MICROBULK MEDICAL SKID

MICROBULK SYSTEM FOR N, & O, MEDICAL APPLICATIONS

The Microbulk Medical Skid is a turnkey package designed to comply with all the necessary codes for a safe and economical Medical Micro-Bulk installation. The standard skid is designed to accept standard FlexFillTM 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, and dental offices.





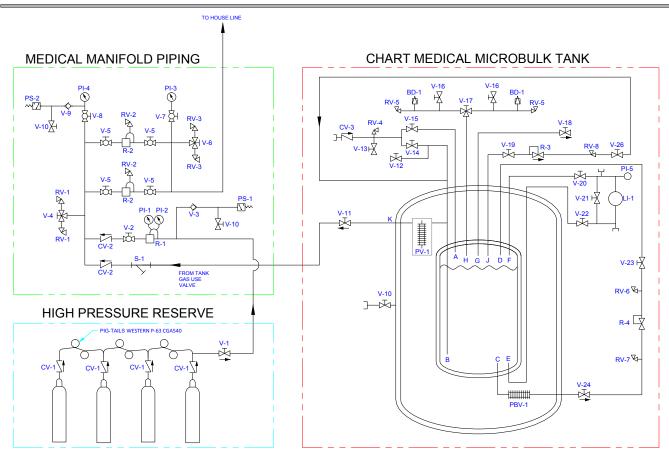
PRODUCT HIGHLIGHTS

- 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 Dimensions: 84" wide x 95.5" long x 90.25" high
- * National Fire Protection Agency
- ** Standard Cubic Feet per Hour



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MICROBULK SYSTEM FOR $N_2 \& O_2$ MEDICAL APPLICATIONS



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

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

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