



# Cole-Parmer®

## AIR CADET®

# VACUUM/PRESSURE PUMPS

## COMPACT SIZE MAKES PUMPS IDEAL FOR PORTABLE APPLICATIONS



**Air Cadet  
Single-Head Pumps**



**Air Cadet  
Dual-Head Pumps**



**Air Cadet  
Vacuum/Pressure  
Station**

### SINGLE-HEAD PUMP

Single-head pump is economically priced and can handle many tough vacuum/pressure applications. Choose from two models to accommodate your electrical requirements.

**What's included:** PTFE thread tape, two polyethylene 3/8" NPT(M) x 3/8" hose barb adapters, and a 6-ft, three-wire cord. The 115 VAC model includes a plug.

### DUAL-HEAD PUMP

Dual-head pump offers you increased capacity over the single-head Air Cadet pump. Use the two pump heads independently or connect them in series with 3/8" ID Tygon® vacuum tubing for up to 20" Hg vacuum.

**What's included:** PTFE thread tape, four polyethylene 3/8" NPT(M) x 3/8" hose barb adapters, and a 6-ft, three-wire cord with plug.

### VACUUM/PRESSURE STATION

Vacuum/pressure station features a built-in bronze and brass vacuum/pressure gauge and stainless steel (SS) regulator. Use the auxiliary port to evacuate or pressurize two systems simultaneously. Station includes a 9" piece of vinyl tubing to connect pump to the regulator.

**What's included:** PTFE thread tape, two polyethylene (PE) 3/8" NPT(M) x 3/8" hose barb adapters, one PE 1/4" NPT(M) x 3/8" hose barb adapter (for auxiliary port), and a 6-ft, three-wire cord.

**Note:** Do not use metal fittings with any Air Cadet pump.

## FEATURES AND BENEFITS

- All-plastic, convoluted diaphragm design handles many vacuum/pressure applications and reduces stress, wear, and heat build-up
- Unique cavity configuration minimizes dead space and air entrapment
- Pumps are available with standard 115 or 230 VAC motor; or a hazardous-duty, 115 VAC motor. Standard AC motors are service-free, brushless type with sealed ball bearings and thermal overload protection

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## Specifications & Ordering Information

### Wetted parts

Models 420-1901, 420-1902, 420-2901, and 420-2902: Valox pump head, FKM diaphragm, valves of FKM fluorelastomer, and polyethylene (PE) adapters

Models 420-3901 and 420-3902: Valox pump head, FKM diaphragm, valves of FKM resin, vinyl tubing, stainless steel regulator, bronze/brass gauge, and PE adapters

**Port size:** 3/8" hose barb **Maximum temperature:** 95°F (35°C) **Duty cycle:** 6-hour cycle for diaphragms; motors are continuous duty

Catalog number	Free-air capacity	Max vacuum	Max pressure	Motor type	Power	Amps	Noise rating	Dimensions (L x W x H)	Shpg wt lb (kg)
<b>Single-head pumps</b>									
<b>MK-07532-40</b>	0.6 cfm (17.0 L/min)	20" Hg	18 psi	1/45 hp, TEFC	115 VAC, 60 Hz	1.2	72 dB(A)	7 1/4" x 4" x 5 1/2"	7 (3.2)
<b>MK-07532-45</b>	0.5 cfm (14.1 L/min)*				230 VAC, 50 Hz	0.8			
<b>Dual-head pumps</b>									
<b>MK-07532-60</b>	0.9 cfm (25.5 L/min)†	20" Hg	18 psi	1/45 hp, TEFC	115 VAC, 60 Hz	1.7	76 dB(A)	10 1/2" x 4" x 5 1/2"	8 (3.7)
<b>MK-07532-65</b>	0.8 cfm (22.6 L/min)†				230 VAC, 50 Hz	0.9			
<b>Vacuum/pressure stations</b>									
<b>MK-07532-80</b>	0.5 cfm (14.1 L/min)	20" Hg	18 psi	1/45 hp, TEFC	115 VAC, 60 Hz	1.5	73 dB(A)	7 1/2" x 8" x 8 3/4"	12 (5.5)
<b>MK-07532-85</b>	0.4 cfm (11.3 L/min)*				230 VAC, 50 Hz	0.75			
<b>OEM pumps</b>									
<b>MK-07532-25</b>	0.6 cfm (17.0 L/min)	20" Hg	18 psi	1/30 hp, PMDC	12 VDC	4	72 dB(A)	8 x 4 x 5 1/2"	4.4 (2.0)
<b>MK-07530-85</b>	0.6 cfm (17.0 L/min)‡			1/45 hp, TEFC	115 VAC, 60 Hz	1.2		7 1/4 x 4 x 5 1/2"	6 (2.7)

†Total free-air capacity. Single-channel capacity is half this value.

‡Split-phase

\*The 230 VAC, 50 Hz models have 5/6 the flow of the 115 VAC, 60 Hz models.



OEM Pumps

### Vacuum/Pressure Conversion Table

Absolute vacuum				Relative vacuum	
torr/mm Hg	mbar	psia	atm	% vacuum	Hg
760	1013	14.696	1.0	0.0	0.0
750	1000	14.5	0.987	1.3	0.42
500	667	9.7	0.658	34	10.22
400	533	7.7	0.526	47	14.22
300	400	5.8	0.395	61	18.12
200	267	3.9	0.264	74	22.07
100	133.3	1.93	0.132	87	25.98
70	93.4	1.35	0.0921	90.8	27.16
50	66.7	0.97	0.0658	93.5	27.95
25.4	33.8	0.4912	0.034	96.6	28.92
10	13.33	0.193	0.0132	98.7	29.52
1	1.33	1.934 x 10 <sup>-4</sup>	1.32 x 10 <sup>-3</sup>	99.9	29.88
0.1	0.133	1.93 x 10 <sup>-3</sup>	1.32 x 10 <sup>-4</sup>	99.99	29.916
1 x 10 <sup>-2</sup>	1.33 x 10 <sup>-2</sup>	1.93 x 10 <sup>-4</sup>	1.32 x 10 <sup>-5</sup>	99.999	29.9196
1 x 10 <sup>-3</sup>	1.33 x 10 <sup>-3</sup>	1.93 x 10 <sup>-5</sup>	1.32 x 10 <sup>-6</sup>	99.9999	29.91996
1 x 10 <sup>-4</sup>	1.33 x 10 <sup>-4</sup>	1.93 x 10 <sup>-6</sup>	1.32 x 10 <sup>-7</sup>	-	29.91999

For more information:

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