Dry Multi Stage Rotary Lobe Vacuum Pumps

Dry multi-stage rotary lobe vacuum pumps are the perfect solution for clean and dry vacuum applications. These pumps operate on a frictionless multi-stage design, having 5 to 6 pumping stages connected in series, operating synchronously to pump gas from the inlet to the exhaust. Each single stage consists of two counter-rotating figure-eight shaped lobes that are separated by a very small gap. New rotary lobe designs provide an ultimate pressure in the range of 5 to 20 mTorr. These rotary lobe vacuum pumps are dry "oil-free" which eliminates problems with oil mist or oil back-streaming which are common with oil-sealed rotary vane vacuum pumps.

Rotary lobe vacuum pumps are non-contact pumps which do not contain Tip-Seals, so they're particulate free, making them a good option over dry scroll vacuum pumps. They are often equipped with a gas ballast to reduce vapor condensation inside the pump and to help pump lighter gases. Rotary lobe vacuum pumps are considered to be highly reliable, with no user maintenance needed between major overhauls, which are typically required after 3-5 years of solid service. Dry multi-stage rotary lobe vacuum pumps are the cleanest of all roughing pumps, they are compact, and reliable. These benefits make them popular in many production applications, including, semiconductor, plasma cleaning, load locks transfer, physical vapor deposition (PVD), photovoltaic, and medical device production applications.

ADIXEN ACP40
22 CFM (600L/M)
220 mTorr

EBARA EV-A10
36 CFM (1000L/M)
7.5 mTorr

Alcatel Adixen
by PFEIFFER VACUUM
ACP Compact Multi-Stage Roots Dry Pumps

The vacuum pumping technology for these NEW compact dry roughing vacuum pumps is based on a frictionless multi-stage roots design. These Alcatel Adixen ACP series pumps are optimized for operation without lubricants inside the pumping module. The benefits of multi-roots dry pumps include oil-free and particulate free dry vacuum, e.g., unlike their counterparts, the dry scroll pump which generate tip seal dust and the oil-sealed rotary vane pumps which suffer from hydrocarbon vapor backstreaming. The new and improved ACP dry vacuum pumps offer a reduced cost of ownership and require an overhaul only every 22,000 hours. These Alcatel Adixen ACP pumps include a single-phase integrated frequency converter with built-in instant voltage range selection. This allows these pumps to be smart and operate on any input voltage from 90 to 254 VAC at 50 or 60 Hz (with no motor setting changes required) while the rotational speed and pumping speed of the pump remains constant. This is a big selling point for OEM applications, if your tool or instrument is mobile the ACP pump can be used in any country or location that has single phase 90 to 254 VAC 50 or 60 Hz wall plug.

Model	Ideal P/N	Adixen P/N	Volts/Phase	Price*
ACP 15	P102997	V5SATSMFAF	90 to 245 VAC 1Ø	$7,816.50
ACP 15G*	P102998	V5GATSRFAF	90 to 245 VAC 1Ø	$9,085.00
ACP 28	P102996	V6SATSFAMF	90 to 245 VAC 1Ø	$11,664.00
ACP 28**		V6SATSFABF	90 to 245 VAC 1Ø	$11,664.00
ACP28G*	P103000	V6GATSFABF	90 to 245 VAC 1Ø	$13,567.00
ACP 40	P102995	V8SACSFAMF	90 to 245 VAC 1Ø	$13,513.50
ACP 40G*	P102999	V8GACSFABF	90 to 245 VAC 1Ø	$15,417.50

* For pumping traces of Corrosive Gases
** Blanked off Ballast

ACCESSORIES

IPF 40
Inlet Particle Filter for
ACP 40 - KF40
P/N P103002 $748.00

IPF 25
Inlet Particle Filter for
ACP 15 or ACP28 - KF25
P/N P103001 $549.00

ADIXEN Dry Compact MultiStage Roots Pumps SPECIFICATIONS

Model	Weight (lbs.)	L x W x H in.	Inlet	Outlet	CFM (M^3hr.)@60hz	Max. Continuous Inlet Pressure(Torr)	Ultimate Pressure (Torr)
ACP 15	51	20.2x7.5x10.6	KF25	KF16	8.2 (14)	750	2.2×10^{-2}
ACP 28	66	25.4x7.6x12.6	KF25	KF25	16 (27)	750	2.2×10^{-2}
ACP 40	71	25.4x7.6x12.6	KF40	KF25	22 (37)	750	2.2×10^{-2}

* Catalog Pricing Subject to Change

EBARA EV-A series DRY Rotary Lobe Vacuum Pumps

Manufacture Warranty
Most NEW Pumps IN STOCK

Ebara EV-A dry rotary lobe vacuum pumps are air-cooled and are designed for light duty dry vacuum applications. These dry pumps the (EV-A03, EV-A06, EV-A10 and EV-AS20) have pumping speeds between 9 to 59 cfm (250 to 1670 L/Min) operate very quiet at 56 dB (A) operating noise level, and have an ultimate pressure without gas ballast of is 7.5 mTorr to 22.5 mTorr. They have very low operating power consumption, as low as 1.1 kW at ultimate pressure. They come in 1 or 3 phase and 110 to 220 VAC.

These pumps employee multi-stage Roots roughing pump technology to achieve a totally clean dry vacuum, to include 5 or 6 internal pumping stages (depending on model). The pump operates on a pair of hybrid Roots which synchronously rotate to keeping a given clearance while transferring the gas from the inlet to the outlet exhaust port. Gears are installed on the other side of the rotors where lubricating oil is used. These are dry vacuum pumps, the oil is not inside the vacuum volume of the pump and is only located inside the gear section. The EV-A 03 and EV-A 06 models use mineral gear oil while the EV-A 10 and EV-AS20 models use Fomblin PFPE gear oil.

The Ebara EV-A pumps produce a clean dry vacuum thanks to its frictionless design, being non-contact, multi-stage roots, reliable, and providing particle-free vacuum generation. Unlike scroll pumps, the EV-A pumps do not have tip seals that wear and generate particulate dust that can be a contaminant of the roughing line and processes chamber during suckback issues. The highly reliable design of the Ebara EV-A vacuum pumps allow for dry vacuum at lower cost of ownership. These pumps eliminate the hassle of tip seal & bearing replacements and do not have base pressure drifts that occurs as tips seals wear in dry scroll pumps. The improved rotary lobes pump design provides a constant ultimate pressure over the entire life of the pump.

The Ebara EV-A pumps are fan cooled but are designed to run at higher internal temperatures which allows them to have a large condensable vapor pumping capacity. Friction from the shaft seals and bearings along with heat that is generated as the gas is compressed help to increase the internal operating temperature of the vacuum pump. When pumping of condensable vapors, installation of the optional gas ballast is required, to prevent condensation inside the pump. Air or nitrogen introduced by the gas ballast reduces the partial pressure of the pumped gases to exceed their saturation vapor pressure (keep them in the vapor phase). It is recommended to use the atmospheric air gas ballast when pumping of non-flammable vapor and condensable solvents. When pumping gas vapors of flammable solvents the N2 ballast must be correctly used following the operation manual. It is effective to keep the pump running about one hour after process completion with the gas ballast valve open when pumping condensable gases like water vapor. This helps to remove all traces of water before the pump is turned off.

The Ebara EV-A dry rotary lobe vacuum pumps include an operation panel and LED display to adjust the pump conditions and control pump settings, such as, run frequency, current, run hours, and error monitoring. These pump motors include a Variable Frequency Drive (VFD) that starts the pump slowly from rest to full speed, reducing noise and vibration, while providing a low start up current. The pumps also include an I/O connector D-sub port which provides dry contact functions like remote start and alarm status monitoring.

A major improvement in the Ebara EV-A design is that the first vacuum stage is located in the second position on the rotor. This orientation of the pumping stage design prevents the rotor bearings from being exposed to the high vacuum which will increase their operating life. The improved pump design also includes hard anodized aluminum body, stainless steel rotors, and internal exhaust check valves, features which help the Ebara EV-A pumps handle pumping of condensable vapors. The optional gas ballast is designed to injecting to the 3 and 4 stages in an optimal position to increase the pumps vapor handling capacity while limiting its effect on the pumps base pressure. The robust design of the Ebara EV-A pumps offer a service life which is typically 3 to 5 years depending on the application and how the pumps are used.

The Ebara EV-A series dry vacuum pumps are simple to use, simply plug them in and turn them on (it's that simple). The Ebara EV-A pumps can operate continuously at atmospheric pressure without over heating or locking up. Used as stand alone or as roughing pumps, these are exceptional dry pumps. Roller casters standard on some and optional on others. See accessories on next page.

* Catalog Pricing Subject to Change

Dry Rotary Lobe

Benefits & Features:

- Air Cooled, Compact Size
- Non-Contact Design
- Constant Ultimate Pressure
- No Tip Seal Dust
- High ATM Pumping Speed
- Single and 3 Phase
- Low Vibration and Noise
- Maintenance FREE
- Highest Water Vapor Pumping of Any Air Cool Dry Pump

EBARA EV-A series DRY Rotary Lobe Vacuum Pumps

Applications:

- Load Lock
- Analytical Instruments
- Metrology - SEM - TEM
- Drying Vacuum Ovens
- Oxygen Plasma Systems
- Wet Pump Replacement
- Scroll Pump Replacement
- Clean Applications
- Glove Boxes
- Freeze Drying
- Sterilizers
- Leak Detectors
- Beam Line & Synchrotrons
- High Energy Physics
- Space Simulation Chambers
- Turbo Pump Backing
- LED Video Display Manufacturing
- Medical & PCB Manufacturing
- Compete with PFPE Rotary Vane in Pumping Oxygen Applications

Model	Ideal Vac P/N	EBARA P/N	Volts/Phase	Price*
EV-A03	P102786	202507	115 VAC 1Ø	$8,118.00
EV-A03	P105977	202507	208-240 VAC 1Ø	$8,118.00
EV-A03	P105978	202552	208-240 VAC 3Ø	$8,118.00
EV-A06	P102787	202508	115 VAC 1Ø	$10,282.80
EV-A06	P105979	202550	208-240 VAC 1Ø	$10,282.80
EV-A06	P105980	202253	208-240 VAC 3Ø	$10,282.80
EV-A10-2U*	P105981	202551	208-240 VAC 1Ø	$11,514.03
EV-A10-3U*	P105987	202509	208-240 VAC 3Ø	$11,514.03
EV-A10-2S**	P105982	202564	208-240 VAC 1Ø	$11,514.03
EV-A10-3S**	P105985	202563	208-240 VAC 3Ø	$11,514.03
EV-A10-2U-P***	P105984	202601	208-240 VAC 1Ø	$12,890.71
EV-A10-3U-P***	P105988	202602	208-240 VAC 3Ø	$12,890.71
EV-A10-2S-P****	P105983	202604	208-240 VAC 1Ø	$12,890.71
EV-A10-3S-P****	P105986	202603	208-240 VAC 3Ø	$12,890.71
EV-A-SA20-2*	P105989	202590	208-240 VAC 1Ø	$16,528.14
EV-A-SA20-3*	P105990	202591	208-240 VAC3Ø	$16,528.14

*Upper Exhaust, **Side Exhaust, ***Upper Exhuast & N2 Purge Unit,

****Side Exhaust & N2 Purge Unit

Ebara DRY EV Series Pump SPECIFICATIONS

Model	Weight (lbs.)	Inlet	Outlet	CFM (M^3hr.)	Ultimate Pressure(mTorr)
EV-A03	41	KF25	KF25	9 (15)	7.5
EV-A06	119	KF40	KF25	22(36)	7.5
EV-A10	159	KF40	KF25	36 (60)	7.5
EV-SA20	143	KF40	KF40	59 (100)	22.5

ACCESSORIES for EV-A Ebara Pumps	Ideal Vac P/N	Price*
AC Cable 1phase, 115 VAC, EV-A03, EV-A06	P104875	$151.80
AC Cable 1phase, 208-480 VAC, EV-A03, EV-A06	P106009	$218.40
AC Cable 3phase, 208-480 VAC, EV-A03, EV-A06	P106010	$225.60
AC Cable 1phase, 208-480 VAC, EV-A10	P106007	$151.80
AC Cable 3phase, 208-480 VAC, EV-A10, EV-SA20	P106008	$139.95
Clear Blue Caster Wheels with brake, EV-A03, EV-A06, (4 ea.)	P105994	$125.00
Intake Catch Pot Trap for Liquids KF25, EV-A03	P106006	$995.00
Intake Catch Pot Trap for Liquids KF40, EV-A06	P106005	$1,195.00
Air Gas Ballast Adapter, EV-A03	P103981	$330.00
Nitrogen N2 Introduction Adapter, EV-A03	P105993	$330.00
Air Gas Ballast Adapter, EV-A06	P105991	$330.00
Nitrogen N2 Introduction Adapter, EV-A06	P105992	$330.00
Star Leveler Legs Swivel Pads, 1.25" dia.", EV-03, EV-06 (1ea.)	P104079	$32.95
Star Leveler Legs Stationary Pads, 1.38" dia., EV-03, EV-06 (1ea.)	P104082	$27.95
Star Leveler Legs Stationary Nylon Pads, 2" dia., EV-03, EV-06 (1ea.)	P104080	$8.21
Star Leveler Legs Stationary Elastomer Pads, 2" dia., EV-03, EV-06 (1ea.)	P104081	$38.25
Rubber Vibration Feet Male end, 1.56" dia., EV-03, EV-06 (1ea.)	P105995	$16.80
Rubber Vibration Feet Male ends both sides 1.56" dia., EV-03, EV-06 (1ea.)	P104083	$26.89
Rubber Vibration Feet Male ends both sides 2.00" dia., EV-03, EV-06 (1ea.)	P104084	$29.98
Rubber Vibration Feet Female ends both sides 2.00" dia., EV-03, EV-06 (1ea.)	P104085	$36.95
Vibration Mount Female Thread, Durometer,Neoprene, EV-03, EV-06 (1ea.)	P104086	$34.95

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