

PROINERT^{®2} AGENT STORAGE CYLINDER – IG-541

DESCRIPTION

Fike ProInert Cylinders are offered in an 80 Liter size filled to a pressure of 200 or 300 bar. The cylinders may be utilized in single or multiple cylinder applications as needed and linked together through a common discharge manifold. Upon installation, the cylinders shall be secured using a suitable racking arrangement. Cylinders are shipped from the factory with a protective shipping cap. These caps should be stored in a suitable area for future use. Shipping caps **must** be in place while transporting or handling cylinders. The Agent Storage Cylinder is a steel pressure vessel designed to hold the IG-541 agent under pressure until it is discharged.

Refer to Fike ProInert Recharge/Refill Manual, P/N 06-806, for cylinder refill instructions and procedures.

SPECIFICATIONS

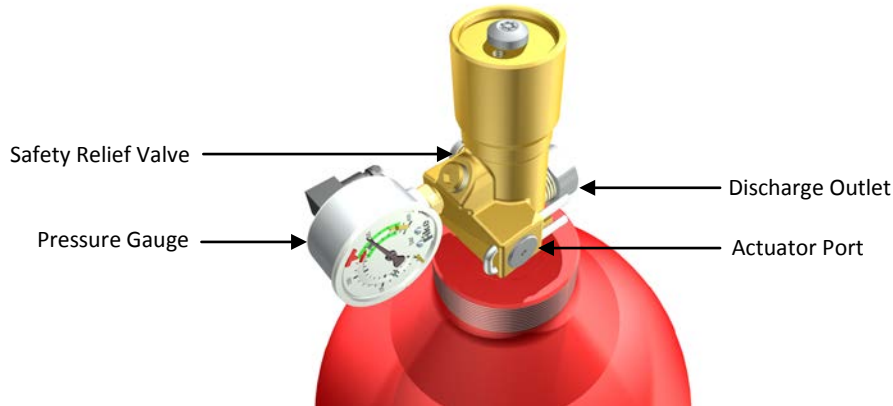
Cylinder Size	Cylinder Dimensions (Approximate)		Mounting Position
	“Height” in (mm)	“Width” in (mm)	
80 Liter (water capacity)	67.60 (1717.0)	11.25 (285.8)	Upright
Cylinder Part Number	IG71-103-200-541		
	IG71-103-300-541		
Cylinder – Pressurization Level	2,900 psi @ 59°F (200 bar @ 15°C)		
	4,351 psi @ 59°F (300 bar @ 15°C)		
Cylinder Storage Temperature Limitation	-4°F to +120°F (-20°C to +49°C) for cylinder and all related items		
Agent Capacity	598.5 ft ³ (16.9 m ³) @ 200 bar		
	856.4 ft ³ (24.3 m ³) @ 300 bar		
Cylinder Rating	EN ISO 9809-2 & TPED 1999/36/EC		
Cylinder Actuation Methods	Electric – UVO (Input from Control Panel)		
	Manual Push Button – UVO		
	Pneumatic – Relay Actuator or Pneumatic Actuator		
Cylinder Color	Signal Red		
Tare Weight	250.0 lbs. (113.4 kg) approximate		
Gross Weight	304.6 lbs. (138.2 kg) approximate @ 200 bar		
	325.4 lbs. (147.6 kg) approximate @ 300 bar		
Listings and Approvals	UL listed		
	FM approved		



Each cylinder is fitted with a ProInert Discharge Valve Assembly. The Fike ProInert Valve Assembly is a pressure-controlled outlet valve designed to provide an outlet pressure of 645 psi (44.5 bar) and a free flow area of 12mm in diameter. Each valve is equipped with a safety relief disc that will rupture if the cylinder pressure exceeds the rating of the rupture disc. The rupture disc is set to relieve at below the test pressure of the cylinder.

Each primary cylinder(s) valve is equipped with a combined pressure gauge and switch providing visual pressure monitoring, as well as continuous cylinder pressure monitoring at the control panel. Secondary cylinder(s) valve is equipped with a pressure gauge only. As an option, secondary cylinder(s) valve can also be equipped with a combined pressure gauge and switch.

NOTE: The Fike system does NOT require a pressure reducing orifice plate.



CYLINDER W/ DISCHARGE OUTLET VALVE

WARNING: Shipping Cap must be in place when moving, weighing or transporting a filled or empty cylinder. Failure to do so may result in death, injury and/or property damage.

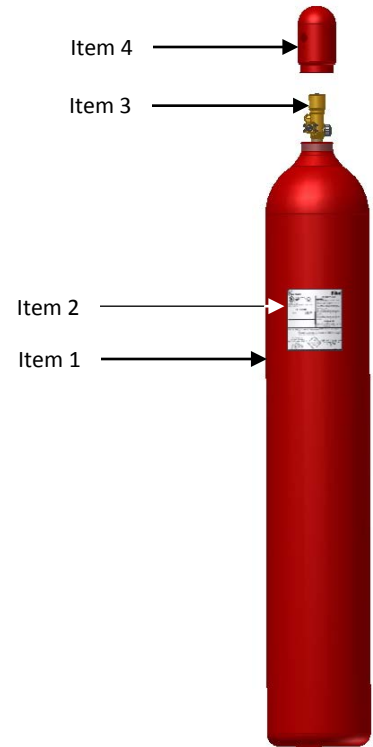
The valve assembly is available in a 200 bar model and a 300 bar model. The valve has a forged brass body. All threads comply with ANSI B2.1, ISO 7-1 & ISO 228-1. The valve meets the requirements of Fike’s UL & FM approved.

ITEMS SUPPLIED WITH CYLINDER

PROINERT 80L CYLINDER ASSEMBLY (P/N IG71-103-XXX-XXX)		
NOTE: The following items are furnished with each Cylinder Assembly		
Item No.	Part Number	Description
1	02-10631	Cylinder, 80L w/ Agent
2	02-13727	Cylinder I.D. Label for 200 bar
	02-13728	Cylinder I.D. Label for 300 bar
3	IG71-001-1	ProInert Valve Assembly for 300 bar
	IG71-001-2	ProInert Valve Assembly for 200 bar
4	02-4829	Safety/Shipping Cap

NOTES:

- 1) Fike nameplate provides the information that is specific to each cylinder:
 Assembly number of the cylinder, year manufactured, fill date, Weight information: tare, gross and agent and Installation, operation and safety information.
 All cylinders filled either by the factory or by an Approved Initial Fill Station are provided with a nameplate bearing the approval agency markings.
- 2) All cylinders do not have siphon tubes and can be mounted the vertical or horizontal position.



ORDERING FORMAT FOR CYLINDER ASSEMBLY

When placing an order for a Cylinder Assembly, you MUST specify the following in addition to the basic part number.

IG71 – 103 – XXX – 541
 Pressure Agent

For a 80L Cylinder @ 200 bar and IG-541 Agent
 p/n is IG71-103-200-541

For a 80L Cylinder @ 300 bar and IG-541 Agent
 p/n is IG71-103-300-541

ITEMS SUPPLIED WITH COMPLETER KITS FOR USE WITH “NPT” THREADS (Completer Kits must be ordered separately)

The completer kit provides the means of actuation, manifold connection and pressure monitoring for the cylinder, one required on each cylinder. There are 2 methods of operation available – Electric / Manual and Pneumatic for both 200 and 300 bar cylinders.

There are 8 options available: 4 for 200 bar systems and 4 for 300 bar systems

Option 1 – Completer Kit for Primary Cylinder w/ Electric – Manual Operation

COMPLETER KIT – IG-541 & 200 bar PRIMARY ELECTRIC (P/N IG71-236-200-541-PE) COMPLETER KIT – IG-541 & 300 bar PRIMARY ELECTRIC (P/N IG71-236-300-541-PE) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-14013	Pressure Gauge w/ Switch Assembly for 200 bar
	02-14014	Pressure Gauge w/ Switch Assembly for 300 bar
2	IG71-123	Discharge Hose Assembly
3	02-13571	Universal Valve Operator (UVO)
4	70-312	Reset Tool
5	02-13280	Din Connector
6	02-13713	Actuation Hose
7	IG71-0166	Plug Removal Tool
8	02-2213	Security Tie
9	02-14802	Lubricant (Molykote 111)

Option 2 – Completer Kit for Primary Cylinder w/ Pneumatic Operation

COMPLETER KIT – IG-541 & 200 bar PRIMARY PNEUMATIC (P/N IG71-236-200-541-PP) COMPLETER KIT – IG-541 & 300 bar PRIMARY PNEUMATIC (P/N IG71-236-300-541-PP) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-14013	Pressure Gauge w/ Switch Assembly for 200 bar
	02-14014	Pressure Gauge w/ Switch Assembly for 300 bar
2	IG71-220	Relay Actuator Assembly w/ Actuation Hose
3	IG71-123	Discharge Hose Assembly
4	IG71-0166	Plug Removal Tool
5	02-14802	Lubricant (Molykote 111)

Option 3 – Completer Kit for Secondary Cylinder(s) w/ Pneumatic Operation

COMPLETER KIT – IG-541 & 200 bar SECONDARY PNEUMATIC (P/N IG71-236-200-541-SP) COMPLETER KIT – IG-541 & 300 bar SECONDARY PNEUMATIC (P/N IG71-236-300-541-SP) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-13662	Pressure Gauge for 200 bar
	02-13663	Pressure Gauge for 300 bar
2	IG71-104	Pneumatic Actuator Assembly w/ Actuation Hose
3	IG71-123	Discharge Hose Assembly
4	02-14802	Lubricant (Molykote 111)

Option 4 – Completer Kit for Secondary Cylinder(s) w/ Pneumatic Operation (Pressure Gauge w/ Low Pressure Switch Option)

COMPLETER KIT – IG-541 & 200 bar SECONDARY PNEUMATIC (P/N IG71-236-200-541-SPL) COMPLETER KIT – IG-541 & 300 bar SECONDARY PNEUMATIC (P/N IG71-236-300-541-SPL) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-14013	Pressure Gauge w/ Switch Assembly for 200 bar
	02-14014	Pressure Gauge w/ Switch Assembly for 300 bar
2	IG71-104	Pneumatic Actuator Assembly w/ Actuation Hose
3	IG71-123	Discharge Hose Assembly
4	02-14802	Lubricant (Molykote 111)

ITEMS SUPPLIED WITH COMPLETER KITS FOR USE WITH “BSP” THREADS (Completer Kits must be ordered separately)

The completer kit provides the means of actuation, manifold connection and pressure monitoring for the cylinder, one required on each cylinder. There are 2 methods of operation available – Electric / Manual and Pneumatic for both 200 and 300 bar cylinders.

There are 8 options available: 4 for 200 bar systems and 4 for 300 bar systems

Option 1 – Completer Kit for Primary Cylinder w/ Electric – Manual Operation

COMPLETER KIT – IG-541 & 200 bar PRIMARY ELECTRIC (P/N IG71-112-200-541-PE) COMPLETER KIT – IG-541 & 300 bar PRIMARY ELECTRIC (P/N IG71-112-300-541-PE) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-14013	Pressure Gauge w/ Switch Assembly for 200 bar
	02-14014	Pressure Gauge w/ Switch Assembly for 300 bar
2	IG71-003	Discharge Hose Assembly
3	02-13571	Universal Valve Operator (UVO)
4	70-312	Reset Tool
5	02-13280	Din Connector
6	02-13713	Actuation Hose
7	IG71-0166	Plug Removal Tool
8	02-2213	Security Tie
9	02-14802	Lubricant (Molykote 111)

Option 2 – Completer Kit for Primary Cylinder w/ Pneumatic Operation

COMPLETER KIT – IG-541 & 200 bar PRIMARY PNEUMATIC (P/N IG71-112-200-541-PP) COMPLETER KIT – IG-541 & 300 bar PRIMARY PNEUMATIC (P/N IG71-112-300-541-PP) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-14013	Pressure Gauge w/ Switch Assembly for 200 bar
	02-14014	Pressure Gauge w/ Switch Assembly for 300 bar
2	IG71-220	Relay Actuator Assembly w/ Actuation Hose
3	IG71-003	Discharge Hose Assembly
4	IG71-0166	Plug Removal Tool
5	02-14802	Lubricant (Molykote 111)

Option 3 – Completer Kit for Secondary Cylinder(s) w/ Pneumatic Operation

COMPLETER KIT – IG-541 & 200 bar SECONDARY PNEUMATIC (P/N IG71-112-200-541-SP) COMPLETER KIT – IG-541 & 300 bar SECONDARY PNEUMATIC (P/N IG71-112-300-541-SP) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-13662	Pressure Gauge for 200 bar
	02-13663	Pressure Gauge for 300 bar

2	IG71-104	Pneumatic Actuator Assembly w/ Actuation Hose
3	IG71-003	Discharge Hose Assembly
4	02-14802	Lubricant (Molykote 111)

Option 4 – Completer Kit for Secondary Cylinder(s) w/ Pneumatic Operation (Pressure Gauge w/ Low Pressure Switch Option)

COMPLETER KIT – IG-541 & 200 bar SECONDARY PNEUMATIC (P/N IG71-112-200-541-SPL) COMPLETER KIT – IG-541 & 300 bar SECONDARY PNEUMATIC (P/N IG71-112-300-541-SPL) NOTE: The following items are furnished with Completer Kit		
Item Number	Part Number	Description
1	02-14013	Pressure Gauge w/ Switch Assembly for 200 bar
	02-14014	Pressure Gauge w/ Switch Assembly for 300 bar
2	IG71-104	Pneumatic Actuator Assembly w/ Actuation Hose
3	IG71-003	Discharge Hose Assembly

INSTALLATION

The following sections provide procedures for the correct installation and mounting positions of Fike Prolnert cylinders and associated hardware.

Cylinders should be located in clean, dry and relatively vibration-free areas. Avoid aisles and other high traffic areas where physical damage or tampering is more likely. Cylinders should never be mounted where the cylinder could potentially be splashed with, or submerged in any liquid. Cylinder storage location must be within a temperature of -4°F to +120°F (-20°C to +49°C) for system components to function properly.

Cylinder brackets must be mounted securely to solid load-bearing surfaces that will support the cylinder load. Some installations may require additional mounting support not supplied by Fike.

Cylinders should be located to allow easy accessibility to the actuation package for manual release of the system. Manual release is achieved by removing the locking pin and pressing the red manual activation strike knob on the UVO. This will initiate the pneumatic discharge sequence.

WARNING: The Prolnert valve Pneumatic Actuator should **always** be the last component installed on any Fike Prolnert system.

PROCEDURE:

- Step 1: Confirm the cylinder location and mount the cylinder rack and manifold support.
- Step 2: Position the cylinders in the racking. Do NOT remove the safety/shipping cap until the cylinders are fully mounted. Generally discharge outlets will be to the right and at an angle of 45 degree to the wall.
- Step 3: Secure the cylinders and mount the manifold.
- Step 4: Fit the discharge hose assemblies to the manifold.
- Step 5: Install and test the discharge pipe network.
- Step 6: Remove the safety/shipping caps and valve outlet caps (retain for future use.)
- Step 7: Connect discharge hose to valve outlet.
- Step 8: Remove and retain the Pressure Gauge port plug.
- Step 9: Screw in the pressure gauge assembly (hand tight) until resistance is felt. Use locking pliers or wrench to screw in the pressure gauge assembly until it bottoms out. For correct orientation, unscrew pressure gauge assembly up to 1 turn.
- Step 10: Remove and retain the blanking plug from the valve actuation port.
- Step 11: For installation details for connecting the UVO, Relay Actuator, Pneumatic Actuator and pilot hoses to each cylinder valve refer to the Equipment Section. Do NOT attach the UVO to the cylinder valves until the system is fully commissioned.