

E-Vac® Vacuum Generators

Adjustable E-Vac Vacuum Generators

Choose the Adjustable E-Vac by the SCFM (SLPM) flow that best suits the performance needed for your application (see *Performance Table* below).

Adjustable E-Vac Kits give you the ability to experiment with an assortment of vacuum cups. E-Vac Kits include a muffler, an assortment of (4) pairs of vacuum cups (closely matched to the performance of that E-Vac), (2) straight, (2) elbow and (1) tee vacuum fittings, 10' (3m) of vacuum tubing and a mounting clip.

Adjustable E-Vac Deluxe Kits include the same items as the standard kit with the addition of an automatic drain filter separator for the compressed air supply and pressure regulator (with coupler).



Adjustable E-Vac Vacuum Generators have vacuum levels up to 25" Hg (85 kPa) that can be used with porous and non-porous materials.

Adjustable E-Vac Performance

The amount of vacuum created varies with the porosity of the load being picked up. Units come from the factory set to 15" Hg (51 kPa). A maximum of 25" Hg (85 kPa) can be achieved on a solid, non-porous surface, but will require increasing the air consumption and vacuum flow.

Adjustable E-Vac	Model 8.2 SCFM 232 SLPM	Model 15.4 SCFM 436 SLPM	Model 26.4 SCFM 748 SLPM	Model 62.7 SCFM 1,775 SLPM
Adjustable E-Vac Only	840008	840015	840030	840060
Adjustable E-Vac with Straight Through Muffler	840008M	840015M	840030M	840060M
Adjustable E-Vac Kit with Straight Through Muffler	841008M	841015M	841030M	841060M
Adjustable E-Vac Deluxe Kit with Straight Through Muffler	842008M	842015M	842030M	842060M

Adjustable Vacuum Generator Performance (15" Hg/ 51 kPa)

Model	Air Consumption SCFM @ 80 PSIG SLPM @ 5.5 BAR		Sound Level in dBA		Vacuum Flow (SCFM/SLPM) vs. Vacuum Level ("Hg/kPa) (Set to 15" Hg/51 kPa)											
	No Muffler	Straight Through Muffler	0	3/10	6/20	9/31	12/41	15/51	0.0	0.0						
											0	3/10	6/20	9/31	12/41	15/51
840008	8.2	232.2	89	77	5.80	164.2	4.68	132.6	3.71	105.0	2.59	73.4	1.53	43.2	0.0	0.0
840015	15.4	436.1	95	77	18.70	529.5	16.00	453.1	12.02	340.3	7.75	219.4	4.05	114.7	0.0	0.0
840030	26.4	747.5	99	74	36.70	1039.2	32.00	906.1	25.63	725.8	17.68	500.5	7.69	217.8	0.0	0.0
840060	62.7	1775.4	107	85	81.00	2293.6	67.00	1897.2	56.33	1595.1	29.00	821.2	11.13	315.3	0.0	0.0

Adjustable Vacuum Generator Performance (25" Hg/ 85 kPa)

Model	Air Consumption SCFM @ 80 PSIG SLPM @ 5.5 BAR		Sound Level in dBA		Vacuum Flow (SCFM/SLPM) vs. Vacuum Level ("Hg/kPa) (Set to 25" Hg/85 kPa)																			
	No Muffler	Straight Through Muffler	0	3/10	6/20	9/31	12/41	15/51	18/61	21/71	24/81	25/85	0.0	0.0										
															0	3/10	6/20	9/31	12/41	15/51	18/61	21/71	24/81	25/85
840008	12.2	345.5	104	89	5.80	164.2	5.58	1579	5.18	146.5	4.80	135.9	4.33	122.5	3.83	108.3	2.94	83.2	1.93	54.5	0.37	10.5	0.0	0.0
840015	25.9	733.4	107	89	18.00	509.7	16.53	4679	15.70	444.6	14.18	401.4	12.13	343.3	8.98	254.1	5.65	160.0	2.69	76.1	0.55	15.6	0.0	0.0
840030	44.8	1268.6	107	82	32.00	906.1	29.00	821.2	26.83	759.8	24.12	682.9	20.92	592.3	14.63	414.1	9.90	280.3	6.13	173.7	1.19	33.8	0.0	0.0
840060	105.2	2978.8	114	92	70.00	1982.1	66.33	1878.3	62.33	1765.0	55.50	1571.5	45.00	1274.2	30.67	868.4	18.37	520.1	8.38	237.4	2.10	59.5	0.0	0.0



Compressed air use is minimized by selecting the exact vacuum level required to lift the heavy, porous cardboard cartons.



A series of bellows cups lift one plastic part at a time off a pallet.

Choosing A Suitable Vacuum Cup

Round Cups are best suited to smooth, flat surfaces. They will grip and release quickly. These cups hold their shape with extended use and grip well to vertical surfaces. Round cups with cleats are better at lifting heavy loads. Cups without cleats can be used for light lifting.



Oval Cups provide the most vacuum due to the larger surface area. They provide more vacuum power than round cups and are suited to lifting heavy loads. They are designed to handle flat rigid sheet materials like wood, glass, cardboard boxes and composites.



Bellows Cups are best suited to textured, uneven surfaces. The folds, called convolutions, provide a collapsible area that allows the cup to quickly compress when it touches the uneven surface. The attach and release time is greater due to the significant volume of the cup.



Vacuum Cup Safety Factor

A **safety factor of 2** is recommended when the vacuum cup is positioned horizontally.

A **safety factor of 4** is recommended when the vacuum cup is positioned vertically.

Some companies or local codes may require a specific safety factor.

Using The Tables Below

Determine the weight of the part to be lifted. Multiply it by the safety factor of (2) when the cup will be positioned horizontally, or by (4) when positioned vertically.

Using the table below, look through the numbers highlighted in orange for the weight capacity per vacuum cup. Use enough vacuum cups to distribute the weight evenly for stable lifting and placement. The model number(s) for the vacuum cup(s) that can handle that weight are directly above (in that column) and are highlighted in blue . Details for each vacuum cup can be found on page 138.

To the left of the vacuum cup weight you've selected (in that same row) is the vacuum level highlighted in green that is needed. Performance data for the In-Line E-Vacs designed for specific vacuum levels can be found on pages 132-133. For loads that vary, Adjustable E-Vacs are the best choice (performance shown on page 136).

Weight in lbs that a vacuum cup can hold at a given vacuum

Vacuum Cup Models	900762 900766	900752 900767	900763	900764	900753 900768	900754 900769	900765	900755 900770	900756 900758	900757 900771	900759	900760	900761
Area of cup in²	0.4	0.8	1.0	1.5	1.8	3.1	4.4	4.9	8.3	14.2	19.6	28.3	
Vacuum ^{mm}Hg	5	0.5	1.0	1.2	1.8	2.2	3.9	5.3	6.0	10.2	17.4	24.1	34.7
	10	1.0	1.9	2.5	3.7	4.3	7.7	10.7	12.1	20.4	34.8	48.2	69.4
	15	1.5	2.9	3.7	5.5	6.5	11.6	16.0	18.1	30.6	52.3	72.3	104.2
	20	2.1	3.9	4.9	7.4	8.7	15.4	21.4	24.1	40.7	69.7	96.4	138.9
	21	2.2	4.1	5.2	7.8	9.1	16.2	22.4	25.3	42.8	73.2	101.3	145.8
	27	2.8	5.2	6.6	10.0	11.7	20.8	28.9	32.6	55.0	94.1	130.2	187.5

Weight in kilograms that a vacuum cup can hold at a given vacuum

Vacuum Cup Models	900762 900766	900752 900767	900763	900764	900753 900768	900754 900769	900765	900755 900770	900756 900758	900757 900771	900759	900760	900761
Area of cup cm²	3	5	6	10	11	20	28	32	54	92	127	182	
Vacuum kPa	17	0.2	0.4	0.6	0.8	1.0	1.7	2.4	2.7	4.6	7.9	10.9	15.7
	34	0.5	0.9	1.1	1.7	2.0	3.5	4.8	5.5	9.2	15.8	21.9	31.5
	51	0.7	1.3	1.7	2.5	3.0	5.2	7.3	8.2	13.9	23.7	32.8	47.2
	68	0.9	1.7	2.2	3.4	3.9	7.0	9.7	10.9	18.5	31.6	43.7	63.0
	71	1.0	1.8	2.3	3.5	4.1	7.3	10.2	11.5	19.4	33.2	45.9	66.1
	91	1.3	2.4	3.0	4.5	5.3	9.4	13.1	14.8	25.0	42.7	59.1	85.0