



VenturiVac™

A cost-effective sack hopper system that easily mixes chemical and polymer solutions, slurry walls, and drilling mud.

Park Process manufactures venturi hoppers for the easy addition of dry materials into a liquid stream. Pumping liquid through the eductor nozzle and on through the venturi section creates a low-pressure zone between these two components. Material is introduced through a conical hopper by gravity into this low-pressure zone where the motive fluid entrains and carries it to the desired discharge point. The Park Process VenturiVac™ systems are designed to mix and convey dry or liquid materials using a liquid motive stream.

Applications Include:

- Mixing Batches of Chemical Solutions
- Installing and Removing Filter Beds
- Transferring Solids using Liquid
- Making of Polymer Solutions
- Making of Drilling Mud
- Mixing of Slurry Walls

Features:

- Carbon steel eductor body with a special coating (stainless steel 304 or 316 are available options)
- Heavy duty carbon steel skid with fork pockets on which other components are mounted
- Removable nozzle and Venturi made from abrasion and chemical-resistant material
- Stainless steel wetted parts on valve between hopper and eductor
- Pressure gauges installed on inlet and outlet nipples
- Stainless steel hopper and chemical table
- Vacuum gauge installed on eductor body

Available Models:



VenturiVac™
MaxSack Hopper



Available Materials & Sizes

Park Process VenturiVac™ eductors are available in a variety of materials of construction. The eductor is comprised of a main body with a nozzle and diffuser insert. The eductor body is made of carbon steel, stainless steel, PVC or other customer specified material. The nozzle and diffuser inserts are typically made of a chemical and abrasion resistant material such as ultra-high molecular weight polyethylene (UHMW) or Teflon.

VenturiVac™ Eductor Sizes									
Pipe (in.)	Nozzle Sizes (in.)			Motive Flow Rate (GPM) @ 40 PSI			Motive Flow Rate (GPM) @ 80 PSI		
	S	M	L	S	M	L	S	M	L
1.0	0.25	0.3125	0.375	1.7	19.05	26.4	16.6	27.0	37.30
1.5	0.375	0.46875	0.5625	26.4	39.6	52.8	37.3	61.25	85.20
2.0	0.5	0.625	0.75	47.0	73.4	106.0	66.4	104.0	149.0
3.0	0.75	0.9375	1.125	106.0	172.0	238.0	149.0	242.0	336.0
4.0	1.0	1.25	1.5	188.0	294.0	423.0	266.0	415.0	598.0
6.0	1.5	1.875	2.25	423.0	687.0	951.0	598.0	971.0	1345.0
8.0	2.0	2.5	3.0	751.0	1180.0	2038.0	1063.0	1669.0	2275.0

How it Works

The VenturiVac™ eductor uses the venturi effect of a converging diverging nozzle to convert the pressure energy of a motive fluid to velocity energy, creating a low-pressure zone that draws in and entrains suction fluid and/or solids. After passing through the throat of the VenturiVac, the mixed fluid expands and the velocity is reduced which results in re-compressing the mixed fluids by converting velocity energy back into pressure energy. This process allows the exiting stream to continue downstream long distances and upwards many feet of head.

Using with a Feed Hopper

The VenturiVac™ eductors can be combined with a feed hopper to facilitate the addition of chemicals to the eductor's suction port. This equipment can be skid mounted to enable it to be moved from one location to another. Feed hoppers range in size from 18" diameter conical-shaped hoppers for sack material to 2.5 cu. yd. inverted pyramid hoppers for bulk bag unloading. The addition of a feed pump to the VenturiVac skid creates a self-contained system. Fluid can be pumped from the source then fed to the VenturiVac where dry powder chemicals are added and sent to a receiving tank, a process system, vessel or holding pond.