

# HYVAC PRODUCTS, INC.

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## HYVAC VACUUM INLET TRAPS (VIT)

HyVac's Vacuum Inlet Traps (VIT) protect vacuum pumps from foreign materials to insure the highest quality air is entering the pump. The plastic transparent styrene sump shows when to change the filter insert.

Simple to maintain - change filter inserts without removing the trap from the vacuum system. Two sump sizes, 4.5" and 9.5" are offered. The 4.5" serves vacuum pumps up to a capacity of 100 L/Min (4 CFM). The 9.5" sump serves vacuum pumps ranging in capacity from 150 to 500 L/Min. (5-15 CFM).

The filter element is copper gauze with a large surface area to trap particles and oil vapors. Other filters are available specifically for difficult environments. Each of the two size traps is offered with 2 connections to serve both the older hose connector models (mostly belt driven pumps) and the newer flange connector models (mostly direct drive pumps). All VIT traps are furnished with 3/4" hose termination on the system side. Flange connection models are optionally equipped with NW adapters. NW clamps, centering rings and elbows are available for easy connection.

Special filter elements that can assist in the operation of vacuum systems in extreme environments are a benefit to today's modern vacuum system operators. HyVac's new Acid-Neut filter employs an acidic neutralizing chemical insert using a visible pH sensitive colorimetric scale to assist in evaluating filter change intervals. This filter is most helpful in freeze drying and other applications where neutralization of acidic vapor streams extends system operation due to pump or fluid degradation. Filter elements for pH basic and solvent streams are also available for use in the new HyVac VIT. Other options include VIT pressure gauges allowing for quick determination of flow rate constriction due to clogged or saturated filter elements.

HvVac Catalog#	Description
Standard = Copper Element	
310 H	9 5" tran with 3/4" hose connectors
310H 5	9 5" tran with 1/2" hose connectors
310 NW25	9 5" tran with NW25 flange connector
310 NW16	9 5" tran with NW16 flange connector
315 H	4 5" tran with 3/4" hose connectors
315H 5	4 5" tran with 1/2" hose connectors
315 NW25	4 5" tran with NW25 flange connector
315 NW16	4 5" tran with NW16 flange connector
Specials	
Stainless Steel	SS
Acid Neut Element	AN
Activated Carbon	AC
2 Micron Pleated paper	2 mic
5 Micron Pleated paper	5 mic
10 Micron Pleated paper	10 mic
Other terminations for trans available	
FOB HyVac Products, Inc.	Terms Net 30 Days

## **HYVAC VACUUM INLET TRAPS (VIT)**

VITs provide preventative maintenance to improve operation, limit downtime and help protect against expensive system failures.

An optional polypropylene bowl for the VIT is available and desirable when organic solvents are a component of the gas stream flowing through the trap. Typically the standard styrene bowl is acceptable for use when acidic streams is encountered.

Vacuum Inlet Traps (VIT) are available from select lab supply dealers and direct from HyVac Products. If you have any questions regarding suitability for operation on your specific system or application our technical staff can help you make an fast and educated decision. HyVac Products, Inc. continues to manufacture the durable HyVac belt drive and direct drive vacuum pumps and is a complete source for many products relating to the mid and high vacuum markets.

### **Filter Element Options for VIT Traps from HyVac.**

Many different types of trapping media have been devised to help eliminate all those nasty things from getting into your vacuum pump. The best method to determine the correct trapping media to employ is to make a list of all the chemicals or items that you feel could potentially get sucked into the vacuum pump. After you have your list together give us a call. There are so many different types of things being done with vacuum pumps, it gets a little overwhelming to try and have a fix for all of them. We do have some solutions and the ones following are a good cross section and relatively inexpensive. We also have more sophisticated solutions available that can get pretty expensive but can also get much more effective.

From all the pumps we see at our factory back for service or repair there is no doubt that foreign contamination is one of the largest slayers of our vacuum pumps. We see pumps all rusted up and with oil that just slumps out of the case it is so contaminated and oxidized. To the other argument we have pumps that have been in service in excess of 40 years with out a hitch. A little planning, protection and care goes along way with these machines.

**Acid Neut** - Employs Potassium hydroxide in an element to neutralize acidic vapor streams. There is a blue indicator included in the element to tell when the trap becomes loaded. When an acid comes into contact with an alkaline or basic chemical that is present in the trap, there is a reaction and water and salt creation are the byproducts. By neutralizing the majority of the acid stream the pump is more protected.

**Activated Carbon** - Typically this filter is used to trap organic solvents like aliphatic and aromatic solvents. The filter can be expected to trap 20% by weight of solvents coming across from the system. As this type of filter element loads with solvent, the user will see an increase in pump down time to reach the vacuum pressure desired. Because the material is microcrystalline graphite it is a good selection for trapping oils and hydrocarbon based products.

**Activated Alumina** - Used for high molecular weight hydrocarbon molecules and is also effective for acidic streams.

## HYVAC VACUUM INLET TRAP ELEMENTS (VIT)

**Copper Mesh** - These are the filter of choice for particulates. They provide a large surface area for the trapping of some condensable vapors but the main purpose of this filter is to keep large coarse particles out of the pump.

**Cellulose Acetate** - A good filter that can double as both a particulate and strong acid filter. It is constructed of virgin wool and cotton fibers. These traps adsorb the material and hold it on their very large surface area. They are a good choice for small particle trapping as they can reach retention sizes in the low micron range.

**Stainless Steel Mesh** - Used same as copper mesh but made from 304 stainless steel. It is the material of choice for particulate trapping in systems which tend toward more acidic or basic vapor streams.

**Particulate 2 Micron** – Traps particulates down to 2 micron sized particles. Good trap for very small particulates but can load quickly if the environment is especially dusty.

**Particulate 5 Micron** – Traps particulates down to 5 micron sized particles. Good trap for small particulates but can load quickly if the environment is especially dusty.

