

**Submittal Data Sheet**

**Project Information**

Project \_\_\_\_\_ Approval \_\_\_\_\_

**Applications**

Hyperbaric chambers, emergency preparedness, where space is not sufficient for a bulk tank, back-feeding during shut downs.

**Design Characteristics**

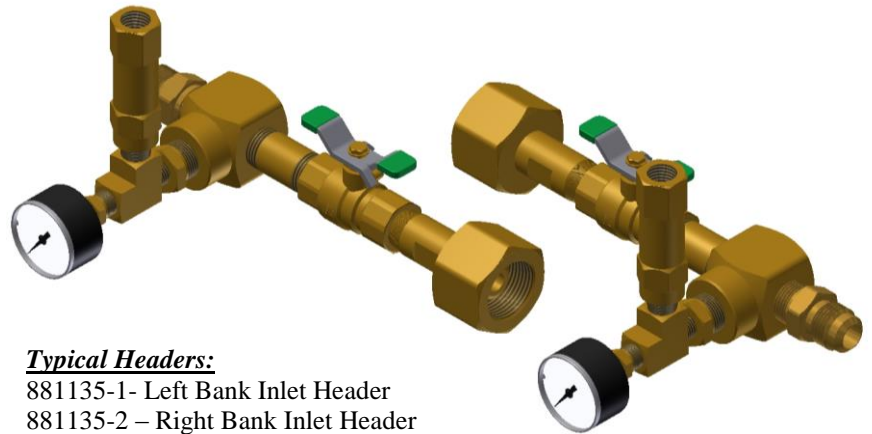
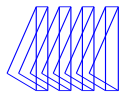
The LU35 series manifold shall be a fully automatic digital design. No manual resetting of valves or levers is required. The unit is designed for use with a liquid primary bank, a liquid secondary bank and an emergency reserve bank of high pressure cylinders. Liquid is withdrawn (thru the Liquid valves) of the portable bulk vessels into vaporizers and then into the control cabinet. The unit shall switch from “Primary” to “Secondary ” bank without fluctuation in line delivery pressure. Simultaneously, the “Secondary in Use” alarm shall be triggered by the manifolds microprocessor. The manifold shall continue to provide gas, in the event of a power failure, until both banks are depleted. After the switchover, the “Secondary” bank shall automatically become the “Primary”. The manifold microprocessor shall also trigger the “High Line Pressure” and “Low Line Pressure” alarms without the need for additional pressure switches or transducers. The manifold microprocessor shall also trigger the “Emergency Reserve in Use” and “Emergency Reserve Low” alarms when used with transducers supplied separately. The manifold shall be capable of providing 3,500 SCFH @ 50 psig with a 5 psig pressure drop from a single portable bulk vessel delivering 95 psig thru a sufficiently sized vaporizer.



The control cabinet shall also incorporate economizer gas circuits for both banks. The economizer circuits will allow the head pressure of the reserve bank to be utilized instead of venting to atmosphere so long as there is sufficient system gas usage. In addition, the system shall incorporate economizer software which recognizes and utilizes small amounts of liquid remaining in vessels that have been depleted.

All manifold regulators, piping and control switching equipment shall be cleaned for use with oxygen service and installed in a painted aluminum cabinet to provide protection and minimize tampering

The control panel shall incorporate a text display, displaying pressures for the Left Bank, the Right Bank, Delivery Pressure, Intermediate Pressure, Emergency Reserve Bank Pressure, five possible Alarm codes, 14 possible Error codes and 2 possible Information codes. Analog gauges are also provided so that all above pressure zones may be observed in the event of a power failure. The control panel shall also incorporate a set of LED’s for each bank, green for “Bank in Use”, amber for “Ready” and red for “Empty”.



**Typical Headers:**  
881135-1- Left Bank Inlet Header  
881135-2 – Right Bank Inlet Header

**Flow Information**

Pressure at Inlet Block to Control Cabinet (just prior to changeover)	Delivery Pressure (allowing 5 psig drop)	Flow (SCFH / CFM)
95 (psig)	55 – 50	3,500 / 58.3

**System Requirements**

Minimum inlet pressure	175 psig (pressure building circuits should be set @ 250 psig) vessels must have 350 psig relief valves
Physical space requirements (includes vaporizers & 3 x 3 portable liquid vessels)	Continuous duty rated system – 16' W x 8' H x 45" D Non-Continuous duty rated system – 14' W x 8' H x 40" D
Cabinet Dimensions / Weight	26 1/4" H x 16 3/4" W x 9 1/4" D / 89 pounds Cabinet door is 28 1/2" H x 19 1/4" W
Electrical Power Feed / Usage	A single point 120 volt AC 50 – 60 Hz / 45 W (0.4 amps)

**How to Order**

LU3522OX1H	Weatherproof control cabinet for 50 psi
LU3522OX2H	Weatherproof control cabinet for 80 psi
30-1000	1x1 10' cryogenic liquid transfer hoses with fittings to connect to vaporizers (3/4 F NPT assumed)
30-1001	2x2 10' cryogenic liquid transfer hoses with fittings to connect to vaporizers (3/4 F NPT assumed)
30-1002	3x3 10' cryogenic liquid transfer hoses with fittings to connect to vaporizers (3/4 F NPT assumed)
30-1003	4x4 10' cryogenic liquid transfer hoses with fittings to connect to vaporizers (3/4 F NPT assumed)
PSM-24	DISS Union/Gauge & Transducer Assembly - Oxygen
RWP 540 03 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 3 cyl's (S= staggered)
RWP 540 04 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 4 cyl's (S= staggered)
RWP 540 04 1 V X C 24	Manifolds - High Pressure Reserve w/ Port – 4 cyl's (V= Vertical Crossover)
RWP 540 05 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 5 cyl's (S= staggered)
RWP 540 06 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 6 cyl's (S= staggered)
RWP 540 06 1 V X C 24	Manifolds - High Pressure Reserve w/ Port – 6 cyl's (V= Vertical Crossover)
RWP 540 07 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 7 cyl's (S= staggered)
RWP 540 08 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 8 cyl's (S= staggered)
RWP 540 08 1 V X C 24	Manifolds - High Pressure Reserve w/ Port – 8 cyl's (V= Vertical Crossover)
RWP 540 09 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 9 cyl's (S= staggered)
RWP 540 10 1 S X C 24	Manifolds - High Pressure Reserve w/ Port – 10 cyl's (S= staggered)
RWP 540 10 1 V X C 24	Manifolds - High Pressure Reserve w/ Port – 10 cyl's (V= Vertical Crossover)
14-3001	2,500 psi transducer with 12' wire cable for Emergency Reserve Low Alarm
14-3002	500 psi transducer with 8' wire cable for Emergency Reserve in Use
CV-050F	Check valve 1/2" F NPT x 1/2 F NPT
600NCH	600 scfh per hour NON-CONTINUOUS duty rated vaporizer – hang mount TQ09-22979
1200 NC	1,200 scfh per hour NON-CONTINUOUS duty rated vaporizer – floor mount