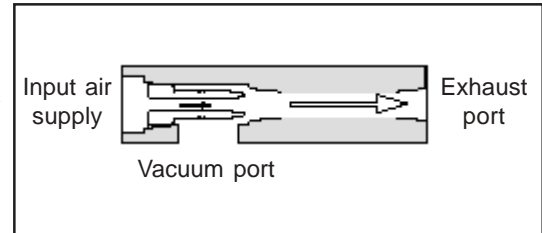


The Value of a Vaccon Single-Stage Venturi Vacuum Pump vs. The Myth of the Multi-Stage Vacuum Pump

Vaccon Single-Stage Venturi Operation

Knowing that the majority of work is done above 9" Hg, Vaccon specifically designed its single-stage venturi's to provide higher vacuum flows at the upper vacuum levels.* In most cases, our flow rates at the upper levels exceed multistage pumps by a factor of 2 to 7 times, while air consumption remains constant. Vaccon offers low cost, high efficiency, single-stage venturi's with no moving parts to break down or wear out. Its straight-through design allows dust and debris to pass through without requiring a filter or impairing performance. Vaccon's single-stage venturi's are compact, requiring little installation space. They can be positioned close to the vacuum point for faster response time, increased safety and greater productivity.



Single-Stage Venturi Pumps:

- High performance
- Compact
- Maintenance free
- Low operating costs

* Note: Vaccon has other air-powered vacuum pumps that are suitable for use in high flow, low vacuum applications. Call for more information.

Multi-Stage Venturi Operation

A multi-stage or multi-chamber vacuum pump is made up of 2 to 4 separate inline venturi's that work in sequential stages using the same input air supply. Each chamber is designed to function up to a specific vacuum level. When a chamber reaches a prescribed vacuum level, a flap automatically closes off that chamber. This process continues until only the first chamber is drawing vacuum, thus the multi-stage effect.

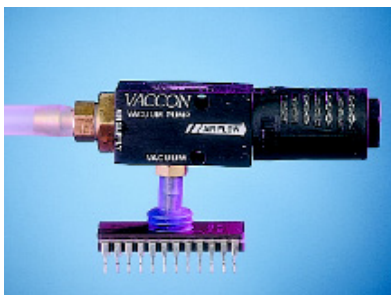
Multi-Stage Venturi Pumps:

- Consume more air
- Provide less flow
- Need more frequent repair and maintenance

Disadvantages of a Multi-Stage Pump

What's important to note is that most vacuum lifting applications work above 9" Hg. Typically, chambers 2, 3, and 4 have shut down before reaching 9" Hg, the multi-stage pump literally turns itself into an inefficient single-stage pump. The problem with the multi-stage pump is that it must maintain a high velocity of flow in chambers 2-4. Air consumption remains high, even though vacuum flow has decreased by almost 75%. In addition, if a vacuum filter is not used, and debris or dust enters the multi-stage pump, it can clog the flap valves requiring repair and/or replacement, downtime and loss of production.

A FEW EXAMPLES OF VACCON PUMPS - [view the complete selection of pumps \(800kb\)](#)



5 styles of vacuum pumps with over 250 models. Available in stainless steel, PVC, teflon, delrin and other materials.



VDF "Dirty One"

Variable vacuum pump allows debris to pass through without clogging. Adjustable vacuum level



Material Transfer

High flow vacuum pumps using as low as 3 PSI provide in-line transfer of various complex shapes and bulk materials. Also available in two direction flow.