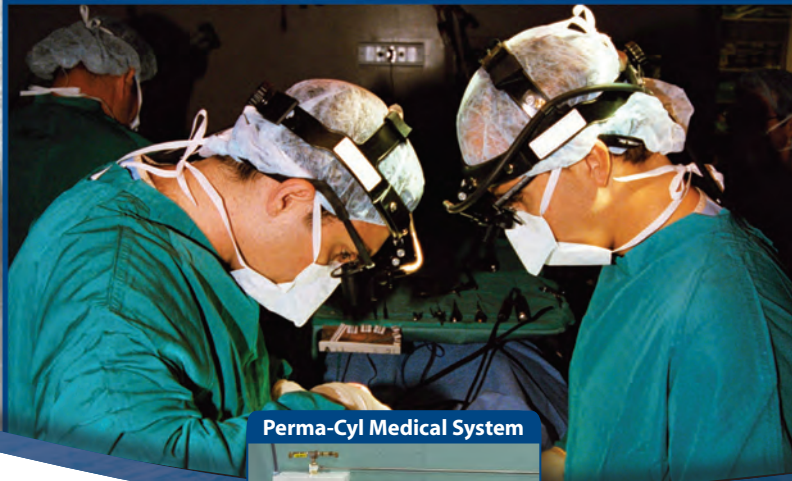


# The First Turnkey System for Medical MicroBulk



## Medical MicroBulk Manifold Integrated with Perma-Cyl.

The Perma-Cyl® Medical system is a turnkey package designed to comply with all the necessary codes for a safe and economical MicroBulk installation. The core component of the system, the MicroBulk manifold, is engineered to accept multiple configurations of Perma-Cyl storage vessels and high-pressure cylinders for a tailored solution. Designed to operate with most alarm panels, the MicroBulk Manifold provides protection against false alarms throughout the dispensing and the refilling cycles. With the Orca Series delivery units, the Perma-Cyl Medical System will provide all the benefits of bulk, in a turnkey MicroBulk package for this market.

Perma-Cyl Medical System



- » Designed in accordance with NFPA 99 & CGA M-1
- » Accepts all Perma-Cyls from 300 to 3000 liters
- » High flow capable, up to 1000 SCFH
- » Flexible to control up to 10 unique system configurations (pre-programmed electronic controller)



800-400-4683 | [www.chart-ind.com](http://www.chart-ind.com)

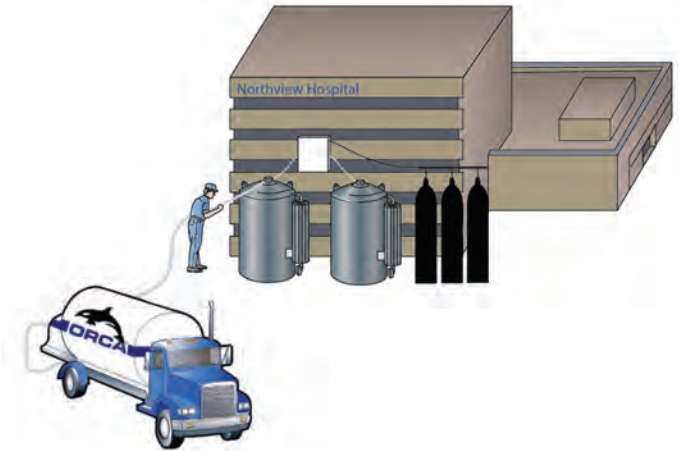


Innovation. Experience. Performance.®

# PERMA-CYL® MEDICAL

MICROBULK SYSTEM FOR N<sub>2</sub> & O<sub>2</sub> MEDICAL APPLICATIONS

The Perma-Cyl® Medical system is a turn-key package designed to comply with all the necessary codes for a safe and economical MicroBulk installation. The core component of the system, the MicroBulk manifold, is engineered to accept multiple configurations of Perma-Cyl storage vessels and high-pressure cylinders for a tailored solution. Designed to operate with most alarm panels, the MicroBulk Manifold provides protection against false alarms throughout the dispensing and the refilling cycles. With the Orca Series delivery units, the Perma-Cyl Medical System will provide all the benefits of bulk, in a turn-key MicroBulk package for this market.



MicroBulk Manifold



Perma-Cyl Medical System

## MANIFOLD PRODUCT HIGHLIGHTS

- Designed in accordance with NFPA\* 99 & CGA M-1
- Accepts all Perma-Cyls from 300 to 3000 liters
- High flow capable, up to 1000 SCFH\*\*
- Flexible to control up to 10 unique system configurations (pre-programmed electronic controller)
- Optimized to interface seamlessly with Perma-Cyl plumbing option #8
- Interfaces with Cyl-Tel for continuous level monitoring (4-20mA output)
- Maintains residual liquid level in Perma-Cyls for no-loss fill & purity integrity
- Designed to operate safely in cryogenic service (protection against vaporizer over-run)
- Integrates with most alarm facility panels (custom alarm panel interface adapter boards available)
- Available for indoor or outdoor installations
- Available for high flow applications, up to 3500 SCFH\*\*
- Co-developed and manufactured by Tri-Tech Medical Inc. exclusively for Chart Inc.

\* National Fire Protection Agency

\*\* Standard Cubic Feet per Hour

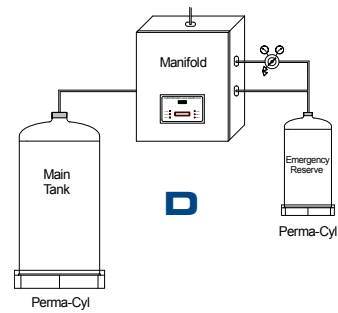
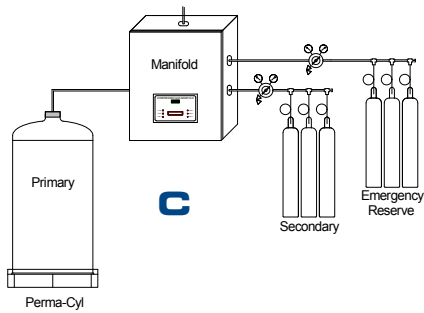
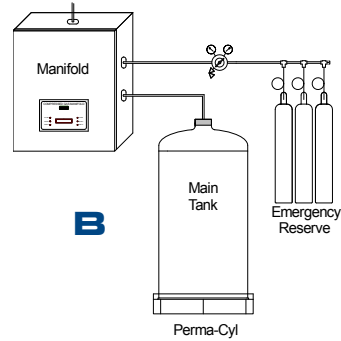
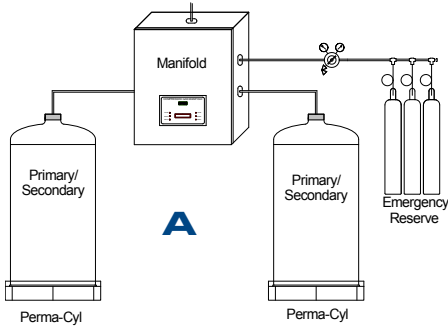


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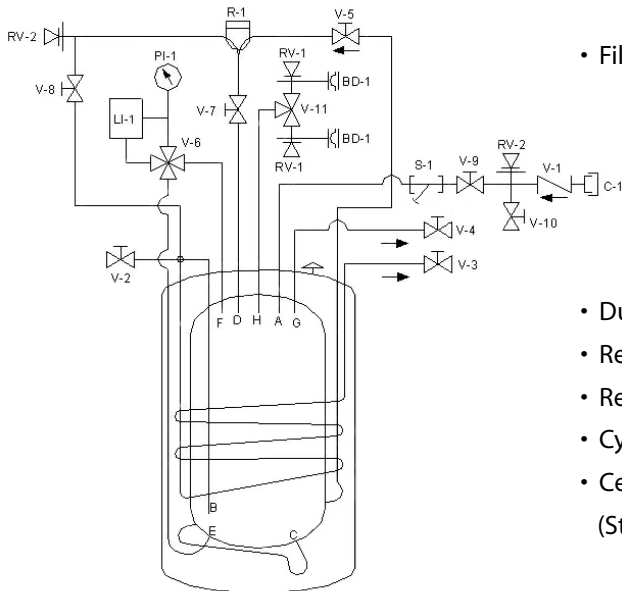
# PERMA-CYL® MEDICAL

MICROBULK SYSTEM FOR N<sub>2</sub> & O<sub>2</sub> MEDICAL APPLICATIONS

## MEDICAL MICROBULK CONFIGURATIONS



## PERMA-CYL CONFIGURE-TO-ORDER MEDICAL OPTION #8 PACKAGE



### • Fill Line Circuit

- Fill Line Strainer, S-1
- CGA Fitting Restraints, C-1
- Fill Hose Purge Valve, V-10
- Fill Hose Isolation Valve, V-9
- Fill Hose Relief Valve, RV-2

- Dual Safeties with Diverter Valve, V-11
- Regulator Isolation Valves, V-5, V-7, V-8
- Regulator Relief Valve, RV-2
- Cyl-Tel with 4-20mA output, LI-1
- Certificate of Compliance (C of C)  
(Statement of Med-Gas service ready)



Stroller/Sprint Filling Station for liquid oxygen filling directly from a dedicated Perma-Cyl

For a complete guide to MicroBulk Medical Applications, see brochure P/N 13554547.