



Taylor-Wharton

Liquid Cylinders

LIQUID CYLINDERS

Portable vacuum-insulated containers that provide convenient and economical means of transporting, storing and dispensing liquefied gases.

- Full Circle® Shock-Mount Ring*
- Polished Heavy Duty Outer Body
- Innovative Non-Binding Contents Gauge
- Reinforced Lateral Head Support
- Color-Coded Relief Valves for Different Pressure Settings
- Protective Nylon Shipping Sleeve**
- 5-Year Warranty on Vacuum



Taylor-Wharton





L Series



L SERIES - Liquid Withdrawal Low Pressure *XL-100, XL-160, XL-180 and XL-240*

Liquid Nitrogen or Liquid Oxygen

The XL-100, XL-160 and XL-180 are transportable units built to rugged construction standards. They are specifically designed for the low pressure requirements of liquid Nitrogen filling, storing and dispensing and feature easy, quick liquid withdrawal.

This series is versatile and was built with the liquid nitrogen user in mind. The XL-100 meets the needs of small volume users, while the XL-160 and XL-180 allow more frequent usage. The XL-100 and XL-240 are easily maneuvered on a five-caster base.

The XL-240 is available in 50 psig and 100 psig (3.4 bar and 6.9 bar) for oxygen service. The XL-240 is available with pressure building capabilities. (MRI version available).

	XL-100	XL-160	XL-180	XL-240
Dimensions				
Diameter	20 in. (508 mm)	20 in. (508 mm)	20 in. (508 mm)	26 in. (660 mm)
Height	50.9 (1293 mm)	57 5/8 in. (1464 mm)	64 3/8 in. (1635 mm)	59 1/2 in. (1511 mm) ⁴
Weight				
Empty (Nominal)	175 lb. (79 kg)	197 lb. (89 kg)	205 lb. (93 kg)	N/A
5 caster base	N/A	N/A	N/A	375 lb. (170 kg)
4 caster base	N/A	N/A	N/A	N/A
Maximum Liquid Capacity				
	103 liters	163 liters	186 liters	250 liters
Usable Liquid Capacity				
	98 liters	160 liters	180 liters	240 liters
Normal Evaporation Rate¹ % Capacity per Day				
Oxygen	N/A	N/A	N/A	0.9%
Nitrogen	2.8%	1.3%	1.25%	1.4%
Argon	N/A	N/A	N/A	N/A
Carbon Dioxide	N/A	N/A	N/A	N/A
Nitrous Oxide	N/A	N/A	N/A	N/A
Dual Pressure Building/ Economizer Regulator³				
Pressure Building Setting	N/A	N/A	N/A	15 psig ⁵ (1 bar/103 kPa)
Economizer Setting	N/A	N/A	N/A	N/A
Design Specification				
TC N/A	4LM	4LM	4LM	4LM
DOT	4L	4L	4L	4LM
Rated DOT Service Pressure	100 psig	100 psig	100 psig	100 psig
Safety Devices				
Pressure Relief Valve	22 psig (1.5 bar/152 kPa)	22 psig (1.5 bar/152 kPa)	22 psig (1.5 bar/152 kPa)	22 psig (1.5 bar/152 kPa)
Inner Container Bursting Disc	176 psig (12 bar/1213 kPa)	176 psig (12 bar/1213 kPa)	176 psig (12 bar/1213 kPa)	176 psig (12 bar/1213 kPa)
Weight of Contents Based on DOT Rated Service Pressure				
Oxygen	N/A	N/A	N/A	563 lb. (255 kg)
Nitrogen	173 lb. (78 kg)	259 lb. (117 kg)	296 lb. (134 kg)	394 lb. (179 kg)
Argon	N/A	N/A	N/A	N/A
Carbon Dioxide	N/A	N/A	N/A	N/A
Nitrous Oxide	N/A	N/A	N/A	N/A

(1) - Vented N.E.R. based on usable liquid capacity

(2) - Container pressure at or above factory pressure/economizer regulator setting

(3) - Regulator has a pressure delta of 20 psig (1.4 bar/138 kPa)

(4) - 5 caster base used for weight and height measurement. For 4 caster square base with handle add approx. 70lb (32 kg) and 1/2 in. (12.7mm)

(5) - XL-240 available with or without pressure building capabilities. L2400C04 for oxygen service employs a single action regulator set at 90 psig (6 bar/621 kPa)



Accessories

TRANSFER HOSES

Transfer hoses are constructed of a flexible stainless steel suitable for the transfer of cryogenic fluids and are available in 4 ft. (1.2 m) or 6 ft. (1.8 m) lengths. Hoses are fitted with a 3/8 in. NPT male fitting on one end and a CGA female fitting on the other end.



Female End Fitting	Hose Length	Male End Fitting	Part Number
Nitrogen and Argon LIQUID or VENT Connection			
CGA 295	4 ft. (1.2 m)	3/8 in. NPT	1700-9C65
CGA 295	6 ft. (1.8 m)	3/8 in. NPT	1600-9C66
Nitrogen and Argon USE Connection			
CGA 580	6 ft. (1.8 m)	3/8 in. NPT	GL50-8C51
Oxygen LIQUID or VENT Connection			
CGA 440	6 ft. (1.8 m)	3/8 in. NPT	GL50-8C53
Oxygen USE Connection			
CGA 540	6 ft. (1.8 m)	3/8 in. NPT	GL50-8C56
Carbon Dioxide LIQUID or Gas USE Connection			
CGA 320	6 ft. (1.8 m)	3/8 in. NPT	HP50-8C51
Carbon Dioxide Gas VENT Connection			
CGA 295	4 ft. (1.2 m)	3/8 in. NPT	1700-9C65
CGA 295	6 ft. (1.8 m)	3/8 in. NPT	1600-9C66

CRYOGENIC PHASE SEPARATORS

Designed to minimize hazardous splashing and vaporization, phase separators are available in three different sizes to accommodate transferring liquids into various open containers. The two larger phase separator are designed to fit the 3/8 in. NPT end of Taylor-Wharton transfer hoses. Specify quantity and size or part number.



Model	Part No.
2 3/4 in. x 1 3/8 in. OD (3/8 in. NPT) (70 mm x 35 mm)	1193-8C80
1 1/4 in. x 1 in. OD (3/8 in. NPT) (32 mm x 25.4 mm)	1193-8C82
1 1/4 in. x 1/2 in. OD (1/8 in. NPT) (32 mm x 12.7 mm)	1193-8C83

EXTERNAL HEAT EXCHANGER

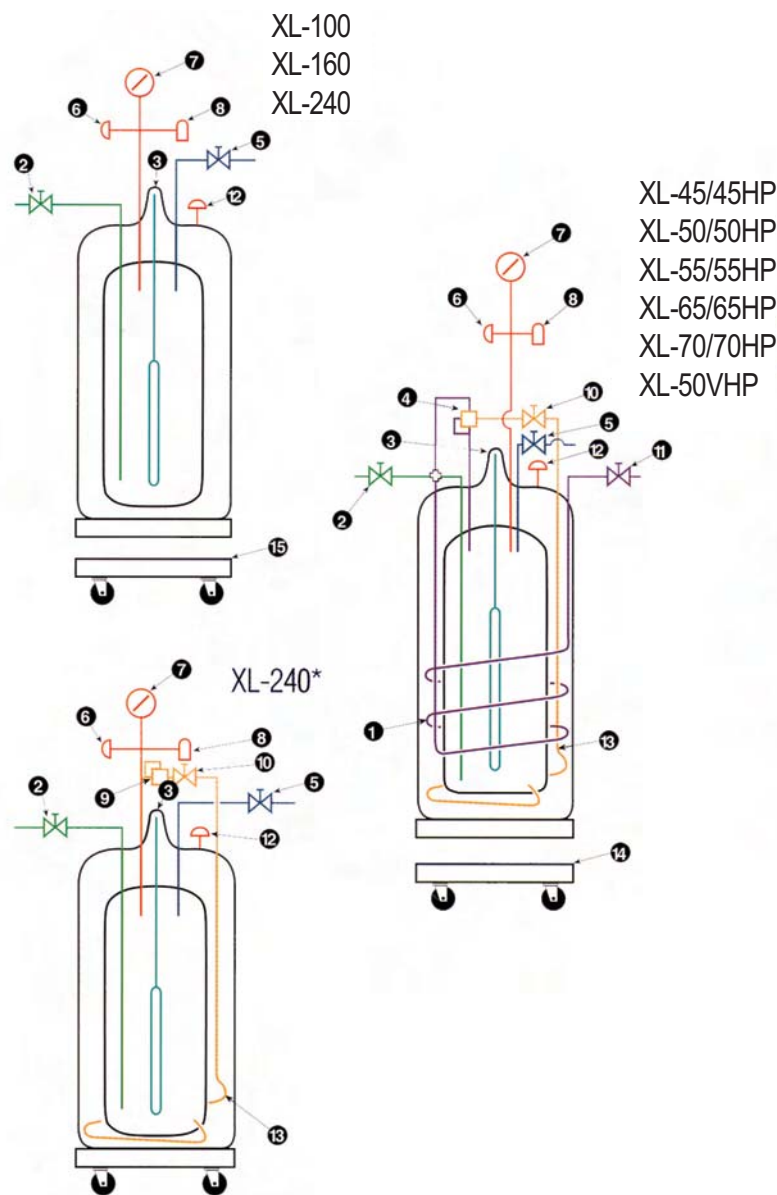
An External Heat Exchanger (vaporizer) effectively increases the gaseous delivery rate of any liquid cylinder by approximately 250 cfh (7.0 cu. m/h) air gases and 120 cfh (3.4 cu m/h) CO₂ continuous at pressures up to 500 psig (34 bar/3447 kPa). The vaporizer is cleaned for oxygen service and comes equipped with a 3/8 in. NPT fitting to connect to a transfer hose and regulator suited to your application. Dimensions - 12 x 15 3/4 x 46



Model	Part No.
External Heat Exchanger	VP50-7C10



Flow Diagram



- Safety
- Vent
- Liquid Withdrawal
- Contents Gauge
- Economizer & Gas Use
- Pressure Building*

* Diagram shows XL-240 with pressure building system. XL-240 model also available without this feature.

1. Vaporizer
2. Liquid Fill/Withdrawal Valve
3. Contents Gauge
4. Dual Pressure Building/Economizer Regulator
5. Vent Valve
6. Inner Containing Bursting Disc
7. Pressure Gauge
8. Pressure Relief Valve
9. Pressure Building Regulator
10. Pressure Building Valve
11. Gas Withdrawal (USE) Valve
12. Vacuum Bursting Disc
13. Pressure Building Coil
14. Base for XL-65/65HP, XL-70/70HP only, optional five-caster base or four-caster base with SureGrip handle available.
15. Five-caster base for XL-100 and XL-240.



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