

Victaulic® Vortex™ Hybrid Fire Extinguishing System

Series 950 49L and 80L DOT/ISO Cylinder Assemblies



1.0 PRODUCT DESCRIPTION

The Series 950 Nitrogen Cylinder and Cylinder Valve Assembly are designed to supply compressed nitrogen gas to Victaulic Vortex systems.

2.0 CERTIFICATION/LISTINGS



CE 0786, EN 12094-4, PI 0589

3.0 SPECIFICATIONS – MATERIAL

Cylinders: Chrome-Moly Steel AISI 4130X

Cylinder Valve:

Body: Brass

Stem: Stainless Steel

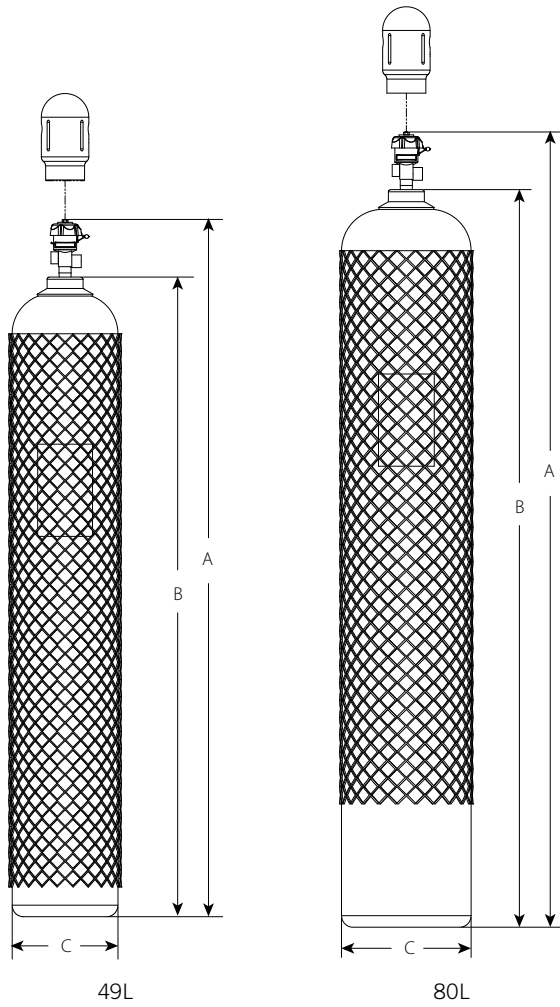
Seat: Polyurethane

O-Rings: Polyurethane, Nitrile, Silicone

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

4.0 DIMENSIONS

Cylinders



Size	Dimensions			Weight	
	A (Closed) inches mm	B inches mm	C inches mm	Empty lbs kg	Filled (Max Pressure) lbs kg
Nominal					
49 Liter	63.4 1610	60.5 1537	9.2 234	140 64	160 73
80 Liter	72.4 1839	69.0 1753	11.3 287	276 125	316 143

5.0 PERFORMANCE

Valve

Working Pressure: Max 300 bar at 15C

Approved Test Pressure: 250 Bar at 15C

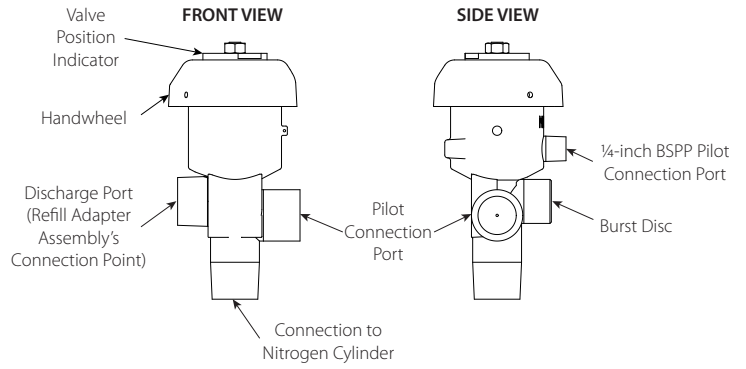
Production Test Pressure: 0.8 x min. value of burst disc

Burst Pressure:

- 49L: 280 bar +0%/-10%
- 80L: 345 bar +0%/-10%

Operating Temperature: +40°F to +130°F (+4.4°C to +54.4°C)

Storage Temperature: -4°F to +130°F (-20°C to + 54.4°C)



5.1 PERFORMANCE

49L Cylinder

Min. Water Capacity: 108 lbs/49 kg

Water Volume: 2995 in³/49L

DOT Service Pressure: 2400 Psi/165 bar

TC Service Pressure: 183 bar

Test Pressure: 4000 Psi/275 bar

80L Cylinder

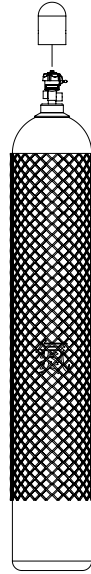
Min. Water Capacity: 176 lbs/80kg

Water Volume: 4893 in³/80L

DOT Service Pressure: 3000 Psi/206 bar

TC Service Pressure: 229 bar

Test Pressure: 5000 Psi/344 bar



Cylinders		Performance		
Size	Standard Conformance	Pressure @ 70° F/21° C	Usable Cylinder Volume ¹	Cylinder Volume
Liter		psi bar	SCF Sm ³	SCF Sm ³
49	DOT 3AA 2400 ISO 9809-1	2100	212	243
		144.8	6.0	6.9
		2200	224	255
		151.7	6.3	7.2
		2300	232	263
		158.6	6.6	7.4
80	DOT 3AA 3000 ISO 9809-1	2400	244	275
		165.5	6.9	7.8
		2100	348	399
		144.8	9.9	11.3
		2200	367	418
		151.7	10.4	11.8
		2300	381	432
		158.6	10.8	12.2
		2400	400	451
		165.5	11.3	12.8
		2500	413	464
		172.4	11.7	13.1
		2600	423	474
		179.3	12.0	13.4
		2640	439	490
		182.0	12.4	13.9
2700	450	501		
186.2	12.7	14.2		
2800	468	519		
193.1	13.3	14.7		
2900	479	530		
200.0	13.6	15.0		
3000	498	549		
206.9	14.1	15.5		

¹ Usable Cylinder Volume listed in the table above are based on 250 psi/17.2 bar remaining in the cylinder.

6.0 NOTIFICATIONS

WARNING



- Always refer to the applicable Victaulic Vortex™ Hybrid Fire Extinguishing System General Design, Installation, and Maintenance Manual before specifying or installing any Victaulic Vortex™ products.
- Wear safety glasses, hardhat, and foot protection during installation and maintenance of a Victaulic Vortex™ Hybrid Fire Extinguishing.
- It is the customer's responsibility to verify hybrid emitter material compatibility and that the proper size hybrid emitter and water flow control cartridge are specified in the system design.

Failure to follow instructions and warnings can cause system failure, resulting in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

[70.03: Victaulic Vortex™ Hybrid Fire Extinguishing System Series 951 Panels](#)

[70.05: Victaulic Vortex™ Hybrid Fire Extinguishing System - Series 950 Water Tanks](#)

[70.07: Victaulic Vortex™ Fire Suppression System Series 950 Nitrogen Cylinder](#)

[70.12: Victaulic Vortex™ Hybrid Fire Extinguishing System Emitters](#)

[70.16: Victaulic Vortex™ Series 953 Flow Cartridge and Strainer Kit](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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Note

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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