

About Taylor-Wharton:

Taylor-Wharton International LLC is a world-leading technology, service and manufacturing network for gas applications involving pressure vessels and precision valves. Taylor-Wharton International LLC operates two complementary businesses from manufacturing, sales, warehouse and service facilities in six countries, on four continents, and markets its products in over 80 countries worldwide. Taylor-Wharton manufactures a complete line of state-of-the-art cryogenic liquid cylinders, MicroBulk and bulk tank storage systems. With worldwide operations, manufacturing facilities and strategic partners, Taylor-Wharton provides MicroBulk systems that deliver safety, quality and efficiency to health care, industrial and other business segments.

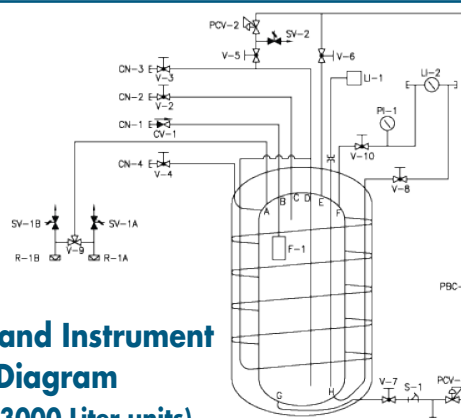
Taylor-Wharton MicroBulk TANK SPECIFICATIONS

Model:	MAWP		Gross Vol		Net Vol		Diameter		Height		Empty Weight		Gaseous Withdraw Rate SCFH
	psig	barg	gal	Liters	gal	liters	inches	mm	inches	mm	lbs	kgs	
MB-240HP	230	15.9	65	247	63	240	26	660	59.5	1511	535	243	400
MB-450HP	350	24.1	119	450	110	416	30	762	74	1880	738	340	575
MB-450VHP	500	34.5	119	450	111	416	30	762	74	1880	864	395	575
MB-1000HP	350	24.1	284	1074	255	965	42	1067	92.5	2350	2000	907	960
MB-1000VHP	500	4.5	284	1074	255	965	42	1067	92.5	2350	2200	997	960
MB-1500HP	350	24.1	410	1552	385	1457	48	1219	98.5	2500	2500	1133	1350
MB-1500VHP	500	34.5	411	1552	386	1457	48	1219	98.5	2500	3000	1360	1350
MB-2000HP	350	24.1	540	2043	513	1942	48	1219	119.5	3035	3000	1360	1400
MB-2000VHP	500	34.5	540	2043	513	1942	48	1219	119.5	3035	3250	1474	1400
MB-3000HP	350	24.1	775	2933	720	2725	59	1499	115	2921	3900	1769	1550
MB-3000VHP	500	34.5	775	2933	720	2725	59	1499	115	2921	4500	2041	1550

*Includes pallet. All specifications are nominal.

Piping and Instrument Legend

CN-1 CONNECTION, FILL	V-3 VALVE, LIQUID WITHDRAWAL	PCV-1 PRESSURE BUILDING REGULATOR
CN-2 CONNECTION, FULL TRYCOCK AND VENT	V-4 VALVE, GAS USE	PCV-2 ECONOMIZER REGULATOR
CN-3 CONNECTION, LIQUID WITHDRAWAL	V-5 VALVE, ECONOMIZER ISOLATION	S-1 STRAINER
CN-4 CONNECTION, VAPORIZER OUTLET (INTERNAL)	V-6 VALVE, PRESSURE BUILDING OUTLET	SV-1A SAFETY VALVE
CV-1 CHECK VALVE, PUMP/TOP FILL	V-7 VALVE, PRESSURE BUILDING INLET	SV-1B SAFETY VALVE (OPTIONAL)
V-2 VALVE, FULL TRYCOCK/VENT	V-8 VALVE, LIQUID INSTRUMENT	SV-2 RELIEF VALVE
	V-9 VALVE, DIVERTER	SV-3 RELIEF VALVE
	V-10 VALVE, GAS INSTRUMENT	R-1A INNER CONTAINER BURST DISC
	LI-1 LIQUID LEVEL GAUGE	R-1B INNER CONTAINER BURST DISC (OPTIONAL)
	LI-2 LIQUID LEVEL DP GAUGE (OPTIONAL)	F-1 FLOAT
	PI-1 PRESSURE GAUGE	
	PBC-1 PRESSURE BUILDING COIL	



Piping and Instrument Diagram
(1000-3000 Liter units)



Taylor-Wharton
Since 1742

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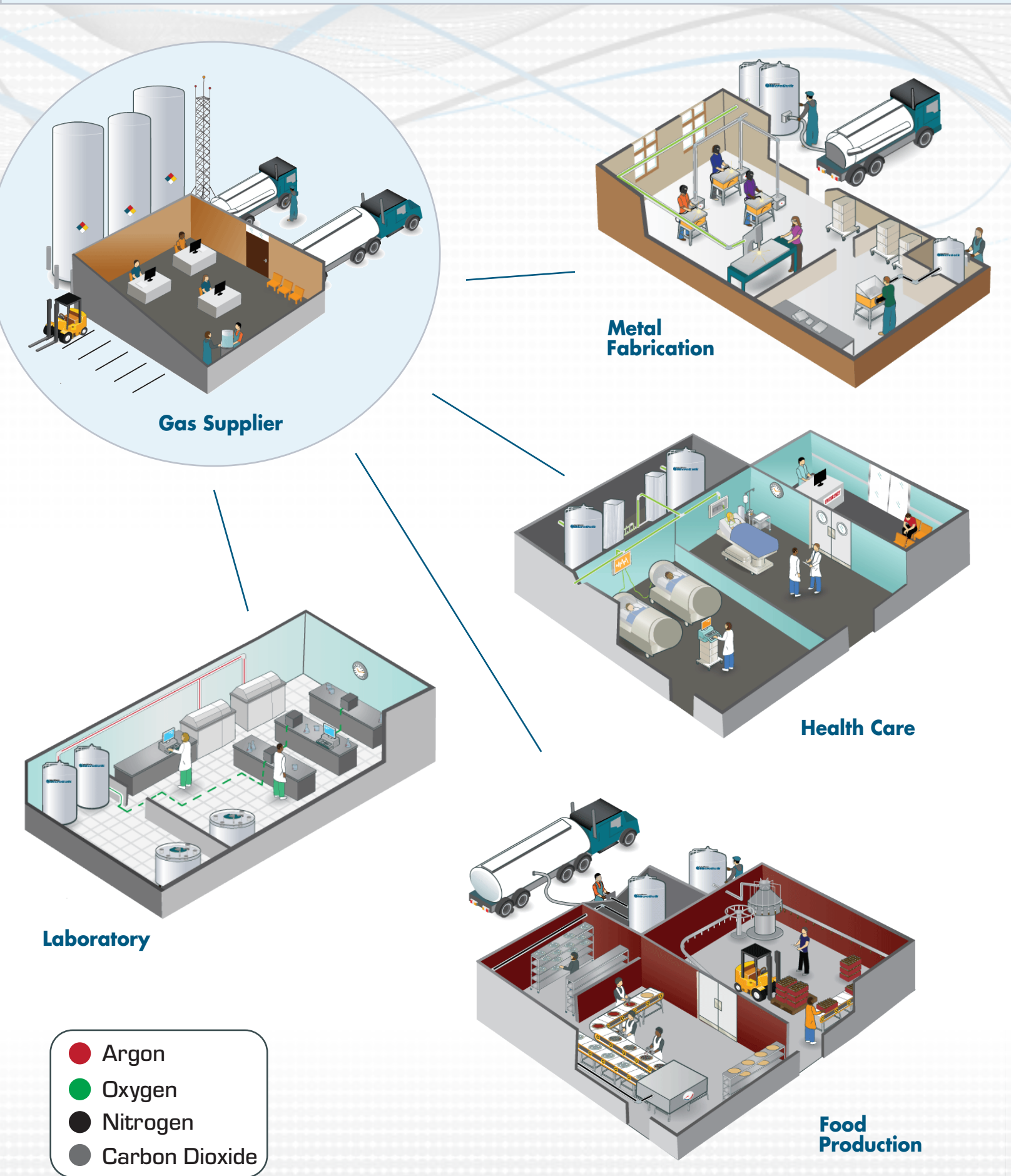
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Taylor-Wharton MicroBulk Solutions





On-site MicroBulk storage from Taylor-Wharton helps you maximize safety, quality and efficiency in your operations:

- Eliminates cylinder handling.
- Reduces deliveries, invoices and administrative time.
- Dedicated containers eliminate potential contamination.
- Simplifies Inventory management.
- Increases operating efficiencies with constant on-stream supply, no unplanned down-time due to run-out.
- Eliminates cylinder change-outs which reduces costs, keeps skilled workers producing not changing tanks.
- Eliminates residual product returned in high pressure cylinders and liquid cylinders.
- Frees up valuable floor space formerly used for cylinder storage.
- Eliminates lost-cylinder costs.
- Eliminates emergency deliveries with telemetry solutions that monitor and report liquid content status and fill needs.
- Provides flexibility to easily add or remove MicroBulk tanks as needed to adjust for changes in storage volume.

MicroBulk System Components:

Truck: Taylor-Wharton's "Universal" fill system is compatible with all MicroBulk delivery trucks in service and available.

MB Tank: Quality and Reliability are built-in providing years of service.

Tank Telematics: Telemetry ready to keep you connected and informed.

Why buy Taylor-Wharton MicroBulk?

Because Taylor-Wharton knows cryogenics customers' needs and has provided quality products for over 50 years, the MicroBulk Product line features:

- Standard Sizes (240 – 3000 liters) and broad range of working pressures up to 500 psig.
- Quality Materials: Durable stainless steel, super insulated, digital gauges.
- Automatic fill shut-off: Functions with most MicroBulk delivery trucks.
- Reliable: Built to last, 5 year vacuum warranty.
- Telemetry Ready: Plug into your network or build new to suit.

Applications: There are hundreds of applications suitable for MicroBulk including but not limited to these:

Industries	Applications	Gas	Typical State
Bio-Technology	Sample Freezing	Nitrogen	Liquid
Electronics	Circuit board & component test chambers	Nitrogen	Liquid
Electronics	Semiconductor cleaning	CO ₂	High Pressure
Food	Packaging	Nitrogen	High Pressure
Food	Beverage Carbonation	CO ₂	High Pressure
Food	Packaging/Freezing	CO ₂	High Pressure
High Technology	Instrumentation	Nitrogen	High Pressure
Hotels/Institutions	Beverage Carbonation; Controlling Pools' pH Levels	CO ₂	High Pressure
Industrial	Cryogenic Cooling and Freezing	Nitrogen	Liquid
Industrial	Purging / Inerting	Nitrogen	High Pressure
Industrial	Cutting	Oxygen	High Pressure
Industrial	Oxidation Process	Oxygen	High Pressure
Industrial	High Speed Cutting	Nitrogen	High Pressure
Industrial	Laser Cutting/Welding	Argon	High Pressure
Industrial	Laser Cutting/Welding/Blanketing	CO ₂	High Pressure
Industrial	Laser Cutting	Nitrogen	Very High Pressure
Industrial	Carbon emission control; Foundry process control	CO ₂	Very High Pressure
Industrial	Specialty Steel & Metal Processing	Argon	High Pressure
Laboratory	ICP-MS, ICP-OES	Argon	High Pressure
Laboratory	Oxygen Enrichment	Oxygen	High Pressure
Medical/Health Care	MRI Magnet Cooling	Nitrogen	Liquid
Medical/Health Care	Respiratory Oxygen Delivery	Oxygen	Liquid
Medical/Health Care	Respiratory Oxygen Therapy	Oxygen	High Pressure