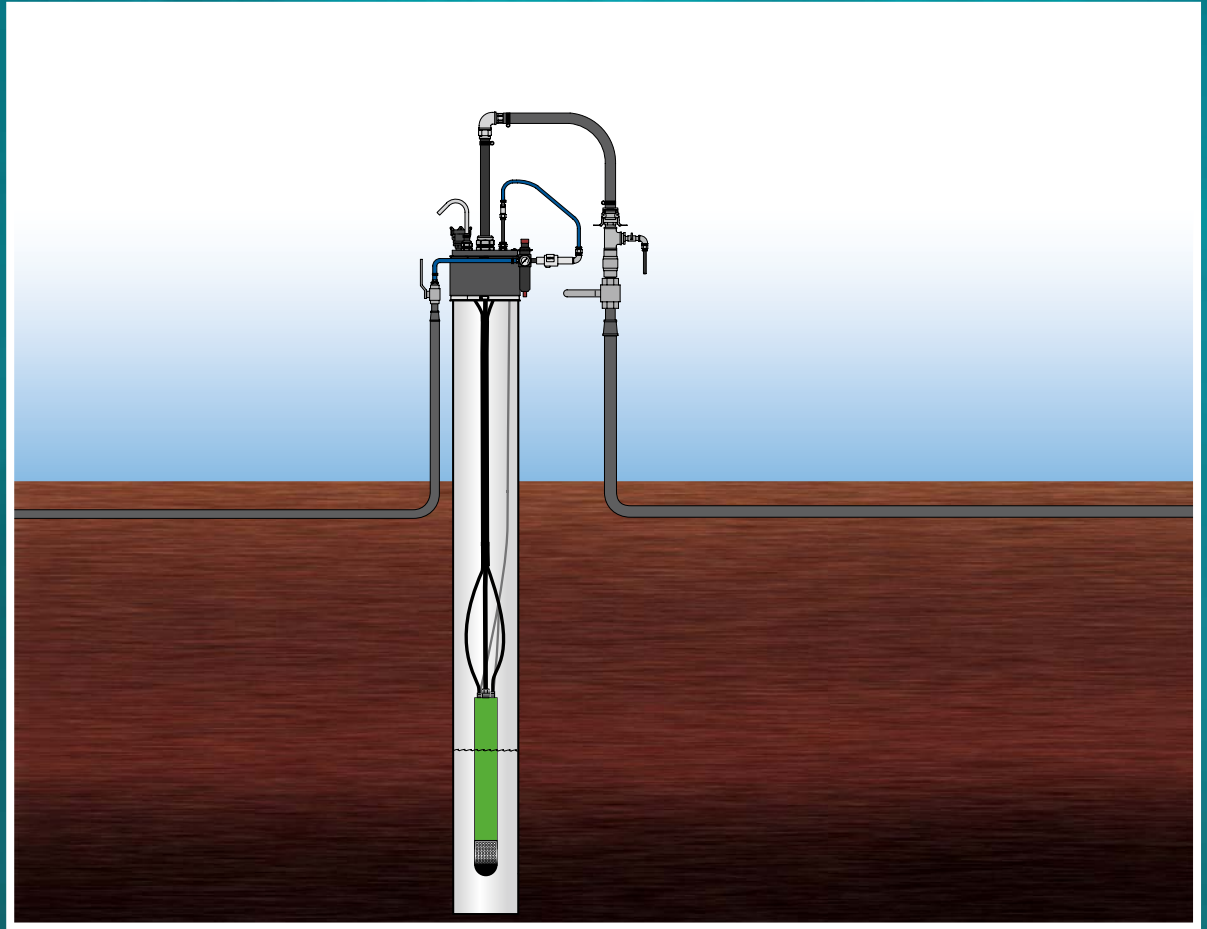




# Pneumatic Pump Design Guide

Essentials for Pneumatic Pump Applications



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*Manufacturer of Environmental  
and Industrial Solutions*

# Essentials for Pneumatic Pump Applications

EPG Companies Inc. has provided landfill pumping systems and pollution control equipment for over 30 years.

Through our years of design, engineering and manufacturing expertise, field knowledge, and extensive partnering with thousands of professionals in the landfill industry, we have provided safe, cost-effective solutions that are now being recognized as essential system components for achieving optimum landfill operation.

In pneumatic pump applications, we recommend the use of the following time-tested, field-proven components:

*(The printed order of each component does not represent importance or priority. All components are designed to work together resulting in optimum safety and efficiency.)*

1. VP Series Pneumatic Pumps
2. Pressure Regulators
3. Pulse Counters
4. Well Seals & Covers
5. Tri-Tube
6. Lifting Slings
7. I-Fit Connectors

EPG manufactures equipment for Horizontal/Vertical Riser Systems, Telemetry & SCADA Systems, and Remediation Systems. We also provide continuing educational classes to support these applications. For more information, visit our web site at [www.epgco.com](http://www.epgco.com).

With over 12,000 installations, EPG Companies Inc. is the specified equipment source and systems provider for more than 1200 landfills.

## 1. Viridian America Pneumatic Pump

Viridian America pumps, constructed from 316 Stainless Steel, are more corrosion resistant and clean easier than lower grade steel pumps, resulting in a longer product life and a lower cost from support and maintenance.



## 5. Tri-Tube

Manufactured from nylon with a polyethylene sleeve, includes a liquid discharge, air supply and air exhaust tubing. The Tri-tube is rated up to 180 °F and pressure tested 210PSI at 73°F.

1/2" Stainless Steel Air Exhaust Diverter

Air Valve 1/2" Ball Valve

Air Supply →

5/8" Air Exhaust Tubing

1" Liquid Discharge Tubing

1/2" Air Inlet Tubing

Pump to be set 12" off bottom



## 2. Pressure Regulator

Pressure regulators maintain constant output pressure in the compressed-air systems regardless of variations in input pressure or output flow.

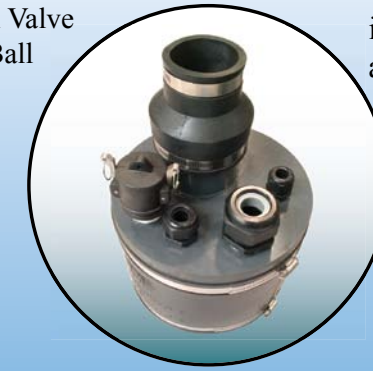


## 3. Pneumatic Pulse Flow Counter

The pulse flow counter gives an indication of the total cycle the pump has operated. An approximate volume of liquid can be calculated from the number of cycles.

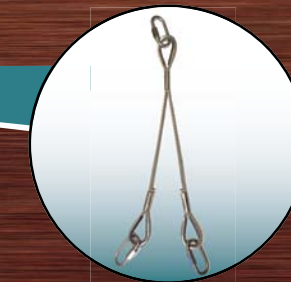
## 4. Well Seal

Well Seals, with a gas tight design, available in 4", 6", 8" and 10" sizes. They feature a gas tight inspection port with easy to remove cap. Also available: Well Covers for flanged applications.



Liquid Discharge →

Pipes can be ground level or buried as per design.



## 6. Safety Cable & Lifting Sling

Attached to the Viridian America Pneumatic Pump, this system allows for easy, stable extraction of the pump. Uses 1/8" 316 Stainless Steel Braided Cable.



## 7. Viridian I-Fit Connectors

Allow for quick and easy installation or replacement of pumps. They are constructed from 316 Stainless Steel, rated at 260 PSI and are available for 1", 1/2", and 5/8" tubing.

For more information, please visit our website at [www.epgco.com](http://www.epgco.com) or call us today at 800-443-7426 and ask for an applications specialist.

## Optional parts for improving operational efficiency of any pneumatic pumping systems:

**Test Valve:** The test valve allows for easy testing without the need to undo a camlock.



**Air Release Valve:** Air locks are often formed when pumping downhill or high points exist in the pipe system. Installing air release valves when the pipes are installed minimize downtime and high costs when fixing problems later.



**Silt Trap:** Installed in strategic locations in force-mains, Silt Traps or "Y" Strainers remove settleable solids and reduces scale build-up in the force-mains significantly.



**Check Valve:** Check Valves or Non-Return Valves prevent condensate from pushing back into the air lines.



**Minimum Pressure Valve (MPV):** The MPV prevents compressed air from being blown into the liquid discharge piping, reducing the potential for pump stalling and excess solids precipitation.



**VVA-14:** The pneumatic Venturi Vacuum Generator is designed to pull a vacuum inside of the pump casing to overcome the vacuum in a condensate sump or extraction well. This allows a lower liquid level to be maintained in the sump/well.



**Drinking Straw Mod:** Do you have a collapsed or restricted well? This unique and innovative modification can help keep that well functional until repairs can take place.



With over 12,000 installations worldwide, EPG equipment has proven to have reliability, long life and trouble-free service. EPG's knowledgeable engineering and applications specialists provide the after-sale support that any system may need.

To speak with an EPG applications specialist or to find out who to contact in your area, please call us at 1-800-443-7426 or email to [info@epgco.com](mailto:info@epgco.com). We'll be happy to answer any questions you may have.

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