



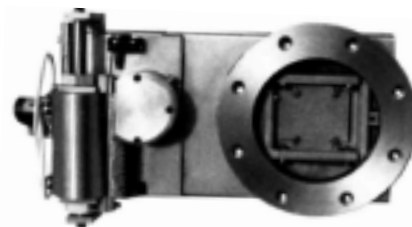
**A-VAC INDUSTRIES**®  
**High Vacuum Supply Directory**



**New & Rebuilt  
 Vacuum Pumps**



**Parts &  
 Accessories**



**Helium  
 Leak Detectors  
 & Supplies**



**High Vacuum  
 Pumps**



**... and  
 more!**



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 Today:

**800-747-2821**

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**FAX: 714-938-0899**

**E-MAIL: savemoney@avac.com**

**See us on the web!  
[www.avac.com](http://www.avac.com)**

# Terms and Conditions

**Pricing:** A-VAC makes every effort to maintain prices as long as possible, but unavoidable adjustments may be made without notice. Prices do not include taxes or shipping.

**Delivery:** All in stock items are shipped F.O.B. Anaheim, CA. While every effort shall be made to meet delivery estimates, A-VAC shall not be liable for losses resulting from unforeseen shipping delays.

**Terms:** Net 30 days upon approved credit. Some shipments may be delayed while credit is being established. Payment may also be made with check or money order as well as Visa and Mastercard.

**Returns, cancellations:** All items returned to A-VAC Industries require a returned goods authorization number

(RGA). Items returned for any other reason than repair, service or warranty adjustment shall be subject to a restocking charge. Cancellation of all stocked item orders shall be honored until order is shipped. After that period, restocking charges will be charged.

**Toll Free: 800-747-2821 Phone: 714-938-1300**  
**Fax: 714-938-0899 E-Mail: [savemoney@avac.com](mailto:savemoney@avac.com)**  
**Internet: [www.avac.com](http://www.avac.com)**  
**Hours: 7:00am - 4:30pm PST**

**Warranty:** All standard catalog items sold by A-VAC Industries shall be free from defects in material and workmanship for a period of one year. Warranty covers items

subject to normal use as determined by seller. Defective items shall be repaired or replaced at the discretion of A-VAC Industries.

**Governing Law:** All transactions conducted by A-VAC Industries shall be governed by the laws in effect in the State of California.

## A-VAC Industries - a history lesson

Once upon a time, back in the dark ages (1969), before I-Pods, Nintendo games and cellular phones, A-Vac Industries was established in Santa Ana, CA. With industry booming in Southern California, and the need for high vacuum equipment service escalating, our founder, Merlin T. Kirby opened the doors of A-Vac Industries to fill that need. 'Providing quality service' was our motto and our business philosophy. While that philosophy

hasn't changed, a lot of other things have. Each year since '69, we have continued to expand our list of services and products while continuing to grow. And our recent expansion to a modern new facility in Anaheim, CA., has allowed us to serve our clients better than ever. We at A-VAC are very proud of our growth and will never forget who made our success possible - the loyal customers and friends we have served through the years.

## Table Of Contents

Vacuum pump filters	3	Helium leak detector parts	10
Diffusion pump fluids	4	Helium leak detectors, new	11
Greases & Sealants	4	Rebuilt vacuum pumps	12
Vacuum pump fluids	5	Vacuum pump repair kits	13
Thermocouple gauges	6	Alcatel vacuum pumps, new	14
Thermocouple gauge tubes & accessories	6	Welch vacuum pumps, new	15
Ionization gauge tubes & accessories	7	Vacuum test chambers	15
Flanges & gaskets	8	Welch pump parts and accessories	16-17
Vacuum hardware, hose and valves	9	Industrial vacuum systems	18

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**Direct Drive!**



# Vacuum Pumps By:



High vacuum requires high quality. Alcatel's "Pascal" series pumps are famous for the quality & reliability needed to meet today's exacting requirements. If you need top quality direct drive pumping, you need Alcatel.

**SD Series:** for use in all general non-corrosive gas applications for industrial, analytical instrumentation and R&D applications.

**I Series:** Addressing specific requirements of the analytical instrument market.

**C1 Series:** Engineered for the aggressive environments encountered in semiconductor dry chemistry plasma (CP) processes and other aggressive industrial, chemical and R&D applications.

**C2 Series:** For enhanced reliability in corrosive applications, specifically semiconductor, chemical & R&D applications that limit the operational service life of standard pumps.

**H1 Series:** All hermetic pumps are helium leak tested and certified to insure safe evacuation of exotic gases.

MODEL	SERIES	CFM	VOLTAGE	MOTOR		CATALOG #
				TYPE		
2005	SD	3.8	LOW	1 PHASE		40.10401.01
2005	SD	3.8	HIGH	3 PHASE		40.10402.01
2005	AE	3.8	LOW	1 PHASE		40.10403.01
2005	AE	3.8	HIGH	3 PHASE		40.10404.01
2005	C1	3.8	LOW	1 PHASE		40.10405.01
2005	C1	3.8	HIGH	3 PHASE		40.10406.01
2005	H1	3.8	LOW	1 PHASE		40.10407.01
2005	H1	3.8	HIGH	3 PHASE		40.10408.01
2010	SD	6.8	LOW	1 PHASE		40.10409.01
2010	SD	6.8	HIGH	3 PHASE		40.10410.01
2010	AE	6.8	LOW	1 PHASE		40.10411.01
2010	AE	6.8	HIGH	3 PHASE		40.10412.01
2010	C1	6.8	LOW	1 PHASE		40.10413.01
2010	C1	6.8	HIGH	3 PHASE		40.10414.01
2010	C2	6.8	LOW	1 PHASE		40.10415.01
2010	C2	6.8	HIGH	3 PHASE		40.10416.01
2015	SD	10.6	LOW	1 PHASE		40.10417.01
2015	SD	10.6	HIGH	3 PHASE		40.10418.01
2015	AE	10.6	LOW	1 PHASE		40.10419.01
2015	AE	10.6	HIGH	3 PHASE		40.10420.01
2015	C1	10.6	LOW	1 PHASE		40.10421.01
2015	C1	10.6	HIGH	3 PHASE		40.10422.01
2015	C2	10.6	LOW	1 PHASE		40.10423.01
2015	C2	10.6	HIGH	3 PHASE		40.10424.01
2015	H1	10.6	LOW	1 PHASE		40.10425.01
2015	H1	10.6	HIGH	3 PHASE		40.10426.01
2021	SD	14.6	LOW	1 PHASE		40.10427.01
2021	SD	14.6	HIGH	3 PHASE		40.10428.01
2021	AE	14.6	LOW	1 PHASE		40.10429.01
2021	AE	14.6	HIGH	3 PHASE		40.10430.01
2021	C1	14.6	LOW	1 PHASE		40.10431.01
2021	C1	14.6	HIGH	3 PHASE		40.10432.01
2021	C2	14.6	LOW	1 PHASE		40.10433.01
2021	C2	14.6	HIGH	3 PHASE		40.10434.01

## Exhaust Filters

For applications requiring clean, oil-free exhaust air, nothing compares to Alcatel's OME25S filters.

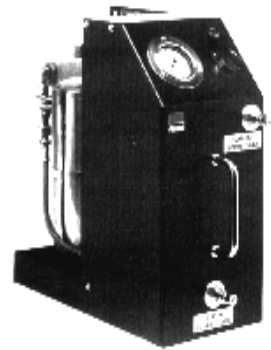


Catalog # 33.66065.01  
Element, 5 pk.#33.66067.01

## External Oil Filters

Alcatel filter systems circulate your pump oil through special filters designed to retain solids and neutralize corrosives, making for a happier, longer-lasting pump.

Catalog # 42.00011.01



# Vacuum Pumps

BY: **WELCH**  
Vacuum Technology



**Belt Drive!**

A trusted supplier of vacuum pumps for over 100 years, Welch Vacuum continues producing the highest quality belt-drive pumps around. For applications requiring rugged, dependable pumping below one micron, Welch pumps are unsurpassed.

## Standard Series (SD):

Welch standard series pumps are designed for non-corrosive applications requiring reliable vacuum levels to  $1 \times 10^{-4}$  range. All models sold complete w/ ballast valve assembly.

Model / Series	CFM	Base Press. (Torr)	115 / 230 volt catalog #
1400 SD	0.9	$1 \times 10^{-4}$	40.44050.01
1400 N	0.9	$1 \times 10^{-4}$	40.44150.01
1405 SD	2.1	$1 \times 10^{-4}$	40.44032.01
1402 SD	5.6	$1 \times 10^{-4}$	40.44026.01
1402 N	5.6	$1 \times 10^{-4}$	40.44126.01
1376 SD	10.6	$1 \times 10^{-4}$	40.44008.01
1376 N	10.6	$1 \times 10^{-4}$	40.44108.01
1397 SD	17.7	$1 \times 10^{-4}$	40.44018.01
1374 SD	23.0	$1 \times 10^{-4}$	40.44004.01
1374 N	23.0	$1 \times 10^{-4}$	40.44104.01

## Chemstar Series (N):

Welch Chemstar pumps feature viton seals, stainless exhaust valves, teflon coated oil cases, and steel vanes for high corrosion and contamination resistance. NW fittings and nitrogen purge connections are standard. Perfect for corrosive gas applications.

## Welch Oil Filtration System

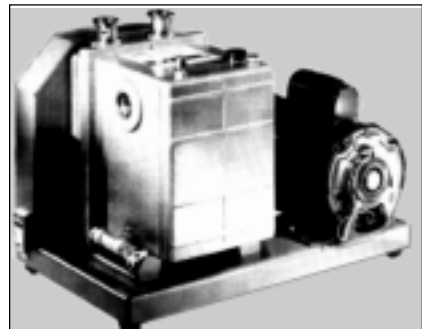


Designed for direct connection to Chemstar series pumps, to protect against heavy loads of corrosive gases or particulates. Oil is continuously removed, filtered and returned to pump while in operation, extending the life of both pump and fluid. 18 lbs. 115 volt operation.

Catalog # 42.00021.01

Replacement filter element

Catalog # 33.60025.01



Economical

# Vacuum Chambers

Complete amber-tinted bell jar of polyetherimide plastic, with polycarbonate base, neoprene gasket and 1/4" hose connection. 12" x 12" chamber dimension offers plenty of room for experiments, degassing or laboratory projects.



Catalog # 35.50030.01

Clear polycarbonate vacuum desiccator complete with neoprene o-ring seal, three way stopcock valve. 10" x 10" working diameter.



Catalog # 35.10001.01

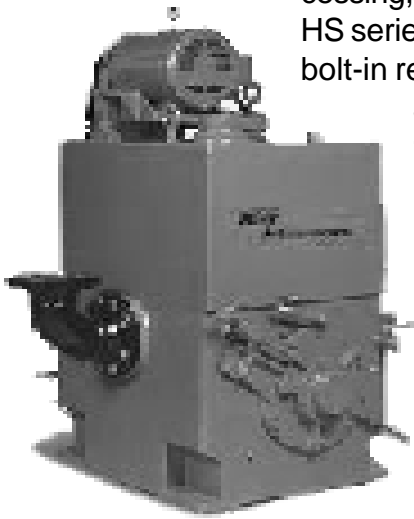
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# Hull Vacuum Pumps

For industrial applications requiring reliable, rugged pumping as in chemical processing, heat treating, vacuum furnaces, metallizing and vacuum coating, Hull brand HS series vacuum pumps provide unsurpassed performance. Designed as a direct bolt-in replacement for another popular rotary piston pump, the HS series pumps actually provide comparable performance and a lower price! All this with a **three year warranty** and uptime support guarantees reliable pumping for years to come.

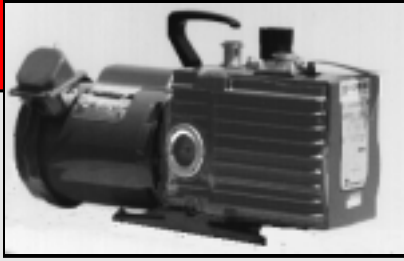


Model	HS-110	HS-150	HS-300
CFM	110	150	300
Ultimate Vacuum, Torr	.02	.005	0.01
Motor H.P.	5	10	15
Oil Capacity, gallons	5	6.5	12
Weight	1,100 lbs.	1,200 lbs	1,750 lbs
Inlet	3.0" ASA	3.0" ASA	4.0" ANSI
Outlet	2.0" FPT	2.0" NPT	3.0 NPT
Cooling water req'd	2.5 gpm	3 gpm	2 gpm
Catalog #	40.97802.01	40.97804.01	40.97800.01

## Pump / Blower Packages

COMING SOON!





# Rebuilt Vacuum Pumps



Our completely remanufactured vacuum pumps stand ready to give years of trouble free performance. Built to factory specs and warranted for one year. For back up, economical expansion or cost conscious startups, our pumps are the intelligent choice!

	Model	CFM	Voltage	Catalog #	Model	CFM	Voltage	Catalog #	
<b>Direct Drive</b>	<b>ALCATEL</b>				<b>Belt Drive</b>	<b>KINNEY</b>			
	2004	3.2	115	40.10204.02		KC5	3	115	40.83409.02
	2008	7	115	40.10206.02		KC8	8	115	40.83407.02
	2012	11	115	40.10210.02		KC15	15	115	40.83410.02
	2033	27	230/460	40.10230.02		KTC21	21	230/460	40.83412.02
	2063	50	230/460	40.10270.02		KDH80	83	230/460	40.83428.02
	<b>EDWARDS</b>					<b>STOKES</b>			
	E2M2	2	115	40.20505.02		148H10	50	230/460	40.74611.02
	E2M5	4	115	40.22613.02		149H10	80	230/460	40.74610.02
	E2M8	6.7	115	40.22608.02		212H10	150	230/460	40.74614.02
E2M12	10	115	40.22610.02	412H10	300	230/460	40.74618.02		
E2M18	14.7	115	40.22612.02	<b>WELCH</b>					
E2M30	19.4	230/460	40.22622.02	1400	.9	115	40.44024.02		
E2M40	30	230/460	40.22614.02	1405	2.1	115	40.44032.02		
E2M80	57	230/460	40.22616.02	1402	5.6	115	40.44026.02		
E2M175	105	230/460	40.22603.02	1376	10.6	115	40.44008.02		
E2M275	210	230/460	40.22604.02	1374	23	230/460	40.44004.02		
<b>LEYBOLD</b>				1375	35	230/460	40.44006.02		
D2A	2.2	115	40.33803.02	1397	17.7	115	40.44018.02		
D4A	4.5	115	40.33806.02	1398	53	230/460	40.44020.02		
D8A	7	115/230	40.33810.02						
D16A	14.1	115/230	40.33814.02						
D30A	26.8	230/460	40.33801.02						
D60A	36.7	230/460	40.33822.02						
D90A	55.0	230/460	40.33826.02						

Note: All pumps rebuilt by A-VAC are professionally assembled to factory specifications with Pro-Torr gold pump fluid. Custom or PFPE fluids maybe substituted at additional cost.

Corrosive application 'C' series pumps are also available at A-VAC.

## Factory pump rebuilding



A-VAC has provided professional rebuilding services since 1969. All major brands of vacuum pumps and blowers are rebuilt in our Anaheim, CA. service department and shipped back with a full ONE YEAR WARRANTY! For professional service rely on A-VAC!

Standard rebuilding service includes:

- Complete disassembly
- Decontamination
- Remachining
- Reassembly w/ Pro-Torr repair kit
- 24 hr run-in
- Repainting & detailing
- Quality Control Final Inspection

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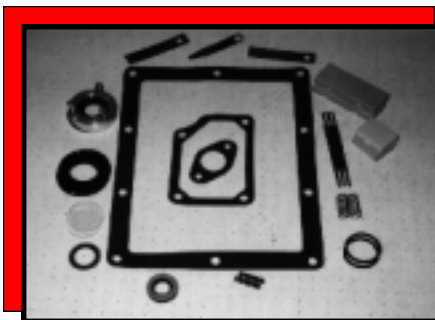
# Pro-Torr Pump Rebuild Kits

High quality Pro-Torr repair kits include all replacement wear parts needed to complete major repairs. These are the same kits used by A-VAC's service department, which allow us to offer a one year repair warranty.

for use in

## ALCATEL 'A' SERIES

Model	Catalog #
2004A	41.10496.01
2004AC	41.10527.01
2008A	41.10494.01
2008AC	41.10506.01
2012A	41.10493.01
2012AC	41.10566.01
2020A	41.10497.01
2020AC	41.10586.01
2033	41.10500.01
2033C	41.10511.01
2063	41.10518.01
2063C	41.10503.01



for use in

## LEYBOLD 'B' SERIES

Model	Catalog #
D1.6B	41.33918.01
D4B	41.33765.01
D8B	41.33981.01
D16B	41.33719.01
D25B	41.33788.01
D40B	41.33839.01
D65B	41.33876.01

for use in

## LEYBOLD 'A' SERIES

Model	Catalog #
D2A	41.33702.01
D2AC	41.33919.01
D4A	41.33857.01
D4AC	41.33764.01
D8A	41.33808.01
D8AC	41.33807.01
D16A	41.33833.01
D16AC	41.33824.01
D30A	41.33818.01
D30AC	41.33801.01
D60A	41.33870.01
D60AC	41.33929.01
D90A	41.33870.01
D90AC	41.33929.01

for use in

## WELCH

Model	Catalog #
1373	41.44055.01
1374	41.44119.01
1375	41.44190.01
1376	41.44221.01
1380	41.44234.01
1395	41.44258.01
1396	41.44262.01
1397	41.44268.01
1398	41.44272.01
1399	41.44298.01
1400	41.44318.01
1402	41.44324.01
1403	41.44337.01
1405	41.44390.01

for use in

## ALCATEL 'Pascal' SERIES

Model	Catalog #
2005	41.10102.01
2005C	41.10103.01
2010	41.10104.01
2010C	41.10105.01
2015	41.10106.01
2015C	41.10107.01
2021	41.10108.01
2021C	41.10109.01

for use in

## EDWARDS

Model	Catalog #
E2M2	41.22425.01
E2M5	41.22690.01
E2M8	41.22744.01
E2M12	41.22685.01
E2M18	41.22803.01
E2M30	41.22722.01
E2M40	41.22687.01
E2M80	41.22718.01

## Celvaseal Leak Sealant

Our silicone resin makes an excellent sealant for pump reassembly.



Quantity	Catalog #
2 oz. w/ applicator	24.00400.01
16 oz. spray can	24.00300.01

ASK ABOUT . . .  
OUR REBUILDING SERVICE TOO!

# Vacuum Pump Filters

## Intake Filters

For effective trapping of particulates to 10 micron size, these intake filters are the best protection for your pump. Shipped complete with polyester filter element



Connection	CFM Flow	Catalog #	Extra Element#
1/2" FPT	10	33.11021.01	33.11056.01
3/4" FPT	20	33.11000.01	33.11056.01
1" FPT	40	33.11051.01	33.11800.01
1 1/2" FPT	80	33.11052.01	33.11800.01
2" FPT	150	33.11057.01	33.11019.01
2 1/2" FPT	195	33.11053.01	33.11019.01
3" MPT	300	33.11054.01	33.11102.01

## Exhaust Filters



To remove oil vapor from exhaust air, these filters are unsurpassed. Complete with wrapped fiberglass elements to insure 99.97% trapping efficiency.

Connection	CFM Flow	Catalog #	Extra Element#
NW16	4.5	33.66025.01	33.66011.01
NW25	24	33.66027.01	33.66031.01
NW40	44	33.66028.01	33.66039.01

## Molecular Sieve Traps

For trapping out oil and water vapor, sieve traps are the logical choice. Traps are filled with type 13X molecular sieve material, which looks like small ceramic pellets. Though appearing smooth, these pellets are actually quite porous, making them ideal for trapping water, oil and other gas vapors before they get into your pump. Complete with 115 volt heater for bake-out, these traps are cheap insurance against pump contamination.



Flange	Catalog#
NW16	34.44026.01
NW25	34.44027.01
NW40	34.44028.01
NW50	34.44031.01

## Molecular Sieve Material

### For use in sieve traps

In "Lab-Speak" our 13X sieve material is a modified form of the sodium zeolite with a pore diameter of ten angstroms ideally suited for absorbing molecules of Chloroform, Carbon Tetrachloride and Benzene. In simple terms, these little ceramic-looking pellets do a great job of trapping water vapors before they get into your vacuum pump, while keeping oil vapors from backstreaming out of your pump.



1 lb. container Catalog # 34.59012.01

## Oil Filtration Systems

COMING SOON

## Moisture- Sensing Sieve Material

Standard 13X absorption with a difference. Bright blue color lightens as moisture is absorbed. Color turns to buff at full saturation indicating time for replacement



1 lb. bag

Catalog #34.59016.01



# Vacuum Pump Fluids



Our years as leaders in high vacuum service have taught us many things. One is to keep your necktie away from pump pulleys. Another is that not all vacuum fluids are created equal. These are the ones we recommend.

DESCRIPTION	Quantity	Catalog #
<p><b>Techni-Clear<sup>®</sup></b>                      For direct drive mechanical pumps. A highly distilled, clear hydrocarbon based fluid. For use in harsh environments, where corrosion resistance and lower vapor pressure is a must.</p>	1 gallon container 5 gallon container 55 gallon drum*	20.32000.10 20.32000.50 20.32000.55
<p><b>Pro -Torr Gold<sup>®</sup></b>                      Refined hydrocarbon mineral oil for belt driven rotary vane and piston vacuum pumps. Provides good sealing, lubricity and ultimate vacuum.</p>	1 gallon container 5 gallon container 55 gallon drum*	20.10000.10 20.10000.50 20.10000.55
<p><b>Pro-Torr API<sup>®</sup></b>                      Designed for rough vacuum pumps, i.e. Busch and Becker, this non-detergent hydrocarbon meets API classification SA and provides excellent lubricity for extended pump life.</p>	1 gallon container 5 gallon container 55 gallon drum*	20.42000.10 20.42000.50 20.42000.55
<p><b>Bluoil<sup>®</sup></b>                      The original "corrosion fighter", Synth Blue is ideal for highly corrosive and reactive applications. Increased pump service life means less downtime.</p>	1 gallon container 5 gallon container 55 gallon drum*	20.50000.10 20.50000.50 20.50000.55
<p><b>Fomblin<sup>®</sup></b>                      The original and still the best PFPE vacuum pump fluid available. For oxygen pumping applications. Chemically inert and oxygen compatible. Other inert fluids also available.</p>	Fomblin Y14/6, 500cc Fomblin Y14/6, 1 gallon Fomblin Y06/6, 500cc Fomblin Y06/6, 1 gallon Fomblin Y25/6, 500cc Fomblin Y25/6, 1 gallon Fomblin / PFPE recycling, per gallon	23.10200.05 23.10200.10 23.10100.05 23.10100.10 23.10000.05 23.10000.10 26.10000.02

\* A refundable \$30. drum deposit shall be applied on all 55 gallon drum orders Note: Other fluid brands, types and quantities are also available, ask our order desk.

## Oil Drum pumps

These 10 gpm rotary hand crank pumps feature cast-iron construction and buna seals for long life and are designed especially for installation in 55 gallon drums. Makes oil transfer a breeze!

Catalog #39.00066.01



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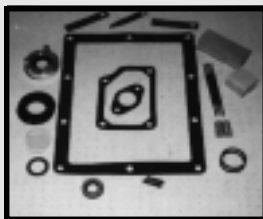
# Welch Vacuum Pump Parts

It's no secret that Welch Scientific manufactures some of the most dependable vacuum pumps around. But to keep your Welch pump working great, you occasionally have to treat it to high quality replacement parts. Here are some of the best.

## Repair Kits

By **PRO-TORR**

These high quality kits include everything you could need to keep your Welch pump running great. For general service and clean up, order a minor kit, which has o-rings, shaft seals, die cut gaskets, washers, woodruff keys and exhaust valves. For complete overhaul use a major kit which includes all of the above plus vanes, vane springs and holders.



For use on  
**Model**

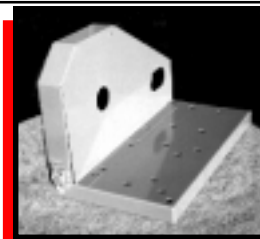
**Minor  
Kit**

**Major  
Kit**

1373	41.44055.AI	41.44055.AA
1374	41.44119.AI	41.44119.AA
1375	41.44190.AI	41.44190.AA
1376	41.44221.AI	41.44221.AA
1380	41.44234.AI	41.44234.AA
1395	41.44258.AI	41.44258.AA
1396	41.44262.AI	41.44262.AA
1397	41.44268.AI	41.44268.AA
1398	41.44272.AI	41.44272.AA
1399	41.44298.AI	41.44298.AA
1400	41.44318.AI	41.44318.AA
1402	41.44324.AI	41.44324.AA
1403	41.44337.AI	41.44337.AA
1405	41.44390.AI	41.44390.AA

## Base / Belt Guard Assemblies

Identical in size & shape to OEM OSHA-approved Welch parts, these assemblies are powder coated for durability & shipped complete with rubber feet and zinc-plated latches.



**Fits Model #**

**Catalog #**

1400/1399  
1402/1405  
1376  
1397/1374

41.44577.AA  
41.44576.AA  
41.48000.AA  
41.44575.AA

## Pump / Motor Pulleys

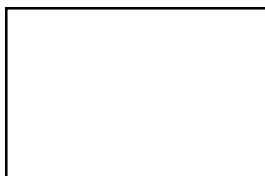
new pulleys increase belt life



Model #	Motor Pulley	Pump Pulley
1400/1399	30.24102.01	30.24006.01
1402 / 1376	30.24101.01	30.24001.01
1405	30.24101.01	30.24007.01
1397	30.24008.01	30.24002.01
1374	30.24059.01	30.24002.01

## Drive Belts

Replace that tired, cracked, old belt, *before* it breaks!



**Model #**

**Catalog #**

1400	30.00010.01
1402 / 1405	30.00012.01
1397(set of 2)	30.00019.01
1374 (set of 2)	30.00045.01
1376	30.00012.01

new style

## Shaft Seals



Replace that leaky old mechanical seal with a high quality, economical lip seal and say goodbye to oil leaks! Kits include new housing, gasket & seal.

**Pump model**

**Catalog #**

1399/1400/1405	41.47212.01
1373/1376/1380/1402	41.47213.01
1397/1374	41.47237.01

**WWW.AVAC.COM**

**800-747-2821**

# Welch Vacuum Pump Parts

## Electric Motors

TEFC motors by GE insure high torque & easy starting. 115 /230 volt, capacitor start.



### Fits model #

1400  
1402 / 1405  
1376 / 1397

### Catalog #

30.44014.01  
30.44010.01  
30.44221.01

## Vacuum Hose

Our pure gum rubber vacuum hose insures tight flexible sealing and low outgassing.



### Fits

Model #	I.D.	O.D.	Catalog #
1400	1/2"	1 1/4"	31.00030.01
1405	5/8"	1 3/8"	31.00035.01
1402	3/4"	1 1/2"	31.00040.01
1397	1 5/8"	3"	31.00065.01
1374	1 5/8"	3"	31.00065.01
1376	1 1/2"	2 1/2"	31.00060.01

Note: On hose over 1" i.d., sections longer than 6-8" should be supported internally

## Exhaust Smoke Eliminators

Filter and reduce exhaust oil mist.  
Protect your employees and our environment



### Fits

### Model #

1400/1405  
extra element  
1402/1376  
extra element  
1397/1374  
extra element

### Catalog #

33.66012.01  
33.66040.01  
33.66023.01  
33.66031.01  
33.66021.01  
33.66039.01

## Replacement Shaft Assemblies

A leading cause of oil leaks is a worn or scored shaft at the shaft seal area. If it's not smooth, it's time for a new shaft.

### Model #

1400  
1402  
1405  
1397/1374

### Catalog #

41.44299.01  
41.44322.01  
41.44386.01  
41.44060.01

## Intake Adapter Fittings

The easiest way possible to adapt Welch intake to standard NW (KF) or female pipe thread fittings



### Fits

Model #	Adapts to	Catalog #
1400	NW16	32.55021.01
1405	NW25	32.55094.01
1402	NW25	32.55017.01
1376	NW25	32.59350.01
1397	1 1/2" FPT	32.55044.01

## Pro-Torr Gold vacuum pump fluid

This highly refined pure mineral oil was designed for belt driven pumps and provides good lubricity with super low vapor pressure



### Size

1 gallon  
5 gallon  
55 gallon

### Catalog #

20.10000.10  
20.10000.50  
20.10000.55

## Hardwood Pump Carts

Quit breaking your back! Put pumps on these low boy carts to ease maintenance & cleaning chores. Solid pump cart w/ castors, 900# capacity 30" x 18" size



### Catalog

#42.00001.01

## Rubber Feet

Feet of styrene bunadiene rubber stop vibration and keep your pumps from sliding around! Sold in 4 ea pack.

### Description

1400/1402/1405  
1397/1374

### Catalog #

41.49037.AA  
41.40002.AA

# Vacuum Fittings

## NW Flange Clamps

### NW10-50

For guaranteed tight connections, depend on the original NW clamp. Built to ISO standard 2861/1, clamps feature plated aluminum construction & wingnut closures.



NW Size	Catalog #
NW10/16	32.51020.01
NW25	32.51021.01
NW40	32.51022.01
NW50	32.51023.01

### NW63-500

single claw, aluminum construction, complete with fastener



NW63-100	32.55162.01
NW160-250	32.55161.01

### NW63-500

double claw, aluminum construction, complete w/ fastener



NW63-100	32.55420.01
NW160-250	32.51067.01

## Blank off Flanges

Type 304 stainless or aluminum, used to close off unused ports



NW Size	Construction	Catalog #
NW16	stainless	32.12071.01
NW16	aluminum	32.11053.01
NW25	stainless	32.12072.01
NW25	aluminum	32.11054.01
NW40	stainless	32.11058.01
NW40	aluminum	32.11055.01
NW50	stainless	32.12074.01
NW50	aluminum	32.11056.01

## NW to Hose Adapters

Aluminum construction

NW Size	Hose Size	Catalog #
NW10	1/2" or 5/8"	32.55002.01
NW16	1/2" or 5/8"	32.55019.01
NW25	3/4" to 7/8"	32.55003.01
NW40	1 1/2"	32.55004.01
NW50	1 1/2"	32.55008.01



## NW Centering Rings

### NW10-50

Stainless construction w/ viton o-ring, 200 degree c max.



NW Size		Catalog #
NW16	stainless w/ viton	32.52201.AA
NW25	stainless w/ viton	32.52202.AA
NW40	stainless w/ viton	32.52203.AA
NW50	stainless w/ viton	32.52204.AA

### NW63-160

Stainless construction w/ viton o-ring, 200 degree c max.

NW63	32.11152.01
NW80	32.11153.01
NW100	32.11154.01
NW160	32.11155.01



## NW 45° Elbows

Type 304 stainless, standard sweeping radius

NW Size	Catalog #
NW16	32.12009.01
NW25	32.12010.01
NW40	32.12011.01
NW50	32.12012.01



## NW 90° Elbows

Type 304 stainless, standard mitered radius

NW Size	Catalog #
NW16	32.12030.01
NW25	32.12031.01
NW40	32.12032.01
NW50	32.12033.01



## NW Tee

Type 304 stainless

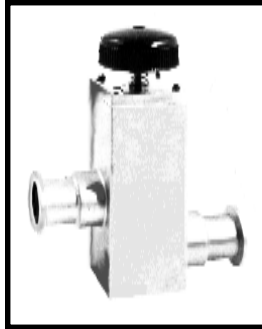
NW Size	Catalog #
NW16	32.12025.01
NW25	32.12026.01
NW40	32.12027.01
NW50	32.12028.01



# Vacuum Hardware

## Vacuum Valves

Our brass bodied bellows sealed valves feature high conductance, long-life bronze bellows, viton seals and uni-directional sealing to  $5 \times 10^{-10}$ . Available in-line or angle. Great for roughing, foreline and vacuum process lines.



**IN-LINE**

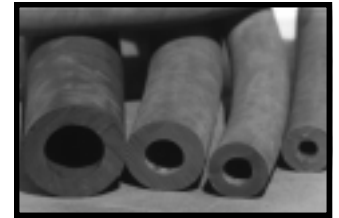
Flange Size	Manual Catalog #	Electro-pneumatic Catalog #
NW16	34.00053.01	34.00065.01
NW25	34.00054.01	34.00066.01
NW40	34.00055.01	34.00067.01
NW50	34.00056.01	34.00068.01

**ANGLE**

Flange Size	Manual Catalog #	Electro-pneumatic Catalog #
NW16	34.00059.01	34.00071.01
NW25	34.00060.01	34.00072.01
NW40	34.00061.01	34.00073.01
NW50	34.00062.01	34.00074.01

## Vacuum Hose

Pure gum rubber vacuum hose offers better sealing, flexibility and lower outgassing.



I.D.	Wall Thickness	Catalog #
1/2"	3/8"	31.00030.01
3/4"	3/8"	31.00040.01
1"	3/8"	31.00050.01
1 1/4"	1/2"	31.00055.01
1 1/2"	1/2"	31.00060.01

**New Product!**

## Smooth-bore Hose Clamps

For use with soft compound vacuum hose, these clamps feature smooth-bore embossed bands and band edges, which won't cut or damage that expensive hose.

Clamp min. opening	for use w/ hose I.D.	Catalog #
1"	1/2"	32.99187.01
1 1/4"	3/4"	32.99114.01
1 13/16"	1"	32.99240.01
2 1/16"	1 1/4"	32.99190.01
2 5/16"	1 1/2"	32.99260.01

## Ion gauge tube adaptors

Stainless construction adaptors connects 3/4" or 1" ion tubes to Conflat flange.



Description	Catalog #
3/4" tube x 2 3/4" conflat	32.11073.01
1" tube x 2 3/4" conflat	32.11074.01

## Check Valves

For rough-vacuum applications nothing works better to prevent oil backstreaming. Installed in vacuum pump intake lines, these brass bodied valves use high quality teflon seats to insure a tight seal.

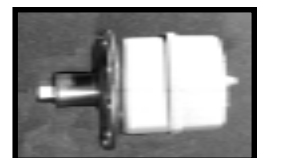


Female pipe thread	Catalog #
1/2"	34.01100.01
3/4"	34.01101.01
1"	34.01102.01

## Vacuum Switches

Our UL-approved switches are perfect for rough vacuum monitoring and controlling vacuum alarms, valves, pumps, motor starters & more. Adjustable from 0-30" mounts with 1/4" FPT.

Catalog # 36.12025.01



**WWW.AVAC.COM**

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**DIGITAL**



Heavy duty digital gauge

# Gauge Page

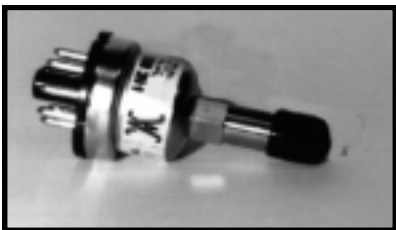
Thermocouple (TC) vacuum gauges have become the most popular high vacuum measurement tool around. Accurate yet economical, our digital TC gauges and tubes are the highest quality available.



Panel mount TC gauge



Mini gauge w/ 6 volt adaptor



TC Gauge sensors



Drop-in replacement for Varian 801



0-30" gauges

**WWW.AVAC.COM**

**800-747-2821**

## Thermocouple Gauges

**\* SOLID STATE \* DIGITAL READOUT**

**\* INDUSTRIAL QUALITY**

Description	Catalog #
Digital TC, one sensor	50.22002.AA
Digital TC, two sensor	50.22003.AA
Digital TC, three sensor	50.22008.AA
Digital TC, one sensor, battery operated	50.22004.AA
Digital TC, one sensor w/ process control	50.22005.AA
Digital TC, one sensor, heavy duty chassis	50.22006.AA
Digital TC, one sensor, panel mount	50.22022.AA
Digital TC, one sensor, mini gauge	50.22009.AA
Digital TC, one sensor, 801 digital replacement	50.22801.AA

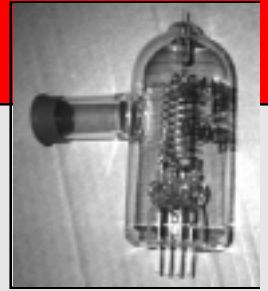
## Top Quality TC Gauge Tubes

Equal to Mnfr. #	Catalog #
#TG27/1518	51.01000.01
#GTC-004	51.01100.01
#DV3M/ DV.01M	51.01300.01
#DV6M/270-06 /MB-3M/1516	51.01400.01
#531/521/Digital TC	51.01500.01
#GTC-036	51.01600.01
#DV-4D/DV-4M	51.01604.01
#DV-23	51.01800.01

## Accessories

Description	Catalog #
Sensor tube drop out trap, 1/8" FPT x 1/8" MPT	51.42001.01
Eight pin octal plug gauge tube connector	51.00035.01
0-30" vacuum gauge, 2" face, 1/4" connection	50-00001.01

# Ionization Gauge Tubes



For accurate, dependable ion gauge readings, quality gauge tubes are a must. Made to A-VAC's standards, our line of ion tubes offer the quality you need at a price that won't make the purchasing department scream.

3/4"

## Cross Reference Size Description Catalog#

GRANVILLE (G.P.) 274002, VEECO TG-75-PO	3/4"	PYREX IRIIDIUM (IR)	51.02120.01
EATON 3300002, G. P. 274012, VEECO RG-75P	3/4"	PYREX TUNGSTEN (TU)	51.02220.01
G.P. 274003, VARIAN K2471305	3/4"	KOVAR (IR)	51.02130.01
PERKIN ELMER 605-7000, VEECO 5030-000-00, G.P. 274013, VARIAN K7360304	3/4"	KOVAR (TU)	51.02230.01
TEMESCAL 924A (0010)	3/4"	KOVAR (IR) COATED	51.02131.01
VARIAN K2471304, VEECO RG-75-N	3/4"	NONEX (IR)	51.02110.01
VEECO TG-75-N	3/4"	NONEX (TU)	51.02210.01
VARIAN K2466304	3/4"	NONEX (IR) COATED	51.02111.01
G.P. 274007	3/4"	KOVAR (IR) CONFLAT	51.05000.01

## Neck types explained

**Nonex:** Also known as "Schott" glass, used for manufacturing our most economical tubes

**Pyrex:** Our higher quality tubes use pyrex type glass. Used to connect tubes to Pyrex glass manifolds

**Kovar:** Tubes made w/ Kovar necks are far stronger & may be welded to flanges or fittings

1"

## Cross Reference Size Description Catalog #

APPLIED 3310-90003, G.P. 274015, VARIAN 572-K7360-302, MRC 4053220	1"	PYREX (TU)	51-3220-01
VARIAN 572-K7360-301	1"	NONEX (TU)	51-3210-01
VARIAN 571-K2471-301, G.P. 274004 1	1"	NONEX (IR)	51-3110-01
G.P. 274005	1"	PYREX (IR)	51-3120-01
VARIAN 563-K2466-301	1"	NONEX (IR) COATED	51-3111-01
G.P. 274006, VARIAN 571-K2471-302	1"	KOVAR (IR)	51-3130-01
APPLIED 3310-01014, TEMESCAL 924A(0010), VARIAN 563-K2466-302	1"	KOVAR (IR) COATED	51-3131-01
G.P. 274016, VARIAN 572-K7360-302	1"	KOVAR (TU)	51-3230-01
G.P. 74008, VARIAN 571-K2471-303	1"	KOVAR (IR) CONFLAT (CF)	
MRC 4053050, G.P. 274018,	1"	KOVAR TU (CF)	51-5200-01
VARIAN 572-K7360-307			
VARIAN 563-K2466-303	1"	KOVAR (IR) COATED (CF)	
ULVAC 20-UGIS	1"	UGIS (TU)	51-3240-01

## Filaments explained

**Iridium:** Used in single filament tubes (four pins). Not easily damaged by occasional bursts of atmosphere but easily contaminated by oil backstreaming. Available in coated (platinum film) and uncoated tubes

**Tungsten:** Used in dual filament tubes (six pins) where oil contamination would damage iridium  
51-5101-01

## NW Flanged ion tubes

These tubes feature the same high quality as our standard tubes but with convenient NW mounting flanges



### NW25 flanged

### Catalog #

1" tube kovar bulb, iridium filament	51-5110-01
1" tube kovar bulb, tungsten filament	51-5210-01

### NW40 flanged

1" tube kovar bulb, iridium filament	51-5120-01
1" tube kovar bulb, tungsten filament	51-5220-01

## SEALED REFERENCE TUBES

To quickly verify ion gauges, order a reference tube, sealed at  $5 \times 10^{-6}$  for quick calibration checks

Catalog # 51-3114-01

**WWW.AVAC.COM**  
800-747-2821

# TURBO Pumps

# Dry Pump Systems

**Now available from Alcatel, the new Drytel 1025, provides high performance in a portable, compact package!**

**The Drytel 1025 features and benefits include :**

*7.5 LPS pumping speed*

*10-6 mbar ultimate pressure*

*The lightest dry pumping system in its class - 33 lbs*

*Small footprint : 306 x 386 x 215 mm.*

*Reliable - 10,000 hours diaphragm life*

*Universal voltage and universal frequency.*

*Simple, one-switch operation*

*Portable*

*Easy to maintain*

*Economical*

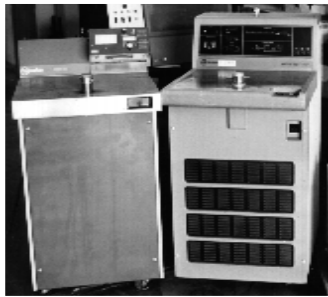


**Catalog # 60-4001-01**

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**Drytel 34**

**Drytel 100**



# Helium Leak Detector Parts

High quality repairs demand high quality parts. Here is a sample of some of the best leak detector parts and accessories available, as used by A-Vac's own service department.

## Filaments

All filaments are tungsten construction and manufactured to A-VAC's exacting standards, insuring long-life and stable leak rate readings.



for use in

Brand	Mnfr part #	Catalog #
Alcatel	53146	11.10201.01
Balzer	BN845718-T	11.41001.01
Dupont	38760	11.51525.01
Edwards	D154-20-102	11.22600.01
Varian	981-82850-301	11.88097.01
Veeco	103-141.01	11.99027.01
Veeco (5 ea.)	103-141.01	11.99026.01

## Diffusion pump heaters



for use in

Brand / model	Catalog #
Alcatel ASM-10,110,151	61.55001.01
Veeco MS-9 / 90	61.59010.01
Veeco MS-17	61.59030.01

## Discharge & TC Gauge Parts

For use in VEECO

Model	Description	Catalog #
MS-9, 90, 17	Discharge gauge (DG) repair kit	11.99051.01
MS-9, 90, 17	DG liner, ea.	11.99005.01
MS-9, 90, 17	Teflon gskt, large	11.99015.01
MS-9, 90, 17	Teflon gskt, small	11.99016.01
MS-9, 90	TC tube	51.01300.01

## Sniffer Probes

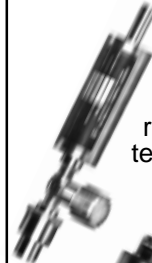
For use with helium leak detectors utilizing standard 1 1/8" test ports, our hand-held, adjustable needle valve probes are to sample atmosphere where leaks are suspected from pressurized vessels. Includes 6' vinyl hose and test port fitting.



Catalog # 12.08010.01

## Helium Leak Standards

Glass envelope construction w/ on/off valve, calibrated to NIST standards and ready for use. 1 1/8" connections fit most test ports.



Range	Catalog #
10 <sup>-7</sup>	12.09070.01
10 <sup>-8</sup>	12.09080.01

Teflon permeation leaks offer a reliable, rugged leak standard for helium that is virtually unbreakable. Ships complete w/ NW25 connection & isolation valve

10 <sup>-6</sup>	xx-xxxx-xx
10 <sup>-7</sup>	xx-xxxx-xx
10 <sup>-8</sup>	xx-xxxx-xx

## Diffusion Pump Fluid



For low vapor pressure, minimal backstreaming and ultimate pressures to 4 x10<sup>-10</sup>, Santovac ® is still some of the best diffusion pump fluid around.

Size	Catalog #
100cc	21.11400.01
500cc	21.11400.05
1 gallon	21.11400.10

## Vacuum pump oil

When servicing your leak detectors, don't forget to change the mechanical pump oil. Our Techni-clear® fluid will give you a better base pressure and a longer lasting pump.



Per gallon, Catalog # 20.32000.10

## Hand-held helium sniffer

Our hand-held helium sniffers are great for finding leaks around pressurized chambers and piping. -5th range sensitivity, Complete with carrying case, instruction manual, and a certificate of calibration.

Catalog #11.95019.01

[WWW.AVAC.COM](http://WWW.AVAC.COM)

800-747-2821



# Alcatel Leak Detectors

High quality Alcatel helium leak detectors are designed for numerous applications, including:

- \* *Electronics* \* *Aerospace* \* *Pharmaceutical*
- \* *Refrigeration / AC* \* *R&D* \* *Automotive & more!*

## ASM142 SERIES

Multipurpose leak detectors

conventional

dry

Features

ASM Graph	ASM142D
ASM142	ASM Graph D
ASM142S	ASM Graph D+

*Audio Alarm*  
*Auto-Calibration*  
*Fast start-up*



Base model catalog #10.10210.01

## ASM182 SERIES

High performance leak detectors

conventional

dry

Features

ASM182T	ASM182TD+
ASM192T	ASM192TD+
ASM192T2	ASM192T2D+

*Fast roughing*  
*Optional remote*  
*Touch screen*



Base model catalog #10.10216.01

## ASM102S SERIES

Portable dry sniffing leak detectors

Features

*High Sensitivity*  
*Lightweight*  
*User friendly*  
*Fast response time*

*Auto calibration*  
*Hand-held remote*  
*RS-232 interface*  
*Lightweight / Portable*



Base model catalog #10.102???.01

## ASI20MD

Integrable industrial leak detector

Features

Modular-design for system integration  
Small physical size  
Auto-calibration  
Auto-diagnostic  
P.L.C. controllable



Base model catalog #10.10???.01

## ASM1002

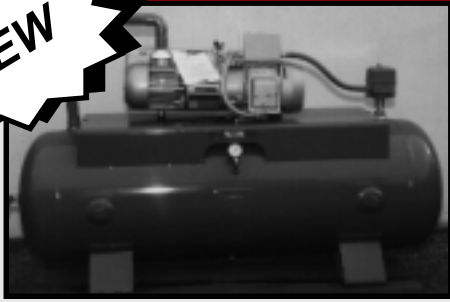
Workstation leak detector

Features

Fully automated for mass production testing  
User-friendly  
High sensitivity  
complete w/ 3 sizes of test chambers  
RS232 port



Base model catalog #10.10???.01

**NEW**

# Industrial Vacuum

## Plant Systems

Our central vacuum systems are designed for applications requiring a dependable, ready to run vacuum supply. They are ideal for medical facilities, automatic test equipment, vacuum forming and vacuum chucking. All systems are assembled with the highest quality components available including direct drive vacuum pumps, ASME-approved vacuum vessels, brass construction isolation valves, in-line check valves, adjustable vacuum switches, & bourdon tube vacuum gauges.

## Selection Chart

CATALOG # SINGLE PUMP	CFM	MOTOR H.P. / PHASE		VESSEL SIZE	CATALOG # DUAL PUMP
76.00001.01	11	1	1	30 GAL	76.00002.01
76.00003.01	18	1.25	1	60 GAL	76.00004.01
76.00005.01	18	1.50	3	80 GAL	76.00006.01
76.00007.01	31	2	3	80 GAL	76.00008.01
76.00009.01	42	3	3	120 GAL	76.00010.01
76.00011.01	69	5	3	120 GAL	76.00012.01
76.00013.01	130	7.5	3	200 GAL	76.00014.01
76.00015.01	200	10	3	200 GAL	76.00016.01





