

# MICROBULK MEDICAL SKID

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

The Microbulk Medical Skid is a turnkey package designed to comply with all the necessary codes for a safe and economical Medical MicroBulk installation. The standard skid is designed to accept standard FlexFill™ piping MicroBulk tanks ranging in size from 1000 liters up to 3000 liters for oxygen and nitrogen service. The skid design allows for an easy vessel upgrade at the customer site without the need to replace the entire skid.

The skid contains both primary and HP backup plumbing manifolds with the option of providing anywhere from 4 to 16 HP cylinder manifold connections. The skid is designed to interface with most hospital alarm panels and includes a primary liquid level alarm connection and low pressure alarm connections on both the primary and backup plumbing manifolds. An optional local alarm panel can be specified if required.

The Medical Microbulk skid is a perfect solution for a turnkey package to serve critical medical facilities such as surgery centers, nursing homes, small hospitals, clinics, long-term care facilities, veterinary facilities, hyperbaric chambers and dental offices.



## PRODUCT HIGHLIGHTS

- Designed in accordance with NFPA\* 99 & CGA M-1
- Available in Perma-Cyl® tank sizes from 1000 to 3000 liters
- High flow capable, up to 2000 SCFH\*\*
- Utilizes a WIKA analog gauge with adjustable low level alarm set point
- Maintains residual liquid level in Perma-Cyl tanks for no-loss fill & purity integrity
- Optional external PB and process vaporizer packages available
- Integrates with most alarm facility panels
- Suitable for outdoor installations
- Skid Shipping Dimensions: 84" wide x 102.5" long x 93.625" high

\* National Fire Protection Agency

\*\* Standard Cubic Feet per Hour

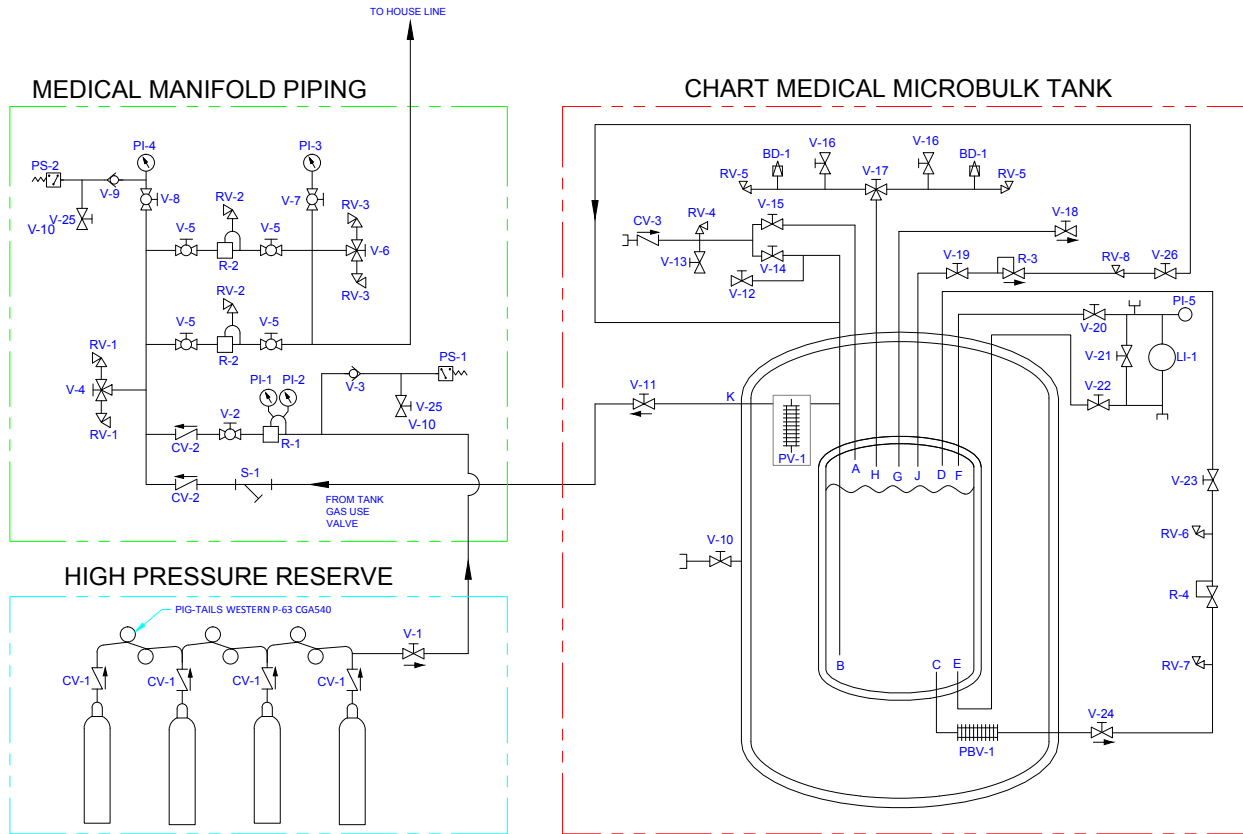
\*\*\* Dimensions include anchoring tabs welded to frame. See spec drawing 20810866 for detailed dimensional drawings.



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## NOMENCLATURE

ITEM	DESCRIPTION	ITEM	DESCRIPTION
CV-1	HIGH PRESSURE BTL OUTLET CHECK VALVE	RV-1	MAIN GAS INLET RELIEF VALVE
V-1	HIGH PRESS SUPPLY ISO VALVE	RV-2	THERMAL RELIEF VALVE FOR R-2
V-2	HIGH PRESS SUPPLY REG ISO VALVE	RV-3	MAIN GAS OUTLET RELIEF VALVE
V-3	EXCESS FLOW VALVE FOR PS-1	RV-4	TANK FILL ASSEMBLY RELIEF VALVE
V-4	MAIN GAS INLET SAFETY 3-WAY VALVE	RV-5	TANK PRIMARY RELIEF VALVE
V-5	GAS SUPPLY REGULATOR ISO VALVE	RV-6	TANK PB OUTLET RELIEF VALVE
V-6	MAIN GAS OUTLET SAFETY 3-WAY VALVE	RV-7	TANK PB INLET RELIEF VALVE
V-7	0-100 PSI PRESSURE GAUGE ISO VALVE	RV-8	TANK ECON INLET RELIEF VALVE
V-8	0-600 PSI PRESSURE GAUGE ISO VALVE	BD-1	TANK SECONDARY RELIEF DEVICE BURST DISC
V-9	EXCESS FLOW VALVE FOR PS-1	S-1	MAIN GAS LINE INLET STRAINER
V-10	TANK VACUUM GAUGE ISO VALVE	R-1	HIGH PRESSURE SUPPLY REGULATOR
V-11	TANK GAS USE VALVE	R-2	MAIN GAS SUPPLY REGULATOR
V-12	TANK LIQUID WITHDRAWAL VALVE	R-3	TANK ECONOMIZER REGULATOR
V-13	TANK FILL HOSE DRAIN VALVE	R-4	TANK PB REGULATOR
V-14	TANK BOTTOM FILL VALVE	LI-1	TANK LIQUID LEVEL GAUGE
V-15	TANK TOP FILL VALVE	PI-1	PRESSURE GAUGE 0-200 PSI
V-16	TANK SAFETY LINE PURGE VALVE	PI-2	PRESSURE GAUGE 0-4000 PSI
V-17	TANK SAFETY 3-WAY DIVERTER VALVE	PI-3	PRESSURE GAUGE 0-100 PSI
V-18	TANK VENT VALVE	PI-4	PRESSURE GAUGE 0-600 PSI
V-19	TANK ECONOMIZER VALVE	PI-5	TANK PRESSURE GAUGE 0-400 PSI
V-20	TANK GAUGE ISOLATION VALVE (LOW)	PS-1	RESERVE LOW PRESS SWITCH ALARM
V-21	TANK GAUGE EQUALIZATION VALVE	PS-2	RESERVE IN USE PRESS SWITCH ALARM
V-22	TANK GAUGE ISOLATION VALVE (HIGH)	PBV-1	PRESSURE BUILDING VAPORIZER COIL
V-23	TANK PRESSURE BUILD OUTLET ISO VALVE	PV-1	PROCESS VAPORIZER COIL
V-24	TANK PRESSURE BUILD INLET ISO VALVE		
V-25	PRESSURE SWITCH PURGE VALVE		
V-26	TANK ECONOMIZER INLET ISO VALVE		

ITEM	CIRCUIT
A	TOP FILL
B	BOTTOM FILL & LIQUID USE
C	PB INLET
D	PB OUTLET
E	LIQUID PHASE
F	VAPOR PHASE
G	VENT
H	DUAL RELIEF
J	ECONOMIZER
K	GAS USE

Your Local Representative



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