

AFC-227 AGENT CYLINDER ASSEMBLY

P/N: AFC-26/40/63/68/89/115/175

DESCRIPTION

The American AFC-227 agent cylinder assembly stores liquid HFC-227ea superpressurized with Nitrogen to 24.8 bars at 21°C. The 26.8L, 40.2L, 63L, and 89L cylinders are fitted with 40-mm discharge valve while the 115L and 175L cylinders with a 50-mm discharge valve. The discharge valves are equipped with either a standard or a 2n1 pressure gauge depending on system requirement. In addition to providing a means to determine agent pressure in the cylinder, the optional 2n1 pressure gauge provides for automatic supervision of significant drop in agent pressure. The discharge valves are also equipped with rupture disc-fitted safety plug that protects the cylinder assembly from possible excessive build-up of agent pressure when exposed to high temperature. As means for protection from potential hazard, safety caps are provided for covering the valve outlet and actuator connection port when the cylinder assembly is being moved or not connected to the system. A label that indicates HFC-227ea as the stored agent, agent fill weight, working temperature range, and other relevant information is permanently attached to the cylinder.



TECHNICAL INFORMATION

Approvals for the clean agent systemUL, FM

 Approvals for cylinderDOT-4BW500
 Agent fill pressure 24.8 bar (360 psi)
 Cylinder rated working pressure 34.5 bar (500 psi)
 Cylinder hydrostatically tested at 137.9 bar (2,000 psi)
 Cylinder material Carbon Steel
 Paint specification Red polyester powder coated
 Installation position Vertical

See corresponding datasheets for more technical information on the discharge valves and pressure gauges.

ORDERING INFORMATION

Specify the part number, agent fill weight, and pressure gauge option when ordering.

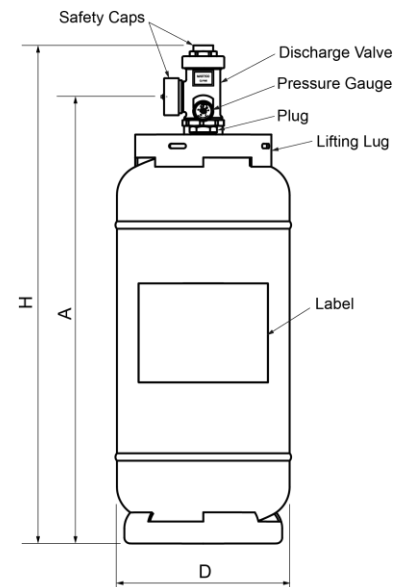
SI Units

Part No.	Water Capacity (L)	Agent Fill Range (kg)	Valve Size (mm)	Dimension (mm)			Empty Weight (kg)	Pressure Gauge Option
				D	H	A		
AFC-26	26.8	13.3 – 25.6	40	350	608	508	20.3	Standard or 2n1
AFC-40	40.2	19.9 – 38.4	40	350	755	655	31.6	
AFC-63	63.0	31.2 – 60.6	40	350	1,005	905	52.9	
AFC-68	68.0	33.7 – 65.4	40	350	1,060	960	56.0	
AFC-89	89.0	44.1 – 85.6	40	350	1,290	1,190	66.3	
AFC-115	115.4	57.2 – 111.0	50	350	1,610	1,495	83.6	
AFC-175	175.0	86.7 – 168.3	50	450	1512	1397	122.2	

US Units

Part No.	Water Capacity (lb)	Agent Fill Range (lb)	Valve Size (in)	Dimension (in)			Empty Weight (lb)	Pressure Gauge Option
				D	H	A		
AFC-26	59.1	29.3 – 56.4	1-1/2	13.8	23.9	20.0	44.8	Standard or 2n1
AFC-40	88.6	43.9 – 84.7	1-1/2	13.8	29.7	25.8	69.7	
AFC-63	138.9	68.8 – 133.6	1-1/2	13.8	39.6	35.6	116.6	
AFC-68	150.0	74.3 – 144.2	1-1/2	13.8	41.7	37.8	123.5	
AFC-89	196.2	97.2 – 188.7	1-1/2	13.8	50.8	46.8	146.2	
AFC-115	254.4	126.1 – 244.7	2	13.8	63.4	58.9	184.3	
AFC-175	385.9	191.2 – 371.1	2	17.7	59.5	55.0	269.4	

^aFitted with only one centrally-located neckring (no Plug)

^bSee image for the lifting lug configuration


AFC-P227 AGENT CYLINDER ASSEMBLY

P/N: AFC-P63/P68//P89/P115/P175

DESCRIPTION

The American AFC-P227 agent cylinder assembly stores liquid HFC-227ea superpressurized with Nitrogen to 24.8 bars at 21°C. These cylinders are fitted with discharge valves identical to those in AFC-227 with additional 20-mm valve serving as inlet for the pressurized nitrogen agent propellant. The discharge valves are equipped with either a standard or a 2n1 pressure gauge depending on system requirement. In addition to providing a means to determine agent pressure in the cylinder, the optional 2n1 pressure gauge provides for automatic supervision of significant drop in agent pressure. The discharge valves and nitrogen inlet valve are also equipped with rupture disc-fitted safety plug that protects the cylinder assembly from possible excessive build-up of agent pressure when exposed to high temperature. As means for protection from potential hazard, safety caps are provided for covering the valve outlet and actuator connection port when the cylinder assembly is being moved or not connected to the system. A label that indicates HFC-227ea as the stored agent, agent fill weight, working temperature range, and other relevant information is permanently attached to the cylinder.



TECHNICAL INFORMATION

Approvals for system.....UL, FM

 Approvals for cylinder.....DOT-4BW500
 Agent fill pressure.....24.8 bar (360 psi)
 Cylinder rated working pressure34.5 bar (500 psi)
 Cylinder hydrostatically tested at137.9 bar (2,000 psi)
 Cylinder materialCarbon Steel
 Paint specificationRed polyester powder coated
 Installation position.....Vertical

See corresponding datasheets for more technical information on the discharge valves and pressure gauges.

ORDERING INFORMATION

Specify the part number, fill weight, and pressure gauge option when ordering.

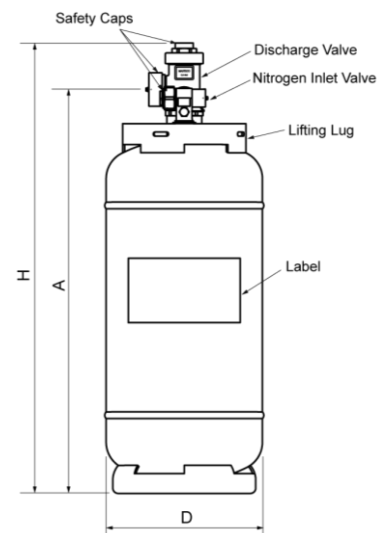
SI Units

Part No.	Partner Nitrogen Cylinder	Water Capacity (L)	Fill Range (kg)	Valve Size (mm)	Dimension (mm)			Empty Weight (kg)	Pressure Gauge Option
					D	H	A		
AFC-P63	ANC68-60	63.0	31.2 – 60.6	40	350	1,005	905	53.4	Standard or 2n1
AFC-P68	ANC68-60	68.0	33.7 – 65.4	40	350	1,060	960	56.0	
AFC-P89	ANC68-70	89.0	44.1 – 85.6	40	350	1,290	1,190	66.8	
AFC-P115	ANC68-80	115.4	57.2 – 111.0	50	350	1,610	1,495	84.1	
AFC-P175	ANC68-80	175.0	86.7 – 168.3	50	450	1512	1397	122.7	

US Units

Part No.	Partner Nitrogen Cylinder	Water Capacity (lb)	Fill Range (lb)	Valve Size (in)	Dimension (in)			Empty Weight (lb)	Pressure Gauge Option
					D	H	A		
AFC-P63	ANC68-60	138.9	68.8 – 133.6	1-1/2	13.8	39.6	35.6	117.5	Standard or 2n1
AFC-P68	ANC68-60	150.0	74.3 – 144.2	1-1/2	13.8	41.7	37.8	123.5	
AFC-P89	ANC68-70	196.2	97.2 – 188.7	1-1/2	13.8	50.8	46.8	147.0	
AFC-P115	ANC68-80	254.4	126.1 – 244.7	2	13.8	63.4	58.9	185.0	
AFC-P175	ANC68-80	385.9	191.2 – 371.1	2	17.7	59.5	55.0	269.9	

*See image for the lifting lug configuration



NITROGEN CYLINDER ASSEMBLY

P/N: ANC68-60/70/80

DESCRIPTION

The nitrogen cylinder assembly stores nitrogen pressurized to 60/70/80 bar at 21°C that is used as propellant for HFC-227ea extinguishing agent contained in a separate AFC-P227 agent cylinder assemblies. When released, the pressurized nitrogen provides extra pressure that drives the extinguishing agent through complex or longer pipe runs within acceptable system discharge time. In addition to providing a means to determine cylinder pressure, the optional 2n1 pressure gauge provides for automatic supervision of significant drop in nitrogen pressure. The AFC-P227 nitrogen cylinder assembly is fitted with 20-mm valve that enables interconnection with and delivery of pressurized nitrogen to AFC-P227 agent cylinder assembly. The valve is equipped with rupture disc-fitted safety plug that protects the cylinder assembly from possible excessive build-up of nitrogen pressure when exposed to high temperature. A safety cap covering the valve outlet port is also provided as a means for protection from potential hazard when the cylinder assembly is being moved or not connected to the system. A label indicating relevant information is permanently attached to the cylinder.



TECHNICAL INFORMATION

Approvals for use with AFC-P227 UL, FM

Approvals for cylinder DOT-3AA
 Fill pressure 60/70/80 bar (870/1015/1160 psi)
 Cylinder rated working pressure 147 bar (2133 psi)
 Cylinder hydrostatically tested at 406.7 bar (5901 psi)
 Cylinder material Seamless Mn Steel
 Paint specification Gray polyester powder coated
 Installation position Vertical
 See corresponding datasheets for more technical information on the cylinder valve and pressure gauges.

ORDERING INFORMATION

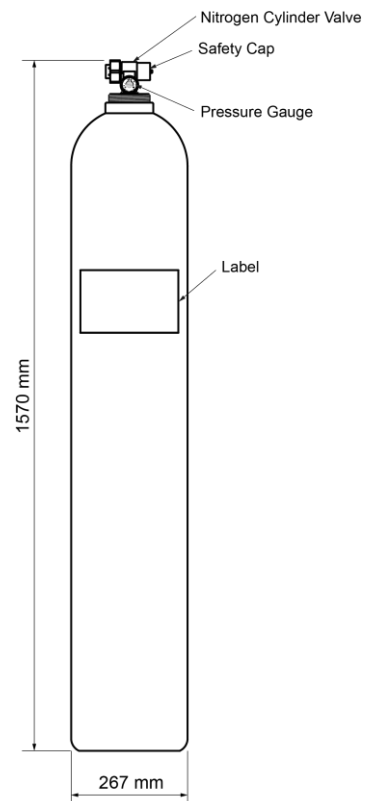
Specify the part number, partner agent cylinder model number and pressure gauge option when ordering.

SI Units

Part No.	Partner AFC-P227 Agent Cylinder	Water Capacity (L)	Fill Pressure (bar)	Valve Size (mm)	Empty Weight (kg)	Pressure Gauge Option
ANC68-60	AFC-P63 AFC-P68	68	60	20	74.5	Standard or 2n1
ANC68-70	AFC-P89		70			
ANC68-80	AFC-P115 AFC-P175		80			

US Units

Part No.	Partner AFC-P227 Agent Cylinder	Water Capacity (lb)	Fill Pressure (psi)	Valve Size (in)	Empty Weight (lb)	Pressure Gauge Option
ANC68-60	AFC-P63 AFC-P68	150	870	3/4	164	Standard or 2n1
ANC68-70	AFC-P89		1,016			
ANC68-80	AFC-P115 AFC-P175		1,161			



AGENT CYLINDER PRESSURE GAUGES

P/N: APG-1/APG-2

DESCRIPTION

The agent pressure gauge is installed in the agent discharge valve to indicate the pressure of agent in the storage cylinder. As an option to the standard type pressure gauge, the 2n1 type (also known as low pressure switch) is a bourdon tube-type pressure gauge fitted with low pressure switching mechanism that can be readily connected to the fire alarm control panel to monitor significant drop in cylinder pressure.



Standard Type

2n1 Type

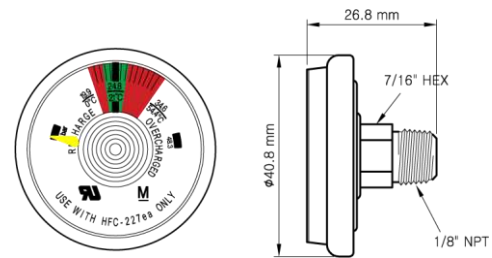
TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227UL, FM

Working pressure 24.8 bar (360 psi)
 Pressure range 0-24.8-48.2 bar (0-360-700 psi)
 Output contact rating (2n1 type) 200VDC, 0.5A
 Switch set pressure (decr.) 19.9±1.5 bar (277.1±21.8 psi)

Materials

Bourdon tube Stainless steel
 Case Stainless steel
 Connection Brass
 Lens Polycarbonate

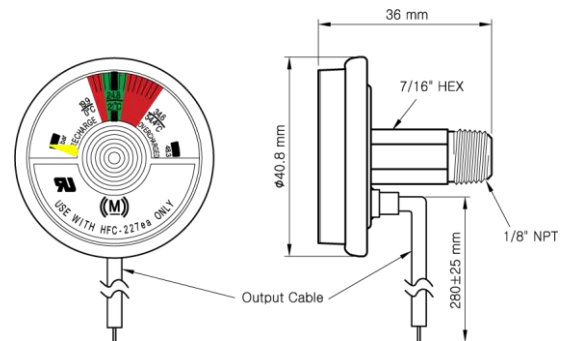


HFC-227ea standard type pressure gauge

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
APG-1	Agent cylinder standard pressure gauge
APG-2	Agent cylinder 2n1 pressure gauge (low pressure switch)



HFC-227ea 2n1 type pressure gauge

NITROGEN CYLINDER PRESSURE GAUGES

P/N: ANPG-N60/N70/N80; ANPG2-N60/N70/N80

DESCRIPTION

The nitrogen pressure gauge is installed in the nitrogen valve to indicate the pressure of nitrogen gas in the storage cylinder. As an option to the standard type pressure gauge, the 2n1 type is a bourdon tube-type pressure gauge fitted with low pressure switching mechanism that can be readily connected to the fire alarm control panel to monitor significant drop in cylinder pressure.

TECHNICAL INFORMATION

Approvals for use with AFC-P227 UL, FM

Working pressure see table
 Pressure range see table
 Output contact rating 200VDC, 0.5A
 Switch set pressure (decreasing) see table

Materials
 Bourdon tube Stainless steel
 Case Stainless steel

Part No.	Working Pressure, bar (psi)	Pressure Range, bar (psi)	Switch Set Pressure, bar (psi)
ANPG-N60	60 (870)	0-60-90 (0-870-1306)	N/A
ANPG-N70	70 (1016)	0-70-105 (0-1016-1523)	N/A
ANPG-N80	80 (1061)	0-80-120 (0-1061-1741)	N/A
ANPG-N60	60 (870)	0-60-90 (0-870-1306)	56 ± 3.6 (812 ± 52)
ANPG-N70	70 (1016)	0-70-105 (0-1016-1523)	65 ± 3.5 (943 ± 10/-51)
ANPG-N80	80 (1061)	0-80-120 (0-1061-1741)	74 ± 2.8 (1073 ± 41)

ORDERING INFORMATION

Specify part number and description when ordering.

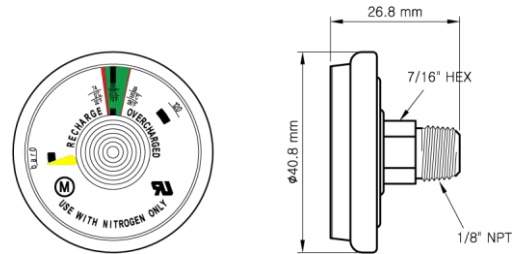
Part No.	Description
See table	Nitrogen cylinder standard pressure gauge (specify working pressure)
See table	Nitrogen cylinder 2n1 pressure gauge (low pressure switch) (specify working pressure)



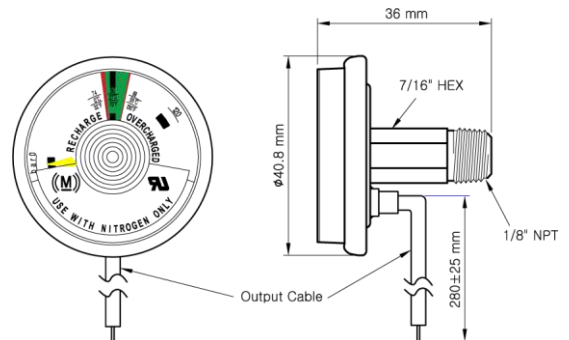
Standard Type



2n1 Type



ANPG series Nitrogen standard type pressure gauge



ANPG2 series Nitrogen 2n1 type pressure gauge

FLEXIBLE HOSE 50A

P/N: AFC-FH-50

DESCRIPTION

The flexible hose 50A is used in AFC-227 or AFC-P227 to direct the flow of HFC-227ea from the agent cylinder to the manifold or distribution piping during system discharge. The straight-threaded (M70x2.0) end of the flexible hose 50A is connected to the union elbow while the tapered-threaded (PT 2") end is connected to the check valve 50A.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227UL, FM

Minimum bending radius 350 mm (13.8 in)

Hydrostatically tested at 137.9 bar (2000 psi)

Materials

HoseEPDM, Stainless Steel (SUSS304)

Nut Brass (C3771)

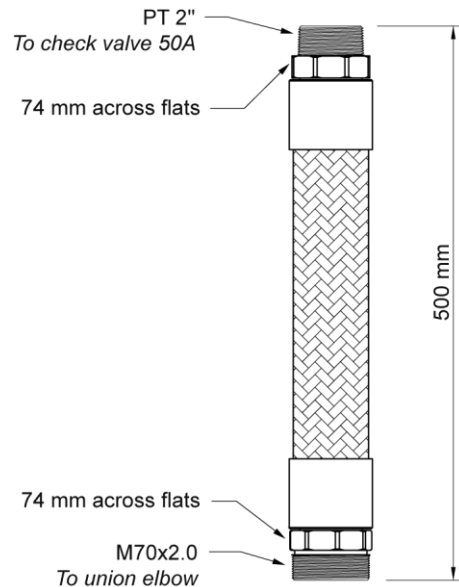
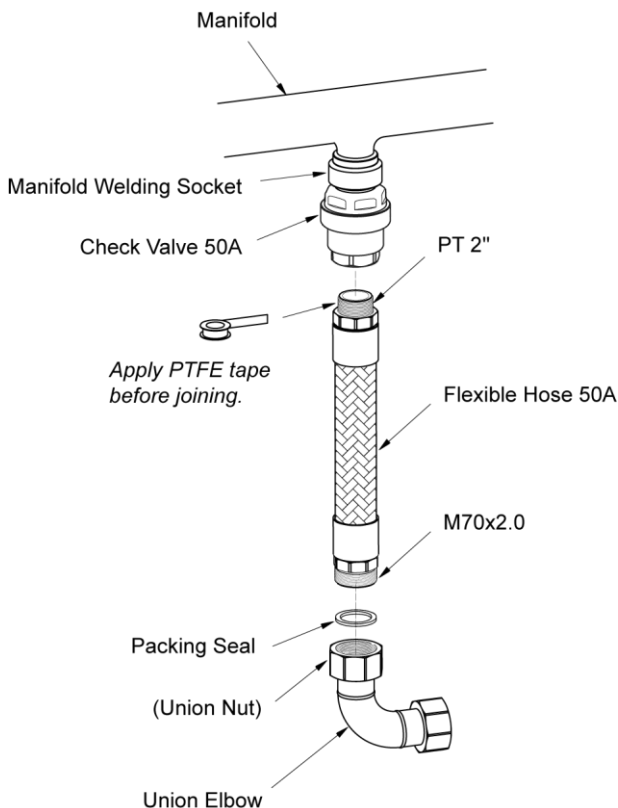
Overall length 500 mm (19.7 in)

Weight 3.6 kg (7.9 lb)

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-FH-50	Flexible hose 50A



INSTALLATION

1. Apply 5 to 7 turns of PTFE tape to the PT 2" end of the flexible hose 50A and make the connection with the check valve 50A.
2. Insert the packing seal into the union nut of the union elbow and connect the other end (M70x2.0) of flexible hose 50A.
3. Properly tighten the connections using a suitable wrench.

FLEXIBLE HOSE 20A

P/N: AFC-FH-600/700/900

DESCRIPTION

The flexible hose 20A is used in AFC-P227 to direct the flow of pressurized nitrogen from the nitrogen cylinder to the HFC-227ea agent cylinder during system discharge. The 48-mm hex nuts at both ends of the flexible hose 20A provide quick threaded coupling of the agent cylinder and the agent propellant nitrogen cylinder via the 20A valves.

TECHNICAL INFORMATION

Approvals for use with AFC-P227UL, FM

UL File Number: EX15719

FM Approval PID: 3049347

Minimum bending radius 75 mm (3.0 in)

Hydrostatically tested at 197.6 bar (2866 psi)

Materials

Flexible hose Stainless Steel (STS304)

Wire mesh Stainless Steel (STS304)

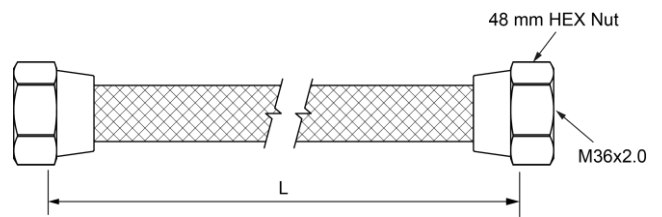
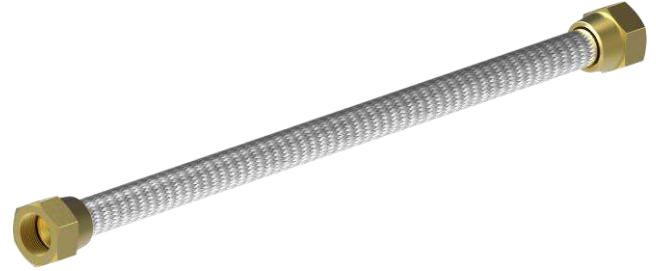
Nut Brass (C3771)

ORDERING INFORMATION

Specify part number when ordering.

Part No.	Nom. Length, L mm (in)	Weight, kg (lb)	Couple/Partner	
			AFC-P227 Agent Cylinder	Nitrogen Cylinder
AFC-FH-600	600 (23.6)	1.27 (2.8)	AFC-P115 AFC-P175	N68-80
AFC-FH-700	700 (27.6)	1.37 (3.0)	AFC-P89	N68-70
AFC-FH-900	900 (35.4)	1.54 (3.4)	AFC-P63	N68-60

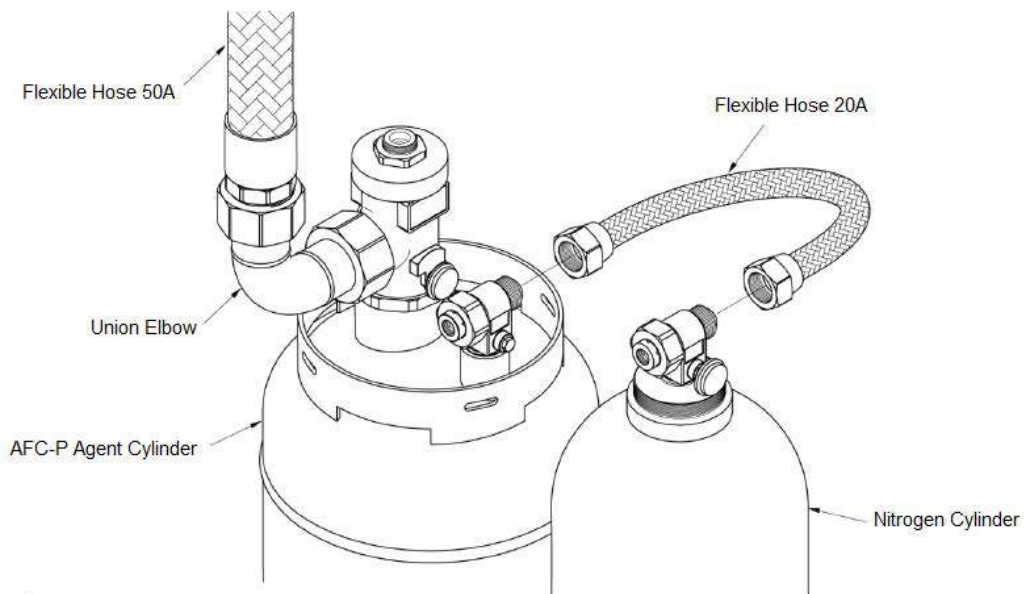
Note: To ensure ordering of correct part, refer to the AFC-P227 cylinders coupling information.



INSTALLATION

With reference to the figure below

1. Mount the hex nuts of the flexible hose 20A to the nitrogen discharge and inlet valves.
2. Tighten the joints using appropriate wrench.



UNION ELBOW

P/N: AFC-UE-125/225

DESCRIPTION

The union elbow is used to provide a 90° connection between the agent cylinder valve and the flexible hose 50A. It comes with two rubber packing seals that must be properly placed inside the union nuts during installation to ensure air-tight connection. The union elbow is fitted with 85 mm octagon nut on both ends for easy installation. When the union elbow is to be connected to a 40 mm discharge valve, a union elbow adapter is needed and must be obtained separately.



Union Elbow with Rubber Packing Set

TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227.....UL, FM

Materials

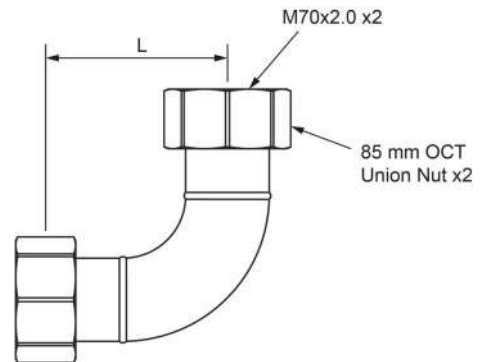
Elbow and Union.....Stainless Steel (STS304)
 Union Nut.....Brass (C3771)
 Packing Seal.....NBR
 Hydrostatically tested at.....137.9 bar (2000 psi)

Part No.	L, mm (in)	Weight, kg (lb)
AFC-UE-125	125 (4.9)	3.0 (6.6)
AFC-UE-225	225 (8.8)	3.7 (8.1)

ORDERING INFORMATION

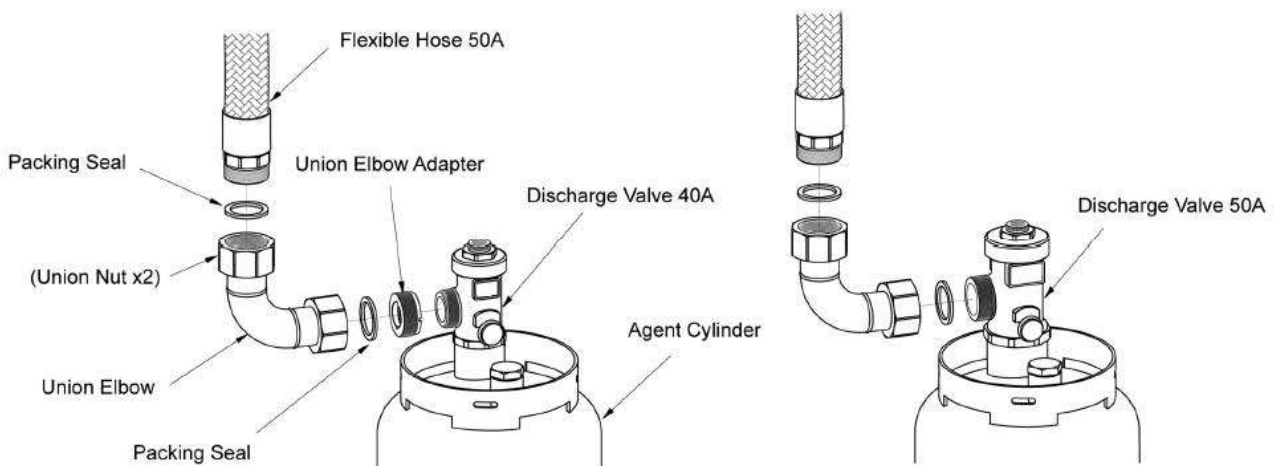
Specify part number and description when ordering.

Part No.	Description
AFC-UE-125	125 mm Union elbow
AFC-UE-225	225 mm Union elbow
AFC-RP01	Rubber packing



INSTALLATION

Join one end of the union elbow with flexible hose 50A then the other end to the discharge valve. If a discharge valve 40A is used, install the union elbow adapter.



Union Elbow – Discharge Valve 40A Assembly Components

 Union Elbow – Discharge Valve 50A Assembly Components
 (Union Elbow Adapter not needed)

UNION ELBOW ADAPTER

P/N: AFC-UEA-40

DESCRIPTION

The union elbow adapter is used when the agent cylinder assemblies having 40 mm discharge valves are to be installed in the system via the supplied union elbow and flexible hose 50A. It provides for the connection of the 40 mm discharge valve to the 50 mm union elbow. The externally-threaded portion of the union elbow adapter is connected to the union elbow while the internally-threaded part is connected to the outlet of the discharge valve. It comes with a factory-installed rubber O-ring that seals off the connection from possible leakage.



TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

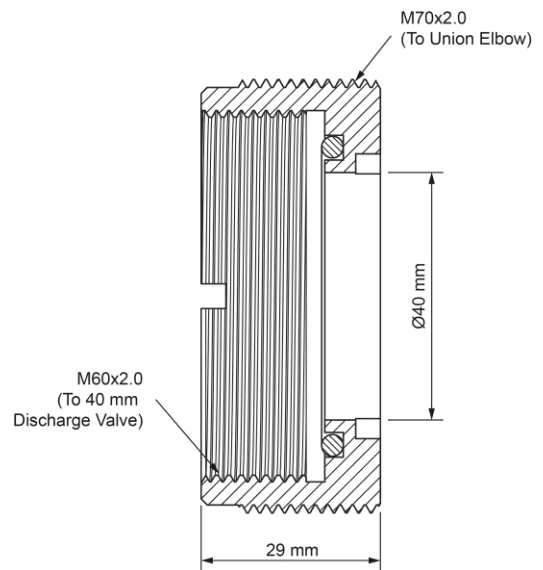
Materials

Body.....Brass (C3604)
 O-ring Seal.....NBR
 Weight0.3 kg (0.7 lb)

ORDERING INFORMATION

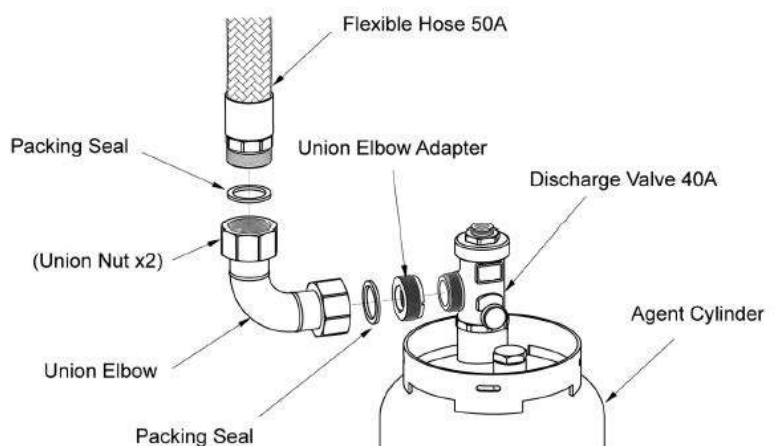
Specify part number and description when ordering.

Part No.	Description
AFC-UEA-40	Union elbow adapter



INSTALLATION

1. Hand tighten the union elbow adapter to the discharge valve 40A.
2. Insert the rubber packing seal into the nut of the union elbow.
3. Join the union elbow nut with the union elbow adapter making sure that the packing seal is properly in-place.
4. Tighten the nut using appropriate wrench.



CHECK VALVE 50A

P/N: AFC-CV50

DESCRIPTION

The check valve 50A is used when two or more agent cylinder assemblies are connected to the distribution piping through a manifold. It prevents backflow and loss of extinguishing agent and possible injury of personnel if the system is operated and discharged when an agent cylinder is disconnected or removed for maintenance. The inlet side of check valve 50A has internal taper threads and is connected to the flexible hose 50A while the outlet side is connected to the manifold via the manifold welding socket. The check valve 50A comes with a rubber packing seal that must be properly inserted into the manifold welding socket during installation to ensure airtight connection.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227UL, FM

Materials

Body Brass (C3771)
 Spring Stainless Steel (STS304)
 Seat and O-ring Seals NBR
 Packing Seal NBR
 Hydrostatically tested at 137.9 bar (2000 psi)
 Weight 4.5 kg (10 lb)

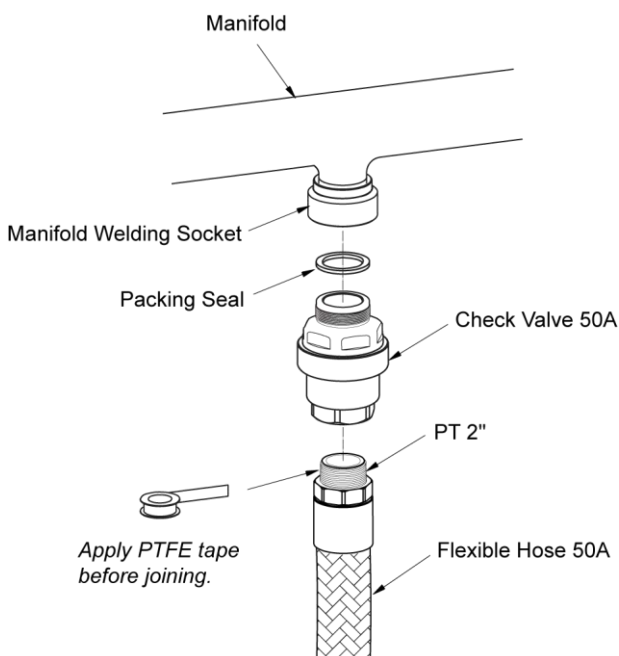
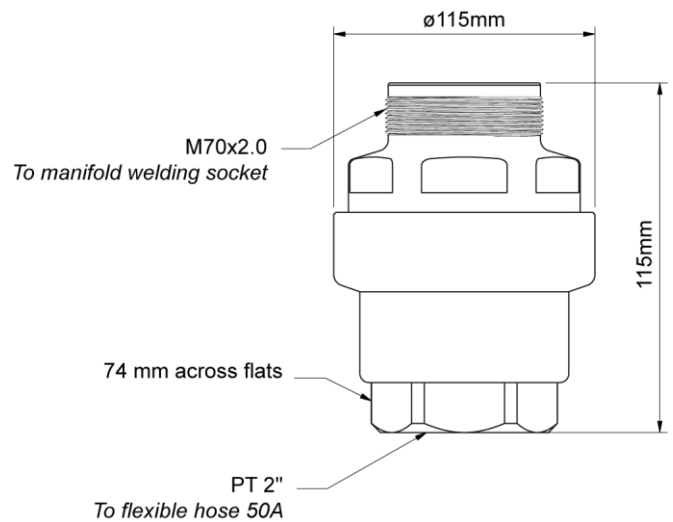
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-CV50	Check valve 50A with packing seal
AFC-RP01	Rubber packing seal



Check Valve with Packing Seal



INSTALLATION

1. Insert the packing seal into the manifold welding socket then join the check valve 50A. Tighten the joint using a suitable wrench.
2. Apply 5 to 7 turns of PTFE tape to the PT 2" end of the flexible hose 50A and make the connection with the check valve 50A.
3. Properly tighten the connections using a suitable wrench.

MANIFOLD WELDING SOCKET

P/N: AFC-MWS50

DESCRIPTION

The manifold welding socket is used as an intermediate connection device between the check valve 50A and manifold. The outlet side of the socket is welded to the manifold while the inlet side which has internal metric threads is connected to the check valve 50A.

TECHNICAL INFORMATION

ApprovalsUL, FM

Body materialCarbon Steel (S20C)
Hydrostatically tested at 137.9 bar (2000 psi)
Weight 1 kg (2.2 lb)

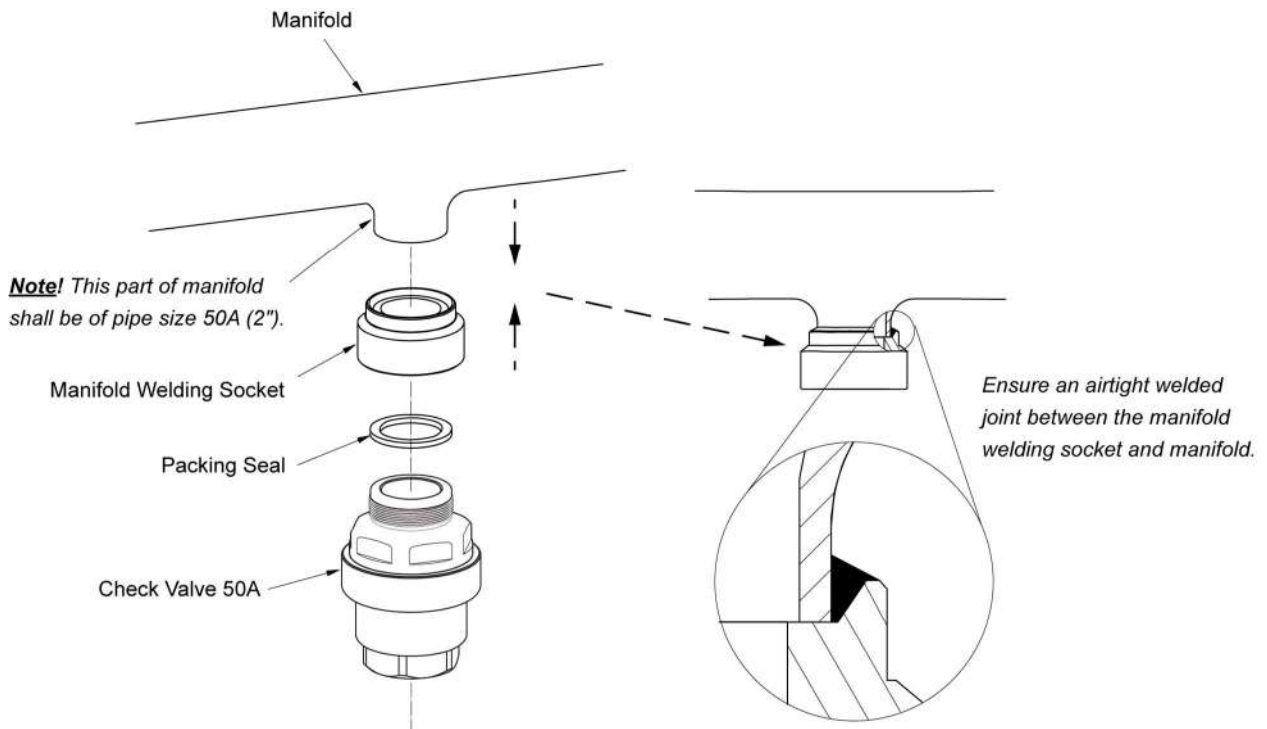
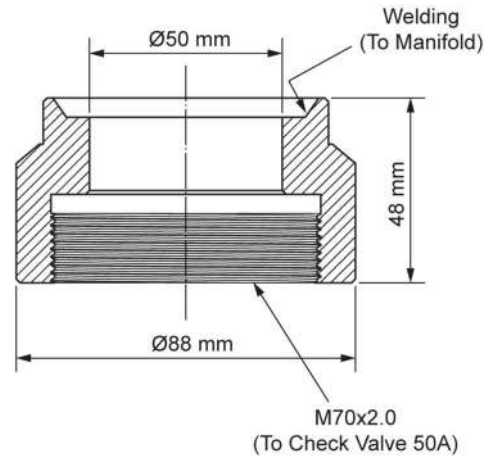
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-MWS50	Manifold welding socket

INSTALLATION

1. Join the manifold welding socket to the manifold with reference to the illustration below.
2. Make sure to insert the packing seal to the manifold welding socket before installing the check valve 50A.



AGENT NEEDLE CYLINDER

P/N: AFC-NC-15

DESCRIPTION

The agent needle cylinder is used for the pneumatic operation of the agent cylinder assembly during system discharge. It is installed on the actuation port at the top of the discharge valve of AFC-227 or AFC-P227. The agent needle cylinder is fitted with a steel needle attached to a needle head that acts as a piston. Pressure from the actuating fluid in the master or pilot cylinder entering the needle cylinder through the copper tubing connected to one of the two copper tube ports is used to actuate the needle head. The other copper tube ports can be plugged or used as an interconnection port for the pneumatic actuation line when two or more agent cylinders are installed protecting the same hazard area. Once operated, the needle cylinder automatically resets when the actuation pressure in the pneumatic actuation line is relieved to below 6 bar (87 psi). The agent needle cylinder is equipped with a push button that can be used for manual operation. The push button is properly secured by a safety clip.



CAUTION

Manually actuating the agent needle cylinder will activate the extinguishing system and may compromise proper operation of a multi-cylinder system. Manual actuation should ONLY be performed in case of emergency as the last course of action.

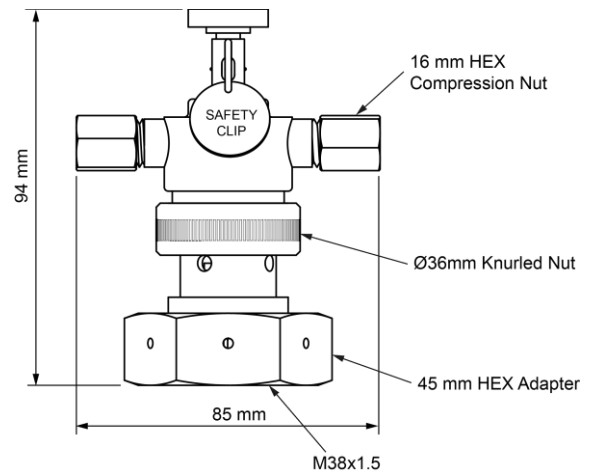
WARNING

Sharp needle hazard.

TECHNICAL INFORMATION

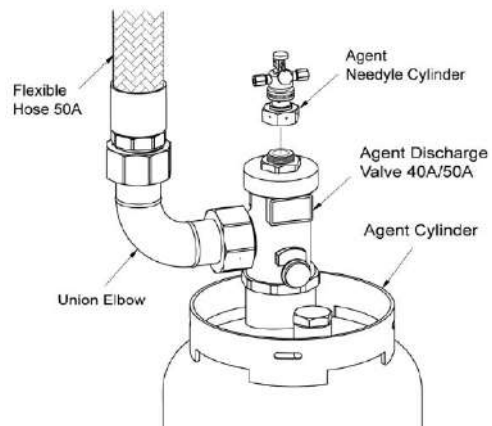
Approvals for use with AFC-227/AFC-P227UL, FM

Minimum actuation pressure	6 bar (87 psi)
Hydrostatically tested at	344.7 bar (5000 psi)
Material	
Body	Brass
Needle	Stainless Steel
Push button	Brass
Safety clip	Stainless Steel
Reset spring	Stainless Steel
Copper tubing nominal size6A (1/4 in)
Copper tubing connection	Compression joint
Compression nut connection thread	M12x1.5
Weight	0.5 kg (1.1 lb)
Discharge valve size compatibility	40 mm (1 1/2 in), 50 mm (2 in)
Maximum installation quantity	
Master/Slave configuration	6
Pilot/Slave (single hazard zone) configuration	30
Pilot/Slave (multi-hazard zone) configuration	25



INSTALLATION

For safety reason, install the agent needle cylinder after the agent cylinder it actuates is completely connected to the manifold and strapped. To install, mount the agent needle cylinder to the top of agent discharge valve and hand-tighten as tight as possible. Slightly turn the 45mm hex adapter using an appropriate wrench to secure the connection.



ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-NC-15	Needle cylinder for agent discharge valve

PLUG PIN

P/N: PP-01

DESCRIPTION

The plug pin is used to shut off or plug the end of the pneumatic actuation line at the needle cylinder (discharge valve actuator). Instead of the ferrule (compression ring), the plug pin can be inserted into the inlet/outlet port of the last needle cylinder in the agent cylinder bank and forced-in further by tightening the compression nut, creating an air-tight metal-to-metal seal.



TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227UL, FM

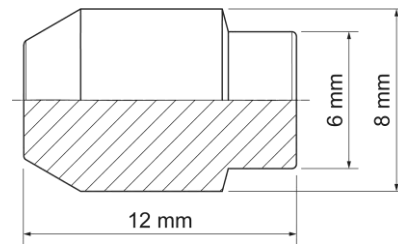
Nominal size6A (1/4")

MaterialBrass

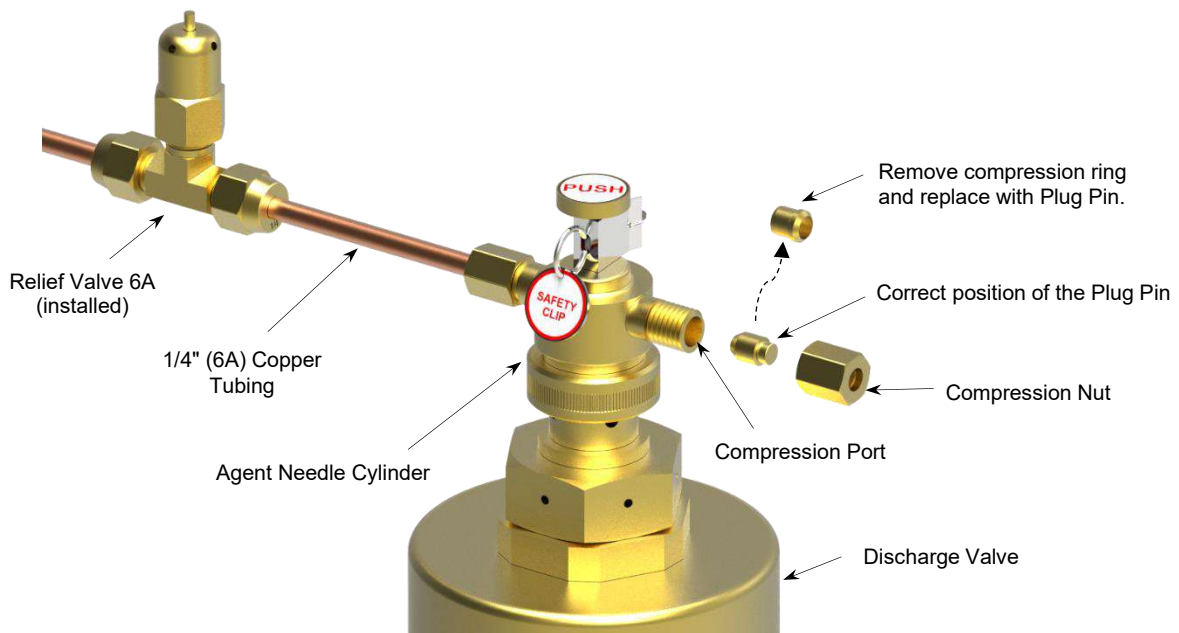
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
PP-01	Plug pin for pneumatic actuation line



INSTALLATION



NITROGEN NEEDLE CYLINDER

P/N: NNC-06

DESCRIPTION

The nitrogen needle cylinder is used for the pneumatic operation of the nitrogen cylinder assembly during AFC-P227 discharge. It is installed on the actuation port of the nitrogen cylinder valve via M18x1.5 nipple joint. The nitrogen needle cylinder is fitted with a steel needle attached to a needle head that acts as a piston. As the HFC-227ea agent is discharged through the agent cylinder valve, some amount of the agent flows into the nitrogen needle cylinder via the interconnect copper tube. The pressure from discharged agent then actuates the needle head causing the needle to penetrate and open the nitrogen cylinder valve. Once operated, the needle cylinder automatically resets when the actuating pressure decreases to below 6 bar (87 psi).



⚠ WARNING

Sharp needle hazard.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

Minimum actuation pressure 6 bar (87 psi)

Hydrostatically tested at 197.5 bar (2866 psi)

Materials

Body Brass

Needle Stainless Steel

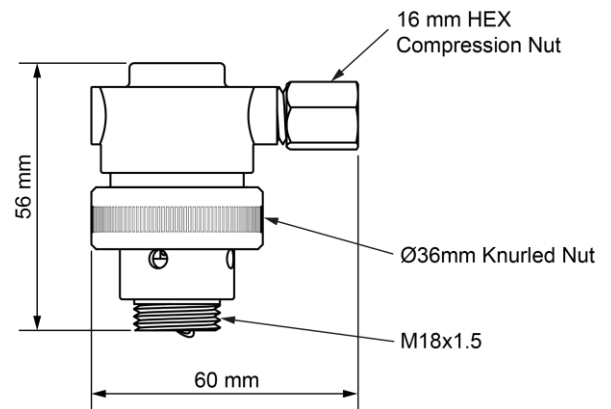
Reset spring Stainless Steel

Copper tubing nominal size 6 mm (1/4 in)

Copper tubing connection Compression joint

Compression nut connection thread M12x1.5

Weight 0.25 kg (0.55 lb)



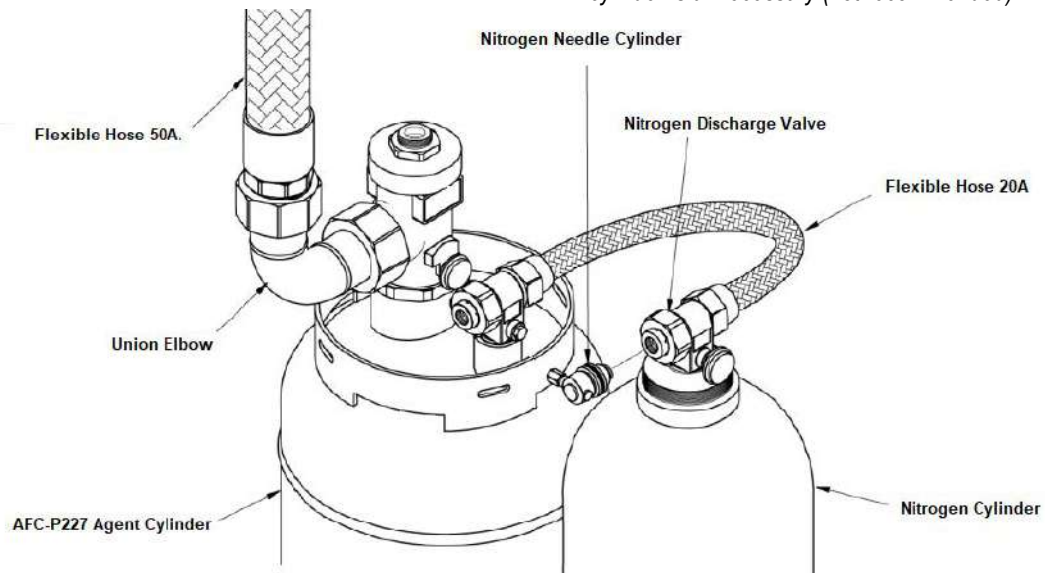
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
NNC-06	Nitrogen needle cylinder

INSTALLATION

1. Connect the nitrogen needle cylinder to the nitrogen discharge valve with reference to the illustration below.
2. Hand-tighten the knurled nut to fix the connection. *Note: Use of pipe wrench or similar tool to tighten the nitrogen needle cylinder is unnecessary (not recommended).*



PIPE ADAPTER

P/N: PA-4025/4032/4040/5032/5040/5050

DESCRIPTION

The pipe adapter provides for direct threaded connection of agent cylinder to the distribution piping. It is designed for use in single-cylinder or non-manifolded system where union elbow, flexible hose 50A, check valve 50A and manifold welding socket are not needed. The pipe adapter assembly consists a stainless-steel body and rubber o-ring seal. The body features a pipe connection side that is internally threaded to standard NPT/PT and a valve connection side with metric internal threads for connection with the 40A or 50A discharge valve.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227UL, FM

Materials

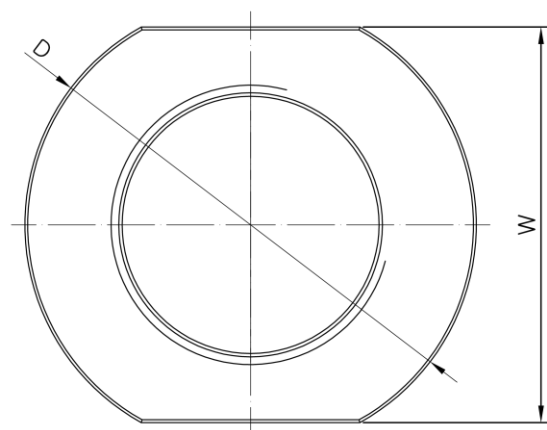
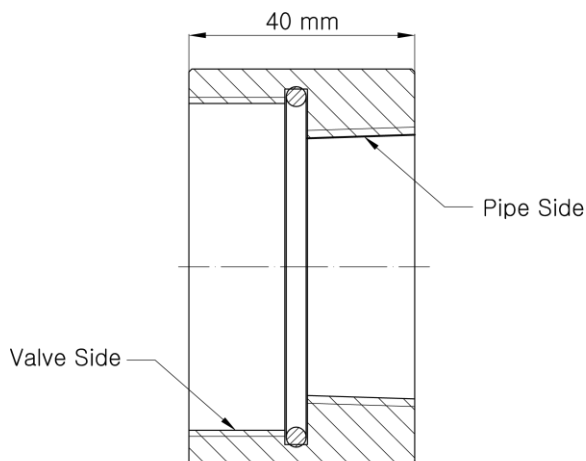
 Body Stainless steel (SUS304)
 O-ring Seal NBR
 Weight 1.2 kg (2.6 lb) max.


Part No.	Threaded Connection		D (mm)	W (mm)
	Pipe Side	Valve Side		
PA-4025	1" NPT/PT (25A)	40A, M60x2	80	70
PA-4032	1-1/4" NPT/PT (32A)			
PA-4040	1-1/2" NPT/PT (40A)			
PA-5032	1-1/4" NPT/PT (32A)	50A, M70x2.5	90	80
PA-5040	1-1/2" NPT/PT (40A)			
PA-5050	2" NPT/PT (50A)			

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
See table	Pipe adapter (specify size)

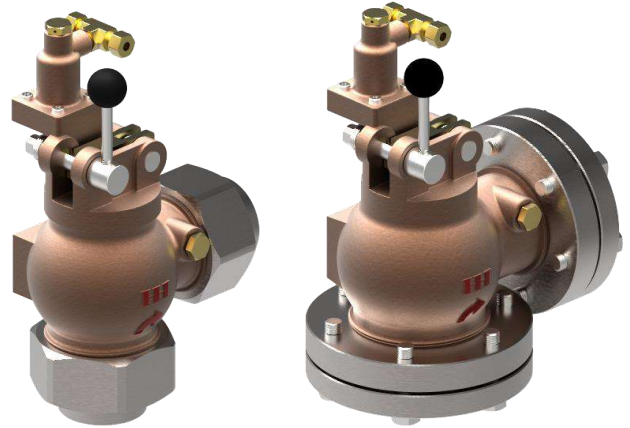


SELECTOR VALVE

P/N: AFC-SV-32/40/50/65/80/100/125/150

DESCRIPTION

When the system protects multiple hazard zones, the selector valve is used to direct the flow of extinguishing agent from the designated agent cylinder(s) to the corresponding protected enclosure during system discharge. The selector valve is normally locked at closed position. Pressure of the actuating gas that is released from the pilot cylinder and enters the pneumatic actuator via the selector valve tee is used to unlock the spindle. Discharged extinguishing agent entering the inlet side lifts the spindle leaving the selector valve open. After system discharge, the spindle rubber seals must be inspected, and the selector valve manually reset to normal position prior to putting to service. The selector valve is fitted with a release lever that enables manual unlocking of the spindle. Selector valve size 32A and 40A are fixed to the manifold/piping via the hex union nuts while size 50A/65A/80A/100A/125A/150A are fixed to the manifold/piping via the flanges hex bolts



P/N: AFC-SV-32/40

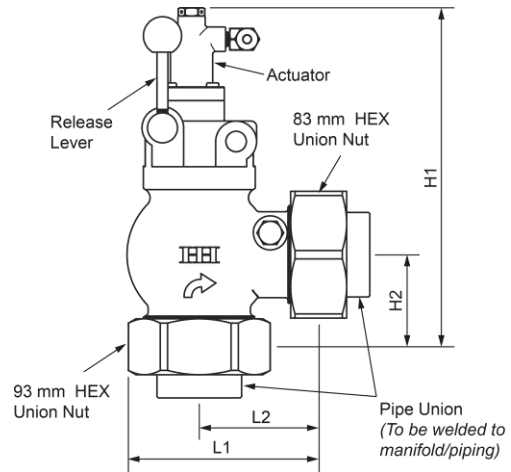
P/N: AFC-SV-50/65/80/100/125/150

TECHNICAL INFORMATION

ApprovalsUL, FM

Material

Body Bronze Casting (BC6)
 Spindle Brass (C3604)
 Release Lever Stainless Steel (STS304)
 Rubber Seals NBR
 Union Nut (In/Out) Carbon Steel (SM45C)
 Pipe Union (In/Out) Carbon Steel (SS400)
 Valve Flange (In/Out) Carbon Steel (SM45C)
 Pipe Counter Flange (In/Out) Carbon Steel (SM45C)
 Hydrostatically tested at 137.9 bar (2000 psi)

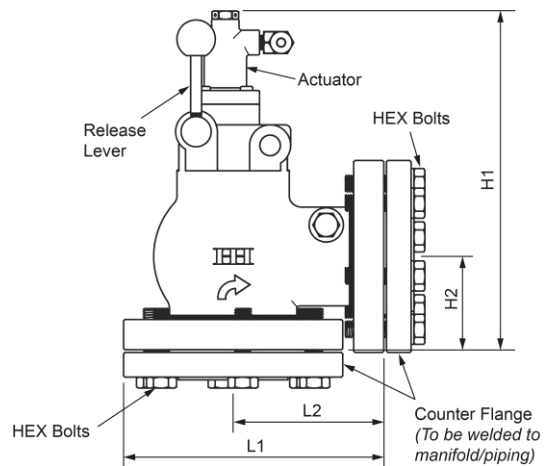


P/N: AFC-SV-32/40

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Nom. Size (in)	Weight, kg (lb)	L1, mm (in)	L2, mm (in)	H1, mm (in)	H2, mm (in)	HEX Bolt Size, mm (in)
AFC-SV-32	32A (1-1/4)	10.9 (24.0)	142 (5.6)	90 (3.5)	249 (9.8)	70 (2.8)	N.A.
AFC-SV-40	40A (1-1/2)	10.2 (22.5)	142 (5.6)	90 (3.5)	249 (9.8)	70 (2.8)	N.A.
AFC-SV-50	50A (2)	18.1 (40.0)	190 (7.5)	110 (4.3)	247 (9.7)	68 (2.7)	19 (3/4)
AFC-SV-65	65A (2-1/2)	25.3 (55.8)	215 (8.5)	125 (5)	286 (11.3)	85 (3.3)	19 (3/4)
AFC-SV-80	80A (3)	38.2 (84.2)	240 (9.4)	140 (5.5)	328 (12.9)	110 (4.3)	24 (15/16)
AFC-SV-100	100A (4)	67.3 (148.4)	288 (11.3)	175 (6.9)	396 (15.6)	135 (5.3)	30 (1 3/16)
AFC-SV-125	125A (5)	98.7 (217.6)	350 (13.8)	200 (7.9)	438 (17.2)	158 (6.2)	30 (1 3/16)
AFC-SV-150	150A (6)	136.7 (301.4)	395 (15.6)	230 (9.0)	461 (18.1)	168 (6.6)	36 (1 7/16)



P/N: AFC-SV-50/65/80/100/125/15

ACTUATION BOX ASSEMBLY

P/N: AFC-AB-01/02/03

DESCRIPTION

The actuation box assembly consists of system components that are used for the automatic or manual release operation of the extinguishing system. The steel box provides enclosure for the actuation (pilot) cylinder, solenoid cutter with solenoid cutter supervisor or remove/tamper seal and an optional discharge pressure switch. Except for the solenoid cutter with solenoid cutter supervisor or remove/tamper seal, all components of the actuation box assembly are factory pre-installed. The solenoid cutter and solenoid cutter supervisor are shipped separately and shall be mounted onsite during system installation.

When a remove/tamper seal is to be used instead of the solenoid cutter supervisor, it should be noted that after the solenoid cutter has been installed, or when the solenoid cutter has been removed and replaced for servicing/maintenance, the remove/tamper seal, must be attached immediately. Otherwise, the solenoid cutter supervisor must be installed properly, and the use of remove/tamper seal is unnecessary.

The actuation box assembly is also factory-fitted with a 4-port terminal block that provides for easy connection of the electrical devices to the agent releasing control panel. If the optional pressure switch (not covered by UL certification and FM approval) is to be used along with the solenoid cutter supervisor a 6-port terminal block must be ordered separately.



TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

 Box materialCold Rolled Steel Sheet (SPCC)
 Box Wall Thickness..... 1.2 mm
 Finish..... Powder Coating Paint

Part No.	Physical Dimension (L x W x H), mm (in)	Weight, kg (lb)
AFC-AB01	310 x 135 x 360 (12.2 x 5.3 x 14.2)	4.5 (9.9)
AFC-AB02	390 x 155 x 380 (15.4 x 6.1 x 15.0)	6.9 (15.2)
AFC-AB03	360 x 135 x 517 (14.2 x 5.3 x 20.4)	7.5 (16.4)

Not UL Listed; Not FM Approved

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-AB01	Actuation box, size 310x135x360
AFC-AB02	Actuation box, size 390x155x380
AFC-AB03	Actuation box, size 360x135x517



Assembly components

Item	Part No.	Description
1	AB-01	Actuation box enclosure (case) for AFC-AB01
	AB-02	Actuation box enclosure (case) for AFC-AB02
	AB-03	Actuation box enclosure (case) for AFC-AB03
2	AFC-PC01	CO ₂ Actuation (pilot) cylinder for AFC-AB-01/02
	AFC-PC02	N ₂ Actuation (pilot) cylinder for AFC-AB03
3	AFC-SC01	Solenoid cutter
4	AFC-SS01	Solenoid cutter supervisor
5	AFC-PS01	Pressure switch (optional)
6	ACB-06-04	Terminal block, 4P
	ACB-06-04b	Terminal block, 6P
	ACB-06-04c*	Terminal block, 8P (required for AFC-AB-03)
-	ATS-01	Remove/tamper seal (not shown)

Not UL Listed; Not FM Approved
**The remove/tamper seal is not needed when the solenoid cutter supervisor is installed.*

ACTUATION (PILOT) CYLINDER

P/N: AFC-PC01

DESCRIPTION

The actuation (pilot) cylinder is used to provide for the storage of liquid CO₂. When the actuation (pilot) cylinder is operated, the CO₂ is released and directed to the actuator of selector valve (if installed) and/or needle cylinder through 6-mm copper tubing connected to the elbow assembly at the valve outlet. The pressure of the CO₂ is used to operate the selector valve actuator and a series of up to 25 actuation (pilot) cylinder actuators in a multi-zone system within 1 second. The actuation (pilot) cylinder is fitted with a discharge valve that uses a burst disc to hold the CO₂ pressure on one side of a plunger inside the valve – keeping the valve closed. The valve is opened by puncturing the burst disc using the solenoid cutter and subsequently venting the pressure acting on the plunger, enabling the flow of CO₂. The discharge valve is also fitted with burst-disc type safety plug as part of the safety feature of the actuation (pilot) cylinder.



TECHNICAL INFORMATION

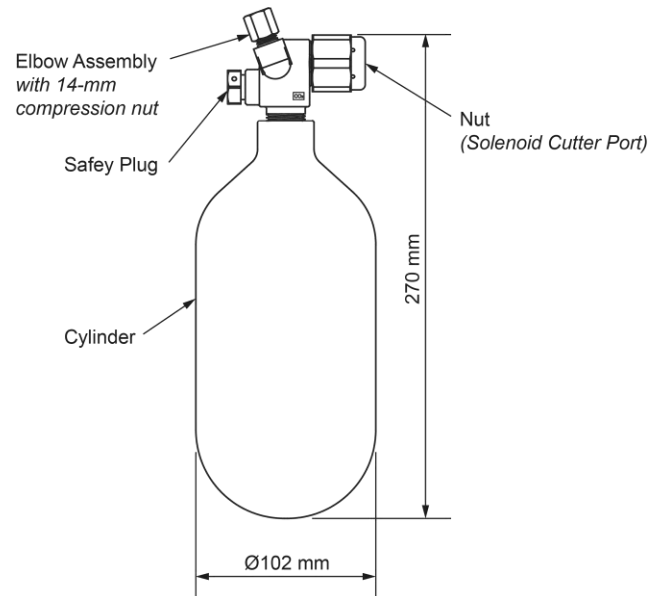
Approval for use with AFC-227/AFC-P227UL, FM

Cylinder nominal water capacity 1.1 L
 CO₂ fill weight0.65 kg
 CO₂ pressure at fill55 bar at 21 °C
 Nominal gross weight3.3 kg
 Cylinder material Manganese steel
 Cylinder hydrostatically tested at297.8 bar (4320 psi)
 Valve body material Brass
 Valve hydrostatically tested at413.6 bar (6000 psi)
 Cylinder finish Powder coating

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-PC01	Actuation (Pilot) Cylinder



SOLENOID CUTTER with ADAPTER

P/N: AFC-SC01

DESCRIPTION

The solenoid cutter is used as a releasing device for the HFC-227ea AFC-227 and AFC-P227. It actuates the pilot or master cylinder when system discharge operation is initiated. In normal system discharge operation, the solenoid cutter is activated via electric signal from the system releasing control panel. When energized, the spring-loaded needle assembly is released. Should the electrical fail, the solenoid cutter is fitted with push button that can be used for manual operation of the device. The solenoid cutter requires to be reset manually after it has been operated.

The solenoid cutter is shipped with suitable adapter depending on whether the device is to be used in conjunction with master agent cylinder or actuation (pilot) cylinder valve. Ensure that this specific information is provided upon order.



TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

Device independent approvals.....c-UL-us

Use of device.....Releasing device

Electrical rating24VDC, 1.7A

Material

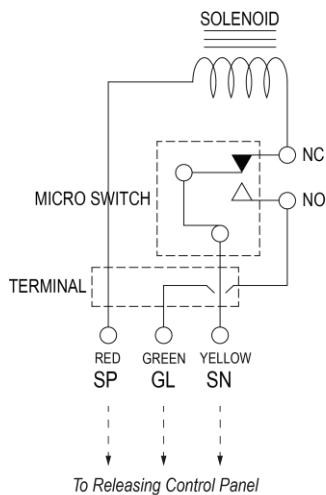
Needle.....Stainless steel

Enclosure/Frame.....Zinc alloy

Gross weight2 kg (4.4 lb)

Listed compatible releasing panel.....Potter PFC-4110RC

Wiring Diagram

 RED-YELLOW : INPUT POWER
 GREEN-YELLOW : NEEDLE RELEASE DISPLAY


Note: The needle release display connection maybe skipped depending on system requirement.

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-SC01	Solenoid Cutter
SA-01	Adapter for pilot cylinder valve
SA-02	Adapter for master cylinder valve

⚠ WARNING Sharp needle hazard.

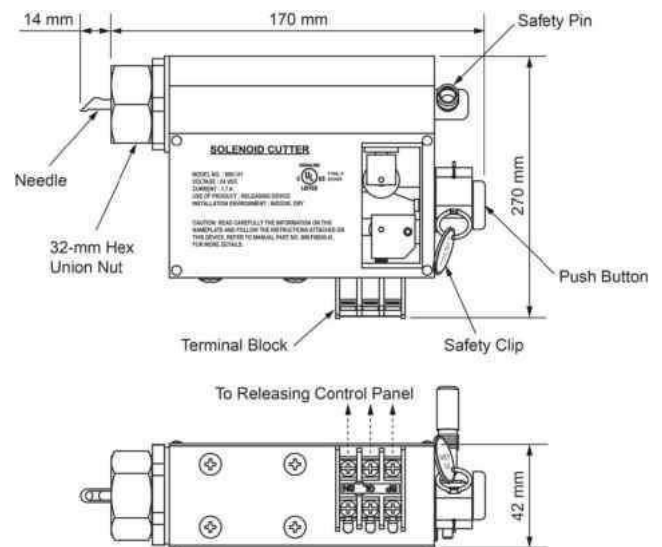


For Pilot Cylinder Valve (P/N: SA-01)



For Master Cylinder Valve (P/N: SA-02)

Solenoid Cutter Adapters



Physical Dimension

SOLENOID CUTTER SUPERVISOR

P/N: AFC-SS01

DESCRIPTION

The solenoid cutter supervisor is used to monitor the position of the solenoid cutter (electric actuator) in the agent actuation (pilot) cylinder valve or master cylinder discharge valve. It is fitted with a normally closed water-resistant micro limit switch such that when the device is properly installed and connected to a releasing control panel, complete removal or significant disengagement due to improper installation or loosening of the solenoid cutter from the valve it actuates causes the switch to activate, transmit electrical signal and triggers the audible and visual supervisory notification at the control panel. The solenoid cutter supervisor can be quickly installed in existing solenoid cutter and valve assemblies or new installations.

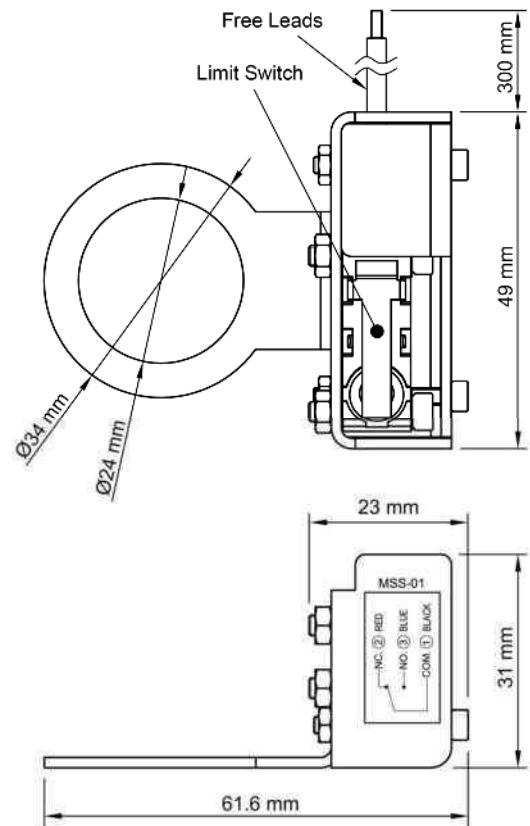
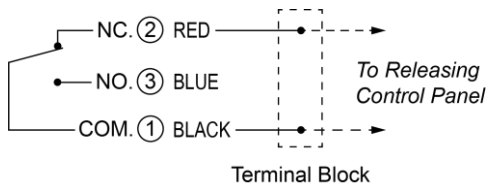


TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227UL, FM

 Micro limit switch approvals UL, cUL, ENEC15
 Electrical rating 30VDC, 5A
 Connection wiring 300 mm free leads, #18 AWG
 Washer bracket, cover, bolts, and nuts material Stainless steel
 Gross weight 80 g
 Compatibility 40A/50A agent cylinder valve, Actuation (pilot) cylinder valve

Wiring diagram

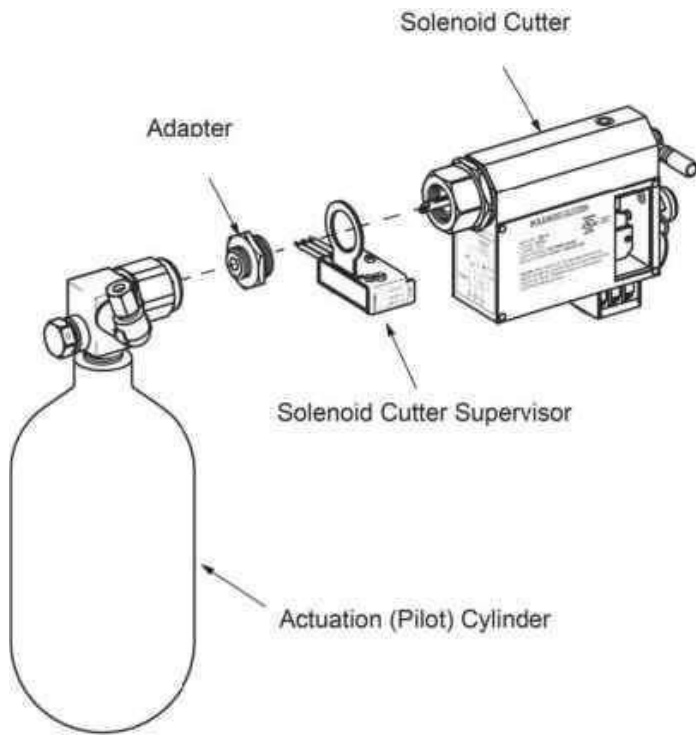


ORDERING INFORMATION

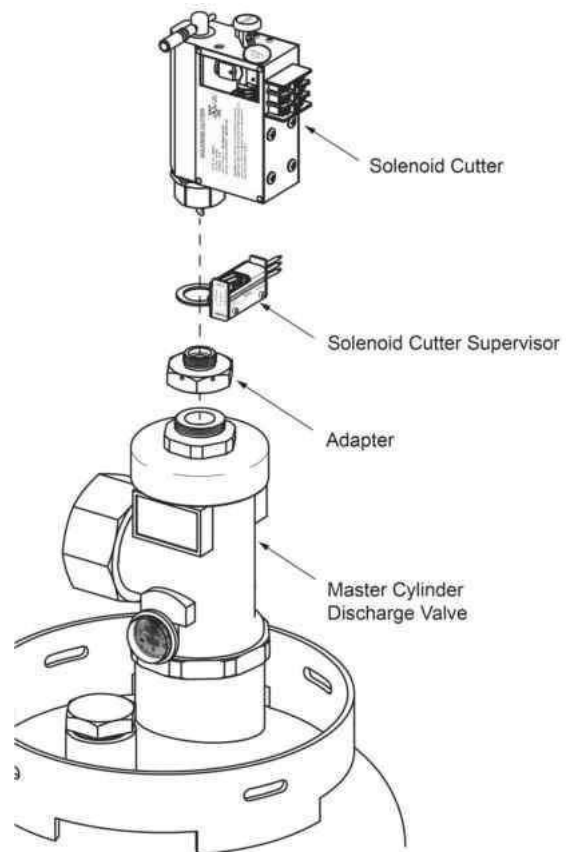
Specify part number and description when ordering.

Part No.	Description
AFC-SS01	Solenoid cutter supervisor

INSTALLATION



(a) Installation of solenoid cutter supervisor in pilot cylinder



(b) Installation of solenoid cutter supervisor in master cylinder

Illustrative guide for the installation of solenoid cutter supervisor in pilot and master cylinders

COMPACT PRESSURE SWITCH

P/N: 96211-BB2-S1637

DESCRIPTION

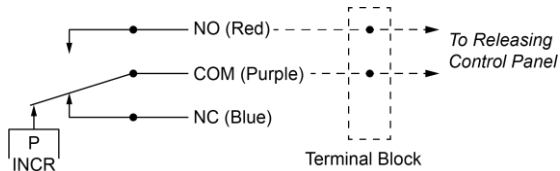
The compact pressure switch is a compact-size pressure switch that is used to initiate the discharge alarm in AFC-227 or AFC-P227 when the agent is released. It is connected directly to the distribution piping via a 1/4" NPT female adapter or pipe socket. As the discharged extinguishing agent reaches the selector valve or location in piping where the pressure switch is installed, the pressure from the flowing agent is used to operate the switch. The operation of the pressure switch shall result to the activation of the discharge alarm system if properly connected to a compatible releasing control panel.



TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

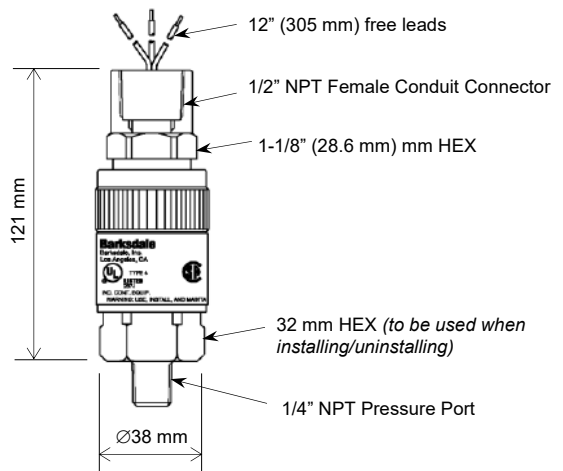
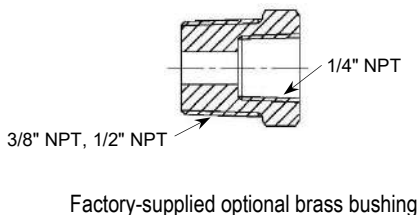
Pressure switch approvals c-UL, CSA
 Electrical rating 30VDC 5A
 Pressure port size 1/4" NPT
 Factory set pressure..... 25 psi (1.7 bar)
 Proof pressure..... 1000 psi (68 bar)
 Wiring diagram



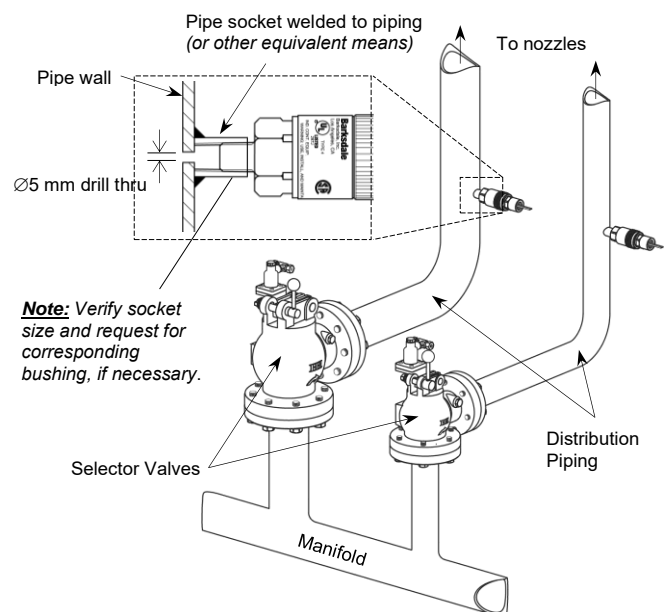
See product datasheet from Barsdale for more technical information.

Optional Parts

If 3/8" NPT or 1/2" NPT instead of 1/4" NPT pipe socket is installed in the distribution piping, a 3/8" x 1/4" NPT or 1/2" x 1/4" NPT brass bushing is provided upon request. Refer to illustration for installation guide.



Physical Dimension



Illustrative guide for installing the compact pressure switch

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
96211-BB2-S1637	Compact Pressure Switch
BN-0610	3/8" x 1/4" NPT Bushing (optional)
BN-0615	1/2" x 1/4" NPT Bushing (optional)

INSTALLATION

With a 1/4" NPT socket or suitable socket-bushing combination, install the pressure switch over a 5-mm hole drilled thru one side of the distribution piping downstream of selector valve, if any. Wrap the pressure port (external thread) with enough PTFE tape, then mount the compact pressure switch to the pipe socket or bushing and tighten by hand plus one full turn using a 32mm hex wrench.

DISCHARGE PRESSURE SWITCH (OPTIONAL)

P/N: AFC-PS01 (DY-PS-01)

DESCRIPTION

An optional discharge pressure switch is factory-assembled with the actuation box and can be used to initiate the discharge alarm when the agent is released. The pressure port of the pressure switch is connected to the selector valve or distribution piping outlet port via 6-mm copper tubing. The pressure switch is fitted with a micro limit switch that closes an electrical circuit when sufficient pressure from the discharged extinguishing agent enters the pressure port or when the push button on top is pulled manually. The operation of the pressure switch shall result to the activation of the discharge alarm system if properly connected to a compatible releasing control panel. Following its operation, the optional discharge pressure switch requires manual reset by pressing the push button inward.

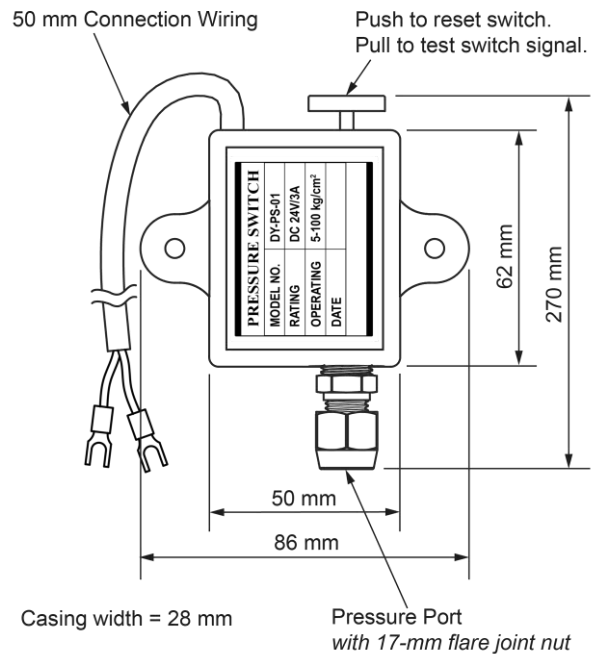
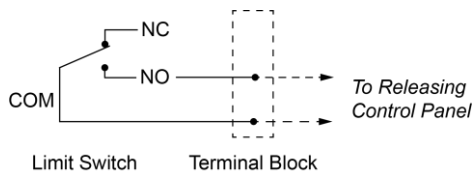


NOTE:

HFC-227ea AFC-227/AFC-P227 requires the use of UL Listed pressure switch that is compatible with the system operating pressure and fire alarm control panel. The system designer is strongly advised to refer to the pressure switch product manual for compatibility information.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227. Not UL Listed; Not FM Approved
 Electrical rating 24VDC, 3A
 Min. operating pressure 5 bar (72.5 psi)
 Casing material Polyethylene
 Weight 0.2 kg (0.44 lb)
 Wiring diagram



ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-PS01(DY-PS-01)	Discharge pressure switch (optional)

DIRECT ACTUATION TOOL SET

DESCRIPTION

The direct actuation tool set is an electric/mechanical discharge valve actuator used specifically for master-slave or single cylinder, single zone system. It is provided in a set of solenoid cutter, solenoid cutter supervisor and discharge valve adapter. The tool set is installed at the actuation port of the agent cylinder discharge valve. Normally, this device is automatically operated via electric signal from the system releasing control panel or manually by operating the push button of the solenoid cutter. The solenoid cutter supervisor provides for notification whether the device is installed or disconnected from the discharge it actuates. Refer to the solenoid cutter and solenoid cutter supervisor datasheets for more information.

TECHNICAL INFORMATION

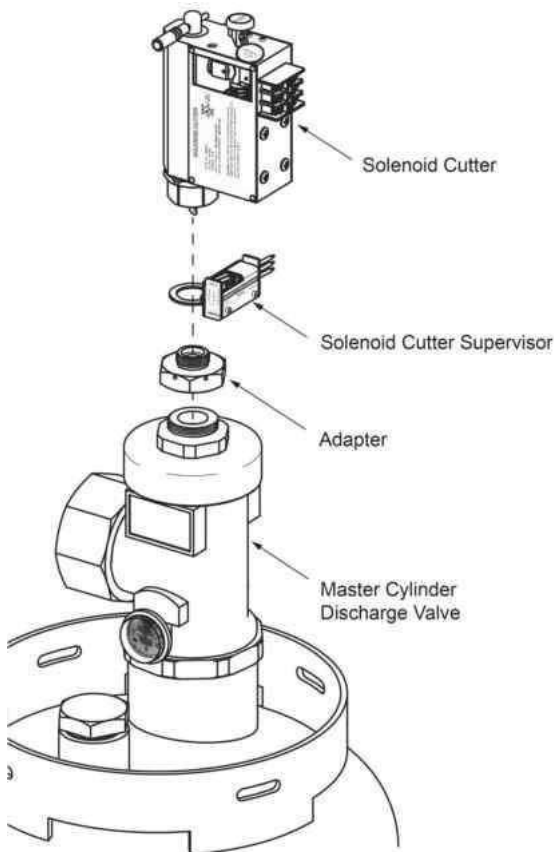
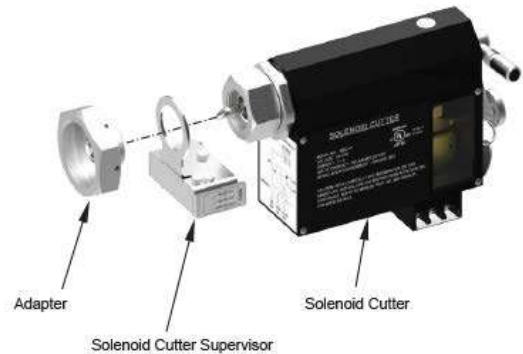
Approvals for use with AFC-227/AFC-P227UL, FM

Solenoid Cutter, and Adapter See datasheet, MDS-MSC
 Solenoid Cutter Supervisor See datasheet, MDS-MSS

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
Direct Actuation Tool Set	
MSC-01	Solenoid cutter
MSS-01	Solenoid cutter supervisor
SCA-02	Solenoid cutter adapter for discharge valve

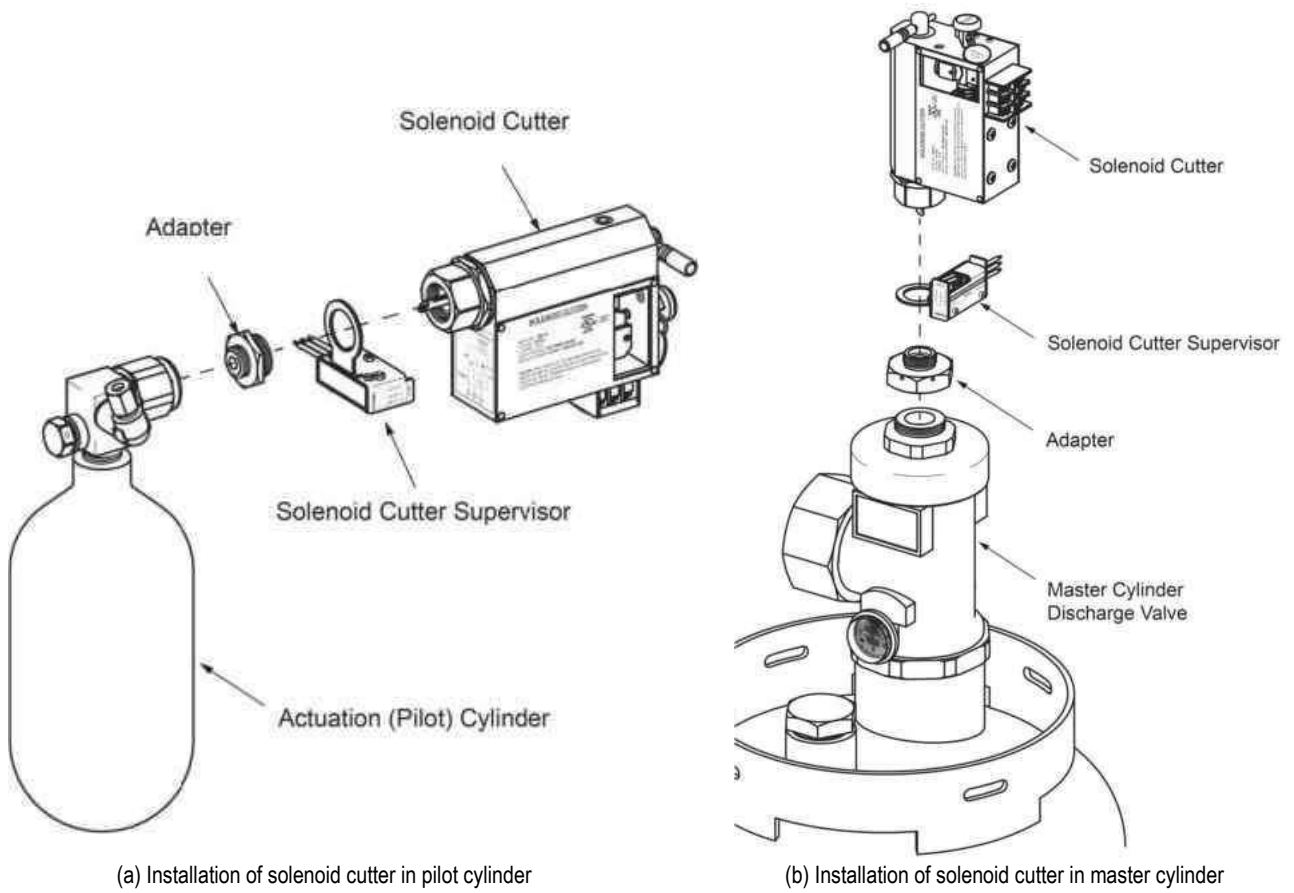


INSTALLATION

Disassemble the direct actuation tool set, if necessary, and install as depicted in the illustration at the left.

NOTE: The direct actuation tool set is to be installed specifically for master-slave, or single cylinder, single zone system. See next page for examples.

INSTALLATION

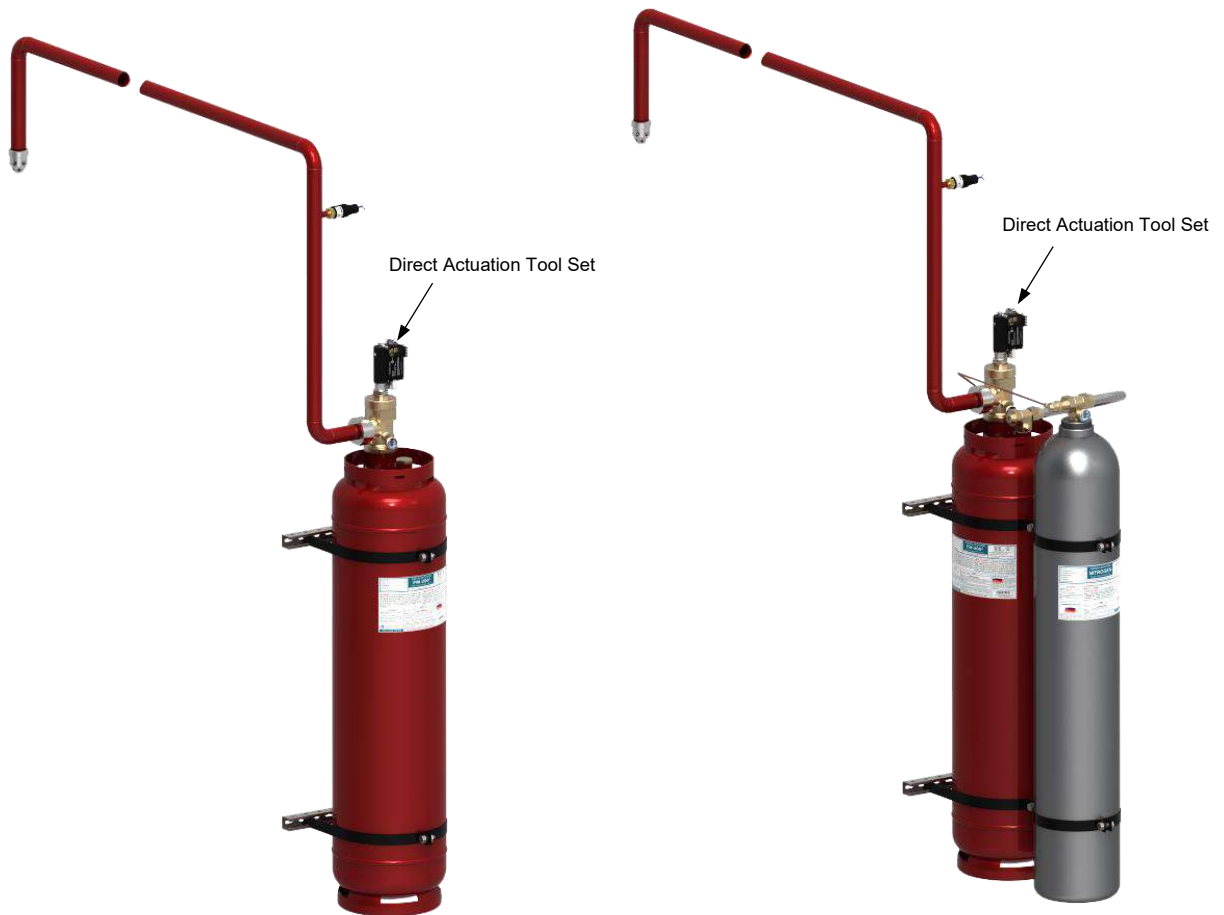


(a) Installation of solenoid cutter in pilot cylinder

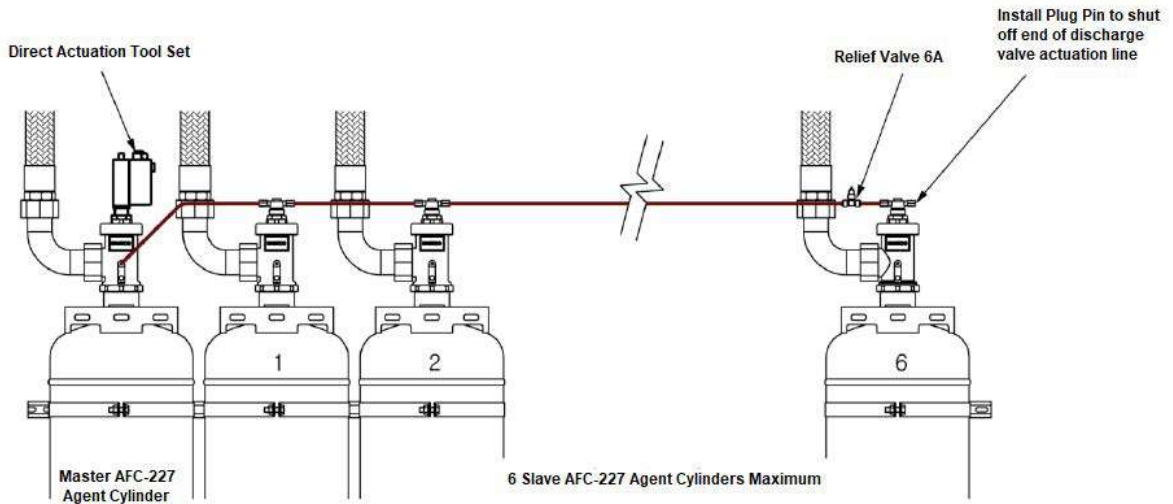
(b) Installation of solenoid cutter in master cylinder

Illustrative guide for the installation of solenoid cutter in pilot and master cylinders

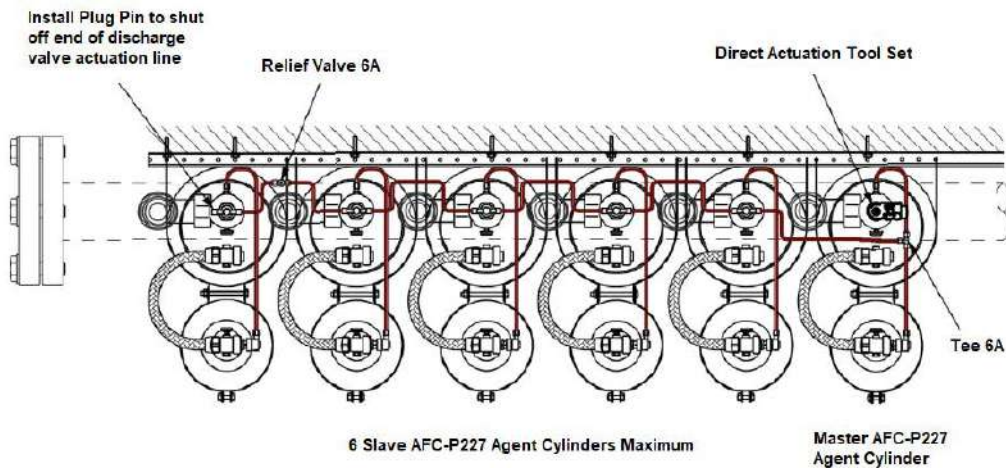
Direct Actuation System Installation Examples



Direct actuation single-cylinder, single-zone system AFC-227 (left), AFC-P227 (right).



AFC-227 direct actuation multiple-cylinder, single-zone system.



AFC-P227 direct actuation multiple-cylinder, single-zone system.

DISCHARGE NOZZLE

P/N: See table

DESCRIPTION

Discharge nozzle is used to facilitate the uniform distribution of HFC-227ea agent throughout the protected hazard space during system discharge. The discharge nozzle is available in 180° and 360° types. The 180° nozzle is intended for sidewall installations, while the 360° nozzle is installed at the center of coverage area in an upright or pendant position.

The discharge nozzle is fitted with an orifice plate having drill size specifically designed to enable the flow of the required amount of agent at prescribed pressure and discharge time as determined using the flow calculation program. Orifice drill sizes are available in 0.2 or 0.5 mm increments.



AFC-227/AFC-P227 360° and 180° Discharge Nozzles

TECHNICAL INFORMATION

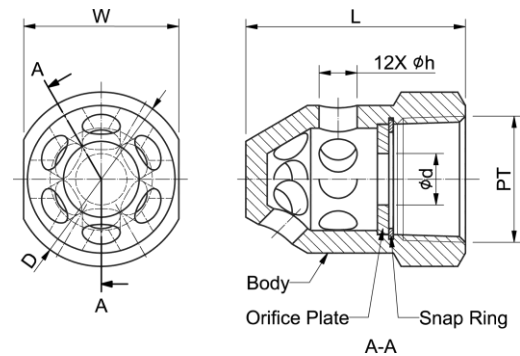
Approvals for use with AFC-227/AFC-P227.....UL, FM

Material

Body Brass
 Orifice plate Brass
 Snap ring Stainless steel
 Body finish Ni-Cr Plating
 Connection thread type PT or NPT
 Thread size 15A, 20A, 25A, 32A, 40A, 50A
 (1/2", 3/4", 1", 1-1/4", 1-1/2", 2")

Nozzle coverage 12.62 x 12.62 m (360°)
 12.62 x 12.62 m (180°)

Protected enclosure height 0.3 m to 4.5 m
 Max. distance from ceiling 0.3 m
 Installation position Pendant/Upright

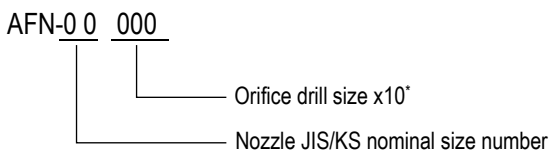


360° discharge nozzles dimension

ORDERING INFORMATION

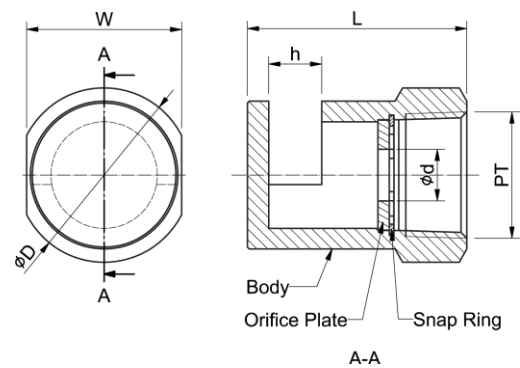
Specify nozzle part number based on flow calculation results when ordering.

Part Number Series Designation



For example, the part number for a 25A (PT 1) nozzle with orifice plate drill size of 13.8 mm would be AFN-25-138.

***Note:** Orifice drill size shall be determined using the listed/approved flow calculation software.



180° discharge nozzles dimension

Nozzle Technical Data

Part No. Series	Nominal Size		D (mm)	W (mm)	L (mm)	h (mm)		Orifice Plate		Est. Max. Weight (g)
	JIS/KS	PT				360°	180°	Drill Size, d	Drill Size Increment	
AFN-15-000	15A	½	32	28	45	5	10	8.2 – 13.4	0.2	120
AFN-20-000	20A	¾	38	34	50	8	12	10.8 – 17.8	0.2	170
AFN-25-000	25A	1	46	41	58	10	14	13.6 – 22.6	0.2	270
AFN-32-000	32A	1 ¼	58	50	68	12	16	18.0 – 29.5	0.5	470
AFN-40-000	40A	1 ½	63	57	74	14	18	21.0 – 34.0	0.5	570
AFN-50-000	50A	2	75	68	84	16	20	26.5 – 44.0	0.5	850

ESCUTCHEON

P/N: ESC-20/25/40/50

DESCRIPTION

Escutcheon is used when the discharge nozzle is to be installed below the ceiling. The purpose of the escutcheon is to completely cover or conceal the gap or clearance between the pipe hole in the ceiling and outer surface of the discharge pipe.

Install the escutcheon by inserting it through the tip of the pipe prior to installing the discharge nozzle.

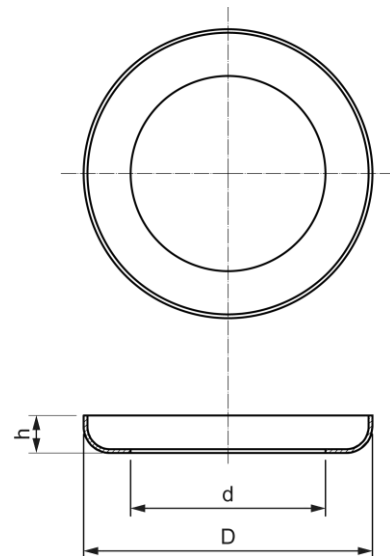


TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P22.. Not within the scope of UL or FM
 Material..... Stainless steel
 Thickness 0.3 mm (0.012 in)
 Weight 0.02 kg (0.04 lb) max.

Escutcheon Dimension

Part No.	Size	D (mm)	d (mm)	h (mm)
ESC-20	15A/20A	55	33	10
ESC-25	25A	61	39	10
ESC-40	32A/40A	77	52	10
ESC-50	50A	96	65	14



ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
See table	Escutcheon (specify size)

TEE 6A

P/N: TE-06

DESCRIPTION

The relief valve 6A is used for bleeding off pressure in the pneumatic actuation line. The relief valve 6A is normally open and automatically closes when the pressure reaches 1.5 bar. After the system has discharged, the relief valve must be manually operated to vent the pressure in the actuation line prior to performing any related post-discharge maintenance.

TECHNICAL INFORMATION

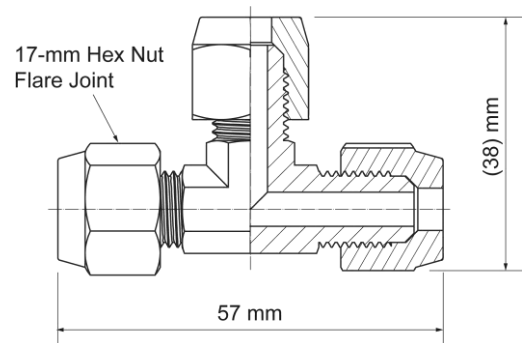
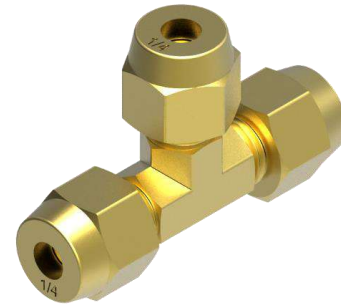
Approvals for use with AFC-227/AFC-P227.....UL, FM

Nominal size.....6A (1/4")
Hydrostatically-tested at.....344.7 bar (5000 psi)
Material.....Brass
Copper tubing connection.....Flared Joint
Connection thread.....7/16" UNF

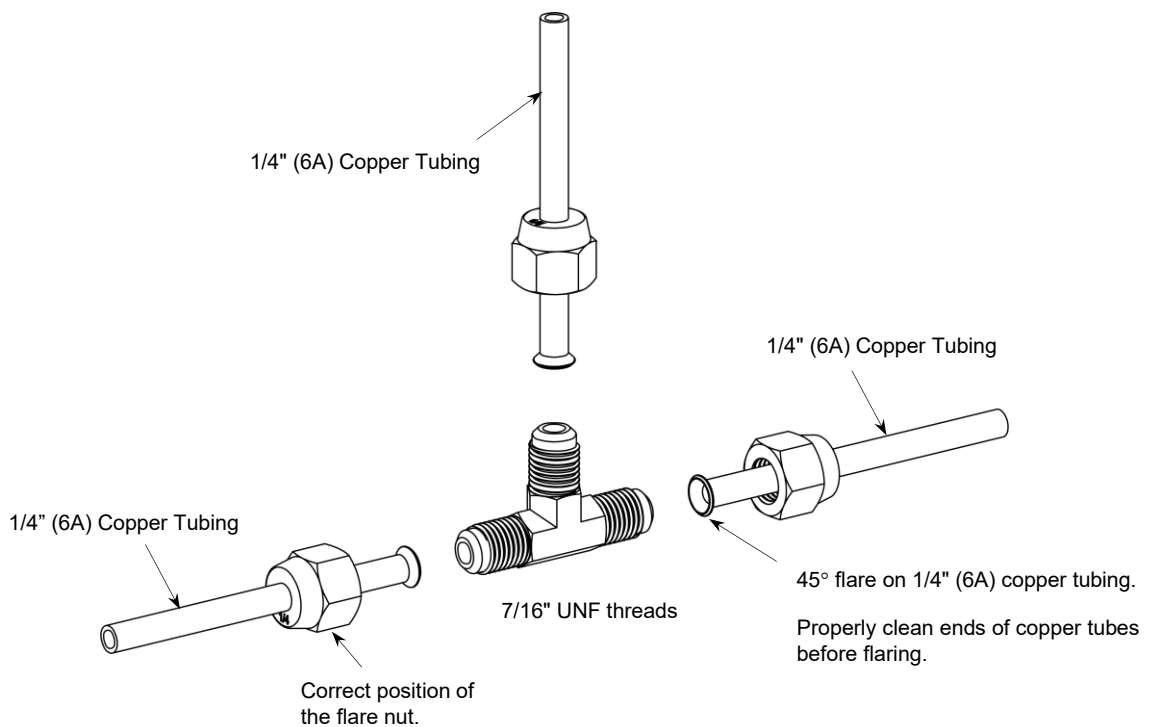
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
TE-06	Tee 6A



INSTALLATION



Illustrative guide for installing the tee 6A

RELIEF VALVE 6A

P/N: RV-06

DESCRIPTION

The relief valve 6A is used for bleeding off pressure in the pneumatic actuation line. The relief valve 6A is normally open and automatically closes when the pressure reaches 1.5 bar. After the system has discharged, the relief valve must be manually operated to vent the pressure in the actuation line prior to performing any related post-discharge maintenance.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227UL, FM

Nominal size6A (1/4")

Minimum operating pressure 1.5 bar

Hydrostatically-tested at344.7 bar (5000 psi)

Material

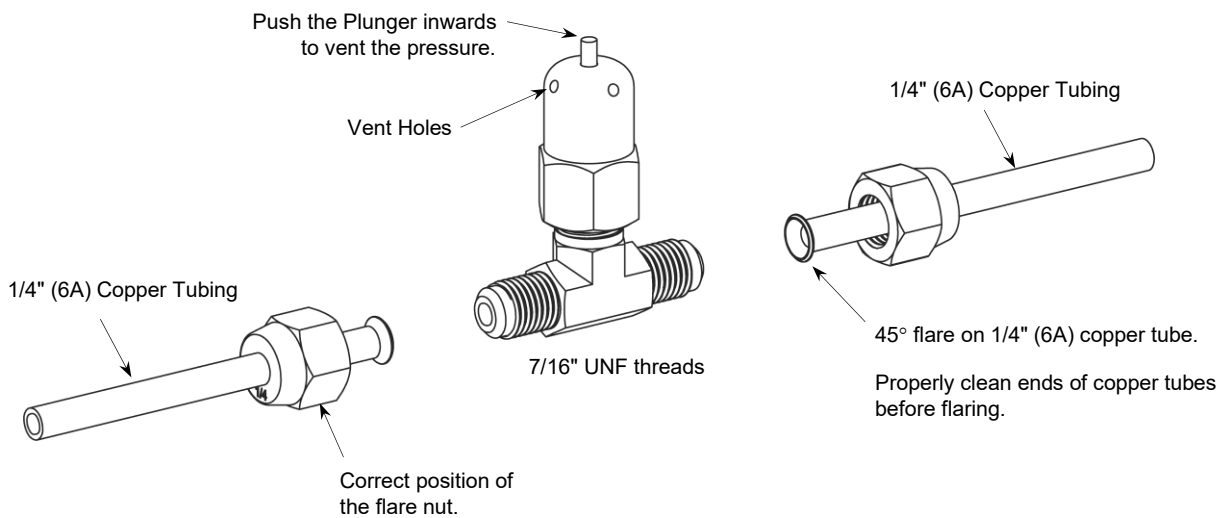
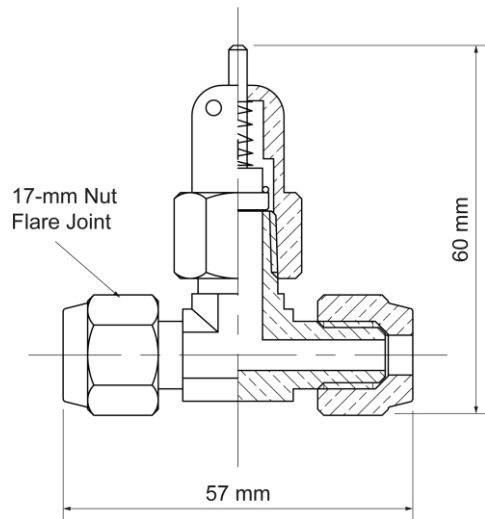
Tee, Flare Nuts, Socket and Plunger Brass
 O-Ring SealNBR
 Spring Steel
 Copper tubing connection Flare Joint
 Connection thread 7/16" UNF
 Installation position Plunger vertically up or down

ORDERING INFORMATION

Specify part number and description when ordering

Part No.	Description
RV-06	Relief valve 6A

INSTALLATION


Illustrative guide for installing the relief valve 6A

PRESSURE RELIEF DEVICE

P/N: PRD-20

DESCRIPTION

The pressure relief device is used in systems where the piping section between the manifold check valve and the selector valve(s) may be closed off. To prevent entrapment of agent in such section of closed piping and over-pressurization when exposed to high temperature, the pressure relief device must be installed in a suitable location at the manifold. The pressure relief device is fitted with a rupture disc that operates at a rated burst pressure of 60 bar.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

Nominal Size 20A (3/4")

Burst Pressure.....60 bar (870 psig)

Material:

Safety Plug, Rupture Disc and Body Brass

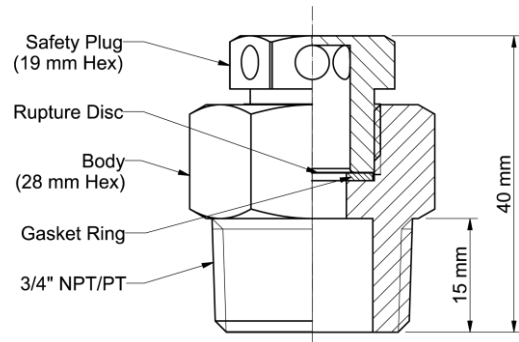
Gasket Ring.....Bakelite

 Connection Thread Size and Options 3/4" NPT/PT
 (NPT or PT thread to be specified on order.)

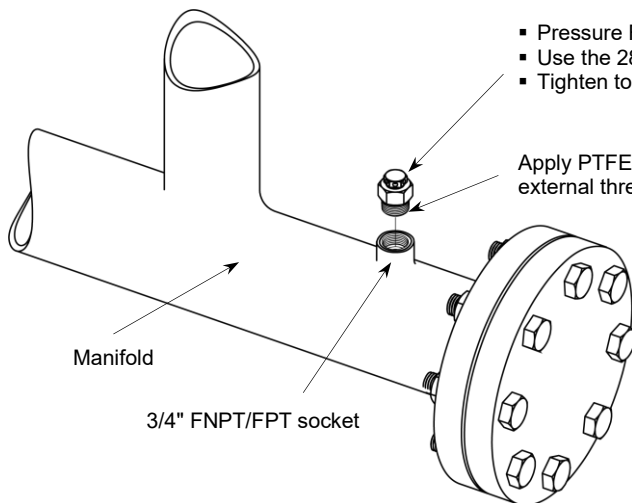
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
PRD-20	Pressure relief device full assembly
PRD-20-04	Rupture disc
PRD-20-03	Gasket ring
PRD-20-02	Safety plug
PRD-20-01	Body

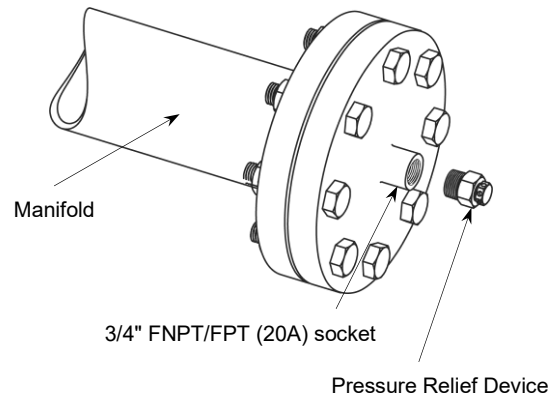


INSTALLATION



Option 1: On manifold pipe

- Pressure Relief Device
- Use the 28-mm hex nut body when tightening or loosening
- Tighten to 800 kg_f-cm torque



Option 2: On end-of-manifold pipe cap

Illustrative guide for installing the pressure relief device

CHECK VALVE 6A

P/N: AFC-CV06

DESCRIPTION

The check valve 6A restricts the flow of actuation gas in the actuation line to one direction only. It is installed in the pneumatic actuation tubing in a multi-zone system to ensure that the actuation pressure is delivered only to the intended needle cylinders (pneumatic valve actuators) on the agent cylinder valves. In main/reserve systems, the check valve is used to prevent the actuation of the reserve system when the main system is discharged.

TECHNICAL INFORMATION

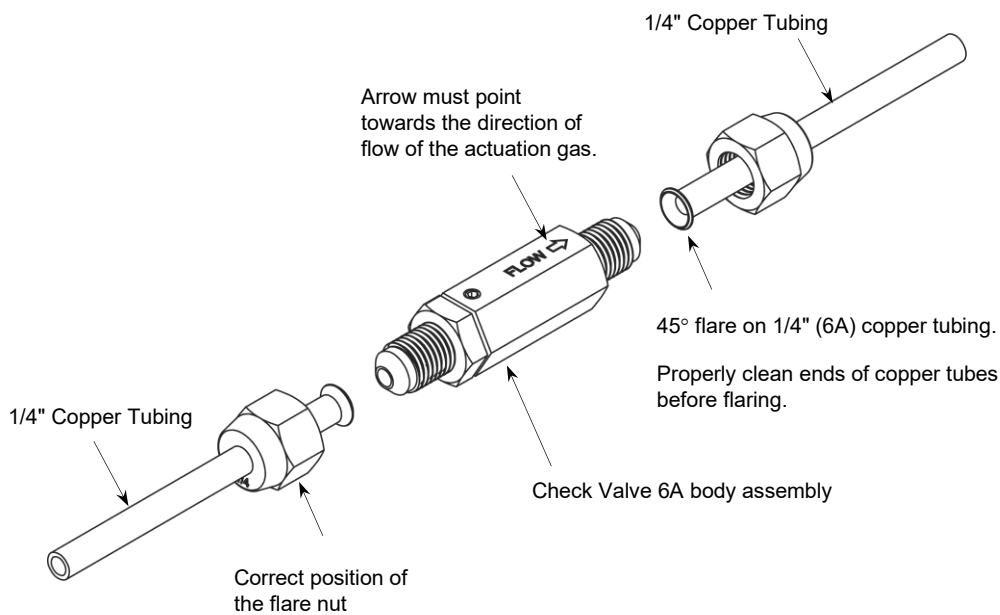
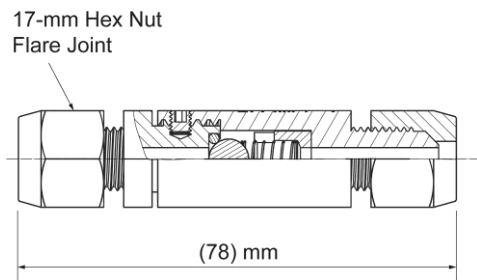
Approval for use with AFC-227/AFC-P227UL, FM

Nominal size 1/4" (6A)
 Fitting thread 7/16" UNF
 Minimum operating pressure 1 bar
 Hydrostatically tested at 344.7 bar (5000 psi)
 Material
 Body, Nipple and Flare Nuts Brass
 O-Ring Seal NBR
 Locking Screw Alloy steel
 Tubing connection Flared joint
 Installation position In line with tubing (arrow points to flow)

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-CV06	Check valve 6A



Illustrative guide for installing the check valve 6A

COPPER TUBING and FITTINGS

P/N: See Table

DESCRIPTION

Copper tube is used to direct the flow of the actuating fluid to the pneumatically-actuated devices. In AFC-227/AFC-P227, these devices include the selector valve actuator, needle cylinders (discharge valve actuators), and pressure switches. The copper tube that will be used for connecting the pilot cylinder, selector valve actuator, and the first agent cylinder's discharge valve actuator is shipped from the factory in rolls of prescribed length and must be cut accordingly during field installation. Optionally, the copper tube can be factory pre-cut and bent to shape into one or more of the following: agent interconnect actuation tube, interlock tube (nitrogen actuation tube), selector valve actuation tube and pressure switch actuation tube.

The brass compression and flare fittings provide for the connection of copper tube between the source and pneumatic actuators or pressure switch.

TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227.....UL, FM

Copper tube
 Nominal size.....6A (1/4")
 Min. wall thickness 0.70 mm

Fittings
 Material..... Brass
 Joint type Compression, Flare

Copper tube and fittings hydrostatically tested at 344.7 bar (5000 psi)

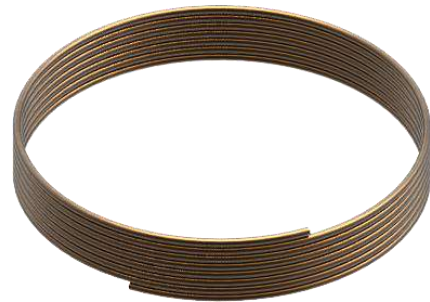
ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
CT-001/002-TL*	Copper tubing (specify total length upon order)
TU-061	PT 3/8 flare fitting
CMF-01	PT 1/4 compression fitting
FT-320-L**	Agent interconnect actuation tube (Loop or Bend)
TN-500	500 mm interlock tube with PT 3/8 compression fitting
TN-530	530 mm interlock tube with PT 3/8 compression fitting
TN-600	600 mm interlock tube with PT 3/8 compression fitting

*TL – copper tubing total length in mm to be specified by customer

**L – copper tube length in mm to be specified by customer



Copper Tube



PT 3/8 x 1/4 Compression Fitting



PT 1/4 x 1/4 Flare Fitting



Agent Interconnect Actuation Tube - Loop



Agent Interconnect Actuation Tube – Bend 90°

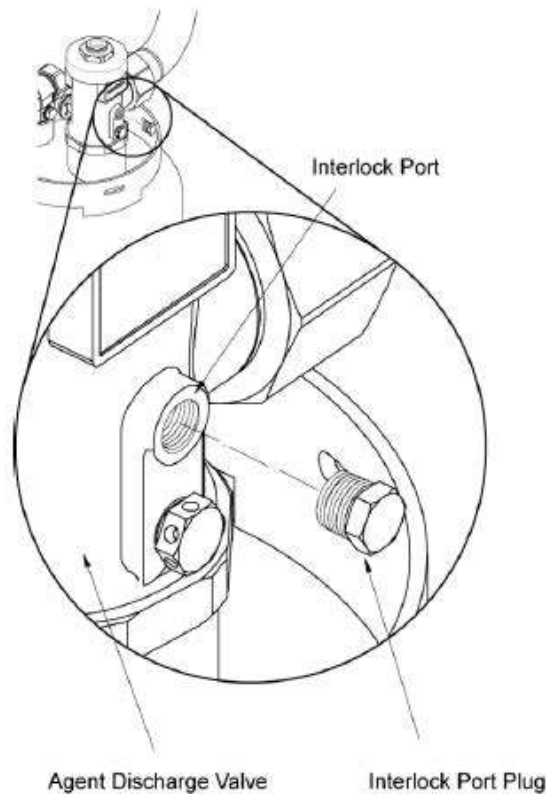


Interlock Tube with PT 3/8 Compression Fitting (For AFC-P227 only)

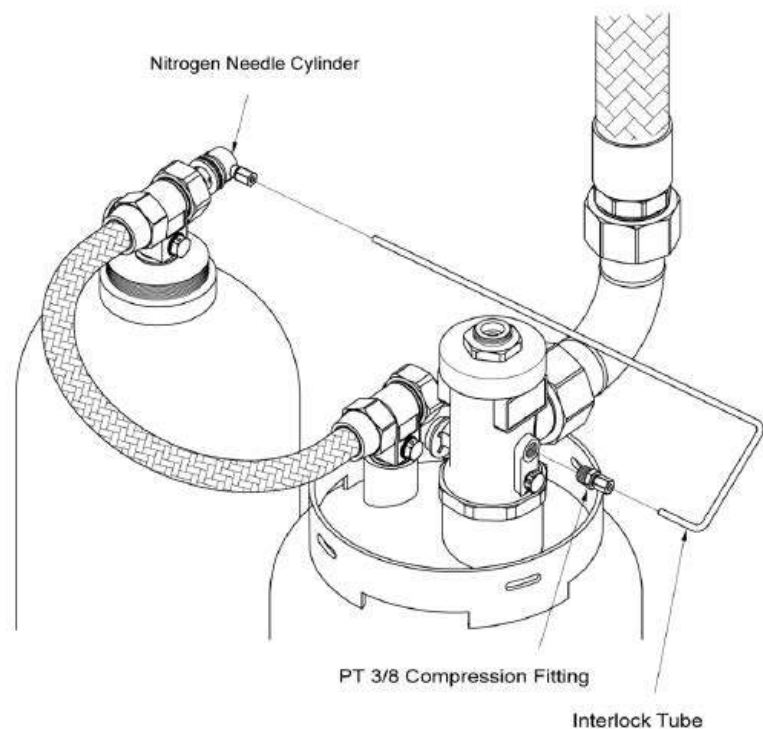
INSTALLATION

Installing the Interlock Tube with PT 3/8 Compression Fitting (Applies to AFC-P227 only)

1. Remove the plug from the interlock port.



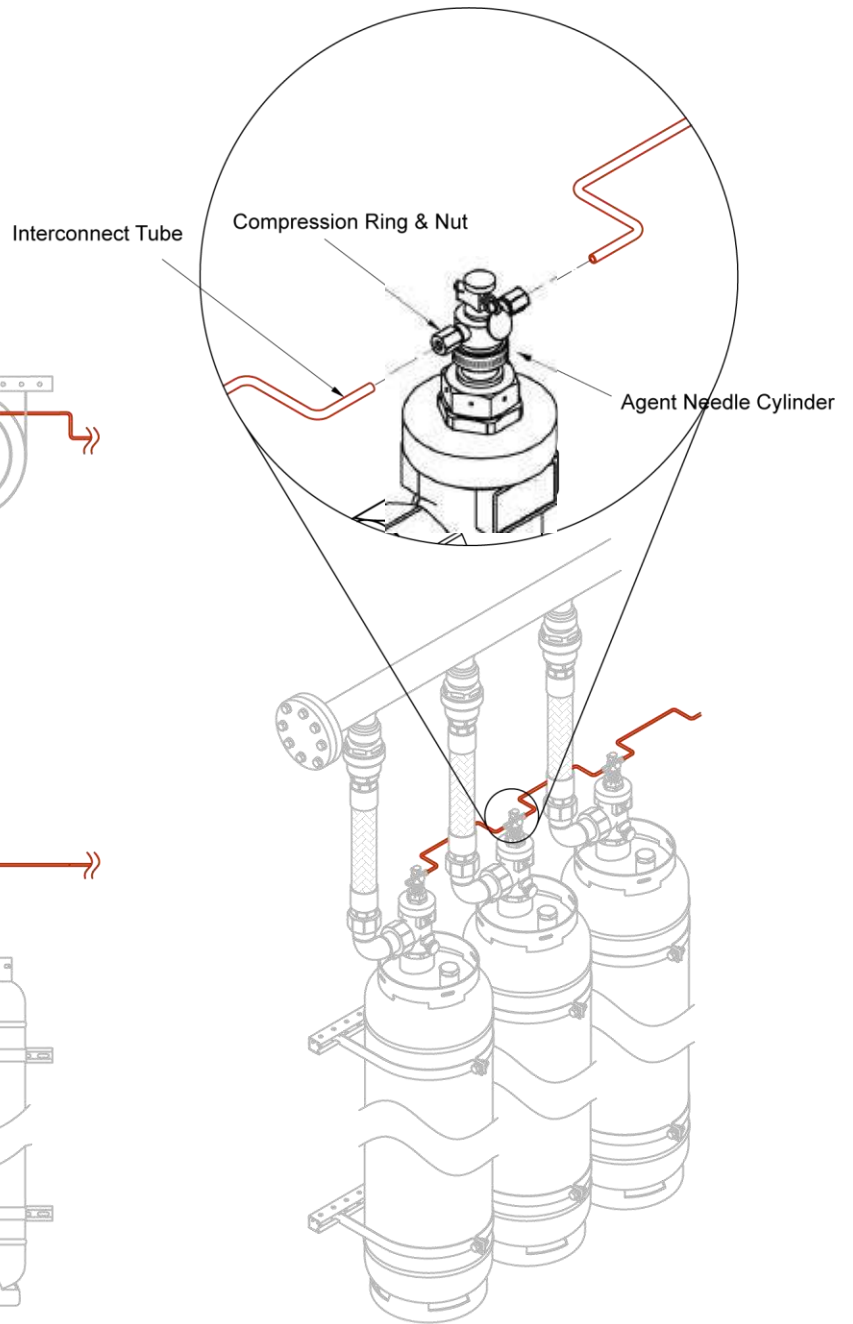
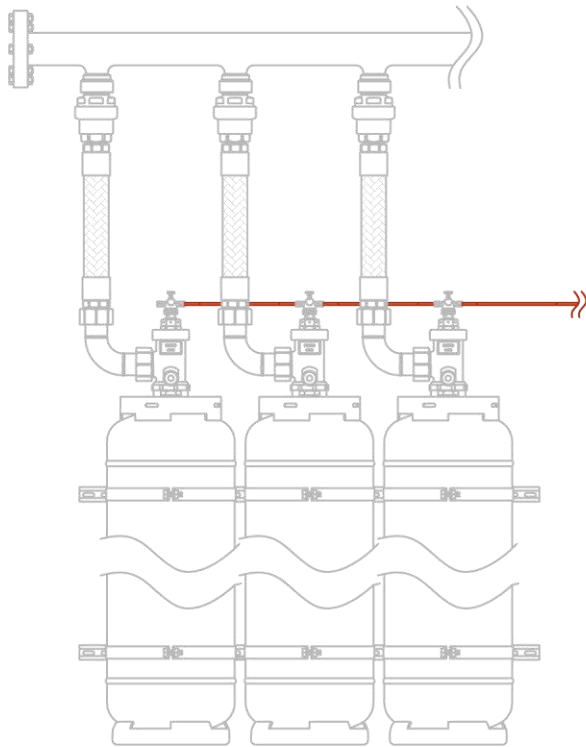
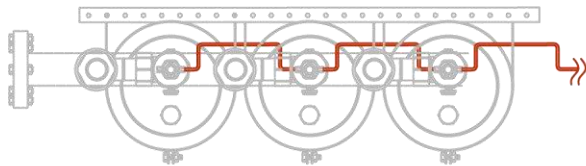
2. Apply sufficient amount of PTFE tape to the male union PT 3/8 compression fitting and hand-tighten it to the interlock port. Using a suitable wrench, further tighten the fitting by 1 to 2 complete turns.
3. Insert the copper tube to the sleeves and nuts of the PT 3/8 compression fitting and nitrogen needle cylinder.
4. Appropriately tighten the compression nuts to complete the connection.



Installing the Interconnect Tube – Bend 90°

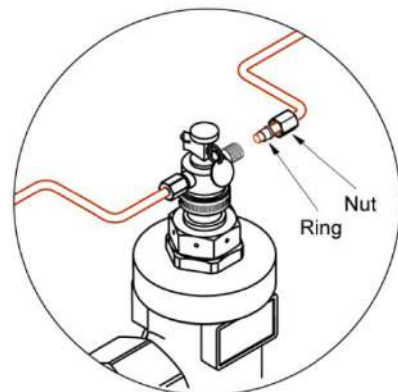
To be installed when the axis of the agent cylinder discharge valve outlet ports is parallel to manifold.

1. Make sure that all agent cylinders are securely strapped at their locations.
2. Starting at either end of a row of cylinders to be interconnected, insert one end of the interconnect copper tube to the compression ring and nut of the agent needle cylinder all the way in.
3. Properly tighten the compression nut.
4. Do the same for the other end of the tube.



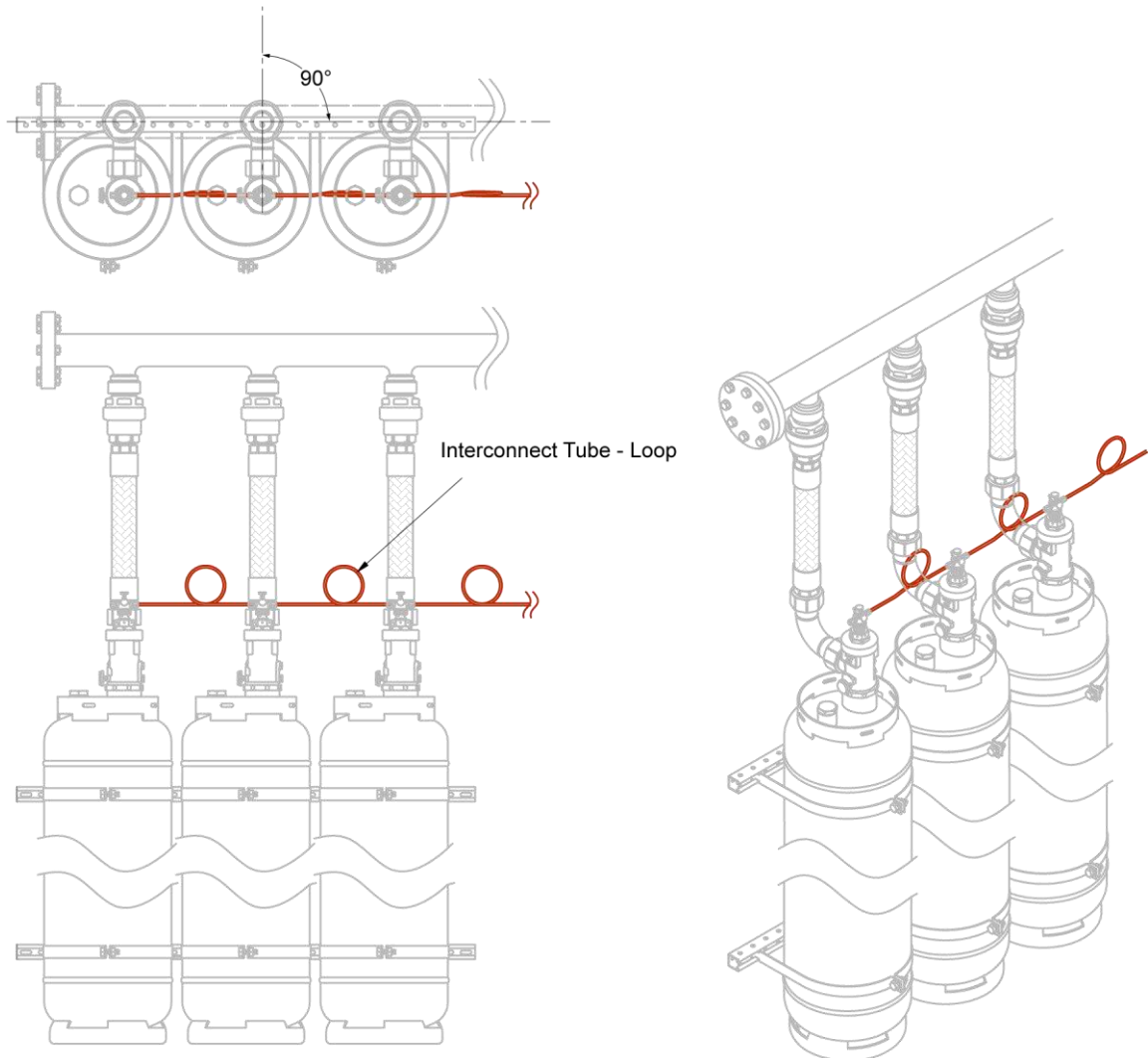
Alternatively,

1. Uninstall the compression ring and nut from the agent needle cylinder.
2. Insert the ring and nut to the copper tube as shown in the figure to the right.
3. Insert the tube to the agent needle cylinder and properly tighten the compression nut.



Installing the Interconnect Tube – Loop

To be installed when the axis of the agent cylinder discharge valve outlet ports is not in-line or parallel to the longitudinal axis of manifold. Although the tube can be configured straight, the loop around provides for easy adjustment to misalignment of needle cylinders (valve actuators) it connects and quick installation.



Interconnect tube – loop type installed in agent cylinders having their discharge valve outlet ports positioned at 90° angle to the longitudinal axis of the manifold.

CYLINDER STRAP

P/N: AFC-ST and AFC-PST

DESCRIPTION

The AFC-227 cylinder strap is used to fasten and secure the agent cylinders in place. The cylinder strap is provided as a set which includes the steel straps, channel struts, bolts, nuts, washers, and end caps. The channel strut can be readily bolted or welded to rigid walls or fabricated steel frames.

ORDERING INFORMATION

Specify part number when ordering.

Part No.	Cylinder Partner
AFC-ST01	AFC-227 agent cylinder AFC- 26, 40, 63, 89, 115
AFC-ST02	AFC-227 agent cylinder AFC-175
AFC-PST01	AFC-P227 agent cylinder AFC-P63, P68, P115
AFC-PST02	AFC-P227 agent cylinder AFC-P175

TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227.....UL, FM

Material

Cylinder strap.....Cold rolled SPCC steel
 Channel strut.....Structural steel (SS400)
 Bolts, nuts, and washers.....Structural steel (SS400)
 Channel end cap.....Plastic

Finish

Cylinder strap.....Black powder coating
 Channel strut.....Hot dip galvanizing

Weight

AFC-ST01.....1.4 ~ 1.6 kg / 2 sets
 AFC-ST02.....2.8 ~ 3.0 kg / 2 sets

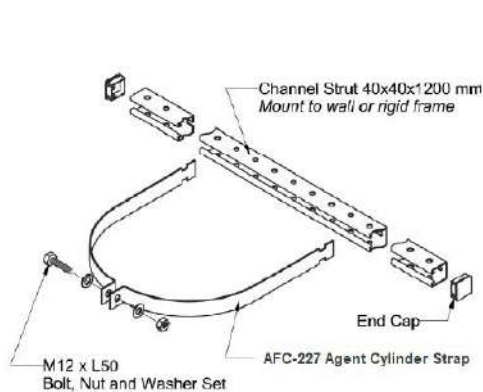
Dimensions See next page



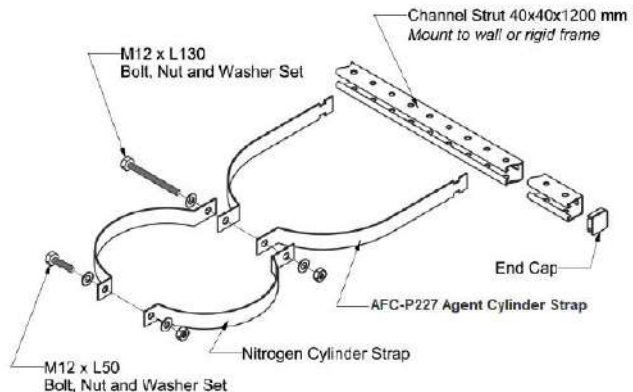
Cylinder Strap for AFC-227 Agent Cylinders (P/N: AFC-ST-01,02)



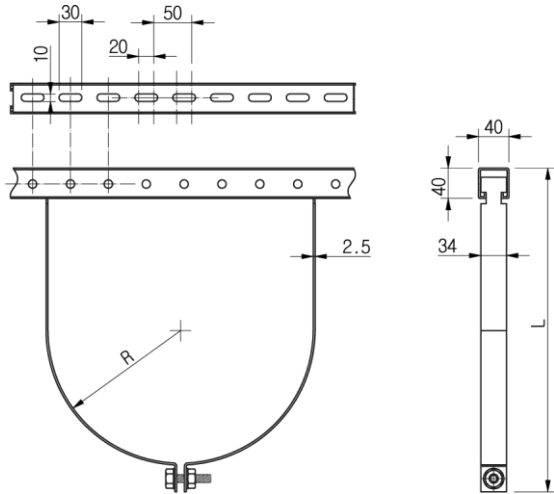
Cylinder Strap for AFC-P227 Agent Cylinders (P/N: AFC-PST-01,02)



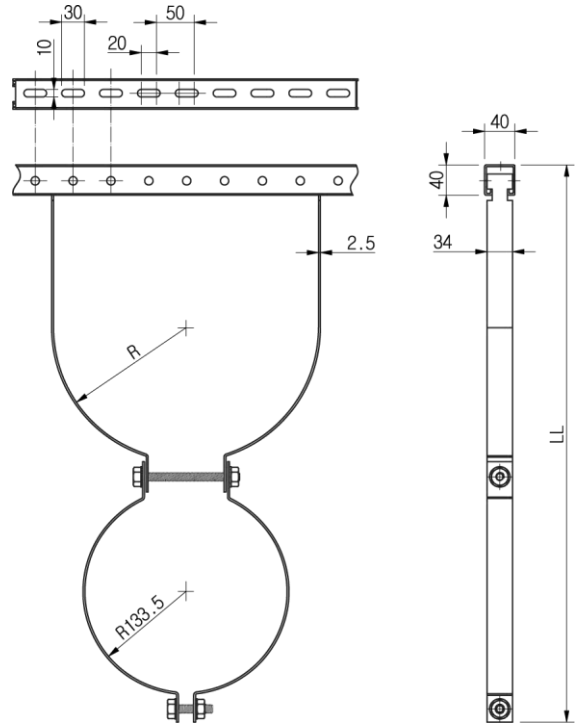
AFC-227 cylinder strap components



AFC-P227 cylinder strap components



AFC-ST Series Cylinder Strap Dimensions



AFC-PST Series Cylinder Strap Dimensions

Dimensions and recommended installation location of cylinder strap

Strap Model No.	Cylinder Model No.	R (mm)	L/LL (mm)	H1* (mm)	H2* (mm)
AFC-ST01	AFC-26	175	427	130	260
	AFC-40	175	427	130	410
	AFC-63	175	427	250	560
	AFC-68	175	427	250	615
	AFC-89	175	427	250	840
	AFC-115	175	427	250	1,140
AFC-ST02	AFC-175	225	515	250	1,000
AFC-PST01	AFC-P63	175	736	250	560
	AFC-P68	175	736	250	615
	AFC-P89	175	736	250	840
	AFC-P115	175	736	250	1,140
AFC-PST02	AFC-P175	225	844	250	1,000

* Tolerance: ± 5 mm



AFC-227 Cylinder Assembly

AFC-P227 Cylinder Assembly

H1, H2: Recommended installation distance of cylinder strap assemblies at channel strut bolt center to the foot (bottom) of cylinder.

WARNING PLATE - INSIDE

P/N: AFC-WP-002-IN

DESCRIPTION

The warning plate - inside enables the person in the protected space to be aware that an HFC-227ea clean agent fire extinguishing system is installed. It also provides safety instruction relevant to the condition of hazard therein. The warning plate-inside shall be mounted at various appropriate locations inside the protected space.

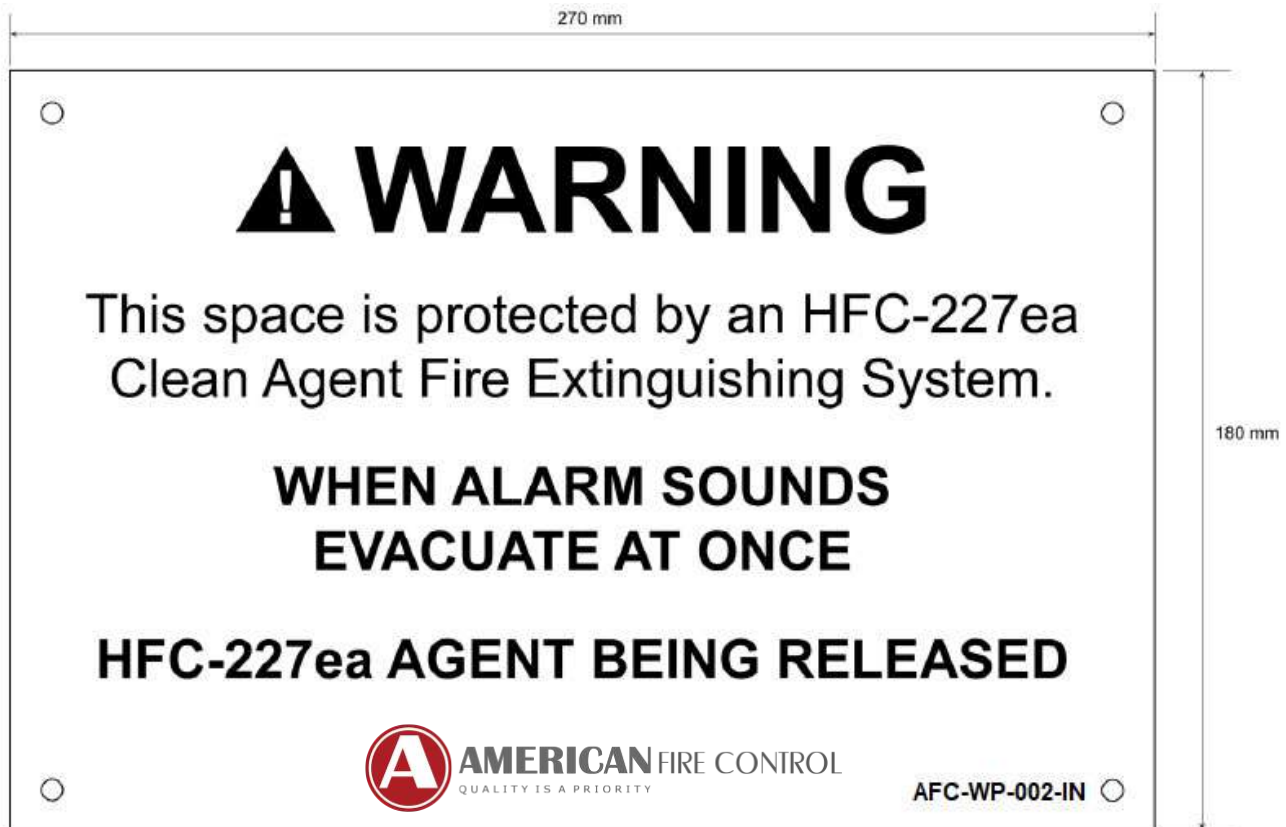
TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227 Not within scope of UL and FM
 Plate Size (Width x Height) 270 x 180 mm (10.63 x 7.09 in)
 Plate Thickness 1.0 mm (0.04 in)
 Plate Material Aluminum
 Mounting Hole Size 5.0 mm (0.20 in)
 Mounting Screw Material STS304

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-WP-002-IN	HFC-227ea warning plate – inside



WARNING PLATE - OUTSIDE

P/N: AFC-WP-001-OUH

DESCRIPTION

The warning plate – outside enables the person entering a protected space to be aware that an HFC-227ea clean agent fire extinguishing system is installed. It also provides relevant safety instructions regarding the condition of hazard therein. The warning plate – outside shall be mounted outside and at the entrance(s) to the protected space.

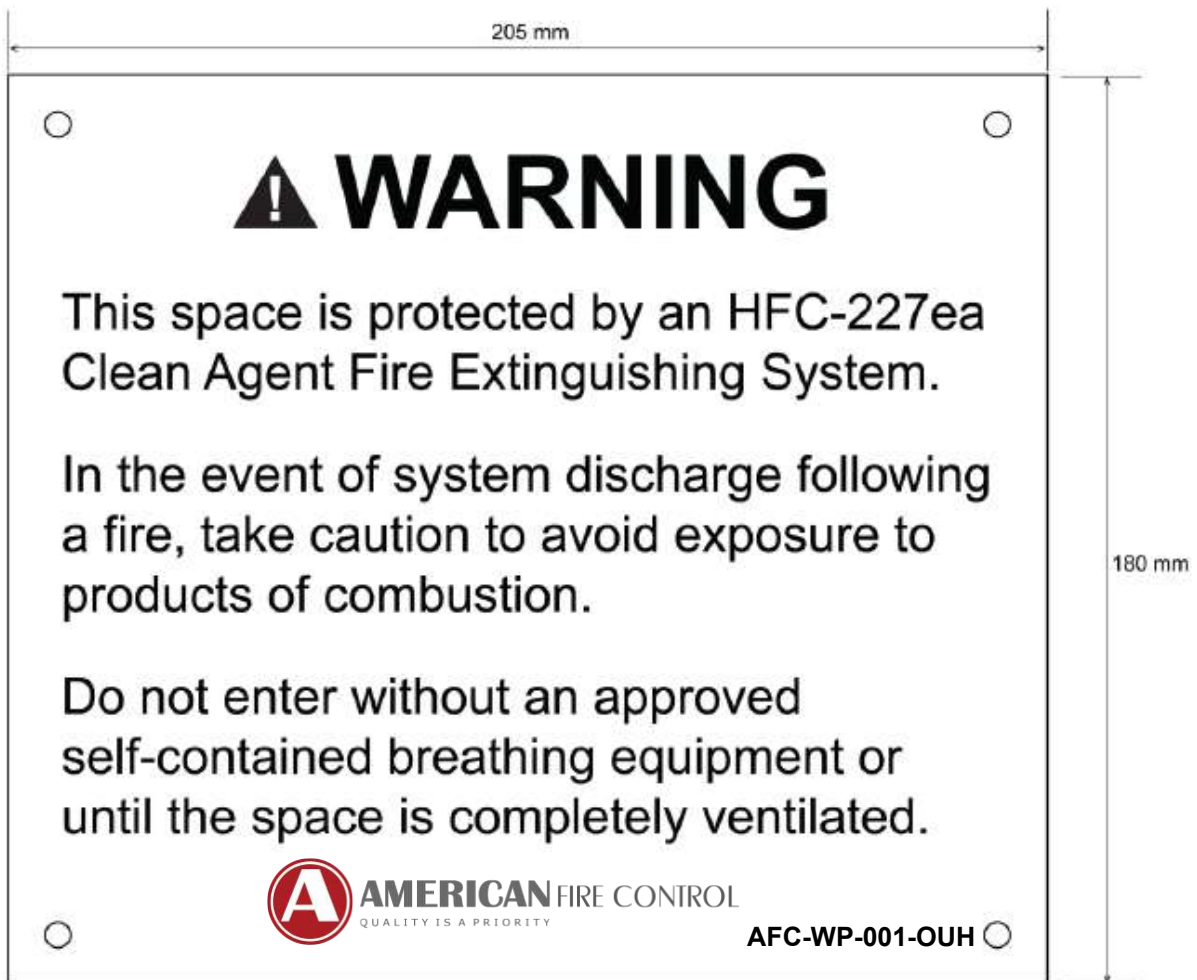
TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227 Not within scope of UL and FM
 Plate Size (Width x Height) 205 x 180 mm (8.07 x 7.09 in)
 Plate Thickness 1.0 mm (0.04 in)
 Plate Material Aluminum
 Mounting Hole Size 5.0 mm (0.20 in)
 Mounting Screw Material STS304

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-WP-001-OUH	HFC-227ea warning plate - outside



MAIN SIGN PLATE

P/N: AFC-MP01

DESCRIPTION

The main sign plate is used to label for quick visual identification of main agent cylinder banks, actuation boxes and manual stations from the reserve units. It is provided with mounting screws for quick and easy installation.

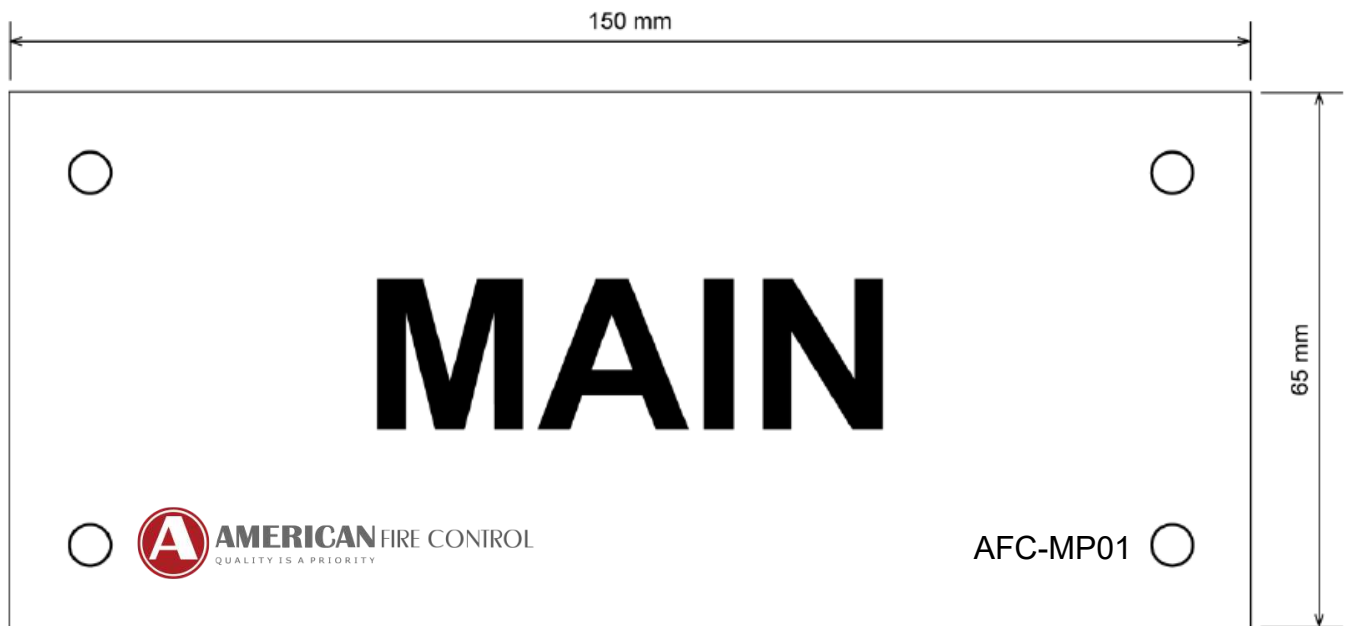
TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227.... Not within scope of UL and FM
 Plate Size (W x H) 150 x 65 mm (5.9 x 2.6 in)
 Plate Thickness 1.0 mm (0.04 in)
 Plate Material Aluminum
 Mounting Hole Size 5.0 mm (0.20 in)
 Mounting Screw Material STS304

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-MP01	Main sign plate



RESERVE SIGN PLATE

P/N: AFC-RP01

DESCRIPTION

The reserve sign plate is used to label for quick visual identification of reserve agent cylinder banks, actuation boxes and manual stations from the main units. It is provided with mounting screws for quick and easy installation.

TECHNICAL INFORMATION

Approval for use with AFC-227/AFC-P227..... Not within scope of UL and FM
 Plate Size (Width x Height) 150 x 65 mm (5.9 x 2.6 in)
 Plate Thickness 1.0 mm (0.04 in)
 Plate Material Aluminum
 Mounting Hole Size 5.0 mm (0.20 in)
 Mounting Screw Material STS304

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-RP01	Reserve sign plate



AFC-227 AGENT CYLINDER LABEL

PN: AFC-227-CL

DESCRIPTION

The agent cylinder label provides detailed information regarding the contents of the cylinder. It also contains instructions on how to handle, install, operate, inspect, and maintain the cylinder-valve assembly.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM





Materials.....UL Listed label materials

Label size (width x height).....279.4mm (11in) x 172mm (6.77in)

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-227-CL	AFC-227 HFC-227ea Cylinder Label

MODEL NO.: <input type="text"/> AGENT WEIGHT: <input type="text"/> KG TARE WEIGHT: <input type="text"/> KG GROSS WEIGHT: <input type="text"/> KG YEAR OF MANUFACTURE: <input type="text"/>	<h2>HFC-227ea</h2> <p>FIRE EXTINGUISHING AGENT</p> <p>CONTAINS FM-200® (HFC-227ea) SUPERPRESSURIZED WITH NITROGEN TO 25 BAR AT 21 °C.</p>	  <p>USE AT TEMPERATURE RANGE OF 0°C TO 54°C. OPERATING PRESSURE OF 25 BAR AT 21°C. FACTORY HYDROSTATICALLY TESTED AT 1000 PSI (69 BAR). DOT 4BW500 COMPLIANT.</p>										
<p>▲ WARNING: The discharge of clean agent systems to extinguish a fire can result in a potential hazard to personnel from the natural form of the clean agent or from the products of combustion that result from exposure of the agent to the fire or hot surfaces. Unnecessary exposure of personnel either to the natural agent or to the products of decomposition shall be avoided.</p>												
<p>▲ CAUTION</p> <p>TRANSPORT, STORE, AND INSTALL THE CONTAINER IN VERTICAL POSITION ONLY.</p> <p>AVOID EXPOSURE TO DIRECT SUNLIGHT.</p> <p>ACCIDENTAL AGENT DISCHARGE COULD CAUSE SEVERE PERSONAL INJURY OR DEATH. ENSURE THAT ALL PROTECTION CAPS AND THREADED SAFETY PLUGS ARE INSTALLED FIRMLY TO THE VALVES WHEN THE CONTAINER IS NOT CONNECTED TO THE SYSTEM.</p>	<p>OPERATION</p> <p>WHEN CONNECTED TO THE SYSTEM, THIS CONTAINER IS OPERATED AUTOMATICALLY VIA PRESSURE-ACTUATED DEVICE OR ELECTRIC ACTUATOR.</p> <p>INSPECTION AND MAINTENANCE</p> <p>MONTHLY: CHECK CONTAINER PRESSURE. IF THE PRESSURE (ADJUSTED FOR TEMPERATURE CORRECTION) SHOWS A LOSS OF MORE THAN 10%, REFILL OR REPLACE THE CONTAINER. INSPECT THE DISCHARGE VALVE, SAFETY PLUG, AND PRESSURE GAUGE. IF ANY SIGN OF DAMAGE THAT COULD POTENTIALLY IMPAIR NORMAL SYSTEM OPERATION IS FOUND, REPLACE THE CONTAINER.</p> <p>SEMI-ANNUALLY: CHECK AGENT QUANTITY. IF AGENT QUANTITY SHOWS A LOSS OF MORE THAN 5%, REPLACE THE CONTAINER.</p> <p>REFER TO THE RECENT EDITIONS OF SYSTEM MANUAL PART NO. BFE-FM200-EFFS-001-00 AND THE STANDARD CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, NFPA 2001 FOR MORE RELATED INFORMATION.</p>	<p>HAZARDOUS MATERIAL IDENTIFICATION</p> <table border="1"> <tr> <td>FM-200® (HFC-227ea)</td> <td>MS/USE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.</td> </tr> <tr> <td>HEALTH</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>REACTIVE HAZARD</td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION*</td> <td><input type="checkbox"/></td> </tr> </table> <p>*TO BE SUPPLIED BY USER. REFER TO FM-200® MSDS FROM CHEMOURS (DUPONT), 1007 MARKET STREET, WILMINGTON, DE 19898, 1-800-441-7515 (OUTSIDE THE U.S. 1-302-774-1000).</p>	FM-200® (HFC-227ea)	MS/USE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.	HEALTH	1	FLAMMABILITY	0	REACTIVE HAZARD	0	PERSONAL PROTECTION*	<input type="checkbox"/>
FM-200® (HFC-227ea)	MS/USE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.											
HEALTH	1											
FLAMMABILITY	0											
REACTIVE HAZARD	0											
PERSONAL PROTECTION*	<input type="checkbox"/>											
 <p>RECYCLING PROTECTS THE ENVIRONMENT. DO NOT DISPOSE. DISCHARGE ONLY IN CASE OF FIRE.</p>	<p>IF CONTAINER CONTENTS MUST BE REMOVED FOR SERVICE, MAINTENANCE OR DISMANTLING OF THE CLEAN AGENT SYSTEM – PRIOR TO REMOVAL CONTACT YOUR LOCAL INSTALLER OR MANUFACTURER FOR INSTRUCTIONS ON HANDLING EQUIPMENT AND RECLAIMING OR RECYCLING CLEAN AGENT.</p>	 <p>American Fire Control LLC, 255 S Orange Ave, FL32801, USA. Tel: +1 607 252 6814 sales@american-afc.com www.american-afc.com</p>										
<p>AFC-227</p>		<p>DO NOT COVER, REMOVE, OR DEFACE THIS LABEL.</p>										

AFC-P227 AGENT CYLINDER LABEL

PN: AFC-P227-CL

DESCRIPTION

The agent cylinder label provides detailed information regarding the contents of the cylinder. It also contains instructions on how to handle, install, operate, inspect and maintain the cylinder-valve assembly.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227 UL, FM




Materials UL Listed label materials

Label size (width x height) 279.4mm (11in) x 172mm (6.77in)

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-P227-CL	AFC-P227 HFC-227ea Cylinder Label

MODEL NO.: _____ AGENT WEIGHT: _____ KG TARE WEIGHT: _____ KG GROSS WEIGHT: _____ KG YEAR OF MANUFACTURE: _____	<h2>HFC-227ea</h2> <p>FIRE EXTINGUISHING AGENT</p> <p>CONTAINS FM-200® (HFC-227ea) SUPERPRESSURIZED WITH NITROGEN TO 25 BAR AT 21 °C.</p>	  <p>USE AT TEMPERATURE RANGE OF 0°C TO 54°C. OPERATING PRESSURE OF 25 BAR AT 21°C. FACTORY HYDROSTATICALLY TESTED AT 1000 PSI (69 BAR). DOT 4BW500 COMPLIANT.</p>										
<p>▲ WARNING: The discharge of clean agent systems to extinguish a fire can result in a potential hazard to personnel from the natural form of the clean agent or from the products of combustion that result from exposure of the agent to the fire or hot surfaces. Unnecessary exposure of personnel either to the natural agent or to the products of decomposition shall be avoided.</p>												
<p>▲ CAUTION</p> <p>TRANSPORT, STORE, AND INSTALL THE CONTAINER IN VERTICAL POSITION ONLY.</p> <p>AVOID EXPOSURE TO DIRECT SUNLIGHT.</p> <p>ACCIDENTAL AGENT DISCHARGE COULD CAUSE SEVERE PERSONAL INJURY OR DEATH. ENSURE THAT ALL PROTECTION CAPS AND THREADED SAFETY PLUGS ARE INSTALLED FIRMLY TO THE VALVES WHEN THE CONTAINER IS NOT CONNECTED TO THE SYSTEM.</p>	<p>OPERATION</p> <p>WHEN CONNECTED TO THE SYSTEM, THIS CONTAINER IS OPERATED AUTOMATICALLY VIA PRESSURE-ACTUATED DEVICE OR ELECTRIC ACTUATOR.</p> <p>INSPECTION AND MAINTENANCE</p> <p>MONTHLY: CHECK CONTAINER PRESSURE. IF THE PRESSURE (ADJUSTED FOR TEMPERATURE CORRECTION) SHOWS A LOSS OF MORE THAN 10%, REFILL OR REPLACE THE CONTAINER. INSPECT THE DISCHARGE VALVE, SAFETY PLUG, AND PRESSURE GAUGE. IF ANY SIGN OF DAMAGE THAT COULD POTENTIALLY IMPAIR NORMAL SYSTEM OPERATION IS FOUND, REPLACE THE CONTAINER.</p> <p>SEMI-ANNUALLY: CHECK AGENT QUANTITY. IF AGENT QUANTITY SHOWS A LOSS OF MORE THAN 5%, REPLACE THE CONTAINER.</p> <p>REFER TO THE RECENT EDITIONS OF SYSTEM MANUAL PART NO. 8FE-FM200-EPPS-001-00 AND THE STANDARD CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, NFPA 2001 FOR MORE RELATED INFORMATION.</p>	<p>HAZARDOUS MATERIAL IDENTIFICATION</p> <table border="1"> <tr> <td>FM-200® (HFC-227ea)</td> <td>MISUSE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.</td> </tr> <tr> <td>HEALTH</td> <td>1</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> <tr> <td>PERSONAL PROTECTION*</td> <td><input type="checkbox"/></td> </tr> </table> <p>*TO BE SUPPLIED BY USER. REFER TO FM-200® MSDS FROM CHEMOURS (DUPONT), 1007 MARKET STREET, WILMINGTON, DE 19898, 1-800-441-7515 (OUTSIDE THE U.S. 1-302-774-1000).</p>	FM-200® (HFC-227ea)	MISUSE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.	HEALTH	1	FLAMMABILITY	0	PHYSICAL HAZARD	0	PERSONAL PROTECTION*	<input type="checkbox"/>
FM-200® (HFC-227ea)	MISUSE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.											
HEALTH	1											
FLAMMABILITY	0											
PHYSICAL HAZARD	0											
PERSONAL PROTECTION*	<input type="checkbox"/>											
 <p>RECYCLING PROTECTS THE ENVIRONMENT. DO NOT DISPOSE, DISCHARGE ONLY IN CASE OF FIRE.</p>	<p>IF CONTAINER CONTENTS MUST BE REMOVED FOR SERVICE, MAINTENANCE OR DISMANTLING OF THE CLEAN AGENT SYSTEM – PRIOR TO REMOVAL, CONTACT YOUR LOCAL INSTALLER OR MANUFACTURER FOR INSTRUCTIONS ON HANDLING EQUIPMENT AND RECLAIMING OR RECYCLING CLEAN AGENT.</p>	 <p>American Fire Control LLC, 255 S Orange Ave, FL32801, USA. Tel: +1 6072526814 sales@american-afc.com www.american-afc.com</p>										
<p>AFC-P227</p>		<p>DO NOT COVER, REMOVE, OR DEFACE THIS LABEL.</p>										

AFC-P227 NITROGEN DRIVER CYLINDER LABEL

PN: AFC-P227-CL2

DESCRIPTION

The nitrogen driver cylinder label provides detailed information regarding the contents of the cylinder. It also contains instructions on how to handle, install, operate, inspect and maintain the cylinder-valve assembly.

TECHNICAL INFORMATION

Approvals for use with AFC-227/AFC-P227.....UL, FM

Materials.....UL Listed label materials

Label size (width x height).....279.4mm (11in) x 144mm (5.67in)

ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
AFC-P227-CL2	AFC-P227 Nitrogen Driver Cylinder Label

<p>MODEL NO.: _____</p> <p>CHARGE PRESSURE AT 21 °C: _____ BAR</p> <p>NITROGEN GAS WEIGHT: _____ KG</p> <p>TARE WEIGHT: _____ KG</p> <p>GROSS WEIGHT: _____ KG</p> <p>MANUFACTURE DATE: _____</p> <p>FACTORY ID: _____</p>	<p>AFC-P227</p> <p>NITROGEN</p> <p>CLEAN AGENT PROPELLANT</p> <p>CONTAINS COMPRESSED NITROGEN GAS INTENDED FOR DISCHARGING FIRE EXTINGUISHING CLEAN AGENT</p>	 <p>USE AT TEMPERATURE RANGE OF 0°C TO 54°C. FACTORY HYDROSTATICALLY TESTED AT 3555 PSI (245 BAR). DOT 3AA COMPLIANT.</p>								
<p>CAUTION</p> <p>TRANSPORT, STORE AND INSTALL THE CONTAINER IN VERTICAL POSITION ONLY.</p> <p>AVOID EXPOSURE TO DIRECT SUNLIGHT.</p> <p>ENSURE THAT ALL PROTECTION CAPS AND THREADED SAFETY PLUGS ARE INSTALLED FIRMLY TO THE VALVES WHEN THE CONTAINER IS NOT CONNECTED TO THE SYSTEM.</p>	<p>WARNING: Avoid exposure to vapors, fumes, and products of combustion.</p> <p>MISE EN GARDE : Éviter toute exposition aux vapeurs, aux fumées et aux produits de combustion.</p> <p>WARNING: When released, can cause suffocation by lowering oxygen content in air available for breathing. Inhalation of very high concentrations can cause dizziness, unconsciousness, or death.</p>	<p>IF CONTAINER CONTENTS MUST BE REMOVED FOR SERVICE, MAINTENANCE OR DISMANTLING OF THE CLEAN AGENT SYSTEM - PRIOR TO REMOVAL, CONTACT YOUR LOCAL INSTALLER OR MANUFACTURER FOR INSTRUCTIONS ON HANDLING EQUIPMENT AND RECLAIMING OR RECYCLING CLEAN AGENT.</p> <p>DO NOT COVER, REMOVE OR DEFACE THIS LABEL.</p>								
<p>HAZARDOUS MATERIAL IDENTIFICATION</p> <table border="1"> <thead> <tr> <th colspan="2">NITROGEN GAS</th> </tr> </thead> <tbody> <tr> <td>HEALTH</td> <td>0</td> </tr> <tr> <td>FLAMMABILITY</td> <td>0</td> </tr> <tr> <td>PHYSICAL HAZARD</td> <td>0</td> </tr> </tbody> </table> <p>MORE INFORMATION ON COMPRESSED NITROGEN GAS HANDLING AND SAFETY ARE AVAILABLE FROM MASTECO INDUSTRY CO LTD.</p>	NITROGEN GAS		HEALTH	0	FLAMMABILITY	0	PHYSICAL HAZARD	0	<p>OPERATION</p> <p>WHEN CONNECTED TO THE SYSTEM THIS CONTAINER IS OPERATED AUTOMATICALLY VIA PRESSURE-ACTUATED DEVICE.</p> <p>INSPECTION AND MAINTENANCE</p> <p>MONTHLY: CHECK THE CONTAINER PRESSURE GAUGE FOR PROPER PRESSURE. IF THE PRESSURE ADJUSTED FOR TEMPERATURE CORRECTION SHOWS A LOSS OF MORE THAN 5%, REFILL OR REPLACE THE CONTAINER.</p> <p>SEMIANNUALLY: CHECK AGENT QUANTITY AND PRESSURE IN PARTNER FM200 CONTAINER. IF AGENT QUANTITY OR PRESSURE SHOWS A LOSS OF MORE THAN 5% OR 15%, RESPECTIVELY, REFILL OR REPLACE THE CONTAINER.</p> <p>REFER TO THE RECENT EDITIONS OF SYSTEM MANUAL PART NO. MM-FM200-01 AND THE STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS NFPA 2001 FOR MORE RELATED INFORMATION.</p>	 <p>American Fire Control LLC, 255S Orange Ave, FL32801 ,USA. Tel: +1 6072526814 sales@american-afc.com www.american-afc.com</p>
NITROGEN GAS										
HEALTH	0									
FLAMMABILITY	0									
PHYSICAL HAZARD	0									