Taylor-Wharton
Since 1742

Taylor-Wharton
Liquid Cylinders

DOT-4L

Innovative. Convenient. Reliable.

Liquid Cylinders

Superior products…outstanding solutions.
Wherever you need them.

Trust the experts for unsurpassed value, quality and service – worldwide. Our extensive product line offers everything you need to transport, store and dispense liquefied gases.

Portable and vacuum-insulated, our vast array of models will fit your needs and store your contents safely and securely every time. Best of all, these products come from Taylor-Wharton, the leader in quality cryogenic liquid cylinders.

Our extensive line-up includes reliable features that ensure excellent performance:

- ***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***
- ***5-Year Warranty on Vacuum***

Liquid Withdraw

Low pressure XL™-100, XL™-160, XL™-180 and XL™-240

Liquid Nitrogen or Liquid Oxygen

Features

- Rugged, easy to maneuver and versatile
- Designed for low pressure filling, storing and dispensing
- Simple, quick liquid withdrawal
- Sizes for every need, from small volume to frequent usage
- Oxygen service and pressure-building capabilities available

(1) Vented N.E.R based on usable liquid capacity.
(2) 5-caster base used for height measure. For 4-caster base square base with handle, add approx. ½ inch (12.7 mm).

MODEL NO.	XL™-100	XL™-160	XL™-180	XL™-230	XL™-230PB	XL™-240
Dimensions Diameter in. (mm) Height in. (mm)	20 (508) 47.6 (1210)	20 (508) 55.7 (1415)	20 (508) 62.8 (1595)	26 (660) 56.1 (1425)	26 (660) 56.1 (1425)	26 (660) 57.5 (1460) (2)
Weight Empty lb. (kg) (Nominal) 5 Caster Base lb. (kg) 4 Caster Base (square base)	N/A 165 (75) N/A	216 (98) N/A N/A	240 (109) N/A N/A	N/A 326 (148) 390 (177)	N/A 326 (148) 390 (177)	N/A 326 (148) 354 (161)
Maximum Liquid Capacity (liters)	103	163	186	240	240	250
Usable Liquid Capacity (liters)	98	160	180	230	230	240
Normal Evaporation Rate (1) % Capacity/Day Oxygen Nitrogen Argon	2.4% 3.8% N/A	0.8% 1.3% N/A	0.8% 1.3% N/A	N/A 1.4% N/A	0.9% 1.4% 0.9%	0.9% 1.4% 0.9%
Pressure Building Regulator Pressure Building Setting	N/A	N/A	N/A	N/A	15 psig	15 psig (1bar/103 kPa)
Design Specification TC DOT Rated DOT Service Pressure	4LM 4L 100 psig	4LM 4L 100 psig	4LM 4L 100 psig	4LM 4L 200psig	4LM 4L 200psig	4LM 4L 200psig
Safety Devices Pressure Relief Valve Inner Container Bursting Disc	22 psig (1.5 bar/152 kPa) 176 psig (12 bar/1213 kPa)	22 psig (1.5 bar/152 kPa) 176 psig (12 bar/1213 kPa)	22 psig (1.5 bar/152 kPa) 176 psig (12 bar/1213 kPa)	22 psig (1.5 bar/152 kPa) 76 psig (5.24 bar/524 kPa)	22 psig (1.5 bar/152 kPa) 76 psig (5.24 bar/524 kPa)	22 psig (1.5 bar/152 kPa) 176 psig (12 bar/1213 kPa)
Weight of Contents Based on DOT-Rated Service Pressure Oxygen lb. (kg) Nitrogen lb. (kg) Argon lb. (kg)	245 (111) 173 (78) N/A	387 (176) 272 (123) N/A	459 (208) 323 (147) N/A	N/A 319 (145) N/A	475 (216) 319 (145) 579 (263)	595 (270) 419 (190) 733 (332)

Specifications subject to change without notice.

GL- Series (DOT-4L)

Gas and Liquid Withdrawal

Medium pressure XL™-45, XL™-50, XL™-55, XL™-65 and XL™-70

Liquid or Gaseous Nitrogen, Oxygen, Argon

- Worry-free, over-the-road transport
- Hard working, tough construction
- Automatic pressure-building and economizer circuits
- Low-loss holding capabilities – conserve during low demand periods

(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 height measure. For 4-caster square base with handle, add approx. ½ inch (12.7 mm)

MODEL NO.	XL™-45	XL™-50	XL™-55	XL™-60	XL™-65	XL™-70
Dimensions						
Diameter in. (mm)	20 (508)	20 (508)	20 (508)	26 (660)	26 (660)	26 (660)
Height in. (mm)	60 (1525)	62.3 (1582)	65 (1650)	56.1 (1425)	57.5 (1460) (4)	61.5 (1562) (4)
Weight						
Empty lb. (kg) (Nominal)	244 (111)	253 (115)	262 (119)	N/A	N/A	N/A
5 Caster Base lb. (kg) (RB)	N/A	N/A	N/A	326 (148)	335 (152)	344 (156)
4 Caster Base lb. (kg) (SB)	N/A	N/A	N/A	390 (177)	368 (167)	376 (171)
Maximum Liquid Capacity (liters)	180	193	210	240	250	280
Usable Liquid Capacity (liters)	169	181	200	230	240	265
Normal Evaporation Rate (1) % Capacity/Day						
Oxygen	1.2%	1.1%	1.1%	0.9%	0.9%	1.0%
Nitrogen	1.9%	1.8%	1.7%	1.4%	1.4%	1.8%
Argon	1.2%	1.1%	1.1%	0.9%	0.9%	1.0%
Gas Withdrawal Rate (2) @ NTP (STP)						
Oxygen cfh (cu. m/h)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)
Nitrogen cfh (cu. m/h)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)
Argon cfh (cu. m/h)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)
Dual Pressure Building/Economizer Regulator (3)						
Pressure Building Setting	125 psig (8.6 bar/862 kPa)	125 psig (8.6 bar/862 kPa)	125 psig (8.6 bar/862 kPa)	125 psig (8.6 bar/862 kPa)	125 psig (8.6 bar/862 kPa)	125 psig (8.6 bar/862 kPa)
Economizer Setting	145 psig (10 bar/1000 kPa)	145 psig (10 bar/1000 kPa)	145 psig (10 bar/1000 kPa)	145 psig (10 bar/1000 kPa)	145 psig (10 bar/1000 kPa)	145 psig (10 bar/1000 kPa)
Design Specification						
TC	4LM	4LM	4LM	4LM	4LM	4LM
DOT	4L	4L	4L	4L	4L	4L
Rated DOT Service Pressure	200 psig	200 psig	200 psig	200 psig	200 psig	200 psig
Safety Devices						
Pressure Relief Valve	230 psig (16 bar/1586 kPa)	230 psig (16 bar/1586 kPa)	230 psig (16 bar/1586 kPa)	230 psig (16 bar/1586 kPa)	230 psig (16 bar/1586 kPa)	230 psig (16 bar/1586 kPa)
Inner Container Bursting Disc	360 psig (24.8 bar/248 kPa)	360 psig (24.8 bar/248 kPa)	360 psig (24.8 bar/248 kPa)	360 psig (24.8 bar/284 kPa)	360 psig (24.8 bar/248 kPa)	360 psig (24.8 bar/248 kPa)
Weight of Contents Based on DOT-Rated Service Pressure						
Oxygen lb. (kg)	388 (176)	417 (189)	445 (202)	517 (235)	543 (246)	606 (275)
Nitrogen lb. (kg)	273 (127)	293 (133)	313 (142)	364 (166)	382 (173)	426 (193)
Argon lb. (kg)	471 (214)	506 (235)	540 (245)	628 (286)	659 (299)	735 (333)
Gaseous Capacity Based on DOT-Rated Service Pressure @ NTP (STP)						
Oxygen cu. ft. (cu. m)	4700 (135)	5031 (142)	5375 (152)	6245 (164)	6558 (186)	7316 (207)
Nitrogen cu. ft. (cu. m)	3780 (107)	4047 (115)	4323 (122)	5023 (133)	5275 (149)	5885 (167)
Argon cfh cu. ft. (cu. m)	4571 (129)	4894 (139)	5320 (151)	6077 (160)	6379 (181)	7116 (202)

Specifications subject to change without notice.

HP- Series (DOT-4L)

MODEL NO.	XL™-45HP	XL™-50HP	XL™-55HP	XL™-60HP	XL™-65HP	XL™-70HP
Dimensions						
Diameter in. (mm)	20 (508)	20 (508)	20 (508)	26 (660)	26 (660)	26 (660)
Height in. (mm)	60 (1525)	62.4 (1585)	64.68 (1650)	56.1 (1452)	57.5 (1460) (4)	61.5 (1562) (4)
Weight						
Empty lb. (kg) (Nominal)	275 (125)	291 (132)	300 (136)	N/A	N/A	N/A
5 Caster Base lb. (kg)	N/A	N/A	N/A	376 (171)	385 (175)	416 (189)
4 Caster Base lb. (kg)	N/A	N/A	N/A	440 (200)	418 (190)	449 (204)
Maximum Liquid Capacity (liters)	176	188	208	240	247	280
Usable Liquid Capacity (liters)	165	176	198	230	240	265
Normal Evaporation Rate (1) % Capacity/Day						
Oxygen	1.4%	1.2%	1.2%	1.0%	1.0%	1.0%
Nitrogen	2.2%	2.0%	1.9%	1.6%	1.6%	1.6%
Argon	1.4%	1.2%	1.2%	1.0%	1.0%	1.0%
Carbon Dioxide	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%
Nitrous Oxide	0.75%	0.75%	0.75%	0.75%	0.75%	0.75%
Gas Withdrawal Rate (2) @ NTP (STP)						
Oxygen cfh (cu. m/h)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)
Nitrogen cfh (cu. m/h)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)
Argon cfh (cu. m/h)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)	350 (9.2)
Carbon Dioxide	150 (3.9)	150 (3.9)	150 (3.9)	150 (3.9)	150 (3.9)	150 (3.9)
Nitrous Oxide	110 (2.9)	110 (2.9)	110 (2.9)	110 (2.9)	110 (2.9)	110 (2.9)
Dual Pressure Building/ Economizer Regulator (3)						
Pressure Building Setting	300 psig (20.7 bar/2068 kPa)	300 psig (20.7 bar/2068 kPa)	300 psig (20.7 bar/2068 kPa)	300 psig (20.7 bar/2068 kPa)	300 psig (20.7 bar/2068 kPa)	300 psig (20.7 bar/2068 kPa)
Economizer Setting	320 psig (22 bar/2206 kPa)	320 psig (22 bar/2206 kPa)	320 psig (22 bar/2206 kPa)	320 psig (22 bar/2206 kPa)	320 psig (22 bar/2206 kPa)	320 psig (22 bar/2206 kPa)
Design Specification						
TC	4LM	4LM	4LM	4LM	4LM	4LM
DOT	4L	4L	4L	4L	4L	4L
Rated DOT Service Pressure	292 psig	292 psig	292 psig	292 psig	292 psig	292 psig
Safety Devices						
Pressure Relief Valve	350 psig (24 bar/2413 kPa)	350 psig (24 bar/2413 kPa)	350 psig (24 bar/2413 kPa)	350 psig (24 bar/2413 kPa)	350 psig (24 bar/2413 kPa)	350 psig (24 bar/2413 kPa)
Inner Container Bursting Disc	525 psig (36 bar/3620 kPa)	525 psig (36 bar/3620 kPa)	525 psig (36 bar/3620 kPa)	525 psig (36 bar/3620 kPa)	525 psig (36 bar/3620 kPa)	525 psig (36 bar/3620 kPa)
Weight of Contents Based on DOT-Rated Service Pressure						
Oxygen lb. (kg)	360 (163)	391 (177)	419 (190)	491 (223)	513 (223)	532 (260)
Nitrogen lb. (kg)	252 (114)	273 (124)	293 (133)	343 (156)	359 (163)	400 (181)
Argon lb. (kg)	438 (199)	475 (215)	509 (231)	669 (271)	624 (283)	696 (316)
Carbon Dioxide	387 (176)	420 (191)	450 (204)	528 (240)	552 (250)	616 (279)
Nitrous Oxide	368 (167)	399 (181)	428 (194)	502 (228)	524 (234)	585 (265)
Gaseous Capacity Based on DOT-Rated Service Pressure @ NTP (STP)						
Oxygen cu. ft. (cu. m)	4359 (123)	4718 (134)	5055 (143)	5931 (156)	6201 (176)	6920 (196)
Nitrogen cu. ft. (cu. m)	3480 (99)	3767 (107)	4037 (114)	4773 (125)	4951 (140)	5526 (156)
Argon cfh cu. ft. (cu. m)	4242 (120)	4582 (130)	4920 (139)	5767 (152)	6036 (171)	6735 (191)
Carbon Dioxide	3392 (96)	3672 104)	3934 (111)	4616 (122)	4826 (137)	5385 (152)
Nitrous Oxide	3216 (91)	3482 (99)	3730 (106)	4380 (115)	4576 (130)	5106 (145)

Gas and Liquid Withdrawal

High pressure XL™-45HP, XL™-50HP, XL™-55HP, XL™-65HP and XL™-70HP

Liquid or Gaseous Nitrogen, Oxygen, Argon, Carbon Dioxide, Nitrous Oxide

- Ideal for handling a wide variety of gases or liquefied gases
- Automatic dual pressure building/ economizer regulator
- Equipped with an internal vaporizer
- State-of-the-art safety features

(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 height measure. For 4-caster base square base with handle, add approx. ½ inch (12.7 mm).

Specifications subject to change without notice.

Accessories

Gas and Liquid Withdrawal

Very High Pressure XL™-50VHP and XL™-55VHP

Liquid or Gaseous Nitrogen, Oxygen, Argon, Carbon Dioxide

- Offers all the unique features of our HP models and more
- Increased maximum allowable working pressure of 500 psig (34 bar)
- Ideal for laser cutting and other high pressure applications

(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).

MODEL NO.	XL™-50 VHP	XL™-55 VHP
Dimensions		
Diameter in. (mm)	20 (508)	20 (508)
Height in. (mm)	64.68 (1592)	65.0 (1650)
Weight		
Empty lb. (kg) (Nominal)	310 (141)	362 (164)
Maximum Liquid Capacity (liters)	188	201
Usable Liquid Capacity (liters)	176	190
Normal Evaporation Rate (1) % Capacity/Day		
Oxygen	1.5%	1.5%
Nitrogen	2.2%	2.2%
Argon	1.5%	1.5%
Carbon Dioxide	0.80%	0.80%
Gas Withdrawal Rate (2) @ NTP (STP)		
Oxygen cfh (cu. m/h)	350 (9.2)	350 (9.2)
Nitrogen cfh (cu. m/h)	350 (9.2)	350 (9.2)
Argon cfh (cu. m/h)	350 (9.2)	350 (9.2)
Carbon Dioxide	150 (3.9)	150 (3.9)
Dual Pressure Building/Economizer Regulator (3)		
Pressure Building Setting	400 psig (28 bar/2758 kPa)	400 psig (28 bar/2758 kPa)
Economizer Setting	420 psig (29 bar/2896 kPa)	420 psig (29 bar/2896 kPa)
Design Specification		
TC	4LM	4LM
DOT	4L	4L
Rated DOT Service Pressure	412 psig	412 psig
Safety Devices		
Pressure Relief Valve	500 psig (34 bar/3447 kPa)	500 psig (34 bar/3447 kPa)
Inner Container Bursting Disc	750 psig (52 bar/5171 kPa)	750 psig (52 bar/5171 kPa)
Weight of Contents Based on DOT-Rated Service Pressure		
Oxygen lb. (kg)	354(161)	380(172)
Nitrogen lb. (kg)	239(108)	256(116)
Argon lb. (kg)	441(200)	473(215)
Carbon Dioxide	379(172)	407(185)
Gaseous Capacity Based on DOT-Rated Service Pressure @ NTP (STP)		
Oxygen cu. ft. (cu. m)	4280(121)	4592(130)
Nitrogen cu. ft. (cu. m)	3298(93)	3538(100)
Argon cfh cu. ft. (cu. m)	4266(121)	4576(130)
Carbon Dioxide	3314(94)	3555(101)

Transfer Hoses

- Flexible, stainless steel construction in a variety of handy lengths

PART/MODEL NO.			
Nitrogen and Argon LIQUID or VENT Connection			
CGA 295	4 ft. (1.2m)	3/8 in. NPT	1700-9C65
CGA 295	6 ft. (1.8m)	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	1600-9C65

Cryogenic Phase Separators

- Minimizes hazardous splashing and vaporization in 3 sizes to accommodate liquid transfer

PART/MODEL NO.	
2 ¾ in. x 1 3/8 in. OD (3/8 in. NPT) (70 mm x 35 mm)	1193-8C80
1 ¼ in. x 1 in. OD (3/8 in. NPT) (32 mm x 25.4 mm)	1193-8C82
1 ¼ in. x ½ in. OD (1/8 in. NPT) (32 mm x 12.7 mm)	1193-8C83

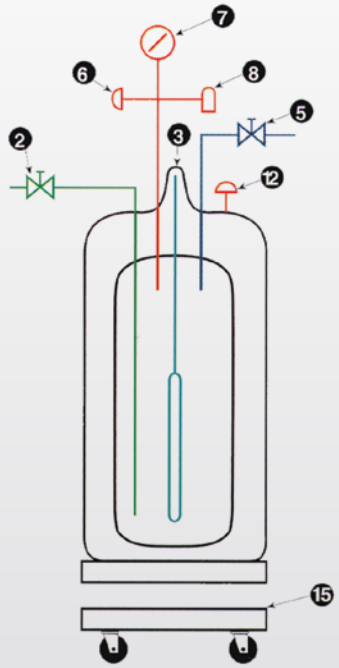
External Heat Exchanger

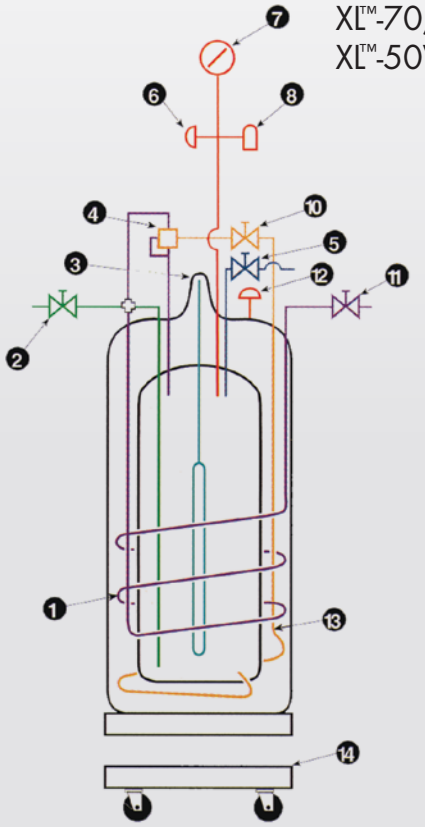
- Increases the gaseous delivery rate
- Easy to connect

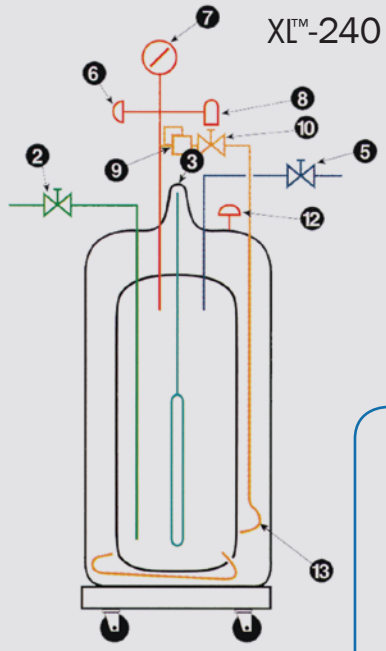
PART/MODEL NO.	
External Heat Exchanger	VP50-7C10

Specifications subject to change without notice.

Liquid Cylinders Flow Diagram







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

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 Port
13. Pressure Building Coil
14. Square base for GL-65 to GL-70/70HP only, optional five caster base or four caster base with Sure-Grip handle available
15. Five caster base for XL™-240

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Quality • Innovation • Value

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