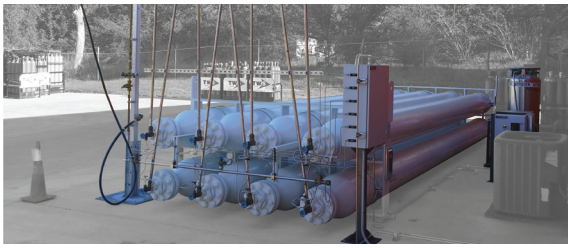
CryoVation



Medical Equipment Catalog

CryoVation LLC | Hainsport, New Jersey | CryoVation.com | TheCryoShop.com | 609.914.4792

Portable Pumping Skid - Oxygen

If you or one of your customers are looking to fill their own medical tanks or similar small cylinders with a pure gas or mixture, the CryoVation PPS system may be the best solution for you. Although not typically used in a portable setting, this PPS can be moved to its power source along with manifold (s) for an easy solution for your filling needs.

Features of the CryoVation PPS-5000 (other sizes available):

- Flow rate of 5000 SCFH (***equals a fill time of 30 minutes for 100 "E" cylinders***).
- Draws liquid from a standard liquid cylinder (45-gallon, 250 PSI; or larger)
- This system is ***available with*** our semi-automated **"Fill-Free"** control console that will sense temperature, pressure and vacuum and allow you interface with a color touchscreen. *See Fill-Free information sheets*
- Pump is standard design with over 30 years of production.
- Built-in safety features include over-pressure and under-temperature shut-off switches, high pressure safety relief valve and over-psi vacuum line safety relief.
- Fills all size medical cylinders *(manifolds are sold separately)*
- Includes a liquid oxygen pump and a vacuum pump
- Powered from a standard 240-volt power source (or 3 Phase hard wire)

Medical Oxygen Equipment – Racks & Manifolds

Starboard Racks from CryoVation ensure that your cylinders will not get scratched from contact with the rack. The Starboard HDPE material is light and durable, made from a continuous extrusion; therefore, it is guaranteed not to delaminate during service-life, it also meets FDA approval for direct food contact.

The Benefits of CryoVation Starboard Racks over others:

- Won't scratch your cylinders during normal filling process
- Minimal show of any wear, dirt and scratches
- Starboard material is resistant to high-impact and stress cracks as well as a high energy absorption
- Waterproof
- Easy to clean
- Fills all portable oxygen cylinders (E, D and M6)

Rack Options:

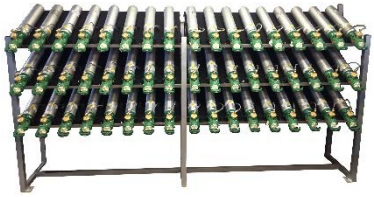
- Size:
  - **R20**, **R30**, **A40**, **A48**, **PSC52** and **R60**
- Connection:
  - CGA 870, 540 or Custom CGA
- Inversion:
  - Available at several °angle
- Row Isolation and Side Headers available with Ceoduex, Rego & Generant Master valves
- A-Frame Racks are available with wheels
- *See Manifolds section for Industrial Oxygen Manifolds*

R20 & R30

A-Frame 40

A-Frame 48

PSC-52



R60

Medical Oxygen FDA Starter Kit & Parts

Regulators, fittings and hoses needed to calibrate analyzer and analyze CGA 540 and 870 style cylinders. *Calibration gases not included*

Gauge Recalibrations & Recertification

Having to send your gauges out is a pain, CryoVation makes it easy with a flat rate and quick turnaround! The process is easy, send us your gauges with a PO or call ahead with a PO, when the gauges come in we process them and ship them back quickly.

- Gauges certified by CryoVation are traceable to N.I.S.T.
- CryoVation certification and oxygen cleaning practices meet FDA requirements used for filling Medical Grade
- According to the CGMP (Current Good Manufacturing Practices), the pressure and vacuum gauges as well as thermometer used for filling Medical Grade
- Oxygen must have annual recalibration by a certified NIST traceable gauge
- CryoVation provides customers with required documentation

On-Site Compliance Service

Personal, on-site compliance training by CryoVation's FDA consultant. Includes personalized SOP manual and 2 days on site.

Medical Q & A

Q: How many "E" Cylinders can I fill at a time?
A: As many as you have manifolding for; there is no limit. The more you fill at a time, the more cost effective and efficient your filling will become. The PPS-2500 will fill 50 E Cylinders per 30 minutes. The PPS-5000 will fill 100 E Cylinders per 30 minutes.

Q: How many E-cylinders can I fill with a standard liquid can?
A: A standard liquid can (45 gallons, 250 psi) will fill approximately 150-200 E Cylinders. (Variables can affect this figure)

Q: What size cylinders can the CryoVation system fill?
A: The CryoVation system is designed to fill all size medical oxygen cylinders. Most portable medical cylinders have a CGA-870 valve, but some, like the grab-n-go, have a CGA-540 valve. We have several different fill racks to choose from.

Q: What are the power requirements for the CryoVation medical oxygen filling system?
A: Our system can run on any power source; please let us know what you have at the time of purchase.

Q: How loud is the CryoVation filling system?
A: You can compare the sound of the pump (while pumping) to a pair of shoes in the dryer. It would be fine in a warehouse or stock room. You may not want it in your office.

Q: How much space does the system occupy?
A: This is contingent on the type of racks you choose, but it generally fits into a 15-foot x 10- foot area.

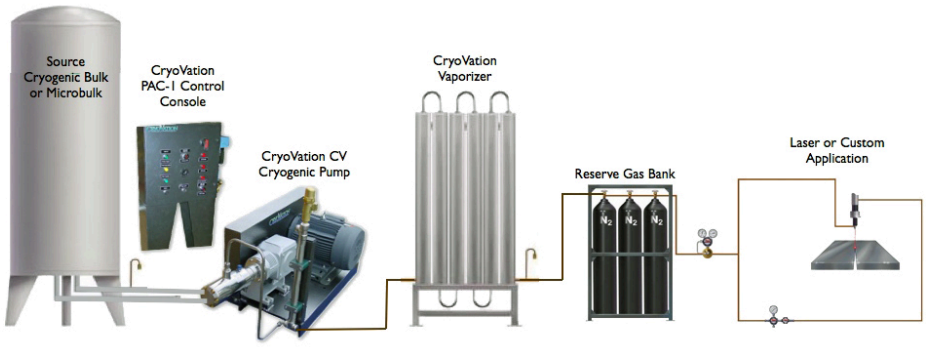
Q: If my volumes increase, can we speed up the flow rate?
A: Yes, the CryoVation system can be upgraded by adding additional vaporizer capacity and, if needed, speeding up the existing pump.

Q: What is the installation expense?
A: We will either use a local service rep or provide one of our in-house technicians to install and train you on the operation of the equipment. This usually takes a few days. Our installations also include materials such as vent tubing, silencer, anchors, compression fittings, pipe clamps, vacuum venting, and drip pan with drain, etc.

Q: Are there FDA requirements I must meet to fill my own cylinders?
A: Yes, because oxygen is considered a drug, the FDA has specific regulations for medical oxygen filling companies. CryoVation offers on-site FDA compliance training to keep you current on FDA regulations and help ensure you will be in full compliance during an FDA inspection. You may also opt to do your own training and we can provide the custom SOP manual and Validation protocol.

SureGas™ System

SUREGAS
automatic gas supply system



SureGas Pumping Skid, to provide automatic pumping to maintain a steady supply of gas at the desired pressure's; complete with the following major components:

- CV **Cryogenic Pump (s)** to deliver a fixed flow rate of gas at a max of 6000 PSI
- SureGas **Automatic Pump Control System** (PAC-1) with **SuperPro Pump Protection.** Provides for completely unattended operation of Cryogenic pump.
- **Ambient Air Vaporizer** to match the flow of the cryogenic pump(s)
- **Skid Assembly** to mount above components. Includes an all-steel frame with top plate and lifting lugs.