

Bulk Liquid Oxygen U.S.P. Storage Systems



Bulk Liquid Oxygen U.S.P.

Praxair offers storage facilities and reserve supplies for its *Medipure*[®] brand cryogenic liquid Oxygen U.S.P. to meet current NFPA standards. Bulk storage units and either liquid or high-pressure cylinder reserve supplies are sized specifically to your facility based on usage patterns and geography. Control equipment is maintenance-friendly and designed to provide interruption-free service.

In addition to providing equipment to meet NFPA requirements, Praxair's *Tracker*[™] remote inventory monitoring system can provide an around-the-clock link to our North American Logistics Center in Tonawanda, N.Y. *Tracker*[™] continuously monitors tank levels, automatically places your order for delivery, provides physical plant operations remote data access and can be integrated to your central monitoring system.

Stringent production, transport and handling procedures help ensure that Praxair's liquid Oxygen U.S.P. meets or exceeds standards of the United States Pharmacopoeia, as delivered to the storage tank at the hospital.

The broad acceptance of bulk liquid storage systems stems from their reliability and compact design, making them particularly practical where hospital ground space is limited. Praxair's specially designed cryogenic storage tanks feature double-walled construction with efficient insulation to minimize evaporation

losses. When gaseous Oxygen U.S.P. is needed, the liquid Oxygen U.S.P. automatically converts to gaseous form as it flows through the vaporizer – an ambient air heat exchanger – before it enters the hospital's distribution pipeline. An integrated backup supply system automatically feeds gaseous Oxygen U.S.P. to the pipeline if the regular Oxygen U.S.P. supply is interrupted for any reason.

Bulk liquid Oxygen U.S.P. storage systems are available in a variety of sizes. Before Praxair recommends the most appropriate size for any given hospital, we carefully weigh a number of critical factors including: the bed size of the hospital, the hospital's geographic location, the existing rate and pattern of Oxygen U.S.P. use, available installation space and accessibility of the site for transport deliveries.

Praxair offers compact, custom fit, cost effective solutions for your bulk liquid Oxygen U.S.P. requirements:

- Automatic switching between vaporizer sections significantly reduces icing and puts less stress on the system
- Remote monitoring through Praxair's Electronic Link *Tracker*[™] System continuously monitors your tank level and automatically places your order for delivery, for uninterrupted supply
- Group Purchasing Organization (GPO) benefits available to members
- Proactive support with FDA regulatory compliance

Basic Properties of Liquid Oxygen U.S.P.:

Density: 71.27 lb. per cu. ft. at boiling point
 Heat of Vaporization: 91.7 BTU per lb.
 Boiling Point: -297.3°F at 1 atmosphere
 Freezing Point: -361.8°F at 1 atmosphere

Purity and Moisture Content of Bulk Liquid Oxygen U.S.P.:

Minimum Purity: 99.0%
 Maximum Moisture Content: 6 ppm
 Approximate Dewpoint at Maximum Moisture Content: -84°F

Tank Selection Table

- Based on primary tank, reserve tank, vaporizer, and medical cabinet.
- Cement pad dimensions are for zone 2 areas only. For other seismic zones, consult your Praxair representative.
- Configuration will vary by individual site and distance from plant
- Standard spill pad - 12' X 10'.
- Praxair recommends a reserve tank with 24-hour capacity.

Primary Tank Size (gallons)	Reserve Tank Size (gallons)	Cement Pad Size (length x width)
1500	120	19' X 20'
3000	500	25' X 26'
6000	1500	25' X 26'
9000	1500	27' X 27'
11000	3000	27' X 27'
13000	3000	27' X 27'

Your Electronic Link

Tracker provides you with an around-the-clock link with Praxair. By transmitting information electronically to our North American Logistics Center in Tonawanda, N.Y., through a remote telemetry unit, the *Tracker™* system:

- Continuously monitors your tank level
- Automatically places your order for delivery
- Provides you with access to your product levels
- Stores tank-level readings in 10-minute intervals for 10 days
- Offers data in ASCII format
- Provides real-time data for inventory management
- Can be integrated with your plant computer system

How It Works

The heart of our *Tracker™* system is an advanced microprocessor installed on each of your gas supply tanks. With this and a simple telephone line, we can access all of the vital data necessary to keep your tank operation up and running.

Relying on this information, the *Tracker™* determines when your reorder point is reached, and an order is automatically generated for delivery, so you always have the gases you need.

The *Tracker™* system also includes a Remote Access Program (RAP), a cost-free option that enables you to have direct access to information from your *Tracker™* units.

With your computer and modem, you not only can access your current product level, RAP also lets them display usage information in either a table or a line graph. In fact, you can review the last 10 days of tank-level readings. RAP, which is available upon request, includes all the software and instructions you'll need for easy set-up.

Uninterrupted Supply

Up-to-the minute tank-level readings... automatic reordering... reliable gas supply... Three key reasons for relying on *Tracker™* to manage your gas inventory. Coupled with Praxair Supply Management, *Tracker™* provides the answer to 100% uninterrupted product supply. For more information about *Tracker™* and other Praxair programs and services, call Praxair.

Hyperbaric Oxygen Therapy

From Praxair Healthcare Services, Medical Bulk Oxygen U.S.P. Systems for Hyperbaric Oxygen Therapy:

- Are you considering offering Hyperbaric Oxygen Therapy?
- If you want hyperbaric oxygen capabilities, we can refer you to one of our select, hyperbaric service partners.
- Before you install a chamber, we can evaluate the unit's impact on your current bulk oxygen system and recommend upgrade solutions to handle the volume increase in gas usage.
- When usage of a chamber will require a dedicated bulk oxygen system, Praxair can install a new oxygen system in your facility.