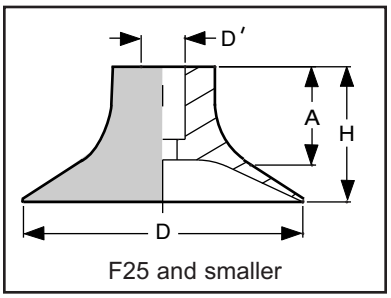
Vacuum Cups and Suction Cups

Universal Style Flat Vacuum Suction Cups

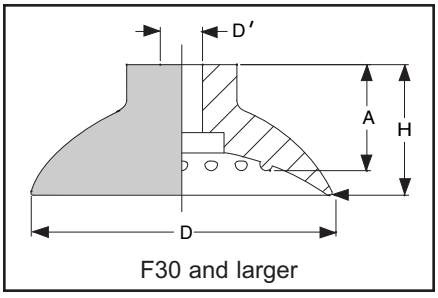
Flat Vacuum Suction Cups

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.



F25 and smaller



F30 and larger

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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ANVER® CORPORATION

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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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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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:

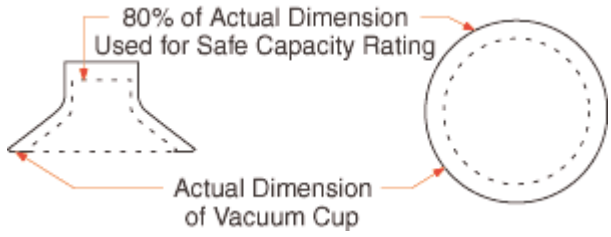
The cup capacities shown above (*) are theoretical capacities based on 24"Hg at sea level with a safety factor of two (2) and a ± 5% margin of error. This is the US ANSI ASME Standard B30.20 for vacuum lifter specifications and is commonly used in North America as a design capacity for vacuum components.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

Pull-off value (at 27"Hg) = ANVER's Listed Capacity x 2 x 1.125 (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 x 2 x 1.125 = 33.98 lbs. From this point, it is necessary to calculate the safety factor based on the vacuum level being used, and the altitude.

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



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