



A I R S E R C O

VACUUM PUMPS AND ACCESSORIES

Adequate evacuation and dehydration are critical to proper preparation of cooling systems prior to charging. A vacuum of 250 microns or less would be recommended. Small reciprocal and compressor-type pumps may not be capable, or require too much time, to achieve this vacuum level. Airserco offers a selection of types and sizes capable of quickly reaching proper vacuum levels.

Airserco offers two series of industrial duty high vacuum pumps in a comprehensive range of sizes to meet the needs of manufacturers, contractors, installers, and service companies. Airserco High Vacuum Pumps are selected from Kinney, Edwards, and Leybold; three of the world's leading vacuum pump manufacturers.

Airserco's Kinney pump series features two-stage rotary cam-and-piston displacement design, and, is recognized worldwide as a continuous duty pump. This series employs a rolling oil-sealed piston, which eliminates metal-to-metal contact within the cylinder walls to ensure high pumping performance and long pump life, even under continuous use. Airserco/Kinney KC model pumps are belt-driven, equipped with heavy duty motors and pulleys, and include an approved belt-guard.

A general guideline for choosing the appropriate size pump for your need is:

Pump Displacement	Application Example
3 - 5 CFM	Window air conditioners, domestic refrigeration, automotive air conditioners, domestic central air conditioners, domestic freezers, light commercial air conditioners, unitary coolers.
6 - 7 CFM	Commercial air conditioners, commercial refrigeration, heat pumps.
8 - 10 CFM	Large commercial air conditioners, large commercial and industrial refrigeration.

Airserco's Edwards and Leybold pumps are two-stage, oil-sealed rotary vane designs. This series of pumps is extremely quiet and efficient. Built for continuous service, they are high performance pumps, capable of quickly reaching vacuum levels of less than 5 microns. Their powerful motors, compact design, and broad choice of sizes make this series an excellent choice for any application.



90301



90401



90350



90450



90540



90550



90640



90650



90740



VACUUM PUMPS AND ACCESSORIES

CONTINUOUS DUTY VACUUM PUMPS

Airserco uses pumps from the world's three leading manufactures of industrial duty vacuum pumps; Edwards High Vacuum, Kinney Vacuum, and Leybold Vacuum. All inventoried pumps are built for continuous duty on the production line, two stage designs capable of absolute pressures of less than one micron. With pumping capacities ranging from 5 to 33 CFM, Airserco has the proper pump to integrate a system best suited for each application. Popular sizes and motor voltages are listed in the tables below. Additional choices, options, and accessory items are also readily available.

Airserco No.	90301	90401	90350	90450	90540
Vendor #	KC-5	KC-8	RV8	RV12	D16B
Manufacturer	Kinney	Kinney	Edwards	Edwards	Leybold
Displacement	5.0 CFM	8.0 CFM	6.9 CFM	10.0 CFM	13.4 CFM
Type	Rotary Piston	Rotary Piston	Rotary Vane	Rotary Vane	Rotary Vane
Stages	2	2	2	2	2
Ultimate Pressure	< 1 micron	< 1 micron	< 1 micron	< 1 micron	< 1 micron
Inlet Connection	1" NPT	1" NPT	NW25	NW25	NW25
Outlet Connection	3/4" NPT	3/4" NPT	NW25	NW25	NW25
Weight	121 lb.	126 lb.	57 lb.	58 lb.	57 lb.
Dimensions (inches)	16.5x9.8x16.6	16.5x9.8x16.6	18.5x6.2x10.3	19.3x6.2x10.3	20.0x6.9x11.7
Motor Power	1/2 HP	3/4 HP	3/4 HP	3/4 HP	1.0 HP
Available Voltage	115/230 V 1-PH	115/230 V 1-PH	115/230 V 1-PH	115/230 V 1-PH	115/230 V 1-PH
Oil Capacity	.80 qt.	.80 qt.	.80 qt.	1.10 qt.	1.05 qt.
Accessories	Mist Filter (Incl.)	Mist Filter (Incl.)	Mist Filter	Mist Filter	Mist Filter

Airserco No.	90550	90640	90650	90740
Vendor #	E2M18	D25B	E2M30	D40B
Manufacturer	Edwards	Leybold	Edwards	Leybold
Displacement	14.7 CFM	20.9 CFM	22.3 CFM	32.5 CFM
Type	Rotary Vane	Rotary Vane	Rotary Vane	Rotary Vane
Stages	2	2	2	2
Ultimate Pressure	< 1 micron	< 1 micron	< 1 micron	< 1 micron
Inlet Connection	NW25	NW25	NW25	NW40
Outlet Connection	3/4 BSP	NW25	NW25	NW40
Weight	79 lb.	71 lb.	89 lb.	150 lb.
Dimensions (inches)	20.4x6.4x9.4	22.4x6.9x9.4	23.0x7.1x9.8	26.4x9.2x4.0
Motor Power	1.0 HP	1.0 HP	1.25 HP	3.0 HP
Available Voltage	115/230 V 1-PH	115/230 V 1-PH	115/230 V 1-PH	230/460 V 3-PH
Oil Capacity	1.10 qt.	1.50 qt.	1.60 qt.	2.70 qt.
Accessories	Mist Filter	Mist Filter	Mist Filter	Mist Filter, Oil filter



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VACUUM PUMPS AND ACCESSORIES



FLEXIBLE STAINLESS STEEL BRAIDED HIGH VACUUM HOSE

9836, 9837 and 9838

- **For evacuation and refrigerant charging**
- **Made of convoluted seamless stainless steel tube**
- **Will not outgas under the most severe high vacuum service**
- **Designed for reliable service and long life**
- **Braided stainless steel outer cover**

Airserco takes special measures to boost the life expectancy of this hose. Woven stainless steel wire braid reduces hose tube elongation, vibration and provides the hose mechanical protection. A 6" long interlocking steel Armor Guard reinforcement, welded with the braid to the hose tube under the end fitting's ferrule, prevents sharp, short-radius bending

and breakage at connection points. Cleaned, dehydrated, and tested during manufacturing, these hoses are supplied ready for use. Airserco, by special order, can supply lengths and end coupling fittings other than those listed.

Airserco Number	I.D.	Length	Ends, MPT
9836-36-2AG2	1/4"	36"	1/4"
9836-72-2AG2	1/4"	72"	1/4"
9837-36-2AG2	3/8"	36"	3/8"
9837-72-2AG2	3/8"	72"	1/4"
9838-36-2AG2	1/2"	36"	1/2"
9838-72-2AG2	1/2"	72"	1/2"



FLEXIBLE WIRE-REINFORCED HIGH VACUUM HOSE

9836VDX, 9837VDX and 9838VDX

- **Steel reinforcement for strength**
- **Vacuum rated for 29.9"/Hg.**
- **Lightweight yet tough and abrasion-resistant**
- **Wide variety of stock sizes**
- **Heavy duty reusable ends**

Flexible high vacuum hoses designed specifically for high vacuum evacuation and dehydration. These hoses are made with spiral steel reinforcement incorporated within the walls of flexible clear PVC tubing. The hoses feature heavy-duty pipe thread end fittings that are durable and reusable, allowing for repairs to damaged hoses. The hose is crush and kink resistant and handles full vacuum. With a bend radius of only five times the I.D., these hoses are flexible, lightweight, and abrasion-resistant. Stock sizes listed below are available for

Airserco Number	I.D.	O.D. Number	Length	Ends, MPT
9836VDX-36	3/8" (.375)	5/8" (.625)	36"	1/4"
9836VDX-72	3/8" (.375)	5/8" (.625)	72"	1/4"
9837VDX-36	3/8" (.375)	5/8" (.625)	36"	3/8"
9837VDX-72	3/8" (.375)	5/8" (.625)	72"	3/8"
9838VDX-36	1/2" (.500)	3/4" (.750)	36"	1/2"
9838VDX-72	1/2" (.500)	3/4" (.750)	72"	1/2"

immediate shipment. Many other sizes can quickly be fabricated to fit your requirements.



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VACUUM PUMPS AND ACCESSORIES



SUPER-X PREMIUM VACUUM PUMP OIL 5000

- **Seals**
- **Lubricates**
- **Resists deposits**

Airserco Super-X Vacuum Pump Oil keeps any high vacuum pump at maximum performance. No pump can deliver a lower pressure than its sealing oil's vapor pressure. This oil must have the viscosity to lubricate and seal clearances in the pump's moving parts at the extreme temperatures developed during continuous use. Super-X oil is a premium quality mineral oil formulated to tolerate exposure to vacuums of 5 microns. Super-X oil resists the formation of deposits and maintains its original lubricating properties over a long life. Super-X offers very high vacuums, excellent lubrication, and long oil life. Available in 1 gallon plastic containers, 4 per case.

Super-X Oil Typical Characteristics	
Product Number	5000
Gravity, API	29.2
Viscosity	SUS at 100°F 335
Flash Point	450°F
Pressure, microns, Hg, max	5



LIQUI-VAC SEALANT 4036

- **Sets up quickly**
- **Seals to 1 micron**
- **Remains flexible**
- **Ready to use**



A real time-saver in servicing cooling systems, Liqui-Vac is the only liquid sealant with the capacity of sealing high vacuum connections. It will positively seal high vacuum leaks around threads, through flared connections, face joints, wherever metal joins metal. Airserco Liqui-Vac sets up quickly, but remains flexible for easy disconnection. Liqui-Vac is resistant to most solvents, can seal to 1 micron, and withstands temperatures from -100°F to +325°F. Available in 4 oz. brush-in-cap cans packed 12 per case, or in 1 qt. cans.



PROTECTIVE DROP-OUT TANK 40210

- **Keeps solids/oil out of vacuum pump during pumpdown**
- **Eases draining trapped oil, other impurities**

The Airserco Protective Drop-Out Tank, installed in the vacuum line, prevents solids or oil in a system from entering the vacuum pump during the pumpdown operation. This protective function prevents damage to the vacuum pump. Each 4" or 8" tank has two piping connections spaced 90° apart on two different levels. The lower connection is recommended for the inlet. A 1/4" NPT drain plug at the tank's bottom facilitates draining trapped oil and other foreign impurities.

Airserco Number	Piping Connections
40210-6	3/8" SAE M. Flare
40210-8	1/2" SAE M. Flare
40210-10	5/8" SAE M. Flare
40210-12	3/4" FPT



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VACUUM PUMPS AND ACCESSORIES



4042

HI-VAC PUMP AND GAUGE CART

4042

FOR HIGH VACUUM PUMP, ELECTRIC HIGH VACUUM GAUGE, HAND TOOLS AND ACCESSORIES

- **Rugged constructed**
- **Well-balanced**
- **Large pneumatic tires**
- **Front and rear handles for easy loading**
- **Accommodates pumps to 23 CFM**
- **Convenient shelf holds vacuum gauge and tools**

This cart, designed to make the Kinney (up to 8 CFM) or Edwards (up to 23 CFM) a portable evacuation station, is built of heavy welded steel. It features large pneumatic tires and is perfectly balanced for easy maneuverability. The large front handle eases loading the cart into a truck; the rear handle includes a storage shelf for a vacuum gauge and hand tools. The cart will also accommodate most other pump brands.



4042 with 90350 pump

HI-VAC PUMP AND GAUGE CART

4042-4

- **4 port manifold enabling evacuation of up to 4 refrigeration units**
- **Ball valves on each port that allow for isolation of vacuum lines**
- **Ideally designed to accommodate Airserco's vacuum gauge line or automatic process controller for mobile back-up evacuation of refrigeration systems**



4042-4 with 4 port manifold, 90550 pump, and APC-1 Vacuum Process Controller



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VACUUM PUMPS AND ACCESSORIES

4042 Ordering Information		
Product	Description	Order Code
High-Vac Pump and Gauge Cart	Base unit includes: Heavy welded steel frame, large pneumatic tires, and stainless steel storage shelf.	4042
4042 Available Equipment Options		
Vacuum Pump (Choose size)	90350 8.0 CFM 90450 10.0 CFM 90540 13.4 CFM 90550 14.7 CFM 90640 20.9 CFM 90650 22.3 CFM (See vacuum pump catalog section for more details)	
Voltage (Choose voltage)	1 Phase Motor	
	50HZ	60HZ
	230V	230V
	100V	110V
	115V	115V
	208-230V	208-230V
Single Manifold	Single port manifold with hose connection to vacuum pump and quick coupler disconnect for attaching vacuum hose to refrigeration system.	-1
(4) Port Manifold	Four (4) port manifold with hose connection to vacuum pump and quick coupler disconnect for attaching vacuum hose to refrigeration system.	-4
APC-1	See APC-1 Ordering Table – Catalog page 8	
Vacuum Gauge	See Analog Vacuum Gauges – Page 21 & 22 See Digital Vacuum Gauges – Page 23 & 24	
Hose Options		
Clear Vacuum Hose (10 ft. standard length)	3/8" I.D. X 7/8" O.D. Clear vacuum hose 1/2" I.D. X 1" O.D. Clear vacuum hose	1200-6V 1600-8V
Flexible Wire-Reinforced Hose (10 ft. standard length)	3/8" I.D. X 5/8" O.D. 1/4" MPT 3/8" I.D. X 5/8" O.D. 3/8" MPT 1/2" I.D. X 3/4" O.D. 1/2" MPT	9836VDX 9837VDX 9838VDX
Stainless Braided Hose (10 ft. standard length)	1/4" I.D. 1/4" MPT 3/8" I.D. 1/4" MPT 3/8" I.D. 3/8" MPT 1/2" I.D. 1/2" MPT	9836 9837 1/4 9837 3/8 9838
Hi-Lo Coupling Yoke - Stainless	Branch Tee with 3/8" Plug and Two 18" Long, 3/8" I.D. Braided Stainless Steel Hoses with 3/8" Quick Connect Sockets (Specify additional lengths if required)	4058
Hi-Lo Coupling Yoke - Flexible Wire-Reinforced	Branch Tee with 3/8" Plug and Two 24" Long, 1/2" I.D. Wire Reinforced Hoses with 3/8" Quick Connect Sockets (Specify additional lengths if required)	4058VDX
Hose Fittings	1/4" Quick Coupler Socket & Plug 3/8" Quick Coupler Socket & Plug	9840/9841 9850/9851



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VACUUM PUMPS AND ACCESSORIES



4041K



4040

HI-VAC TEST MANIFOLD

4040, 4041K

- **Available with flanged or NPT inlet**
- **All brass and bronze construction**
- **Includes 1/8" NPT port for gauge tube**
- **Works with most vacuum pumps**
- **4041K includes electric vacuum breaker valve**
- **Access valve port for charging**

Designed for use with vacuum gauges using a 1/8" NPT gauge tube connection, the test manifold is an invaluable tool. Properly used with a quality vacuum gauge, it can recognize: unit still too wet and requires additional pump time, a leak in the system, freeze-up exists and must be defrosted, pump oil is contaminated and requires an oil change, or the cooling unit is correctly dehydrated. The manifold includes two vacuum-tight ball valves, isolation port to mouth the vacuum gauge tube, 1/2" female NPT connection for evacuation hose, and a 1/4" flare access valve for a charge hose. Model 4040 has a flanged base for connection to pumps with a NW25 flange inlet. Model 4041K has a 3/4" male NPT base for use with Kinney pumps, or others with threaded connection. The 4041K also has an installed electric vacuum breaker valve to be connected to the Kinney pump moter leads for automatic operation.



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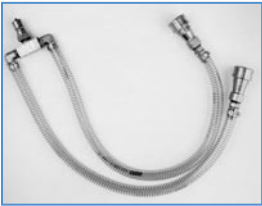
VACUUM PUMPS AND ACCESSORIES

HI-LO COUPLING YOKE

4058

- **Speeds evacuation time**
- **Includes quick couplers for fast connect/disconnect**
- **All brass/stainless steel construction**
- **Heavy duty for long life**

The 4058 Hi-lo Coupling Yoke is used to evacuate from the cooling system's high pressure side and low pressure side. This results in lower pressures with much less pumping time. The 4058 includes a heavy brass branch tee with 9851 auto shut off Quick Coupler Plug. The yoke can be connected to a 9850 socket attached to a single evacuation hose without leakage. Two 18" long, 3/8" I.D. braided stainless steel hoses, each with 9850 auto shut-off socket, are used to connect to both the high side and the low side for simultaneous evacuation.



HI-LO COUPLING YOKE

4058 VDX

- **Brass yoke with steel-reinforced hose**
- **Includes quick couplers**
- **Extra large 1/2" I.D. X 24" long hoses**
- **Heavy duty for long life**

The 4058 VDX is functionally identical to the 4058 Coupling Yoke. It features 1/2" x 24" long steel-reinforced hoses in place of braided stainless steel. Like the 4058, it includes an auto shut-off plug on the brass branch tee and 9850 shut-off sockets on both hoses.



HEAVY-DUTY REFRIGERANT CHARGING HOSE

9801-B

- **Premium quality, 600 PSI, 3,000 PSI burst hose**
- **Compatible with all refrigerants**
- **Full crimp design exceeds UL standards**

Airserco 9801-B series charging hoses are superior quality designed for continuous service with any refrigerant. With exceptional burst strength and heavy-duty fittings, these hoses

Airserco Number	Hose I.D.	End Fitting	Length
9801-B-4FFL-6	7/32"	1/4" FFL	72"
9801-B-4FFL-10	7/32"	1/4" FFL	120"
9801-B-4FFL-12	7/32"	1/4" FFL	144"
9801-B-4FFL-15	7/32"	1/4" FFL	180"
9801-B-4FFL-25	7/32"	1/4" FFL	300"
<i>5/16" hose available for special order.</i>			
<i>Custom end fittings available upon request.</i>			

also feature female flare, finger tight fittings on both ends. Stocked in several lengths for the manufacturer or commercial service contractor.