups



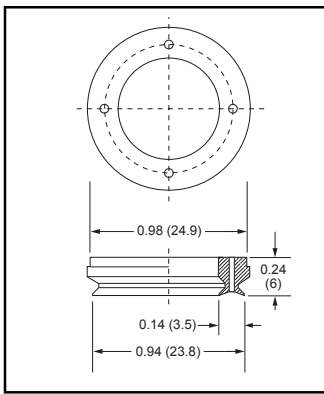
CD Handling Suction Cups



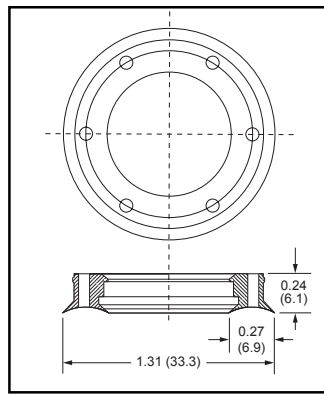
ANVER offers a wide range of Vacuum Cups and Specialty Suction Cups for the Optical Storage Media Industry. These small cups (unloader discs) offer maximum suction power while handling the sensitive and delicate surfaces on materials including:

CD-Audio, CD-ROM, DVD, CD-R, CD-RW, DVD-R, DVD-RW, Mo-Mini-Disc

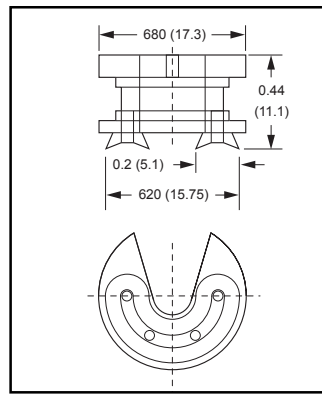
ANVER offers a full range of single cup, bellows, half ring and closed or full ring cups for pick and place robotic arms. These cups are used on a range of automatic packaging machines including EAM (USA), Heino Illsman (Germany), Gima (Italy), and Kyoto of (Japan). These vacuum suction cups have proven themselves, and are used worldwide in the CD manufacturing process.



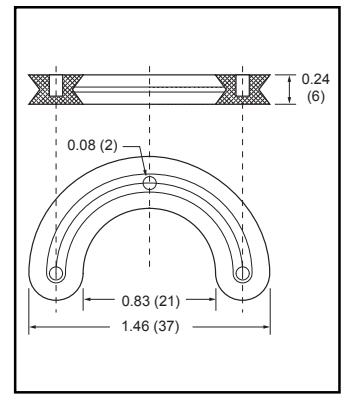
CD24-SIT



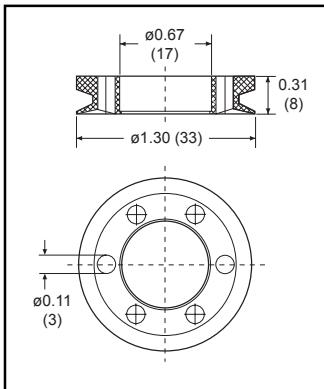
CD31-SIT



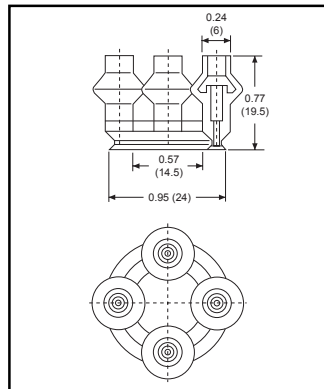
CDH17-SIT



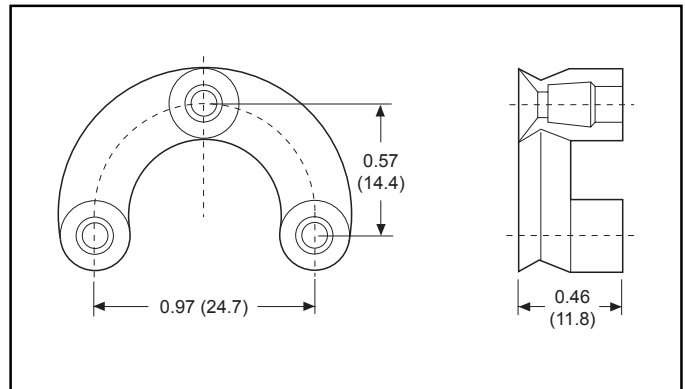
CDH37-SIT



AVR18-33-S45



CDB24-SIT



CD34-SIT

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Vacuum Cups and Suction Cups

Suction Cups for the Baking Industry

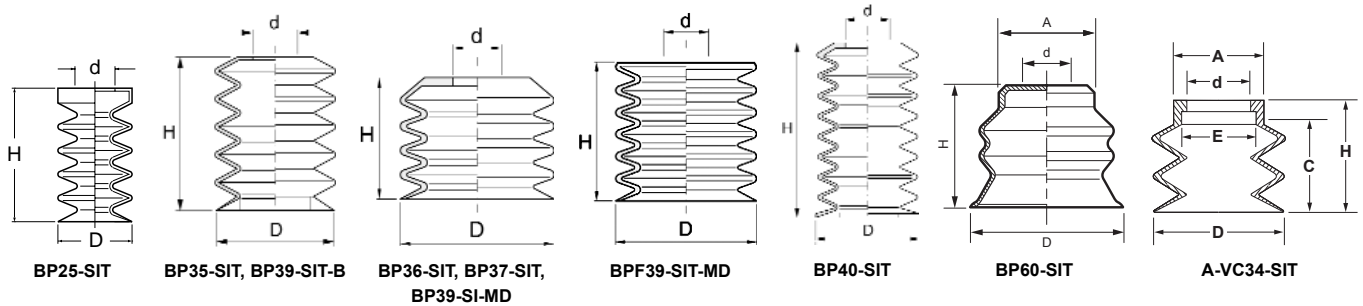


ANVER offers a variety of Specialty Vacuum Cups and Suction Cups for specific food handling applications such as Depanners. These cups are especially made for handling breads, cakes, rolls, pizza shells, pies, and other similar items generally handled with low vacuum, large air flow systems. Made from translucent food-grade silicone, ANVER baking vacuum cups and suction cups can be used directly at the exit point of the baking ovens. They are precision molded to prevent product damage, yet have adequate capacity to handle heavy cakes. They are rated for a temperature range from -60° F to +400° F (-51° C to +204° C). Various sizes of round and rectangular vacuum cups and suction cups are available to handle products of different shapes and sizes. These suction cups are also available in metal-detectable silicone rubber compounds.

Vacuum Cup Materials:

The standard material is Translucent Silicone (SIT).

The Brown and red cups are Metal-Detectable Silicone (MD)



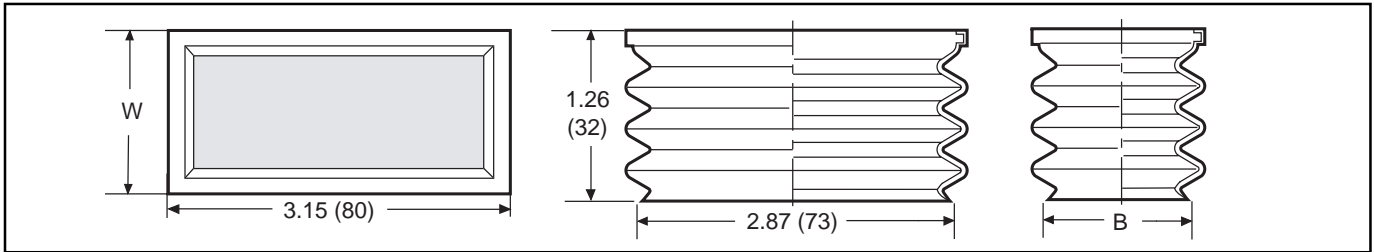
ANVER Item No.	Description	D in. (mm)	d in. (mm)	H in. (mm)	A in. (mm)	C in. (mm)	E in. (mm)
BP25-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	0.98 (25)	0.53 (13.5)	1.77 (45)	N/A	N/A	N/A
BP35-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.38 (35)	0.51 (13)	1.67 (42)	N/A	N/A	N/A
BP36-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.46 (37)	0.64 (16)	1.38 (35)	N/A	N/A	N/A
BP37-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.54 (38)	0.47 (12)	1.14 (29)	N/A	N/A	N/A
BP37-SIT-R	Round, Food Grade Red Silicone Bellows Vacuum Suction Cup	1.54 (38)	0.47 (12)	1.14 (29)	N/A	N/A	N/A
BP39-SIT-B	Round, Food Grade Brown Silicone Bellows Vacuum Suction Cup	1.54 (38)	0.59 (15.0)	1.70 (43)	N/A	N/A	N/A
BP39-SI-MD	Round, Metal Detectable Food Grade Silicone Bellows Vacuum Suction Cup with ringed lip	1.54 (39)	0.57 (14.5)	1.51 (38)	N/A	N/A	N/A
BPF39-SI-MD	Round, Metal Detectable Flat Tip Food Grade Silicone Bellows Vacuum Suction Cup	1.54 (39)	0.61 (15.5)	1.58 (40)	N/A	N/A	N/A
BP40-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.57 (40)	0.57 (14.5)	2.72 (69)	N/A	N/A	N/A
BP-RR	Vacuum Cup Retainer Fitting for Various Baking Cups Fits BP37 thru BP40 Plastic Bobbin Style Fitting	0.97 (24.6)	0.35 (8.7)	0.29 (7.2)	N/A	N/A	N/A
BP60-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	2.36 (60)	0.75 (19)	1.87 (47.5)	1.46 (37)	N/A	N/A
A-VC34-SIT	Round, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.34 (34)	0.65 (16.5)	1.06 (27)	1.00 (25)	0.83 (21)	0.79 (20)

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Vacuum Cups and Suction Cups



Suction Cups for the Baking Industry



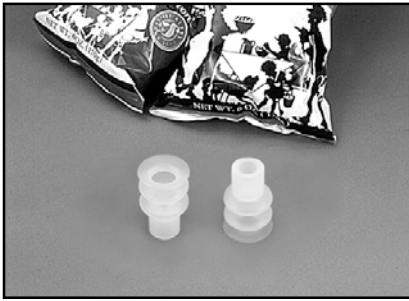
ANVER Item No.	Description	W in. (mm)	B in. (mm)
BPR-3373	Rectangular, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.57 (40)	1.30 (33)
BPR-2473	Rectangular, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	1.18 (30)	0.94 (24)
BPR-1573	Rectangular, Translucent Food Grade Silicone Bellows Vacuum Suction Cup	0.87 (22)	0.59 (15)

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Vacuum Cups & Suction Cups



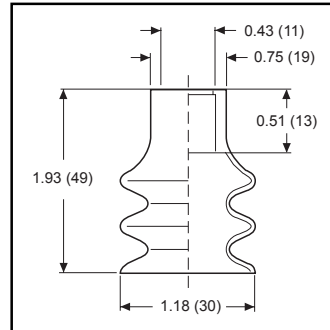
Special Applications Series



Suction Cups for Handling or Opening Plastic Bags and Foil Food Packages

Custom manufactured by ANVER with thin, feathered edges, these vacuum cups and suction cups can grab even the thinnest foil.

BB2.5-30-SIT made from silicone. It functions where most other vacuum cups and suction cups would fail. Even bags of potato chips can be handled without crushing the contents.

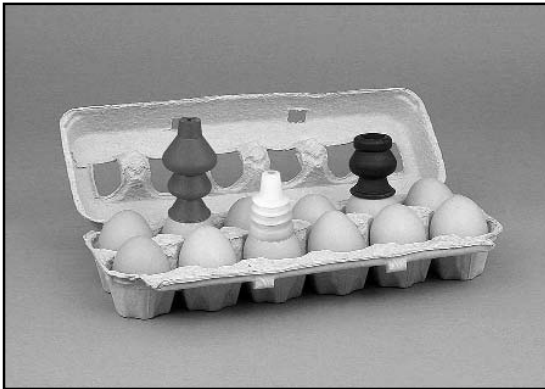


ANVER Item No.	Description	Dia. in. (mm)	Fitting Type	Suspension Group
BB2.5-30-SIT	Silicone Bellows Vacuum Cup	1.18 (30)	OCF2-18F-G	SLSA-2 Suspensions

Vacuum Cups & Suction Cups

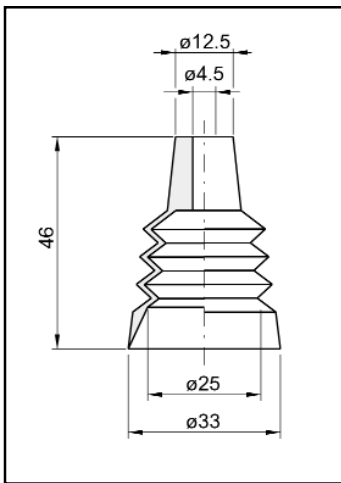


Suction Cups for Eggs and other Round Objects

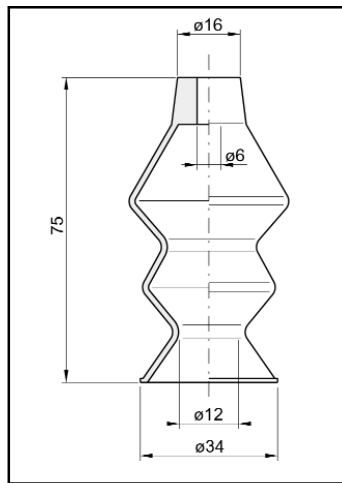


Vacuum cups and suction cups specially designed to handle eggs and other round objects such as golf balls are available in various sizes and materials.

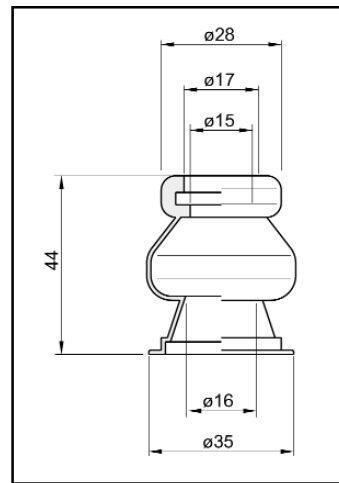
Food-grade white or red silicone as well as black nitrile rubber are all available. Push-Over Fittings are also offered.



BE33-SIT



BE34-SIT



BE35-SIT

ANVER Item No.	Description	Dia. in. (mm)
BE33-SIT	Silicone Bellows Vacuum Cup	1.30 (33)
BE34-SIT	Silicone Bellows Vacuum Cup	1.34 (34)
BE35-NBR	Nitrile Bellows Vacuum Cup	1.38 (35)

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Vacuum Cups & Suction Cups

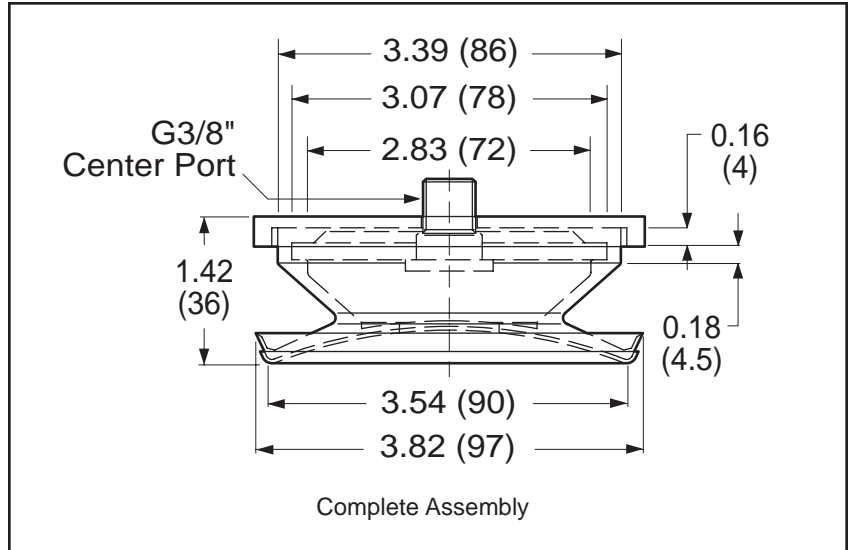
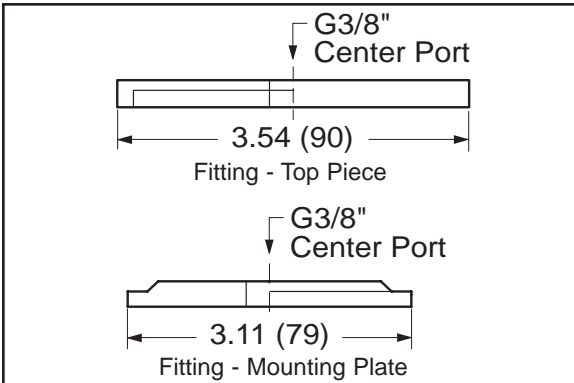


For High Temperature Glass Handling



High Temperature Suction Cups Capable of 752° F (400° C)

These suction cups are ideal for handling extremely hot materials like glass, for which they were designed. The suction pads can be used up to 752° F (400° C) for a short periods. Because of the special rubber FPM-F pad material and the heat resistant felt coating, the pads will not mark material surfaces. The large metal mounting plate firmly holds the rubber pad and makes for quick changes. It is recommended however, that extra pads and plate hardware be ordered for fast replacement. It takes longer for the pad to cool than it takes to replace it.



ANVER Item No.	Vacuum in N	Internal Volume in cm3	Min. curvature radius R of surface in mm	Flex of sealing lip	Weight in kg	Required volume flow for -0.6 bar in m3/h
HTSP-90	230	66.5	250	16.5	0.255	3

ANVER Item No.	Description
HTSP-90	High Heat Suction Cup Assembly
HTSP-F	Fitting for High Heat Suction Cup
HTSP-90-C	Cup for High Heat Suction Cup



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Vacuum Cups & Suction Cups

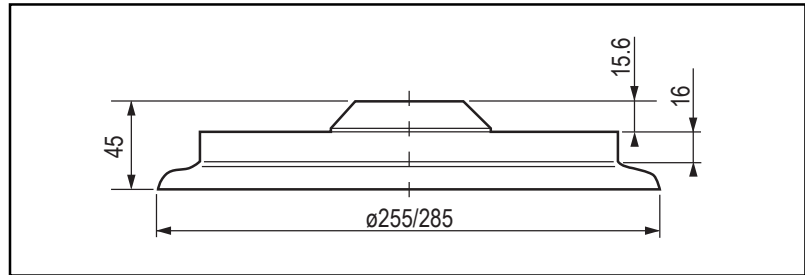


Soft Touch Vacuum Cups for Glass Sheet Handling



FST Soft Touch Flat Series

ANVER's FST series "Soft Touch" Flat Vacuum cups attach gently with minimum pressure a quick attach and a safe, sturdy grip. The FST series features a bonded seal to a heavy steel plate for rigidity. They have a fairly flat design for attaching to sheet surfaces with little pressure. These special cups are designed specifically for glass handling though can work on other smooth surfaces. The cups come with a small hole in the center which needs to be drilled out depending on your mounting preference. We recommend you order extras for your own stock and drill them at the same time to minimize down-time.



ANVER Item No.	Pad Diameter in. (mm)	Overall Height in. (mm)	Capacity* lb (kg)	Seal Material	Hub Material
FST255-NBR	10.04 (255)	1.77 (45)	350 (159)	NBR	Steel
FST255-SIT	10.04 (255)	1.77 (45)	350 (159)	Silicone	Steel
FST285-NBR	11.22 (285)	1.77 (45)	500 (227)	NBR	Steel
FST285-SIT	11.25 (285)	1.77 (45)	500 (227)	Silicone	Steel

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Vacuum Cups & Suction Cups

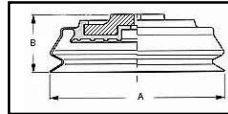


Soft Touch Vacuum Cups for Glass Sheet Handling



BST Soft Touch Bellows Series

ANVER's new BST series "Soft Touch" Bellows Vacuum cups attach gently with minimum pressure, while the internal sealing ring assures a safe, sturdy grip. The BST series features a slip on seal with a bellows design for attaching to sheet surfaces with little pressure. These versatile cups are excellent for glass handling as well as many other applications.



Complete Seal & Cup Number	Replacement Seal Number	A Pad Diameter in. (mm)	B Overall Height in. (mm)	Capacity* lb (kg)	Non-Marring Seal Material	Hub Material
BST1.5-150-NR	SR1.5-150-NR	5.91 (150)	2.28 (58)	125 (56)	Natural Rubber	Aluminum
BST1.5-150-SIT	SR1.5-150-SIT	5.91 (150)	2.28 (58)	125 (56)	Silicone	Aluminum
BST1.5-210-NR	SR1.5-210-NR	8.27 (210)	2.48 (63)	250 (113)	Natural Rubber	Aluminum

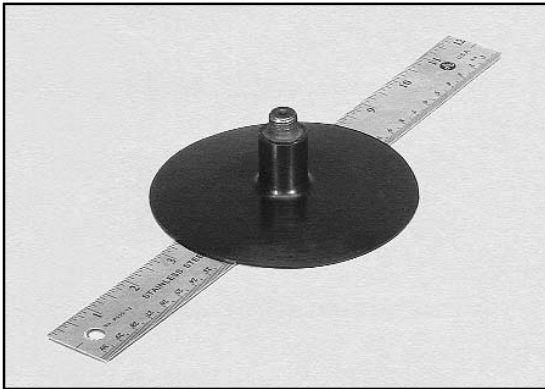
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Vacuum Cups & Suction Cups



Ultra-Flat Suction Cup

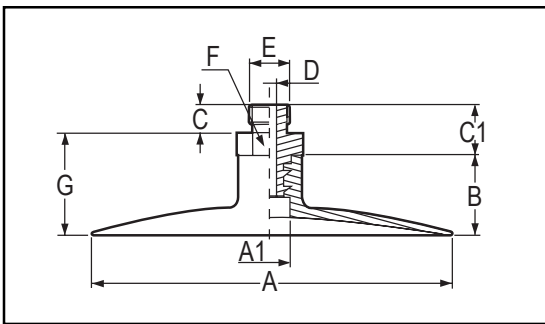


For Handling Even Narrow Workpieces

The SFC-120 Ultra-Flat Suction Cup is designed for gripping sheet materials of various shapes and sizes, including flat materials in varying widths. Because of its ultra-flat shape, this suction cup can handle objects much narrower than itself (minimum width 25 mm).

The unique design, with the long, tapered sealing lip, allows the cup to adapt to material surfaces including lightly uneven surfaces and can be used for sensitive materials. The cup works best on materials that are smooth, flat and fairly rigid. There can be no debris under the cup or it will not seal. The cup is made of epichlor-H-rubber ECO making it very resistant to chemicals.

This is a hard-wearing suction cup with an metal 1/4" male nipple vulcanized into the single sealing lip pad and provides maximum strength while handling sheet loads. This is a highly specialized vacuum cup. It's suitability really needs to be tested on a load before being able to be certain it will work right. It is best for sheet materials.

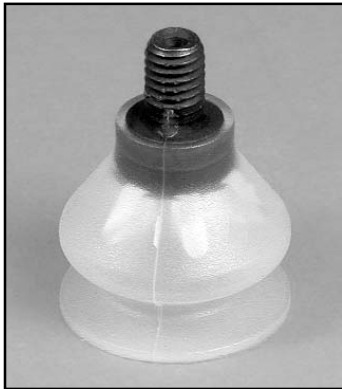


ANVER Item Number	Vacuum in N	Internal Volume in cm ³	Flex of sealing lip	A in. (mm)	A1 in. (mm)	B in. (mm)	C in. (mm)	C1 in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)
SFC-120	200	2.14	3.4	4.72 (120)	0.51 (13)	1.10 (28)	0.39 (10)	0.71 (18)	0.18 (4.5)	0.25 (6.4)	0.75 (19)	1.42 (36)

Vacuum Cups & Suction Cups



Vacuum Cups with Bonded Metal Inserts



Made for Special Use Machinery

B1.5-30-SIT8M (shown at left)

ANVER Item Number	Diameter in. (mm)	Thread Size	Cup Material	Description
B1.5-25-SIT8M	0.98 (25)	8mm Male	Translucent Silicone	Bellows Cup
B1.5-30-SIT8M	1.18 (30)	8mm Male	Translucent Silicone	Bellows Cup
B2.5-40-NBR-14G	1.57 (40)	1/4 Female G	Nitrile Rubber	Double Bellows Cup
B2.5-30-NBR-14G	1.18 (30)	1/4 Female G	Nitrile Rubber	Double Bellows Cup
B1.5-25-NBR8M	0.98 (25)	8mm Male	Nitrile Rubber	Bellows Cup
B1.5-44-SIT10M	1.73 (44)	10mm Male	Translucent Silicone	Bellows Cup



B1.5-25-SIT8M



B2.5-40-NBR-14G



B2.5-30-NBR-14G



B2.5-25-NBR8M



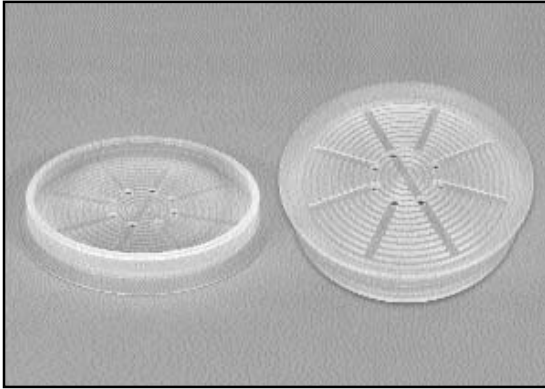
B1.5-44-SIT10M

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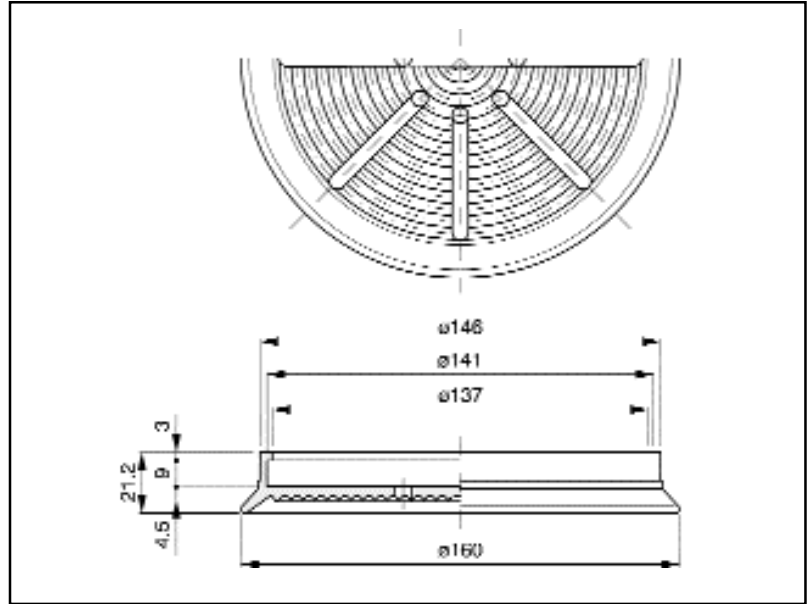
Vacuum Cups & Suction Cups



Silicone and Nitrile Slip-On Sealing Rings



These seals are designed for use on flat, smooth surfaces. Their low headroom and minimal flex make them an excellent choice for clamping and fixture devices, making these vacuum pads a versatile and economic choice for a variety of applications.



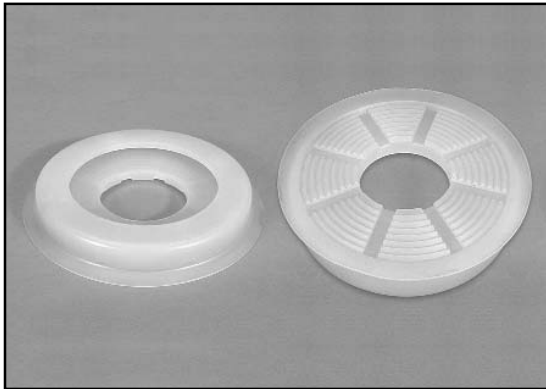
ANVER Item Number	Dia. in (mm)	Height in (mm)	Bottom Surface	Material
A-0100006030	6.30 (160)	0.83 (21.2)	Cleated	Silicone

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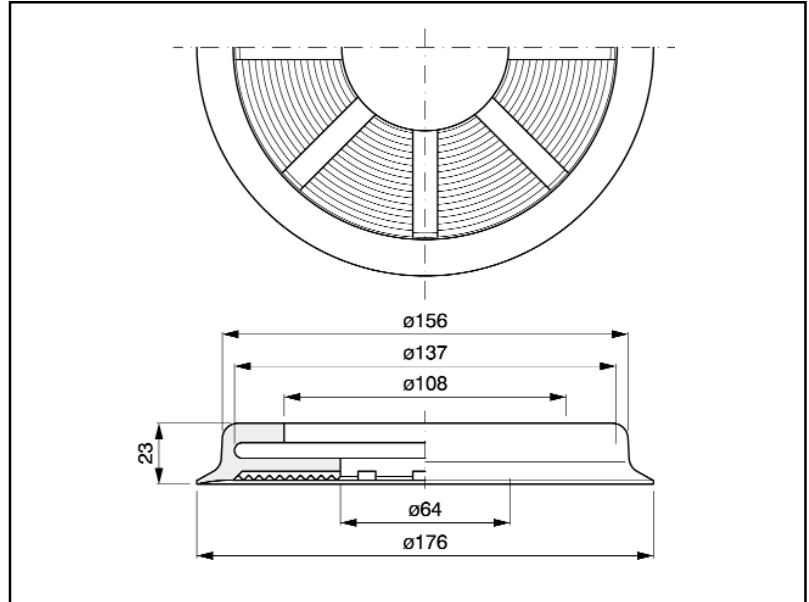
Vacuum Cups & Suction Cups



Silicone and Nitrile Slip-On Sealing Rings



These seals are designed for use on flat, smooth surfaces. Their low headroom and minimal flex make them an excellent choice for clamping and fixture devices, making these vacuum pads a versatile and economic choice for a variety of applications.



ANVER Item Number	Dia. in (mm)	Height in (mm)	Bottom Surface	Material
A-0100015030	6.93 (176)	0.91 (23)	Cleated	Silicone
A-0100015014	6.93 (176)	0.91 (23)	Cleated	Nitrile

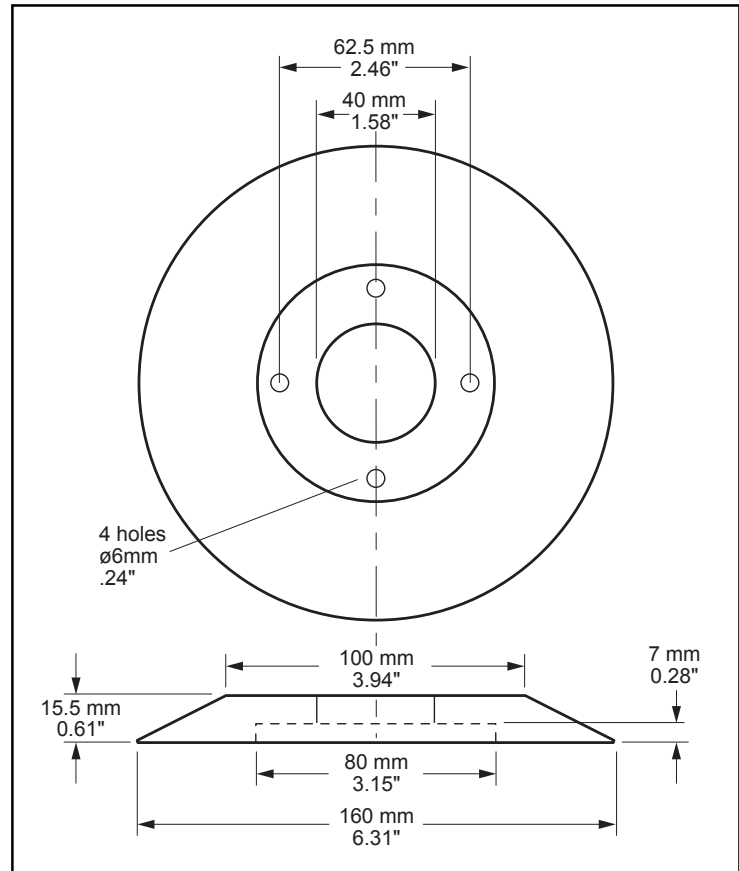
Vacuum Cups & Suction Cups



Silicone Bolt-On Sealing Rings



These seals are designed for use on flat, smooth surfaces. Their low headroom and minimal flex make them an excellent choice for clamping and fixture devices, making these vacuum pads a versatile and economic choice for a variety of applications.



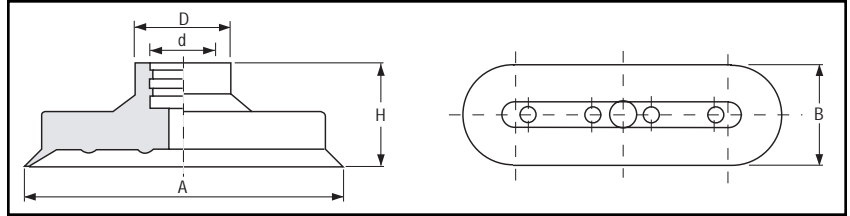
ANVER Item Number	Dia. in (mm)	Height in (mm)	Bottom Surface	Material
SR-BO160SIT	6.31 (160)	1.58 (40)	Smooth	Silicone

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ANVER stocks a large variety of small oval vacuum suction cups to suit your vacuum lifting needs. Our Small OC Series Vacuum Suction Cups are best suited for handling small round or cylindrical oblong surfaces such as pens, tubing, or bottles. These vacuum suction cups are available in numerous sizes and materials for use on many small item material handling applications.

The cups are listed with the appropriate Series 1 or 2 fitting and Level Compensators on the right. Each fitting has a number of Level Compensators available. The Level Compensators needed for these cups are Anver "NR" non-rotating type. This keeps the cup from spinning out of position.



ANVER Item No. and Material	A Length in. (mm)	B Width in. (mm)	D O.D. in. (mm)	d I.D. in. (mm)	H Height in. (mm)	Associated Fitting No. / Type	Associated Level Compensator/ Suspension
OC7-10-NBR Nitrile	0.39 (10)	0.27 (7)	0.27 (7)	0.20 (5)	0.27 (7)	BF7FL-OR	SLSA-1
OC7-10-SIT Silicone	0.39 (10)	0.27 (7)	0.27 (7)	0.20 (5)	0.27 (7)	BF7FL-OR	SLSA-1
OC5-15-NBR Nitrile	0.59 (15)	0.20 (5)	0.31 (8)	0.20 (5)	0.47 (12)	BF7FL-OR	SLSA-1
OC5-15-SIT Silicone	0.59 (15)	0.20 (5)	0.31 (8)	0.20 (5)	0.47 (12)	BF7FL-OR	SLSA-1
OC6-18-NBR Nitrile	0.71 (18)	0.24 (6)	0.31 (8)	0.20 (5)	0.47 (12)	BF7FL-OR	SLSA-1
OC6-18-SIT Silicone	0.71 (18)	0.24 (6)	0.31 (8)	0.20 (5)	0.47 (12)	BF7FL-OR	SLSA-1
OC8-24-NBR Nitrile	0.95 (24)	0.31 (8)	0.47 (12)	0.20 (5)	0.47 (12)	BF7FL-OR or 1/8" OC-Fittings	SLSA-1 or SLSA-2
OC8-24-SIT Silicone	0.95 (24)	0.31 (8)	0.47 (12)	0.20 (5)	0.47 (12)	BF7FL-OR or 1/8" OC-Fittings	SLSA-1 or SLSA-2
OC10-30-NBR Nitrile	1.18 (30)	0.39 (10)	0.47 (12)	0.20 (5)	0.47 (12)	BF7FL-OR or 1/8" OC-Fittings	SLSA-1 or SLSA-2
OC10-30-SIT Silicone	1.18 (30)	0.39 (10)	0.47 (12)	0.20 (5)	0.47 (12)	BF7FL-OR or 1/8" OC-Fittings	SLSA-1 or SLSA-2
OC12-36-NBR Nitrile	1.42 (36)	0.47 (12)	0.47 (12)	0.20 (5)	0.47 (12)	BF7FL-OR or 1/8" OC-Fittings	SLSA-1 or SLSA-2
OC12-36-SIT Silicone	1.42 (36)	0.47 (12)	0.47 (12)	0.20 (5)	0.47 (12)	BF7FL-OR or 1/8" OC-Fittings	SLSA-1 or SLSA-2

Vacuum Cups and Suction Cups



Small Oval Vacuum Suction Cups

ANVER Item No. and Material	A Length in. (mm)	B Width in. (mm)	D O.D. in. (mm)	d I.D. in. (mm)	H Height in. (mm)	Associated Fitting No. / Type	Associated Level Compensator/ Suspension
OC15-45-NBR Nitrile	1.77 (45)	0.59 (15)	0.67 (17)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC15-45-SIT Silicone	1.77 (45)	0.59 (15)	0.67 (17)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC20-60-NBR Nitrile	2.36 (60)	0.79 (20)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC20-60-SIT Silicone	2.36 (60)	0.79 (20)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC25-75-NBR Nitrile	2.95 (75)	0.98 (25)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC25-75-SIT Silicone	2.95 (75)	0.98 (25)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC28-85-NBR Nitrile	3.35 (85)	1.10 (28)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC28-85-SIT Silicone	3.35 (85)	1.10 (28)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC35-100-NBR Nitrile	3.94 (100)	1.38 (35)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2
OC35-100-SIT Silicone	3.94 (100)	1.38 (35)	0.71 (18)	0.43 (11)	0.83 (21)	1/8" OC-Fittings	SLSA-2

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Vacuum Cups and Suction Cups

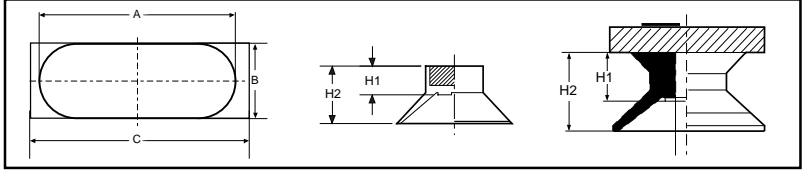
Small Bonded Oval Vacuum Suction Cups



These small, deep-profile oval vacuum cups are best suited for handling narrow cylinders and tubes. The vacuum cups have long, soft lips bonded to a metal plate and are a good choice for custom automation equipment.

Features:

- Supplied bonded to a blank Aluminum or Steel Top Plate.
- Standard 50 - 60 Durometer Neoprene (Silicone and other materials available upon request)

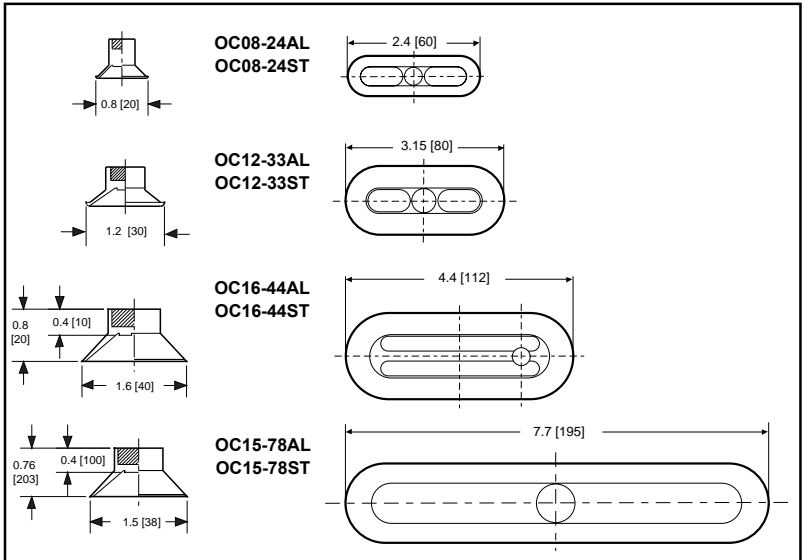
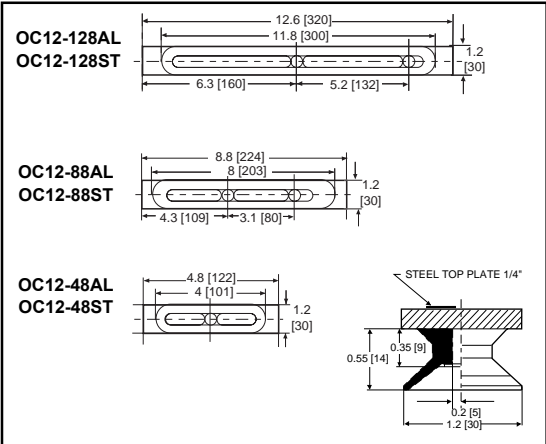


ANVER Item No.	A in. (mm)	B in. (mm)	C in. (mm)	H1 in. (mm)	H2 in. (mm)	Rated Load lb (kg)
OC08-24 *	2.36 (60)	0.79 (20)	-	0.35 (9)	0.55 (14)	6 (2.7)
OC12-33 **	3.15 (80)	1.18 (30)	-	0.35 (9)	0.55 (14)	12 (5.5)
OC12-48	3.98 (101)	1.18 (30)	4.80 (122)	0.63 (16)	0.79 (20)	15 (6.8)
OC12-88	7.99 (203)	1.18 (30)	8.82 (224)	0.63 (16)	0.79 (20)	35 (15.9)
OC12-128	11.80 (300)	1.18 (30)	12.60 (320)	0.63 (16)	0.79 (20)	50 (27.7)
OC16-44	4.41 (112)	1.57 (40)	-	0.39 (10)	0.79 (20)	25 (11.4)
OC15-78	7.68 (195)	1.50 (38)	-	0.39 (10)	0.75 (19)	40 (18.2)

* An alternative to the OC08-24 cup above is the OC20-60-NBR/SIT which is the same size but less expensive.
 ** An alternative to the OC12-33 cup above is the OC28-85-NBR/SIT which is about the same size but less expensive.

Note: Rated loads are estimated; actual capacity will vary based on the load surface and the level of vacuum.

These vacuum pads come without mounting holes or vacuum ports unless otherwise noted.



Vacuum Cups and Suction Cups

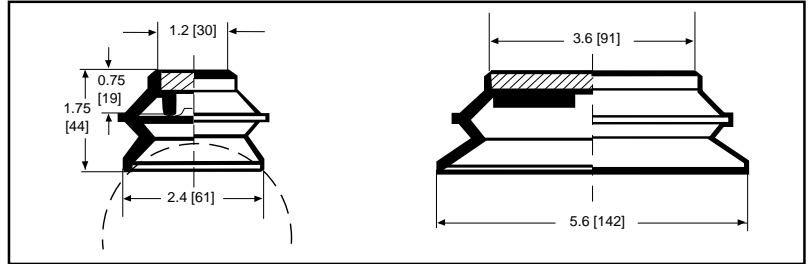


Small Bonded Oval Vacuum Suction Cups



1.5 Bellows Oval Vacuum Cups

Oval 1.5 Bellows Vacuum Cups are excellent for handling cylindrical objects. These cups have a rated capacity of 20 lb (9 kg).



ANVER Item No.	A in. (mm)	B in. (mm)	H1 in. (mm)	H2 in. (mm)	Rated Load lb (kg)
OB1.5-24-56	5.60 (142)	2.40 (61)	0.75 (19)	1.73 (44)	20 (9.1)

Vacuum Cups & Suction Cups



OC55 Series Medium Oval Cups

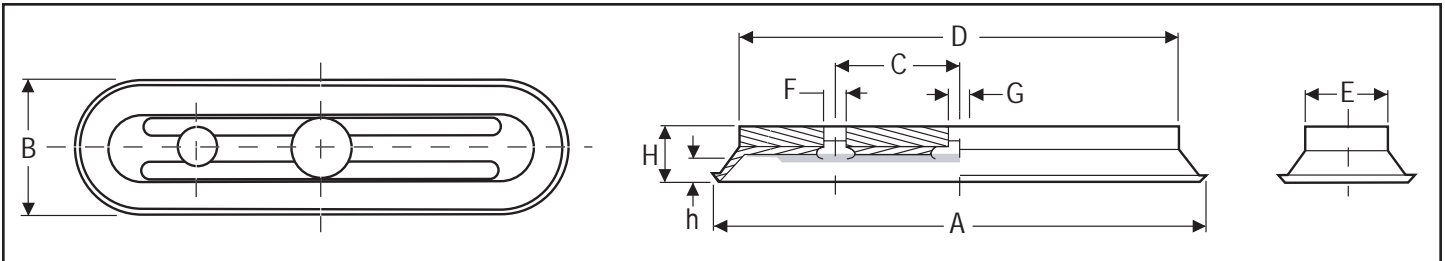


For Paper and Cardboard Applications

ANVER OC55 Series Oval Vacuum Cups consist of a natural rubber seal bonded to a long lasting aluminum hub. OC55 Series vacuum cups are commonly used for handling paper, cardboard cartons and wood, but are suitable for almost any vacuum handling application such as glass. The color of the seal is orange. These cups have a nice lip design and work well. The standard material is Natural Rubber (NR).

Note: The actual suction cup width when pressed down under load is just under 2 1/2" (64 mm) in width.

Mounting: The vacuum cups come un-drilled and un-tapped with two locating holes only. These holes come sealed with rubber and can be used a center or side vacuum port. If you drill through for mounting holes, make sure to seal the threads with a semi-hardening sealant.



ANVER Item No.	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G in. (mm)	H in. (mm)	h in. (mm)	Rated Load (Vertical) lb (kg)*	Rated Load (Horizontal) lb (kg)*
OC55-100NR	3.9 (100)	2.2 (55)	1.0 (25)	3.1 (78)	1.3 (33)	0.3 (8)	0.3 (8)	0.9 (22)	0.35 (9)	15 (7)	30 (14)
OC55-150NR	5.9 (150)	2.2 (55)	1.6 (40)	5.0 (128)	1.3 (33)	0.3 (8)	0.3 (8)	0.9 (22)	0.35 (9)	22 (10)	45 (20)
OC55-200NR	7.9 (200)	2.2 (55)	2.0 (50)	7.0 (178)	1.3 (33)	0.3 (8)	0.3 (8)	0.9 (22)	0.35 (9)	30 (13)	60 (27)
OC55-300NR	11.8 (300)	2.2 (55)	3.9 (100)	10.9 (278)	1.3 (33)	0.3 (8)	0.3 (8)	0.8 (21)	0.30 (8)	50 (22)	100 (45)

* The cup capacities shown above are based on 24"Hg at sea level with a safety factor of two (2) in the horizontal (flat), and four (4) in the vertical (upright).

Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.

Vacuum Cups & Suction Cups



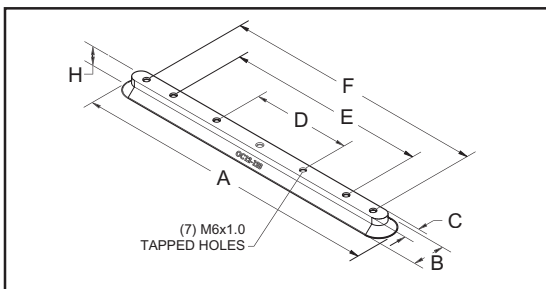
ANVERFLEX Oval Vacuum Cups



These oval vacuum cups with soft, long lips and deep profile are specifically designed for handling flat, rigid materials such as sheet and plate. They are also excellent for wood, composites, curved panels, stone and other materials. They feature an excellent, versatile design for most applications.

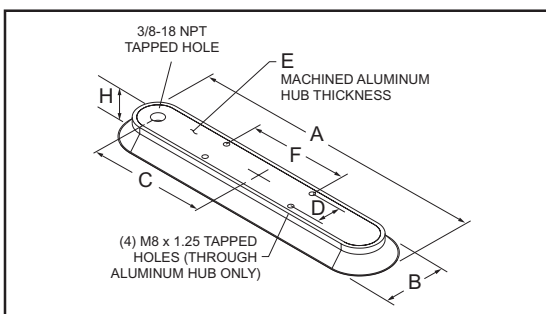
Features:

- Vacuum Hub is a machined aluminum plate bonded to an ANVERFLEX™ proprietary urethane cup. There is no leakage as all mounting holes are sealed on the bottom.
- Vacuum Cup is supplied with pre-drilled and tapped mounting holes and a vacuum port. No drilling is required.
- Vacuum Cups include an inside sealing ring for added security. Capacity is calculated from this inside seal for a strong conservative load rating.
- Color is dark translucent green ANVERFLEX™ urethane which is extremely long wearing, non-marring and resistant to abrasives. The seal is bonded onto an aluminum hub.



Note: The (7) seven M6x1.0 holes above can be used for mounting and for the vacuum. The holes are drilled and tapped through the aluminum which can be used for mounting and/or the vacuum porting. The holes are vacuum tight because they are supplied sealed with urethane from the bottom. We recommend you use four or six outside holes for mounting and use the center hole(s) for the vacuum port. You simply cut out the urethane from the bottom of the holes you are using for vacuum.

ANVER Item No.	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)	Rated Load* (Vertical) lb (kg)	Rated Load* (Horizontal) lb (kg)
OC12-128	12.38 (314)	1.38 (35)	0.63 (16)	4.00 (102)	8.00 (203)	10.5 (267)	0.58 (15)	25 (11)	50 (23)



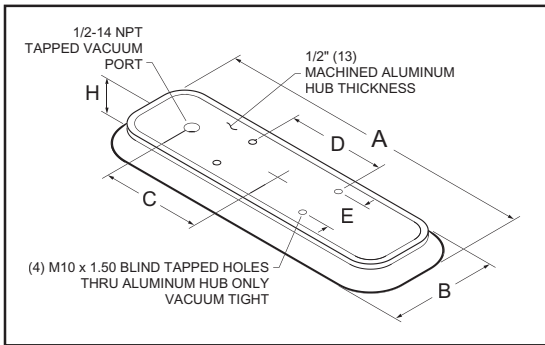
ANVER Item No.	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	H in. (mm)	Rated Load* (Vertical) lb (kg)	Rated Load* (Horizontal) lb (kg)
OC32-100	10.50 (267)	3.63 (92)	3.38 (86)	1.25 (32)	0.38 (9.5)	5.00 (130)	1.03 (26)	62 (28)	125 (57)
OC32-150	15.50 (394)	3.63 (92)	5.88 (149)	1.25 (32)	0.38 (9.5)	5.00 (130)	1.03 (26)	95 (43)	190 (86)
OC46-112	12.00 (305)	4.75 (121)	3.63 (92)	1.50 (38)	0.50 (13)	5.00 (130)	1.27 (32)	100 (45)	200 (91)

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Vacuum Cups & Suction Cups



ANVERFLEX Oval Vacuum Cups



ANVER Item No.	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	H in. (mm)	Rated Load* (Vertical) lb (kg)	Rated Load* (Horizontal) lb (kg)
OC56-177	18.00 (457)	5.88 (149)	6.00 (152)	6.00 (152)	2.50 (64)	1.27 (32)	200 (90)	400 (181)
OC64-200	19.75 (502)	6.75 (171)	6.00 (152)	6.00 (152)	2.50 (64)	1.27 (32)	275 (124)	550 (249)

*The cup capacities shown above are based on 24"Hg at sea level with a safety factor of two (2) in the horizontal (flat), and four (4) in the vertical (upright).

Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.



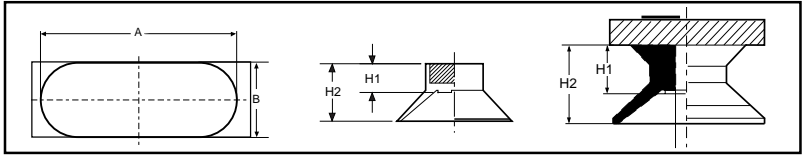
Vacuum Cups and Suction Cups

Large Oval Vacuum Suction Cups



These oval vacuum cups with soft, long lips and deep profile are specifically designed for handling flat, rigid materials such as metal plate. Note: Vacuum pads come without mounting holes or vacuum ports unless otherwise noted.

- Features:**
- Supplied with a blank 5/16" (8 mm) steel or aluminum top plate bonded to the rubber body.
 - Standard 50 - 60 Durometer Nitrile (Silicone and other materials available upon request)

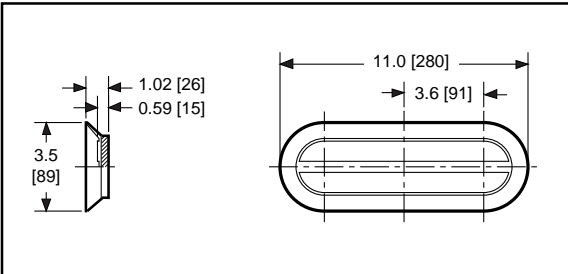


ANVER Item No.	A in. (mm)	B in. (mm)	H1 in. (mm)	H2 in. (mm)	Rated Load lb (kg)
OC22-60	6.00 (152)	2.17 (55)	0.51 (13)	0.83 (21)	45 (20.5)
OC22-80	8.00 (203)	2.17 (55)	0.51 (13)	0.83 (21)	60 (27.3)
OC22-100	10.00 (250)	2.17 (55)	0.51 (13)	0.83 (21)	80 (36.4)
OC22-120	12.00 (304)	2.17 (55)	0.51 (13)	0.83 (21)	100 (45.5)
OC40-112	11.00 (280)	3.50 (89)	0.59 (15)	1.02 (26)	200 (90.9)
OC52-177	17.70 (450)	5.10 (130)	0.59 (15)	0.94 (23)	400 (182.0)
OC60-177	17.70 (450)	5.90 (150)	0.59 (15)	0.94 (23)	500 (227.0)
OC72-200	20.00 (508)	7.20 (183)	0.75 (19)	1.61 (41)	700 (317.5)

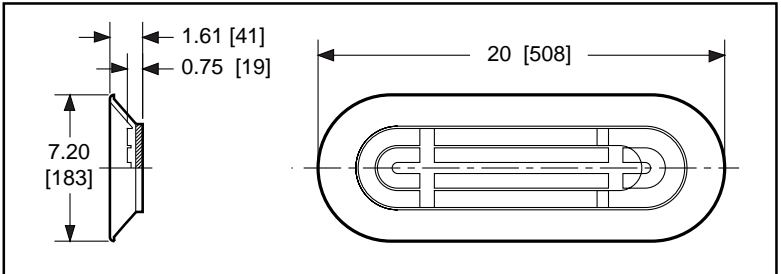
Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.

OC40 and 72

These large oval vacuum cups with soft, long lips are designed for handling flat, rigid materials, such as metal plate. They can handle thin glass without breakage, and laminate without puckering.



OC40-112AL • OC40-112ST



OC72-200AL • OC72-200ST

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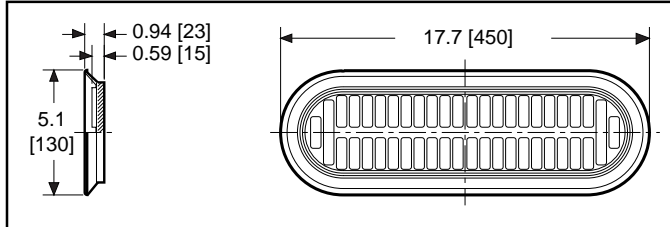
Vacuum Cups and Suction Cups



Large Oval Vacuum Suction Cups

OC52-177AL/ST

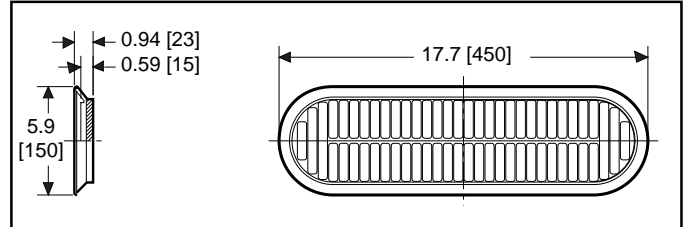
These large oval vacuum cups are suitable for flat materials and glass plates. The cups have soft, long lips that provide good sealing on slightly flexible material.



OC40-112AL • OC40-112ST

OC60-177AL/ST

These vacuum cups have a short, stiff lip with an additional internal sealing edge and are suitable for rigid and flat materials such as thick glass plate.



OC72-200AL • OC72-200ST

Vacuum Cups & Suction Cups



Large Hinged Oval Vacuum Cups

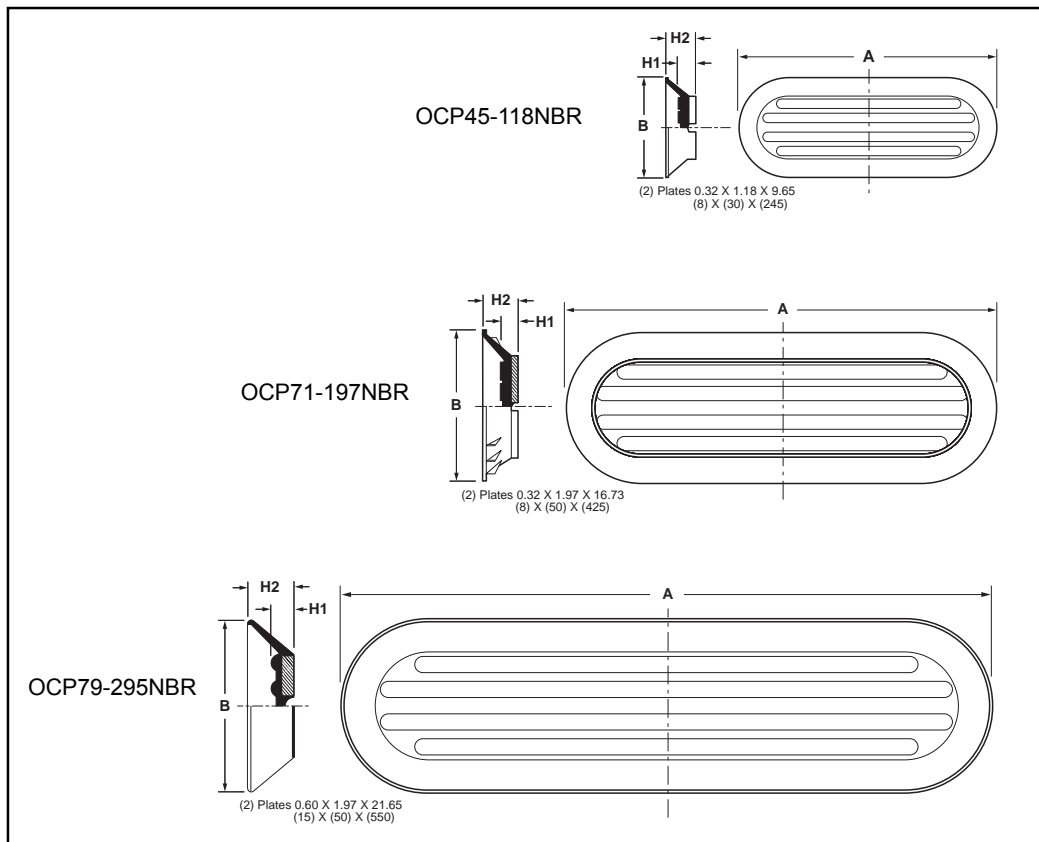


ANVER's OCP Series Oval Vacuum Cups have been specifically designed for lifting pipe and other cylindrical loads. These cups are hinged down the center in order to conform to varying diameters, making them a practical and economical lifting solution for a variety of situations.

The OCP Series Vacuum Cups should be used in conjunction with a clevis mounting configuration, in order to maximize the cup's versatility. OCP Series Oval Vacuum Cups are available in three sizes with a steel mounting hub.

Note: The current design looks slightly different to the above photo as it incorporates a number of design improvements.

ANVER Item No.	A in. (mm)	B in. (mm)	H1 in. (mm)	H2 in. (mm)	Rated Capacity lb (kg)	Minimum Pipe Diameter In. (mm)
OCP45-118NBR	11.8 (300)	4.5 (115)	0.71 (18)	1.34 (34)	150 (68)	9 (229)
OCP71-197NBR	19.7 (500)	7.1 (180)	0.75 (19)	16.1 (41)	450 (204)	14 (356)
OCP79-295NBR	29.5 (750)	7.9 (200)	0.98 (25)	2.13 (54)	750 (340)	16 (407)

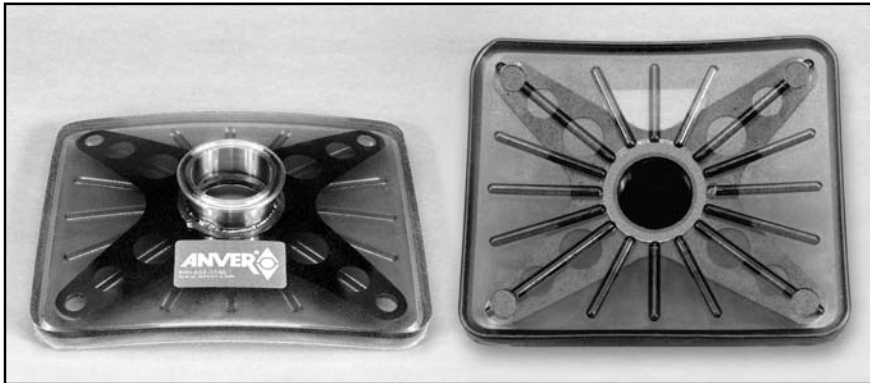


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Vacuum Cups and Suction Cups

FlexGrip Series Vacuum Pad Attachments



For Lifting CRT Monitors and other Curved and Cylindrical Objects

The FlexGrip Series Vacuum Pad Attachment, a new concept in vacuum pad engineering designed to make the lifting of CRT Monitors, and other similar, slightly curved and cylindrical objects easy and safe, is now available from Anver.

The FlexGrip, which is suitable as a single pad for the VT160 and smaller Vacuum Tube Lifting Systems, has a spring steel skeleton molded inside its urethane body, which is pre-formed to the smallest curvature of your application (load), but will flatten out to accommodate larger curves, or even conform to a flat surface. When released, it springs back to its pre-formed curved shape. The pad shown here is molded from 35 durometer urethane, but can be made in 20, 40, 50 or 60 durometer, as well, according to the demands of your application.

Contact an Anver Application Engineer to find out how the FlexGrip can simplify your lifting application today!

Vacuum Cup Part Number

FlexGrip Series Vacuum Pads are Custom Engineered to meet the needs of your particular application. Please call factory for details.

T1-FG65S20-U35

Vacuum Cups & Suction Cups



VC Series: VC25, VC35, VC40 and VC45



Production quality construction with a universal design make ANVER VC Series Vacuum Cups suitable for most applications. Thick rubber bonded to a machined aluminum base make these vacuum cups rugged and long lasting. VC Vacuum Cups are well suited for high duty use found in the automotive industry and in press feeding operations.

Features:

- Rugged construction design with deep threaded mounting hole for use in heavy production.
- Long low-angle lip requires little pressure to make initial contact. This flexibility also compensates for inaccuracies in cup height.
- Two inside sealing edges make contact after vacuum is attained and become the main sealing edges for safety.
- Strengthened outside lip helps achieve a fast, even release.
- Durable, soft rubber bonded to a stiff aluminum hub gives these vacuum cups an excellent non-skid grip.
- Cleated bottom makes these vacuum cups excellent for both horizontal and vertical loads.

Recommended Usage:

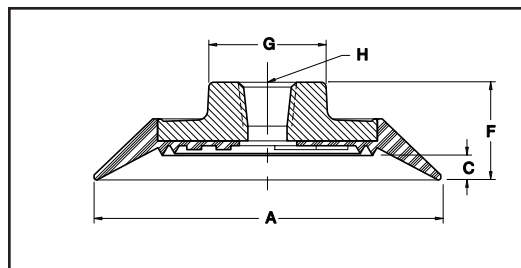
- On light gauge sheet and other thin materials to thick blocks.
- On lightly textured surfaces, such as fiberglass panels, plastic, auto panels, auto glass, etc.
- On wavy or contoured surfaces.
- These vacuum cups have a relatively large port, making them suitable for handling even porous materials.
- Suspension Assemblies are available in a variety of styles and sizes.

Vacuum Cup Materials:

- The Standard Stock material is Blue Neoprene.
- Silicone is sometimes in stock while other compounds are available on special order; contact factory for details.

Vacuum Cup Materials:

- The Standard Stock material is Blue Neoprene.
- Silicone is sometimes in stock while other compounds are available on special order; contact factory for details.



ANVER Item No.	A Dia. in. (mm)	A' Dia. in. (mm)	C Flex in. (mm)	F Height in. (mm)	G Flat in. (mm)	H Suspension Port	*Rated Load lb (kg)	Weight lb (kg)	Adapter Fitting for Suspension	Suspension Needed
VC25	2.50 (63.5)	2.75 (70)	0.26 (7)	1.14 (29)	0.98 (25)	1/4" NPT	15 (6.8)	0.10 (0.05)	None Needed	SLSA3 Series
VC35	3.50 (89)	3.75 (95)	0.33 (8)	1.38 (35)	0.98 (25)	3/8" NPT	30 (13)	0.15 (0.07)	3/8" NPT M 1/4" NPT F	SLSA3 Series
VC40	4.00 (100)	4.25 (110)	0.37 (9.4)	1.18 (30)	0.95 (24)	3/8" G	45 (20)	0.18 (0.08)	Info to Come	SLSA3 Series
VC45	4.50 (114)	4.63 (117)	0.38 (10)	1.61 (41)	1.26 (32)	3/8" NPT	55 (24)	0.35 (0.16)	3/8" NPT M 1/4" NPT F	SLSA3 Series

*The cup capacities shown above are based on 24"Hg at sea level with a safety factor of two (2) in the horizontal (flat). Vertical Load Capacity is half of the listed Horizontal Load Capacities above.

Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.

Vacuum Cups & Suction Cups



VC Series: VC55



ANVER's VC55 Vacuum Cup offers production quality construction with a curved-lip configuration designed for convex loads. Soft rubber, with a beaded lip, is bonded to an aluminum hub, making these cups rugged and long lasting.

The vacuum cup has a threaded through-hole for pipe mounting (3/8" NPT) with wrench flats for easy mounting. The 40-45 Durometer Neoprene Rubber Sealing Ring is bonded to a cast aluminum hub with an Integral Scuff Pad.

Features:

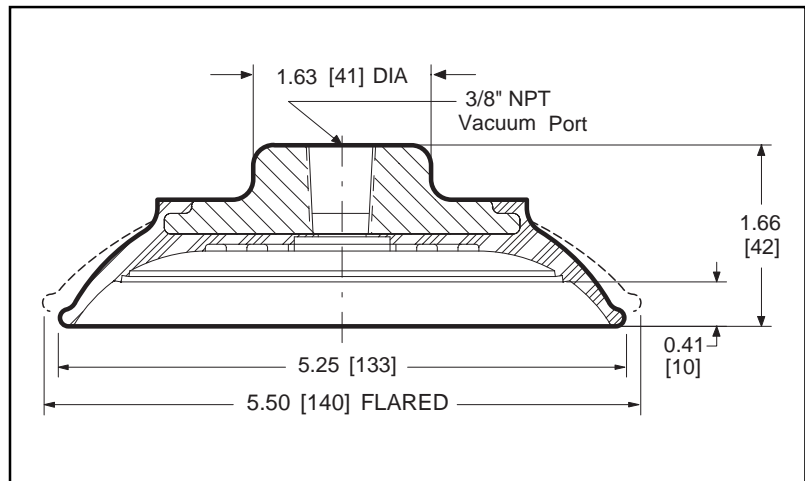
- Designed for production use. Rugged construction with deep threaded mounting hole.
- Two inside sealing edges make contact after vacuum is attained and become the main sealing edge for safety.
- Durable, soft rubber bonded to a stiff aluminum hub provides an easy quick-attach and an excellent non-skid grip.

Recommended Usage:

- Specifically designed for round or curved materials.
- Lightly textured surfaces such as fiberglass panels, glass, aircraft fuselages, drums, canisters, etc.
- Wavy or contoured surfaces.
- These cups have a relatively large port, making them suitable for handling porous items, such as fiber drums.

Vacuum Cup Materials:

- Standard material is Neoprene.
- Silicone and other compounds are available; allow for longer lead time.



ANVER Item No.	Rated Load lb. (kg)	Weight lb. (kg)
VC55	75 (34)	0.5 (0.2)

Vacuum Cups & Suction Cups



VC Series: VC57, VC65, VC75, VC95R-2 and VC119-2



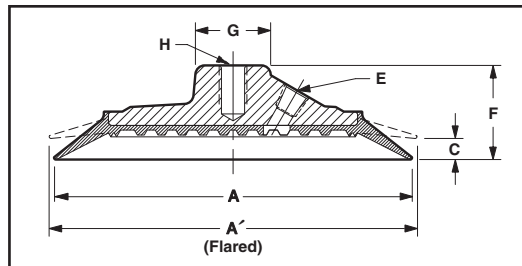
These ANVER vacuum cups feature production quality construction, with a universal design, suitable for most applications. Machine rod suspension mounting, with side vacuum port, ensures strong, long lasting, airtight connections.

Features:

- Rugged construction designed for production use.
- Long low-angle lip requires little pressure to make initial contact. This flexibility compensates for inaccuracies in cup height.
- Two inside sealing edges make contact after vacuum is attained and become the main sealing edges for safety.
- Cleated bottom eliminates puckering or slipping. Excellent for horizontal or vertical applications.
- Soft, pliable rubber bonded to a stiff aluminum hub gives these cups an easy quick-attach and a tremendous non-skid grip.

Recommended Usage:

- For light gauge sheet and other thin materials to thick blocks.
- Lightly textured surfaces, such as fiberglass panels, auto panels, etc.
- Wavy or contoured surfaces.
- These cups are flexible, making them suitable for handling cartons.



Vacuum Cup Materials:

- Standard material is Neoprene.
- Silicone and other materials are available; allow for longer lead time.

ANVER Item No.	A Dia. in. (mm)	A' Dia. in. (mm)	C Flex in. (mm)	E Port	F Height in. (mm)	G Flat in. (mm)	H Suspension Connection	*Rated Load lb (kg)	Weight lb (kg)	Suspension Assembly
VC57	5.60 (142)	5.88 (149)	0.44 (11)	1/4" NPT	1.88 (48)	1.25 (32)	1/2-13 UNC	75 (34)	0.75 (0.34)	PS57R-NBR Series
VC65	6.30 (160)	6.63 (168)	0.50 (13)	1/4" NPT	2.00 (51)	1.25 (32)	1/2-13 UNCT	100 (45)	0.90 (0.41)	PS65R-NBR Series
VC75	7.40 (188)	7.63 (194)	0.56 (14)	3/8" NPT	2.75 (70)	1.50 (38)	5/8-11 UNC	150 (68)	1.50 (0.68)	PS75R-NBR Series
VC95R-2	9.75 (248)	10.00 (254)	0.63 (16)	3/8" NPT	2.58 (66)	2.75 (70)	3/4-10 UNC	250 (113)	2.75 (1.25)	PS95R-NBR Series
VC119-2	12.25 (311)	12.50 (318)	0.50 (13)	3/8" NPT	2.50 (64)	2.75 (70)	3/4-10 UNC	500 (227)	5.44 (2.47)	PS119R-NBR Series

* The cup capacities shown above are based on 24"Hg at sea level with a safety factor of two (2) in the horizontal (flat). Vertical Load Capacity is half of the listed Horizontal Load Capacities above.

Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.



Vacuum Cups & Suction Cups



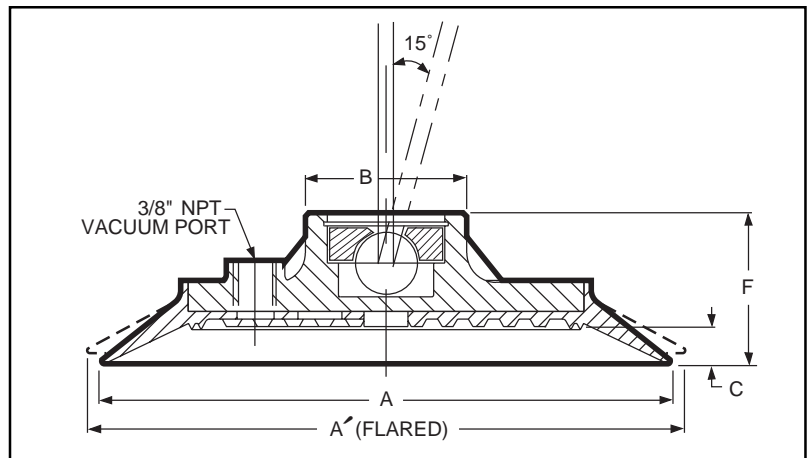
VC Series: VC95R-4 and VC119-4



ANVER's Large Vacuum Cups with ball swivel mounting are excellent for handling large loads where it is necessary to compensate for uneven or wavy surfaces.

Features:

- Rugged construction designed for production use.
- Pivoting suspension rod adjusts to flexible or irregular loads.
- Two inside sealing edges make contact after vacuum is attained and become the main sealing edges for safety.
- Excellent for horizontal or vertical applications. For vertical applications, two or more rows of cups are recommended.
- Standard rubber is 40-45 Durometer Neoprene. Silicone available upon request.



ANVER Item No.	A Dia. In. (mm)	A' Dia. In. (mm)	B Rim Width in. (mm)	F Height in. (mm)	C Flex in. (mm)	Vacuum Port	*Rated Load (Vertical) lb. (kg)	*Rated Load (Horizontal) lb. (kg)	Cup Weight lb. (kg)
VC95R-4	9.75 (248)	10.00 (254)	2.75 (70)	2.58 (66)	0.63 (16)	3/8" NPT	125 (56)	250 (113)	2.75 (1.25)
VC119-4	12.25 (311)	12.50 (318)	2.75 (70)	2.50 (64)	0.50 (13)	3/8" NPT	250 (113)	500 (227)	5.44 (2.47)

* The cup capacities shown above are based on 24"Hg at sea level with a safety factor of two (2) in the horizontal (flat), and four (4) in the vertical (upright).

Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.

Vacuum Cups & Suction Cups



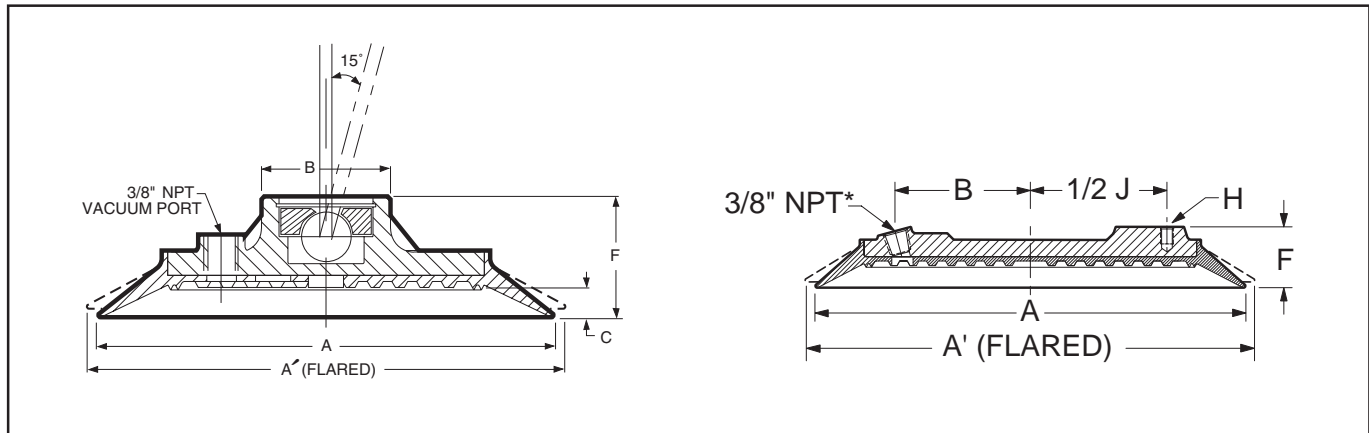
VC Series: VC95R-4, VC95Q, VC119-4, VC119Q and VC125Q-2



ANVER's Large Vacuum Cups with ball swivel mounting are excellent for handling large loads where it is necessary to compensate for uneven or wavy surfaces.

Features:

- Rugged construction designed for production use.
- Pivoting suspension rod adjusts to flexible or irregular loads.
- Two inside sealing edges make contact after vacuum is attained and become the main sealing edges for safety.
- Excellent for horizontal or vertical applications. For vertical applications, two or more rows of cups are recommended.
- Standard rubber is 40-45 Durometer Neoprene. Silicone available upon request.



ANVER Item No.	A Dia. in. (mm)	A' Dia. in. (mm)	B Rim Width in. (mm)	F Height in. (mm)	C Flex in. (mm)	Vacuum Port	H Bolt Size	J Bolt Circle in. (mm)	*Rated Load lb. (kg)	Cup Weight lb. (kg)	Suspension Assembly Number
VC95R-4	9.75 (248)	10.00 (254)	2.75 (70)	2.55 (65)	0.66 (17)	3/8" NPT	N/A	N/A	250 (113)	2.75 (1.25)	PS95S Series
VC95Q	9.75 (248)	10.00 (254)	2.13 (54)	1.55 (39)	0.66 (17)	3/8" NPT	5/16-18 UNC	4.5 (114)	250 (113)	2.75 (1.25)	PS95Q/C Series
VC119-4	12.25 (311)	12.50 (318)	2.75 (70)	2.50 (64)	0.50 (13)	3/8" NPT	N/A	N/A	500 (227)	5.44 (2.47)	PS119S Series
VC119Q	12.25 (311)	12.50 (318)	3.56 (90)	1.63 (41)	0.50 (13)	3/8" NPT	3/8-16 UNC	Inner 5.66 (144) Outer 8.00 (203)	500 (227)	5.44 (2.47)	Info to Come
VC125Q-2	12.75 (324)	13.00 (330)	4.00 (102)	1.78 (45)	0.65 (17)	3/8" NPT	3/8-16 UNC	8.00 (203)	500 (227)	Info to Come	PS125Q/C Series

* The cup capacities shown above are based on 24"Hg at sea level with a safety factor of two (2) in the horizontal (flat), and four (4) in the vertical (upright).

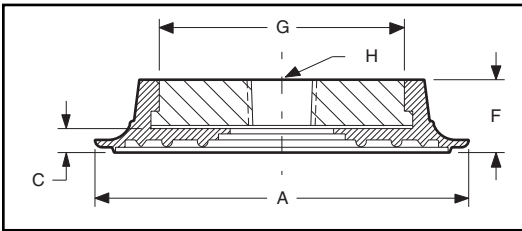
Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.

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Vacuum Cups & Suction Cups



VP26, VP36, VP47 and VP64



Used on Woodworking and Panel Handling Equipment

ANVER VP Series Vacuum Cups are designed for use on flat, smooth surfaces. Their low headroom and minimal flex make them an excellent choice for clamping and fixture devices. Replacement seals are available in four different materials, making these vacuum pads a versatile and economic choice for a variety of applications.

Features:

- Excellent for lifting smooth, rigid loads typically found in the furniture industry.
- Seals can be replaced without removing the entire cup.
- Long lasting aluminum hub can accommodate a variety of mounting sizes and styles.
- Replacement seals are available in Nitrile (NBR), Silicone (SIT), Urethane (PUR), and Vinyl (VYL).
- Variety of Mounting Options and Suspensions.
- Seals are interchangeable with the seals used on HDC Series Hold Down Clamps.

VP Series Vacuum Pad Assembly Specifications:

Nitrile NBR	A Dia. in. (mm)	C Flex in. (mm)	F Height in. (mm)	G in. (mm)	H Port	Rated Cap. lb. (kg)
VP26-NBR	2.56 (65)	0.25 (6.3)	0.63 (16)	1.57 (40)	1/4"NPT	14 (6.35)
VP26-SIT	2.56 (65)	0.25 (6.3)	0.63 (16)	1.57 (40)	1/4"NPT	14 (6.35)
VP26-PUR	2.56 (65)	0.25 (6.3)	0.63 (16)	1.57 (40)	1/4"NPT	14 (6.35)
VP26-VYL	2.56 (65)	0.25 (6.3)	0.63 (16)	1.57 (40)	1/4"NPT	14 (6.35)
VP36-NBR	3.54 (90)	0.25 (6.3)	0.68 (17)	2.32 (59)	3/8"NPT	30 (13.60)
VP36-SIT	3.54 (90)	0.25 (6.3)	0.68 (17)	2.32 (59)	3/8"NPT	30 (13.60)
VP36-PUR	3.54 (90)	0.25 (6.3)	0.68 (17)	2.32 (59)	3/8"NPT	30 (13.60)
VP36-VYL	3.54 (90)	0.25 (6.3)	0.68 (17)	2.32 (59)	3/8"NPT	30 (13.60)
VP47-NBR	4.63 (117)	0.25 (6.3)	0.68 (17)	3.47 (88)	3/8"NPT	50 (22.00)
VP47-SIT	4.63 (117)	0.25 (6.3)	0.68 (17)	3.47 (88)	3/8"NPT	50 (22.00)
VP47-PUR	4.63 (117)	0.25 (6.3)	0.68 (17)	3.47 (88)	3/8"NPT	50 (22.00)
VP47-VYL	4.63 (117)	0.25 (6.3)	0.68 (17)	3.47 (88)	3/8"NPT	50 (22.00)

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Vacuum Cups & Suction Cups



VP26, VP36, VP47 and VP64

VP Series Vacuum Pad Assembly Specifications (cont.):

Nitrile NBR	A Dia. in. (mm)	C Flex in. (mm)	F Height in. (mm)	G in. (mm)	H Port	Rated Cap. lb. (kg)
VP64-NBR	6.30 (160)	0.39 (10.0)	0.98 (25)	4.72 (120)	3/8"NPT	100 (45.00)
VP64-SIT	6.30 (160)	0.39 (10.0)	0.98 (25)	4.72 (120)	3/8"NPT	100 (45.00)
VP64-PUR	6.30 (160)	0.39 (10.0)	0.98 (25)	4.72 (120)	3/8"NPT	100 (45.00)
VP64-VYL	6.30 (160)	0.39 (10.0)	0.98 (25)	4.72 (120)	3/8"NPT	100 (45.00)

VP Series Vacuum Pad Replacement Seals and Hubs:

Part Number	Description	Fits Vacuum Pad
VP26-H	Aluminum Hub Only	VP26-XXX
26-NBR	Nitrile Seal Only	VP26-NBR
26-SIT	Silicone Seal Only	VP26-NBR
26-PUR	Polyurethane Seal Only	VP26-NBR
26-VYL	Vinyl Seal Only	VP26-NBR
VP36-H	Aluminum Hub Only	VP36-XXX
36-NBR	Nitrile Seal Only	VP36-NBR
36-SIT	Silicone Seal Only	VP36-NBR
36-PUR	Polyurethane Seal Only	VP36-NBR
36-VYL	Vinyl Seal Only	VP36-NBR

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Vacuum Cups & Suction Cups

VP26, VP36, VP47 and VP64



VP Series Vacuum Pad Replacement Seals and Hubs:

Part Number	Description	Fits Vacuum Pad
VP47-H	Aluminum Hub Only	VP47-XXX
47-NBR	Nitrile Seal Only	VP47-NBR
47-SIT	Silicone Seal Only	VP47-NBR
47-PUR	Polyurethane Seal Only	VP47-NBR
47-VYL	Vinyl Seal Only	VP47-NBR
VP64-H	Aluminum Hub Only	VP64-XXX
64-NBR	Nitrile Seal Only	VP64-NBR
64-SIT	Silicone Seal Only	VP64-NBR
64-PUR	Polyurethane Seal Only	VP64-NBR
64-VYL	Vinyl Seal Only	VP64-NBR

Vacuum Cups & Suction Cups



VP50 Rigid and Port Mount Series



ANVER VP50 series vacuum pads offer a convenient solution to your material handling needs. Two standard mounting styles make these versatile vacuum pads perfect for just about any application, while the hand replaceable sealing rings make maintenance quick, easy, and economical.

Features:

- Thru-Port Mount or Rigid Mount (1/2 - 13 UNC) with side port available as standard.
- Short-lip design for quick, even attach/release.
- Cleated Bottom for Maximum Capacity.
- Seals available in blue neoprene and white silicone.

ANVER Item No.	Replacement Seal Number	Cup Diameter in. (mm)	Cup Height in. (mm)	Mounting Style	Vacuum Port Size	Rated Load** lb. (kg)
VP50-1-CR	SSR-50	5.13 (130)	0.95 (24)	Port	3/8"NPT	80 (36)
VP50-1-SI	SSR-50-SI	5.13 (130)	0.95 (24)	Port	3/8"NPT	80 (36)
VP50-2-CR	SSR-50	5.13 (130)	1.70 (44)	Rigid*	1/4"NPT	80 (36)
VP50-2-SI	SSR-50-SI	5.13 (130)	1.70 (44)	Rigid*	1/4"NPT	80 (36)

* Note: The Rigid Mount has a (1/2 - 13 UNC) blind tapped suspension hole with 1/4"NPT side port for vacuum.

**Rated load capacity at 24 in. Hg vacuum, when used in the horizontal plane, and based on a safety factor of 2. Divide again by 2 for vertical application. Actual capacity depends on load surface and condition of vacuum generating system, which must be determined by the user.

Vacuum Cups & Suction Cups



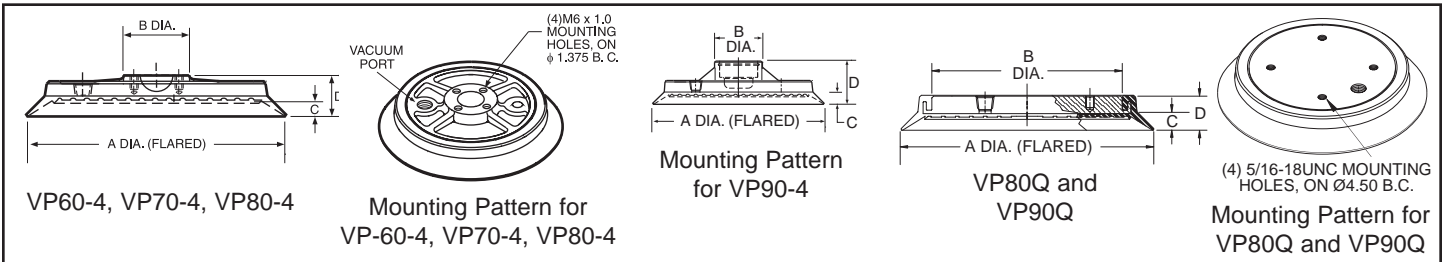
VP60, VP70, VP80 and VP90



ANVER's VP Series flat vacuum cups are also available for use with our ball swivel suspensions. These cups have been designed using our 30+ years of experience in the vacuum handling field making them some of the most versatile and economical vacuum cups we offer.

Features:

- Easy-to-install replacement seals make maintenance simple and economic.
- Short lip seals attach quickly and evenly.
- Standard Ball Swivel Mounting
- Cleated bottom maximizes capacity — excellent for both horizontal and vertical loads.



ANVER Item No.	Replacement Seal Number	A Cup Dia. in. (mm)	B Dia. in. (mm)	C Flex in. (mm)	D Height in. (mm)	Vacuum Port	Rated Load* lbs. (kg)	Weight lb. (kg)	Suspension Assembly Number
VP60-4-NBR	SSR-60	6.13 (156)	2.00 (51)	0.38 (10)	1.19 (30)	1/4" NPT	110 (50)	0.80 (0.36)	PS60S Series
VP60-4-SI	SSR-60-SI	6.13 (156)	2.00 (51)	0.38 (10)	1.19 (30)	1/4" NPT	110 (50)	0.80 (0.36)	PS60S Series
VP70-4-NBR	SSR-70	7.13 (181)	2.00 (51)	0.38 (10)	1.19 (30)	1/4" NPT	160 (73)	1.15 (0.52)	PS70S Series
VP70-4-SI	SSR-70-SI	7.13 (181)	2.00 (51)	0.38 (10)	1.19 (30)	1/4" NPT	160 (73)	1.15 (0.52)	PS70S Series
VP80-4-NBR	SSR-80	8.25 (210)	2.00 (51)	0.44 (11)	1.25 (32)	1/4" NPT	220 (100)	1.55 (0.70)	PS80S Series
VP80-4-SI	SSR-80-SI	8.25 (210)	2.00 (51)	0.44 (11)	1.25 (32)	1/4" NPT	220 (100)	1.55 (0.70)	PS80S Series
VP90-4-NBR	SSR-90	9.25 (235)	2.50 (64)	0.47 (12)	2.31 (59)	3/8" NPT	275 (125)	2.60 (1.18)	PS90S Series
VP90-4-SI	SSR-90-SI	9.25 (235)	2.50 (64)	0.47 (12)	2.31 (59)	3/8" NPT	275 (125)	2.60 (1.18)	PS90S Series
VP80Q-SSR	SSR-80	8.25 (210)	5.88 (149)	0.44 (11)	1.25 (32)	1/4" NPT	220 (100)	2.18 (0.99)	PS80S Series
VP80Q-SSR-SI	SSR-80-SI	8.25 (210)	5.88 (149)	0.44 (11)	1.25 (32)	1/4" NPT	220 (100)	2.18 (0.99)	PS80S Series
VP90Q-NBR	SSR-90	9.25 (235)	6.80 (173)	0.47 (12)	1.22 (31)	3/8" NPT	275 (125)	2.25 (1.02)	PS90Q Series
VP90Q-SI	SSR-90-SI	9.25 (235)	6.80 (173)	0.47 (12)	1.22 (31)	3/8" NPT	275 (125)	2.25 (1.02)	PS90Q Series

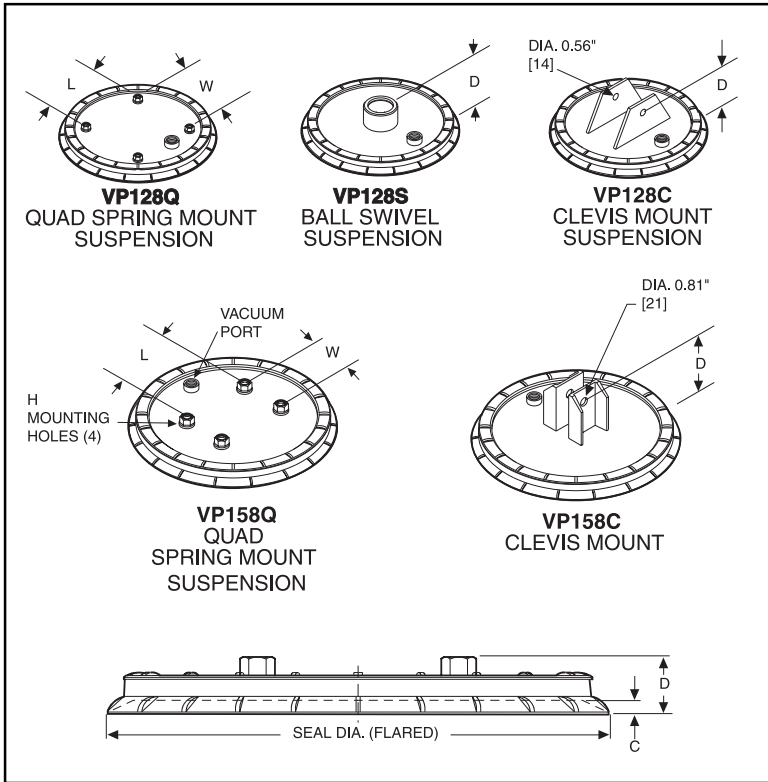
* Rated Load Capacity at 24" Hg vacuum when used on a horizontal plane and based on a safety factor of 2. Divide again by 2 for vertical applications. Actual capacity depends on load surface and condition of the vacuum generating system. NBR = Nitrile SI = Silicone

➤ This spec sheet was adapted for print from our website. Additional information and photos are available at www.anver.com. 0172501



Vacuum Cups and Suction Cups

Large VP Series Vacuum Pads w/ Replaceable Seals



ANVER's Large VP Series Vacuum Pads feature hand replaceable sealing rings and rugged high quality steel hubs making these some of the most versatile and economical vacuum cups available. Large VP Series Vacuum Cups can be mounted in a variety of ways.

Features:

- Economical - seals replace easily in minutes
- No tools needed
- Cleated bottoms for maximum capacity in both vertical and horizontal applications
- Short lip design for quick attach and release
- Heavy Duty steel hubs can be mounted in a variety of ways
- Vacuum Cup Materials:

The standard materials are Nitrile (NBR) and Silicone (SI).



Specifications for Large VP Series Vacuum Pads with Replaceable Seals:

Vacuum Pad Number	Replacement Seal Number	Mounting Type	Seal Dia. in (mm)	L in (mm)	W in (mm)	C in (mm)	D in (mm)	Vacuum Port NPT	H UNC	Shipping Weight lb (kg)	Capacity* lb (kg)
VP128Q-NBR	SR-128	Quad-Spring	13.25 (337)	5.66 (141)	5.66 (141)	0.42 (11)	1.42 (36)	3/8	3/8-16	11 (5.0)	600 (272)
VP128Q-SI	SR-128-SI	Quad-Spring	13.25 (337)	5.66 (141)	5.66 (141)	0.42 (11)	1.42 (36)	3/8	3/8-16	11 (5.0)	600 (272)
VP128S-NBR	SR-128	Ball-Swivel	13.25 (337)	—	—	0.42 (11)	2.44 (62)	3/8	—	12 (5.5)	600 (272)
VP128S-SI	SR-128-SI	Ball-Swivel	13.25 (337)	—	—	0.42 (11)	2.44 (62)	3/8	—	12 (5.5)	600 (272)
VP128C-NBR	SR-128	Clevis	13.25 (337)	—	—	0.42 (11)	2.92 (74)	3/8	—	13 (5.9)	600 (272)
VP128C-SI	SR-128-SI	Clevis	13.25 (337)	—	—	0.42 (11)	2.92 (74)	3/8	—	13 (5.9)	600 (272)

* Rated Load Capacity at 24 inch Hg vacuum when used in the horizontal plane based on a vacuum holding safety factor of two. Standard seal material is ANVER's exclusive non-marring blue Nitrile rubber (NBR). Silicone (SI) is also available.

Vacuum Cups & Suction Cups



Large VP Series Vacuum Pads w/ Replaceable Seals

Specifications for Large VP Series Vacuum Pads with Replaceable Seals:

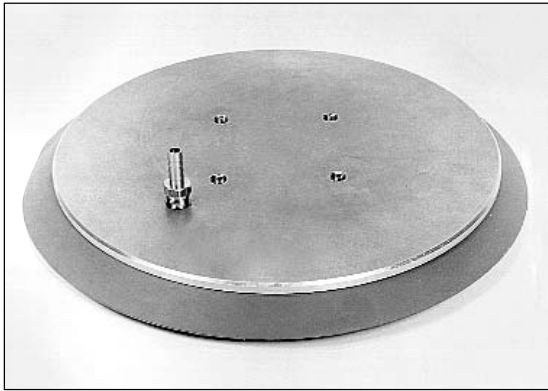
Vacuum Pad Number	Replacement Seal Number	Mounting Type	Seal Dia. in (mm)	L in (mm)	W in (mm)	C in (mm)	D in (mm)	Vacuum Port NPT	H UNC	Shipping Weight lb (kg)	Capacity* lb (kg)
VP158Q-NBR	SR-158	Quad-Spring	16.25 (413)	6.5 (165)	4.0 (102)	0.44 (11)	2.13 (51)	1/2	3/4-10	25 (11.4)	1200 (544)
VP158Q-SI	SR-158-SI	Quad-Spring	16.25 (413)	6.5 (165)	4.0 (102)	0.44 (11)	2.13 (51)	1/2	3/4-10	25 (11.4)	1200 (544)
VP158S-NBR	SR-158	Quad-Spring**	16.25 (413)	9.0 (229)	4.0 (102)	0.44 (11)	2.13 (51)	1/2	3/4-10	25 (11.4)	1200 (544)
VP158S-SI	SR-158-SI	Quad-Spring**	16.25 (413)	9.0 (229)	4.0 (102)	0.44 (11)	2.13 (51)	1/2	3/4-10	25 (11.4)	1200 (544)
VP158C-NBR	SR-158	Clevis	16.25 (413)	—	—	0.44 (11)	3.94 (98)	1/2	—	26 (11.8)	1200 (544)
VP158C-SI	SR-158-SI	Clevis	16.25 (413)	—	—	0.44 (11)	3.94 (98)	1/2	—	26 (11.8)	1200 (544)

**For Use only on Suspension Assemblies with 5" x 7" Slides. Consult Factory.



Vacuum Cups and Suction Cups

Round Pads with Stretch-On Seals

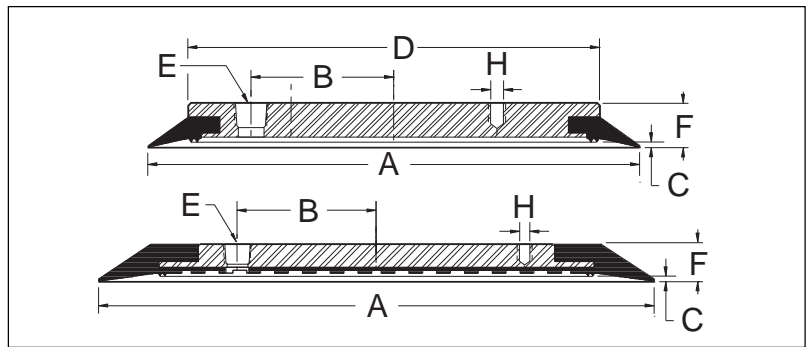
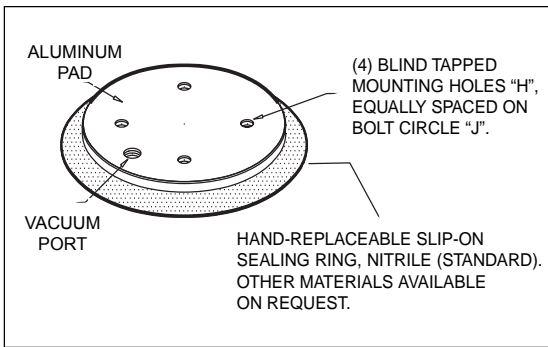
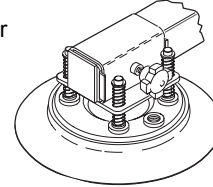


Features:

- Rugged construction ideal for production use.
- Short lip design maximizes load rigidity.
- Hand replaceable seals.

Recommended Usage:

These vacuum pads are designed for flat, rigid materials, such as sheet metal or plate. The pads should only be used for horizontal lifting applications.



Pad Assembly Part Number	Replacement Seal Number	A Cup Dia. in. (mm)	B Rad. in. (mm)	C Flex in. (mm)	D Dia. in. (mm)	E** Port	F Height in. (mm)	H Mounting Holes	J Circle in. (mm)	Rated Load* lbs. (kg)	Weight lb. (kg)
VP108Q-NBR	SR-108	10.75 (273.0)	2.75 (69.9)	0.19 (4.8)	9.16 (228.6)	1/8" NPT	0.97 (24.7)	5/16-18 UNC	4.5 (114)	400 (180)	0.80 (0.36)
VP108Q-SI	SR-108-SI	10.75 (273.0)	2.75 (69.9)	0.19 (4.8)	9.16 (228.6)	-	-	-	-	400 (180)	-
VP120Q-NBR	SR-120	12.38 (314.5)	3.75 (95.3)	0.25 (6.4)	10.69 (271.6)	3/8" NPT	1.00 (25.4)	3/8-18 UNC	8.0 (203)	550 (240)	1.15 (0.52)
VP120Q-SI	SR-120-SI	12.38 (314.5)	3.75 (95.3)	0.25 (6.4)	10.69 (271.6)	-	-	-	-	550 (240)	-
VP140Q-NBR	SR-140	13.75 (349.0)	3.75 (95.3)	0.25 (6.4)	12.56 (319.0)	3/8" NPT	1.06 (26.9)	3/8-18 UNC	8.0 (203)	725 (327)	1.55 (0.70)
VP140Q-SI	SR-140-SI	13.75 (349.0)	3.75 (95.3)	0.25 (6.4)	12.56 (319.0)	-	-	-	-	725 (327)	-
VP150Q-NBR	SR-150	15.00 (381.0)	3.75 (95.3)	0.13 (3.3)	9.63 (244.6)	3/8" NPT	1.00 (25.4)	3/8-18 UNC	8.0 (203)	800 (360)	2.60 (1.18)
VP150Q-SI	SR-150-SI	15.00 (381.0)	3.75 (95.3)	0.13 (3.3)	9.63 (244.6)	-	-	-	-	800 (360)	-

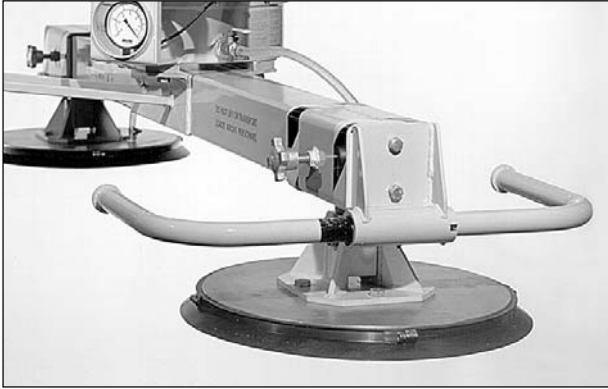
* Rated Load Capacity at 24 in. Hg, when used in a horizontal plane, and based on a safety factor of 2. Divide again by 2 for vertical applications. Actual capacity depends on load surface and condition of vacuum generating system and must be determined by the user.

** Metric Ports available as a special order. These cups are normally sold un-drilled. Special materials available; please consult factory.



Vacuum Cups and Suction Cups

Round pads with Clamp-on Seals



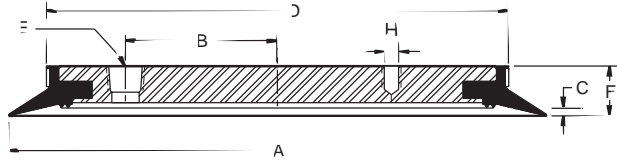
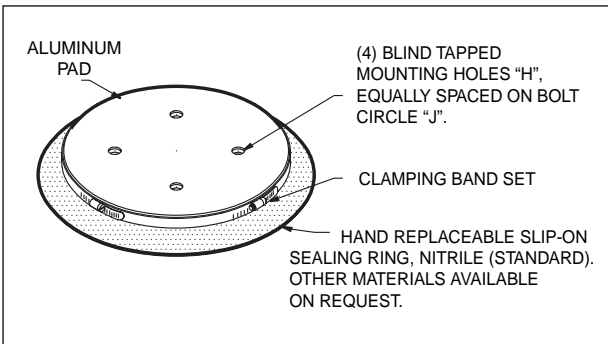
Features:

- Rugged Construction, Designed for Production Use.
- Hand Replaceable Seals.
- Short Lip Design Maximizes Load Rigidity.
- Low Profile Design.

Recommended Usage:

These flat aluminum vacuum pads with stretched-on rubber sealing rings are ideal for applications with flat, rigid loads.

The rubber seal is held in a groove on the side of the pad and is secured with a clamping band. These rubber seals can be replaced by hand; however, this usually requires removal of the pad from the lifter.



Pad Assembly Part Number	Replacement Seal Number	A Cup Dia. in. (mm)	B Rad. in. (mm)	C Flex in. (mm)	D Dia. in. (mm)	E** Port	F Height in. (mm)	Rated Load* lbs. (kg)	Weight lb. (kg)
VP154Q-NBR	SR-154	15.94 (404.9)	5.25 (133.4)	0.31 (7.9)	13.19 (335.0)	1/2" NPT	1.25 (31.8)	1000 (450)	13.3 (6.0)
VP154Q-SI	SR-154-SI	15.94 (404.9)	5.25 (133.4)	0.31 (7.9)	13.19 (335.0)	-	-	1000 (450)	-
VP170Q-NBR	SR-170	17.00 (431.8)	5.50 (13.97)	0.34 (8.6)	14.56 (369.8)	3/8" NPT	1.50 (38.1)	1225 (552)	17.7 (8.0)
VP170Q-SI	SR-170-SI	17.00 (431.8)	5.50 (13.97)	0.34 (8.6)	14.56 (369.8)	-	-	1225 (552)	-
VP190Q-NBR	SR-190	19.00 (482.6)	5.00 (127.0)	0.38 (9.7)	16.50 (419.1)	1/2" NPT	1.44 (36.6)	1530 (689)	21.6 (9.7)
VP190Q-SI	SR-190-SI	19.00 (482.6)	5.00 (127.0)	0.38 (9.7)	16.50 (419.1)	-	-	1530 (689)	-
VP230Q-NBR	SR-230	22.25 (565.2)	6.00 (152.4)	0.34 (8.6)	19.88 (505.0)	1/2" NPT	1.56 (39.6)	2315 (1043)	39.7 (17.9)
VP230Q-SI	SR-230-SI	22.25 (565.2)	6.00 (152.4)	0.34 (8.6)	19.88 (505.0)	-	-	2315 (1043)	-
VP250Q-NBR	SR-250	24.69 (627.1)	6.00 (152.4)	0.34 (8.6)	21.88 (555.8)	1/2" NPT	1.56 (39.6)	2725 (1228)	47.6 (21.5)
VP250Q-SI	SR-250-SI	24.69 (627.1)	6.00 (152.4)	0.34 (8.6)	21.88 (555.8)	-	-	2725 (1228)	-

* Rated Load Capacity at 24 in. Hg, when used in a horizontal plane, and based on a safety factor of 2. Divide again by 2 for vertical applications. Actual capacity depends on load surface and condition of vacuum generating system and must be determined by the user.

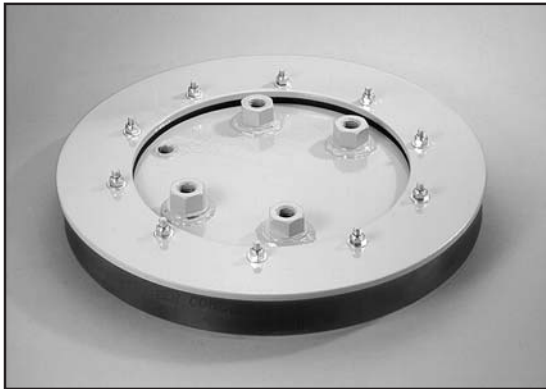
** Metric Ports available as a special order. These cups are normally sold un-drilled. Special materials available; please consult factory.

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Vacuum Cups & Suction Cups



VP Series

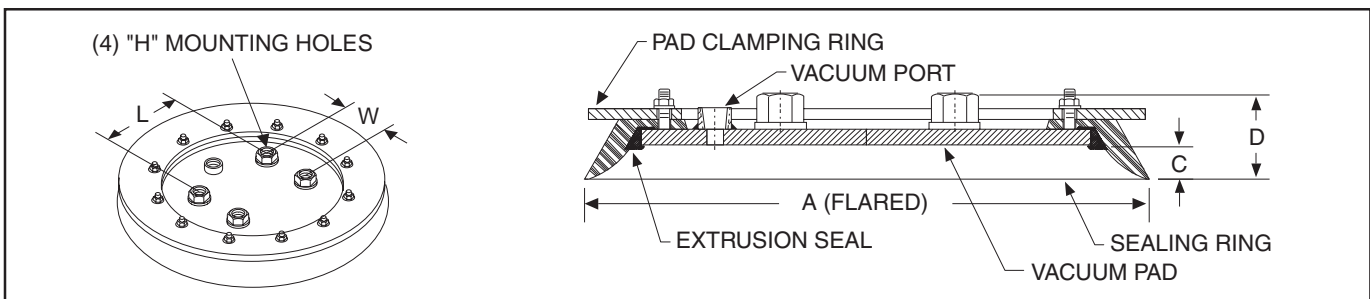


Large Vacuum Pads with Bolt-On Seals

ANVER Bolt-On Vacuum Pads feature heavy-duty steel construction with replaceable rubber seals. Excellent for handling semi-rigid to very rigid loads such as metal sheet or plate, these versatile vacuum pads have become an industry standard. A variety of mounting styles make these pads perfect for a wide range of vacuum lifting applications.

Features:

- Rugged Steel Construction for years of service.
- Quad-Mount is standard, consult factory for other mounting options.
- Seals available in Nitrile (or Neoprene) and Silicone
- Extended steel hub protects seal from damage.
- Internal Seal provides safe attach/release.



ANVER Item No.	Replacement Seal Number	Internal Seal Number	A Pad Dia. in (mm)	Mounting Bolt Pattern L X W in (mm)	C in (mm)	D in (mm)	Vacuum Port NPT	H Mounting	Weight lb (kg)	*Rated Load lb (kg)
VP145Q	SR-145DP	SE-145	14.50 (368)	6.0 X 4.0 (152 X 102)	0.81 (21)	2.44 (62)	3/8"	5/8-11 UNC	29 (13)	750 (341)
VP155Q	SR-155DP	SE-155	17.25 (438)	6.5 X 4.0 (165 X 102)	0.81 (21)	2.44 (62)	1/2"	3/4-10 UNC	38 (17)	1000 (455)
VP185Q	SR-185DP	SE-185	18.50 (470)	8.0 X 6.0 (203 X 165)	0.81 (21)	2.44 (62)	1/2"	3/4-10 UNC	45 (20)	1300 (591)
VP195Q	SR-195DP	SE-195	19.50 (495)	8.0 X 6.0 (203 X 165)	0.81 (21)	2.44 (21)	1/2"	3/4-10 UNC	50 (23)	1550 (705)
VP215Q	SR-215DP	SE-215	22.00 (559)	8.0 X 6.0 (203 X 165)	1.06 (27)	2.56 (65)	3/4"	3/4-10 UNC	58 (26)	2000 (909)
VP235Q	SR-235DP	SE-235	24.00 (610)	8.0 X 6.0 (203 X 165)	1.19 (30)	2.69 (68)	3/4"	3/4-10 UNC	66 (30)	2300 (1045)

*NOTE: Rated load capacity at 24" Hg vacuum when used in the horizontal plane, and based on a safety factor of 2. Divide again by 2 for vertical applications. Actual capacity depends on load surface and condition of the vacuum generating system, and must be determined by the user.

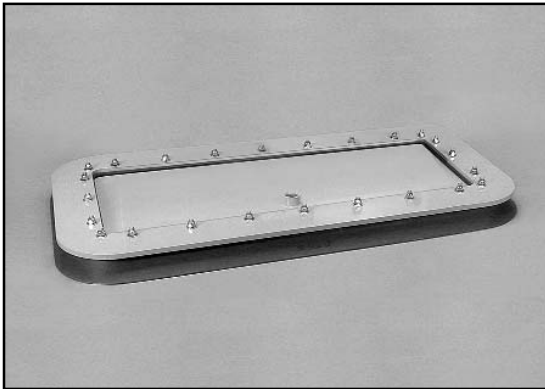
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Vacuum Cups & Suction Cups



VP Series



Large Capacity Vacuum Pads for Extra Heavy Loads

ANVER Large Capacity Vacuum Pad Attachments are ideal for lifting heavy, compact loads in situations where the available load surface precludes the use of lifters with multiple pads. The PA1834 Vacuum Pad is one of the larger pads made by ANVER and can be an economical alternative to multiple vacuum pad lifters.

Features:

- Sturdy Steel Construction
- Replacement Bolt-On Vacuum Seal
- High Lifting Capacity

ANVER Item No.	Seal Number	Weight lb. (kg)	Rated Load* lb. (kg)	Mounting Style
VP1834Q	SR-1834-DP	130 (59)	3200 (1451)	Quad
VP1834C	SR-1834-DP	130 (59)	3200 (1451)	Clevis

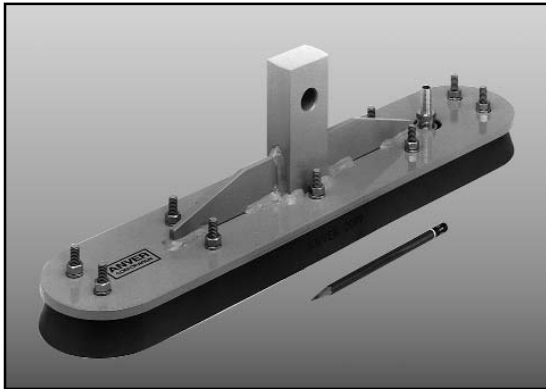
* Notes:

- Rated load at 24 in. Hg, vacuum, when used in the horizontal plane. Based on a safety factor of two (2), on vacuum holding.
- When used with M250M ANVER Mechanical Vacuum Generator, this vacuum pad is derated to 3000 lb. (1361 kg) Contact factory for more information.
- For Single/Dual Pad Attachment used under ANVER Vacuum Generators - Contact factory for more information.

Vacuum Cups and Suction Cups



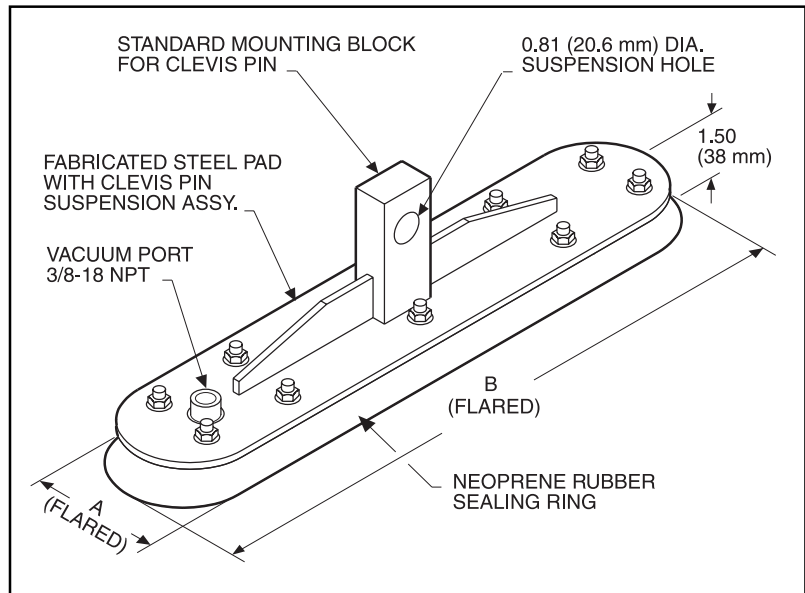
Heavy-Duty Oval Bolt-On Pads



These Heavy-Duty Bolt-On Pads feature replaceable sealing rings made of non-marring Neoprene rubber. The long lips on these rings make them ideal for handling cylindrical objects such as tanks and large cylinders.

These pads come either with clevis or blank. Special mountings also available.

- Heavy-duty steel construction
- Replaceable seals
- Custom mounting (special request)



ANVER Item No.	Description	Replacement Sealing Ring	B Length in. (mm)	A Width in. (mm)	Rated Load lbs. (kg)
VP4512C-CR	Oval Vacuum Pad, 4.5" x 12" Clevis Mount (Neoprene)	SR-4512BOR	12.5 (318)	5 (127)	250 (114)
VP4517C-CR	Oval Vacuum Pad, 4.5" x 17" Clevis Mount (Neoprene)	SR-4517BOR	17.5 (445)	5 (127)	375 (170)
VP4522C-CR	Oval Vacuum Pad, 4.5" x 22" Clevis Mount (Neoprene)	SR-45122BOR	22.5 (572)	5 (127)	500 (227)

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Vacuum Cups & Suction Cups



VP Series



Large capacity vacuum pads with ball swivel suspensions are available from ANVER for Heavy Mill Duty Vacuum Lifters. These rugged pads are suitable for a variety of lifting applications and have rated load capacities up to 2300 lb. Special Ball Swivel Suspension design provides a simple, safe way to lift thin, wavy plates, while sturdy aluminum construction minimizes downtime and repairs.

Features:

- Economical - seals are easily replaceable in minutes
- Ball Swivel Suspension compensates for uneven loads
- Large Lifting Capacity for Heavy Duty Applications
- Extra Large Aluminum hubs provide long life while protecting the seals from damage.

ANVER Item No.	Replacement Seal Number	Pad Diameter in. (mm)	Rated Load lb (kg)	Port Size NPT
VP185-4	SR-185DP	18.37 (460)	1300 (590)	3/4"
VP195-4	SR-195DP	19.50 (495)	1550 (703)	3/4"
VP215-4	SR-215DP	22.00 (560)	2000 (907)	3/4"
VP235-4	SR-235DP	23.25 (590)	2300 (1043)	3/4"

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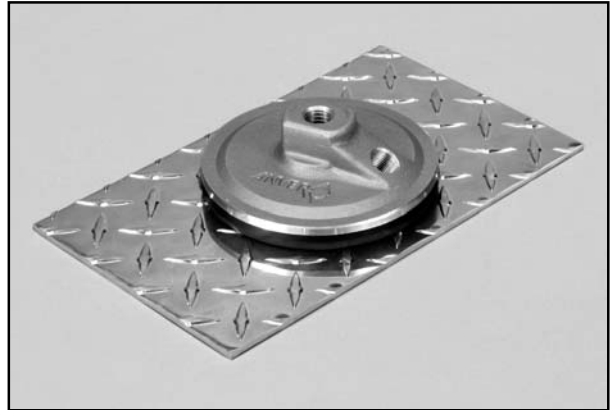


Vacuum Cups and Suction Cups

Small VP Series Vacuum Pads w/ 'A7'-Type Foam Seals



Vacuum Pads with Foam Sealing Rings



ANVER VP Series Round Vacuum Pads with A7 Slip-On Foam Sealing Rings are most effective on uneven or textured surfaces such as tread plate and small profile diamond plate, as shown above. These machined cast-aluminum pads with their slip-on seal design are both economical and easy to maintain. Part of our larger program of foam-seal vacuum pads, their suitability for a particular application is best determined by actual testing on a sample. Contact one of our applications engineers to arrange a free evaluation.

Features:

- Pads easily adjust to textured surfaces for maximum safety
- Seals are easily replaceable and economical
- VP Series Round Vacuum Pads offer maximum versatility when used with ANVER Spring Loaded Suspension Assemblies.
- Contact ANVER for additional information or assistance

Vacuum Pad Number	Replacement Seal Number	Mounting Type	Mounting Hole	Vacuum Port NPT	Seal Dia.		Overall Height in. (mm)	Shipping Weight lb (kg)	Capacity** lb (kg)
					in. (mm)				
VP45-A7	FR45-A7	Thru-Port Type	3/8" NPT	3/8"	2.8 (72)		1.03 (26)	0.2 (0.09)	25 (11)
VP57-A7	FR57-A7	Rigid with Side Port	1/2-13 UNC	1/4"	3.5 (89)		1.57 (40)	0.5 (0.23)	40 (18)
VP65-A7	FR65-A7	Rigid with Side Port	1/2-13 UNC	1/4"	4.1 (104)		1.61 (40)	0.6 (0.27)	55 (25)
VP65-A7	FR75-A7	Rigid with Side Port	5/8-11 UNC	3/8"	4.8 (122)		1.67 (42)	0.9 (0.41)	75 (34)

** Rated load capacity at 22 in. Hg vacuum, when used in the horizontal plane, and based on a safety factor of 2. Divide again by 2 for vertical application.

Actual capacity depends on load surface, and condition of the vacuum generating system, and must be determined by the user.



Typical Foam Seal for Small VP Series
Slips on outside ring.

Vacuum Cups & Suction Cups



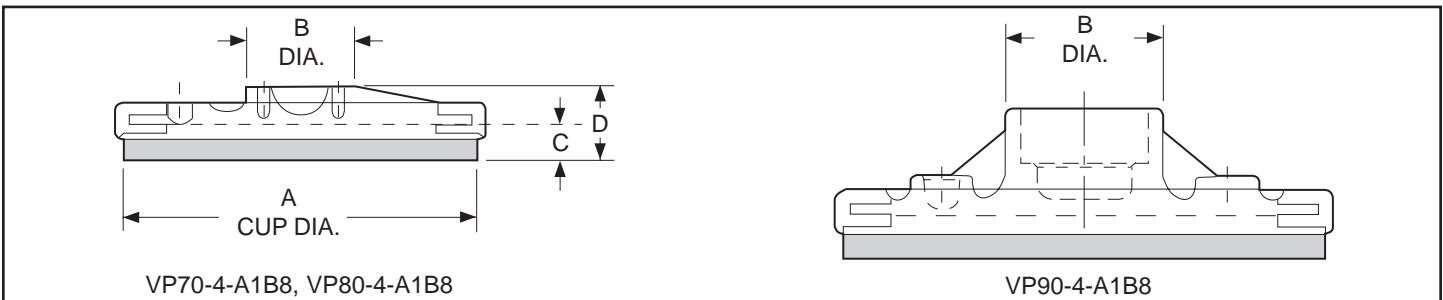
VP Series



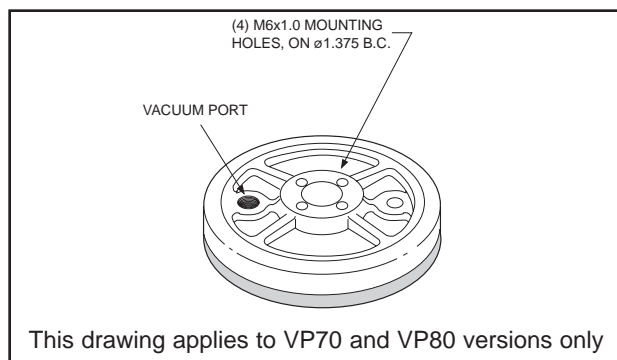
ANVER VP Series Round Vacuum Pads feature a slip on dual sealing ring. These foam seals are most effective on rough, uneven or textured surfaces such as stone or concrete. Available in a number of shapes, styles and materials, their dual seal design makes maintenance easy.

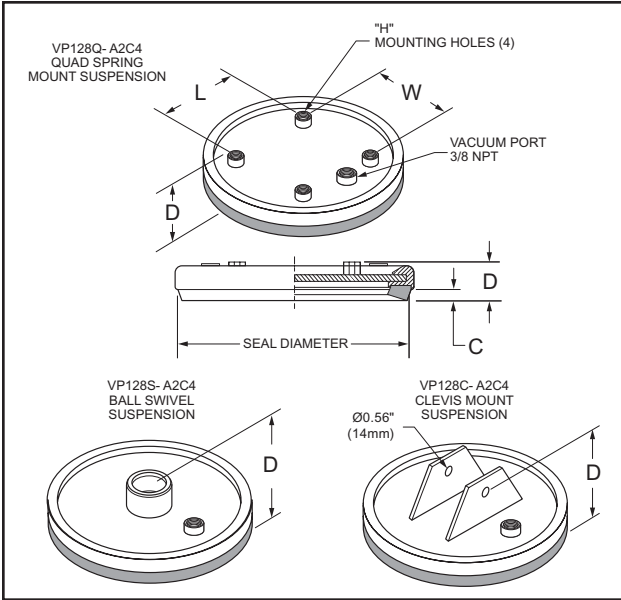
Features:

- Pads adjust easily to uneven or rough surfaces for maximum safety.
- Seals are easily replaceable and economical
- Seals are available in a large variety of shapes and materials.
- VP Series Round Vacuum Pads offer maximum versatility when used with ANVER Spring Loaded Suspension Assemblies.
- Contact ANVER for additional information



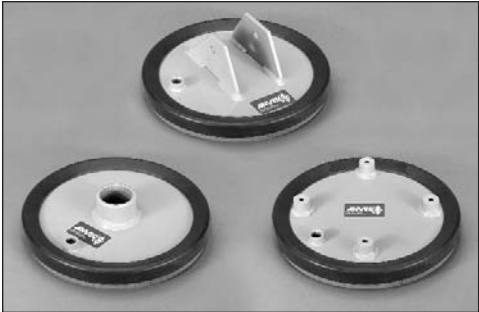
ANVER Item No.	Standard Seal No.	A Cup Dia. in. (mm)	B Dia. in. (mm)	C in. (mm)	D in. (mm)	Vacuum Port	Rated Load lbs (kg)
VP70-4-A1B8	FR70-A1B8	5.88 (149)	2.00 (51)	0.63 (16)	1.38 (35)	1/4 NPT	75 (34)
VP80-4-A1B8	FR80-A1B8	6.88 (175)	2.00 (51)	0.63 (16)	1.38 (35)	1/4 NPT	100 (45)
VP90-4-A1B8	FR90-A1B8	7.88 (200)	2.38 (60)	0.63 (16)	2.38 (60)	3/8 NPT	150 (68)





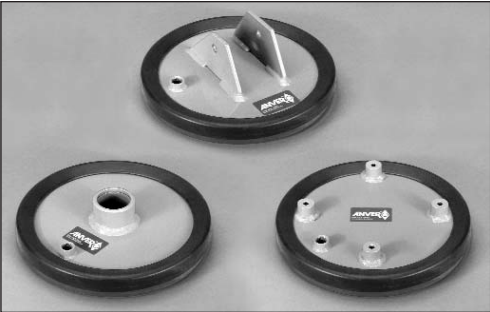
ANVER VP Series Round Vacuum Pads feature a slip-on dual sealing ring. These foam seals are most effective on rough, uneven or textured surfaces such as stone or concrete. Available in a number of shapes, styles and materials, their dual seal design makes maintenance easy.

- Features:**
- Pads adjust easily to uneven or rough surfaces for maximum safety.
 - Seals are easily replaceable and economical
 - Seals are available in a large variety of shapes and materials.
 - VP Series Round Vacuum Pads offer maximum versatility when used with ANVER Loaded Suspension Assemblies.
 - Contact ANVER for additional information



With A2C4 seal

Note:
A2C4 Orange Sponge Foam is standard.
Other foam styles available.
Consult Factory.

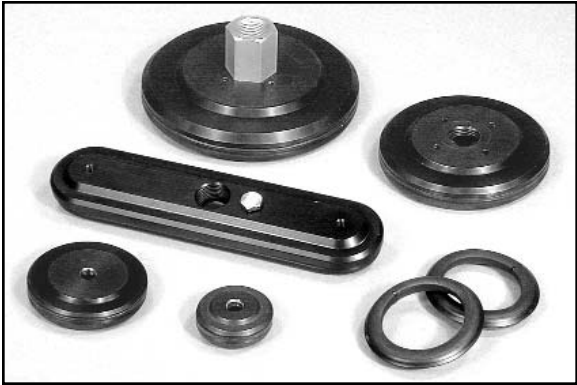


With A2B7 seal

Specifications for Large VP Series Foam Pads with Slip-On Foam Seals:

Vacuum Pad Number	Replacement Seal Number	Mounting Type	Seal Dia. in (mm)	L in (mm)	W in (mm)	C in (mm)	D in (mm)	Vacuum Port NPT	H UNC	Shipping Weight lb (kg)	Capacity* lb (kg)
VP128Q-A2C4	24530695	Quad-Spring	11.5 (292)	5.66 (141)	5.66 (141)	0.75 (19)	2.0 (50)	3/8	M10x1.5	11 (5.0)	300 (136)
VP128Q-A2B7	24530713	Quad-Spring	11.5 (292)	5.66 (141)	5.66 (141)	0.75 (19)	2.0 (50)	3/8	M10x1.5	11 (5.0)	300 (136)
VP128S-A2C4	24530695	Ball-Swivel	11.5 (292)	—	—	0.75 (19)	3.02 (77)	3/8	—	12 (5.5)	300 (136)
VP128S-A2B7	24530713	Ball-Swivel	11.5 (292)	—	—	0.75 (19)	3.02 (77)	3/8	—	12 (5.5)	300 (136)
VP128C-A2C4	24530695	Clevis	11.5 (292)	—	—	0.75 (19)	3.50 (89)	3/8	—	13 (5.9)	300 (136)
VP128C-A2B7	24530713	Clevis	11.5 (292)	—	—	0.75 (19)	3.50 (89)	3/8	—	13 (5.9)	300 (136)

* Rated Load Capacity at 22 inch Hg vacuum when used in the horizontal plane based on a vacuum holding safety factor of two.



P Series EPDM (Ethylene-Propylene) Foam Vacuum Cups and Suction Cups

Ideal for use on plane surfaces, where minimum movement is required to maintain the pick-up area, and for support of pliable materials. Available in sizes from 0.65 to 6.13 inches (16.6 to 155.6mm).

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)
P-35 CUP & FITTING A-3350045		1.67 (42.5)	0.61 (15.5)	13.0 (5.90)	15.0 (6.80)
P-35 CUP & VALVE A-3350038		1.67 (42.5)	1.28 (32.5)	13.0 (5.90)	15.0 (6.80)
P-35 SEALING RING A-3350023		1.50 (38.0)	0.41 (10.5)	N/A	N/A
P-60 CUP & FITTING A-3350046		2.66 (67.5)	0.61 (15.5)	42.0 (19.0)	49.0 (22.2)
P-60 CUP & VALVE A-3350039		2.66 (67.5)	1.28 (32.5)	42.0 (19.0)	49.0 (22.2)
P-60 SEALING RING A-3350024		2.36 (60.0)	0.41 (10.5)	N/A	N/A

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Vacuum Cups and Suction Cups



Generic P-Style / P Series EPDM Foam Vacuum Cups

Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)
P-100 CUP & FITTING A-3350047		4.23 (107.5)	0.75 (19.0)	130.0 (59.0)	148.0 (67.1)
P-100 CUP & VALVE A-3350040		4.23 (107.5)	2.01 (51.0)	130.0 (59.0)	148.0 (67.1)
P-100 SEALING RING A-3350025		3.94 (100.0)	0.41 (10.5)	N/A	N/A
P-200 CUP & FITTING A-3350048		8.46 (215.0)	1.34 (34.0)	500.0 (226.8)	600.0 (272.2)
P-200 SEALING RING A-3350026		8.27 (210.0)	1.04 (26.5)	N/A	N/A
P-300 CUP & FITTING A-3350049		12.40 (315.0)	1.34 (34.0)	1200 (544.3)	1400 (635.0)
P-300 SEALING RING A-3350027		12.20 (310.0)	1.04 (26.5)	N/A	N/A
OP-20X100 CUP & SEAL A-3350050		4.37 [L] 1.19 [W] (111.0) [L] (30.1) [W]	0.71 (18.0)	21 (9.5)	24 (10.9)
OP-20X100 SEALING RING A-3350028		4.20 [L] 1.16 [W] (106.7) [L] (29.4) [W]	0.41 (10.4)	N/A	N/A



Vacuum Cups and Suction Cups

Generic P-Style / P Series EPDM Foam Vacuum Cups

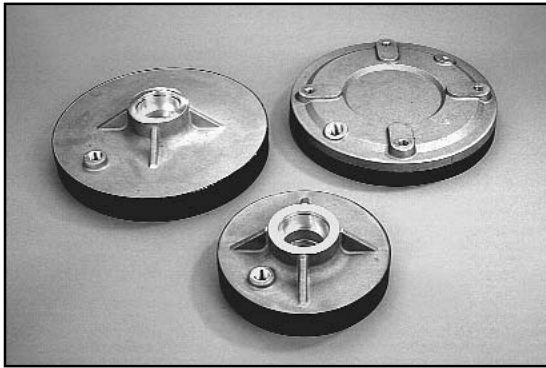
Vacuum Cup Description and Part Number	Dimensional Dwg.	Static* Dia. in. (mm)	Static* Height in. (mm)	Load Capacity at 24 in. Hg (609.6mm Hg) 2:1 safety factor lb (kg)	Pull-Off Capacity at 27 in. Hg (685.6mm Hg) 1:1 safety factor lb (kg)
OP-40X200 CUP & SEAL A-3150051		8.25 [L] 1.97 [W] (210.0) [L] (50.0) [W]	0.85 (21.4)	99 (45.0)	86 (39.0)
OP-40X200 SEALING RING A-3350029		8.13 [L] 1.89 [W] (207.0) [L] (47.8) [W]	0.41 (10.4)	N/A	N/A

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Vacuum Cups & Suction Cups



VC Series



Round Vacuum Pads with Adhesive Foam Seals

ANVER VC Series Round Vacuum Pads can be fitted with foam rubber sealing rings that are glued in place. These foam seals are most effective on rough, uneven or textured surfaces such as stone or concrete. Available in two standard types of foam, the sealing rings are glued to the sturdy aluminum vacuum hub to guard against seal slippage and assure safe load handling.

Features:

- Available for most vacuum pad types and sizes.
 - Adjust easily to uneven or rough surfaces for maximum safety.
 - Seals are replaceable and economical
 - Seals are available in a large variety of shapes and materials.
 - Offer maximum versatility when used with ANVER Spring Loaded Suspensions.
 - Available with Neoprene and Latex Foam Seals.
- Please consult ANVER for additional information.

ANVER Item No.	Foam Seal Type	Cup Diameter in. (mm)	Port Size NPT	Overall Height in. (mm)	Suspension Style	Rated Capacity lb (kg)
VC57-H1	Neoprene Foam	3.63 (93)	1/4"	2.06 (52)	Rigid	25 (11)
VC57-H5	Latex Foam					
VC75-H2	Neoprene Foam	5.00 (127)	3/8"	2.31 (59)	Rigid	45 (20)
VC75-H6	Latex Foam					
VC95R-2-H3	Neoprene Foam	6.75 (171)	3/8"	2.31 (59)	Rigid	100 (45)
VC95R-2-H7	Latex Foam					
VC95R-4-H3	Neoprene Foam	6.75 (171)	3/8"	2.50 (64)	Ball Swivel	100 (45)
VC95R-4-H7	Latex Foam					
VC95R-4-CRH4	Neoprene Foam	9.75 (248)	3/8"	2.58 (66)	Ball Swivel	100 (45)
VC95R-4-CRH8	Latex Foam					
VC95Q-H3	Neoprene Foam	6.75 (171)	3/8"	1.44 (37)	Quad-Spring	100 (45)
VC95Q-H7	Latex Foam					
VC119-2-H4	Neoprene Foam	9.75 (248)	3/8"	2.31 (59)	Rigid	225 (102)
VC119-2-H8	Latex Foam					
VC119-4-H4	Neoprene Foam	9.75 (248)	3/8"	2.50 (64)	Ball Swivel	225 (102)
VC119-4-H8	Latex Foam					
VC125Q-2-H4	Neoprene Foam	9.75 (248)	3/8"	1.68 (43)	Quad-Spring	225 (102)
VC125Q-2-H8	Latex Foam					

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FP Foam Seal Vacuum Pads



FP Foam Seal Rectangular Vacuum Pads

ANVER's FP series of foam seal vacuum pads are designed for handling rough, moderately uneven load surfaces such as saw cut or flamed stone, rough wood, fiberglass web and concrete. They can also handle smooth stone surfaces if used for both smooth and rough stone.

The pads have a welded steel construction for durability. The seals themselves fit over a welded steel lip so they will stay on firmly even in the vertical position. Changing seals can be done in under a minute by hand without tools making this system perfect for critical jobsite installation schedules. The economical replaceable foam seals feature a neoprene rubber slip-on edge and a soft durable foam sealing edge that readily conforms to rough, uneven surfaces to create as vacuum tight a seal as possible.

The pads are rated at a conservative 22 in. Hg vacuum unlike the 24 in. Hg used on traditional cups. They are then either divided by two for horizontal or four for vertical handling. Made in USA by ANVER.

Features

- A range of Standard Interchangeable Pads with Foam Seals which can be quickly changed as needed with a two nut and bolt mounting.
- Welded steel construction with steel lip to insure the seal stays in position. Long lasting foam seals handle both smooth and rough stone.
- Twelve standard sizes with five different capacities. (Consult factory for custom sizes)
- Can be mounted in minutes under standard ANVER Vac-Packs for horizontal handling or with ANVER's EZ-Tilt for Tilting loads.
- Replacing worn seals can be done in under a minute by hand without tools. Heavy welded steel construction for durability.

ANVER Item No.	** Seal No.	W x L in (mm)	Rated Load Capacity (Horizontal) lb (kg)	Rated Load Capacity (Vertical) lb (kg)
FP070200G-A2B7	24530694	7 x 20 (178 x 508)	500 (227)	250 (113)
FP100140G-A2B7	24530714	10 x 14 (254 x 356)	500 (227)	250 (113)
FP100190G-A2B7	24530715	10 x 19 (254 x 483)	750 (340)	375 (170)
FP120170G-A2B7	24530715	12 x 17 (305 x 432)	750 (340)	375 (170)
FP100250G-A2B7	24530716	10 x 25 (254 x 635)	1000 (454)	500 (227)
FP120210G-A2B7	24530716	12 x 21 (305 x 533)	1000 (454)	500 (227)
FP140190G-A2B7	24530716	14 x 19 (356 x 483)	750 (340)	375 (170)
FP120290G-A2B7	24530717	12 x 29 (305 x 737)	1500 (680)	750 (340)
FP140250G-A2B7	24530717	14 x 25 (356 x 635)	1500 (680)	750 (340)
FP160230G-A2B7	24530717	16 x 23 (406 x 584)	1500 (680)	750 (340)
FP140320G-A2B7	24530718	14 x 32 (356 x 813)	2000 (907)	1000 (454)
FP160290G-A2B7	24530718	16 x 29 (406 x 737)	2000 (907)	1000 (454)
FP210230G-A2B7	24530718	21 x 23 (533 x 584)	2000 (907)	1000 (454)

* The cup capacities shown above are based on 22"Hg at sea level with a safety factor of two (2) in the horizontal (flat), and four (4) in the vertical (upright).

Rated Load Capacities are estimated; actual capacity will vary based on the load surface and the level of vacuum.

** Tapered foam seals are standard. Consult factory for alternate configurations.

Vacuum Cups & Suction Cups



Rectangular Vacuum Pads



Rectangular Vacuum Pads with Slip-On Foam Sealing Rings

In addition to our standard vacuum cups and suction cups, ANVER also offers rectangular vacuum pads with slip-on foam seals. Sturdy steel construction and a variety of sizes and capacities have made these pads a stone industry standard. Standard two part slip-on foam seal makes repairs easy and economical.

Features:

- Large Selection of Seal Materials and shapes. Part Numbers Below are for Pads with Standard Foam Seals.
- A number of mounting styles to adapt to virtually any system.
- Twelve standard sizes with five different capacities.
(Consult factory for custom sizes)
- Rugged steel construction for long life.

ANVER Item No.	Replacement Seal Number	Pad Dimensions in. (mm)	Mounting Holes in. (mm)	Port Size NPT	Rated Load lb (kg)
FP070200Q-A2B7	24530694	7 x 20 (178 x 508)	3.5 x 6.5 (89 x 165)	3/8"	500 (227)
FP100140Q-A2B7	24530714	10 x 14 (254 x 356)	4.0 x 6.5 (102 X 165)	1/2"	500 (227)
FP100190Q-A2B7	24530715	10 x 19 (254 x 483)	4.0 x 6.5 (102 X 165)	1/2"	750 (340)
FP120170Q-A2B7	24530715	12 x 17 (305 x 432)	8.0 x 8.0 (203 X 203)	1/2"	750 (340)
FP100250Q-A2B7	24530716	10 x 25 (254 x 635)	4.0 x 6.5 (102 X 165)	1/2"	1000 (454)
FP120210Q-A2B7	24530716	12 x 21 (305 x 203)	8.0 x 8.0 (203 X 203)	1/2"	1000 (454)
FP140190Q-A2B7	24530716	14 x 19 (356 x 432)	8.0 x 8.0 (203 x 203)	1/2"	1000 (454)
FP120290Q-A2B7	24530717	12 x 29 (305 x 737)	8.0 x 8.0 (203 x 203)	1/2"	1500 (680)
FP140250Q-A2B7	24530717	14 x 25 (356 x 635)	8.0 x 8.0 (203 x 203)	1/2"	1500 (680)
FP160230Q-A2B7	24530717	16 x 23 (406 x 584)	8.0 x 8.0 (203 x 203)	1/2"	1500 (680)
FP140320Q-A2B7	24530718	14 x 32 (356 x 831)	8.0 x 8.0 (203 x 203)	3/4"	2000 (907)
FP160290Q-A2B7	24530718	16 x 29 (406 x 737)	8.0 x 8.0 (203 x 203)	3/4"	2000 (907)
FP210230Q-A2B7	24530718	21 x 23 (521 x 584)	8.0 x 8.0 (203 x 203)	3/4"	2000 (907)

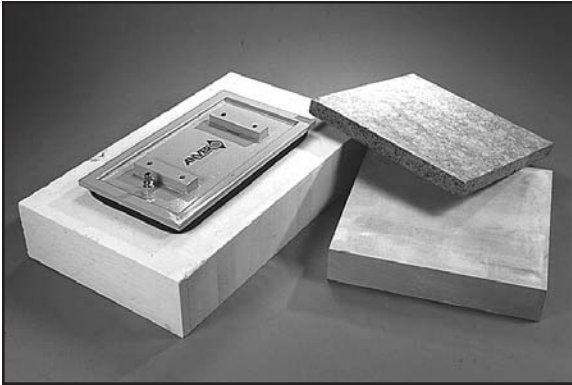
Note: Rated load at 22 in. Hg vacuum, when used in the horizontal plane. Based on a safety factor of two (2); on vacuum holding.

* Indicates sizes available from stock.

** Seal Numbers above are for pads with tapered foam seals. Consult factory for alternate configurations.

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Rectangular Vacuum Pads



Rectangular Vacuum Pads with Snap-In Foam Seals

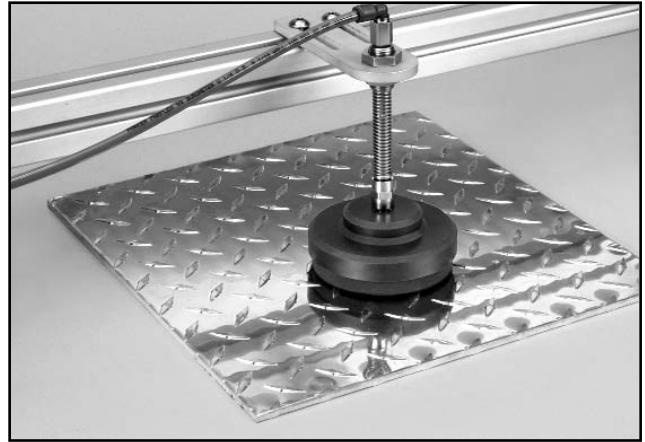
ANVER builds a large selection of rectangular foam seal vacuum pads for stone and concrete lifting applications. These foam pads feature sealing rings that snap directly into the pad, ensuring a sturdy airtight seal. Heavy steel construction and a variety of mounting styles make these vacuum pads perfect for a number of material handling applications. Recommended for use on rough rigid surfaces such as stone, concrete, tread-plate, and fiberglass.

Quad-Spring Suspension mounting is standard, other mounting options are available upon request. Four-Pronged Neoprene Foam Seals are standard for these pads. Additional Foam seals are available in a variety of materials and styles. Contact ANVER for details.

ANVER Item No.	Replacement Seal Number	Pad Dimensions in. (mm)	Mounting Holes in. (mm)	Port Size NPT	Rated Load lb (kg)
FPS110110Q-B4	24530776	11 x 11 (279 x 279)	6.5 x 4.0 (165 x 102)	1/2"	500 (227)
FPS110160Q-B4	24530777	11 x 16 (279 x 406)	6.5 x 4.0 (165 x 102)	1/2"	750 (341)
FPS110220Q-B4	24530778	11 x 22 (279 x 559)	8.0 x 6.0 (203 x 152)	1/2"	1000 (455)
FPS160160Q-B4	24530781	16 x 16 (406 x 406)	8.0 x 6.0 (203 x 152)	1/2"	1250 (568)
FPS160220Q-B4	24530783	16 x 22 (406 x 559)	8.0 x 6.0 (203 x 152)	1/2"	1500 (682)
FPS220220Q-B4	24530789	22 x 22 (559 x 559)	8.0 x 6.0 (203 x 152)	3/4"	2000 (909)

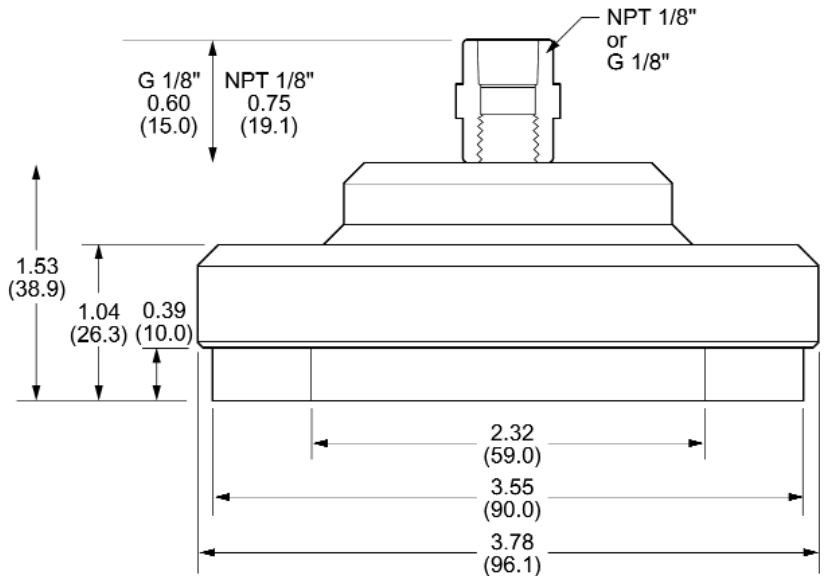


**Vacuum
Lifting System
Pads**



This assembly comes with a double female NPT 1/8" or G 1/8" coupling. This makes it ready to screw into our 1/8" suspensions. You can also take this adaptor coupling off, and use the male fitting which protrudes from the cup.

Material: Black Delrin



Part Number	Seal Type/ Use	Fitting	*Rated Load (Horizontal) lb (kg)	*Rated Load (Vertical) lb (kg)	Weight oz. (g)	Replacement Sealing Ring P/N	Fitting Group	Level Compensator Suspension
FP38-HS18-H1	Black Neoprene/ Uneven Surface	NPT 1/8"	35 (15.9)	17.5 (7.9)	6.2 (176)	FR-H1	Group 3	SLSA-2
FP38-HS18G-H1	Black Neoprene/ Uneven Surface	G 1/8"	35 (15.9)	17.5 (7.9)	6.2 (176)	FR-H1	Group 3	SLSA-2
FP38-HS18-H5	Blue Latex/ Rough Surface	NPT 1/8"	35 (15.9)	17.5 (7.9)	6.2 (176)	FR-H5	Group 3	SLSA-2
FP38-HS18G-H5	Blue Latex/ Rough Surface	G 1/8"	35 (15.9)	17.5 (7.9)	6.2 (176)	FR-H5	Group 3	SLSA-2

** Rated load capacity at 22 in. Hg vacuum, when used in the horizontal plane, and based on a safety factor of 2.

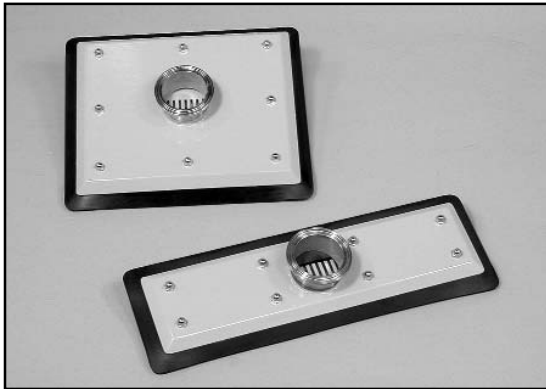
Divide again by 2 for vertical application.

Actual capacity depends on load surface, and condition of the vacuum generating system, and must be determined by the user.



Ergonomic Vacuum Tube Lifters

Vacuum Pad Attachments



T1 Series Single Rectangular Pad Attachments

ANVER "T1" Series Rectangular Vacuum Pad Attachments are ideal for lifting loads that have a limited surface area for vacuum attachment. With over 60 stock sizes to choose from, our applications engineers can help select the attachment pad that is best suited for your vacuum lifting system.

Features:

- Replaceable Seals available in both Neoprene and Natural Gum Rubber.
- Quick-Disconnect Attachments make it easy to change pads for load handling versatility.
- Vacuum Pads can rotate a full 360°.
- Ideal for Lifting Boxes as well as other Flat Semi-Porous loads.
- Curved pads for lifting objects with curved surfaces are also available.

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:						
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200
T1-035080	3.5 (89)	8 (203)	X						
T1-035100	3.5 (89)	10 (254)	X	X					
T1-035120	3.5 (89)	12 (305)	X	X	X				
T1-035160	3.5 (89)	16 (406)	X	X	X				
T1-040085	4 (102)	8.5 (216)	X						
T1-040105	4 (102)	10.5 (267)	X	X					
T1-040125	4 (102)	12.5 (318)	X	X	X				
T1-040165	4 (102)	16.5 (419)	X	X	X				
T1-045065	4.5 (114)	6.5 (165)	X	X					
T1-045080	4.5 (114)	8 (203)	X	X					
T1-045100	4.5 (114)	10 (254)	X	X	X				
T1-045125	4.5 (114)	12.5 (318)	X	X	X	X			
T1-045150	4.5 (114)	15 (381)	X	X	X	X			
T1-045205	4.5 (114)	20.5 (521)	X	X	X	X	X	X	

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Ergonomic Vacuum Tube Lifters



Vacuum Pad Attachments

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:						
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200
T1-045245	4.5 (114)	24.5 (622)	X	X	X	X	X	X	X
T1-050070	5 (127)	7 (178)	X	X					
T1-050085	5 (127)	8.5 (216)	X	X					
T1-050105	5 (127)	10.5 (267)	X	X	X				
T1-050130	5 (127)	13 (330)	X	X	X	X			
T1-050155	5 (127)	15.5 (394)	X	X	X	X			
T1-050210	5 (127)	21 (533)	X	X	X	X	X	X	
T1-050250	5 (127)	25 (635)	X	X	X	X	X	X	X
T1-055065	5.5 (140)	6.5 (165)	X	X	X				
T1-055080	5.5 (140)	8 (203)	X	X					
T1-055105	5.5 (140)	10.5 (267)	X	X	X	X			
T1-055120	5.5 (140)	12 (305)	X	X	X	X			
T1-055150	5.5 (140)	15 (381)	X	X	X	X	X		
T1-055190	5.5 (140)	19 (483)	X	X	X	X	X	X	
T1-060070	6 (152)	7 (178)	X	X	X				
T1-060085	6 (152)	8.5 (216)	X	X					
T1-060110	6 (152)	11 (279)	X	X	X	X			
T1-060125	6 (152)	12.5 (318)	X	X	X	X			
T1-060155	6 (152)	15.5 (394)	X	X	X	X	X		
T1-060195	6 (152)	19.5 (495)	X	X	X	X	X	X	

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Ergonomic Vacuum Tube Lifters

Vacuum Pad Attachments

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:						
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200
T1-065065	6.5 (165)	6.5 (165)	X	X	X				
T1-065090	6.5 (165)	9 (229)	X	X	X	X			
T1-065105	6.5 (165)	10.5 (267)	X	X	X	X	X		
T1-065120	6.5 (165)	12 (305)	X	X	X	X	X		
T1-065160	6.5 (165)	16 (406)	X	X	X	X	X	X	
T1-070070	7 (178)	7 (178)	X	X	X				
T1-070095	7 (178)	9.5 (241)	X	X	X	X			
T1-070110	7 (178)	11 (279)	X	X	X	X	X		
T1-070125	7 (178)	12.5 (318)	X	X	X	X	X		
T1-070165	7 (178)	16.5 (419)	X	X	X	X	X	X	
T1-075075	7.5 (191)	7.5 (191)	X	X	X	X			
T1-075085	7.5 (191)	8.5 (216)	X	X	X	X			
T1-075100	7.5 (191)	10 (254)	X	X	X	X	X		
T1-075130	7.5 (191)	13 (330)	X	X	X	X	X	X	
T1-080080	8 (203)	8 (203)	X	X	X	X			
T1-080090	8 (203)	9 (229)	X	X	X	X			
T1-080105	8 (203)	10.5 (267)	X	X	X	X	X		
T1-080135	8 (203)	13.5 (343)	X	X	X	X	X	X	
T1-085090	8.5 (216)	9 (229)	X	X	X	X	X		
T1-085120	8.5 (216)	12 (305)	X	X	X	X	X	X	

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Ergonomic Vacuum Tube Lifters



Vacuum Pad Attachments

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:						
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200
T1-090095	9 (229)	9.5 (241)	X	X	X	X	X		
T1-090125	9 (229)	12.5 (318)	X	X	X	X	X	X	
T1-095115	9.5 (241)	11.5 (292)	X	X	X	X	X	X	X
T1-100120	10 (254)	12 (305)	X	X	X	X	X	X	X

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Ergonomic Vacuum Tube Lifters

Vacuum Pad Attachments



T Series Dual and Multi Rectangular Pad Attachments

ANVER Manufactures and Stocks the Largest Selection of Rectangular Vacuum Pad Attachments (also known as "feet") as well as a Wide Variety of Spreader Beams, Manifolds, and other Vacuum Lifting Mounting Accessories in order to accommodate even the Most Difficult Lifting Applications. Our experienced sales engineers can help you choose the attachment that is best suited for your material handling needs.

Features:

- With over 60 standard sizes of vacuum pad attachments available, we make it easy for you to find the perfect attachment.
- Replaceable vacuum seals are available in both Neoprene and Natural Gum Rubber.
- Our New Versatile Four-Port Manifold Design allows for Higher Vacuum Flow for improved load holding ability.
- Rugged Extruded Aluminum Spreader Beams make Pad Adjustments Easier.
- A Variety of mounting styles are available to adapt to any vacuum lifting system.

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:							
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200	VT250
T-035060	3.5 (89)	6 (152)	X	X						
T-035080	3.5 (89)	8 (203)	X	X	X					
T-035100	3.5 (89)	10 (254)	X	X	X	X				
T-035120	3.5 (89)	12 (305)	X	X	X	X	X			
T-035160	3.5 (89)	16 (406)	X	X	X	X	X	X		
T-040065	4 (102)	6.5 (165)	X	X						
T-040085	4 (102)	8.5 (216)	X	X	X					
T-040105	4 (102)	10.5 (267)	X	X	X	X				
T-040125	4 (102)	12.5 (318)	X	X	X	X	X			
T-040165	4 (102)	16.5 (419)	X	X	X	X	X	X		
T-045065	4.5 (114)	6.5 (165)	X	X	X	X				
T-045080	4.5 (114)	8 (203)	X	X	X	X	X			

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Ergonomic Vacuum Tube Lifters



Vacuum Pad Attachments

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:							
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200	VT250
T-045100	4.5 (114)	10 (254)	X	X	X	X	X			
T-045125	4.5 (114)	12.5 (318)	X	X	X	X	X	X	X	*
T-045150	4.5 (114)	15 (381)	X	X	X	X	X	X	X	*
T-045205	4.5 (114)	20.5 (521)	X	X	X	X	X	X	X	X
T-045245	4.5 (114)	24.5 (622)	X	X	X	X	X	X	X	X
T-050070	5 (127)	7 (178)	X	X	X	X				
T-050085	5 (127)	8.5 (216)	X	X	X	X	X			
T-050105	5 (127)	10.5 (267)	X	X	X	X	X			
T-050130	5 (127)	13 (330)	X	X	X	X	X	X	X	*
T-050155	5 (127)	15.5 (394)	X	X	X	X	X	X	X	*
T-050210	5 (127)	21 (533)	X	X	X	X	X	X	X	X
T-050250	5 (127)	25 (635)	X	X	X	X	X	X	X	X
T-055065	5.5 (140)	6.5 (165)	X	X	X	X	X			
T-055105	5.5 (140)	10.5 (267)	X	X	X	X	X	X	X	*
T-055120	5.5 (140)	12 (305)	X	X	X	X	X	X	X	*
T-055150	5.5 (140)	15 (381)	X	X	X	X	X	X	X	*
T-055190	5.5 (140)	19 (483)	X	X	X	X	X	X	X	X
T-060070	6 (152)	7 (178)	X	X	X	X	X			
T-060080	6 (152)	8 (203)	X	X	X	X	X			

* Can only be used on a 4 Pad Configuration for VT250 systems

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Ergonomic Vacuum Tube Lifters

Vacuum Pad Attachments

Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:							
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200	VT250
T-060085	6 (152)	8.5 (216)	X	X	X	X	X			
T-060110	6 (152)	11 (279)	X	X	X	X	X	X	X	*
T-060125	6 (152)	12.5 (318)	X	X	X	X	X	X	X	*
T-060155	6 (152)	15.5 (394)	X	X	X	X	X	X	X	*
T-060195	6 (152)	19.5 (495)	X	X	X	X	X	X	X	X
T-065065	6.5 (165)	6.5 (165)	X	X	X	X	X			
T-065090	6.5 (165)	9 (229)	X	X	X	X	X	X	X	*
T-065105	6.5 (165)	10.5 (267)	X	X	X	X	X	X	X	*
T-065120	6.5 (165)	12 (305)	X	X	X	X	X	X	X	*
T-065160	6.5 (165)	16 (406)	X	X	X	X	X	X	X	X
T-070070	7 (178)	7 (178)	X	X	X	X	X			
T-070095	7 (178)	9.5 (241)	X	X	X	X	X	X	X	*
T-070110	7 (178)	11 (279)	X	X	X	X	X	X	X	*
T-070125	7 (178)	12.5 (318)	X	X	X	X	X	X	X	*
T-070165	7 (178)	16.5 (419)	X	X	X	X	X	X	X	X
T-075075	7.5 (191)	7.5 (191)	X	X	X	X	X	X	X	*
T-075085	7.5 (191)	8.5 (216)	X	X	X	X	X	X	X	*
T-075100	7.5 (191)	10 (254)	X	X	X	X	X	X	X	*
T-075130	7.5 (191)	13 (330)	X	X	X	X	X	X	X	X

* Can only be used on a 4 Pad Configuration for VT250 systems

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Ergonomic Vacuum Tube Lifters



Vacuum Pad Attachments

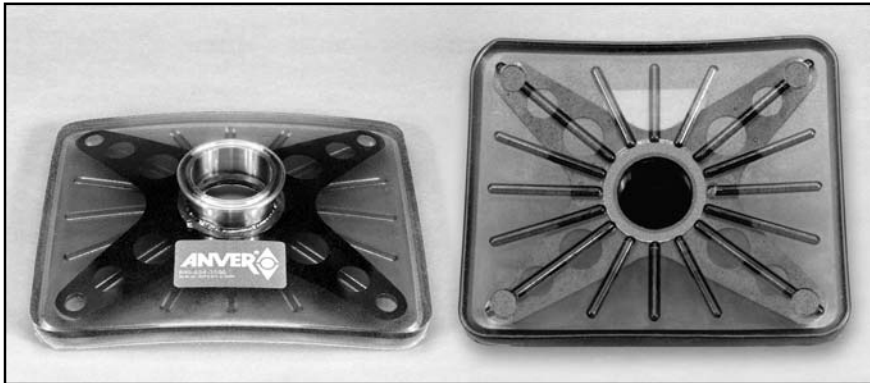
Single Vacuum Pad Attachments			Can Be Used With ANVER Vacuum Tube Lifter Model:							
Pad Number	Width in. (mm)	Length in. (mm)	VT090	VT100	VT120	VT140	VT160	VT180	VT200	VT250
T-080080	8 (203)	8 (203)	X	X	X	X	X	X	X	*
T-080090	8 (203)	9 (229)	X	X	X	X	X	X	X	*
T-080105	8 (203)	10.5 (267)	X	X	X	X	X	X	X	*
T-080135	8 (203)	13.5 (343)	X	X	X	X	X	X	X	X
T-085090	8.5 (216)	9 (229)	X	X	X	X	X	X	X	*
T-085120	8.5 (216)	12 (305)	X	X	X	X	X	X	X	X
T-090095	9 (229)	9.5 (241)	X	X	X	X	X	X	X	*
T-090125	9 (229)	12.5 (318)	X	X	X	X	X	X	X	X
T-095115	9.5 (241)	11.5 (292)	X	X	X	X	X	X	X	X
T-100120	10 (254)	12 (305)	X	X	X	X	X	X	X	X

* Can only be used on a 4 Pad Configuration for VT250 systems



Vacuum Cups and Suction Cups

FlexGrip Series Vacuum Pad Attachments



For Lifting CRT Monitors and other Curved and Cylindrical Objects

The FlexGrip Series Vacuum Pad Attachment, a new concept in vacuum pad engineering designed to make the lifting of CRT Monitors, and other similar, slightly curved and cylindrical objects easy and safe, is now available from Anver.

The FlexGrip, which is suitable as a single pad for the VT160 and smaller Vacuum Tube Lifting Systems, has a spring steel skeleton molded inside its urethane body, which is pre-formed to the smallest curvature of your application (load), but will flatten out to accommodate larger curves, or even conform to a flat surface. When released, it springs back to its pre-formed curved shape. The pad shown here is molded from 35 durometer urethane, but can be made in 20, 40, 50 or 60 durometer, as well, according to the demands of your application.

Contact an Anver Application Engineer to find out how the FlexGrip can simplify your lifting application today!

Vacuum Cup Part Number

FlexGrip Series Vacuum Pads are Custom Engineered to meet the needs of your particular application. Please call factory for details.

T1-FG65S20-U35



Round Vacuum Pads with Adhesive Seals

ANVER Round Vacuum Pads can be fitted with foam rubber sealing rings that are glued in place. These foam seals are most effective on rough, uneven or textured surfaces such as stone or concrete. Available in two standard types of foam, the sealing rings are glued to the sturdy aluminum vacuum hub to guard against seal slippage and assure safe load handling.

Features:

- Available for most vacuum pad types and sizes.
- Adjust easily to uneven or rough surfaces for maximum safety.
- Seals are replaceable and economical
- Seals are available in a large variety of shapes and materials.
- Quick Release Mounts Available.
- Black Foam Seal and White Latex Seal are also available. Please consult ANVER for additional information.

ANVER Item No.	Foam Color	Cup Diameter in. (mm)	Overall Height in. (mm)	Rated Capacity lb (kg)
T1-95Q-H3	Black Foam	6.75 (171)	1.44 (37)	100 (45)
T1-95Q-H7	White Foam	6.75 (171)	1.44 (37)	100 (45)
T1-125Q-H4	Black Foam	9.75 (248)	1.68 (43)	225 (102)
T1-125Q-H8	White Foam	9.75 (248)	1.68 (43)	225 (102)

Ergonomic Vacuum Tube Lifters



Vacuum Pad Attachments



Round Vacuum Pads for Lifting Barrels and Buckets

Features:

- Seals adjust easily to uneven or rough surfaces for maximum safety
- Seals are replaceable and economical
- Seals are available in a large variety of sizes and materials
- Pads are furnished with standard quick connect coupling for use with Anver VT and VB Vacuum Lifters
- Please consult ANVER for additional product information

BH60R-SS Round Bag Head Specifications:

This compact, round pad is most effective for lifting tightly packed Bags, Pails and Drums, Plastic Wrapped Rolls, and other similar items.

BH60R-SS Round Bag Head Specifications:

This compact, round pad is most effective for lifting tightly packed Bags, Pails and Drums, Plastic Wrapped Rolls, and other similar items.

ANVER Item No.	Pad Diameter in. (mm)	Seal Style	Optional Skirt No.	Replacement Seal No.
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BH60R-SS-G3	10.0 (254)	Standard	BH60R-SK	BH60R-FR-G3
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Standard T1-Vacuum Pads Specifications:

ANVER Item No.	Pad Diameter in. (mm)	Connection Type	Overall Height in. (mm)
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T1-12D-A2B7-SS	12 (305)	Quick Release	2.95 (74.9)
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T1-20D-A2B7-SS	20 (508)	Quick Release	2.95 (74.9)
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NOTE: Please consult with factory for adapters, extensions, etc. Most feature two inch diameter connectors to accommodate the high airflow required for bag lifting and handling. Special foam seals are available with Extra Soft Edges, for handling printing signature bundles.

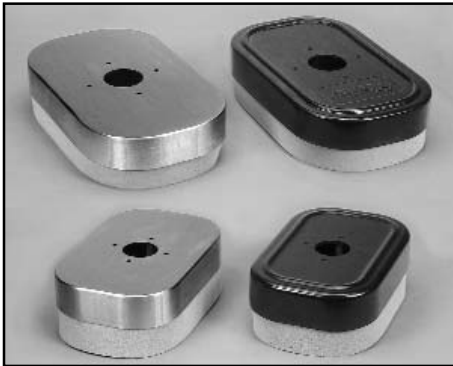


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Ergonomic Vacuum Tube Lifters



Bag Lifting Head Attachments

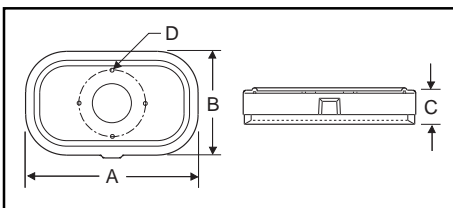


Bag Lifting Heads

- Versatile Vacuum Lifting Pads for Virtually All Industrial Bag and Sack Lifting Applications.
- Designed for Robotic End Effectors, Tube lift system and pick and place machines.
- All but model BH90-P are unmarked making them perfect for OEM use.
- High quality rubber seals are long lasting and will lift even crumpled bags with ease.

ANVER Bag Head Vacuum Pad Attachments are ideal for use with vacuum tube lifter systems in the food, chemical and pharmaceutical industries, or anywhere bags are used. The three standard sizes available will handle all the standard bag sizes found in industry today. They are widely used in industry.

Stainless Steel Bag Heads: These highly polished vacuum attachment pads feature a stainless steel top cover, stainless or plastic mesh screen, and hand-replaceable foam sealing rings. These are rugged, heavy duty pads for continuous industrial use. A four mounting hole pattern allows the pad to interface with various standard ANVER adapters, swivels, etc., and other machine mounts.



Plastic Bag Heads: ANVER also builds a line of rugged, Plastic Bag Lifting Heads in two sizes which handle most commonly used bags. They are durable, lightweight, dent-resistant and a very economical alternative, well-suited for the majority of applications. They work well, are lightweight and have quickly become our top sellers in this market segment.

ANVER Item No.	A Length in. (mm)	B Width in. (mm)	C Height in. (mm)	D Mounting Bolt Circle in. (mm)	Seal Style	Optional Skirt No.	Replacement Seal No.
BH40-P-C5	11.00 (280)	7.25 (184)	3.94 (100)	3.15 (80)	Rectangular	BH40-SK	BH40-FR-C5
BH40-P-G3G6	11.00 (280)	7.25 (184)	3.94 (100)	3.15 (80)	Tapered	BH40-SK	BH40-FR-G3G6
BH40-SSP-C5	11.00 (280)	7.25 (184)	3.94 (100)	3.15 (80)	Rectangular	BH40-SK	BH40-FR-C5
BH40-SSP-G3G6	11.00 (280)	7.25 (184)	3.94 (100)	3.15 (80)	Tapered	BH40-SK	BH40-FR-G3G6
BH52-SS-G3 Discontinued (Replaced by BH40-SSP-C5)	11.42 (290)	7.40 (188)	2.95 (75)	4.72 (120)	Tapered	BH52-SK	BH52-FR-G3
BH52-SS-D2B4 Discontinued (Replaced by BH40-SSP-C5)	11.42 (290)	7.40 (188)	2.95 (75)	4.72 (120)	Ribbed	BH52-SK	BH52-FR-D2B4
BH73-SS-G3	15.39 (391)	7.40 (188)	2.95 (75)	4.72 (120)	Tapered	BH73-SK	BH73-FR-G3
BH73-SS-D2B4	15.39 (391)	7.40 (188)	2.95 (75)	4.72 (120)	Ribbed	BH73-SK	BH73-FR-D2B4
BH90-P-C5	15.83 (402)	9.53 (242)	3.94 (100)	4.72 (120)	Rectangular	BH90-SK	BH90-FR-C5

Note: Please consult with factory for adapters, extensions, etc. Most feature two inch diameter connectors to accommodate the high airflow required for bag lifting and handling. Special foam seals are available with Extra Soft Edges, for handling printing signature bundles.

Rubber Skirts: Rubber skirts are available for all sizes although they tend to get sucked in under the pads and are best avoided if possible. They are usually not necessary if matched up with an ANVER High Airflow vacuum station.

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Ergonomic Vacuum Tube Lifters



Bag Lifting Head Attachments

ANVER Item No.	A Length in. (mm)	B Width in. (mm)	C Height in. (mm)	D Mounting Bolt Circle in. (mm)	Seal Style	Optional Skirt No.	Replacement Seal No.
BH90-P-G3G6	15.83 (402)	9.53 (242)	3.94 (100)	4.72 (120)	Tapered	BH90-SK	BH90-FR-G3G6
BH90-SSP-C5	15.83 (402)	9.53 (242)	3.94 (100)	4.72 (120)	Rectangular	BH90-SK	BH90-FR-C5
BH40-SSP-G3G6	15.83 (402)	9.53 (242)	3.94 (100)	4.72 (120)	Tapered	BH90-SK	BH90-FR-G3G6

Note: Please consult with factory for adapters, extensions, etc. Most feature two inch diameter connectors to accommodate the high airflow required for bag lifting and handling. Special foam seals are available with Extra Soft Edges, for handling printing signature bundles.

Rubber Skirts: Rubber skirts are available for all sizes although they tend to get sucked in under the pads and are best avoided if possible. They are usually not necessary if matched up with an ANVER High Airflow vacuum station.



Detail of G3G6 Style Tapered Foam Seal

Suction Hand Cups

Vacuum Holding Accessories

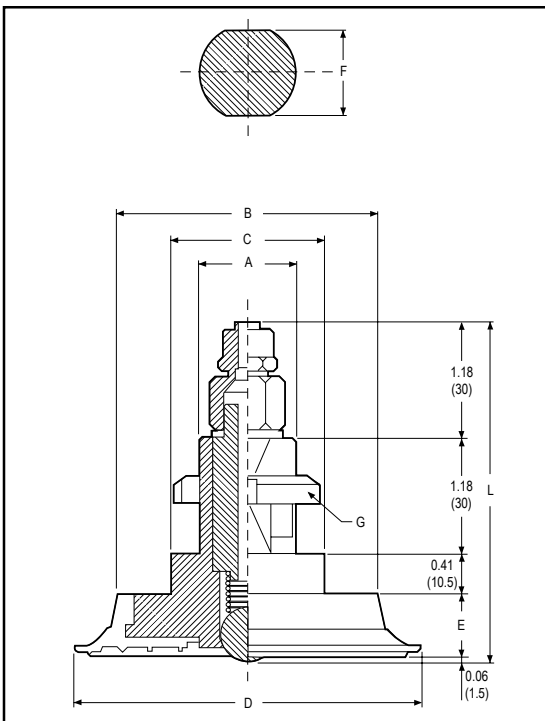


Vacuum Hold-Down Clamps

ANVER Vacuum Hold-Down Clamps provide quick and accurate holding of smooth, non-porous workpieces on benchtops, CNC machine tables and specialized fixturing setups. The vacuum clamps can be arranged to accommodate odd shapes, and release quickly for difficult setup changes. These unique vacuum clamps feature soft rubber seals ideal for holding finished or polished surfaces without scratching or marking. ANVER HDC Vacuum Hold-Down Clamps are ideal for many workholding applications in the metalworking, plastics, glass, stone, and wood paneling industries.

Features:

- Vacuum Hold-Down Clamps are Ideal for holding smooth, flat objects
- Compact, lightweight design
- Available in Four Sizes with choice of Black Nitrile, Translucent Silicone or Blue Vinyl Seals.
- Body is machined from Aluminum for maximum rigidity for Metal or Glass Machining operations
- Bottom Flange provides for Clamp-in-Place Mounting.
- One Ferrule-less Compression Fitting for attaching 6mm OD/4mm ID Plastic Tubes
- Replacement Seals are Interchangeable with ANVER VP Series Vacuum Pads



Part No. without seal	Part No. with Nitrile Seal	Part No. with Silicone Seal	Part No. with Urethane Seal	Part No. with Vinyl Seal
HDC26	HDC26-NBR	HDC26-SIT	HDC26-PUR	HDC26-VYL
HDC36	HDC36-NBR	HDC36-SIT	HDC36-PUR	HDC36-VYL
HDC47	HDC47-NBR	HDC47-SIT	HDC47-PUR	HDC47-VYL
HDC64	HDC64-NBR	HDC64-SIT	HDC64-PUR	HDC64-VYL

Pad Series	A Metric Thread Size & Length	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)	F in. (mm)	G	L Metric Ring Gauge
HDC26	25 X 1.5	1.97 (50)	1.57 (40)	2.56 (65)	0.63 (16)	0.87 (22)	KM 5	3.5 (89)
HDC36	25 X 1.5	2.64 (67)	1.57 (40)	3.54 (90)	0.63 (16)	0.87 (22)	KM 5	3.5 (89)
HDC47	25 X 1.5	3.81 (97)	1.57 (47)	4.72 (120)	0.63 (16)	0.87 (22)	KM 5	3.5 (89)
HDC64	35 X 1.5	5.31 (135)	3.15 (80)	6.3 (160)	0.91 (23)	1.26 (32)	KM 7	3.66 (93)

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Vacuum Holding Accessories

Compressed Air Powered Welding Hold-Down Clamps



ANVER Compressed Air Powered Welding Hold-Down Clamps are supplied with a self contained hydraulic ram and pump that develops compressive force to help increase welding production and significantly reduce time and labor costs on a variety of welding operations. These vacuum attachment hold-down clamps can significantly reduce time and labor costs on a variety of welding operations, such as welding beams to plate or in the fabrication of tanks, cylinders and heavy structural sections. They also are an ideal means of raising a sagging plate to beam level.

Welding of U-brackets and the use of wedges can be eliminated. There are no brackets to knock off or tack welds to grind when the welding operation is completed.

The welding hold-down clamp is positioned over the sections to be welded. The vacuum attachment pads, powered by a compressed air venturi, are then activated, creating the holding force. The operator is able to accurately position the pieces to be welded while the hydraulic ram holds the pieces tight, helping to make a secure weld possible. A quick vacuum release valve permits movement of the unit to the next welding point quickly and easily.

Features:

- Requires less than a minute to set up
- Simply and quickly attach the clamp and begin welding
- Clamp quickly releases for the next weld
- High quality, long lived ENERPAC® hydraulic rams unlike many low cost mass produced competitive units
- ANVER's Welding Hold-Down Clamps are production quality tools designed for jobs requiring continuous use.
- These clamps quickly remove the gap between the plate and the stiffener. They eliminate the need for lugs, chains, c-clamps, or tack-welding and regrinding from the welding operation.
- The suspension rods are hardened while the frame is made of high tensile steel for maximum strength. The attach and release is extremely fast. The units are powered by an air venturi which is silent and efficient.
- The three largest units feature rugged bolt-on style pads with extended pad covers to protect the sealing rings.
- The ENERPAC® hydraulic ram is of the highest quality to minimize the chance of leakage.
- A suspension hook allows the hold-down clamps to be easily positioned.

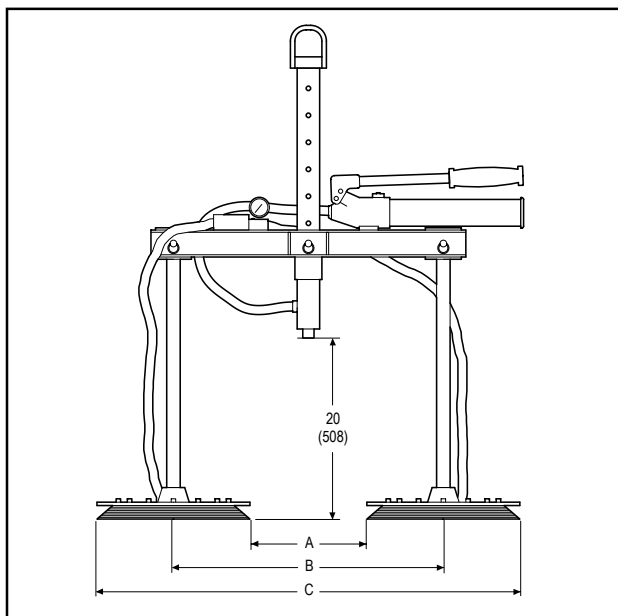
Compressed Air Powered Welding Hold-Down Clamps include:

- Solid machined steel rods provided for pad suspension.
- Welded, steel tube frame provides maximum strength and eliminates any chance of distortion.
- Steel reinforced clear PVC hose, stainless steel clamps and brass fittings used throughout.



Vacuum Holding Accessories

Compressed Air Powered Welding Hold-Down Clamps



Specifications:

- Air pressure requirements: dry, clean, compressed air of 72 psi
- Air consumption: 2.3 cfm
- Attach/release time: 5 seconds on model WCAL400, faster on smaller models

ANVER Item No.	Rated Load* lb (kg)	Load Force at 1 to 1	A in. (mm)	B in. (mm)	C in. (mm)	Unit Weight lb (kg)	Pad No.	Each Pad Diameter in. (mm)
WCAL050	500 (227)	1000 (454)	14 (356)	24 (610)	34 (864)	55 (25)	VC95-4	10.0 (254)
WCAL100	1000 (454)	2000 (908)	11 (279)	24 (610)	36 (914)	75 (34)	VC119-4	12.5 (318)
WCAL150	1500 (680)	3000 (1360)	15 (381)	30 (762)	45 (1143)	95 (43)	VP145S	14.5 (368)
WCAL250	2500 (1135)	5000 (2270)	11 (279)	30 (762)	49 (1245)	120 (55)	VP185S	18.5 (470)
WCAL400	4000 (1800)	8000 (3600)	14 (356)	36 (914)	58 (1473)	140 (64)	VP215S	22.0 (559)

* Rated load at 24 in. Hg, with a 2:1 safety factor on vacuum holding.



Robotic Bottling Components

Bottling Pick-Up Heads



ANVER Robotic Bottling Pick-up Heads can be the best solution to your bottle handling needs. These versatile items can lift, move, pack, and unpack bottles and similar objects of varying forms and dimensions. We offer a large variety of high quality bottling pick-up heads, ensuring that your bottles can be efficiently handled using simple movements and a strong grip.

Choosing the Right Pick-Up Head:

It is important that the correct pick-up head be chosen for your application. The size and shape of your bottle are the most important factors, but the internal materials that grip the bottle should also be considered in order to get the most out of your equipment. Contact our Technical Sales department and let us assist in finding the right Pick-up Heads for you.

ANVER Item No.	Outer Diameter in. (mm)	Inner Diameter in. (mm)	Inner Height in. (mm)
B-001.0001	2.17 (55)	1.26 (32)	2.36 (60)
B-001.0002	2.52 (64)	1.26 (32)	2.36 (60)
B-001.0003	2.91 (74)	1.26 (32)	2.91 (74)
B-001.0004	2.52 (64)	1.54 (39)	3.03 (77)
B-001.00042	2.52 (64)	1.54 (39)	3.03 (77)
B-001.0005	2.91 (74)	1.54 (39)	3.03 (77)
B-001.0006	2.17 (55)	1.42 (36)	1.81 (46)
B-001.0007	2.52 (64)	1.42 (36)	1.81 (46)
B-001.0008	2.91 (74)	1.42 (36)	2.36 (60)
B-001.0009	2.52 (64)	1.61 (41)	2.83 (72)
B-001.0010	2.91 (74)	1.61 (41)	2.83 (72)
B-001.0011	2.76 (70)	1.65 (42)	2.24 (57)
B-001.0012	1.97 (50)	1.26 (32)	2.34 (59.5)
B-001.0013	2.17 (55)	1.30 (33)	3.46 (88)

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Robotic Bottling Components



Bottling Pick-Up Heads

ANVER Item No.	Outer Diameter in. (mm)	Inner Diameter in. (mm)	Inner Height in. (mm)
B-001.0014	2.56 (65)	1.30 (33)	3.50 (89)
B-001.0015	1.93 (49)	1.26 (32)	2.60 (66)
B-001.0016	1.65 (42)	1.06 (27)	1.18 (30)
B-001.0017	1.26 (32)	0.87 (22)	1.26 (32)
B-001.0018	2.52 (64)	1.73 (44)	3.27 (83)
B-001.0019	2.91 (74)	1.73 (44)	3.27 (83)
B-001.0020	2.76 (70)	1.46 (37)	2.80 (71)
B-001.0021	2.87 (73)	1.46 (37)	2.87 (73)
B-001.0022	3.15 (80)	2.28 (58)	3.27 (83)
B-001.0023	3.15 (80)	2.09 (53)	2.76 (70)
B-001.0024	2.52 (64)	1.42 (36)	2.68 (68)
B-001.0025	3.15 (80)	1.18 (30)	3.70 (94)
B-001.0026	1.57 (40)	1.22 (31)	1.89 (48)
B-001.0027	3.05 (77.5)	1.73 (44)	2.44 (62)
B-001.0028	2.56 (65)	2.09 (53)	2.32 (59)
B-001.0029	2.36 (60)	1.65 (42)	2.01 (51)
B-001.0030	2.17 (55)	1.65 (42)	1.97 (50)
B-001.0031	3.15 (80)	2.52 (64)	2.20 (56)
B-001.0032	3.19 (81)	1.73 (44)	1.67 (42.5)
B-001.0033	2.32 (59)	1.81 (46)	2.32 (59)

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Robotic Bottling Components

Bottling Pick-Up Heads

ANVER Item No.	Outer Diameter in. (mm)	Inner Diameter in. (mm)	Inner Height in. (mm)
B-001.0034	1.77 (45)	1.38 (35)	2.60 (66)
B-001.0035	2.17 (55)	1.30 (33)	2.44 (62)
B-001.0036	2.99 (76)	2.32 (59)	1.73 (44)
B-001.0037	2.36 (60)	1.93 (49)	2.17 (55)
B-001.0038	1.97 (50)	1.50 (38)	1.73 (44)
B-001.0039	1.44 (36.5)	1.18 (30)	1.14 (29)
B-001.0040	1.57 (40)	1.22 (31)	1.89 (48)
B-001.0041	3.35 (85)	2.76 (70)	3.07 (78)
B-001.0042	2.28 (58)	1.69 (43)	2.40 (61)
B-001.00421	2.28 (58)	1.69 (43)	2.48 (63)
B-001.00422	2.28 (58)	1.69 (43)	2.48 (63)
B-001.0043	2.68 (68)	1.65 (42)	2.80 (71)
B-001.00431	2.68 (68)	1.69 (43)	2.78 (70.5)
B-001.00432	2.68 (68)	1.69 (43)	2.78 (70.5)
B-001.0044	2.36 (60)	1.50 (38)	2.44 (62)
B-001.0045	2.95 (75)	1.50 (38)	2.56 (65)
B-001.0046	5.04 (128)	4.33 (110)	3.66 (93)
B-001.0049	3.43 (87)	3.03 (77)	2.87 (73)
B-001.0050	2.76 (70)	1.65 (42)	2.17 (55)

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Robotic Bottling Components



Bottling Pick-Up Heads

ANVER Item No.	Outer Diameter in. (mm)	Inner Diameter in. (mm)	Inner Height in. (mm)
B-001.0051	2.17 (55)	1.65 (41.8)	1.81 (46)
	2.36 (60)	1.65 (41.8)	2.20 (56)
	2.68 (68)	1.65 (41.8)	2.56 (65)
B-001.0052	2.17 (55)	1.65 (41.8)	2.40 (61)
	2.36 (60)	1.65 (41.8)	2.80 (71)
	2.68 (68)	1.65 (41.8)	3.15 (80)
B-001.0053	3.05 (77.5)	1.81 (46)	2.72 (69)
B-001.0054	2.32 (59)	1.81 (46)	1.46 (37)
B-001.0055	2.32 (59)	1.81 (46)	1.85 (47)
B-001.0056	2.95 (75)	2.09 (53)	2.62 (66.5)
B-001.0057	2.32 (59)	1.81 (46)	2.91 (74)
B-001.0058	2.83 (72)	2.28 (58)	2.62 (66.5)
B-001.00581	2.76 (70)	2.28 (58)	2.62 (66.5)
B-001.0059	2.28 (58)	1.77 (45)	2.20 (56)
B-001.0060	2.28 (58)	1.57 (40)	1.89 (48)
B-001.0063	2.95 (75)	1.81 (46)	3.01 (76.5)
B-001.0064	2.28 (58)	1.77 (45)	2.20 (56)
B-001.0065	2.36 (60)	1.61 (41)	2.38 (60.5)

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Robotic Bottling Components

Bottling Pick-Up Heads

ANVER Item No.	Outer Diameter in. (mm)	Inner Diameter in. (mm)	Inner Height in. (mm)
B-001.0067	3.15 (80)	2.17 (55)	2.83 (72)
B-001.0068	1.97 (50)	1.34 (34)	2.40 (61)
B-001.0069	1.97 (50)	1.50 (38)	1.73 (44)
B-001.0070	2.17 (55)	1.38 (35)	2.80 (71)
B-001.0072	2.36 (60)	1.61 (41)	2.38 (60.5)
B-001.0075	2.05 (52)	1.38 (35)	1.97 (50)
B-001.0076	2.56 (65)	1.57 (40)	2.13 (54)
B-001.0077	2.95 (75)	1.81 (46)	1.97 (50)
B-001.0080	2.76 (70)	1.77 (45)	2.32 (59)
B-001.0081	2.76 (70)	1.97 (50)	2.99 (76)
B-001.0084	2.76 (70)	2.07 (52.5)	1.89 (48)
B-001.0087	2.56 (65)	1.81 (46)	2.04 (51.7)
B-001.0088	2.76 (70)	1.93 (49)	2.44 (62)
B-001.0091	2.95 (75)	1.81 (46)	2.44 (62)
B-001.0092	2.17 (55)	1.50 (38)	1.65 (42)
B-001.0093	2.76 (70)	2.28 (58)	N/A
B-001.0094	2.95 (75)	1.81 (46)	3.03 (77)
B-001.0095	2.56 (65)	1.50 (38)	1.85 (47)

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Robotic Bottling Components



Bottling Pick-Up Heads

ANVER Item No.	Outer Diameter in. (mm)	Inner Diameter in. (mm)	Inner Height in. (mm)
B-001.0101	2.17 (55)	1.61 (41)	1.93 (49)
B-001.0104	2.28 (58)	1.57 (40)	1.89 (48)
B-001.0105	1.14 (29)	0.85 (21.5)	1.28 (32.5)
B-001.0107	2.56 (65)	1.57 (40)	2.13 (54)
B-002.0001	2.56 (65)	1.57 (40)	1.69 (43)
B-014.0015	1.50 (38)	1.18 (30)	N/A
B-014.0016	1.97 (50)	1.73 (44)	N/A

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An Inflatable Rubber Bladder that Tightly Grips the Load from the inside when pressurized.

Features:

- A Brand New Product to grip and lift opened mouth containers quickly and efficiently.
- A rubber bladder inflates to 140% of size to firmly grip loads from the inside.
- Rubber attachment is delicate, non-marring and conforms to any shape.
- Has good load capacity and is unaffected by dusty environments.
- Requires just a small amount of air pressure (10-15+ PSI) to expand and attach. To release simply reverse the air flow. As the system is sealed it only requires pressure with no loss of flow to operate. Attach and release are instantaneous, designed for high speed production machinery. Economical, requires no lubrication.
- Units are rebuildable in the field simply by replacing the rubber bladder, which slips on and is locked down by a screw collar.

NOTE: Pickers on this page with the suffix -PU are constructed from Polyurethane Rubber, which is Food Production Safe and Fully Washable.

Picker Part No	Resting insertion D Dia. in. (mm)	Maximum Inflatable D1 Dia. in. (mm)	Overall d Dia. in. (mm)	Connection Thread Size	Overall H height in. (mm)	Rubber Gripper h height in. (mm)
IP1751G18	0.67 (17)	0.99 (25)	0.73 (18.5)	G 1/8"	4.02 (102)	2.01 (51)
IP1751G18-PU	0.67 (17)	0.99 (25)	0.73 (18.5)	G 1/8"	4.02 (102)	2.01 (51)
IP2050G18	0.79 (20)	1.10 (28)	0.73 (18.5)	G 1/8"	3.98 (101)	1.97 (50)
IP2050G18-PU	0.79 (20)	1.10 (28)	0.73 (18.5)	G 1/8"	3.98 (101)	1.97 (50)
IP2763G18	1.07 (27)	1.58 (40)	1.07 (27)	G 1/8"	4.69 (119)	2.48 (63)
IP2763G18-PU	1.07 (27)	1.58 (40)	1.07 (27)	G 1/8"	4.69 (119)	2.48 (63)
IP3760G38	1.46 (37)	1.97 (50)	1.54 (39)	G 3/8"	4.73 (120)	2.36 (60)
IP3760G38-PU	1.46 (37)	1.97 (50)	1.54 (39)	G 3/8"	4.73 (120)	2.36 (60)
IP4761G38	1.85 (47)	2.56 (65)	1.93 (49)	G 3/8"	4.88 (124)	2.40 (61)

Note: Very little pressure is required to hold loads. Using an air pressure regulator, dial down the force to only the minimum pressure required to hold the load and no more. This will greatly lengthen the service life of the replaceable rubber bladder. Use of excess pressure may rupture or force the rubber bladder off the end.

ANVER Vacuum Lifters are designed in a modular fashion. Standard components are selected to match your application (Given the vast selection and inventory that we offer, this means a lifter to match almost any application can be quickly built). ANVER designs its lifters so that each pad bears an equal load weight.

In theory most steel and aluminum sheets can be handled with up to 5 inches of deflection at the outer edge without permanently bending the plate. ANVER, however, recommends a 2-inch deflection factor be used when determining the number of pads and required beam length. Based on our 30+ years experience in thousands of vacuum lifter applications, we have found that a 2-inch deflection offers an extra measure of lifting safety by reducing the curvature under the pads while at the same time making it easier to position the lifter on the load. In practice, it is difficult for operators to center a lifter using a 5-inch deflection design on a load.

In no case should the overhang indicated for a 5 inch deflection be exceeded.

The following procedure is recommended for vacuum lifter selection:

Selecting the Proper Beam and Crossarm Length and Lifting Pad Configuration

1) Identify the size of material to be lifted. Determine the minimum and maximum dimensions and maximum weight of the load. The minimum and maximum thickness are also critical.

2) Determine the allowable amount of load overhang. Overhang (L) and spacing between pads (2L) are based on the minimum thickness of material. Click here for acceptable Steel Plate Overhang or Aluminum Plate Overhang or Glass Plate Overhang . The thinnest material to be lifted should always be used to determine the allowable overhang.

3) Determine the number of pads Lengthwise. Referring to the appropriate table, determine the minimum number of pads required for the maximum load length, rounding up to the next highest number. For example, if the maximum length is 120 inches and the recommended spacing between pads is 60 inches, use a lifter with a minimum of two cups ($120/60=2$). Determine the minimum number of lifting pads required for the maximum load length by dividing the maximum load length by 2L and rounding to the next highest number.

4) Determine the number of pad rows. Determine the minimum number of lifting pads required for the maximum load width by dividing the maximum load width by the 2L number from the table and rounding up to the next highest number. For example, a load width of 72 inches with a recommended spacing between pads of 60 inches ($72/60=1.2$: rounded up to 2) requires a minimum of two pads along the width of the load.

5) Determine the beam length. The beam length is calculated by subtracting 2L from the maximum load length, then adding 6 inches to it. For example, with a maximum load length of 120 inches with a 2L of 60 inches, the minimum beam length would be 66 inches ($120-60+6$). If this is not a standard length, select the next longest standard beam length.

6) Determine the Required Length of Crossarms. Subtract 2L from the maximum load width and add 6 inches. If this is not a standard length, select the next longest standard crossarm length.

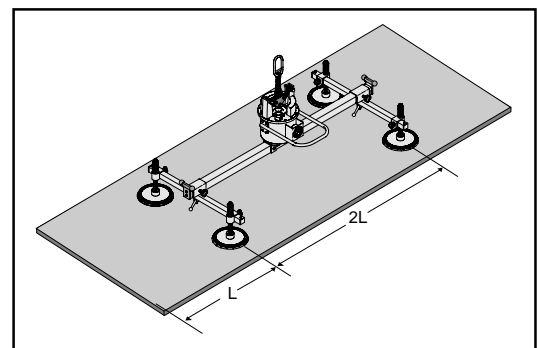
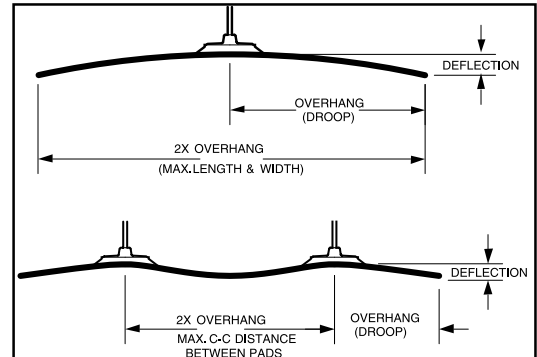
7) Selecting Vacuum Lifting Pad Size and Style.

Consider the following points when selecting the proper vacuum pads:

- The maximum weight to be lifted;
- The number of pads (calculated as explained above);
- The lifting surface and porosity of the load.

8) Follow these guidelines for selecting vacuum pads:

- Use the fewest number of pads necessary;
- Use pads with the largest possible diameter;
- The load width should never exceed five times the lifting pad width or diameter when handling a load with a single row of pads;
- Pad capacities must be derated by 50% when used for vertical handling or upending applications;
- Neoprene sealing rings are recommended for general use (load temperatures of up to 200 degrees F)
- Silicone sealing rings are recommended for applications where load surface marring is a concern or temperatures may exceed 200 degrees C (up to 500 degrees F).



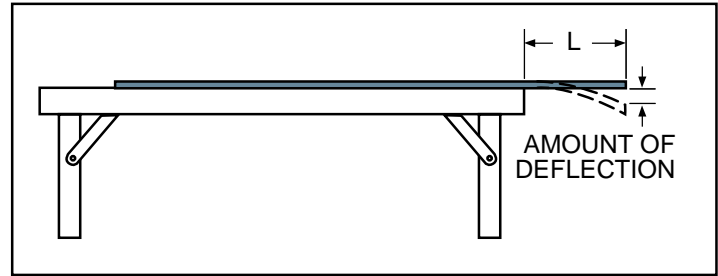
Notes Regarding Deflection (Bending):

- 1) Brittle materials such as glass should be held nearly flat.
- 2) For other materials such as wood, particleboard, etc., deflection can be estimated by direct measure.

NOTE: Although multiple rows may not be required when using the above guidelines, they should be considered if load tipping is a concern.

While choosing the number of crossarm members on a vacuum lifter designed for up-ending (tilting), an even number of crossarms must be specified to prevent interference with the up-ending yoke.

Our applications engineers are always available to assist you in selecting the right vacuum lifter. Call or e-mail us for assistance.





Air Consumptionis the rate at which compressed air is used within the system.

Air Vacuum Generatoris a vacuum system that operates on compressed air by applying venturi principles.

Blow-offis a blast of air that travels through the system against the vacuum. It is used to aid the release of items from the vacuum cups.

Economizer Versionis a system that regulates the vacuum level in the manifold and automatically controls the flow of compressed air into the generator. Program the vacuum level requirements into the unit, and it maintains them using check valves and electric or pneumatic switches to draw energy only when necessary.

Efficiencyrefers to the level of vacuum generated in the system. ANVER offers efficiencies of 75% vacuum and 90% vacuum or 22 in. Hg and 27 in. Hg, respectively.

Generatoris a vacuum system that operates on compressed air by applying venturi principles.

Flow Capacityrefers to the volume of air evacuated from the system. Generally this is stated as a rate, such as standard cubic feet per minute (SCFM). Multiply the manifold volume by the required number of cycles per minute.

Hysteresisis a lag in response time exhibited by a body in reacting to changes in forces acting upon it.

Manifoldis the collective volume of a vacuum system, including the cups, hose, fittings, and controls. It is the amount of air that will need to be evacuated to create a vacuum.

Nozzledetermines the dimensions and flow rates for the vacuum generator. ANVER offers five sizes to satisfy most applications.

PLC Device.....refers to a Programmable Logic Control Device, such as a computer or other digital controller.

Reservoiris a chamber used to store compressed air for blow-off.

SCFM.....Standard Cubic Feet per Minute.

Vacuum Level.....is the degree of vacuum generated. It may be expressed in percentage of vacuum, inches of mercury or any other vacuum or pressure unit.

Venturiis a vacuum generator that operates on compressed air by applying venturi principles.

Venturi Principleis based on the research of Giovanni Venturi, an Italian physicist who investigated the effect on fluids of conical expansions and contractions. For our purposes, forcing air through a small nozzle and its subsequent expansion creates a vacuum.



The Anver Vacuum Resource Book

Conversion Tables

Unit Conversions

Dimensions

Beginning with:	Multiply by:	To obtain:
inches	25.4	mm
mm	0.03937	inches
ft ³	0.02832	m ³
ft ³	28.32	liters
in ³	5.79×10^{-4}	ft ³
cm ³	3.53×10^{-5}	ft ³
mm ³	3.53×10^{-8}	ft ³
m ³	35.31	ft ³
liters	0.03531	ft ³

Flow Rates

Beginning with:	Multiply by:	To obtain:
SCFM	28.32	liters/min.
liters/min	0.03531	SCFM
gal/min	0.00933	SCFM

Vacuum/Pressure

Beginning with:	Multiply by:	To obtain:
% Vacuum	0.3	inches Hg
inches Hg	3.333	% Vacuum
inches Hg	25.4	mm Hg
inches Hg	2.54	cm Hg
inches Hg	0.4898	psi
inches Hg	33.86	mBar
mm Hg	0.03937	inches Hg
cm Hg	0.3937	inches Hg
psi	2.0416	inches Hg
mBar	0.02953	inches Hg

Conversion factors may be rounded.
Vacuum always implies negative pressure.



Vacuum Cups and Suction Cups

Effect of Atmospheric Pressure on Vacuum Level



The basic formula is:

$$\text{Current atmospheric Pressure} \times \frac{\text{Max rated level of a vacuum pump}}{30" \text{ Hg (absolute vacuum)}}$$

It is important to consider the relationship between atmospheric pressure and altitude as it affects vacuum pump performance. Because free air is less dense at higher altitudes (i.e. lower atmospheric pressures) operation at these higher altitudes has the effect of reducing the capacity and maximum vacuum levels attainable. Refer to the following table to correct for performance at various altitudes.

Altitude Above Sea Level (Feet)	Altitude Above Sea Level (Meters)	Atmospheric Pressure (psi)	Maximum Vacuum Level Attainable (inches Hg)	Vacuum Level Loss at Altitude	Maximum Vacuum Level Possible at this Altitude
0'	0 M	14.70 psi	29.921" Hg	-	-
1000'	305 M	14.16 psi	28.9" Hg	3.4%	96.6%
2000'	610 M	13.66 psi	27.8" Hg	7.1%	92.9%
3000'	914 M	13.16 psi	26.8" Hg	10.4%	89.6%
4000'	1219 M	12.68 psi	25.8" Hg	13.8%	86.2%
5000'	1524 M	12.22 psi	24.9" Hg	16.8%	83.2%
6000'	1829 M	11.77 psi	24.0" Hg	19.8%	80.2%
7000'	2134 M	11.33 psi	23.1" Hg	22.8%	77.2%
8000'	2438 M	10.91 psi	22.2" Hg	25.9%	74.1%
9000'	2743 M	10.50 psi	21.4" Hg	28.6%	71.4%
10,000'	3048 M	10.10 psi	20.6" Hg	31.3%	68.7%
11,000'	3353 M	9.71 psi	19.8" Hg	33.9%	66.1%
12,000'	3658 M	9.34 psi	19.0" Hg	36.5%	63.5%
13,000'	3962 M	8.97 psi	18.3" Hg	39.0%	61.0%
14,000'	4267 M	8.62 psi	17.5" Hg	41.4%	58.6%
15,000'	4752 M	8.28 psi	16.9" Hg	43.6%	56.4%

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Vacuum Cups and Suction Cups



Material Selection Guide

Pg-psig	Pa-psia	In. Hg	-mbar	Torr	-mm Hg	% Vacuum
0.00	14.70	0	0.00	760.0	0.0	0.0
0.49	14.24	1	33.86	734.6	25.4	3.3
0.98	13.75	2	67.72	709.2	50.8	6.6
1.47	13.26	3	101.58	683.8	76.2	9.9
1.96	12.76	4	135.44	658.4	101.6	13.2
2.45	12.27	5	169.30	633.0	127.0	16.5
2.95	11.78	6	203.16	607.6	152.4	19.8
3.44	11.29	7	237.02	582.2	177.8	23.1
3.93	10.80	8	270.88	556.8	203.2	26.4
4.42	10.31	9	304.74	531.4	228.6	29.7
4.91	9.82	10	338.60	506.0	254.0	33.0
5.40	9.33	11	372.46	480.6	279.4	36.3
5.89	8.84	12	406.32	455.2	304.8	39.6
6.38	8.35	13	440.18	429.8	330.2	42.9
6.87	7.86	14	474.04	404.4	355.6	46.2
7.36	7.36	15	507.90	379.0	381.0	49.5
7.86	6.87	16	541.76	353.6	406.4	52.8
8.35	6.38	17	575.62	328.2	431.8	56.1
8.84	5.89	18	609.48	302.8	457.2	59.4
9.33	5.40	19	643.34	277.4	482.6	62.7
9.82	4.91	20	677.20	252.0	508.0	66.0
10.31	4.42	21	711.06	226.6	533.4	69.3
10.80	3.93	22	744.92	201.2	558.8	72.6
11.29	3.44	23	778.78	175.8	584.2	75.9
11.78	2.95	24	812.64	150.4	609.6	79.2
12.27	2.45	25	846.50	125.0	635.0	82.5
12.76	1.96	26	880.36	99.6	660.4	85.8
13.26	1.47	27	914.22	74.2	685.8	89.1
13.75	0.98	28	948.08	48.8	711.2	92.4
14.24	0.49	29	981.94	23.4	736.6	95.7
14.70	0.00	29.92	1013.00	0.0	760.0	100.0

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