

VA Vacuum Pumps

Hand Operated/Laboratory, Dry

Hand-Operated Vacuum/Pressure Pumps

Produce up to 25" Hg vacuum or test for pressure leaks

- Pumps are sealed and self-lubricated for a long, maintenance-free life
- Vacuum gauge is graduated in both centimeters and inches of mercury
- Built-in trigger enables you to release vacuum without disconnecting the pump

Specifications & Ordering Information

Wetted parts: Zinc alloy or PVC with Santoprene® and Buna N

Port size: 1/4" ID tubing

Dimensions: 7 1/2"L x 2"W x 9 1/2"H



Max temperature: 150°F (65°C)

Catalog number	Max vacuum	Max pressure*	Body material	mL/stroke	Price
KH-79301-00	25" Hg	15 psi	Zinc alloy	15	
KH-79301-10		12 psi	PVC	16	
KH-79301-20		7 psi	PVC	35	

*NPT fittings can be used with NPS threads.

Accessories

[KH-79301-50 Converter kit](#) eliminates the need to move tube from one port to another when switching from vacuum to pressure. Includes vacuum/pressure gauge

[KH-79301-60 Repair kit](#) for pump 79301-00

[KH-79301-61 Repair kit](#) for pumps 79301-10 and -20

[KH-06413-20 Tygon® vacuum tubing](#), 1/4" ID x 5/8" OD. Pack of 10 feet



PVC pump 79301-10 is lightweight and easy to handle.

Zinc alloy pump 79301-00 is perfect for rugged applications.

Cole-Parmer Venturi Vacuum Pumps

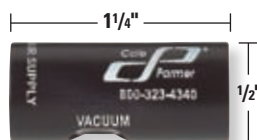
Pumps are air-powered—require no electrical power source or lubricant

- No moving parts ensure long life with low maintenance
- No batteries or electrical connections—intrinsically safe
- Place pumps close to your application for fast response and minimal vacuum loss

These pumps take advantage of the venturi effect—as a stream of compressed air exits a constricted orifice the resulting pressure drop draws air through a vacuum port.

The air saver circuitry is perfect for any lab or process application. Powered by compressed air only; the pneumatic vacuum switch is the brain behind the system that constantly monitors and controls the vacuum level. Eliminates the constant air loss and noise of most venturi vacuum pumps. The vacuum switch is adjustable from 0 to 30" Hg with a hysteresis of 3" Hg.

What's included: replaceable silencer (except model 78165-40). Model 78165-20 includes a vacuum gauge. Air Saver models include venturi pump with air saver circuitry, silencer, and a vacuum gauge.



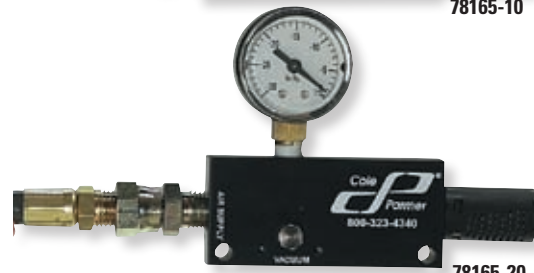
78165-40



78165-60



78165-10



78165-20

2 year warranty

5 year warranty

Filter/Regulator

We recommend an air filter upstream of the pump to prolong service life. Filter should have a pore size of 50 µm or smaller.

[KH-79160-00 Filter/regulator](#), 5 µm. Ports are 1/4" NPT(F)



ISO9001:2000
CERTIFIED SUPPLIER

Specifications & Ordering Information

Wetted parts: anodized aluminum body, brass venturi, and Buna N seals

Air supply pressure: 80 psi

Max temperature: 140°F (60°C)

Catalog number	Free-air capacity cfm (L/min)	Maximum vacuum	Air input at 80 psi cfm (L/min)	Noise rating	Port sizes		Dimensions (L x W x H)	Price	Replacement silencers	
					Air supply	Vacuum			Cat. no.	Price
Venturi vacuum pumps										
KH-78165-40¹	0.3 (8.5)	27.0" Hg	0.75 (21.2)	55 dB(A)	#10-32	#10-32	1 1/4"L x 1 1/2" dia OD			
KH-78165-00	0.5 (14.2)	28.0" Hg	0.8 (22.7)	68 dB(A)			2 1/2" x 5/8" x 3/8"		KH-78165-50	
KH-78165-10	1.2 (34.0)	28.0" Hg	1.8 (51.0)	72 dB(A)	1/4" NPT(F)	1/8" NPT(F)	4 5/8" x 3/4" x 3/4"		KH-78165-52	
KH-78165-20	3.2 (90.6)	28.0" Hg	4.8 (136)				4 5/8" x 1" x 3 1/2"			
KH-78165-30	1.2 (34.0)	29.5" Hg	4.9 (139)	68 dB(A)	1/4" NPT(F)	1/8" NPT(F)	5 1/4" x 3/4" x 2 1/8"		KH-78165-54	
Air Saver Venturi vacuum pumps										
KH-78165-60	1.2 (34.0)	28.0" Hg	1.8 (51.0)	72 dB(A)	1/4" NPT(F)	1/8" NPT(F)	4 5/8" x 3/4" x 3/4"		KH-78165-52	
KH-78165-70	3.2 (90.6)	28.0" Hg	4.8 (136)				4 5/8" x 1" x 3 1/2"			

*When air is flowing. ¹Does not include silencer.

Cole-Parmer® Air Admiral® Vacuum/Pressure Pumps and Stations

Compact size and integral handle make pump easily transportable

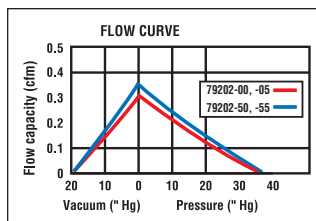
- Economical pump serves as pressure or vacuum source with an excellent price-to-performance ratio
- Low-friction piston runs cool and quiet for a long service life with consistent performance

This pump is designed for portability and versatility with a tough, lightweight plastic housing and integral carrying handle. The long-wearing motor delivers performance characteristics suitable for a wide range of applications. Pump features a convenient cord storage compartment in its base.

Air Admiral Vacuum Station provides you with the portability of the standard Air Admiral but with enhanced features of a vacuum gauge to measure the level of the system, regulator valve to adjust the vacuum level, and a catchpot to prevent ingestion of fluids in the pump.

What's included: 6-ft cord with plug (U.S. standard on 115 VAC models; European plug on 230 VAC models).

Note: Do not pump liquids or immerse pump. Avoid organic, basic, and acidic vapors.



79202-00



79202-50



Specifications & Ordering Information

Wetted parts: glass-filled polyester piston cup retainer and head, Ryton® cylinder sleeve, valves of Viton® fluoroelastomer, PTFE piston cup, silicone tubing, Delrin® fittings

Dimensions: 7⁵/₈" L x 4¹/₂" W x 7¹/₂" H

Duty cycle: continuous

Catalog number	Free-air capacity cfm (L/min)	Max vacuum	Max pressure	Max temp	Port sizes (vacuum/pressure)	Motor		Noise rating	Power (VAC, Hz)	Amps	Price
						Type	hp				
Standard Air Admiral Vacuum Station											
KH-79202-00	0.37 (10.5)	20" Hg	33 psi	104°F (40°C)	1/4" hose barb	Shaded pole	1/25	57 dB(A) at 3 ft (1 m)	115, 60 230, 50	1.6 0.8	
KH-79202-05	0.31 (8.8)	20" Hg	33 psi	104°F (40°C)	1/4" hose barb	Shaded pole	1/25	57 dB(A) at 3 ft (1 m)	115, 60 230, 50	1.6 0.8	
Air Admiral Vacuum Station											
KH-79202-50	0.37 (10.5)	20" Hg	—	104°F (40°C)	1/4" hose barb	Shaded pole	1/25	57 dB(A) at 3 ft (1 m)	115, 60 230, 50	1.6 0.8	
KH-79202-55	0.31 (8.8)	20" Hg	—	104°F (40°C)	1/4" hose barb	Shaded pole	1/25	57 dB(A) at 3 ft (1 m)	115, 60 230, 50	1.6 0.8	

KH-06413-20 Tygon® vacuum tubing, 1/4" ID x 5/8" OD. Pack of 10 feet

Cole-Parmer® Air Admiral® Aspiration Systems

Compact, lightweight, and portable aspiration system

- Dial vacuum gauge and regulator let you monitor and adjust vacuum level
- Liquid trap avoids ingestion of fluids into the pump
- Automatic flow shutoff when full

System features an autoclavable collection receiver made of polypropylene, a hydrophobic in-line filter to prevent introduction of the aspirate into the pump, and automatic shutoff to prevent overflow of the aspirate to protect you and the pump from exposure to the media. The pump also features a vacuum regulator to control the flow of liquids. This system is recommended for aspirating aqueous solutions including buffers, but not for use with acidic, basic, or organic vapors and gases.

What's included: 1.2-L collection vessel, two hydrophobic filters, 6-ft PVC tubing, cord and plug.

New



79202-20



Specifications & Ordering Information

Wetted parts

Models 79202-20 and -25: glass-filled polyester piston cup retainer and head, Viton® cylinder sleeve, Viton valves, PTFE piston cup, silicone tubing, Delrin® fittings

Duty cycle: continuous

Catalog number	Free-air capacity cfm (L/min)	Max vacuum " of Hg	Max pressure	Max temperature	Motor		Noise rating	Port size	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Price
					Type	hp						
KH-79202-20	0.39 (11)	21.3"	33 psi	104°F (40°C)	Shaded pole	1/4	57 dB(A)	3/16" hose barb	115, 60 230, 50	1.6 0.8	11" x 8 1/4" x 10"	
KH-79202-25	0.39 (11)	21.3"	33 psi	104°F (40°C)	Shaded pole	1/4	57 dB(A)	3/16" hose barb	115, 60 230, 50	1.6 0.8	11" x 8 1/4" x 10"	

VA Vacuum Pumps

Laboratory, Dry

AIR CADET® Vacuum/Pressure Pumps

Unique cavity configuration minimizes dead space and air entrapment

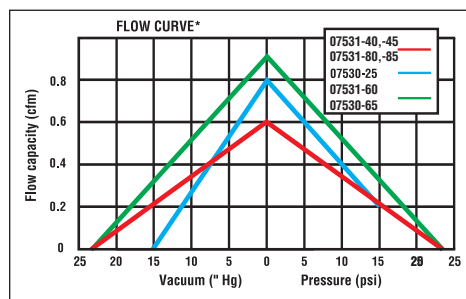
- All-plastic, convoluted diaphragm design handles many vacuum/pressure applications and reduces stress, wear, and heat build-up
- Pumps are available with standard 115 or 230 VAC motor; portable 12 VDC motor; or a hazardous-duty, 115 VAC motor. Standard AC motors are service-free, brushless type with sealed ball bearings and thermal overload protection
- Increased chemical resistance w/new Dacron diaphragm



07531-40



07531-60



*The 230 VAC, 50 Hz models have 2/3 the flow of the 115 VAC, 60 Hz models.

New
models



Now includes on/off power switch

New Features

- Stronger more chemically resistant diaphragms
- On/off toggle switch
- Higher pressure and deeper vacuum
- New design for easier pump maintenance

A Single-Head Pumps

Single-head pumps are economically priced and can handle many tough vacuum/pressure applications. Choose from three models to accommodate your electrical requirements.

What's included: thread tape made of PTFE resin, two polyethylene 3/8" NPT(M) x 3/8" hose barb adapters, and a 6-ft, three-wire cord; 115 VAC model includes a plug. Power switch included on pump motor (except for 07530-65). Pump with DC motor includes 12" leads with no ground. **Note:** Do not use metal fittings with any Air Cadet pump.

B Dual-Head Pump

Dual-head pump gives you increased capacity over the single-head Air Cadet pumps. Use the two pump heads independently or connect them in series with 3/8" ID Tygon® vacuum tubing for up to 23" Hg vacuum.

What's included: thread tape made of PTFE resin, four polyethylene 3/8" NPT(M) x 3/8" hose barb adapters, and a 6-ft, three-wire cord; 115 VAC models include a plug. **Note:** Do not use metal fittings with any Air Cadet pump.

Specifications & Ordering Information

Wetted parts

Models 07531-40, -45, -60 and 07530-65: Noryl® pump head, DACRON reinforced viton diaphragm, valves of PTFE resin, and polyethylene (PE) adapters

Models 07531-80 and -85: DACRON reinforced viton diaphragm, SS regulator, bronze/brass gauge, and PE adapters

Model 07530-25: Noryl pump head, nitrile diaphragm, valves of PTFE resin, and PE adapters

Duty cycle: 6-hr cycle for diaphragms; motors are continuous duty (except 07530-25)

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Catalog number	Free-air capacity cfm (L/min)	Max vacuum	Max pressure	Max temp	Motor type		Noise rating	Port size	Power	Amps	Dimensions (L x W x H)	Price
					Type	hp						
A Single-head pumps												
KH-07531-40	0.54 (15.5)	23" Hg	23 psi	95°F (35°C)	TEFC	1/45	72 dB(A)	3/8" hose barb	115 VAC, 60 Hz	1.2	8" x 4" x 5 1/2"	
KH-07531-45	0.45 (13)								230 VAC, 50 Hz	0.8		
KH-07530-25	0.60 (17)	18" Hg	15 psi					12 VDC	4.0			
B Dual-head pump												
KH-07531-60	1.1 (31) [†]	23" Hg	23 psi	95°F (35°C)	TEFC	1/25	76 dB(A)	3/8" hose barb	115 VAC, 60 Hz	1.7	11 3/4" x 4" x 5 1/2"	
KH-07530-65*	0.91 (26) [†]								230 VAC, 50 Hz	0.6	7 1/2" x 8" x 8 3/4"	
C Vacuum/pressure station												
KH-07531-80	0.5 (14.1)	23" Hg	23 psi	95°F (35°C)	TEFC	1/45	73 dB(A)	3/8" hose barb	115 VAC, 60 Hz	1.5	7 1/2" x 8" x 8 3/4"	
KH-07531-85	0.4 (11.3)								230 VAC, 50 Hz	0.75		

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

*Power switch not available on 230 VAC models.

Vacuum Pumps VA

Laboratory, Dry



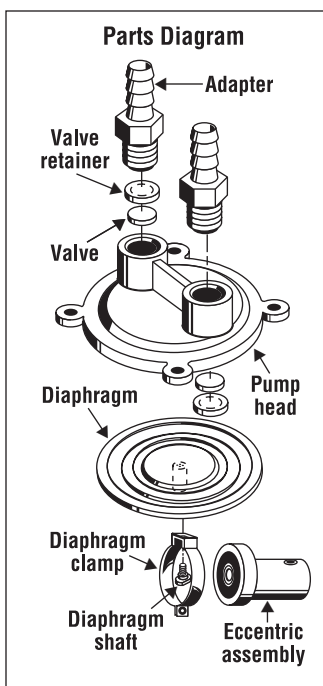
07531-80



C 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. Each station includes a 9" piece of vinyl tubing to connect pump to the regulator.

What's included: thread tape of PTFE resin, two polyethylene (PE) $\frac{3}{8}$ " NPT(M) x $\frac{3}{8}$ " hose barb adapters, one PE $\frac{1}{4}$ " NPT(M) x $\frac{3}{8}$ " hose barb adapter (for auxiliary port), and a 6-ft, three-wire cord. The 115 VAC model includes a plug. **Note:** Do not use metal fittings with any Air Cadet® pump.



Accessories for Air Cadet Pumps

KH-07395-20 Vacuum/pressure gauge connector kit, brass. Contains two PE adapters and one each of bushing, pipe tee, and adapter for pipe mount

Service Kits contain a Fluorel or nitrile diaphragm, Noryl pump head with two valves of PTFE resin, and two Noryl retainers. Use kit with Fluorel diaphragm for better chemical resistance; choose kit with nitrile diaphragm for long diaphragm life.

KH-07530-04 Service kit with Fluorel diaphragm

KH-07530-06 Service kit with nitrile diaphragm

Replacement Parts for Air Cadet Pumps

KH-07530-77 Pump head assembly, Valox®. Includes valves and retainers. For continuous pressures greater than 14 psi

KH-07530-74 Diaphragm clamp assembly; includes diaphragm, diaphragm clamp and shaft, and eccentric assembly

KH-07530-79 Diaphragm shaft

KH-07530-08 Diaphragm of Dacron®-reinforced Viton®. For continuous pressures greater than 12 psi and longer service life

KH-07530-75 Eccentric assembly

KH-08782-27 Thread sealer tape of PTFE resin. Each roll measures 260"L x $\frac{1}{2}$ "W. Pack of 10 rolls

Cole-Parmer Air Cadet PRO™ Vacuum Pumps

Exceptional performance for the price!

- General-purpose pumps are great for filtration or vacuum drying
- At 37 dB(A), it's quieter than a conversation!
- Long service intervals reduce maintenance costs

Designed for general laboratory applications, these pumps will give you thousands of hours of worry-free operation. Pumps have gas ballast for purging of any contaminants that may condense in the pump head. A standard Air Cadet PRO will work for all your basic vacuum needs including filtration and degassing. For demanding applications requiring solvents or corrosive chemicals, use the chemical-duty Air Cadet PRO.

Specifications & Ordering Information

Wetted parts

Standard models: Viton®, aluminum, polyamide, and PVC
Chemical-duty models: PTFE, Kalrez®, and ETFE



07530-00



Catalog number	Free-air capacity*	Max vacuum	Max temperature	Port size	Motor		Noise rating	Power (VAC, Hz)	Dimensions (W x H x D)	Price
					Stages	hp				
Standard Air Cadet PRO vacuum pumps										
KH-07530-00 KH-07530-51	0.5 cfm (13 LPM)	27.8" Hg (56 torr)	104°F (40°C)	$\frac{5}{16}$ " hose barb	1	$\frac{1}{20}$	37 dB(A)	115, 60 220, 50	$4\frac{7}{8}$ " x $8\frac{1}{16}$ " x $8\frac{1}{4}$ "	
KH-07530-01 KH-07530-52	0.6 cfm (17 LPM)	29.8" Hg (6 torr)	104°F (40°C)	$\frac{5}{16}$ " hose barb	2	$\frac{1}{12}$	44 dB(A)	115, 60 220, 50	$7\frac{5}{8}$ " x $5\frac{1}{16}$ " x $9\frac{1}{4}$ "	
KH-07530-02 KH-07530-53	1.4 cfm (38 LPM)	29.8" Hg (6 torr)	104°F (40°C)	$\frac{5}{16}$ " hose barb	2	$\frac{1}{4}$	44 dB(A)	115, 60 220, 50	9" x $6\frac{5}{8}$ " x $10\frac{3}{8}$ "	
Chemical-duty Air Cadet PRO vacuum pumps										
KH-07530-15 KH-07530-61	0.5 cfm (13 LPM)	27.8" Hg (56 torr)	104°F (40°C)	$\frac{5}{16}$ " hose barb	1	$\frac{1}{20}$	37 dB(A)	115, 60 220, 50	$4\frac{7}{8}$ " x $8\frac{1}{16}$ " x $8\frac{1}{4}$ "	
KH-07530-16 KH-07530-62	0.6 cfm (17 LPM)	29.8" Hg (6 torr)	104°F (40°C)	$\frac{5}{16}$ " hose barb	2	$\frac{1}{12}$	44 dB(A)	115, 60 220, 50	$7\frac{5}{8}$ " x $5\frac{1}{16}$ " x $9\frac{1}{4}$ "	
KH-07530-17 KH-07530-63	1.4 cfm (38 LPM)	29.8" Hg (6 torr)	104°F (40°C)	$\frac{5}{16}$ " hose barb	2	$\frac{1}{4}$	44 dB(A)	115, 60 220, 50	9" x $6\frac{5}{8}$ " x $10\frac{3}{8}$ "	

*Free-air capacity will be reduced by $\frac{5}{6}$ at 50 Hz.

VA Vacuum Pumps

Compact OEM

Compact OEM Vacuum Pumps

For your laboratory or OEM applications!

A-B Miniature OEM Vacuum/Pressure Pumps

These pumps will achieve a vacuum level of 5.9" Hg or pressure up to 6.8 psi. Use for lab applications where only a small amount of pressure or vacuum is needed—ideal for low-pressure aeration.

C Air Cadet® OEM Vacuum/Pressure Pumps

These pumps have excellent vacuum/pressure capabilities with continuous operation up to 20" Hg or 18 psi. Long-life convoluted diaphragm minimizes stress and heat build-up. The head is made of non-contaminating plastics, Noryl® body, nitrile diaphragm, and PTFE valves.

D Micro-Boxer Pumps

This latest advance in technology reaches a previously unexplored size-to-performance ratio. The miniature pump comes with either an economical permanent magnet motor or a coreless DC motor for extra long life. Diaphragm and valves are made of silicone.

E Oil-Free Rotary Vane Pumps

These pumps require little maintenance and reduce risk of contamination. Ideal for use in low-pressure or high-capacity applications. Pumps include vacuum gauge, filter, carrying handle, and a 6-ft cord (115 VAC models have a U.S. standard plug).

F Economical Oiled Pump

Centrifugal force holds woven linen vanes against finely polished cast-iron body interior for a vacuum-tight seal—the self-adjusting vanes automatically compensate for wear. Pumps include separate vacuum and pressure gauges, vacuum and pressure regulators, oil trap, air filter, carrying handle, and a 6-ft, three-wire cord (115 VAC models have a three-prong plug and a two-prong adapter with ground wire).



A
79600-02



B
79600-06



ISO9001:2000
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C
07530-85



D
79600-12



E
07055-60



F
07055-04

Technical info

For every 1000 feet above sea level, the listed maximum vacuum for your pump will be reduced by 1" Hg.

Specifications & Ordering Information

Catalog number	Free air capacity (L/min)	Max vacuum " of Hg	Max pressure (psi)	Temp range	Service life (hrs)	Power connection	Noise rating	Port size	Power	Amps	Dimensions (L x W x H)	Price
A Vacuum/pressure pumps												
KH-79600-02	0.4	5.9	6.8	41 to 113°F (5 to 45°C)	150	Solder tabs	65 dB(A)	3-mm barb	3 or 6 VDC	0.45	1 ⁵ / ₁₆ " x 1 ¹ / ₁₆ " x 1 ¹ / ₂ "	
KH-79600-04	1							4.5-mm barb				
B Pressure pumps												
KH-79600-06	0.5	—	5.8	41 to 113°F (5 to 45°C)	150	Solder tabs	65 dB(A)	3-mm barb	3 VDC	0.3	1 ¹ / ₄ " x 3 ³ / ₄ " x 5 ⁵ / ₁₆ "	
KH-79600-08	1											
C Air Cadet OEM vacuum/pressure pumps												
KH-07530-85	17.0	20	18	41 to 95°F (5 to 35°C)	4000	Pig tail	72 dB(A)	3/8" NPT(F)	115 VAC 12 VDC	1.2 4	7 ¹ / ₄ " x 4" x 5 ¹ / ₂ "	
KH-07530-25	22.6	18	15									
D Micro-boxer pumps												
KH-79600-14	1.4	14.2	8.1	-4 to 113°F (-20 to 45°C)	12,000 12,000	Solder tabs	65 dB(A)	2.8-mm tubing ID	6 VDC 12 VDC	43 mA 22 mA	1 ¹ / ₂ " x 5 ⁵ / ₈ " x 1 ¹ / ₂ "	
KH-79600-16												
E Economical oil-free rotary vane pumps												
KH-07055-60	133	26	10 continuous, 15 intermittent	40 to 100°F (4 to 38°C)	10,000	Standard plug	72 dB(A)	1/4" NPT(F)	115 VAC, 50/60 Hz 220 VAC, 50/60 Hz	7 2.8	11 ⁵ / ₈ " x 5 ⁵ / ₈ " x 6 ⁵ / ₁₆ "	
KH-07055-65	113											
F Economical oiled rotary vane pumps												
KH-07055-04	127	26.5	10 continuous, 15 intermittent	40 to 100°F (4 to 38°C)	14,000	Standard plug	72 dB(A)	1/4" NPT(F)	115 VAC, 50/60 Hz 220 VAC, 50/60 Hz	2.2 0.9	18" x 9" x 11"	
KH-07055-35	106	25										

Vacuum Pumps VA

Laboratory, Dry

Filtration Pumps

New

Great for vacuum filtration, blotting, and solid phase extraction

- Lightweight but rugged design minimizes downtime for repairs
- No wetted metal parts in the pump head for corrosion protection
- Corrosion-resistant materials meet your demanding applications

A patented multi port valve design tolerates occasional liquids drawn into the vacuum system. All wetted materials are made of chemical resistant resins including Ryton®, PTFE, and Kalrez®. Order a pump with a high-quality, smoothly dampened brass vacuum/pressure gauge and a bleeder valve to have precise control of the vacuum system. Typical applications include bottle-top filtration, manifold filtration, solvent degassing, and desiccation.

What's included: power cord and plug.

Specifications & Ordering Information

Max temperature: 105°F (40°C) **Duty cycle:** continuous

Catalog number	Head configuration	Free air capacity cfm (L/min)	Max vacuum " Hg (torr)	Max pressure	Wetted materials	hp	Port size	Power (VAC)	Amps	Dimensions (L x W x H)	Price
KH-78161-10 KH-78161-15	Dual head/series	0.71 (20) 0.71 (20)	29.68 (7.5) 29.68 (7.5)	15 psi 15 psi	Aluminum, neoprene Aluminum, neoprene	1/6 1/6	1/8" NPT(F)* 1/4" NPT(F)	115 230	1.2 0.7	12 1/4" x 6 1/4" x 8" 12 1/4" x 6 1/4" x 8"	
KH-78164-00 KH-78164-05 KH-78164-40 KH-78164-42 KH-78164-44	Single head	0.21 (6) 0.21 (6) 0.4 (11.5) 0.4 (11.5) 0.45 (13)	27.0 (75) 27.0 (75) 24.4 (218) 22.9 (180) 27.0 (75)	35 psi 35 psi 30 psig 30 psig 30 psig	Ryton®, Viton®, neoprene Ryton, Viton, neoprene Ryton, Kalrez®, PTFE Ryton, EPDM Ryton, Kalrez, PTFE	1/12 1/12 1/10 1/10 1/10	1/8" NPT(F)* 1/8" NPT(F)* 3/8" hose barb 3/8" hose barb 3/8" hose barb	115 230 115 115 115	1.2 0.8 1.3 1.3 1.3	6 1/2" x 3 3/4" x 5 3/4" 6 1/2" x 3 3/4" x 5 3/4" 7 7/8" x 3 1/2" x 2 3/4" 7 7/8" x 3 1/2" x 2 3/4" 7 7/8" x 3 1/2" x 2 3/4"	
KH-78164-46 KH-78164-48	Dual head/Series Dual head/Parallel	0.6 (16) 1.1 (30)	29.4 (15) 25.3 (120)	7.4 psig 7.4 psig	Ryton, Kalrez, PTFE Ryton, Kalrez, PTFE	1/8 1/8	3/8" hose barb 3/8" hose barb	115 115	0.9 0.9	14 1/8" x 5 1/2" x 3 1/2" 14 1/8" x 5 1/2" x 3 1/2"	
KH-78164-60 KH-78164-62	Single head	0.19 (5.5) 0.45 (13)	25.3 (120) 27.0 (75)	35 psi 30 psig	PTFE, Ryton Ryton, Kalrez, PTFE	1/12 1/10	1/8" NPT(F)* 3/8" hose barb	115 115	1.2 1.3	6 1/2" x 3 3/4" x 5 3/4" 7 7/8" x 3 1/2" x 2 3/4"	
KH-78164-64 KH-78164-66 KH-78164-68	Dual head/series Single head Single head	0.6 (16) 0.19 (5.5) 0.4 (11.5)	29.4 (15) 25.3 (120) 24.4 (218)	7.4 psig 35 psi 30 psig	Ryton, Kalrez, PTFE PTFE, Ryton Ryton, Kalrez, PTFE	1/12 1/12 1/10	3/8" hose barb 1/8" NPT(F)* 3/8" hose barb	115 115 115	0.9 1.2 1.3	14 1/8" x 5 1/2" x 3 1/2" 6 1/2" x 3 3/4" x 5 3/4" 7 7/8" x 3 1/2" x 2 3/4"	

CE
230 VAC
models only

78164-64

78164-40

Standard-Duty Dry Vacuum Piston Pumps

Great for filtering, aspirating, degassing, and desiccating

- Pumps do not require water or oil to operate
- Water trap prevents liquid from being drawn into the pump
- Muffler provides quiet operation

Note: Avoid using pump with organic, acidic, or basic vapors

What's included: muffler, water trap, carrying handle, suction cup feet, on/off switch, two 1/4" barbed fittings, and a 6-ft cord (the 115 VAC models come with a standard U.S. plug; 230 VAC models come with a European plug).

Service kits include: connecting rod assembly, two handle screws, four head screws, O-ring head and cylinder, valve plate assembly, plastic jar, filter element, ball, and gasket.



79204-00

79204-30

Specifications & Ordering Information

Wetted parts: aluminum (treated for corrosion resistance), stainless steel, and PTFE

Maximum operating temperature: 104°F (40°C)

Duty cycle: continuous

Port size: 1/4" ID hose barb

Dimensions: 8"L x 8 13/16"W x 10"H

CE
230 VAC
models only

RUNS DRY

Catalog number	Free-air capacity cfm (L/min)	Ultimate* vacuum	Maximum pressure	Motor		Noise rating	Port size (tube ID)	Power (VAC, Hz)	Amps	Price	Service kits	
				Type	hp						Catalog number	Price
Single-head pumps												
KH-79204-00 KH-79204-05	0.76 (22) 0.67 (19)	26.0" Hg (100 torr)	100 psig	SP	1/8	62 dB(A)	1/4"	115, 60 230, 50	31 1.3		KH-79204-01	
KH-79204-10 KH-79204-15	1.20 (34) 0.99 (28)	27.2" Hg (70 torr)	50 psig	SP	1/8		1/4"	115, 60 230, 50	4.6 1.5		KH-79204-11	
KH-79204-20 KH-79204-25	1.60 (45) 1.34 (38)	27.6" Hg (60 torr)	100 psig	PSC	1/4		1/4"	115, 60 230, 50	3.6 1.5		KH-79204-21	
Dual-head pumps												
KH-79204-30 KH-79204-35	2.1 (60) 1.8 (50)	29.8" Hg (5 torr)	—	PSC	1/3	58 dB(A)	3/8"	115, 60 230, 50	1.3 3.3		KH-79204-31	
KH-79204-50 KH-79204-55	3.1 (88) 2.6 (76)	27.6" Hg (60 torr)	—	PSC	1/3		3/8"	115, 60 230, 50	1.1 3.5		KH-79204-51	

*Ultimate total vacuum

†Motor type: SP = split phase, PSC = permanent split capacitor

KH-06413-20 Tygon® vacuum tubing, 1/4" ID x 5/8" OD. Pack of 10 feet

VA Vacuum Pumps

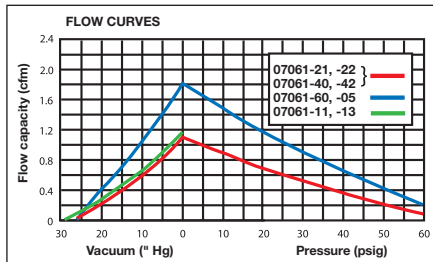
Laboratory, Dry

High-Capacity Vacuum/Pressure Pumps

Free-air capacities up to 2.2 cfm (62.3 L/min)

- Shaded-pole fan-cooled motor has thermal overload switch to protect your pump system
- Heads on pumps 07061-60 and -05 are connected in parallel for higher capacity; heads on 07061-11 and -13 are connected in series for greater vacuum
- Select pumps with or without gauges, regulators, and valves.

What's included: 6-ft, three-wire cord (U.S. standard plug on 115 VAC models). Models 07061-11 and -13 includes a filter/muffler.



07061-40

ISO9001:2000
CERTIFIED SUPPLIER

Specifications & Ordering Information

Wetted parts: aluminum, stainless steel, Nordel®, and Nomex®

Port size: 1/4" NPT(F), 3/8" hose barb on gauges

Duty cycle: continuous

Noise rating: 68 dB(A)



Motor: permanent split capacitor

Catalog number	Pump head configuration	Free-air capacity cfm (L/min)	Max vacuum	Max pressure	Max temperature	hp	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Price
Pump without gauges or regulators (order regulators separately below; order gauges with 1/4" NPT(M) connections from "Pressure" section on pages 1306-1349)										
KH-07061-21 KH-07061-22	Single	1.1 (31.2) 1.0 (28.3)	25.5" Hg 24.0" Hg	60 psi	100°F (38°C)	1/8	115, 60 220/240, 50	4.2 2.2/1.9	7 ⁵ / ₈ " x 5 ¹ / ₈ " x 10 ¹ / ₄ "	
Pumps with gauges, regulators, and adjustable relief valve										
KH-07061-40 KH-07061-42	Single	1.1 (31.2) 1.0 (28.3)	25.5" Hg 24.0" Hg	60 psi	100°F (38°C)	1/8	115, 60 220/240, 50	4.2 2.2/1.9	7 ⁵ / ₈ " x 5 ¹ / ₈ " x 10 ¹ / ₄ "	
KH-07061-60 KH-07061-05	Dual/parallel	2.2 (62.3) 1.8 (51.0)	25.5" Hg 24.0" Hg	60 psi	100°F (38°C)	1/4	115, 60 220, 50	3.6 2.0	11 ¹³ / ₁₆ " x 5 ¹ / ₂ " x 10 ¹ / ₄ "	
Pump with vacuum gauge only										
KH-07061-11 KH-07061-13	Dual/series	1.15 (32.5) 0.85 (24.0)	29.0" Hg 28.0" Hg	—	100°F (38°C)	1/4	115, 60 220, 50	3.6 2.0	11 ¹³ / ₁₆ " x 5 ¹ / ₂ " x 10 ¹ / ₄ "	

KH-07061-32 Pressure regulator assembly for pumps 07061-21 and -22

KH-07061-30 Vacuum regulator assembly for pumps 07061-21 and -22

KH-07061-01 Service kit for all pumps

KH-07061-03 Service kit for dual-head pumps. Pumps 07061-60, -05, -11 and -13 also require kit 07061-01 above

KH-07061-06 Diaphragm for all models, neoprene/nylon

KH-07061-04 Replacement diaphragm for all models, Nordel/Nomex

Quiet Vacuum/Pressure Pumps

Few moving parts means less friction and longer life

- Low power consumption—high efficiency
- Low noise and vibration
- No bearings, oil-less design

What's included: 6-ft cord (U.S. standard plug on 115 VAC models).



Pressure pump
79610-41



Pressure pump
79610-51



ISO9001:2000
CERTIFIED SUPPLIER



Specifications & Ordering Information

Wetted parts: ABS plastic, EPDM **Duty cycle:** continuous

Free-air capacity	Maximum vacuum	Maximum pressure	Noise rating	Port size	Dimensions (L x W x H)	115 VAC models			220 VAC models		
						Catalog number	Amps	Price	Catalog number	Amps	Price
Pressure pumps											
1.2 cfm	—	3.0 psi	31 dB	1/8" NPT(F)	5 ³ / ₄ " x 5" x 4 ¹ / ₄ "	KH-79610-41	0.3		KH-79610-46	0.15	
2 cfm	—	3.0 psi	30 dB	3/8" NPT(F)	4 ³ / ₄ " x 6 ³ / ₄ " x 7 ³ / ₄ "	KH-79610-51	0.7		KH-79610-56	0.35	
2.3 cfm	—	3.5 psi	33 dB	3/8" NPT(F)	4 ³ / ₄ " x 6 ³ / ₄ " x 7 ³ / ₄ "	KH-79610-61	1.0		KH-79610-67	0.5	
3.2 cfm	—	4.0 psi	37 dB	3/8" NPT(F)	4 ³ / ₄ " x 6 ³ / ₄ " x 7 ³ / ₄ "	KH-79610-71	1.6		KH-79610-76	0.8	
3.6 cfm	—	3.5 psi	38 dB	1 ¹ / ₈ " straight pipe	10" x 9" x 8 ¹ / ₂ "	KH-79610-81	2.3		KH-79610-87	1.15	
Vacuum/pressure pumps											
1.1 cfm	4.0" Hg	2.0 psi	32 dB	Outlet 1/8" NPT(F), Inlet 3/8" barb	4 ¹ / ₂ " x 5" x 3 ¹ / ₄ "	KH-79610-02	0.23		KH-79610-07	0.12	
2 cfm	8.0" hg	4.0 psi	39 dB	Outlet 1/8" NPT(F), Inlet 3/8" barb	4 ¹ / ₂ " x 5" x 3 ¹ / ₄ "	KH-79610-22	0.46		KH-79610-27	0.23	

KH-06413-30 Tygon® vacuum tubing, 3/8" ID x 7/8" OD. Pack of 10 feet

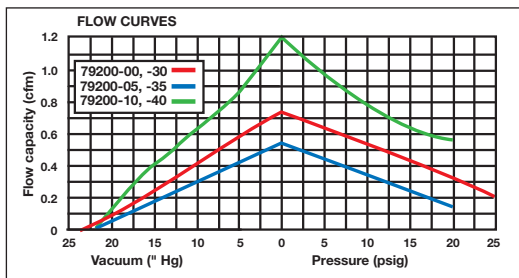
KH-06413-50 Tygon vacuum tubing, 5/8" ID x 13/8" OD. Pack of 10 feet

Vacuum/Pressure Pumps Coated with PTFE

Wetted parts are coated with PTFE to handle your toughest applications

- Lightweight aluminum construction and compact size make pumps ideal for benchtop applications such as vacuum filtration
- Low vibration operation is smooth with balanced eccentrics
- Pumps with gauges and regulators give more control of your vacuum/pressure applications

What's included: 6-ft power cord with built-in switch (the 115 VAC models have grounded plug, 220 VAC and 12 VDC models have stripped ends).



79200-00

Specifications & Ordering Information

Wetted parts

- Pumps 79200-00, -05, -10: PTFE and die-cast zinc
- Pumps 79200-30, -35, -40: PTFE

Port size: 1/8" NPT(F)

Duty cycle: continuous

Noise rating: 65 dB(A)



Catalog number	Free-air capacity cfm (L/min)	Maximum vacuum	Maximum pressure	Maximum temperature	Motor		Power	Amps	Dimensions (L x W x H)	Price
					Type	hp				
Pumps with gauges and regulators										
KH-79200-00	0.75 (21.2)	23.2" Hg	25 psi	104°F (40°C)	Shaded pole	1/20	115 VAC, 60 Hz	1.7	6 7/8" x 4 1/4" x 4 3/4"	
KH-79200-05	0.55 (15.6)	22.0" Hg	20 psi	104°F (40°C)	Shaded pole	1/20	220 VAC, 50 Hz	1	6 7/8" x 4 1/4" x 4 3/4"	
KH-79200-10	1.20 (33.6)	22.9" Hg	20 psi	104°F (40°C)	Permanent magnet	1/10	12 VDC	5	7 3/8" x 4 1/4" x 4 3/4"	
Pumps without gauges and regulators										
KH-79200-30	0.75 (21.2)	23.2" Hg	25 psi	104°F (40°C)	Shaded pole	1/20	115 VAC, 60 Hz	1.7	6 7/8" x 4 1/4" x 4 3/4"	
KH-79200-35	0.55 (15.6)	22.0" Hg	20 psi	104°F (40°C)	Shaded pole	1/20	220 VAC, 50 Hz	1	6 7/8" x 4 1/4" x 4 3/4"	
KH-79200-40	1.20 (33.6)	22.9" Hg	20 psi	104°F (40°C)	Permanent magnet	1/10	12 VDC	5	7 3/8" x 4 1/4" x 4 3/4"	

Technical info

For every 1000 feet above sea level, the listed maximum vacuum for your pump will be reduced by 1" Hg.

Dryfast® Vacuum Pumps

Advanced Vapor Management System increases pump life

- All PTFE wetted materials
- Perfect for high boiling point applications

Laboratory work just became easier with this new advancement in laboratory vacuum pump technology! The Dryfast® is not just a vacuum pump, but a piece of precision laboratory equipment. These pumps work with all your equipment from evaporators to vacuum ovens—and with models available from 2.5 cfm @ 30 torr to 1.2 cfm @ 2 torr, there is certain to be a pump that will fit your needs.

Dryfast's key feature is the Advanced Vapor Management (AVM) system. The AVM system allows ambient air to constantly flow through the pump head while in operation, eliminating liquid buildup in the pump head and extending the life of the diaphragm. Regulator on the front of the pump housing enables you to manually adjust the vacuum level. The pump is constructed with a solid PTFE body, a PTFE diaphragm, and Kalrez® valves for assured performance even with applications using dimethylformamide (DMF).

What's included: pump, 6-ft power cord and plug (115 VAC models have US std plug, 230 VAC have European plug; other plug options are available, please contact our Application Specialists for more information).



79206-20

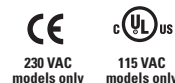
New

Specifications & Ordering Information

Wetted parts: PTFE, Kalrez®

Max temp: 105°F (40°C)

Duty cycle: continuous



230 VAC models only

115 VAC models only

Catalog number	Free-air capacity cfm (L/min)	Max vacuum " of Hg (Torr)	Max pressure (psi)	Motor		Noise rating	Port size	Power (VAC, Hz)	Dimensions (L x W x H)	Price
				Type	hp					
KH-79206-20	2.5 (70)	28.7 (30)	—	PSC*	1/2	61 dB(A)	1/4" barb	115, 60	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-25	2.5 (70)	28.7 (30)	—	PSC*	1/2	61 dB(A)	1/4" barb	230, 50	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-30	1.2 (35)	29.6 (9)	—	PSC*	1/2	61 dB(A)	1/4" barb	115, 60	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-35	1.2 (35)	29.6 (9)	—	PSC*	1/2	61 dB(A)	1/4" barb	230, 50	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-40	0.9 (25)	29.6 (9)	—	PSC*	1/2	61 dB(A)	1/4" barb	115, 60	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-45	0.9 (25)	29.6 (9)	—	PSC*	1/2	61 dB(A)	1/4" barb	230, 50	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-50	1.2 (35)	29.85 (2)	—	PSC*	1/2	61 dB(A)	1/4" barb	115, 60	20 1/2" x 13 7/8" x 14 1/2"	
KH-79206-55	1.2 (35)	29.85 (2)	—	PSC*	1/2	61 dB(A)	1/4" barb	230, 50	20 1/2" x 13 7/8" x 14 1/2"	

*Permanent split capacitor

VA Vacuum Pumps

Laboratory, Dry

Corrosion-Resistant and Solid PTFE Vacuum Pumps

Quiet, reliable pumps with excellent chemical compatibility

Compact pumps can be used in even the smallest locations and with aggressive solvents without the risk of damaging the pump. Pumps are ready to use within minutes of receiving and require little maintenance. Choose the pump that best suits your application. CE-marked 230 VAC models available upon request. Dual pump heads are available—either in parallel or in series. Two pump heads connected in parallel will double the pumping capacity while two heads connected in series will increase the vacuum level the pump can achieve. The dual head pumps require two service kits when maintenance is necessary.

A Corrosion-Resistant Vacuum/Pressure Pumps

These pumps feature PVDF-coated aluminum, stainless steel (SS), or Ryton® heads with PTFE, Kalrez®, or stainless steel valves.

B Solid-PTFE Head Vacuum/Pressure Pumps

Pumps feature solid-PTFE pump heads and Kalrez valves and seals to provide excellent protection against the most aggressive solvent vapors. Patented structured diaphragm and multiport umbrella valves increase pump life and reliability.

Specifications & Ordering Information

Max temp: 105°F (40°C) Motor type: TEFC Duty cycle: continuous

Head configurations	Free-air capacity cfm (L/min)	Max vacuum	Max psi	Wetted parts	Port size NPT(F)	Dimensions (L x W x H)	115 VAC, 60 Hz models		230 VAC, 50 Hz models		Service kits	
							Catalog number	Price	Catalog number	Price	Catalog number	Price
A Corrosion-resistant pumps												
Single	0.19 (5.5)	25.2" Hg	35	PTFE, Ryton, Kalrez	1/8"*	6 1/2" x 3 5/8" x 5 5/8"	KH-07056-61		KH-07056-66		KH-07056-67	
Single	1.2 (34)	27" Hg	60	PTFE, PVDF, SS	1/4"	11" x 7 3/4" x 10"	KH-07056-32		KH-07056-33		KH-07056-18	
Single				PTFE, SS			KH-07056-30		KH-07056-31		KH-07056-19	
Dual/series	1.2 (34)	29.5" Hg	—	PTFE, PVDF, SS	1/4"	12 3/4" x 9 3/4" x 7"	KH-07056-37		KH-07056-38		KH-07056-18	
B Solid PTFE head pumps												
Single	0.35 (10)	27" Hg	15	PTFE, Kalrez	1/8"†	11" x 5 1/2" x 7 1/4"	KH-78162-00		KH-78162-05		KH-78162-50	
Dual/series	0.35 (10)	29.68" Hg					KH-78160-00		KH-78160-05			
Single	0.71 (20)	27" Hg	15	PTFE, Kalrez	1/4"†	12 1/4" x 6 1/4" x 8"	KH-78162-10		KH-78162-15		KH-78162-52	
Dual/series	0.71 (20)	29.68" Hg					KH-78160-10		KH-78160-15			
Dual/parallel	2.3 (65)	27.2" Hg	15	PTFE, Kalrez	1/4"†	13" x 6 3/4" x 8 3/4"	KH-78160-30		KH-78160-35		KH-78162-54	

*Pumps include 6-mm hose barbs. †Pumps include 10-mm hose barbs.

Chemical-Duty PTFE Vacuum Pumps

Corrosion-resistant PTFE construction handles aggressive vapors and gases

- For high boiling point applications
- Portable pumps are ideal for filtering, degassing, drying, and distilling organic solvents, acids, and bases

What's included: a muffler, two 1/4" barbed fittings, and cord with plug. (Models 79205-00 and -05 include a 6-ft cord; all other models have a 7 1/2-ft cord. The 115 VAC models include a standard U.S. plug; 230 VAC models include a European plug.)

Service kits: kit 79205-03 includes two valve flappers, two Viton® O-rings, one Teflon® lined diaphragm, and one tube of Loctite® sealant. Kit 79205-13 includes three O-rings, one diaphragm mold, one tube of Loctite sealant, and one screw.

Specifications & Ordering Information

Wetted parts: PTFE pump head and diaphragm, Kalrez® valves Duty cycle: continuous

Catalog number	Free-air capacity cfm (L/min)	Ultimate vacuum*	Motor		Noise rating	Port size (tube ID)	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Price	Service kits	
			Type ¹	hp							Cat. no.	Price
KH-79205-00	0.45 (12.7)	25.5" Hg (110 torr)	CS	1/12	61 dB(A)	3/8"	115, 60	0.9	6" x 5 1/2" x 7 1/2"		KH-79205-03	
KH-79205-05	0.38 (10.6)						230, 50	0.24				
KH-79205-10	0.78 (22.0)	26.0" Hg (100 torr)	PSC	1/3	60 dB(A)	3/8"	115, 60	2.65	10" x 7" x 6 7/8"		KH-79205-13	
KH-79205-15	0.64 (18.00)						230, 50	1.6				

*Ultimate total vacuum ¹Motor types: CS = capacitor start, PSC = permanent split capacitor

KH-79205-01 Vacuum regulator for models 79205-00 and -05

KH-79205-02 Inlet/exhaust separator for all models. Place on the inlet or the outlet to protect your pump from contaminants in the vapor

KH-06413-30 Tygon® vacuum tubing, 3/8" ID x 7/8" OD. Pack of 10 feet

More info

Flow charts available on ColeParmer.com



07056-32

Pull-up handle and compact size make these pumps easy to carry around your lab.

78162-00



78162-10

What's included: 6-ft power cord with U.S. grounded plug on 115 VAC models and European plug on 230 VAC models.



Self-Cleaning Dry Vacuum System™

Complete oil-free vacuum system for rotary evaporators

- Self-cleaning purge extends diaphragm life
- Complete system includes inlet and outlet separators and regulators
- Boiling point below 100°C—ideal for stripping volatile solvents

This two-stage flexible diaphragm pump resists aggressive vapors and the build-up of solid residue or liquids on the diaphragm. A glass inlet separator traps liquids and particulates present in the vapor before it enters the pump. Simply adjust the gas ballast or vent switch to inhibit vapor condensation inside the pump heads when pumping heavy vapor loads. When you turn off the pump, the self-cleaning purge runs for 2 minutes, expelling any condensed solvent vapors into the outlet separator. A conveniently located vacuum level regulator inhibits sample bumping or foaming.

What's included: glass inlet and outlet separators with 1/4" barbed fittings, an applications booklet, and 7 1/2-ft cord with plug (the 115 VAC models have a U.S. standard plug; 230 VAC models have a European standard plug.)

Specifications & Ordering Information

Wetted parts: PTFE pump head and diaphragm, Kalrez® valves

Motor: double shaft, PSC and TEFC
Duty cycle: continuous

Noise level: 61 dB(A) start up, 59 dB(A) after 1 minute



Port size: 1/4" OD hose barb

Catalog number	Free-air capacity cfm (L/min)	Max vacuum " of Hg (torr)	Ultimate pressure	Maximum temperature	hp	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Price
KH-79205-30	1.2 (34.0)	29.6 (9)	9 torr (12 mbar)	104°F (40°C)	1/5	115, 60	1.4	13 3/4" x 12" x 11 3/4"	
KH-79205-35	1.0 (28.0)		9 torr (12 mbar)	104°F (40°C)		230, 50	1.5		
KH-79205-80	1.1 (32)	29.85 (2)	9 torr (12 mbar)	104°F (40°C)	1/5	115, 60	1.4	13 3/4" x 12" x 11 3/4"	
KH-79205-85	0.9 (27)		9 torr (12 mbar)	104°F (40°C)		230, 50	1.5		

Accessories

[KH-06413-20](#) Tygon® vacuum tubing, 1/4" ID x 5/8" OD. Pack of 10 feet

Automated Self-Cleaning Vacuum System™

Automatic vacuum control and vapor management!

This new pump is the ultimate "set-and-forget" vacuum pump for applications requiring a precise vacuum level utilizing all the features of a standard self-cleaning vacuum system plus many more. Programmable features include selectable vacuum levels, memory for stored programs, electronic vacuum regulator, and a digital absolute pressure gauge.

Multipurposing with this pump is a breeze when you can store settings for one application, and then when finished, easily set up a stored program for another. The control system utilizes an absolute pressure gauge that displays the vacuum level on a 2"H, six-digit display and controls the regulator to maintain vacuum to within 1% of the reading. Being a self-cleaning pump there is a programmed cleaning cycle when the pump turns off to remove any vapor buildup inside the pump head which protects the diaphragm and extends the time between required maintenance. The easiest way to be certain the pump will be ready when you are is to order a service kit so that you are prepared for preventive maintenance.

What's included: glass inlet and outlet separators with 1/4" barbed fittings, applications booklet, and 7 1/2-ft cord with plug (115 VAC models have a U.S. std plug; 230 VAC models have a European plug.)



Specifications & Ordering Information

Wetted parts: PTFE pump head body and diaphragm, Kalrez® valves

Duty cycle: continuous

Noise rating: 61dB(A) at start-up, 58 dB(A) after 1 minute

Catalog number	Free-air capacity cfm (L/min)	Max vacuum " of Hg (torr)	Max pressure (psi)	Max temp	Motor		Port size	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Price
					Type*	hp					
KH-79205-50	1.2 (34)	29.8 (2)	—	104°F (40°C)	PSC and TEFC	1/5	1/4" barb	115, 60	1.4	11 1/4" x 8" x 11 1/2"	
KH-79205-55								230, 50	1.5		

VA Vacuum Pumps

Laboratory, Dry

PowerDry™ Vacuum Systems

Automatically remove accumulated liquids inside the pump

- Perfect pump for rotary evaporators or vacuum ovens
- PowerDry® technology increases pump efficiency and service life

PowerDry is an innovative solution to the problem of accumulated liquids inside a vacuum pump head. Since liquids are incompressible, they increase the wear and tear on the diaphragm and valves which over time reduces the performance, efficiency, and life of the pump. The PowerDry® system features an adjustable 3-cycle electronic timer that cycles while the pump is in use to purge any condensing liquids. The three individual timing cycles used are initial pump down time, drying cycle duration, and the interval between drying cycles (repeat cycle)—each can be set to an optimal setting for your application.

What's included: solid-PTFE pump head and motor, high-speed purge valve, PowerDry® controller, and power cord.

Specifications & Ordering Information

Wetted materials: PTFE head, Kalrez® valves, PTFE diaphragm

Pumpdown cycle: 13 to 360 seconds

Drying cycle: 1 to 10 seconds

Repeat cycle: 10 to 900 seconds

Duty cycle: continuous

78162-60



Catalog number	Free-air capacity cfm (L/min)	Max vacuum " of Hg (Torr)	Max pressure (psi)	Max temperature	hp	Port size	Power (VAC)	Amps	Dimensions (L x W x H)	Price	Service kits	
											Cat. no.	Price
KH-78162-60	0.7 (20)	29.6 (7.5)	15	105°F (40°C)	1/8	3/8" hose barb	115	1.2	12 5/8" x 6 1/4" x 7 7/8"		KH-78162-91	—
KH-78162-62	1.2 (34)										KH-78162-92	
KH-78162-64	1.2 (34)	29.8 (3)	15	105°F (40°C)	1/8	3/8" hose barb	115	3.2	12 5/8" x 6 1/4" x 7 7/8"		KH-78162-94	—
KH-78162-66	2.1 (60)											

Vacuum Pump System

Controls vacuum and removes harmful volatile vapors

- Produces oil-free vacuum
- Pump features a gas ballast valve for working with condensable gases

Pump system recovers close to 100% of solvent vapors at the outlet for disposal or regeneration. This pump system is equipped with a catchpot on the inlet and condenser/catchpot on the outlet to protect the pump and the air in the pump environment. Digital controller automatically adjusts the regulator to maintain vacuum levels from 0 to 29.5" Hg.

What's included: a chemical resistant pump; a digital controller; a 500-mL capacity condenser; a dust inlet trap; two 10mm hose barbs for cooling water connections; a stand; two catchpots; and two 6-ft cords with plug (for both controller and pump); U.S. plug on 115 VAC model, European plug on 230 VAC model.

Specifications & Ordering Information



Pump

Wetted materials: PTFE Kalrez® and ETFE resins

Free-air: 1.2 cfm (34.0 L/min)

Maximum vacuum: 29.5" Hg

Max temperature: 176°F (80°C)

Port size: 10-mm hose barb

hp: 1/4

Duty cycle: continuous

Controller

Measuring range: 0 to 29.89" Hg

Measuring accuracy: <0.5% full-scale

Max gas temperature: 176°F (80°C)

at the transducer

Control output: (transistor) 24 VDC,

450 mA maximum

Vacuum connection: 1/4" to 3/8"

hose barb, NW16 flange

Display: 4-digit, 1/2"H LED

Recorder output: 0 to 1 VDC

Catalog number	Power (VAC, Hz)	Dimensions (W x H x D)	Shpg wt lb (kg)	Price
KH-79110-00	115, 50/60	11 5/8" x 27 7/8" x 13 7/8"	51 (23.2)	
KH-79110-05	230, 50/60			



79110-00

Diaphragm Vacuum Pumps

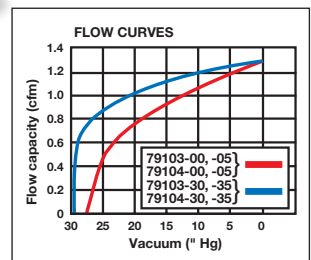
Oilless diaphragm pumps provide a clean vacuum

- Ideal for vacuum/pressure filtration, cryogenics, and distillation
- Quiet operation—all models are rated at or below 45 dB(A)
- Pumps are designed for high reliability and provide nearly maintenance-free service life

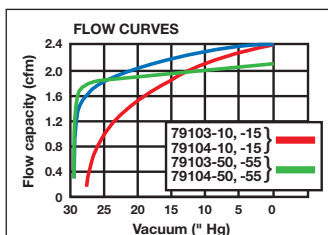
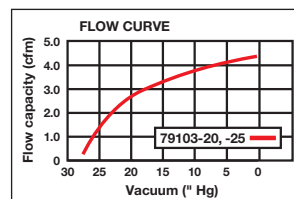
Order a 79103-series pump for general-purpose applications; select a 79104-series pump with chemical-resistant wetted parts for highly corrosive applications. Choose a model with a gas ballast valve when working with condensable gases.

What's included: barbed fittings (inlet only for 79103-series pumps); an on/off switch; and an 8-ft power cord with plug (U.S. grounded plug on 115 VAC units; European plug on 220 to 240 VAC units). The 79103-series pumps have an R $\frac{1}{4}$ " (1/4" BSPT) outlet equipped with a silencer.

Two-stage,
general-purpose
diaphragm pump
79103-30



Two-stage,
chemical-resistant
vacuum pump
79104-30 delivers
vacuum down to
29.5" Hg.



Service Kits include one diaphragm and one pair of valves per stage.

Catalog number	For pump models	Price
Service kits for general-purpose pumps		
KH-79103-90	79103-00, -05	
KH-79103-92	79103-10, -15, -30, -35	
KH-79103-94	79103-20, -25, -50, -55	
Service kits for chemical-resistant pumps		
KH-79104-90	79104-00, -05	
KH-79104-92	79104-10, -15, -30, -35	
KH-79104-94	79104-50, -55	

Specifications & Ordering Information

Wetted parts

79103-series: Viton®, aluminum, polyamide, and PVC
79104-series: PTFE, Kalrez®, and ETFE resins



No. of stages	Gas ballast	Free-air capacity*	Max vacuum	Max temperature	hp	Dimensions (L x W x H)	120 VAC models		230 VAC models	
							Cat. no.	Price	Cat. no.	Price
General-purpose diaphragm pumps										
1	No	1.3 cfm (36.8 L/min)	27.6" Hg	104°F (40°C)	1/8	10 $\frac{3}{16}$ " x 6 $\frac{3}{16}$ " x 7 $\frac{1}{16}$ "	KH-79103-00		KH-79103-05	
1	No	2.5 cfm (70.8 L/min)	27.6" Hg	104°F (40°C)	1/4	10 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ "	KH-79103-10		KH-79103-15	
1	No	4.4 cfm (125 L/min)	27.6" Hg	104°F (40°C)	1/4	14 $\frac{7}{8}$ " x 9 $\frac{1}{2}$ " x 7 $\frac{1}{8}$ "	KH-79103-20		KH-79103-25	
2	No	1.3 cfm (36.8 L/min)	29.65" Hg	104°F (40°C)	1/4	10 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ "	KH-79103-30		KH-79103-35	
3	No	2.2 cfm (62.3 L/min)	29.86" Hg	104°F (40°C)	1/4	12 $\frac{1}{16}$ " x 9 $\frac{1}{2}$ " x 6 $\frac{1}{8}$ "	KH-79103-50		KH-79103-55	
Chemical-resistant diaphragm pumps										
1	No	1.2 cfm (34.0 L/min)	27.6" Hg	104°F (40°C)	1/8	10 $\frac{3}{16}$ " x 6 $\frac{3}{16}$ " x 7 $\frac{1}{16}$ "	KH-79104-00		KH-79104-05	
1	No	2.3 cfm (65.1 L/min)	27.6" Hg	104°F (40°C)	1/4	10 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ "	KH-79104-10		KH-79104-15	
2	Yes	1.2 cfm (34.0 L/min)	29.65" Hg	104°F (40°C)	1/4	10 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ "	KH-79104-30		KH-79104-35	
3	Yes	2.1 cfm (59.5 L/min)	29.86" Hg	104°F (40°C)	1/4	12 $\frac{1}{16}$ " x 9 $\frac{1}{2}$ " x 6 $\frac{1}{8}$ "	KH-79104-50		KH-79104-55	

*Performance is decreased to 5/6 when operating at 50 Hz.

VA Vacuum Pumps

Laboratory, Dry

High-Capacity Diaphragm Pumps

Completely dry pump for high vacuum applications

- Unique flat diaphragm design reduces wear and tear for longer service life
- Vacuum levels as low as 1.5 torr
- Very quiet operation at 44 dB(A)

Provides high flow rates for increased laboratory efficiency. Long service intervals reduce downtime. Choose a chemical-resistant pump if solvents or corrosive gases will come into contact with the pump. Gas ballast, which allows purging of any condensed gases in the pump, is standard on all models. Protect your pump with an inlet filter for particulates or use a cold trap for condensable vapor; see pages 1933 to 1936 for vacuum pump accessories.

What's included: 6-ft power cord and plug.

Specifications & Ordering Information

Wetted parts

General-purpose models: Viton®, aluminum, polyamide, and PVC

Chemical-resistant models: PTFE, Kalrez®, and ETFE resins

Catalog number	Free-air capacity*	Max vacuum	Max temperature	Stages	Motor hp	Noise rating	Port size	Power (VAC, Hz)	Dimensions (W x H x D)	Price
General-purpose diaphragm pumps										
KH-78500-60 KH-78500-71	2.6 cfm (75 L/min)	29.94" Hg (1.5 torr)	104°F (40°C)	3	¼	44 dB(A)	8-mm hose barb	115, 60 230, 50	9" x 6½" x 15"	
KH-78500-64 KH-78500-74	4.9 cfm (138 L/min)	29.94" Hg (1.5 torr)	104°F (40°C)	3	¼	48 dB(A)	NW 16 flange	115, 60 230, 50	21¼" x 9½" x 11½"	
KH-78500-66 KH-78500-76	7.1 cfm (200 L/min)	29.8" Hg (6 torr)	104°F (40°C)	2	¼	48 dB(A)	NW 16 flange	115, 60 230, 50	21¼" x 9½" x 11½"	
Chemical-resistant diaphragm pumps										
KH-78500-80 KH-78500-90	2.6 cfm (75 L/min)	29.94" Hg (1.5 torr)	104°F (40°C)	3	¼	44 dB(A)	8-mm hose barb	115, 60 230, 50	9" x 6½" x 15"	
KH-78500-84 KH-78500-94	4.9 cfm (138 L/min)	29.94" Hg (1.5 torr)	104°F (40°C)	3	¼	48 dB(A)	NW 16 flange	115, 60 230, 50	21¼" x 9½" x 11½"	
KH-78500-86 KH-78500-96	7.1 cfm (200 L/min)	29.8" Hg (6 torr)	104°F (40°C)	2	¼	48 dB(A)	NW 16 flange	115, 60 230, 50	21¼" x 9½" x 11½"	

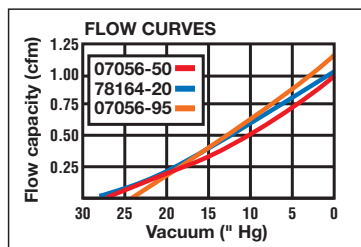
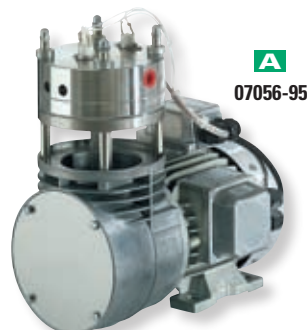
*Free-air capacity will be reduced by 5% at 50 Hz.

Specialty Vacuum/Pressure Pumps

Oversized, permanently lubricated bearings for long-term operation

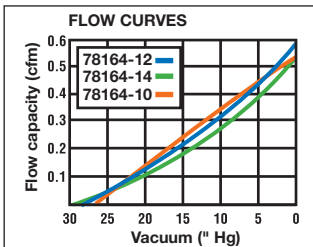
A Heated-Head Pump

Use to pump gases that contain condensable vapors or to maintain gases at high temperatures. The head heats up to 400°F (204°C) in 15 minutes. Heated head prevents vapors from condensing, prolonging the life of the pump. The TEFC motor is isolated from heated head. Cord and plug are not included; order separately on page 1307.



B Explosion-Proof Pumps

Ideal for hazardous areas where flammable gases or vapors may be present. Pumps 78164-10, -12, -14, and -20 are rated for use in Class I, Groups C & D, Division 1 environments. Pump 07056-50 is rated for use in Class I, Group D, Division 1 environments. See "Technical Data" in the back of this catalog for information on National Electrical Code (NEC) hazardous classifications.



Specifications & Ordering Information

Catalog number	Free-air capacity cfm (L/min)	Max vacuum	Max pressure	Wetted parts	Port size NPT(F)	Dimensions (L x W x H)	Price	Service kits	
								Catalog number	Price
A Heated-head vacuum pump									
KH-07056-95	1.20 (33)	24" Hg	20 psi	Teflon®, stainless steel	¼"	11" x 7¼" x 10½"		KH-07056-96	
B Explosion-proof vacuum pumps									
KH-78164-10*	0.60 (17)	27.0" Hg	36 psi	Teflon, stainless steel	¼"	8" x 4¼" x 5¾"		KH-78164-52	
KH-78164-12*	0.62 (17.5)	27.0" Hg	36 psi	Teflon, Kalrez®	¼"	6" x 4¼" x 7¼"		KH-78164-52	
KH-78164-14*	0.64 (18)	29.7" Hg	—	Teflon, stainless steel	¼"	9¾" x 8" x 7¼"		KH-78164-52	
KH-07056-50†	1.20 (33)	27.0" Hg	50 psi	Teflon, stainless steel	¼"	13¾" x 8¼" x 9¼"		KH-07056-19	
KH-78164-20*	1.13 (32)	28.0" Hg	20 psi	Teflon, Kalrez	¼"	9¾" x 8" x 7¼"		KH-78164-52	

*Models 78164-10, -12, -14, and -20 are rated for use in Class I, Groups C & D, Division 1 environments.

†Model 07056-50 and 78164-16 are rated for use in Class I, Group D, Division 1 environments.



78500-84



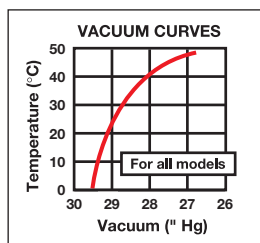
Cole-Parmer Portable Dual-Channel Water-Jet Aspirator Pumps

Produce pulseless vacuums up to 29.5" Hg

- Built-in circulating pump and water tank make these units portable and eliminate water waste
- Simple to operate—just fill the tank and turn on the pump
- Circulating pump continuously forces water across a set of venturies—operation is quiet, clean and efficient.

Pump features two metal venturi aspiration jets to create the vacuum with a built-in check valve to prevent backflow of water into the system. Tank features a drain port and spigot for easy water changes. Order the optional vacuum gauge/regulator to monitor and control vacuum level.

What's included: tank, aspiration pump, tank closure, and power cord.



Technical info

The vacuum created by an aspirator pump is dependent on the vapor pressure of water; which, in turn, is a function of temperature. The lower the water temperature, the lower the potential vacuum.

New

35031-00



Specifications & Ordering Information

Wetted parts: nickel-coated brass, polypropylene, silicone, and stainless steel

Duty cycle: Continuous
Tank size: 9.5 L

Dimensions: 14³/₈"W x 14³/₈"H x 10"D

Catalog number	Free-air capacity cfm (L/min)	Max vacuum \" Hg (torr)	Noise rating	Port size	Power (VAC, Hz)	Dimensions (W x H x D)	Price
KH-35031-00 KH-35031-10	0.6 (18)	29.5 (10)	60 dB(A)	8-mm hose barb	115, 50/60 230, 50/60	13" x 16" x 11"	

Stainless Steel Bellows Vacuum Pump/Compressors

Hermetically sealed pump head minimizes leakage—only 10⁻⁴ mL/second for helium

- Ideal for use with pollution control and measuring instruments, gas analyzing equipment, and medical instrumentation
- Thermal overload switch protects your pump system

What's included: 6-ft cord with U.S. plug on 115 VAC models; European plug on 230 VAC model.



07065-20



07065-80



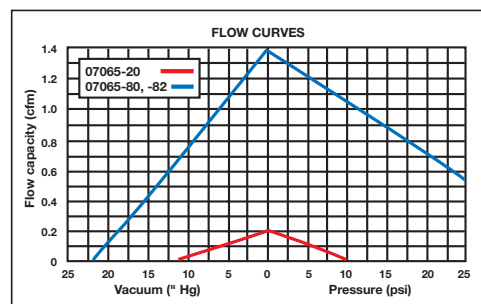
Specifications & Ordering Information

Wetted parts: 304/312 stainless steel (SS) head, 350 SS bellows, 301 SS valves, PTFE gasket

Port size
Models 07065-20: 1/8" NPT(F)
Models 07065-80 and -82:
1/4" NPT(F)

Motor: TEFC, shaded-pole
Duty cycle: continuous
Noise rating: 71 dB(A)

Catalog number	Free-air capacity	Maximum vacuum	Maximum pressure	Maximum temp	hp	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Price
Low-capacity bellows vacuum pump/compressor									
KH-07065-20	0.22 cfm (6.2 L/min)	13" Hg	10 psi	105°F (41°C)	1/40	115, 50/60	1.4	6 1/4" x 3 7/8" x 4 1/4"	
High-capacity bellows vacuum pump/compressor									
KH-07065-80 KH-07065-82	1.4 cfm (39.2 L/min)	23" Hg	25 psi	105°F (41°C)	1/10	115, 50/60 230, 50	0.65 0.32	8 3/4" x 4" x 7 1/2"	



These versatile, maintenance-free units can serve as either vacuum pumps or compressors.

Accessories

KH-03300-96 Compression fitting, 316 SS. 1/8" NPT(M) x 1/8" OD tubing. For model 07065-20

KH-03301-06 Compression fitting, 316 SS. 1/4" NPT(M) x 1/4" OD tubing. For models 07065-80, -82

VA Vacuum Pumps

Laboratory, Dry

Rotary Vane Vacuum Pumps

Designed especially for chemistry applications!

- Compact design—half the size of a typical rotary vane pump
- Energy efficient motor reduces cost of ownership

These two-stage rotary vane vacuum pumps were newly redesigned for the best performance in a laboratory. They're designed to reduce the number of wear parts and minimize the force on the remaining wear parts for long life. The high-contact metal parts are plasma-treated to yield the maximum corrosion resistance. To increase the service intervals, the pump features an anti-suckback valve to inhibit corrosive vapors from entering the pump and a redesigned oil flow path which also reduces pump noise.

What's included: oil and 6-ft power cord and plug.

New



79107-00



Specifications & Ordering Information

Duty cycle: continuous

Catalog number	Free-air capacity cfm (LPM)	Ultimate vacuum		Max temperature	hp	Noise rating dB(A)	Port size		Oil capacity	Power (VAC)	Amps	Dimensions (L x W x H)	Price
		Without ballast	With ballast				Inlet	Outlet					
KH-79107-00 KH-79107-05	1.6 (47)	1.5 x 10 ⁻³ torr (2 x 10 ⁻³ mbar)	7.5 x 10 ⁻³ torr (1 x 10 ⁻² mbar)	104°F (40°C)	¼	44	NW 16	10-mm hose barb	9.5 oz	120 230	3 1.6	12" x 5" x 7½"	
KH-79107-10 KH-79107-15	4.0 (113)	1.5 x 10 ⁻³ torr (2 x 10 ⁻³ mbar)	7.5 x 10 ⁻³ torr (1 x 10 ⁻² mbar)	104°F (40°C)	¾	49	NW 16	10-mm hose barb	25 oz	120 230	4.6 2.5	14½" x 5¾" x 8¼"	
KH-79107-20 KH-79107-25	5.8 (165)	1.5 x 10 ⁻³ torr (2 x 10 ⁻³ mbar)	7.5 x 10 ⁻³ torr (1 x 10 ⁻² mbar)	104°F (40°C)	½	52	NW 16	NW 25	27 oz	120 230	5.2 2.7	18¼" x 6" x 9¼"	

GO to page(s) 1368 to 1413

For a complete selection of our vacuum/pressure gauges.

GO to page(s) 596 to 660

For our complete line of fittings.

Vacuum Gauge and Meter/Controller

Displays offer both an electronic sweeping dial and a numerical readout

- Three measuring ranges—torr, mbar, or pascal (Pa)

Benchtop Vacuum Gauge is perfect for benchtop and process use. Gauge features electronic digital calibration to ensure accuracy. Sensor even indicates faults in readings. Measurements are shown on 3½-digit, ⅜" H LCD.

Gauge is enclosed in a durable metal housing. Process connection accepts a NW10 flange connector or ¼" ID tubing.

What's included: a sensor and a 6-ft cord with 2-prong plug.

Benchtop Vacuum Meter/Controller is ideal for use in distillation or rotary evaporation systems. Simply connect tubing to your system to take readings. As a controller, this unit is great for use with your solvent recovery system. To use as a controller, order vacuum valve 07379-90 to regulate vacuum.

For more information, please see ColeParmer.com.

Specifications & Ordering Information

Accuracy: ±10% of reading **Resolution:** autoranging **Dimensions:** 5¼"W x 3¼"H x 8"D

Catalog number	Description	Range	Process connection	Operating temp	Media compatibility	Power	Price
KH-07379-30	Vacuum gauge	760 to 0.001 torr, 1000 to 0.001 mbar, 1000 to 0.001 kPa	NW10 flange, ¼" to ⅜" stepped hose barb	49 to 104°F (10 to 40°C)	Liquids or gases compatible with tungsten, bronze, aluminum, magnesium, and silicon	115 VAC, 50/60 Hz	
KH-07379-32						230 VAC, 50/60 Hz	
KH-07379-40	Vacuum meter/controller	760 to 0.001 torr, 1000 to 0.001 mbar, 100,000 to 0.1 Pa	NW10 flange and ¼" hose barb	32 to 104°F (0 to 40°C)	Gases compatible with tungsten, aluminum, magnesium, Viton®, and bronze	115 VAC, 50/60 Hz	
KH-07379-45						230 VAC, 50/60 Hz	

Vacuum gauge
07379-30



Vacuum
meter/controller
07379-40





Rotary Vane Vacuum Pumps

Wide range of free-air capacities to match specific applications

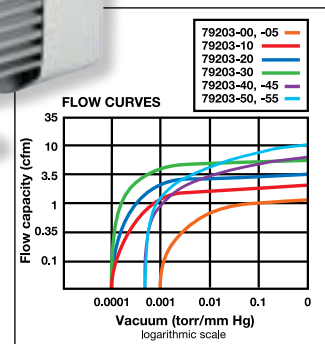
- Portable direct-driven high vacuum pumps—ideal for freeze dryers, vacuum ovens, and concentrators
- Convenient inlet barb connection accepts two different tubing IDs
- Gas ballast valve inhibits condensation of vapors—close for high-vacuum applications, open for applications with moist vapors

Isolation valve activates on power loss to prevent oil suckback and isolate vacuum chamber. Time specific warning tag alerts you to change oil.

What's included: user-activated tag to encourage appropriate oil change interval, 3-ft rubber vacuum hose, ISO-to-hose adapter kit, and 40 mL of premium vacuum pump oil.



79203-10



Specifications & Ordering Information

Wetted parts: cast iron, stainless steel, aluminum, fluoroelastomers

Maximum temperature: 104°F (40°C)

Motor: TEFC

Duty cycle: continuous (not above 10 torr)

Exhaust connection: 1-20 (3/4-20 model 79203-00)

Noise rating: 50 to 55 dB, depending on model



Catalog number	Free-air capacity cfm (L/min)	Ultimate vacuum torr (mbar)	hp	Inlet barb tubing ID	Oil capacity oz (L)	Power VAC, Hz	Dimensions (L x W x H)	Price
KH-79203-00	1.8 (51)	2 x 10 ⁻³ (2.6 x 10 ⁻³)	1/4	3/16" and 1/8"	12 (0.4)	115, 60 230, 50	14" x 5" x 8 1/2"	
KH-79203-05	1.5 (43)							
KH-79203-10	2.6 (70)	1 x 10 ⁻⁴ (1.3 x 10 ⁻⁴)	1/2	7/16" and 1/8"	25 (0.9)	115, 60/230, 50	18 1/2" x 6 1/2" x 9 3/4"	
KH-79203-20	3.8 (108)							
KH-79203-30	6.1 (173)							
KH-79203-40	7.7 (218)	3 x 10 ⁻⁴ (4 x 10 ⁻⁴)	3/4	9/16" and 1/8"	32 (1.2)	115, 60 230, 50	20 1/2" x 7" x 10 3/4"	
KH-79203-45	6.4 (181)							
KH-79203-50	11.3 (320)	4 x 10 ⁻⁴ (5 x 10 ⁻⁴)	3/4	9/16" and 1/8"	29 (1.1)	115, 60 230, 50	21 1/8" x 7 1/8" x 10 3/4"	
KH-79203-55	9.3 (263)							

Economical Rotary Vane Vacuum Pumps

Compact design ideal for portable applications

- Designed to minimize vibration
- Dual voltage
- Isolation valve and gas ballast protects pump and system

Whether you work in the lab, manufacturing floor, or HVAC industry this is the pump for your applications. The lightweight design and rugged construction lend itself to even the most demanding environments. Dual-stage pumps feature two pump units connected in series which are driven from the same shaft to create vacuum levels as low as 5 x 10⁻² torr.

Large finned die-cast aluminum oil reservoir extends time between oil changes and helps limit overheating. All models have an isolation valve to prevent oil suck back into the system, angled low profile oil drain for fast and complete oil changes, and large sight glass on oil reservoir to monitor oil level and condition. Center-balanced handle make transportation easy and clean with no oil spills.

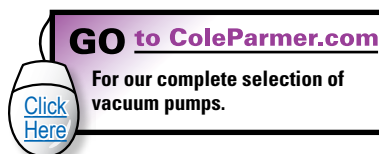
Specifications & Ordering Information

Wetted parts: aluminum

Duty cycle: intermittent

Catalog number	Free-air capacity* cfm (L/min)	Max vacuum	Max temperature	Motor hp	Port sizes		Oil capacity	Power (50/60 Hz)	Dimensions (L x W x H)	Price
					Inlet	Outlet				
KH-07164-30	1 to 5 cfm (42 L/min)	5 x 10 ⁻² torr	110°F (43°C)	1/2	1/4", 3/8" flare and 1/2" male Acme (auto)	Filter	32 oz (0.9 L)	110/220 VAC	10 3/4" x 5" x 7"	
KH-07164-50	4 cfm (95 L/min)								16" x 5 1/2" x 9 1/2"	
KH-07164-60	6 cfm (170 L/min)								16" x 5 3/4" x 9 1/2"	
KH-07164-70	12 cfm (339 L/min)								18 1/8" x 5 3/4" x 11 1/8"	

*Free-air capacity will be reduced by 5% the value at 50 Hz.



For our complete selection of vacuum pumps.

New



07164-50



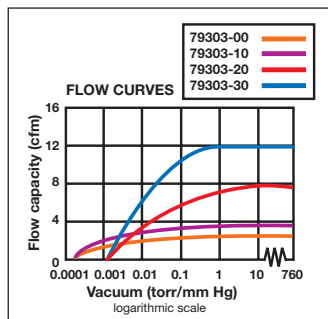
VA Vacuum Pumps

Rough, Oiled

Direct-Drive, Rotary Vane Vacuum Pumps

Wide range of free-air capacities to match specific applications

- Positive pressure oil system ensures proper lubrication and prevents oil starvation at high gas loads
- Fast acting inlet valve protects internal components against oil and air contamination if the pump stops while under vacuum
- Gas ballast valve limits internal condensation—use pump when condensable vapors are present



79303-00

No need to purchase both single- and dual-stage pumps! Dual-mode pumps offer a choice of high-vacuum (HV) mode or high-throughput (HT) mode in one pump. Pumps also feature three-position gas ballast control. Set the pump to HV mode with gas ballast off for use with electron microscopes or mass spectrometers; set it to HT mode with gas ballast fully open for use with gel dryers, vacuum ovens, or rotary evaporators.

What's included: vacuum oil. Pumps do not include a power cord.

Specifications & Ordering Information

Wetted parts: cast-iron, stainless steel, aluminum, fluoroelastomers

Maximum temperature: 104°F (40°C)

Motor: TEFC

Duty cycle: continuous

Noise rating (at 50 Hz)

Standard pumps: 55 dB(A)

Dual-mode pumps: 48 dB(A)



Dual-mode pump
79303-00

Catalog number	Free-air capacity	Ultimate vacuum torr (mm Hg)*		hp	Port size	Oil capacity	Power (50/60 Hz)	Amps	Dimensions (L x W x H)	Price
		Without ballast	With ballast							
KH-79303-00	2.3 cfm (65 L/min)	1.5 x 10 ⁻³	9 x 10 ⁻²	1/2	NW 25	24 oz (0.7 L)	115/230 VAC	2.6**	16 1/2" x 6 1/4" x 8 7/8"	
KH-79303-10	3.5 cfm (99 L/min)	1.5 x 10 ⁻³	7.5 x 10 ⁻²	1/2	NW 25	24 oz (0.7 L)	115/230 VAC	1.4**	16 1/2" x 6 1/4" x 8 7/8"	
KH-79303-20	5.9 cfm (167 L/min)	1.5 x 10 ⁻³	4.5 x 10 ⁻²	3/4	NW 25	25 oz (0.75 L)	115/230 VAC	3.3**	18 1/2" x 6 1/4" x 8 7/8"	
KH-79303-30	8.6 cfm (243 L/min)	1.5 x 10 ⁻³	4.5 x 10 ⁻²	3/4	NW 25	29 oz (1.0 L)	115/230 VAC	1.7**	18 1/2" x 6 1/4" x 8 7/8"	

*Ultimate total vacuum

**Current draw (amps) will be decreased to 5/6 at 50 Hz and decreased to 1/2 at 230 VAC.

Accessories

Service kits include springs, seals, gaskets, O-rings, filters, valves, and washers. Replace every 15,000 hours. Oil mist filter and return kit directs oil back into your pump reducing oil changes and maintenance time.

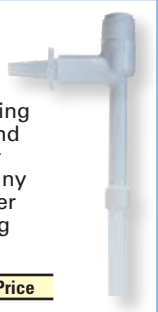
Cat. no.	For pump models	Price
Service kits		
KH-79303-02	79303-series	
Oil mist filter and return kit		
KH-79303-60	79303-00, -10, -20	
KH-79303-61	79303-30	

Vacuum Filtration Aspiration Pump

- Up to 11.5 liters/min

Polypropylene tube has maximum free-air pumping capacity of 11.5 liters/min. Connect 3/8" NPT(M) end to a faucet and attach the 4 3/4" long tubing. Water flow produces a partial vacuum, sufficient for many laboratory needs. Integral check valve keeps water out of vacuum line. Convenient detachable tubing connector accepts tubing from 1/4" to 3/8" ID.

Cat. no.	Description	Water pressure	Vacuum	Price
EK-06378-30	Aspirator pump	7.5 psi min	28.5" Hg	



INNOCAL®

INNOVATIVE CALIBRATION SOLUTIONS



NIST-Traceable Calibration Certificates

InnoCal offers an ISO/IEC-accredited metrology lab for instrument calibration, repair, and NIST-traceable certification.

Pressure

NIST-traceable certificate for:	Certification test points	Test data included	Catalog number	Price
Pressure/vacuum gauge; 1, 2, or 3% accuracy (not NIST-traceable)	Certificate of Accuracy across range; 0 to 10,000 psi, 0 to 30" Hg.	No	KH-17040-00	
Pressure/vacuum gauge; better than 1% accuracy (not NIST-traceable)	Certificate of Accuracy across range; 0 to 10,000 psi, 0 to 30" Hg.	No	KH-17040-02	
Pressure/vacuum gauge; 1, 2, or 3% accuracy	NIST-traceable with test data. Five test points across range 0 to 10,000 psi, 0 to 30" Hg	Yes	KH-17040-10	
Pressure/vacuum gauge; better than 1% accuracy	NIST-traceable with test data. Five test points across range 0 to 10,000 psi, 0 to 30" Hg	Yes	KH-17040-12	

Call 866-InnoCal (466-6225)
Online, visit InnoCalSolutions.com

Vacuum Pumps **VA**

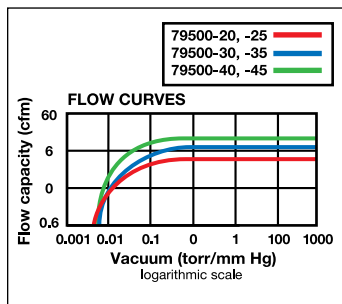
Rough, Oiled

Magnetically Coupled Rotary Vane Pumps

Sealed head means no oil leaks

- High pumping speeds
- Safety valve seals the pump during power loss
- Easy to service, low maintenance

Magnetically coupled drive shaft eliminates oil leaks. Dual mode pump with gas ballast allows for vacuum settings for many different applications.



79500-20



Specifications & Ordering Information

Wetted parts: cast-iron, stainless steel, aluminum, fluoroelastomers**Motor:** TEFC**Maximum temperature:** 104°F (40 °C)**Duty cycle:** continuous

Catalog number	Free-air capacity ¹	Ultimate vacuum torr [*]		Motor hp	Port size	Oil capacity	Power		Amps	Dimensions (L x W x H)	Price
		Without ballast	With ballast				VAC (50/60 Hz)				
KH-79500-20	3.5 cfm (99 L/min)	3.7 x 10 ⁻³	1.5 x 10 ⁻²	½	NW 16	25 oz (0.75 L)	115	2.6*	17" x 6⅞" x 8½"		
KH-79500-25							230	1.4*			
KH-79500-30	7.1 cfm (201 L/min)	3.7 x 10 ⁻³	7.5 x 10 ⁻³	⅔	NW 25	34 oz (1.0 L)	115	3.3*	20⅞" x 7" x 8½"		
KH-79500-35							230	3.3*			
KH-79500-40	14.1 cfm (400 L/min)	3.7 x 10 ⁻³	7.5 x 10 ⁻³	¾	NW 25	40 oz (1.2 L)	115	3.3*	22⅞" x 7⅞" x 9⅞"		
KH-79500-45							230	1.7*			

*Current draw (amps) will be decreased to ⅔ at 50 Hz. ¹Free-air capacity will be reduced by ⅔ at 50 Hz.

Accessories

[KH-79500-26](#) Oil mist filter for 79500-20, -25[KH-79500-36](#) Oil mist filter for 79500-30, -35[KH-79500-46](#) Oil mist filter for 79500-40, -45[KH-79500-37](#) Replacement filter element for 79500-26, -36[KH-79500-48](#) Replacement filter element for 79500-46[KH-79500-47](#) Oil return adapter for 79500-26, -36, -46; returns oil mist back into the reservoir[KH-79500-49](#) Replacement oil

High-Vacuum Gear Pump Systems

Complete systems for rotary evaporation, vacuum, and filtration manifolds

- Dual-stage gear pumps provide deep vacuum to 1 x 10⁻¹ torr
- Use for distillation and removing high boiling point solvents

Gear design allows pump to operate continuously between 0.1 torr and atmosphere, unlike a rotary vane pump. Rotating gears do not mesh and are very tolerant of vapor and provide smooth low-maintenance operation. Exhaust oil recycler coalesces oil mist and puts back into the pump to prevent build up of oil residue in the filter.

What's included: tubing, gauge, vacuum regulator, 1 L of pump oil, and exhaust oil recycler. Models 79206-10 and -15 include a collecting flask.

Specifications & Ordering Information

Maximum temperature: 140°F (40°C)**Oil capacity:** 0.48 qt (15.2 oz)**Wetted parts:** stainless steel valves, Viton® seals, powdered metal**Port size:** ⅜" OD hose barb**Motor:** single phase, TEFC**Motor speed:** 3450 rpm at 60 Hz**Horsepower:** ¼ hp**Duty cycle:** continuous**Noise rating:** 58 dB(A)

79206-00

Catalog number	Free-air capacity cfm (L/min)	Ultimate vacuum*	Dimensions (L x W x H)	Power (VAC, Hz)	Price
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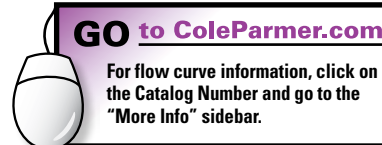
Systems for rotary evaporators and vacuum manifolds

KH-79206-00	1.1 (31)	0.1 torr	14½" x 5⅞" x 8⅞"	115, 60	
KH-79206-05	0.9 (26)	(0.13 mbar)		230, 50	

Systems for filtration

KH-79206-10	1.1 (31)	0.1 torr	14½" x 5⅞" x 8⅞"	115, 60	
KH-79206-15	0.9 (26)	(0.13 mbar)		230, 50	

*Ultimate total vacuum

[KH-79206-01](#) Replacement exhaust oil recycler**GO to ColeParmer.com**

For flow curve information, click on the Catalog Number and go to the "More Info" sidebar.

VA Vacuum Pumps

High Vacuum

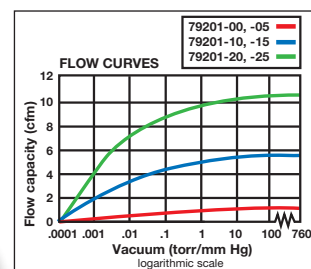
High-Vacuum Pumps for Corrosive Gases

Corrosion-resistant parts—ideal for pumping corrosive gases such as Cl₂, HBr, F₃CCO₂H, and HOAC

- Pumps draw clean oil from top of oil reservoir, not from the bottom as do direct-drive pumps
- Lower pump speed (less than 580 rpm) results in less wear, cooler operation, and longer service life
- Bubbler tube in the oil reservoir allows nitrogen gas purging, resulting in lower operating temperature, reduced corrosion rate, and extended pump oil life

What's included: a clamp, centering ring, NW flange to hose barb fitting, pump oil, and an instruction manual containing an applications booklet.

Engineered for corrosion resistance and long service life—high-vacuum pump 79201-00.



Specifications & Ordering Information

Wetted parts: Viton® fluoroelastomer, Teflon® black grade S, chemical-resistant cast iron, stainless steel, and nickel plated or anodized steel

Max temperature: 145°F (63°C)
Motor: ODP (open drip-proof)

Duty cycle: continuous
Noise level: 59 dB(A)



Catalog number	Free-air capacity	Ultimate vacuum (torr)		hp	Inlet/outlet ports [†]	Oil capacity	Power (VAC, Hz)	Amps	Dimensions (L x W x H)	Shpg wt lb (kg)	Price
		Without ballast	With ballast								
KH-79201-00 KH-79201-05	0.9 cfm (25.5 L/min)	3.0 x 10 ⁻³	3.0 x 10 ⁻²	1/3	NW 16 flange (7/16" OD hose barb)	19.8 oz, (0.59 L)	115, 60 230, 50	4.8 3.5	17 3/4" x 9" x 12 5/8"	68 (30.9)	
KH-79201-10 KH-79201-15	5.6 cfm (158 L/min)	3.0 x 10 ⁻³	3.0 x 10 ⁻²	1/2	NW 25 flange (1 3/16" OD hose barb)	72 oz, (2.1 L)	115, 60 230, 50	8.4 2.8	19 1/4" x 14 1/4" x 15 3/4"	128 (58.1)	
KH-79201-20 KH-79201-25	10.6 cfm (300 L/min)	3.0 x 10 ⁻³	3.0 x 10 ⁻²	1	NW 25 flange (1 3/16" OD hose barb)	80 oz, (2.4 L)	115, 60 230, 50	13.4 4.9	19 1/4" x 12 1/4" x 15 5/8"	177 (80.3)	

*Ultimate total vacuum †Pumps include NW flange to hose barb adapters.

Accessories

[KH-79201-50](#) **Oil filtration system;** protects your pump from corrosive gases and particulates. 115/230 VAC, 50/60 Hz

[KH-79201-58](#) **Activated alumina element** for high acid gas loads

[KH-79201-57](#) **Replacement cellulose element**

[KH-79201-70](#) **Gold vacuum oil, one liter**

[KH-79201-72](#) **Gold vacuum oil, one gallon**

Acid Neutralization Traps and Alkaline Elements. Use the trap with alkaline element to neutralize hydrous acids.

For pump models	Acid neutralization traps			Elements	
	Cat. no.	Dimensions	Price	Cat. no.	Price
79201-00, -05	KH-79201-60	8" W x 9" H		KH-79201-61	
79201-10, -15, -20, -25	KH-79201-62	8" W x 13" H		KH-79201-63	

Turbomolecular Pump Systems

Achieve vacuum down to 7.5 x 10⁻⁹ torr

- Ready to go, simply connect to your system
- Modular, easy to maintain
- Integrated turbo controller

This single package combines everything necessary to achieve high vacuum levels. Choose a diaphragm backing pump for an oil-free system. To control vacuum levels, order vacuum gauge and cable to connect to system controller. For a description of turbo molecular technology, see ColeParmer.com.

What's included: pump and controller.

Turbomolecular pump system 79500-50



Specifications & Ordering Information

Catalog number	Free-air capacity cfm (L/min)	Ultimate vacuum torr (mBar)	Port size	Compression ratio	Backing pump		Power (50/60 Hz)	Dimensions (W x H x D)	Price
					Type	Speed (N ₂)			
KH-79500-50 KH-79500-55	1.16 (33) 2.1 (60)	7.5 x 10 ⁻⁸ (1 x 10 ⁻⁷)	ISO-KF 40 ISO-K 63	>1011	Diaphragm	1.1 m ³ /hr	115/230 VAC	13 1/8" x 11 1/16" x 11 1/16"	
KH-79500-70 KH-79500-75	7.4 (210)	7.5 x 10 ⁻⁸ (1 x 10 ⁻⁸) 7.5 x 10 ⁻⁸ (1 x 10 ⁻⁸)	ISO-K 100	>1 x 109	Rotary vane	3 m ³ /hr	115 VAC 230 VAC	15 1/2" x 21 1/8" x 15 5/8"	

Accessories

[KH-79500-67](#) **Vacuum gauge;** measures from 1000 to 3.75 x 10⁻⁹ mm Hg. Viton seals. Requires cable 79500-68 below

[KH-79500-68](#) **Cable** for 79500-67; required to connect gauge to system

[KH-79500-69](#) **Inlet screen** for 79500-50

[KH-79500-71](#) **Inlet screen** for 79500-55

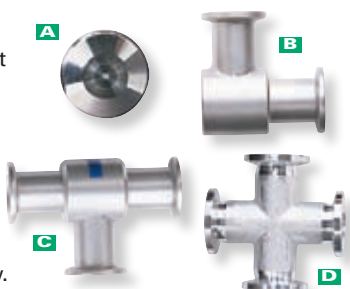
[KH-79500-72](#) **Inlet screen** for 79500-70, -75

Fittings, Co-Seals, Centering Rings, Tubing, Adapters, and Clamps

Flange Fittings

Choose from chemically resistant 316 stainless steel (SS) or economical aluminum.

A blank flange will seal an outlet not in use. Elbow fittings provide a 90° bend. Tee- and cross fittings let you connect two or three lines to your pump. Order clamps and either co-seals or centering rings below.



Key	Type	Size	316 SS fittings		Aluminum fittings	
			Cat. no.	Price	Cat. no.	Price
A	Blank flange	NW 16	KH-31401-00		KH-31400-00	
		NW 25	KH-31401-02		KH-31400-02	
		NW 40	KH-31401-04		KH-31400-04	
		63 ISO-K	KH-31401-06		KH-31400-06	
		100 ISO-K	KH-31401-08		KH-31400-08	
B	90° elbow fittings	NW 16	KH-31401-20		KH-31400-20	
		NW 25	KH-31401-22		KH-31400-22	
		NW 40	KH-31401-24		KH-31400-24	
		63 ISO-K	KH-31401-26		KH-31400-26	
		100 ISO-K	KH-31401-28		KH-31400-28	
C	Tee fittings	NW 16	KH-31401-30		KH-31400-30	
		NW 25	KH-31401-32		KH-31400-32	
		NW 40	KH-31401-34		KH-31400-34	
		63 ISO-K	KH-31401-36		KH-31400-36	
		100 ISO-K	KH-31401-38		KH-31400-38	
D	Cross fittings	NW 16	KH-31401-60		KH-31400-60	
		NW 25	KH-31401-62		KH-31400-62	
		NW 40	KH-31401-64		KH-31400-64	
		63 ISO-K	KH-31401-66		KH-31400-66	
		100 ISO-K	KH-31401-68		KH-31400-68	

Co-Seals and Centering Rings

Polymer support and nitrile O-rings withstand up to 10⁻⁷ torr (mm Hg). Temperature range of coseal is 14 to 176°F (-10 to 80°C). Temperature range of centering rings is 14 to 212°F (-10 to 100°C).



31400-60

Catalog number	Flange size	Price
Co-seals		
KH-31400-60	NW 10/16	
KH-31400-62	NW 20/25	
KH-31400-64	NW 32/40	
Centering rings		
KH-31402-70	NW 16	
KH-31402-72	NW 25	
KH-31401-82	63 ISO-K	
KH-31401-84	100 ISO-K	

Tubing

321 SS tubing with butt-welded seam that eliminates leaks. Choose NW 16 or NW 25 flanges. NW 16 has 3/4" ID; NW 25 has 1" ID.

Catalog number	Length	Price
Tubing with NW 16 flange		
KH-79752-31	10"	
KH-79752-32	20"	
KH-79752-33	40"	
Tubing with NW 25 flange		
KH-79752-41	10"	
KH-79752-42	20"	
KH-79752-43	40"	



79752-31

Flange Adapters

Adapters fit almost every kind of vacuum pump and accessory. Be sure to order clamps and co-seal or centering ring below.



Key	Cat. no.	Port size	Material	Price
NW 16 adapters				
E	KH-31401-01	1/8" NPT(M)	316L SS	
	KH-31401-03	1/4" NPT(M)	316L SS	
F	KH-31401-05	1/8" NPT(F)	316L SS	
	KH-79735-10	1/4" NPT(F)	316L SS	
	KH-31401-07	1/8" NPT(F)	Aluminum	
	KH-31401-09	1/4" NPT(F)	Aluminum	
G	KH-31400-50	10-mm hose barb	Aluminum	
	KH-31401-75	1/2" hose barb	316L SS	
	KH-31401-73	3/4" hose barb	316L SS	
H	KH-31401-11	1/4" OD tubing	316L SS	
	KH-31401-13	1/2" OD tubing	316L SS	
	KH-31401-15	3/4" OD tubing	316L SS	
I	KH-31401-17	1/4" VCR (M)	316L SS	
	KH-31401-19	1/2" VCR (M)	316L SS	
J	KH-31401-21	1/4" VCR (F)	316L SS	
	KH-31401-23	1/2" VCR (F)	316L SS	
NW 25 adapters				
E	KH-31401-25	1/8" NPT (M)	316L SS	
	KH-31401-27	1/4" NPT (M)	316L SS	
	KH-31401-29	1/2" NPT (M)	316L SS	
	KH-31401-31	3/4" NPT (M)	316L SS	
F	KH-31401-33	1/8" NPT (F)	Aluminum	
	KH-31401-35	1/4" NPT (F)	Aluminum	
	KH-31401-37	1/8" NPT (F)	316L SS	
	KH-31401-39	1/4" NPT (F)	316L SS	
G	KH-31401-69	1/2" to 5/8" hose barb	Aluminum	
H	KH-31401-41	1/2" O D tubing	316L SS	
	KH-31401-43	3/4" OD tubing	316L SS	
	KH-31401-45	1" OD tubing	316L SS	
I	KH-31401-47	1/4" VCR (M)	316L SS	
	KH-31401-49	1/2" VCR (M)	316L SS	
J	KH-31401-51	1/4" VCR (F)	316L SS	
	KH-31401-53	1/2" VCR (F)	316L SS	
NW tee adapters				
K	KH-31401-55	NW 25 x NW 16	316L SS	
	KH-31401-57	NW 40 x NW 16	316L SS	
	KH-31401-59	NW 40 x NW 25	316L SS	
63 ISO-K adapters				
L	KH-31401-61	NW 25	316L SS	
	KH-31401-63	NW 40	316L SS	
100 ISO-K adapter				
L	KH-31401-65	NW 40	316L SS	

Clamps

Clamps are constructed of 316 SS, PTFE, Viton® fluoroelastomer, aluminum, and Perbunan®. Temperature range is from 14 to 212°F (-10 to 100°C).

Cat. no.	Flange size	Price
KH-31400-40	NW 10/16	
KH-31400-42	NW 20/25	
KH-31400-44	NW 32/40	
KH-31400-46	ISO-K	



31400-40

VA Vacuum Pumps

Accessories

Inlet Traps

Protect your vacuum pump against damage from contaminants

A Inlet Foreline Trap

Trap prevents back migration of rotary pump oil vapor into your inlet jet. Product includes activated alumina.

Catalog number	Max flow	Temp range	Ports	Wetted parts	Dimensions	Price
KH-79302-20	20 cfm	32 to 122°F	NW 25	Aluminum, Viton®	3¼" dia x 5½"L	

[KH-79302-21](#) Replacement element for trap 79302-20

B Stainless Steel Coaxial Traps

Prevent oil backstreaming into vacuum chamber. Coalesce oil vapor backstreaming from the pump onto the fibrous metal trap element. An element is required and must be ordered at the same time as the trap; order separately below table.

Catalog number	Connections	Capacity	Diameter	Height	Price
KH-79208-00	NW 16	4 cfm	3¼"	5¼"	
KH-79208-10	NW 25	12 cfm	5½"		

[KH-79208-01](#) Copper element for 79208-00

[KH-79208-11](#) Copper element for 79208-10

[KH-79208-02](#) Stainless steel element for 79208-00

[KH-79208-12](#) Stainless steel element for 79208-10

C Stainless Steel Molecular Sieve Traps

Remove trace amounts of water vapor and prevent oil backstreaming by adsorbing oil vapor on a zeolite or alumina charge. **Note:** A sieve charge is required and must be ordered at the same time as the trap; order separately below table.

Catalog number	Connections	Capacity	Diameter	Height	Price
KH-79208-30	NW 16	8 cfm	4½"	6¾"	
KH-79208-40	NW 25				

[KH-79208-31](#) Synthetic zeolite sieve charge

[KH-79208-32](#) Activated alumina sieve charge

D Inlet Condensate Trap

Trap protects pumps from harmful vapors.

Catalog number	Ports	Capacity	Wetted parts	Dimensions	Price
KH-79302-00	NW 25	1.84 L	Aluminum, glass, Viton	6¾" dia x 8¼"L	

E Stainless Steel and Glass Cold Traps

Easy to clean—remove from the vacuum pump and clean at the end of each day to prevent trapped oil vapors from damaging the pump. Dry ice traps have a removable 3-qt well for dry ice/alcohol slurry. Liquid nitrogen cold traps efficiently trap acidic vapors and lower the vacuum pump base pressure. Glass cold traps are used with Dewar flasks and ice/liquid N₂.

Catalog number	Low temp	Connections	Capacity	Dia	H	Price
316 SS dry ice cold traps , 12 hour refrigerant hold time (hours with no load)						
KH-79209-00	110°F	NW 16	3 qt	10"	8¼"	
KH-79209-10	(-79°C)	NW 25				
KH-79209-30	110°F	½" OD straight tube	3 qt	10"	8¼"	
KH-79209-60	(-79°C)					
316 SS liquid nitrogen cold traps , 2 to 4 hour refrigerant hold time (hours with no load)						
KH-79209-70	-324°F	NW 16	0.75 L	5½"	11"	
KH-79209-70	(-198°C)	NW 25				
Glass cold traps						
KH-34530-30	-324°F	10 mm	40 mL	1½"	7¼"	
KH-34530-34	(-198°C)	16 mm	70 mL	1½"	9¾"	
KH-34530-50		½"	1 L	5½"	13½"	

[KH-79209-01](#) Replacement seal for dry ice cold traps



A
Inlet foreline trap 79302-20

More info

Bigger is not better! Oversizing a pump for trapped applications will lead to sublimation of condensed vapor out of the cold trap and into the pump. These conditions shorten the oil life and degrade pump performance.



B
Coaxial trap 79208-00



C
Molecular sieve trap 79208-30



D
Inlet condensate trap 79302-00

E
Glass cold trap 34530-34



E
Dry ice cold trap 79209-00



E
Glass cold trap 34530-50

Regulators and Valves

A Regulators

Order a regulator to monitor and control vacuum or pressure levels. Each regulator comes with a gauge except model 98250-00[†]; order gauge 68003-05 below.

Specifications & Ordering Information

Catalog number	Range	Capacity	Ports inlet; outlet	Wetted parts	Price
Vacuum regulators					
KH-07061-30	0 to 30" Hg	2 cfm	¼" NPT(M); ¼" hose barb	Aluminum, brass	
KH-00910-10	0 to 29" Hg	2.47 cfm	⅜" NPT(F); ⅜" NPT(F)	Brass	
Pressure regulators					
KH-07061-32	0 to 100 psig	2 cfm	¼" NPT(M); ¼" hose barb	Aluminum, brass	
KH-98250-00[†]	0 to 125 psig	20 cfm	¼" NPT(F); ¼" NPT(F)	Nylon	

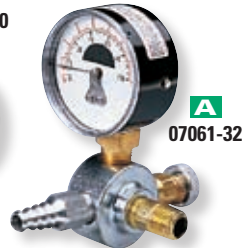
[†]Model 98250-00 does not include a gauge and has ⅜" NPT(F) gauge port.

Accessories

[KH-68003-05 Gauge](#), 2" dia; for use with regulator 98250-00. With ⅜" NPT(M) bottom connection, 0 to 160 psi



00910-10



07061-32



79302-60

B Manual Vacuum Valves

Needle Valves are ideal for fine control of gas bleed.

Isolation Valves are used to close off sections of your vacuum system. Indicator shows open or closed position.

Specifications & Ordering Information

Catalog number	Valve type	Application	Port size	Price
KH-79302-40	Needle	Gas emission to 10 ⁻³ torr	NW 10	
KH-79302-60	Isolation**	Leak-tight to 10 ⁻⁴ mbar L/sec	NW 25	
KH-79302-62			NW 40	

**Features Viton® diaphragm

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Inlet/Outlet Filters

Protect your pump and equipment from dust and particles

- Use on either the vacuum down to 29" Hg or pressure up to 150 psi
- 10-micron filter element is easily replaced
- Shatterproof clear plastic housing

Wetted materials include a nylon head, Buna-N gasket, polyethylene (PE) element, and a polycarbonate bowl. Stainless steel elements are also available; see ordering table.

Specifications & Ordering Information

Catalog number	Max flow rate	Filter area	Internal volume	Port size	Dimensions (H x dia)	Price	Repl. PE element		SS filter element	
							Cat no.	Price/3 pk	Cat no.	Price
KH-79700-60	3.2 cfm	4.9 sq. in.	2.1 cu. in.	⅜" NPT(F)	2½" x 3"		KH-79700-61		KH-79700-62	
KH-79700-70	31.8 cfm	16 sq. in.	11.9 cu. in.	½" NPT(F)	5½" x 3½"		KH-79700-71		KH-79700-72	
KH-79700-75	180 cfm	35 sq. in.	41.2 cu. in.	1½" NPT(F)	8¼" x 5½"		KH-79700-76		KH-79700-77	



79700-60



79700-70

Tygon® Vacuum Tubing

Formulation: Tygon R-3603 vacuum

Applications: Vacuum service— withstands 29.9" Hg at 75°F (24°C)

Characteristics: Heavy wall, nontoxic, nonoxidizing; transparent.

Resin certification: Tubing is manufactured according to GMP.

Temperature range: -58 to 165°F (-50 to 74°C)

Sterilize: With ethylene oxide or autoclave for 30 minutes at 250°F, 15 psi.



Catalog number	Dimensions: inches (mm)			Max psi at 70°F	Price/10-ft pk
	ID	OD	Wall		
EK-06413-10	⅜ (4.8)	⅝ (14.4)	⅜ (4.8)	61	
EK-06413-20	¼ (6.4)	⅝ (16.0)	⅜ (4.8)	49	
EK-06413-30	⅜ (9.6)	⅞ (22.4)	¼ (6.4)	47	
EK-06413-40	½ (12.8)	1⅞ (28.6)	⅝ (8.0)	45	
EK-06413-50	⅝ (16.0)	1⅞ (35.0)	⅜ (4.8)	45	
EK-06413-60	¾ (19.2)	1½ (38.1)	⅜ (4.8)	49	
EK-06413-70	1 (25.4)	2 (50.8)	½ (6.4)	42	

VA Vacuum Pumps

Accessories

Outlet Filters

Capture oil fog, mist, or smoke from oil-lubricated pump exhaust

- Minimum 99.97% efficient at 3 microns
- Seamless, drawn, carbon steel housing
- Drain back option lets you reuse the oil

Filters contain a filter media element that coalesces 99.97% of emitted oil. Match the free-air capacity of your pump and the outlet port size. Housing is steel with a nickel-chrome plated finish. Maximum temperature is 200°F (93°C). Filters with drain back feature allow reuse of the oil mist—an internal drain returns the oil to the pump.

What's included: housing and filter element.

Specifications & Ordering Information

Catalog number	Free-air capacity	Port size	Dimensions (H x dia)	Price	Replacement filter	
					Cat. no.	Price
KH-79775-02	4.5 cfm	3/8" BSP(M)	4 1/2" x 2 1/2"		KH-79775-50	
KH-79775-04		1/2" NPT(M)				
KH-79775-06		3/4" NPT(M)				
KH-79775-08		NW 25 flange				
KH-79775-10		NW 16 flange				
KH-79775-12	7.0 cfm	3/4" BSP(M)	5 1/2" x 2 1/2"		KH-79775-51	
KH-79775-14		1/2" NPT(M)				
KH-79775-20		3/4" NPT(M)				
KH-79775-20	24 cfm	NW 25 flange	9 1/4" x 5 1/8"		KH-79775-52	
Outlet filters with drain back						
KH-79775-30	16 cfm	NW 25 flange	8 3/8" x 5 1/8"		KH-79775-53	
KH-79775-35		1"-20 Fine	7 1/8" x 5 1/8"			
KH-79775-40	24 cfm	1 1/4"-20 Fine	9 5/8" x 6 1/4"		KH-79775-54	



Outlet filter
79775-00



Outlet filter with
drain back 79775-30

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GO to page(s) 487-546

We have fittings to adapt to almost any
connection type. See pages 487-546 for our
complete line.

Fluids and Oils

A Vacuum Grease is available in three formulations. Vacuum grease (79751-30) is ideal for general applications. Hydrocarbon vacuum grease (79751-36) is for 4-Ball Extreme Pressure tests.

Catalog number	Volume oz (g)	Max temp	Price
KH-79751-30	5.3 (150)	500°F (260°C)	
KH-79751-36	3.5 (99)	392°F (200°C)	

B Dow Corning 704® Silicone Vacuum Pump Fluid is free of impurities, chemically inert, and thermally and chemically stable. Formulated for long service life under demanding conditions. Low vapor pressure of 2×10^{-8} torr (at 25°C) quickly produces vacuums of 10^{-9} to 10^{-8} torr untrapped, and 10^{-10} to 10^{-11} torr trapped. Specific gravity of fluid is 1.07 g/mL; viscosity is 39 cSt at 25°C.

Catalog number	Volume	Price
KH-79754-10	500 mL	
KH-79754-12	1 gal. (3,785 L)	

C Cole-Parmer® Vacuum Pump Oil is formulated to ensure good performance and long pump life. CP 500 is a high-viscosity, general-purpose oil. Use CP 19 in direct drive pumps to resist gum formation and oxidation. CP 20 exhibits a low vapor pressure and resists oxidation and thermal degradation—ideal for mechanical vacuum pumps. All types have a specific gravity of 0.86 g/mL.

Catalog number	Type (viscosity)	Volume	Vapor pressure	Price
KH-79755-00	CP 500	1 qt (946 mL)	10^{-6} torr at 25°C	
KH-79755-02	(56 cSt)	1 gal. (3,785 mL)		
KH-79755-10	CP 19	1 qt (946 mL)	3×10^{-5} torr at 25°C	
KH-79755-12	(54 cSt)	1 gal. (3,785 mL)		
KH-79755-20	CP 20	1 qt (946 mL)	3×10^{-5} torr at 25°C	
KH-79755-22	(58 cSt)	1 gal. (3,785 mL)		

D Fomblin® Y L-VAC Vacuum Pump Oil is ideal for applications involving highly corrosive and reactive gases. Fomblin pump oil exhibits low back-migration rates resulting in ultraclean vacuum. All types have a specific gravity of 1.89 g/mL.

Catalog number	Type	Volume	Vapor pressure at 20°C	Viscosity at 20°C	Price
KH-79751-70	06/6	17.5 oz (517 mL)	2×10^{-6} torr	71 cSt	
KH-79751-71	16/6		2×10^{-6} torr	110 cSt	
KH-79751-72	25/6		4×10^{-6} torr	113 cSt	

A 79751-30



B



79754-10

C



79755-10

D



79751-70