

## PROINERT<sup>®2</sup> SELECTOR VALVE ASSEMBLY

### DESCRIPTION

Fike offers several selector valves for use with the ProInert Fire Extinguishing System. The Selector Valve allows a single agent supply to be utilized for protection of multiple hazards, reducing the total number of cylinders required.

**NOTE:** When protecting multiple hazards with a single agent source, each hazard will require a Selector Valve. Special considerations shall be made when using a selector valve controlled system to protect adjacent hazards that may simultaneously become involved in a fire.

The Selector Valve body is available in a carbon steel finish. The unit consists of a ball-valve that blocks agent flow until the valve has been activated. Selector Valves are available in 25 mm, 40 mm, 50 mm, 80 mm and 100 mm sizes. All sizes except the 100 mm are supplied with BSPT threaded ends. The 100 mm valve is supplied with ANSI 600 lb raised face flanged ends.

Each Selector Valve is equipped with a Valve Position Monitor that provides a visual indication of the status of the valve (open or closed).

The Selector Valve Assembly can be pneumatically operated by either a ProInert Primary Actuation Package (P/N IG71-118) or a ProInert Secondary Actuation Package (P/N IG71-119). Activating the Actuator will result in the release of Nitrogen from the Nitrogen Cylinder and subsequently pneumatically opening the Selector Valve. Each Selector Valve Assembly comes equipped with the Selector Valve and its actuator with relief / pop-off valve.

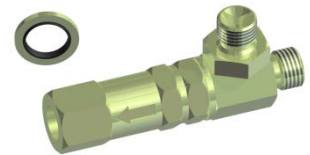
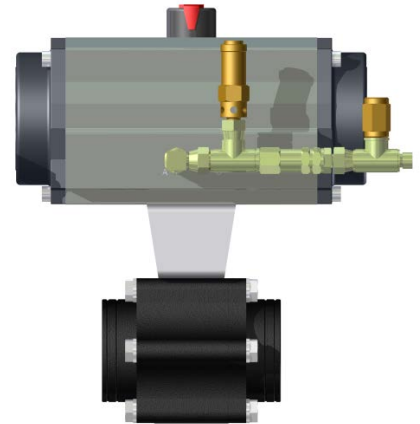
**NOTE:** For additional information on the ProInert Actuation Packages, reference Data Sheet C.2.50.01.

### NON RETURN CHECK VALVE KIT – SELECTOR VALVE ACTUATION (P/N IG71-028)

The Non Return Valve kits are used in the Selector Valve pneumatic actuation line. The correct placement of these kits within the actuation lines ensures that the required numbers of cylinders from a central bank are operated. The kits also protect against unwanted back pressure within the actuation line. The design of the Non Return Valve is such that it can be mounted in any orientation.

The kit comprises of a 1/4" Non Return Valve, a 1/4" Equal Tee and two sealing washers.

The rating for the 1/4" Non Return Valve has a nominal Free Flow Diameter of 5 mm with a working pressure of 180 bar and a minimum cracking pressure is 0.35 bar.



**APPROVAL**

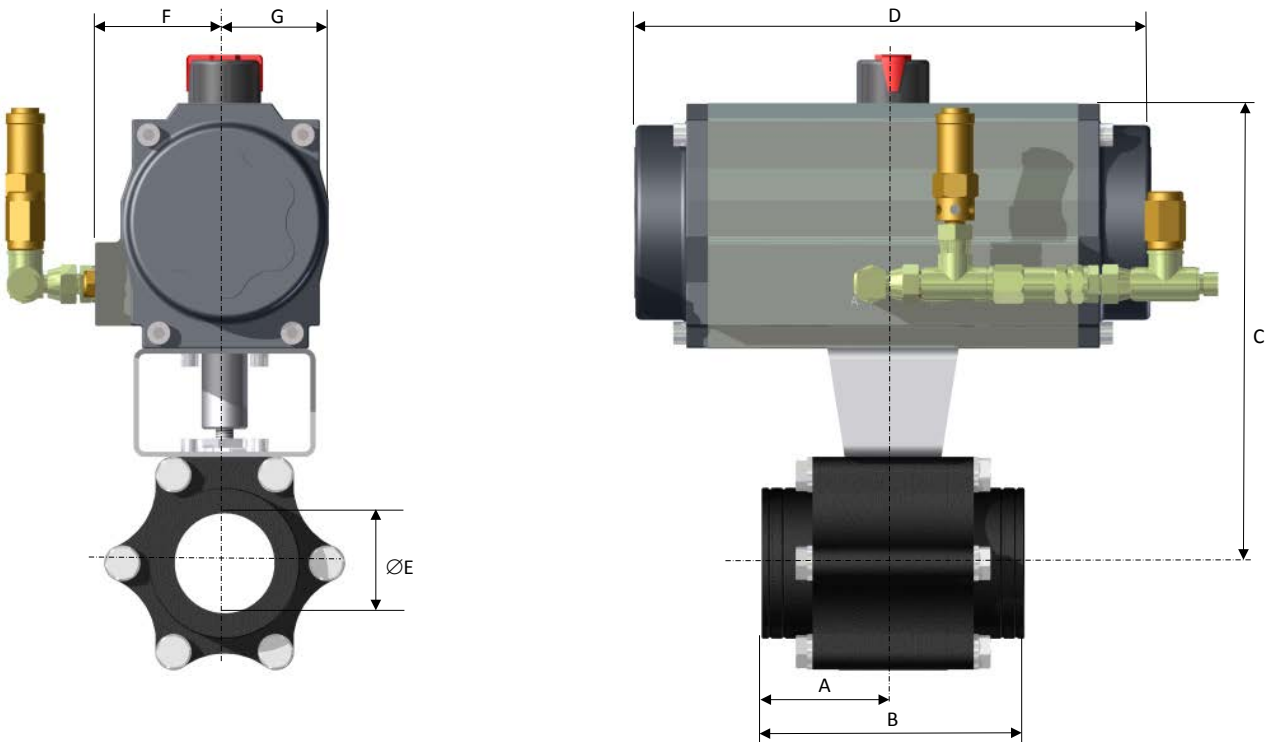


Certification  
Number C331v

Form No. C.2.41.01-3

25 – 100 mm Selector Valves									
Part Number	Size	A	B	C	D	E	F	G	Weight
IG71-025-SV-3	25 mm	68.5	137	175	215	25	42	53	6.6 kg
IG71-040-SV-3	40 mm	68.5	137	205	236	38	49	57	10.2 kg
IG71-050-SV-3	50 mm	72.5	145	240	266	49	51	72	14.4 kg
IG71-080-SV-3	80 mm	153	306	284	361	75	71	79	38.6 kg
IG71-100-SV-3	100 mm	--	305	446	522	100	100	87	

All Dimensions in mm

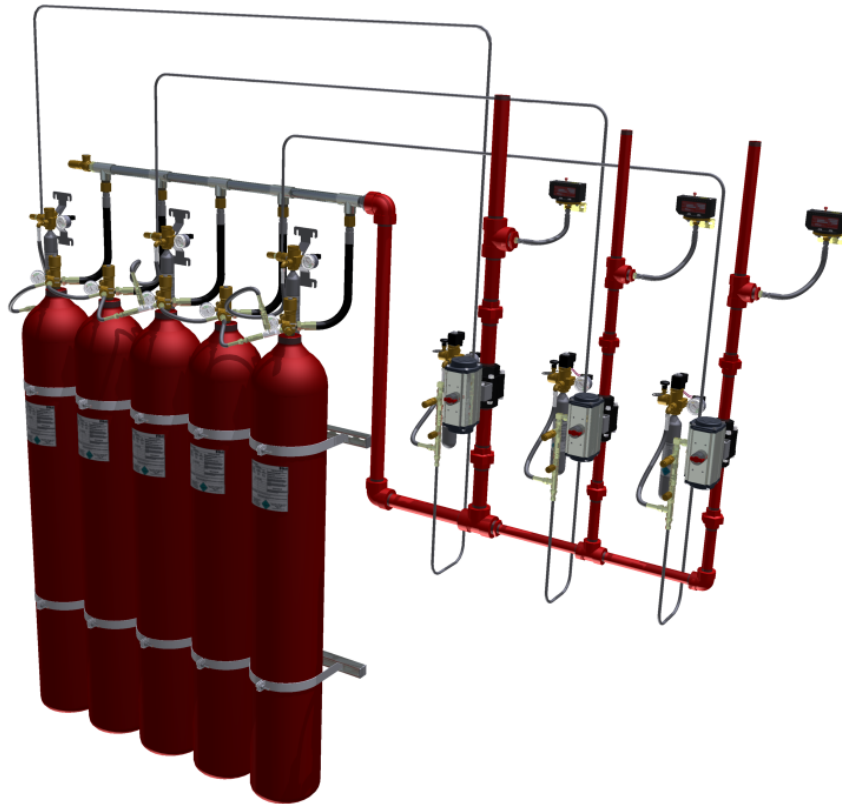


### **MULTIPLE HAZARDS WITH IDENTICAL VOLUMES**

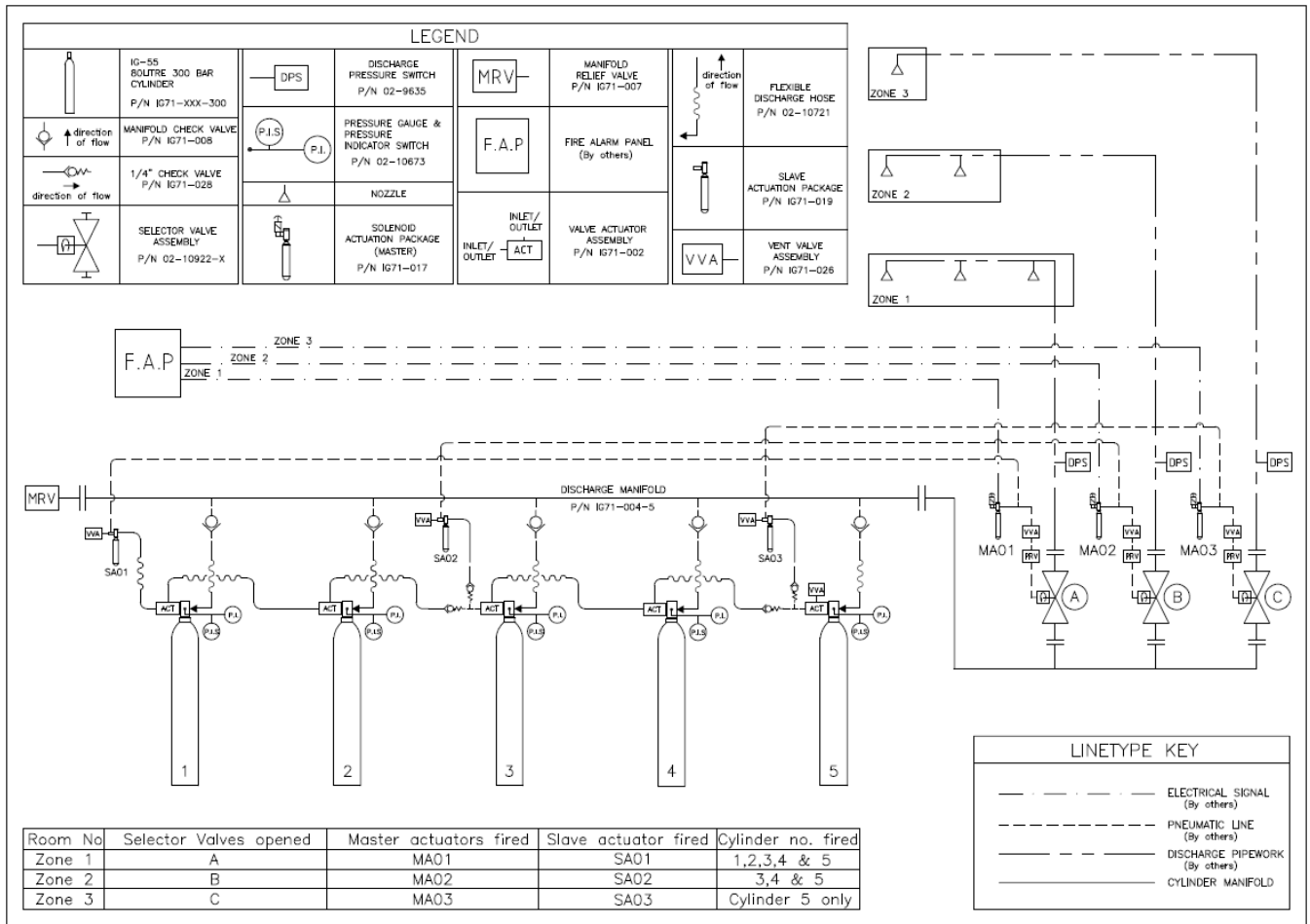
When utilizing multiple cylinders to protect multiple hazards with identical volumes it is necessary to use Selector Valves to divert the flow of agent into the activated hazard. The selector valves may be activated electronically or manually by pneumatically connecting to the solenoid actuator provided with the selector valve. The selector valves may also be activated by pneumatically connecting to a slave actuator, which in turn is pneumatically connected to a solenoid actuator.

### **MULTIPLE HAZARDS WITH DIFFERENT VOLUMES**

In cases where a bank of cylinders is used to protect multiple hazards with different volumes, a configuration of solenoid actuators and slave actuators may be utilized to control the cylinder bank and the agent flow. A typical example of such a system is shown below.



The system illustrated comprises of a bank of 5 cylinders that will provide protection to three separate zones. The P & ID below shows how the system is connected.



Actuation Scenarios	
Zone 1 Activation	Electrical operation of master actuator MA01 will result in the operation of selector valve A and slave actuator SA01. The slave actuator will operate cylinders 1, 2, 3, 4 & 5.
Zone 2 Activation	Electrical operation of master actuator MA02 will result in the operation of selector valve B and slave actuator SA02. The slave actuator will operate cylinders 3, 4 & 5. Cylinders 1 & 2 are not operated due to the 1/4" check valves installed in the actuation line that connects the cylinder valves.
Zone 3 Activation	Electrical operation of master actuator MA03 will result in the operation of selector valve C and slave actuator SA03. The slave actuator will operate cylinder 5 only. Cylinders 1, 2, 3 & 4 are not operated due to the 1/4" check valves installed in the actuation line that connects the cylinder valves.

As each selector valve system is different in design and configuration the fittings used on the actuation circuit can vary. Please consult Fike for assistance on selecting the correct additional fittings that will be required for the system that is designed.

Detailed below are the fittings that would be required for the design illustrated above.

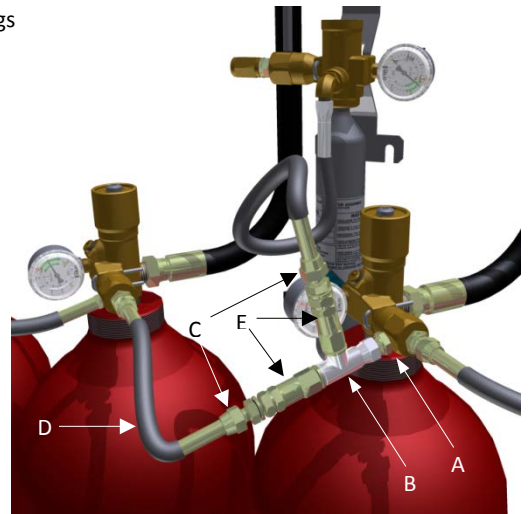
The connections between cylinder nos. 1 and 2 are made up using the standard fittings provided with the cylinder assemblies.



Connection detail at Cylinder No. 1 and No. 2

The connections at cylinder nos. 2 and 3 are made up using the standard fittings provided with the cylinder assemblies and the following additional parts.

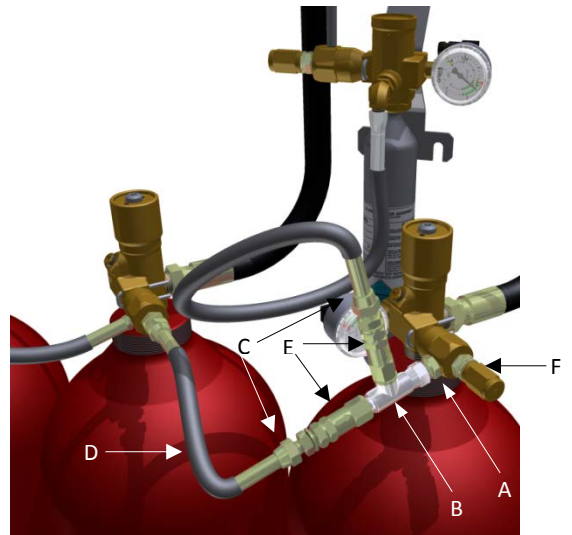
Item	Part Number	Description
A	02-10797	Adaptor, R 1/8 to G 1/4
B	02-11731	Tee, G 1/4 Male x G 1/4 Female x G 1/4 male Branch
C	02-10824	Connector, G 1/4 to G 1/4
D	02-4977	Hose
E	02-10927	Check valve
Not shown	02-10926	1/4" Sealing washer



Connection detail at Cylinder No. 2 and No. 3

The connections at cylinder nos. 4 & 5 are made up using the standard fittings provided with the cylinder assemblies and the following additional parts.

Item	Part Number	Description
A	02-10797	Adaptor, R 1/8 to G 1/4
B	02-11731	Tee, G 1/4 Male x G 1/4 Female x G 1/4 male Branch
C	02-10824	Connector, G 1/4 to G 1/4
D	02-4977	Hose
E	02-10927	Check valve
F	IG71-026	Vent Assembly
Not shown	02-10926	1/4" Sealing washer



Connection detail at Cylinder No. 4 and No. 5

The Prolnert Actuation Package is used to operate a selector valve and its associated slave actuator and cylinder assemblies. This should be the last component installed on the system. All components are shipped as separate items to be field installed.

**NOTE:** Ensure that the slave actuator is connected to the port labeled 'A'.

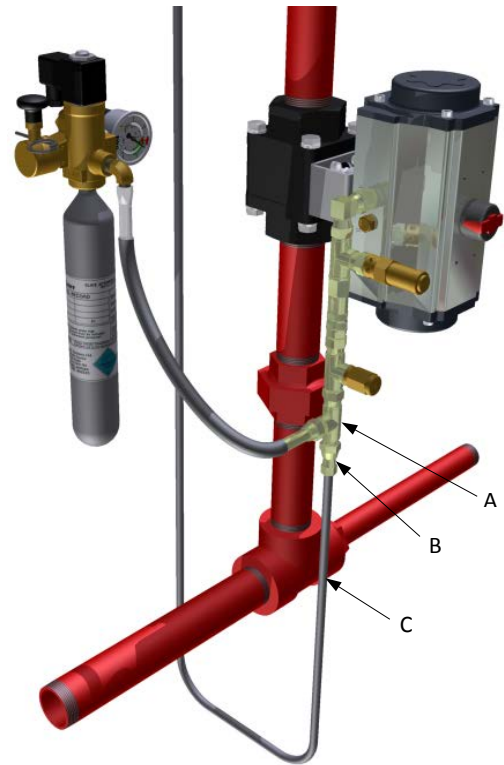
The following items should be completed prior to final installation of the Prolnert Actuation Package:

- Container installation should be complete and secured in place
- Selector Valves should be installed and secured in place
- Discharge piping installation should be complete and all bracing, brackets, etc. in place
- The discharge nozzles should be installed

The detection & control system installation should be complete & tested – no faults shall be present.

The typical connections at a selector valve are made up using the standard fittings provided and the following additional parts.

Item	Part Number	Description
A	02-11731	Tee, G ¼ Male x G ¼ Female x G ¼ male Branch
B	By others	Adaptor, G ¼ to tube 6 mm OD
C	By others	Tube 6 mm OD



Typical connection detail at the Selector Valve

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