

Title

Material Submittal for FM-200
Fire Suppression System

Brand

AMERICAN AFC



**AMERICAN
FIRE CONTROL**

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AMERICAN
FIRE CONTROL

***Technical Data
Sheets (Catalogues).***



AMERICAN FIRE CONTROL

QUALITY IS A PRIORITY



AFC-227/AFC-P227

ENGINEERING CLEAN AGENT FIRE EXTINGUISHING SYSTEM

FM-200 / HFC-227ea



LISTED
EX29550



APPROVED

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Mission

American Fire Control aims to provide superior manufacturing and technical solutions for the commercial and industrial sector and its production processes by using very advance automated smart system.

Vision

American Fire Control is guided by one overarching goal: deliver quality manufacturing solutions at a competitive rate and on time, every time. The American team is committed to exceeding its customers' expectations by always working with integrity, excellence, and a focused determination toward the accomplishment of the mission. The goal is to serve as an extension of our customers' teams by working closely with them to ensure mutual success.

Identity

American Fire Control is proud to be a United States manufacturer. Strategically located in Orlando, FL. American fire control leverages the region's strong manufacturing base and highly skilled local workforce. Our team is made up of experienced industry leaders united by a shared vision. Each American team member is committed to continuous improvement, exceptional customer service, and is encouraged to support the community where we live. We foster an environment where team members are valued for their contributions to our success. AFC's investment in the retention of its employees is key to attaining our long-term goals and achieving growth as a major competitor in our market.

Value

Responsibility: We take personal responsibility for all our work, actions, and decisions.

Honesty and Integrity: We are honest in all our business interactions with our co-workers and business partners and expect the same in return.

Respect: We treat others in a way that they feel respected.

Excellence: We strive to excel in everything we do. We are committed to producing high-quality products and services at a superior value for our customers.

Humility: We are grateful for our success and share our appreciation with our co-workers but do not seek public recognition.

Innovation: We encourage and value creative solutions to customer needs, business challenges, and a vision for the future.



ABOUT US

At American Fire Control, we have a rich history dating back to 1925, when our company was established as a family-owned business in the state of Florida. Over the years, we have established ourselves as a premier manufacturer of fire protection products, primarily in the United States, through our unwavering commitment to quality, growth, innovation, and leadership.

In 1947, we took a significant step towards consolidating our control over every aspect of our business by constructing our own manufacturing and corporate headquarters. This allowed us to closely monitor and manage every phase of the product life cycle, from formulation and testing to marketing and distribution. This strategic move was critical in driving our consistent growth and fueling innovation in our product offerings.

The unwavering dedication and loyalty of our diverse team of employees is the cornerstone of our success. Each team member plays a crucial role in ensuring the smooth operation of our business and in delivering exceptional service and support to our valued customers.

At American Fire Control, we recognize the importance of forging strong relationships with our customers, and we take great pride in offering them a high level of personalized service and support. Our customers can trust that we will provide them with the highest quality of service, from the initial quote and manufacturing process to shipping and problem resolution.

Today, American Fire Control is operated by the fourth generation of our founding family, and our original goals of quality, growth, innovation, and leadership continue to guide us. These values form the core of our identity and will continue to shape our future as we strive to maintain our position as a leader in the fire protection industry.



QUALITY IS A PRIORITY

American Fire Control is committed to delivering high-quality products to our customers. We understand that quality is of utmost importance to our clients, and we strive to ensure that every product we manufacture meets the highest standards of quality.

To achieve this goal, we have implemented a comprehensive quality management system that is designed to ensure that our products meet or exceed customer expectations. Our quality management system encompasses all aspects of our business, from product design and development to production and delivery.

We use only the highest quality raw materials and components in the manufacturing process, and our skilled and experienced team of professionals employs the latest techniques and technologies to produce products of exceptional quality. We also conduct rigorous testing and inspection at every stage of production to ensure that our products meet or exceed all applicable industry standards.

We are proud of our reputation for delivering high-quality products, and we are committed to continuously improving our processes and systems to ensure that we maintain this standard. Our dedication to quality is reflected in every product that we manufacture, and we are confident that our customers will appreciate the attention to detail and commitment to excellence that we bring to every project.

At American AFC, we understand that quality is the foundation of our success, and we are committed to maintaining the highest standards of quality in everything we do.

One-Year Limited Warranty

At American Fire Control, our top priority is our customers' satisfaction. We are a manufacturer of premium products, and we are proud to offer a comprehensive warranty.

Our One-Year Limited Warranty supersedes all other warranties previously given and covers all American AFC products against manufacturing defects in material and workmanship, provided the products were installed and used in accordance with all applicable instructions and limitations issued by American AFC. In the unlikely event of a defect, American AFC will, at our sole discretion, repair or replace defective material, free of charge.

Please note that repairs or parts replaced under this warranty are warranted only throughout the remainder of the warranty period. This warranty is in the nature of liquidated damages to which the purchaser might otherwise be entitled at law or in equity.

It is important to note that American AFC is not liable for any claims for labor, installation costs, damages, or other special or consequential damages, including, but not limited to, loss of revenue or profits, or any other expenses incurred by reason of any products found to be defective. Additionally, American AFC is not liable for any incidental or consequential loss, damages, or expenses caused by any defects in the product, by repair of it, or arising directly or indirectly from its use.

Please be advised that this warranty does not apply if the product has been altered or repaired by others. American AFC will make no allowances or credit for such repairs or alterations unless first authorized in writing by American AFC.

In conclusion, this warranty is exclusive and in lieu of all other warranties, conditions, and representations, whether express or implied, oral or written, statutory, or otherwise. All other warranties, conditions, and representations are hereby canceled. At American AFC, we are committed to providing our customers with the highest quality products and excellent customer service.

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
 UL File Number: EX29550
 FM Approval PID: PR472172

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

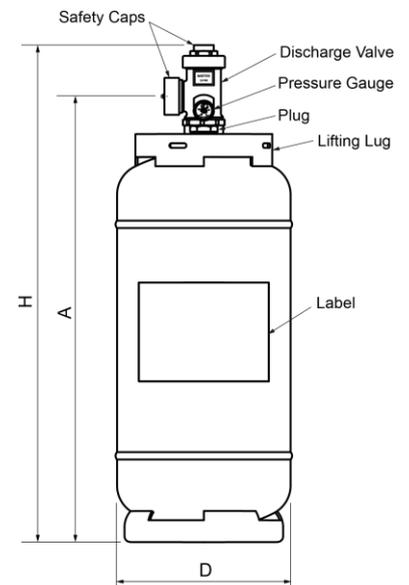
Part No.	Water Capacity (L)	Agent Fill Range (kg)	Valve Size (mm)	Dimension (mm)			Empty Weight (kg)	Pressure Gauge Option
				D	H	A		
AFC-26	26.8	13.3 – 25.6	40	350	608	508	20.3	Standard or 2n1
AFC-40	40.2	19.9 – 38.4	40	350	755	655	31.6	
AFC-63	63.0	31.2 – 60.6	40	350	1,005	905	52.9	
AFC-68	68.0	33.7 – 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
 UL File Number: EX29550
 FM Approval PID: PR472172

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.

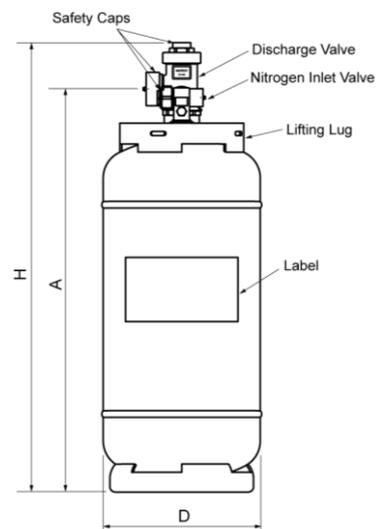
SI Units

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

 UL File Number: EX29550
 FM Approval PID: PR472172

 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

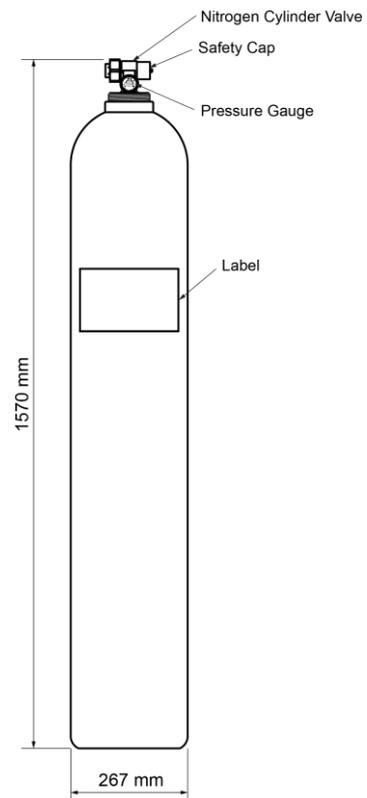
Specify the part number, partner agent cylinder model number and pressure gauge option when ordering.

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-P227.....UL, FM

UL File Number: EX29550

FM Approval PID: PR472172

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)

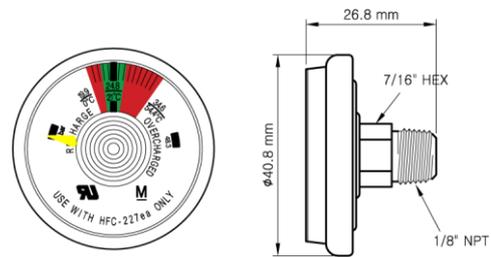
Materials

Bourdon tube Stainless steel

Case Stainless steel

Connection Brass

Lens Polycarbonate

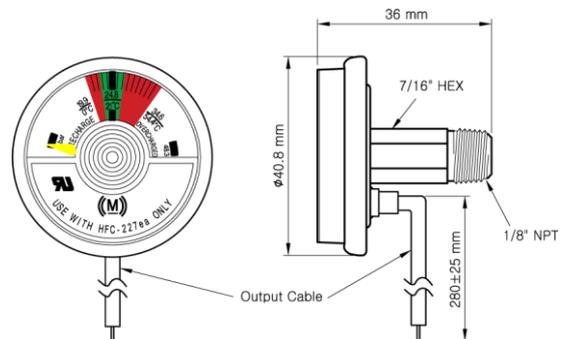


HFC-227ea standard type pressure gauge

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

 UL File Number: EX29550
 FM Approval PID: PR472172

 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.

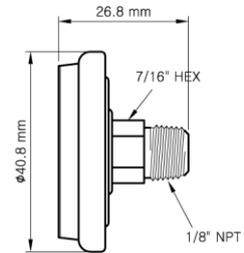
Part No.	Description
See table	Nitrogen cylinder standard pressure gauge (specify working pressure)
See table	Nitrogen cylinder 2n1 pressure gauge (low pressure switch) (specify working pressure)



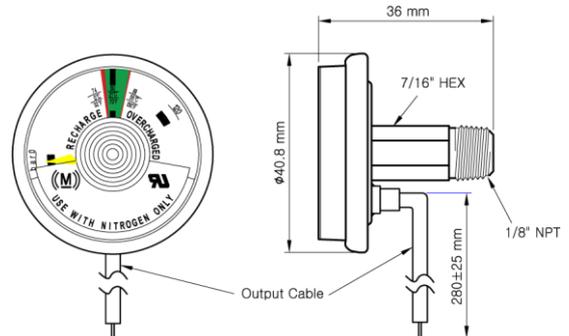
Standard Type



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-P227.....UL, FM

UL File Number: EX29550
FM Approval PID: PR472172

Minimum bending radius..... 350 mm (13.8 in)

Hydrostatically tested at..... 137.9 bar (2000 psi)

Materials

Hose.....EPDM, Stainless Steel (SUS304)

Nut..... Brass (C3771)

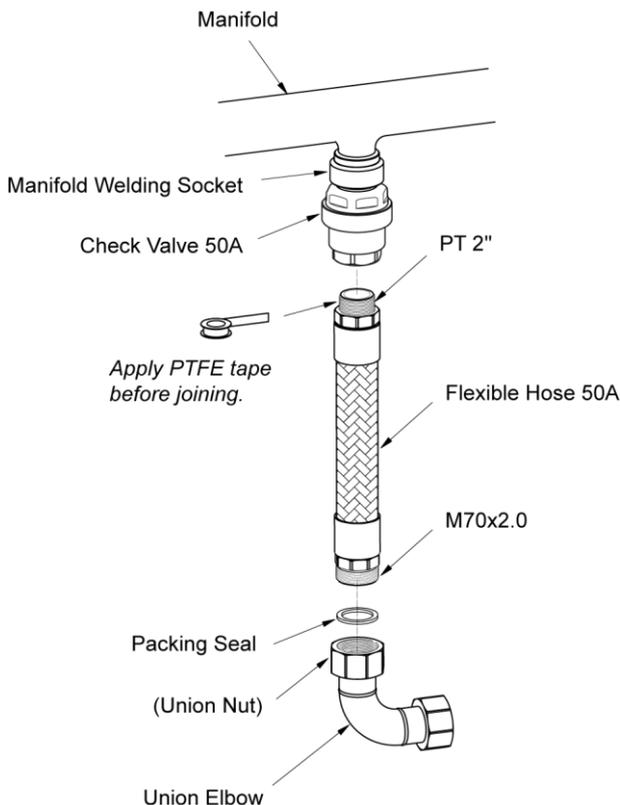
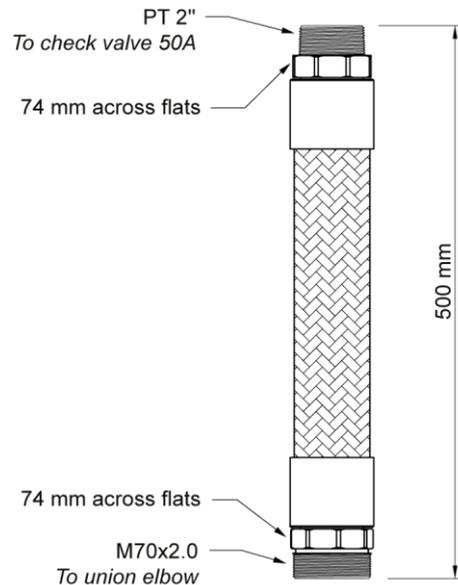
Overall length..... 500 mm (19.7 in)

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: EX29550
 FM Approval PID: PR472172

Minimum bending radius 75 mm (3.0 in)

Hydrostatically tested at 197.6 bar (2866 psi)

Materials

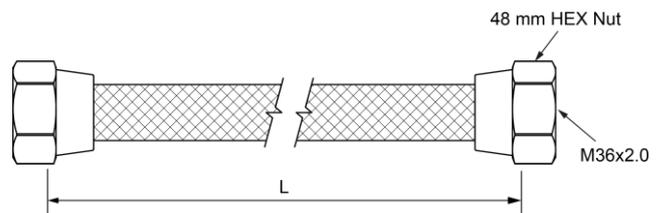
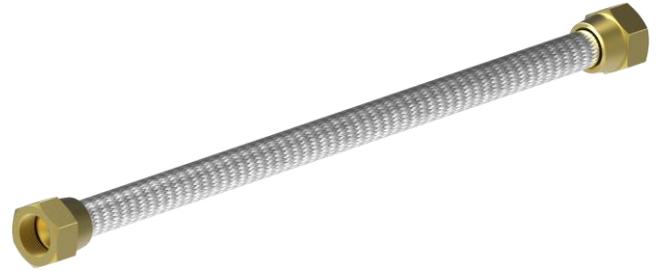
 Flexible hose Stainless Steel (STS304)
 Wire mesh Stainless Steel (STS304)
 Nut Brass (C3771)

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

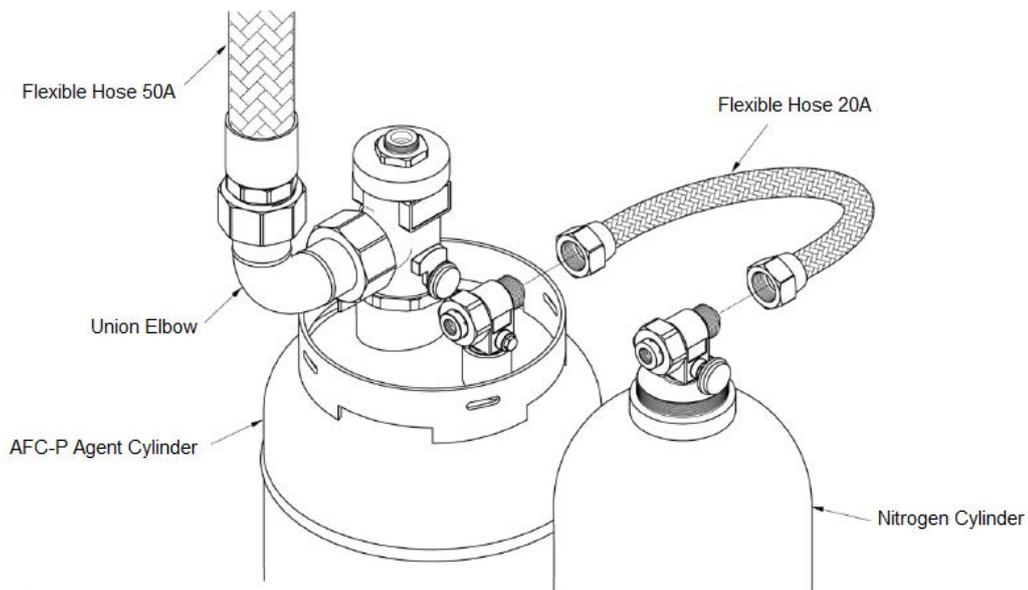
Note: To ensure ordering of correct part, refer to the AFC-P227 cylinders coupling information.



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.

TECHNICAL INFORMATION

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

 UL File Number: EX29550
 FM Approval PID: PR472172

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)

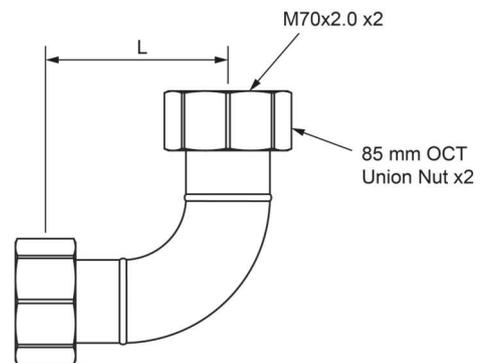
ORDERING INFORMATION

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

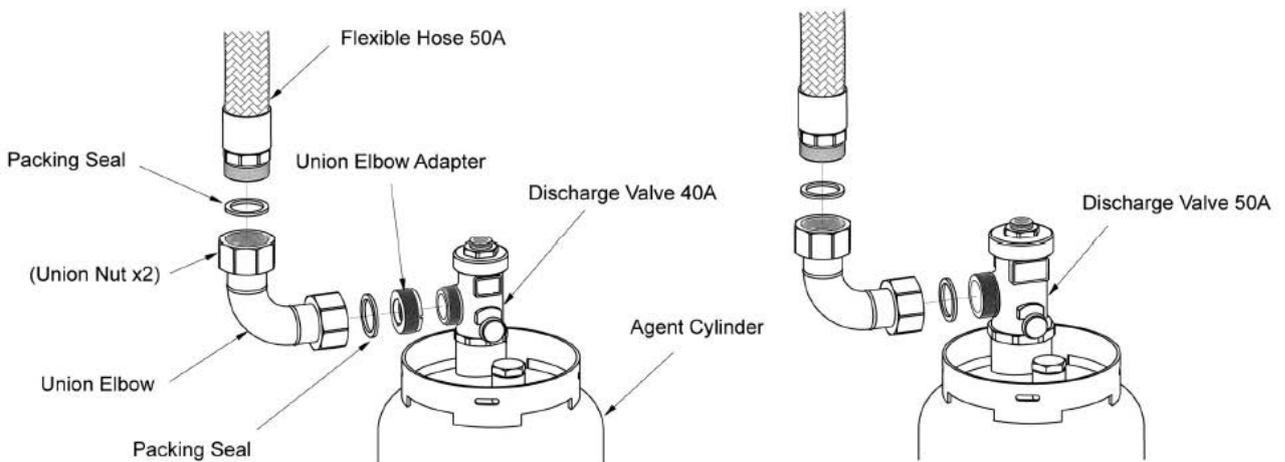


Union Elbow with Rubber Packing Set



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

UL File Number: EX29550
FM Approval PID: PR472172

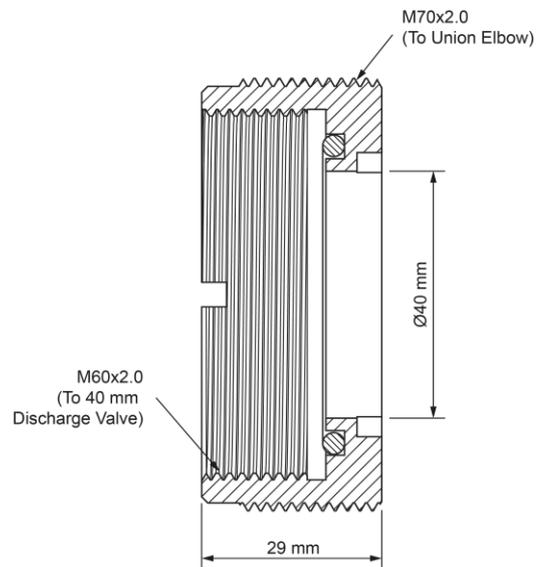
Materials

Body Brass (C3604)
O-ring Seal NBR
Weight 0.3 kg (0.7 lb)

ORDERING INFORMATION

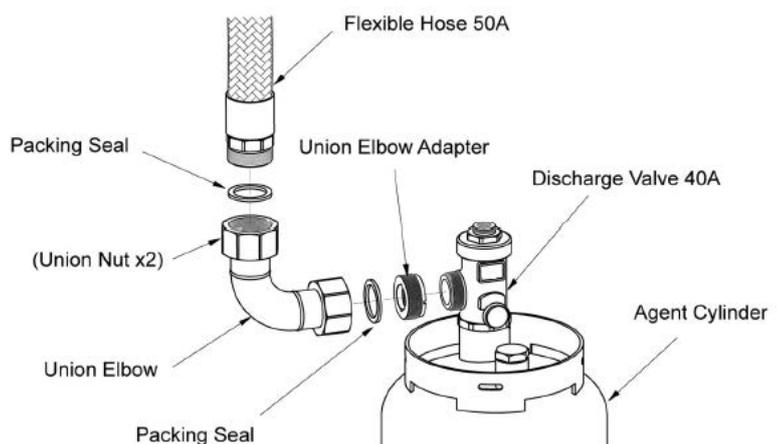
Specify part number and description when ordering.

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

UL File Number: EX29550
FM Approval PID: PR472172

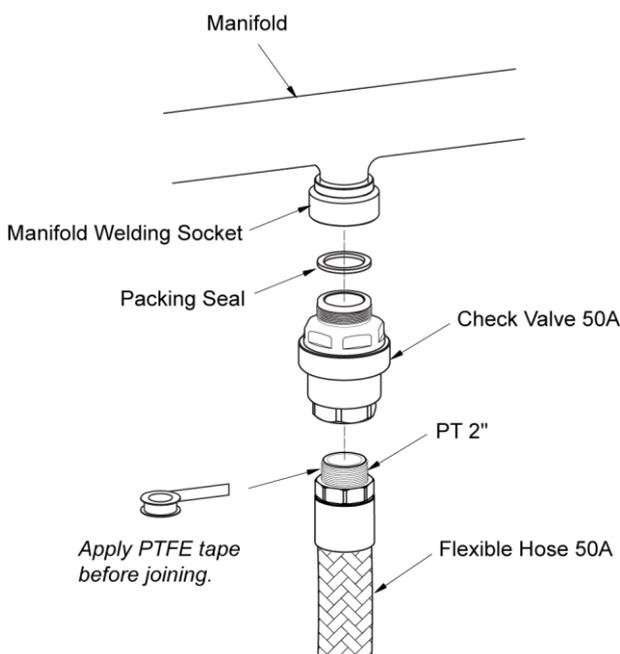
Materials

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)

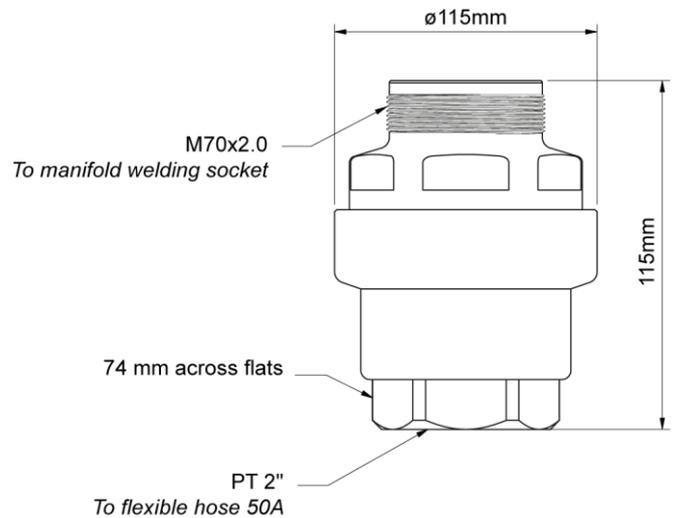
ORDERING INFORMATION

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

UL File Number: EX29550
FM Approval PID: PR472172

Body materialCarbon Steel (S20C)

Hydrostatically tested at137.9 bar (2000 psi)

Weight1 kg (2.2 lb)

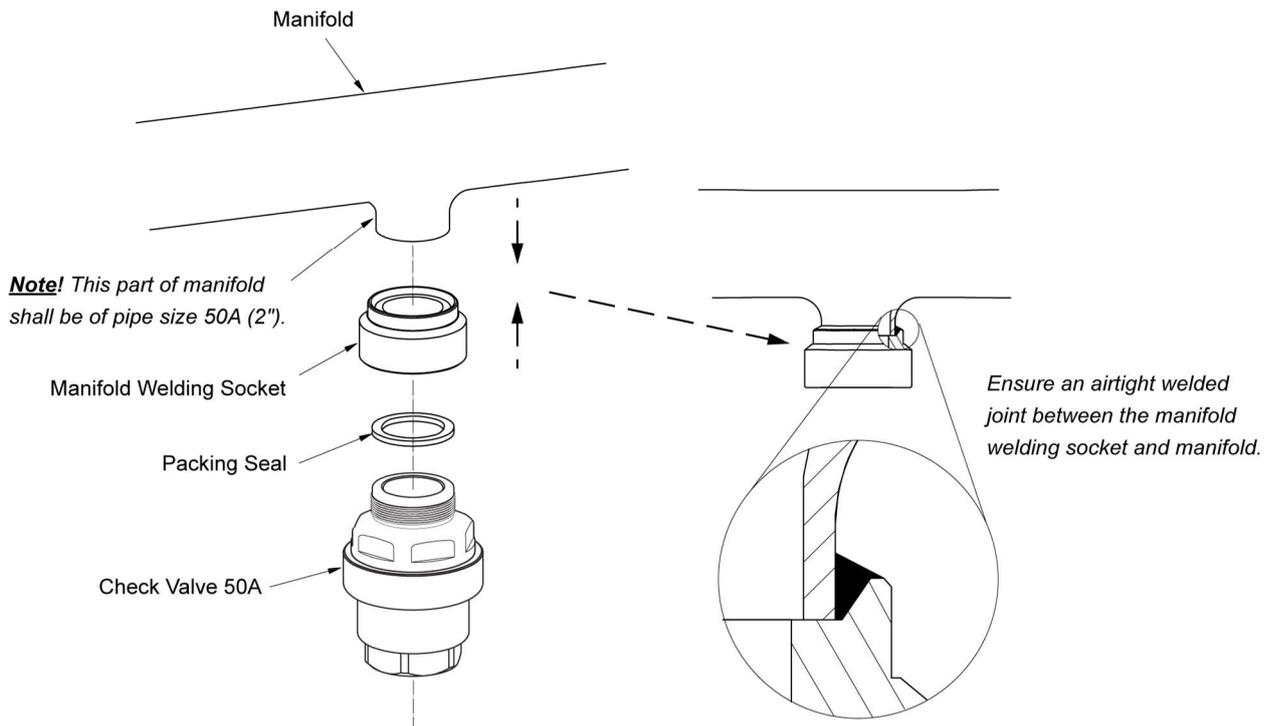
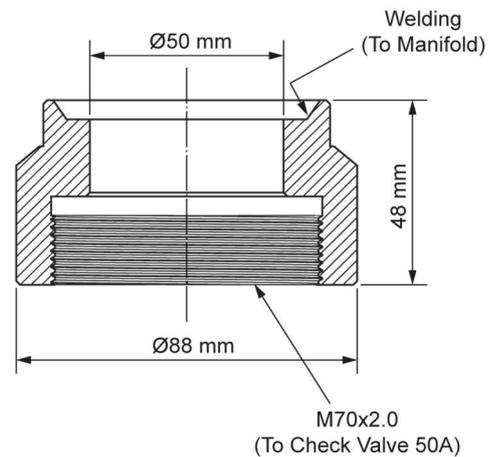
ORDERING INFORMATION

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

UL File Number: EX29550

FM Approval PID: PR472172

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 size 6A (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

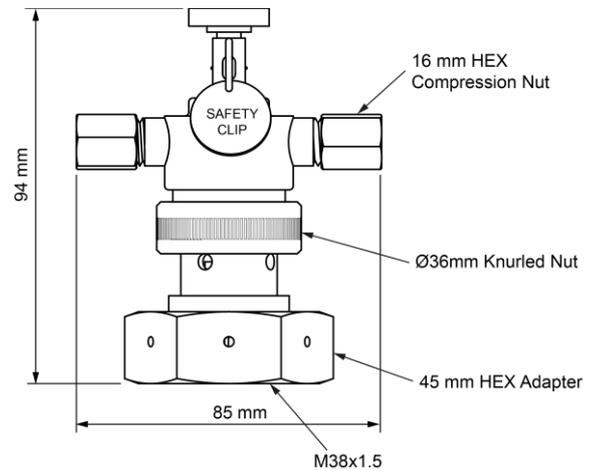
Pilot/Slave (single hazard zone) configuration 30

Pilot/Slave (multi-hazard zone) configuration 25

ORDERING INFORMATION

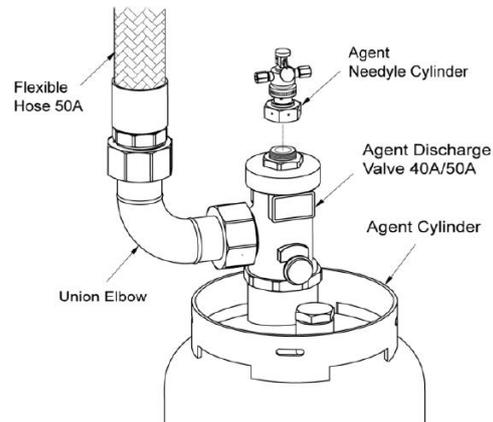
Specify part number and description when ordering.

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



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.



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.



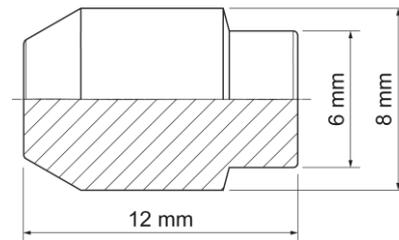
TECHNICAL INFORMATION

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

UL File Number: EX29550
FM Approval PID: PR472172

Nominal size6A (1/4")

MaterialBrass

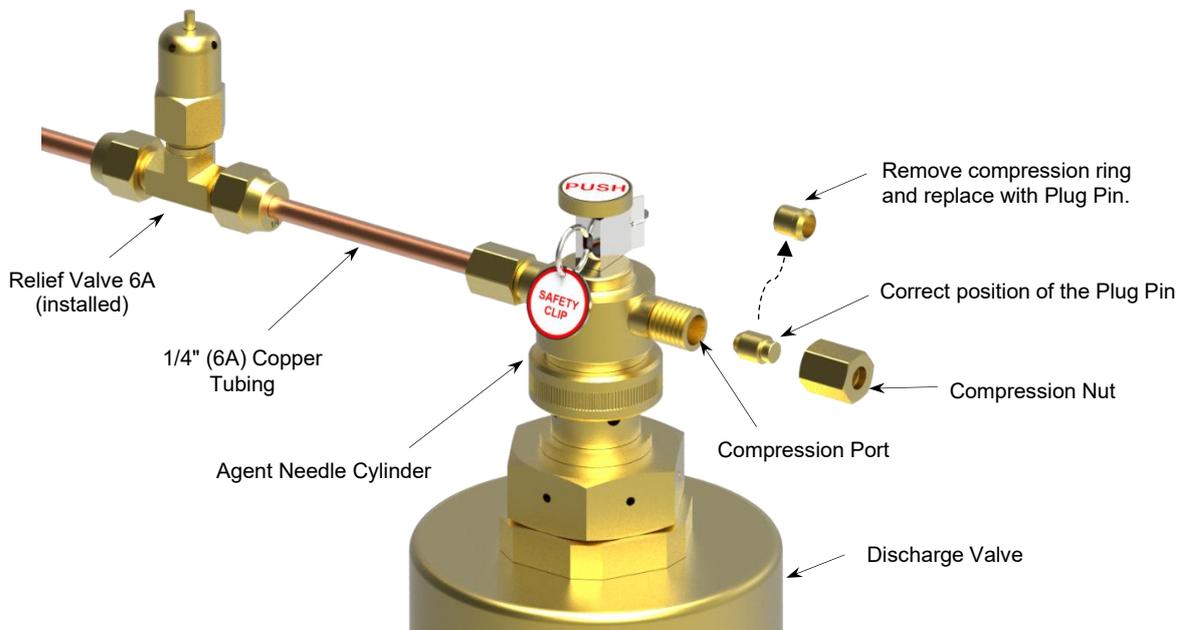


ORDERING INFORMATION

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

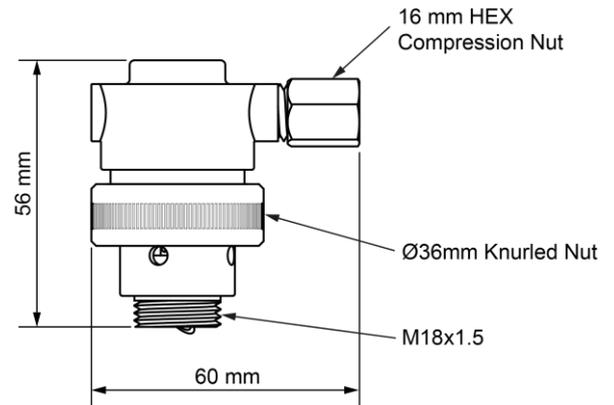
UL File Number: EX29550
FM Approval PID: PR472172

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)



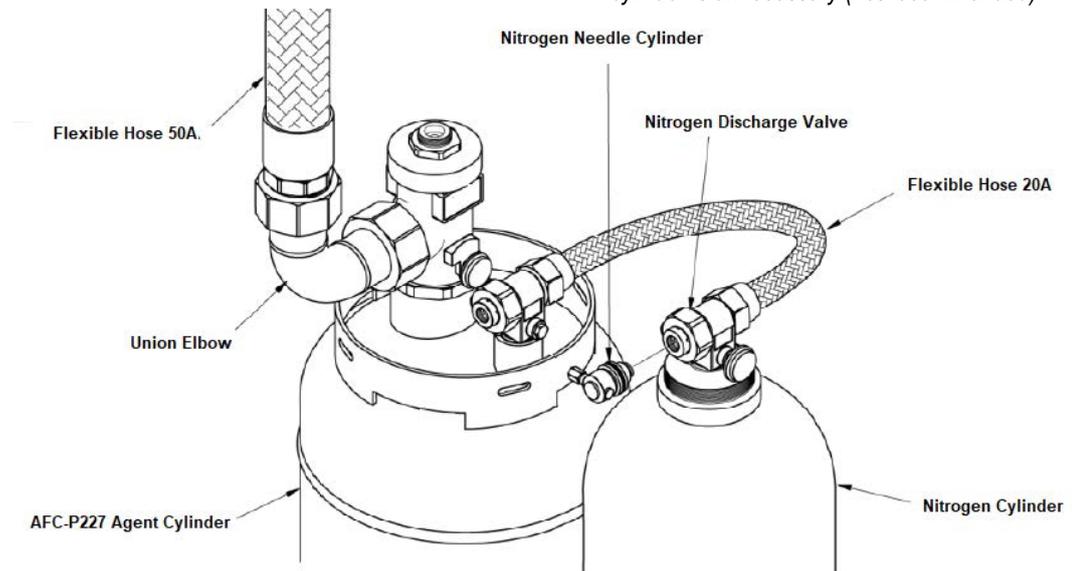
ORDERING INFORMATION

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

 UL File Number: EX29550
 FM Approval PID: PR472172

Materials

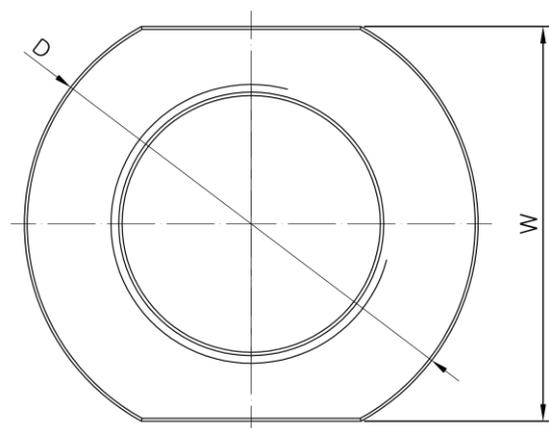
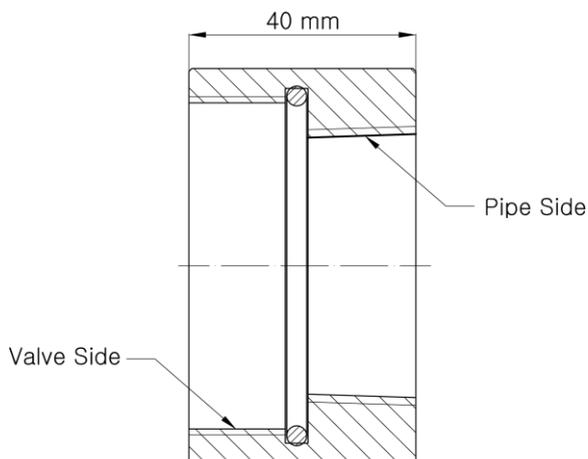
 Body Stainless steel (SUS304)
 O-ring Seal NBR
 Weight 1.2 kg (2.6 lb) max.

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 (<i>specify size</i>)

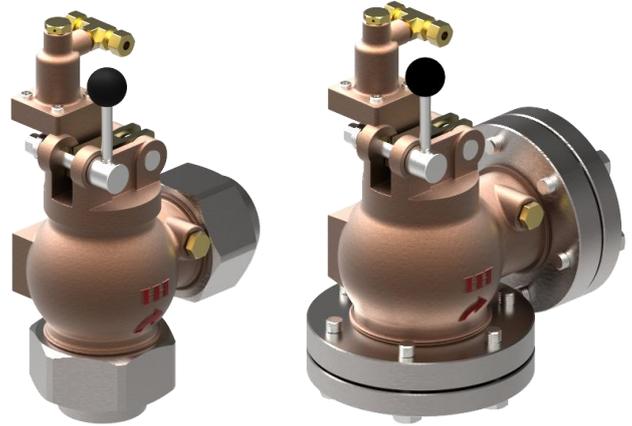


SELECTOR VALVE

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

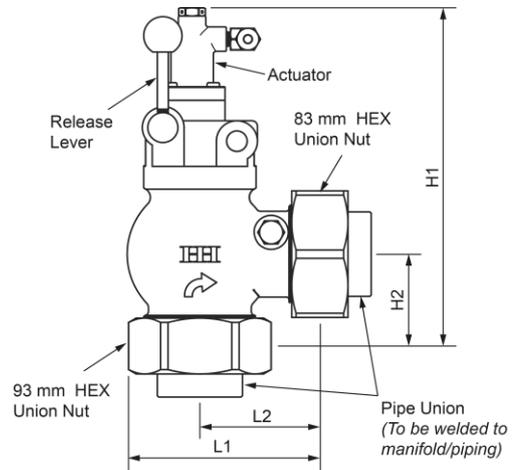
P/N: AFC-SV-50/65/80/100/125/150

TECHNICAL INFORMATION

ApprovalsUL, FM

 UL File Number: EX29550
 FM Approval PID: PR472172

Material

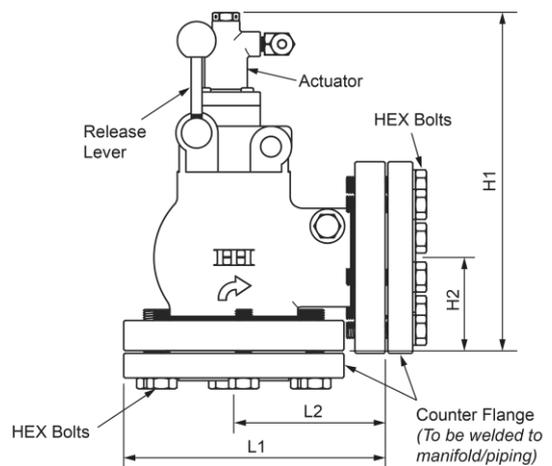
 Body Bronze Casting (BC6)
 Spindle Brass (C3604)
 Release Lever Stainless Steel (STS304)
 Rubber Seals NBR
 Union Nut (In/Out) Carbon Steel (SM45C)
 Pipe Union (In/Out) Carbon Steel (SS400)
 Valve Flange (In/Out) Carbon Steel (SM45C)
 Pipe Counter Flange (In/Out) Carbon Steel (SM45C)
 Hydrostatically 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-P227UL, FM

 UL File Number: EX29550
 FM Approval PID: PR472172

 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

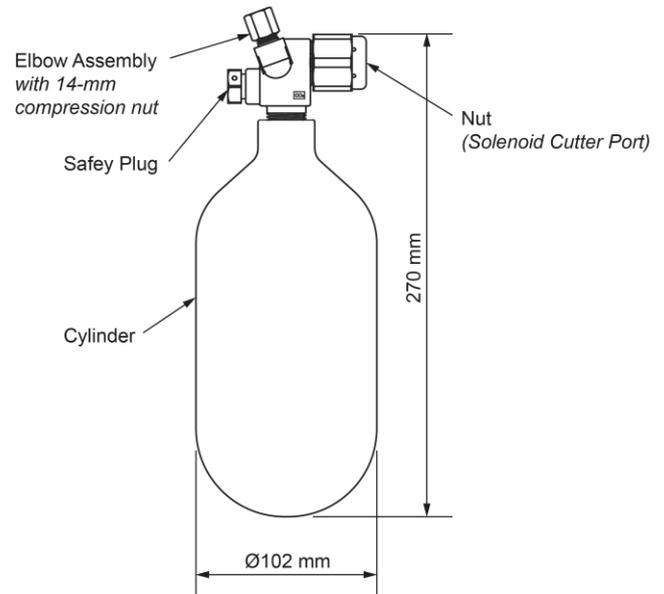
UL File Number: EX29550
FM Approval PID: PR472172

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
 UL File Number: EX29550
 FM Approval PID: PR472172

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

⚠ WARNING Sharp needle hazard.



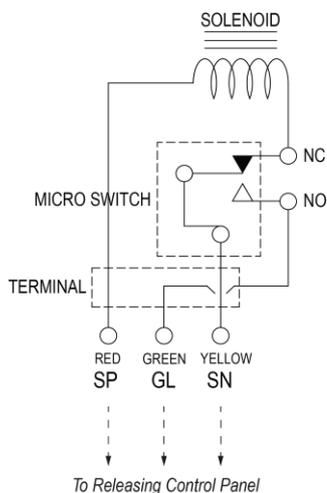
For Pilot Cylinder Valve (P/N: SA-01)



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

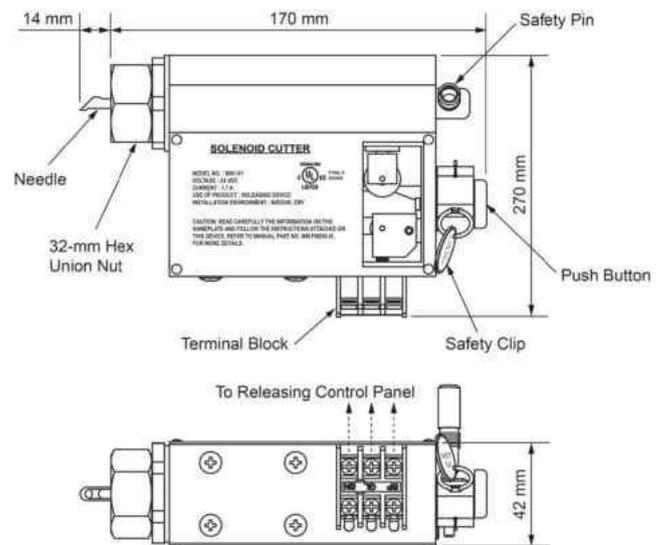
Solenoid Cutter Adapters

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



To Releasing Control Panel

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



Physical Dimension

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

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.



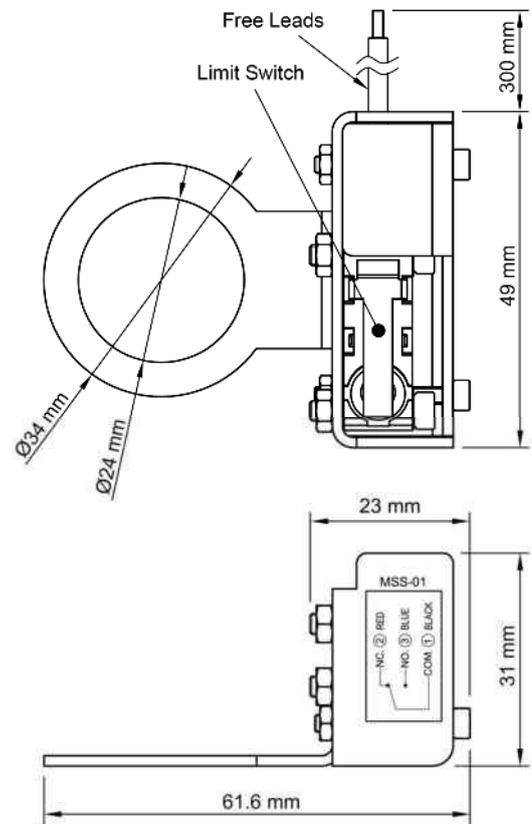
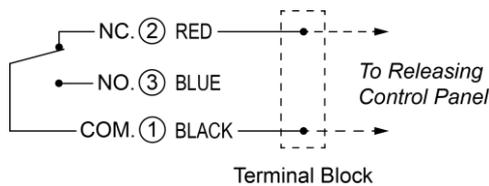
TECHNICAL INFORMATION

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

 UL File Number: EX29550
 FM Approval PID: PR472172

 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

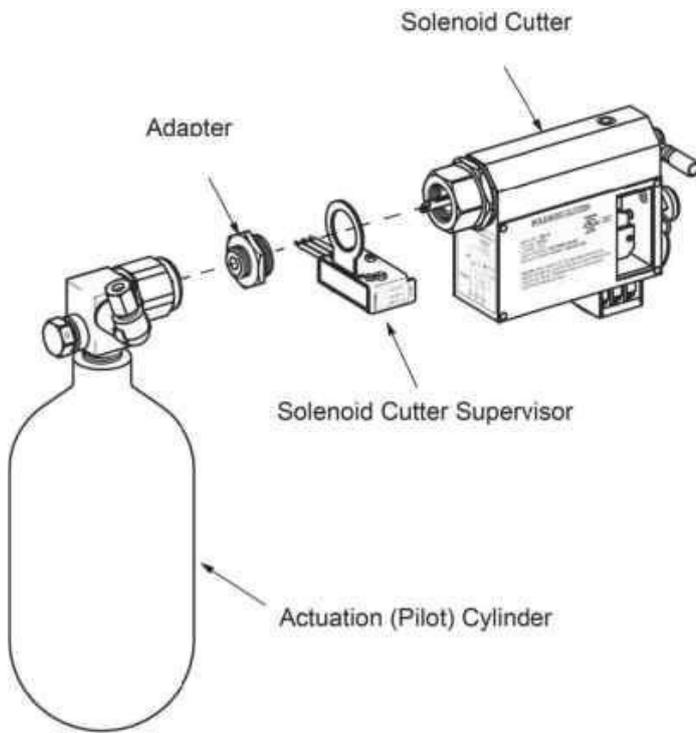


ORDERING INFORMATION

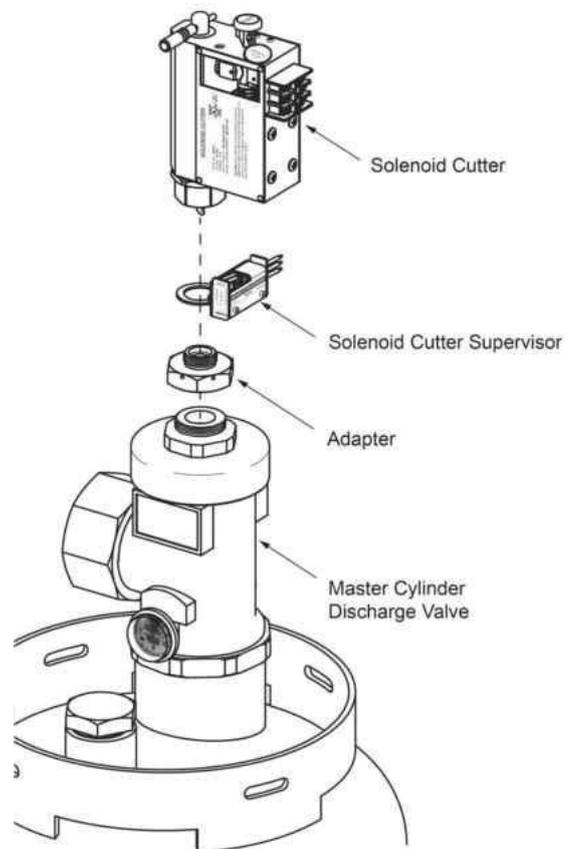
Specify part number and description when ordering.

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

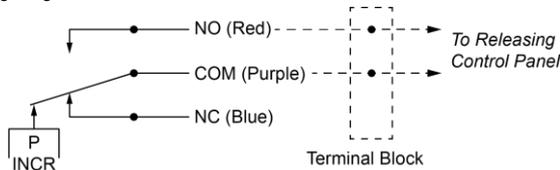
The compact pressure switch is a compact-size pressure switch that is used to initiate the discharge alarm in AFC-227 or AFC-P227 when the agent is released. It is connected directly to the distribution piping via a 1/4" NPT female adapter or pipe socket. As the discharged extinguishing agent reaches 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-P227UL, FM

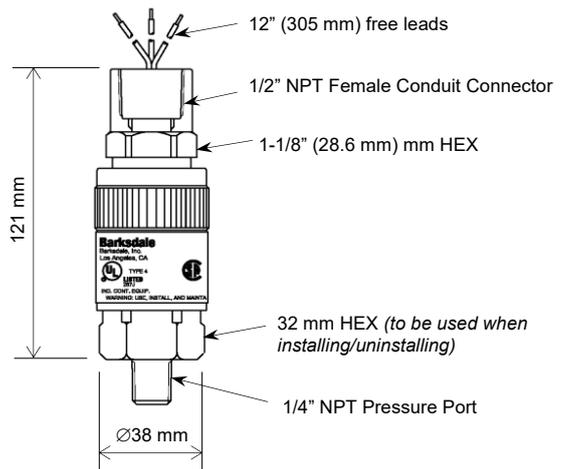
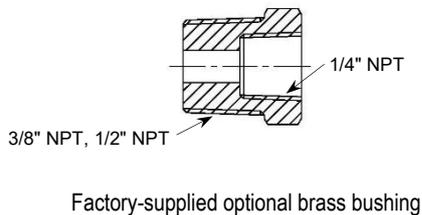
 UL File Number: EX29550
 FM Approval PID: PR472172

 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

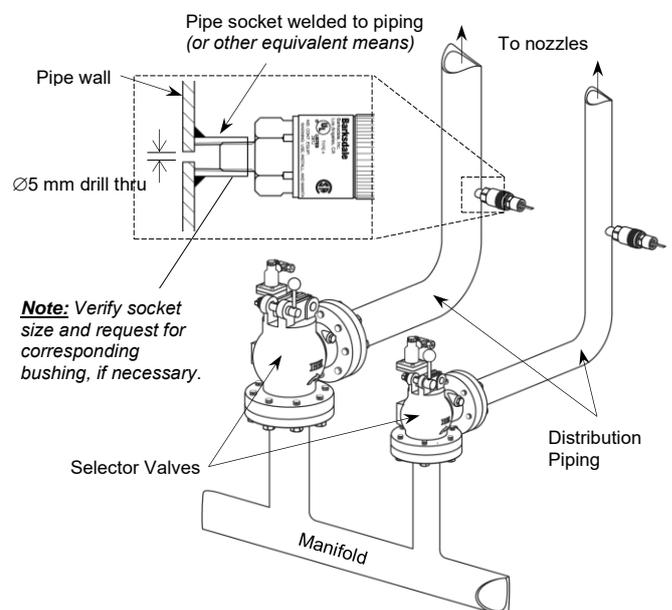
ORDERING INFORMATION

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.



Illustrative guide for installing the compact pressure switch

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.

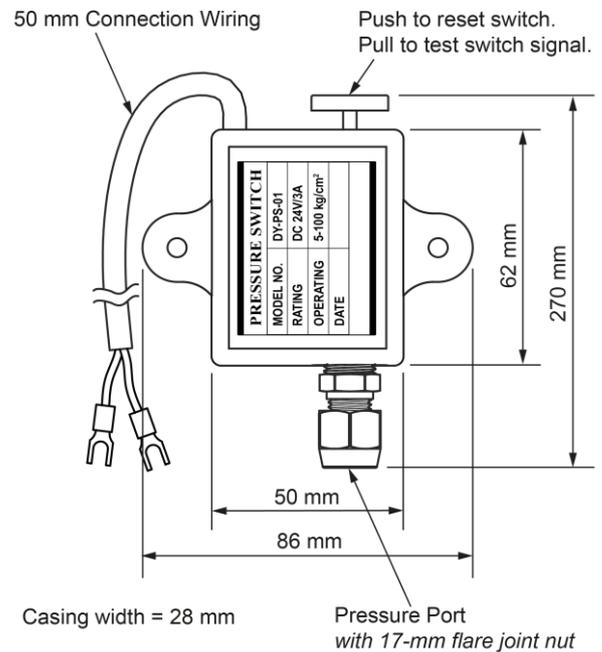
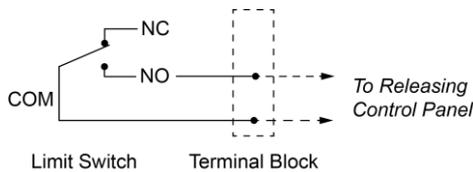


NOTE:

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.

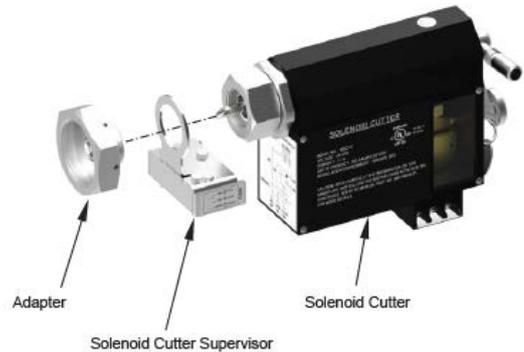


TECHNICAL INFORMATION

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

UL File Number: EX29550
 FM Approval PID: PR472172

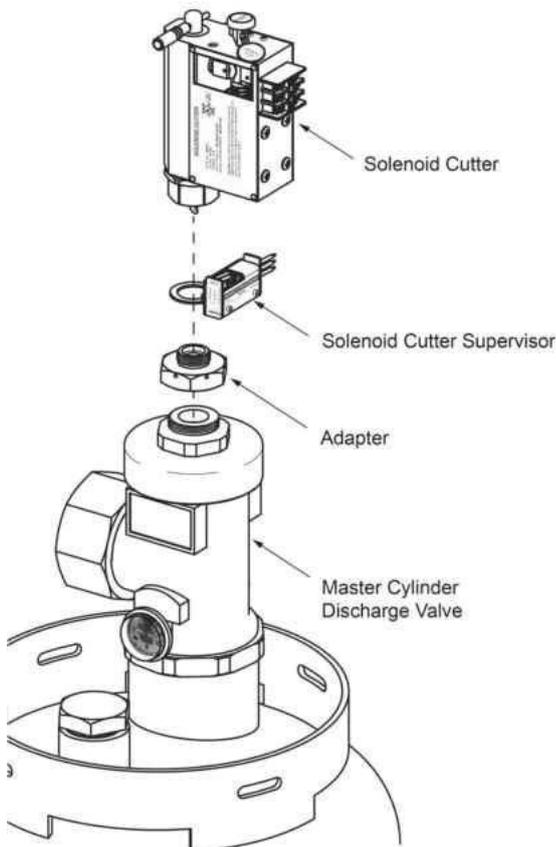
Solenoid Cutter, and AdapterSee datasheet, MDS-MSC
 Solenoid Cutter SupervisorSee datasheet, MDS-MSS



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

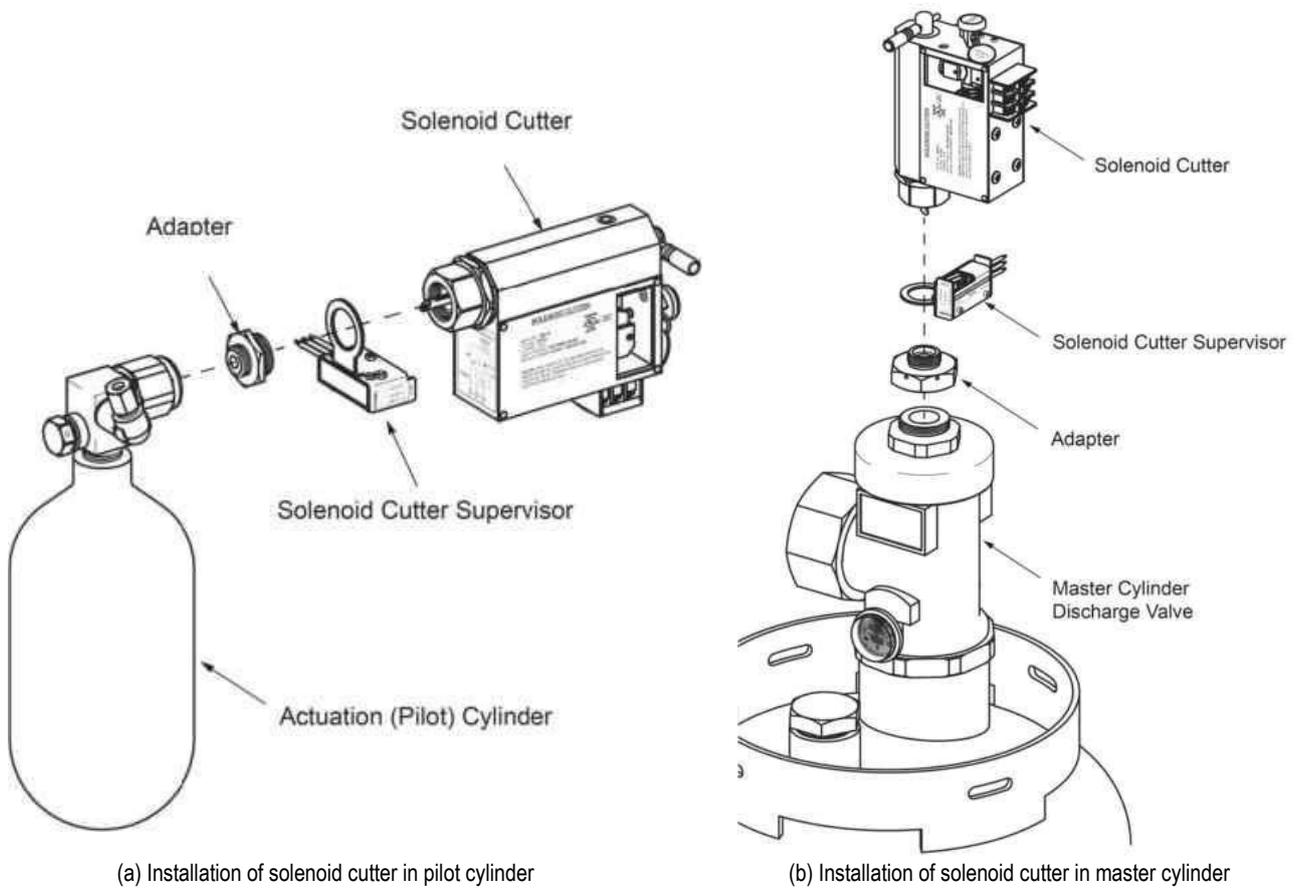


INSTALLATION

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

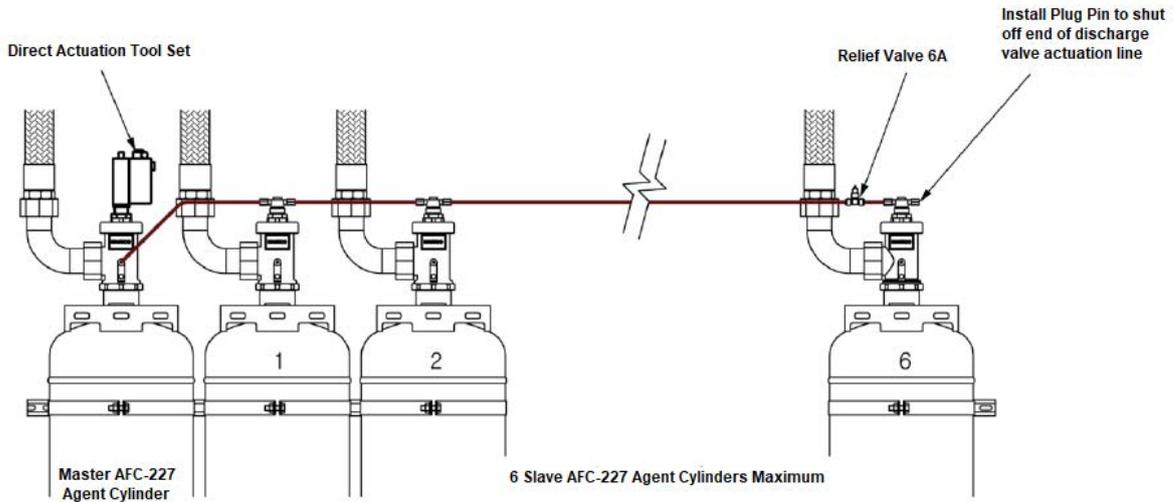


Illustrative guide for the installation of solenoid cutter in pilot and master cylinders

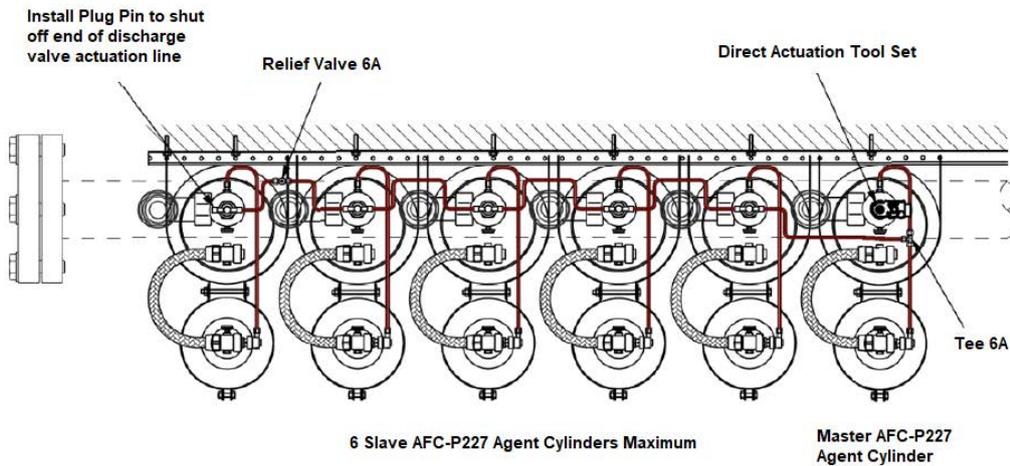
Direct Actuation System Installation Examples



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.

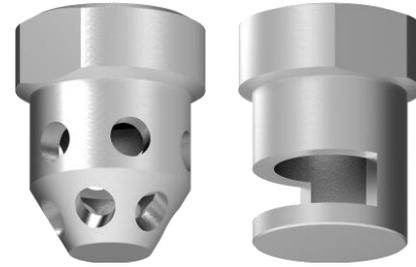
DISCHARGE NOZZLE

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

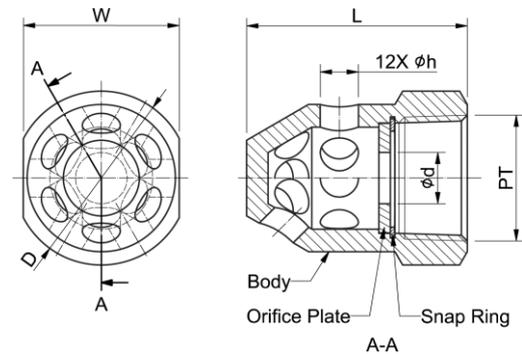
UL File Number: EX29550
 FM Approval PID: PR472172

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

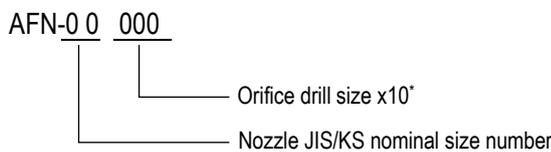


360° discharge nozzles dimension

ORDERING INFORMATION

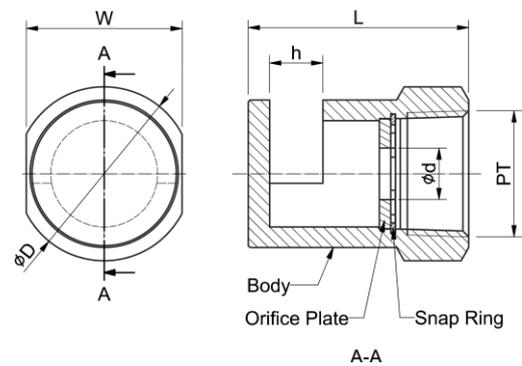
Specify nozzle part number based on flow calculation results when ordering.

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	1/2	32	28	45	5	10	8.2 – 13.4	0.2	120
AFN-20-000	20A	3/4	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 1/4	58	50	68	12	16	18.0 – 29.5	0.5	470
AFN-40-000	40A	1 1/2	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.

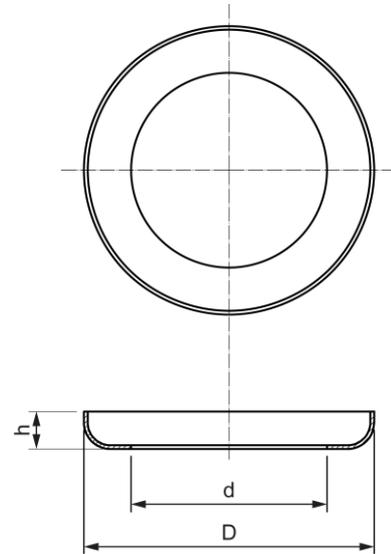


TECHNICAL INFORMATION

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 (<i>specify size</i>)

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

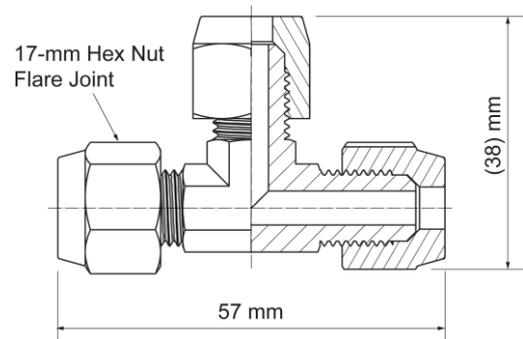
UL File Number: EX29550
FM Approval PID: PR472172

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

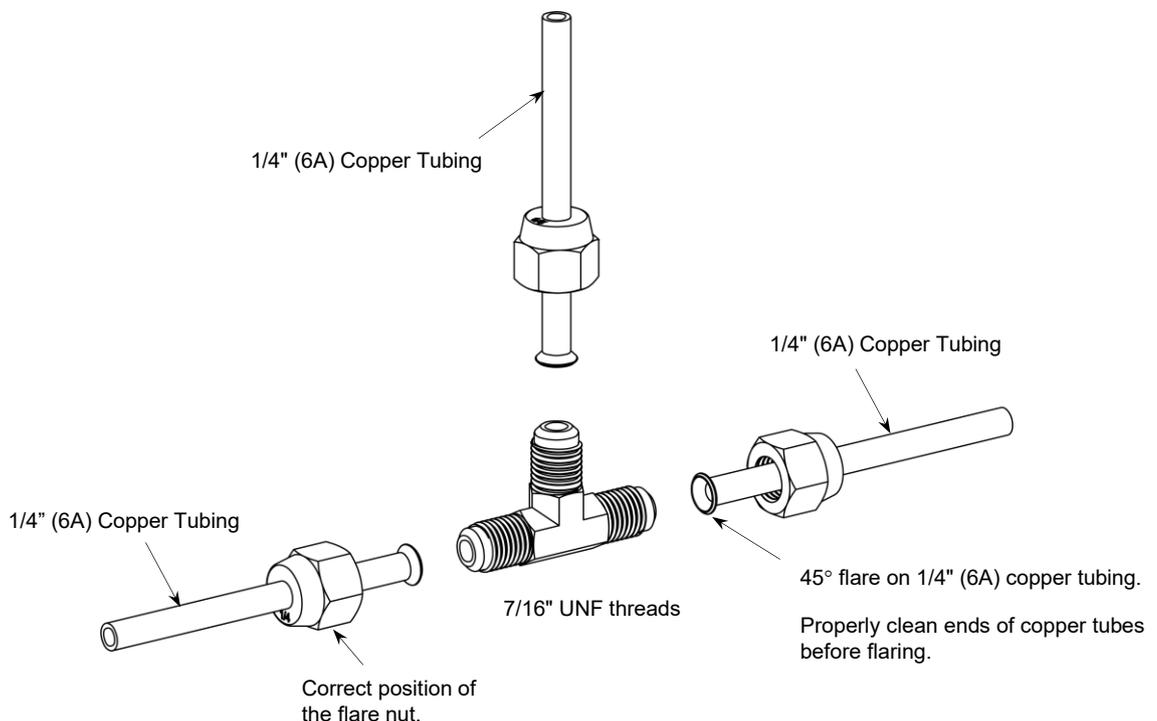
ORDERING INFORMATION

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-P227.....UL, FM

 UL File Number: EX29550
 FM Approval PID: PR472172

 Nominal size.....6A (1/4")
 Minimum operating pressure.....1.5 bar
 Hydrostatically-tested at.....344.7 bar (5000 psi)

Material

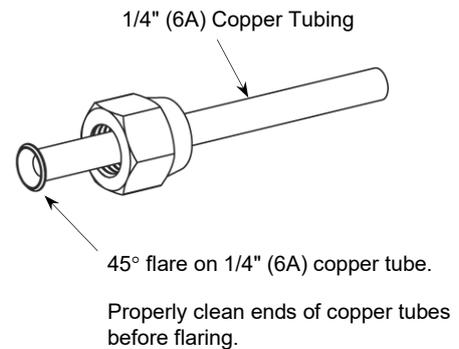
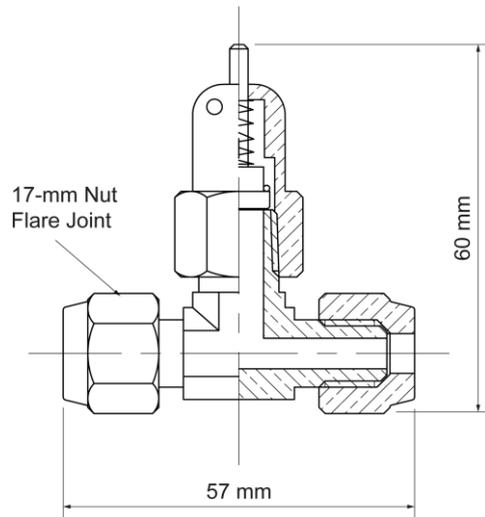
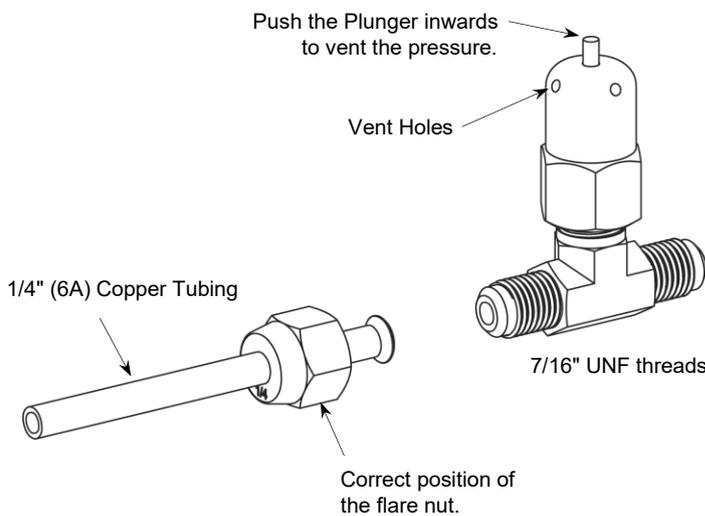
 Tee, Flare Nuts, Socket and Plunger Brass
 O-Ring Seal.....NBR
 Spring.....Steel
 Copper tubing connectionFlare Joint
 Connection thread7/16" UNF
 Installation position.....Plunger vertically up or down

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

UL File Number: EX29550

FM Approval PID: PR472172

Nominal Size 20A (3/4")

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

Material:

Safety Plug, Rupture Disc and Body Brass

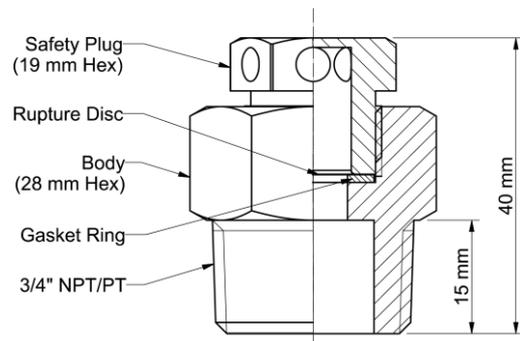
Gasket Ring..... Bakelite

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

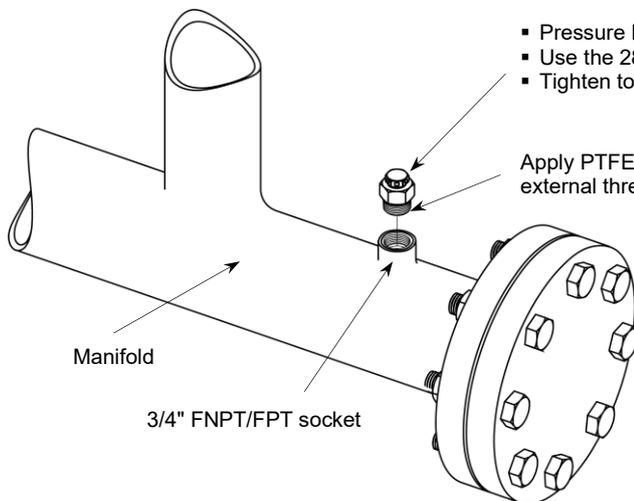
ORDERING INFORMATION

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

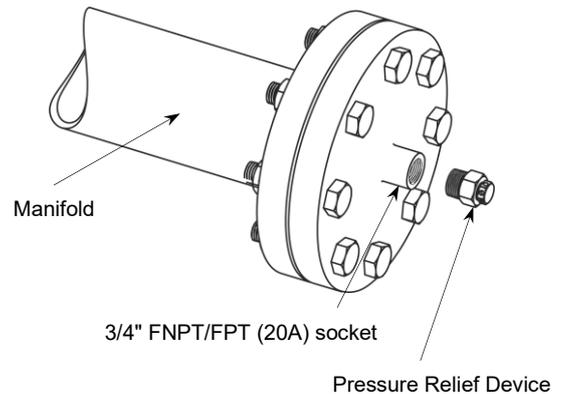


INSTALLATION



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.

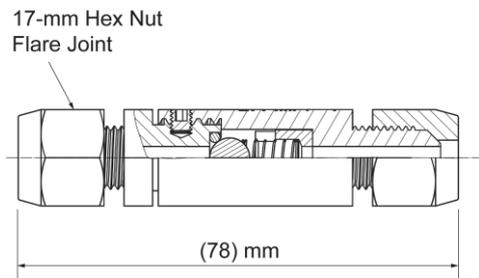


TECHNICAL INFORMATION

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

UL File Number: EX29550
FM Approval PID: PR472172

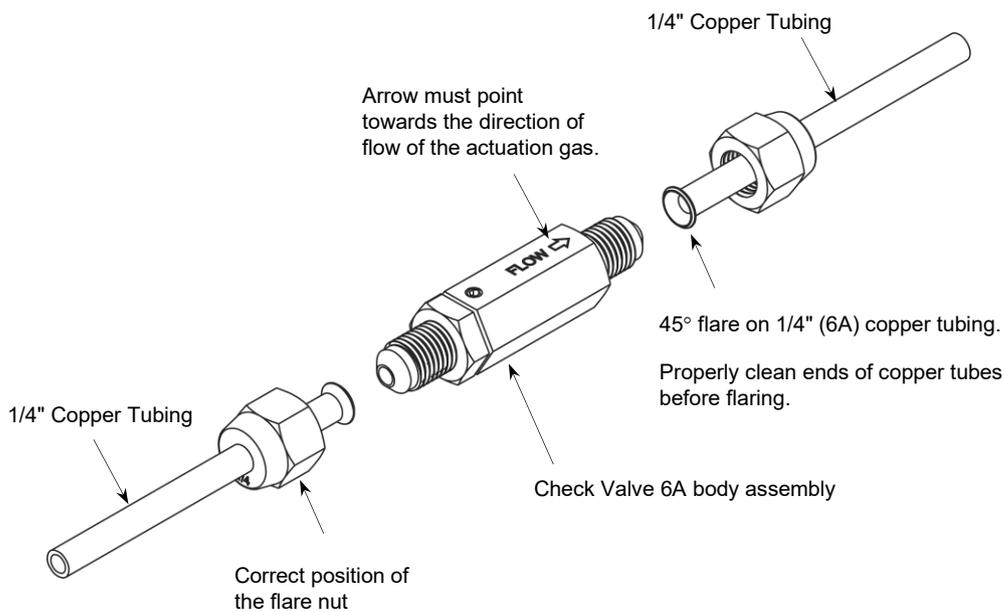
Nominal size 1/4" (6A)
Fitting thread 7/16" UNF
Minimum operating pressure 1 bar
Hydrostatically tested at 344.7 bar (5000 psi)
Material
Body, Nipple and Flare Nuts Brass
O-Ring Seal NBR
Locking Screw Alloy steel
Tubing connection Flared joint
Installation position In line with tubing (arrow points to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

UL File Number: EX29550
 FM Approval PID: PR472172

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°

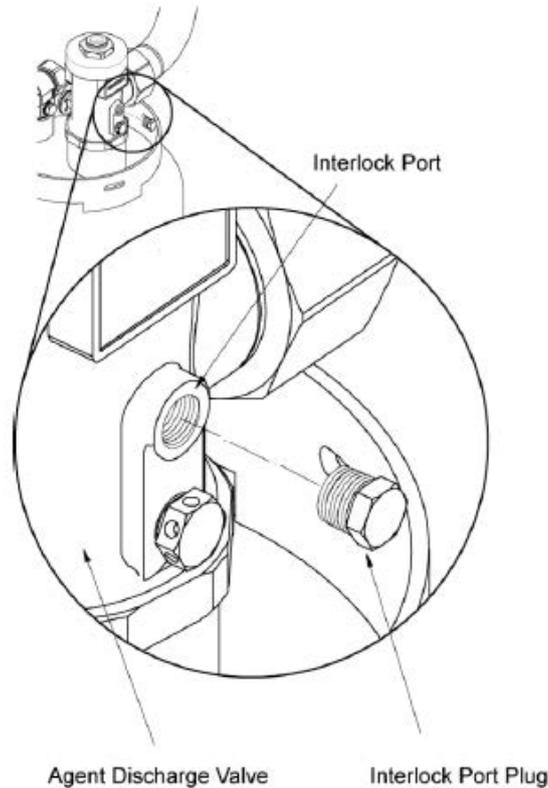


Interlock Tube with PT 3/8 Compression Fitting (For AFC-P227 only)

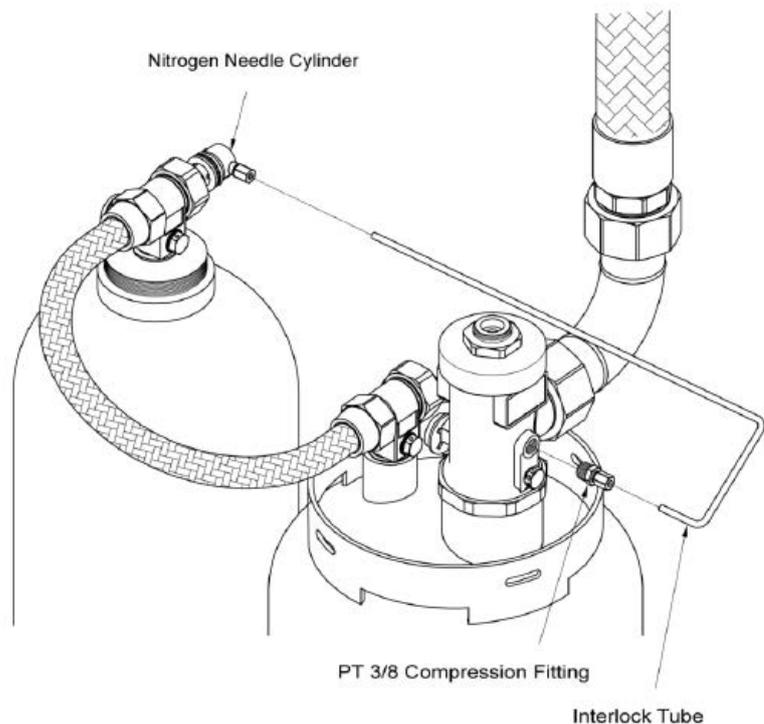
INSTALLATION

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

1. Remove the plug from the interlock port.



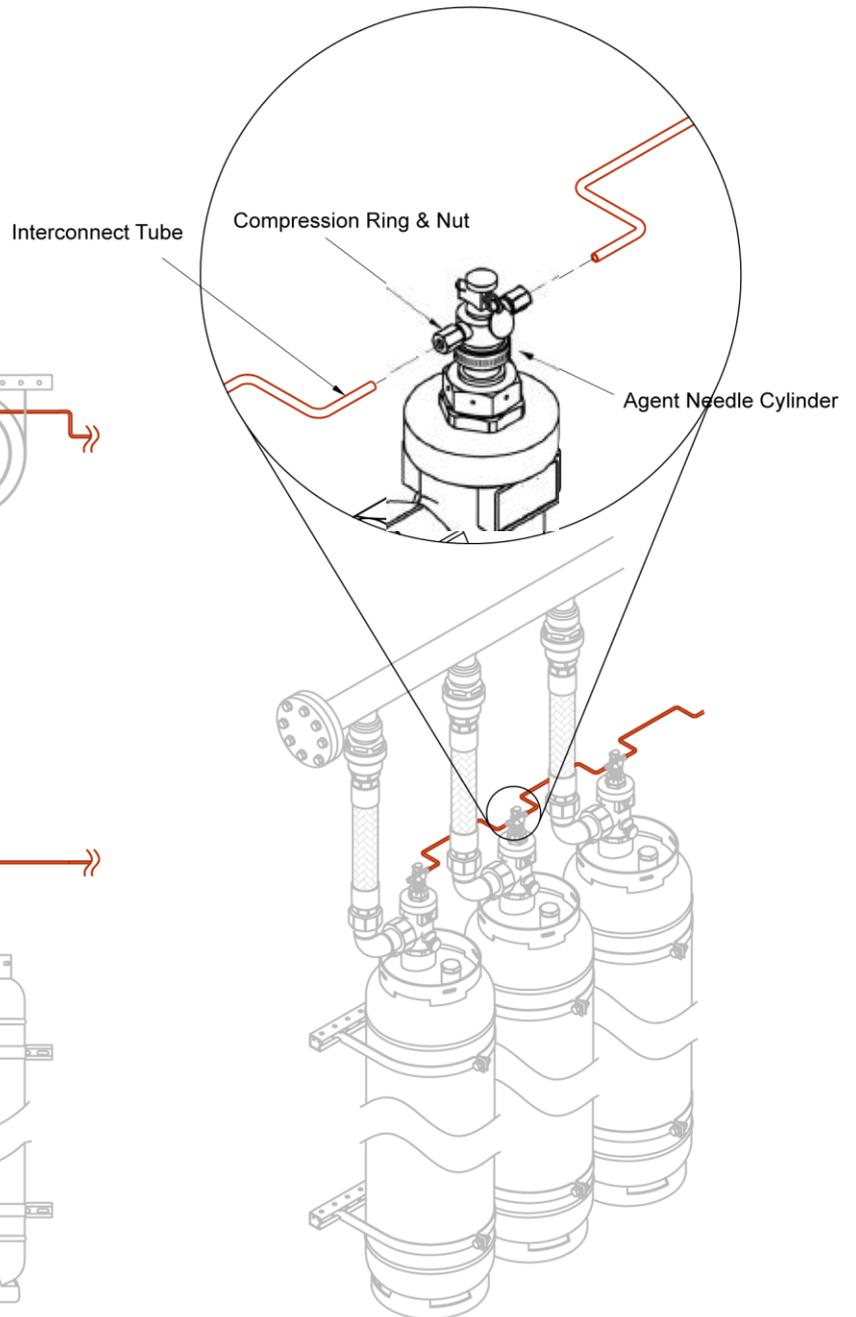
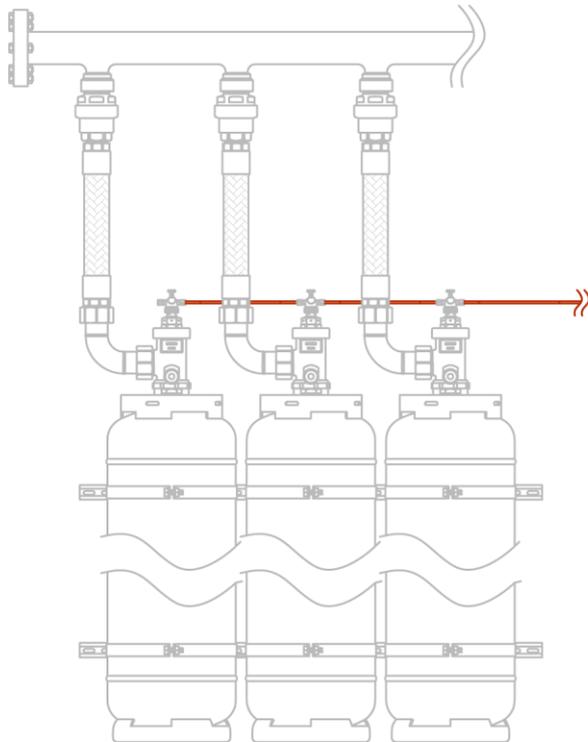
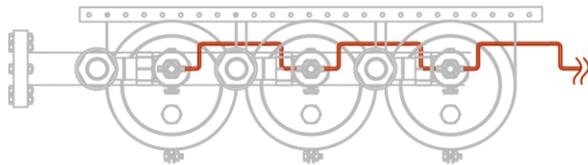
2. Apply sufficient amount of PTFE tape to the male union PT 3/8 compression fitting and hand-tighten it to the interlock port. Using a suitable wrench, further tighten the fitting by 1 to 2 complete turns.
3. Insert the copper tube to the sleeves and nuts of the PT 3/8 compression fitting and nitrogen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



Installing the Interconnect Tube – Bend 90°

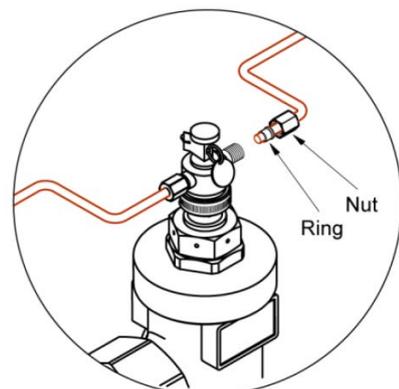
To be installed when the axis of the agent cylinder discharge valve outlet ports is parallel to manifold.

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.



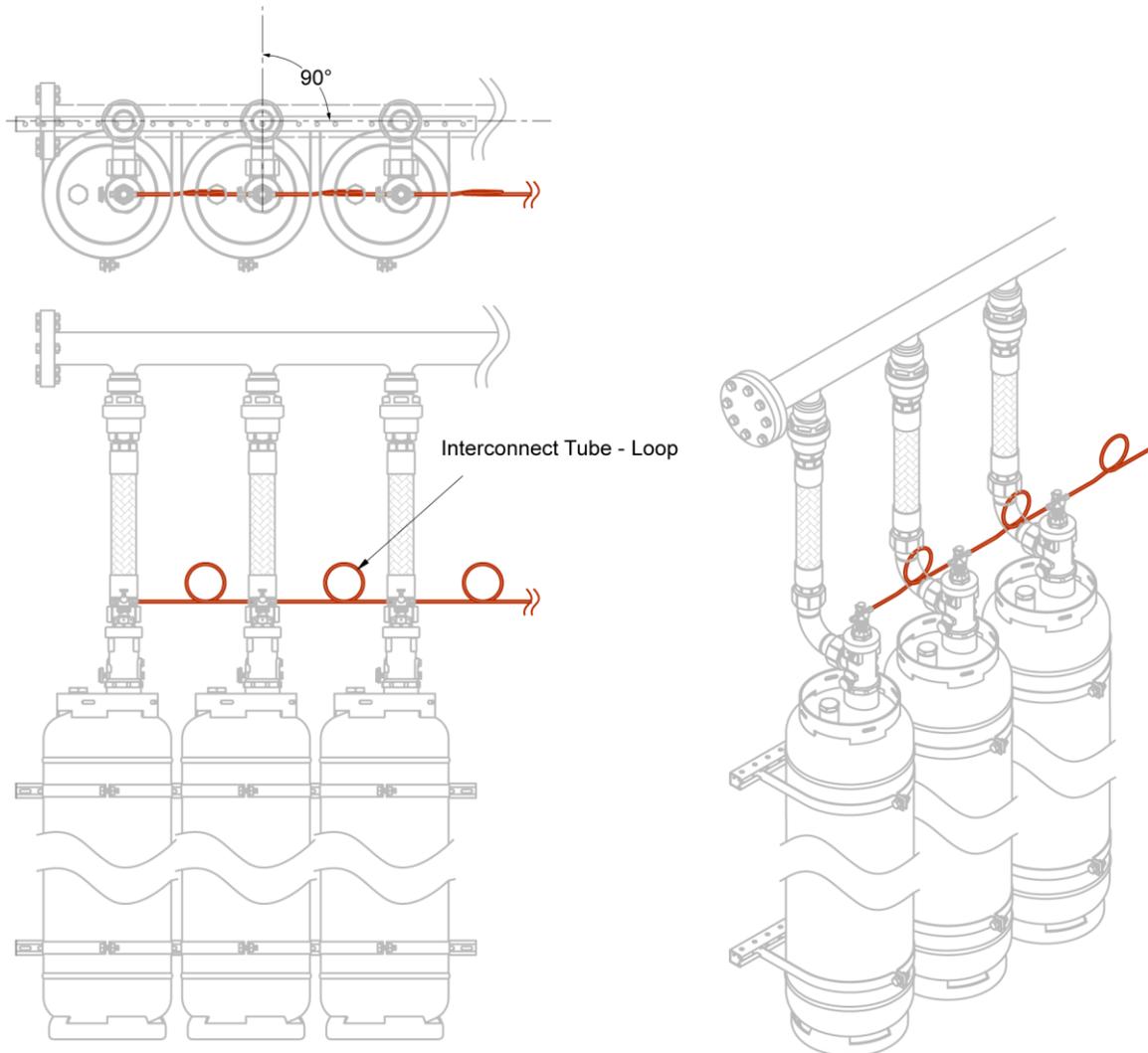
Alternatively,

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

UL File Number: EX29550
FM Approval PID: PR472172

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

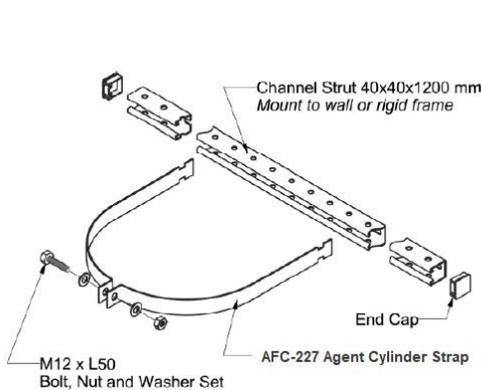
Dimensions See next page



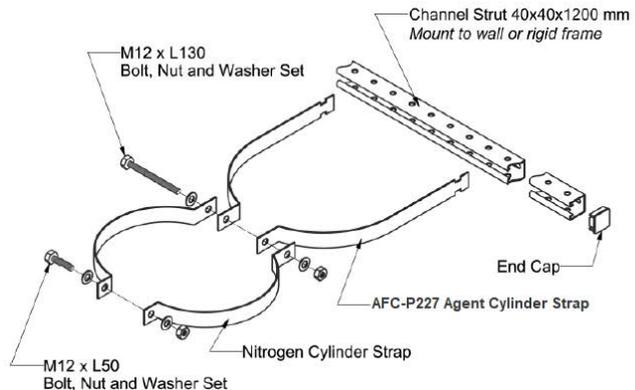
Cylinder Strap for AFC-227 Agent Cylinders (P/N: AFC-ST-01,02)



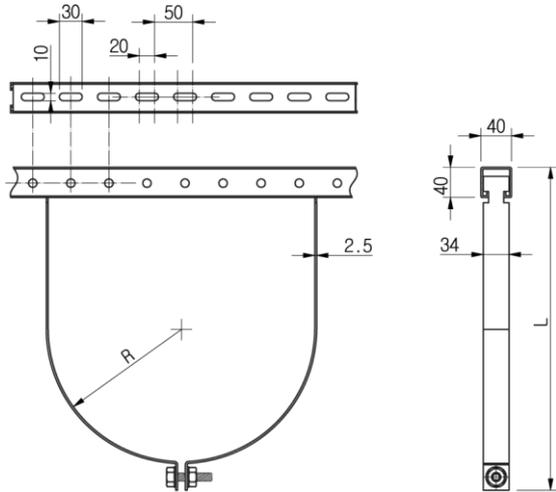
Cylinder Strap for AFC-P227 Agent Cylinders (P/N: AFC-PST-01,02)



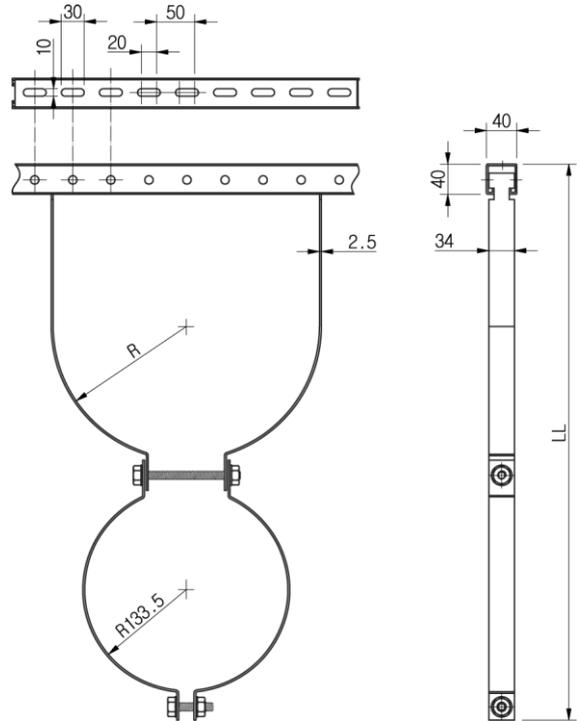
AFC-227 cylinder strap components



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.

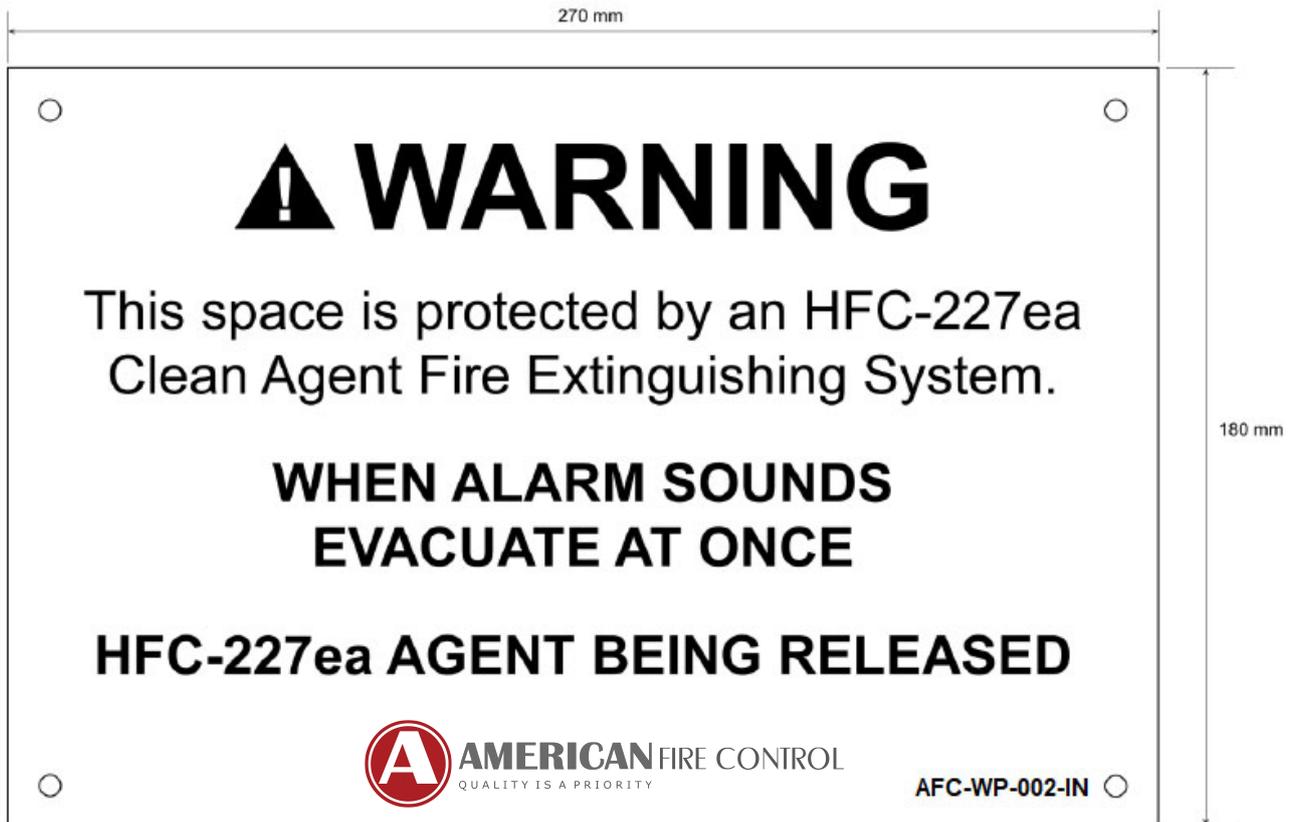
TECHNICAL INFORMATION

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.

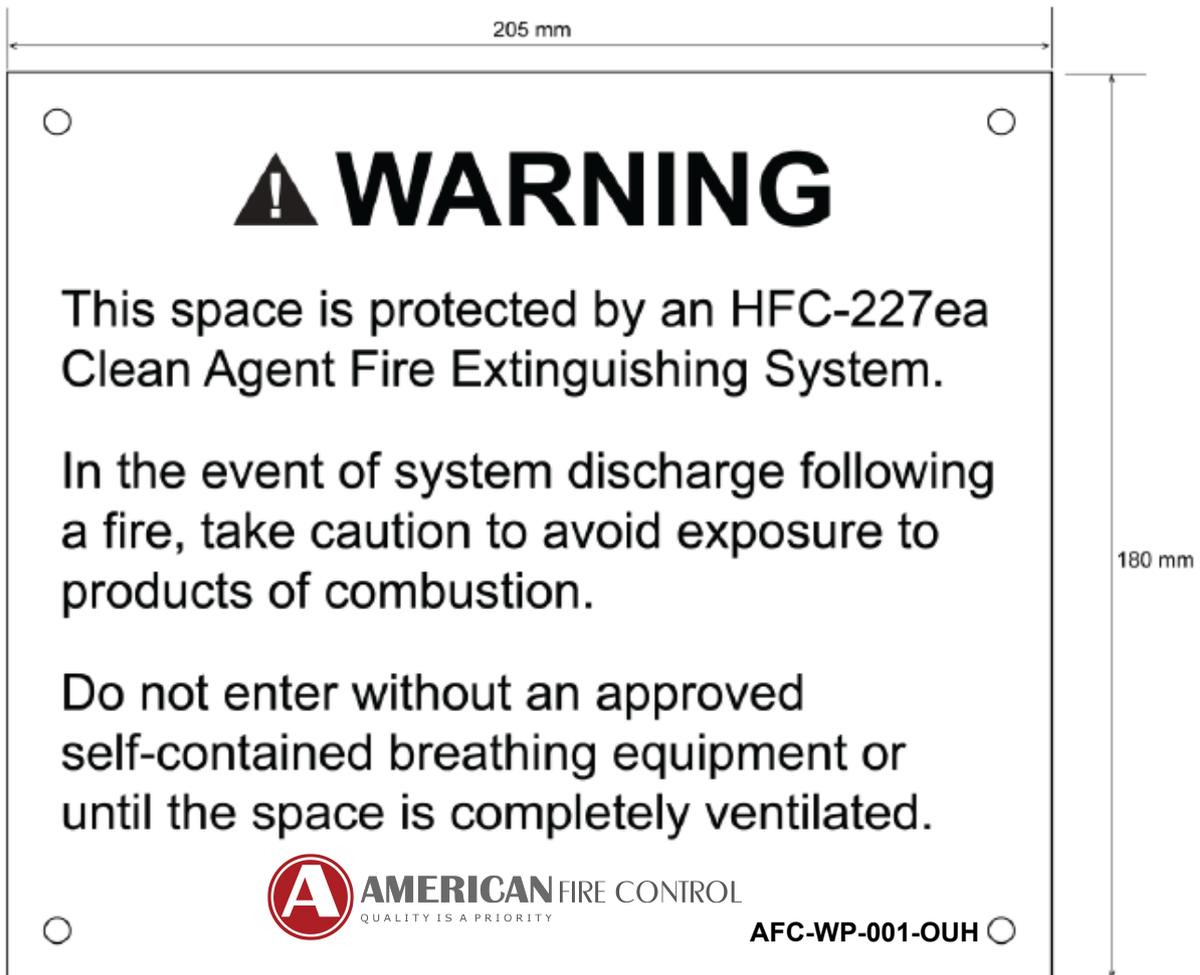
TECHNICAL INFORMATION

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.

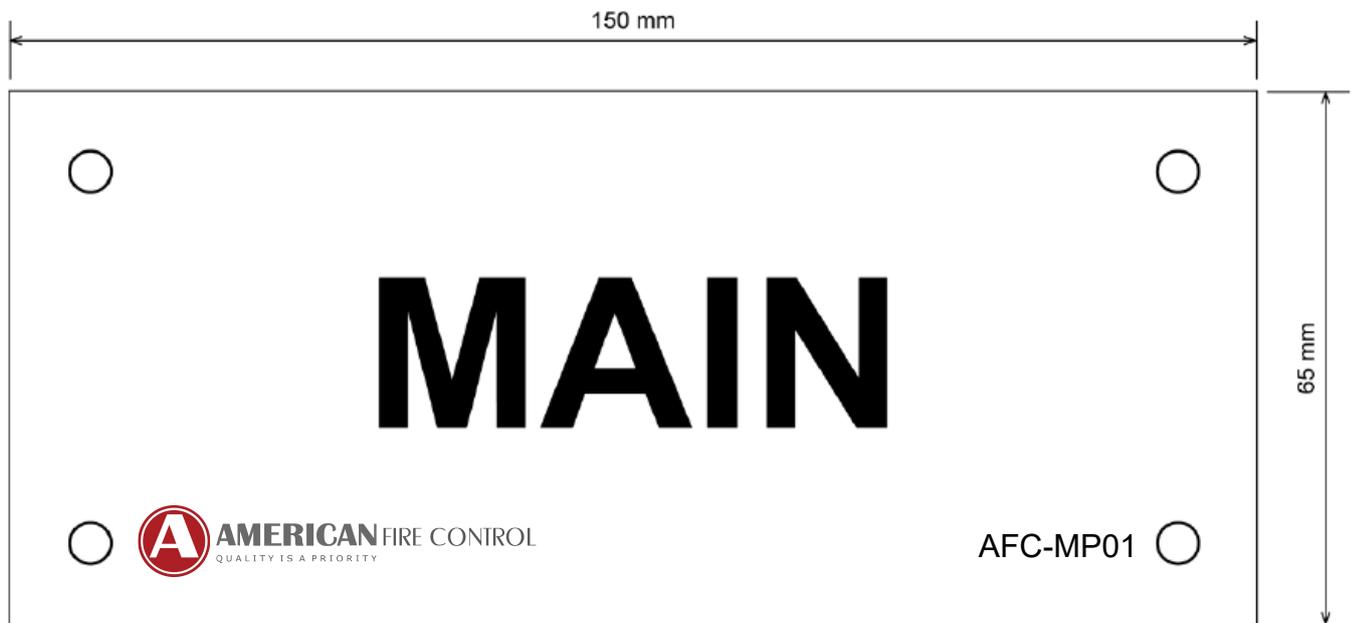
TECHNICAL INFORMATION

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

 UL File Number: EX29550
 FM Approval PID: PR472172

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 MANUFACTURE DATE: <input type="text"/> FACTORY ID: <input type="text"/>	  AFC-227 HFC-227ea FIRE EXTINGUISHING AGENT CONTAINS HFC-227ea SUPERPRESSURIZED WITH NITROGEN TO 25 BAR AT 21 °C.	  Clean Agent Extinguishing System Unit 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 4BW500KGS COMPLIANT.															
<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>▲ MISE EN GARDE : La décharge d'un système à agent extincteur propre pour éteindre un feu peut présenter un danger potentiel pour le personnel en raison de la forme naturelle de l'agent extincteur propre ou des produits de combustion découlant de l'exposition de l'agent au feu ou à des surfaces chaudes. Toute exposition inutile du personnel à l'agent naturel ou aux produits de combustion doit être évitée.</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 style="text-align: center;">OPERATION</p> <p>WHEN CONNECTED TO THE SYSTEM, THIS CONTAINER IS OPERATED AUTOMATICALLY VIA PRESSURE-ACTUATED DEVICE OR ELECTRIC ACTUATOR.</p> <p style="text-align: center;">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. AFC-227/AFC-P227-02 AND THE STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, NFPA 2001 FOR MORE RELATED INFORMATION.</p>	<p style="text-align: center;">HAZARDOUS MATERIAL IDENTIFICATION</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">HFC-227ea</td> <td style="text-align: center;">1</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 style="text-align: center;">HEALTH</td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td style="text-align: center;">FLAMMABILITY</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td style="text-align: center;">PHYSICAL HAZARDS</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td style="text-align: center;">PERSONAL PROTECTION*</td> <td style="text-align: center;">1</td> <td></td> </tr> </table> <p>*TO BE SUPPLIED BY USER DEPENDING ON USE CONDITION. REFER TO HFC-227ea SAFETY DATA SHEET FROM AMERICAN FIRE CONTROL LLC.</p>	HFC-227ea	1	MISUSE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.	HEALTH	1		FLAMMABILITY	0		PHYSICAL HAZARDS	0		PERSONAL PROTECTION*	1	
HFC-227ea	1	MISUSE OR INTENTIONAL INHALATION ABUSE MAY LEAD TO DEATH WITHOUT WARNING. RAPID EVAPORATION OF THE LIQUID MAY CAUSE FROSTBITE.															
HEALTH	1																
FLAMMABILITY	0																
PHYSICAL HAZARDS	0																
PERSONAL PROTECTION*	1																
 <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, Orlando FL32801, USA Tel.: +1 607 252 6814 sales@american-afc.com www.american-afc.com</p>															
AFC-227	DO NOT COVER, REMOVE, OR DEFACE THIS LABEL.																

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

UL File Number: EX29550
FM Approval PID: PR472172

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

<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border-bottom: 1px solid black;">MODEL NO.:</td><td style="border-bottom: 1px solid black; width: 80px;"></td></tr> <tr><td style="border-bottom: 1px solid black;">AGENT WEIGHT:</td><td style="border-bottom: 1px solid black; text-align: right;">KG</td></tr> <tr><td style="border-bottom: 1px solid black;">TARE WEIGHT:</td><td style="border-bottom: 1px solid black; text-align: right;">KG</td></tr> <tr><td style="border-bottom: 1px solid black;">GROSS WEIGHT:</td><td style="border-bottom: 1px solid black; text-align: right;">KG</td></tr> <tr><td style="border-bottom: 1px solid black;">MANUFACTURE DATE:</td><td style="border-bottom: 1px solid black;"></td></tr> <tr><td style="border-bottom: 1px solid black;">FACTORY ID:</td><td style="border-bottom: 1px solid black;"></td></tr> </table>	MODEL NO.:		AGENT WEIGHT:	KG	TARE WEIGHT:	KG	GROSS WEIGHT:	KG	MANUFACTURE DATE:		FACTORY ID:		<p>AFC-P227</p> <h1 style="margin: 0;">HFC-227ea</h1> <p>FIRE EXTINGUISHING AGENT</p> <p>CONTAINS HFC-227ea SUPERPRESSURIZED WITH NITROGEN TO 25 BAR AT 21 °C.</p>	<div style="text-align: center;">   </div> <p style="font-size: 8px; text-align: center;">Clean Agent Extinguishing System Unit</p> <p style="font-size: 8px;">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 4BW500KGS COMPLIANT.</p>			
MODEL NO.:																	
AGENT WEIGHT:	KG																
TARE WEIGHT:	KG																
GROSS WEIGHT:	KG																
MANUFACTURE DATE:																	
FACTORY ID:																	
<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <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> </div> <div style="width: 48%;"> <p>▲ MISE EN GARDE : La décharge d'un système à agent extincteur propre pour éteindre un feu peut présenter un danger potentiel pour le personnel en raison de la forme naturelle de l'agent extincteur propre ou des produits de combustion découlant de l'exposition de l'agent au feu ou à des surfaces chaudes. Toute exposition inutile du personnel à l'agent naturel ou aux produits de combustion doit être évitée.</p> </div> </div>																	
<p style="text-align: center;">▲ CAUTION</p> <p style="font-size: 8px;">TRANSPORT, STORE, AND INSTALL THE CONTAINER IN VERTICAL POSITION ONLY.</p> <p style="font-size: 8px;">AVOID EXPOSURE TO DIRECT SUNLIGHT.</p> <p style="font-size: 8px;">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 style="font-size: 8px; text-align: center;">OPERATION</p> <p style="font-size: 8px;">WHEN CONNECTED TO THE SYSTEM, THIS CONTAINER IS OPERATED AUTOMATICALLY VIA PRESSURE-ACTUATED DEVICE OR ELECTRIC ACTUATOR.</p> <p style="font-size: 8px; text-align: center;">INSPECTION AND MAINTENANCE</p> <p style="font-size: 8px;">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 style="font-size: 8px;">SEMI-ANNUALLY: CHECK AGENT QUANTITY. IF AGENT QUANTITY SHOWS A LOSS OF MORE THAN 5%, REPLACE THE CONTAINER.</p> <p style="font-size: 8px;">REFER TO THE RECENT EDITIONS OF SYSTEM MANUAL PART NO. AFC-227/AFC-P227-02 AND THE STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, NFPA 2001 FOR MORE RELATED INFORMATION.</p>	<p style="font-size: 8px; text-align: center;">HAZARDOUS MATERIAL IDENTIFICATION</p> <table style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr><td style="width: 30%;">HFC-227ea</td><td style="width: 10%;"></td><td style="width: 60%;">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 style="text-align: center;">1</td><td></td></tr> <tr><td>FLAMMABILITY</td><td style="text-align: center;">0</td><td></td></tr> <tr><td>PERSONAL HAZARD</td><td style="text-align: center;">0</td><td></td></tr> <tr><td>PERSONAL PROTECTION*</td><td style="text-align: center;"><input type="checkbox"/></td><td></td></tr> </table> <p style="font-size: 8px;">*TO BE SUPPLIED BY USER DEPENDING ON USE CONDITION. REFER TO HFC-227ea SAFETY DATA SHEET FROM AMERICAN FIRE CONTROL LLC.</p>	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		PERSONAL HAZARD	0		PERSONAL PROTECTION*	<input type="checkbox"/>	
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																
PERSONAL HAZARD	0																
PERSONAL PROTECTION*	<input type="checkbox"/>																
<p style="font-size: 8px;">RECYCLING PROTECTS THE ENVIRONMENT. DO NOT DISPOSE. DISCHARGE ONLY IN CASE OF FIRE.</p>	<p style="font-size: 8px;">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>	<div style="text-align: center;">  <p>AMERICAN FIRE CONTROL LLC. 255 S Orange Ave, Orlando FL 32801, USA Tel.: +1 807 252 6814 sales@american-afc.com www.american-afc.com</p> </div>															
AFC-P227	DO NOT COVER, REMOVE, OR DEFACE THIS LABEL.																

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
 UL File Number: EX29550
 FM Approval PID: PR472172

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

MODEL NO.: <input type="text"/> CHARGE PRESSURE AT 21 °C: <input type="text"/> BAR NITROGEN GAS WEIGHT: <input type="text"/> KG TARE WEIGHT: <input type="text"/> KG GROSS WEIGHT: <input type="text"/> KG MANUFACTURE DATE: <input type="text"/> FACTORY ID: <input type="text"/>	<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>	 USE AT TEMPERATURE RANGE OF 0°C TO 54°C. FACTORY HYDROSTATICALLY TESTED AT 3555 PSI (245 BAR). DOT 3AA/KGS COMPLIANT.								
<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" style="margin-left: auto; margin-right: auto;"> <tr><th colspan="2">NITROGEN GAS</th></tr> <tr><td>HEALTH</td><td>D</td></tr> <tr><td>FLAMMABILITY</td><td>D</td></tr> <tr><td>PHYSICAL HAZARD</td><td>D</td></tr> </table> <p>MORE INFORMATION ON COMPRESSED NITROGEN GAS HANDLING AND SAFETY ARE AVAILABLE FROM AMERICAN FIRE CONTROL LLC.</p>	NITROGEN GAS		HEALTH	D	FLAMMABILITY	D	PHYSICAL HAZARD	D	<p style="text-align: center;">OPERATION</p> <p>WHEN CONNECTED TO THE SYSTEM, THIS CONTAINER IS OPERATED AUTOMATICALLY VIA PRESSURE-ACTUATED DEVICE.</p> <p style="text-align: center;">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>SEMI-ANNUALLY: CHECK AGENT QUANTITY AND PRESSURE IN PARTNER AGENT CONTAINER. IF AGENT QUANTITY OR PRESSURE SHOWS A LOSS OF MORE THAN 5% OR 10%, RESPECTIVELY, REFILL OR REPLACE THE CONTAINER.</p> <p>REFER TO THE RECENT EDITIONS OF SYSTEM MANUAL PART NO. AFC-227/AFC-P227-02 AND THE STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS, NFPA 2001 FOR MORE RELATED INFORMATION.</p>	 <p>AMERICAN FIRE CONTROL LLC. 255 S Orange Ave, Orlando FL32801, USA Tel: +1 607 252 6814 sales@american-afc.com www.american-afc.com</p> <p style="text-align: center;">AFC-P227</p>
NITROGEN GAS										
HEALTH	D									
FLAMMABILITY	D									
PHYSICAL HAZARD	D									



**AMERICAN
FIRE CONTROL**

Previous Approvals.

BENAN PROJECT



MATERIAL INSPECTION REQUEST



DETAILS OF SCHEDULED INSPECTION

Section A

Package : BP-001

MIR No : TSC -BP01-TCC-ZFP-MIR-ME-00147

To : Zuhair Fayez Partnership

Phase No. : _____

Date : 21-Mar-24

Inspection scheduled for - Time: _____

Date : 21-Mar-24

Location :

Building/Plot : _____

Level : _____

Zone : _____

Material to be Inspected :

Spec./Drwg ref : _____

Submittal No : _____

Measuring Equipment used: _____

Calibrated (Y/N) _____

Validity date: _____

Description of

Material inspection request for fire hydrant and vertical indicator post, see attached delivery notes for description and quantity

Required Inspection :

Proof of GC/MEP
Co-ordinated Inspection

[Signature]

CONFIRMATION OF CONTRACTOR'S Q.C. INSPECTION

Section B

Confirmation of co-ordination and compliance with Specifications, Approved Drawings, Method Statement and Quality Control Plan

Tick box YES NO

Note: If NO, any departure from Specifications, Approved Drawings, Method Statement and Quality Control Plan to be recorded below.



Non Conformity and/or reference of attached Non Conformity Report (NCR): _____

Date: _____

Contractor : Project Manager *[Signature]*

Date : 21-Mar-24

SUPERVISION CONSULTANT'S REVIEW COMMENTS

Section C

- ① Firehydrant and Vertical indicator post inspected as per attached delivery note.
- ② Quantity shall be considered after site installation request approval.

A	Approved
B	Approved with Comments ✓
C	Revised & Resubmit
D	For Information Only
R	Rejected

Consultant: _____

Date : 23/03/24

PM/CM If Required : _____

Date : _____

THE CONSULTANT'S COMMENTS SHALL NOT RELIEVE THE CONTRACTOR OF ANY OF HIS RESPONSIBILITIES UNDER THE CONTRACT

Received for Contractor : _____

Date : _____

Received Copy to : PM / Others

Copy with Section A completed by Contractor to be passed to Consultant
Original with Section B completed to be handed to Consultant prior to Inspection
Consultant to complete Section C and return to Contractor



SUBMITTAL

Submittal Reference:	TSC-BP01-SUB-TCC-ZFP-MAT-N	Date:	18/03-Mar-24
Revision:	00		
Document Type	Material Submittal	SUBMITTED FOR	CODE
		APPROVAL FOR INFORMATION	FA
			FI
Project:	TMG Sales Centre Benan City Project	PACKAGE NO:	BP-01
		BUILDING NO:	General
TO:	Zuhair Fayed Partnership (ZFP)	ACTION	
Cc:	Atrium Project Management (APM)- TMG	APPROVED	A
		APPROVED AS NOTED	<input checked="" type="checkbox"/> B
		REVISE AND RESUBMIT	C
		NO ACTION REQUIRED	D
		REJECTED	R

SAMPLES LISTED BELOW. (DELETE OR ADD AS NECESSARY)

ITEM	QTY	Dwg., Spec. or BOQ Ref.	DOCUMENT / DRAWING NO.	DESCRIPTION	TYPE*	CODE	ACTION
1	1			Material Submittal for Fire Hydrant and Vertical Indicator Post	MAT		
				Technical Data attached			

23/03/2024

Contractor's Project Manager: Mahmoud Ibrahim

Signature:

18/03/24

SC review comment / PMCM review comments / REMARKS:

① Fire Hydrant and vertical indicator post technically approved.

② Contractor shall comply with specs, codes, stds and approved shopdrawings.

③ Material shall be FM approved and listed.

Correction or comments made relative to submittal during this review. **DO NOT** relieve the contractor from compliance with the requirements of drawings and specifications for review of general conformance with design concept of the project.

FOR CLIENT (Optional):	DATE:	FOR CONSULTANT: Resident Engineer	DATE: 19/03/2024
COPIES:		FOR PROJECT MANAGER: Project Manager	DATE:

* TYPE: SD - Shop Drawing, GT - Guaranteed / Guaranteed, I - Inspection, CA - Calculations, SM - Sample, MD - Manufacturer's Data, LT - Laminates, OT - Others

DRY BARREL FIRE HYDRANT



SPECIFICATIONS

- Maximum Operating Pressure: 250 PSI (17.2 Bar)
- UL Listed, FM Approved for Fire Protection Roadside Service
- Conforms to AWWA C502 Requirements
- Factory Tested 100% to 500 PSI (34.5 Bar)
- Ductile Iron Body
- Steel Stem and Bronze Seat
- All Fasteners Below Ground 304 Stainless Steel
- Finish: Red and Black Epoxy Paint Interior and Exterior per AWWA C550
- Lubrication: Lube Oil Cold Temp
- Repairable Due to Traffic Breakage Without Excavation
- Seat and Disc Repairable Without Excavation
- Minimal Torque Seat and Disc Design for Closing and Opening Torque



Models

F-7700

ASME CLASS 150 / ISO PN16 Flanges

F-8700

AWWA Mechanical joint

INLET

- 6" (ND150) ASME B16.5 Class 150
- DIN 2503 PN16 Flanged
- 6" Mechanical Connection per AWWA / ANSI C153 / A21.53

OUTLET

- Fire Pump Steamer 4 1/2" - 4nh
- 2 1/2" - 7.5NH Standard

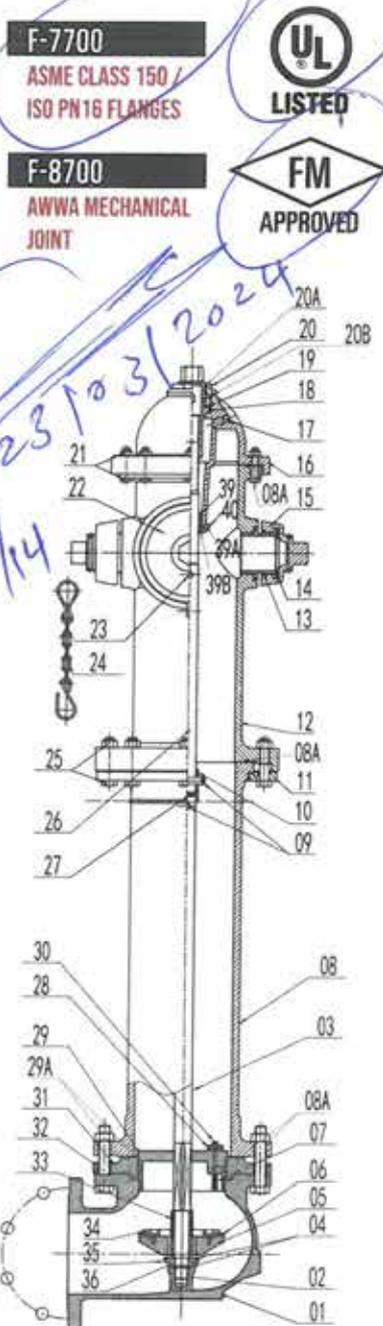


DRY BARREL FIRE HYDRANT



DUCTILE IRON BODY • SEAT AND DISC REPAIRABLE WITHOUT EXCAVATION • AWWA C550 EPOXY COATED

250 PSI (17.2 BAR) MAXIMUM OPERATING PRESSURE



F-7700
ASME CLASS 150 /
ISO PN16 FLANGES

F-8700
AWWA MECHANICAL
JOINT



MATERIAL LIST

ITEM	DESCRIPTION	SPECIFICATION
1	Connector Inlet	Ductile Iron ASTM A536 Grade 65-45-12
2	Lock Nut	Ductile Iron ASTM A536 Grade 65-45-12
3	Connecting Rod	Carbon Steel 1045 ASTM A29/29M
4	Lock Nut	Gasket EPDM ASTM D200
5	Tray	Ductile Iron ASTM A536 Grade 65-45-12
6	Seal	EPDM ASTM D2000
7	Drain Hole Spring	Stainless Steel 316 ASTM A240
8	Lower Barrel	Ductile Iron ASTM A536 Grade 65-45-12
8A	O- Ring	NBR ASTM D2000
9	Perforated Cylinder Pin	Carbon Steel 1045 ASTM A29/29M
10	Connecting Rod Sleeve	Carbon Steel 1045 ASTM A29/29M
11	Clamp Ring	Ductile Iron ASTM A536 Grade 65-45-12
12	Body Upper	Ductile Iron ASTM A536 Grade 65-45-12
13	Outlet Nipple	C95400 ASTM B148
14	Outlet Gasket	EPDM ASTM D2000
15	Outlet Cap	Ductile Iron ASTM A536 Grade 65-45-12
16	Upper Bonnet	Ductile Iron ASTM A536 Grade 65-45-12
17	Thread Plug	C95400 ASTM B148
18	Screw Stem Nut	C95400 ASTM B148
19	Screw Nut Gasket	C95400 ASTM B148
20	Screw Nut Seat	C95400 ASTM B148
20A	O- Ring	NBR ASTM D2000
20B	O- Ring	NBR ASTM D2000
21	Bonnet Bolts and Nuts	Carbon Steel 1035 ASTM A29/29M
22	Pumper Connection Cap	Ductile Iron ASTM A536 Grade 65-45-12
23	Cylindrical Pin	Carbon Steel 1045 ASTM A29/29M
24	Cover Chain	Carbon Steel Gr B ASTM A283-B
25	Body Bolts and Nuts	Carbon Steel 1035 ASTM A29/29M
26	Upper Stem	Carbon Steel 1045 ASTM A29/29M
27	Cushion	EPDM ASTM D2000
28	Drain Hole Cover	C95400 / EPDM
29	Seat	C95400 ASTM B148
29A	O- Ring	NBR ASTM D2000
30	Bolt and Nut	Stainless Steel 304 ASTM A240
31	Seat Retainer Plate	Ductile Iron ASTM A536 Grade 65-45-12
32	Lower Barrel Bolts and Nuts	1035 ASTM A29/29M
33	Annular Tube	Carbon Steel 1045 ASTM A29/29M
34	Plate Retainer	Ductile Iron ASTM A536 Grade 65-45-12
35	Lock Nut Seat	Ductile Iron ASTM A536 Grade 65-45-12
36	Check Turn Gasket	GR.B ASTM A283-B
37	Steamer Connector Tube	C95400 ASTM B148
38	Steamer Gasket	GR.B ASTM A283-B
39	Screw Stem Bushing	Stainless Steel 304 ASTM A240
39A	O- Ring	NBR ASTM D2000
39B	O- Ring	NBR ASTM D2000
40	Bolt	Stainless Steel 304 ASTM A240

Seat Repair Kit: Includes all seals, O-rings and removal tool "T" Handle. (1) item #4, (1) item #6, (1) item 8A, (1) item 20A, (1) item 20B, (2) item 29A (3) item 29B, (2) item 39A, (2) item 39B and (1) T handle stem wrench.

Traffic Repair Kit: Includes new connecting sleeve, clamp ring, pins and O-rings for above ground repair. (2) item 8A, (2) item 9, (1) item 10, (1) item 11, (1) item 20A, (1) item 27, (1) item 20B, (2) item 39A, (2) item 39B

All information contained herein is the property of the manufacturer and deemed to be accurate. Information is subject to change without notice. Purchaser is responsible for proper installation and use of product. American Fire Control, USA, LLC, provides no manufacturer's warranty but extends its own warranty on all products sold. American Fire Control, USA, LLC, are subject to its full terms and conditions of sales as published and available on request. Any warranty made extends to original purchaser and is not assignable or transferable.

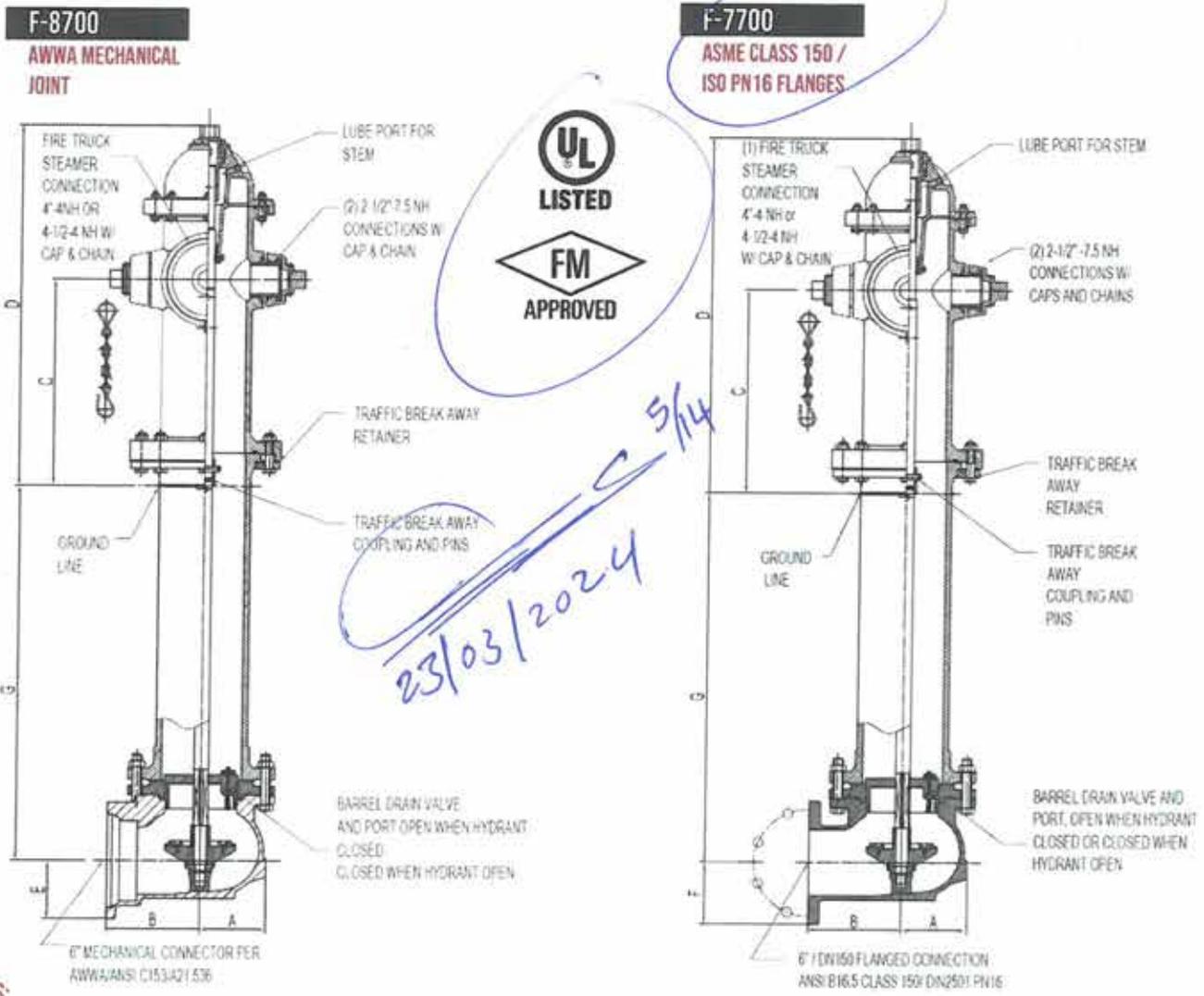


DRY BARREL FIRE HYDRANT



Dry Barrel Hydrant 6" (DN 150) Flanged or Mechanical Inlet, STD Outlets (2) 2 1/2" -7.5NH Male Outlets and (1) 4 1/2" - 4 NH Male Steamer Pumper Connection:

DIMENSIONAL INFORMATION



OPTIONS:

- Inlet flanged ASME B16.5 Class 150 or ISO2501 PN16, or / mechanical AWWA C153 / A21.536
- Depth choose one of above Dimension "G"
- Outlet (2) 2 1/2" hose connection thread type specify, standard =7.5NH (other thread types available)
- Steamer pumper outlet standard=(1) 4 1/2" -4NH, also available 4"-4NH optional adapter fitting

Part Number Flanged	Part Number Mechanical	A (mm/ inch)	B (mm/ inch)	C (mm/ inch)	D (mm/ inch)	E (mm/ inch)	F (mm/ inch)	G (mm/ inch)	Weight (kg)
F-7700	F-8700	146/ 5.75	208/ 8.18	460/ 18.11	805/ 31.7	130/5.12	140/5.51	1063/42	185
								1215/48	190
								1368/54	196
								1520/60	211
								1673/66	220
								1825/72	241
								1978/78	246
2130/84	251								



DATA SHEET

5100 Vertical Indicator Post



AMERICAN FIRE CONTROL
QUALITY IS A PRIORITY

The American 5100 Vertical Post Indicator is a critical component of fire protection systems, designed to provide a visual indication of the status of fire protection valves such as post indicator valves. These valves are commonly found in fire sprinkler systems, hydrant systems, and standpipe systems within buildings and industrial facilities. The VPI plays a crucial role in ensuring the efficient operation of these systems during fire emergencies.



SPECIFICATIONS

- Clearly displays valve status (open or shut) for operational awareness
- Enables remote operation of buried or hard-to-reach valves
- Secure design with a padlock-compatible wrench handle fitting over a "u" bracket
- Simplified installation with adjustable telescoping stem, eliminating the need for field cutting
- Easily customizable open and shut signs by removing the post head
- Compatible with gate valves sizes ranging from 4" to 12"
- UL listed and FM approved

CORROSION PROTECTION

- Internally and externally spray epoxy painted ral3000

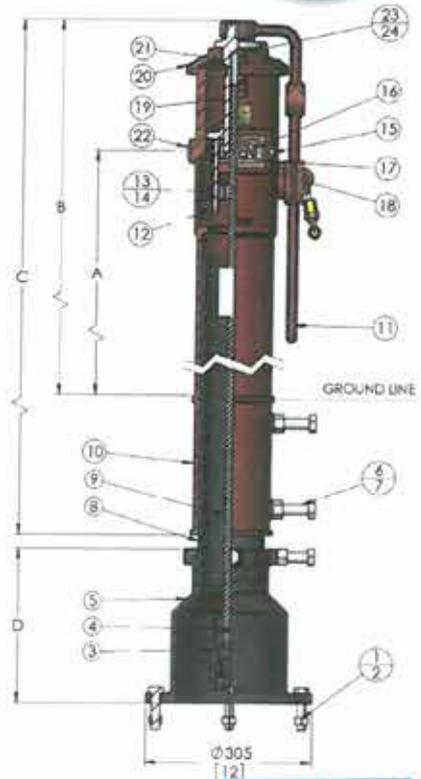
FIELD ADJUSTMENT

- Remove post head to adjust open and shut signs as required
- Adjust telescoping stem and pipe to desired length
- Attach base of post to the post plate on the valve using bolts/nuts provided

Handwritten note: 23/03/2024 6/14

PART LIST

No.	Part Name	Specification/Material
1	Hex Cap Screw	Carbon Steel ASTM A307B
2	Hex Nut	Carbon Steel ASTM A307B
3	Crane Coupling	Ductile Iron ASTM A536 Gr. 65-45-12
4	Cotter Pin	Carbon Steel ASTM A307B
5	Base Flange	Cast Iron ASTM A126 Class B
6	Hex Nut	Carbon Steel ASTM A307B
7	Hex Cap Screw	Carbon Steel ASTM A307B
8	Standpipe	Carbon Steel ASTM A53
9	Stem 1" Square	Carbon Steel AISI 1045
10	Body	Cast Iron ASTM A126 Class B
11	Locking Wrench	Ductile Iron ASTM A536 Gr. 65-45-12
12	Target Carrier Nut	Stainless Steel AISI 304
13	Hex Cap Screw	Carbon Steel ASTM A307B
14	Hex Nut	Carbon Steel ASTM A307B
15	Hex Cap Screw	Carbon Steel ASTM A307B
16	Target	Cast Aluminum
17	Window Glass	Plexiglass
18	Gasket	EPDM ASTM D2000
19	Operating Nut	Stainless Steel AISI 304
20	Top Section	Cast Iron ASTM A126 Class B
21	Snap Ring	Spring Steel
22	Plug	Carbon Steel ASTM A307B
23	Square Nut	Carbon Steel ASTM A307B
24	Hex Cap Screw	Carbon Steel ASTM A307B



DATA SHEET

5100 Vertical Indicator Post



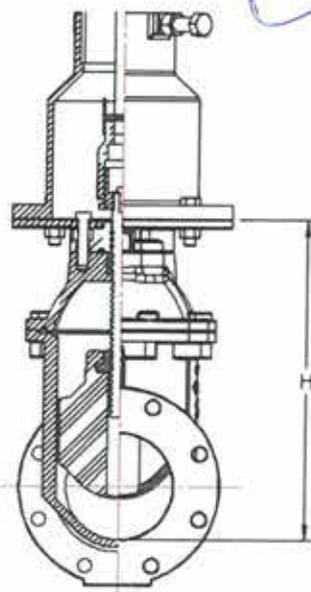
AMERICAN FIRE CONTROL
QUALITY IS A PRIORITY

DIMENSIONS

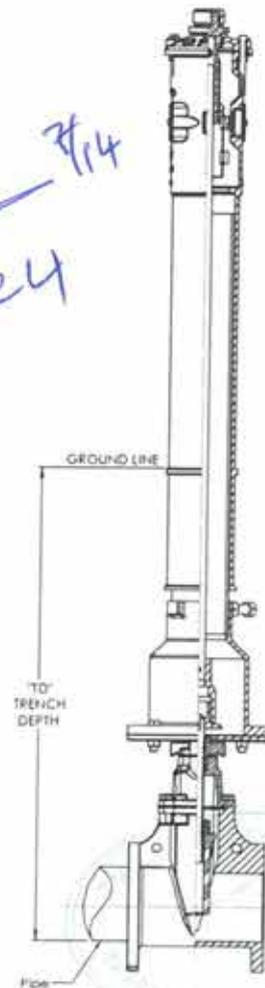
Valve Size	Model No.	A	B	C	D
4" ~12"	5100	700 (27.5")	1000 (39.3")	1248 (49.1")	297 (11.7")

AMERICAN AFC A-3100 PIV-NRS Gate Valve

Valve Size	H
4"	11.9"
6"	17.2"
8"	20.79"
10"	26.18"
12"	30.31"



Handwritten notes:
23/03/2024
7/14



Size	4"	6"	8"	10"	12"
Trench Depth Range (TD) Min	34.65"	39.76"	44.29"	48.62"	53.54"
Trench Depth Range (TD) Max	71.26"	76.38"	80.91"	85.24"	90.16"

All dimensions contained herein are approximate and subject to change without notice. American Fire Control Co. is not responsible for any errors or omissions. For more information, please contact American Fire Control Co. at 1-800-368-1111 or visit our website at www.american-afc.com. All other dimensions are subject to the manufacturer's specifications. American Fire Control Co. is not responsible for any errors or omissions. All other dimensions are subject to the manufacturer's specifications.





CERTIFICATE

This is to certify that

American Fire Control

255 S Orange Ave,
Orlando, FL 32801
United States of America

Handwritten signature and date: 23/03/2024 8/14

has implemented and maintains a **Quality Management System**.

Scope:

The Design and Manufacture of Ductile and Gray Iron Castings, Fire Hydrants, Indicator Posts, Check Valves, Gate Valves, Butterfly Valves and Associated Component.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	051223010103
Date of original certification	2014-07-22
Date of certification	2023-12-05
Valid until	2026-12-04



To verify certificate, visit at :

<https://uafaccreditation.org>
<https://www.iafcertsearch.org>



ARS Assessment Private Limited

Handwritten signature

Managing Director

UAF Address : 400, North Center Dr, STE 202, Norfolk, VA 23502, United States of America :

This certificate remains the property of ARS and must be returned to ARS on Cancellation or Suspension of the certificate Validity of the certificate is subject to successful completion of surveillance audits. Further clarification regarding the scope of this certificate and the applicability of standard may be obtained by consulting the Organization on info@arscert.com



CERTIFICATE

This is to certify that

American Fire Control

255 S Orange Ave,
Orlando, FL 32801
United States of America

Handwritten signature and date: 23/03/2024

has implemented and maintains an **Environmental Management System**.

Scope:

The Design and Manufacture of Ductile and Gray Iron Castings, Fire Hydrants, Indicator Posts, Check Valves, Gate Valves, Butterfly Valves and Associated Component.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 14001 : 2015

Certificate registration no. 051223020104
Date of original certification 2014-07-22
Date of certification 2023-12-05
Valid until 2026-12-04



To verify certificate, visit at :
<https://uafaccreditation.org>
<https://www.iafcertsearch.org>



ARS Assessment Private Limited

Handwritten signature

Managing Director

UAF Address : 400, North Center Dr, STE 202, Norfolk, VA 23502, United States of America :

This certificate remains the property of ARS and must be returned to ARS on Cancellation or Suspension of the certificate Validity of the certificate is subject to successful completion of surveillance audits. Further clarification regarding the scope of this certificate and the applicability of standard may be obtained by consulting the Organization on info@arscert.com



CERTIFICATE

This is to certify that

American Fire Control

255 S Orange Ave,
Orlando, FL 32801
United States of America

Handwritten signature and date: 23/03/2024

has implemented and maintains an **Occupational Health and Safety Management System**.

Scope:

The Design and Manufacture of Ductile and Gray Iron Castings, Fire Hydrants, Indicator Posts, Check Valves, Gate Valves, Butterfly Valves and Associated Component.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 45001 : 2018

Certificate registration no. 051223030105
Date of original certification 2014-07-22
Date of certification 2023-12-05
Valid until 2026-12-04



To verify certificate, visit at :
<https://uafaccreditation.org>
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HBOR.EX28963 - Hydrants

Hydrants

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American Fire Control LLC
 255 S Orange Ave
 Orlando, FL 32801 United States

EX28963

Base-valve design:

Model	Base-valve Size, in.	Hose Outlet (No. of Outlets), in.	Pumper Outlet (No. of Outlets), in.	Rated Pressure, psig
F-8700	5-1/4	(2) 2-1/2	(1) 4-1/2	250
F-7700	5-1/4	(2) 2-1/2	(1) 4-1/2	250

Wet-barrel design:

Model	Hose Outlet (No. of Outlets), in.	Pumper Outlet (No. of Outlets), in.	Rated Pressure, psig
FW-9000	(2) 2-1/2	(1) 4-1/2	250

Last Updated on 2023-02-10

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

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Member of the FM Global Group

Other Fire Protection Products | Fire Hydrants (Dry Barrel Type) | Hydrants, Dry Barrel

Model F-7800, F-8700, F-8800, and F-7700

Handwritten: 1 3/4
23/03/2024

Product Description

Product Specification

Model No	Size		# of Hose Outlets	Hose Outlet Size		Pumper Connection Size		Rated Working Pressure		Remarks
	in	(mm)		in	(mm)	in	(mm)	psi	(kPa)	
F-7800	6	(152)	2	2 1/2	(64)	4	(102)	250	(1720)	a
F-8700	6	(152)	2	2 1/2	(64)	4 1/2	(114)	250	(1720)	a
F-8800	6	(152)	2	2 1/2	(64)	4	(102)	250	(1720)	b
F-7700	6	(152)	2	2 1/2	(64)	4 1/2	(114)	250	(1720)	b

Remarks:

- a.) Available with a ANSI/AWWA C111/A21.11 Mechanical Joint Inlet Connection
- b.) Available with a ASME B16.5 Class 150 Flanged Joint Inlet Connection



Member of the FM Global Group

Details

Category Hydrants, Dry Barrel

Class of Work 1510 - Hydrants(Dry Brl Ty), Pvt FS

Certification Type FM Approved

Listing Country United States of America

Company

American Fire Control LLC
255 S Orange Avenue, Orlando,
Florida 32801
United States of America
<http://american-afc.com>

A handwritten signature in blue ink, followed by the date "23/03/2024" and a fraction "13/4".

		COMMENT RESOLUTION SHEET(CRS)			 Imagine it. Delivered.
Project Name	Package Jeddah South Container Terminal Upgrade - Design & Build Main Works			Date:	30 July 2023
Project No.	60622986	CRS Reference No.: 003215	Rev.0A	Page:	1 of 1

Comment Resolution Sheet Information	Code	ER Reference No.
CRS Status: <input checked="" type="checkbox"/> CLOSED <input type="checkbox"/> OPEN	1	
* All new comments are marked in RED		

CONTRACTOR'S DOCUMENT NO./ TRANSMITTAL REFERENCE	DOCUMENT TITLE / REFERENCE	RECEIVED	ISSUED
11099-SUB-UDC-GL-MAR-002	Material Approval Request for Zone Control Valves-Rev.0A Vendor: United Diamond Contractors	17 July 2023	30 July 2023

S/NO.	DOCUMENT /DRAWING/ REPORT SECTION OR CLAUSE NO.	ENGINEER'S COMMENTS	CONTRACTOR'S RESPONSE	FINAL RESOLUTION
1.		Material Approval Request for Zone Control Valves-Rev.0A Supplied by United Diamond Contractors is acceptable subject to the condition that it complies with the approved IFC Drawings, Contract Specifications and the Employer's Requirements.		

Jacobs

TECHNICALLY ACCEPTABLE
30/07/23

APPROVAL OF THIS DOCUMENT DOES NOT RELIEVE
VENDOR OF HIS RESPONSIBILITY FOR DESIGN,
FABRICATION, AND PERFORMANCE OF THE EQUIPMENT

  MATERIAL APPROVAL REQUEST FOR ZONE CONTROL VALVE	ARCHIRODON GROUP NV Integrated Management System		Jeddah South Container Terminal Upgrade Design & Build Main Works		Rev.
	Issued For	General Use			
	Reference No.	11099-SUB-UDC-GL-MAR-002			0A
	Serial No.				
Page			1 of 81		

DP WORLD JEDDAH

Contract No.: SAJED-M&I-2019-144/DB/2020/059

MATERIAL APPROVAL REQUEST FOR ZONE CONTROL VALVES

VENDOR: UNITED DIAMOND CONTRACTORS

Jacobs

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30/07/23

APPROVAL OF THIS DOCUMENT DOES NOT RELIEVE VENDOR OF HIS RESPONSIBILITY FOR DESIGN, FABRICATION, AND PERFORMANCE OF THE EQUIPMENT FURNISHED.

Rev.	Issue Date	Issue Status	Completed by		Reviewed by		Approved by	
			Job Position	Technical Office Section Head	Job Position	Technical Office Manager	Job Position	Project Manager
0A	13.07.2023	IFA	Name	Karamullah Sharief	Name	Mohamed Khairy	Name	Dipankar Chakravorty
			Signature		Signature		Signature	

 	ARCHIRODON GROUP NV Integrated Management System  MATERIAL APPROVAL REQUEST FOR ZONE CONTROL VALVE	Jeddah South Container Terminal Upgrade Design & Build Main Works		Rev.
		Issued For	General Use	
		Reference No.	11099-SUB-UDC-GL-MAR-002	0A
		Serial No.		
Page	3 of 81			

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2. COMPLIANCE STATEMENTS	Page 006
3. TECHNICAL SPECIFICATIONS (REFERENCE LIST)	Page 019
4. TECHNICAL DATA SHEETS	Page 020

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FURNISHED.

 	ARCHIRODON GROUP NV Integrated Management System  MATERIAL APPROVAL REQUEST FOR ZONE CONTROL VALVE	Jeddah South Container Terminal Upgrade Design & Build Main Works		Rev.
		Issued For	General Use	
		Reference No.	11099-SUB-UDC-GL-MAR-002	0A
		Serial No.		
		Page	7 of 81	

3. TECHNICAL SPECIFICATIONS (REFERENCE LIST)

REFERENCE	TITLE
11099-ENG-B-GL-PB-SPE-0040	SPECIFICATION FOR BUILDING MECHANICAL SERVICES

Jacobs

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30/07/23

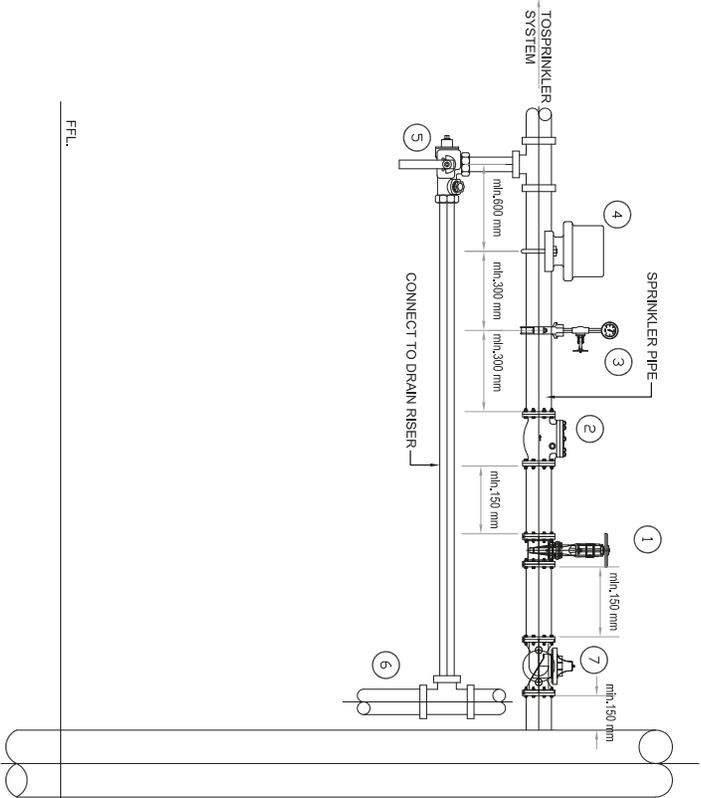
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Sr. #	Description	Brand Name	Model
1.1	OS&Y Gate Valve	American Fire Control	A-3000
1.2	OS&Y Gate Valve	Mueller	R-MFP2
2.1	Swing Check Valve	American Fire Control	A-3150
2.2	Swing Check Valve	Mueller	A2122
3	Water Flow Switch	Potter	VSR
4	Supervisory / Tamper Switch	Potter	OSYSU
5	Pressure Guge	AGF	7500
6	Test & Drain Valve	GIACOMINI	A61
7	Pressure Reducing Valve	CLA-VAL	90G-21

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COMBINATION STANDPIPE RISER

ZONE CONTROL VALVE ASSEMBLY 6.4" DIA. PIPE.

SR. NO.	DESCRIPTION	MODEL NO.	MAKE
1	O.S&V TYPE GATE VALVE WITH TAMPER SWITCH	TBA	TBA
2	CHECK VALVE	TBA	TBA
3	PRESSURE GAUGE	TBA	TBA
4	FLOW SWITCH	TBA	TBA
5	COMBINATION TEST AND DRAIN VALVE	TBA	TBA
6	DRAIN RISER	TBA	TBA
7	PRESSURE REDUCING VALVE	TBA	TBA

NOTES / REFERENCES
 1) ALL THE MATERIAL WILL BE INSTALLED AS APPROVED MATERIAL SUBMITTAL

1 FLOOR CONTROL VALVE ASSEMBLY DETAIL
 SCALE: NTS



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DATA SHEET

A-3000 OS&Y Resilient Wedge Gate Valve - Flanged Ends



AMERICAN FIRE CONTROL
QUALITY IS A PRIORITY

The American A-3000 Flange OS&Y (Outside Screw and Yoke) Gate Valve is a reliable and robust valve designed for various industrial applications. This valve complies with the AWWA C515 standard ensuring high-quality performance and adherence to industry standards. It features a heavy-duty handwheel and attachment nut and high-quality graphite packing.



Jacobs

TECHNICALLY ACCEPTABLE
30/07/23

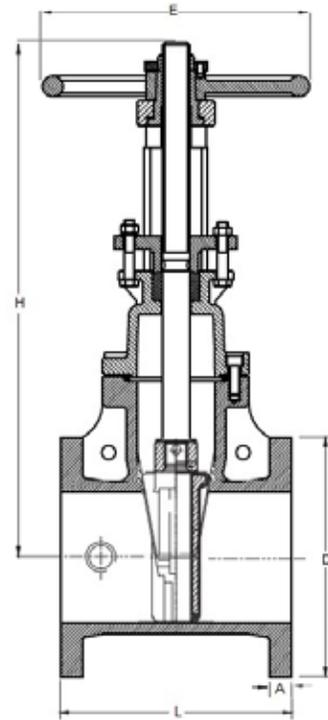
APPROVAL OF THIS DOCUMENT DOES NOT RELIEVE
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FURNISHED.

SPECIFICATIONS

- Complies with AWWA C515 standard
- Flanged end to ANSI B16.1 Class 125/ANSI B16.42 Class 150/BS EN1092-2 PN16
- Size Range: Available in sizes ranging from 2.5" to 12"
- Max working pressure: 300PSI (21 bar) /Max testing pressure: 600PSI (42bar)
- Working Temperature: 0°C to 80°C (32°F to 176°F)
- Fusion-bonded epoxy coating inside and outside complying with AWWA C550 standards
- Approvals: UL listed , FM approved

PART LIST

ID	PART	MATERIAL
1	Valve Body	Ductile Iron ASTM A536 65-45-12
2	Resilient Wedge	Ductile Iron ASTM A536/EPDM ASTM D2000
3	Wedge Nut	Stainless Steel 304
4	Dowel Pin	Stainless Steel 304
5	Stem Back Seat O-Ring	EPDM ASTM D2000
6	Bonnet Gasket	EPDM ASTM D2000
7	Bonnet	Ductile Iron ASTM A536
8	Packing	PTFE Graphite
9	Threaded Rod	Stainless Steel 304
10	Gland	Ductile Iron ASTM A536 65-45-12
11	Gland Nut	Stainless Steel 304
12	Yoke	Ductile Iron ASTM A536 65-45-12
13	Handwheel	Ductile Iron ASTM A536 65-45-12
14	Handwheel Nut	C95400 Aluminum Bronze
15	Stem	Stainless Steel 304
16	Bolt	Stainless Steel 304
17	Yoke Screw	C95400 Aluminum Bronze
18	NPT Plug	C95400 Aluminum Bronze



DIMENSIONS

SIZE		L		H OPEN		H CLOSED		A		D		E	
IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.
2.5	65	7.48	190	16.96	431	14.56	370	0.70	18	7	178	7.87	200
3	80	7.99	203	18.46	469	16.53	420	0.74	19	7.51	191	7.87	200
4	100	9.01	229	21.22	539	17.59	447	0.94	24	9.01	229	10.24	260
6	150	10.51	267	28.18	716	23.89	607	0.98	25	10.98	279	12.39	315
8	200	11.49	292	36.29	922	29.68	754	1.14	29	13.50	343	14.75	375
10	250	12.99	330	44.64	1134	35.03	890	1.18	30	15.98	406	16.37	416
12	300	14.01	356	51.96	1320	40.59	1031	1.25	32	19.01	483	17.51	445

WEIGHTS

VALVE SIZE	2.5"	3"	4"	6"	8"	10"	12"
WEIGHT LB (KG)	46.3 (21)	64 (29)	79.4 (36)	136.7 (62)	213.8 (97)	315.3 (143)	425.5 (193)

All information contained herein is supplied by manufacturer and deemed to be accurate. Information is subject to change without notice. Purchaser is responsible for proper installation, use and maintenance of product. American Fire Control USA, LLC. passes on manufacturer's warranty but extends no other warranty. All products sold by American Fire Control USA, LLC. are subject to its full terms and conditions of sales as published and available on request. Any warranty made extends to original purchaser and is not assignable or transferable.





The American A-3150 Swing check valves are designed only for fire protection services, also referred to as non-return, retention, or one-way valve, a check valve is designed to only allow the flow of water in one direction, a swing type clapper is found inside the valve which is spring loaded preventing water from flowing in a return direction.



SPECIFICATIONS

- Meet or exceed the requirements of AWWA C508 Standard,
- Full waterway designed
- Max working pressure:300PSI (21 bar) /Max testing pressure 600PSI (42bar)
- Approvals:UL listed, FM approved
- Flanged ends to ANSI B 16.1 class 125 or ANSI B16.42 class 150
- Min/Max working temperature: 0°C to 80°C (32°F to 176°F)



Jacobs

TECHNICALLY ACCEPTABLE
30/07/23

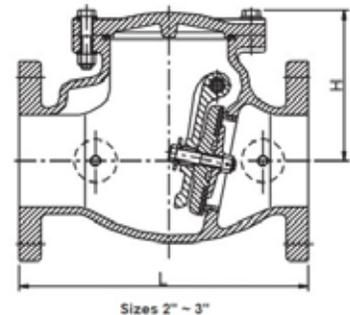
APPROVAL OF THIS DOCUMENT DOES NOT RELIEVE VENDOR OF HIS RESPONSIBILITY FOR DESIGN, FABRICATION, AND PERFORMANCE OF THE EQUIPMENT FURNISHED.

COATINGS

- The interior and exterior of the valve coated with fusion-bonded epoxy in accordance with ANSI/AWWA C550

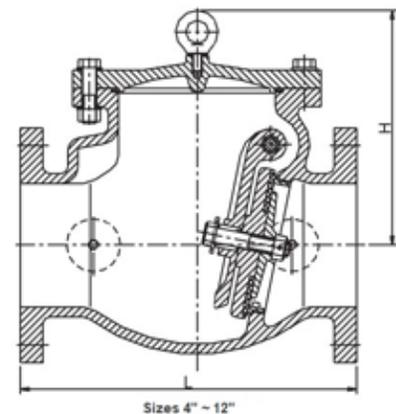
PART LIST

ID	PART	MATERIAL
1	Valve Body	Ductile Iron ASTM, A536 65-45-12
2	Cover	Ductile Iron ASTM, A536 65-45-12
3	Gasket	EPDM ASTM D2000
4	Clapper Arm	Ductile Iron ASTM, A536 65-45-12
5	Disc Ring	EPDM ASTM D2000
6	Disc	Ductile Iron ASTM, A536 65-45-12
7	Retainer Washer	Bronze ASTM A148
8	Hinge Pin	Stainless Steel ASTM A276, 304
9	Pin Plug	Stainless Steel ASTM A276, 304
10	Seat Ring	Bronze ASTM A148



DIMENSIONS

IN	DN	L	H
2"	DN50	8"	5.6"
2.5"	DN65	8.5"	5.8"
3"	DN80	9.5"	6.4"
4"	DN100	11.5"	6.8"
6"	DN150	14"	9.2"
8"	DN200	19.5"	11.8"
10"	DN250	24.5"	13.7"
12"	DN300	27.5"	16.5"



WEIGHTS

VALVE SIZE	2"	2.5"	3"	4"	6"	8"	10"	12"
WEIGHT LB (KG)	33(15)	44(20)	55(25)	75(34)	143(65)	251(114)	408(185)	617(280)

All information contained herein is supplied by manufacturer and deemed to be accurate. Information is subject to change without notice. Purchaser is responsible for proper installation, use and maintenance of product. American Fire Control USA, LLC. passes on manufacturer's warranty but extends no other warranty. All products sold by American Fire Control USA, LLC. are subject to its full terms and conditions of sales as published and available on request. Any warranty made extends to original purchaser and is not assignable or transferable.



Submittal #COM-1873.0 - Fire Fighting Valves COM - Material Submittal

Distribution Summary

Distributed by Ubada Dange (Contractor Main - Lynx Contracting Company) on Oct 11, 2023

To Omar Turk (Contractor Main - Lynx Contracting Company), Abdullah Shalan (Contractor Main - Lynx Contracting Company), Read Sabbah (Contractor Main - Lynx Contracting Company)

Message FOR CONST. --REFER TO THE CONSULTANT COMMENTS

Attachments [Jawhart Jeddah Mall FF Valve MTS Rv-0.pdf](#), [12 - MAR - firefighting valves.pdf](#)

Name	Response	Attachments	Comments
Naseem Yousef Anaqerh (Consultant - Echo Architecture)	Approved as Noted		Approved as noted subject to : - all materials are UL/FM approved . - all material to comply with specification and project documents. - Alarm Check Valve type H with variable pressure trim with retard chamber and motor gong . - Butterfly valves for shops only . - follow detail of installation as per drawing and NFPA recommendation .
Ahmad Basheer (Contractor Main - Lynx Contracting Company)	For Record Only		

Revision	0	Submittal Manager	Ubada Dange (Contractor Main - Lynx Contracting Company)
Status	Closed	Date Created	Oct 1, 2023
Issue Date	Oct 1, 2023	Spec Section	COM - Material Submittal
Responsible Contractor	SC - Injaz Technical for Contracting Est.	Received From	
Received Date		Submit By	
Final Due Date	Oct 9, 2023	Lead Time	
		Cost Code	5112500-15500 - FIRE PROTECTION
Location	Mechanical	Type	Manufacturer Data & Specs
Approvers	Nisar Ahmed (Contractor Main - Lynx Contracting Company), Ali Danon (Contractor Main - Lynx Contracting Company), Ahmad Basheer (Contractor Main - Lynx Contracting Company), Syed Fizan (Contractor Main - Lynx Contracting Company), Marko Injac (Contractor Main - Lynx Contracting Company), Feras Jabr (Contractor Main - Lynx Contracting Company), Naseem Yousef Anaqerh (Consultant - Echo Architecture), Mohammed Jamal (Consultant - Echo Architecture), Ibrahim Quraishi (Consultant - Echo Architecture)		
Ball in Court			
Distribution	Syed Fizan (Contractor Main - Lynx Contracting Company)		
Description	Submitted Material List: 1) OS&Y Gate Valve - American Fire Control. 2) Swing Check Valve - American Fire Control.		

- 3) Supervisory Switch - Potter.
- 4) Flow Switch - Potter.
- 5) Test & Drain Valve - HD Fire.
- 6) Pressure Gauge - AGF.
- 7) Alarm Check Valve - HD Fire.
- 8) Butterfly Valve - American Fire Control.

Submittal Workflow

Name	Sent Date	Due Date	Returned Date	Response	Attachments
General Information Attachments					12 - MAR - firefighting valves.pdf Jawhart Jeddah Mall FF Valve MTS Rv-0.pdf
Ubada Dange		Oct 3, 2023	Oct 1, 2023	Submitted	
Nisar Ahmed	Oct 1, 2023	Oct 5, 2023	Oct 2, 2023	For Record Only	
Ali Danon	Oct 1, 2023	Oct 5, 2023		Pending	
Ahmad Basheer	Oct 2, 2023	Oct 7, 2023	Oct 10, 2023	For Record Only	
Comment	for approval				
Syed Fizan	Oct 2, 2023	Oct 7, 2023		Pending	
Marko Injac	Oct 2, 2023	Oct 7, 2023		Pending	
Feras Jabr	Oct 2, 2023	Oct 7, 2023		Pending	
Naseem Yousef Anaqerh	Oct 10, 2023	Oct 9, 2023	Oct 11, 2023	Approved as Noted	
Comment	Approved as noted subject to : - all maerials are UL/FM approved . - all material to comply with specifaction and project documents. - Alarm Check Valve type H with variable pressure trim with retard chamber and motor gong . - Butterfly valves for shops only . - follow detail of installtion as per drawing and NFPA recommendation .				
Mohammed Jamal	Oct 10, 2023	Oct 9, 2023		Pending	
Ibrahim Quraishi	Oct 10, 2023	Oct 9, 2023		Pending	



KING ABDULAZIZ INTERNATIONAL
AIRPORT
JEDDAH- SAUDI ARABIA
HAJJ TERMINAL COMPLEX



Project Name : Fire Protection System
 Project ID : UDC-P-528 Contractor : UNITED DIAMOND CONTRACTORS Co.
 Contract NO :
 Reference No : UDC-P528-ME-FF-MS-008 Revision No : 0 Date : 12-Feb-24
 Subject : Fire Fighting Valves - American Fire Control - AFC
 Specification & BOQ Reference :

DOCUMENTS	DRAWINGS	MATERIALS
Specify Technical Submittal	<input type="checkbox"/> Design Drawings <input type="checkbox"/> Shop Drawings <input type="checkbox"/> As Built Drawings	<input checked="" type="checkbox"/> Materials Submittals <input type="checkbox"/> Calculation <input type="checkbox"/> Samples

Attachments (Hard Copies & PCMs)

Documents	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Soft Copy / CD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Drawings	<input type="checkbox"/> Yes <input type="checkbox"/> No	Samples	<input type="checkbox"/> Yes <input type="checkbox"/> No
Technical Data	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Others	

Reviewers (RC)	Initial Approval				Remarks
	A	B	C	D	
<input type="checkbox"/> Architectural					
<input type="checkbox"/> Structural					
<input checked="" type="checkbox"/> Mechanical					* OY&Y Gate Valves - American Fire Control - AFC
<input type="checkbox"/> Electrical					
<input type="checkbox"/> Contract Administrator					
<input type="checkbox"/> PCM & Planning					
<input type="checkbox"/> Quality Assurance					
<input type="checkbox"/> Safety					
<input type="checkbox"/> Surveying					
<input type="checkbox"/> Others					

Final Approval Code:
 A - Approved C - Revise and Resubmit
 B - Approved As Noted, Resubmittal Not Required D - Not Approved

Consultant's Comments
 - follow The Instructions of NFBA Code.

UDC Representative		Consultant or Client Representative	
Name :	Eng. Mahmood Ismaeil	Name :	Ahmed Bgala
Signature :		Signature :	
Date :	12-Feb-24	Date :	19/2/2024
Stamp :		Stamp :	

0202 / / التاريخ: 19/2/2024

Documentation
Review & Approval

اسم المشروع : إنشاء القرية الشعبية - اشبيلية



Q03/2022

رقم المشروع

المقاول

المطور

الاستشاري

المرشد للمقاولات والبريكاست
ALMARSHAD CONTRACTING & PRECAST

شركة حدة اشبيلية
للإستثمار

المركز المعماري
ARCH. CENTRE

REQUEST FOR MATERIALS APPROVAL

طلب اعتماد مواد

2/11/2023

تاريخ التقديم:

M-MAT-14

رقم التقديم :

ميكانيكا

نوع التقديم :

REV

0

AMEICAN FIRE CONTROL

نوع المادة المقدمة :

مواصفات المادة المقدمة للإعتماد (حسب العقد) :

جداول الكميات والمواصفات

15-1

رقم البند:

رقم الصفحة:

15-100

رقم المواصفه:

عينات

كامل المشروع

مكان الاستخدام:

هاتف

المصنع أو الوكيل

بلد المنشأ

عينات

كامل المشروع

المادة

م

6991226



شركة الاعمال العربية للمقاولات والبريكاست

امريكا

(B)

TEST & DRAIN VALVE (HD FIRE)

1

امريكا

(B)

BUTTERFLY VALVE (AMEICAN FIRE CONTROL)

2

امريكا

(B)

FLOW SWITCH (POTTER)

3

امريكا

(B)

PRESSURE GAUGE (AGF)

4

Contractor's Stamp & Sin

توقيع و ختم المقاول:

مدير المشروع: م/ غسان الحسين

المهندس المختص: م/ السيد هيكل

التوقيع:

التوقيع:

التاريخ: 2/11/2023

التاريخ: 2/11/2023

ملاحظات و توصيات الإستشاري :

التوصية بالموافقة مع ملاحظات B

التوصية بالموافقة مع ملاحظات A

التوصية بالموافقة A

RECEIVED

04 NOV 2023

المرشد للمقاولات

مشروع القرية الشعبية

لا مانع من اعتماد المسودات المحرقة طبقاً للأمر

① محسب لإختيار د (ZCVA) من نوع (HD Fire) (UL-FM)

② محسب فرائض على Tansersub و متصل لوحة إختار الحريق (UL-FM)

③ Flow switch من نوع (Potter) - (UL-FM) لنفاث (ZCVA)

④ حاد صنف من نوع AGF - (UL-FM) ويستند لجميع نقاط إختيار (ZCVA)

أما مضاف الحريق و مبرر عدم إختياره المنسأ عند إلتوريد من موقع مع إستحداث إصقان

مدير المشروع: م/ صلاح كامل

المهندس المختص: م/ سامح نصير

التوقيع:

التوقيع:

التاريخ: 2023/11/4

التاريخ: 2023/11/4

المركز المعماري
ARCH.CENTRE
مشروع القرية الشعبية في

إحداثيات الموقع: 36° 07' 00" N 5° 00' 00" W

إحداثيات الموقع: 36° 07' 00" N 5° 00' 00" W

2

1

ملاحظات هامه :

مشروع
استكمال متطلبات الدفاع المدني لإصلاحية الطائفة

طلب اعتماد مواد المشروع

الطلب: مواد البناء طلب - كمبرية العامة للسجون
الدوران الرئيسي - مجموعة من لاني السعودية
الإستشاري الرئيسي: شركة دار جسيمة
استشاري أعمال الصلحة: مكتب ماضي الاستشارات
مقابل أعمال الدفاع المدني شركة أمانة المدن السعودية

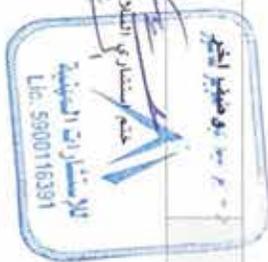
التاريخ	اسم المشروع	رقم المشروع	رقم التقييم
2024-4-21	استكمال طلبات طرق التسي وإصلاحية طلب	1	1

مقدم الي	مكتب عاجور للاستشارات الهندسية	مواد	مواد	مواصفات	نوع التقييم
اخرى	وثيقة نظام الجودة	مطابق لطلب	معلومات	مواصفات	مواصفات

طلب طلب
الشركات الصممة
American Fire Control, Tyro, Viking AHD Fire

مواصفات المنتج الفنية + تقرير اختيار
1- بناءً على أن الشركة كانت بجانب قبول الأخطاء على كل شيء
2- تم الرجوع في الإرسال
3- إكمال

حالة المراجعة	قيد الانتظار	موافقة	وافق كصا لوحظ	تم إعادة الإرسال الرخص	غير مكتمل - إعادة الإرسال





MAERSK

MAERSK
HEAD OFFICEJEDDAH
(RASD BUILDING)



UNITED DIAMOND CONTRACTORS CO.
شركة الماس والاساس
ذ.م.ك. (شركة مساهمة)
For Commission And Award

Project Name : MAERSK HEAD OFFICEJEDDAH (RASD BUILDING)

Project ID : UDC-P-885 Contractor : UNITED DIAMOND CONTRACTORS Co.

Contract NO. : Reference No : UDC-P885-ME-DR-MAT-007 Revision No : 0 Date : 19-Jun-23

Subject : FF - Zone Control Valve

Specification & BOQ Reference :

DOCUMENTS

Specify Technical Submittal

Design Drawings
 Shop Drawings
 As Built Drawings

MATERIALS

Materials Submittals
 Calculation
 Samples

Documents Yes No

Soft Copy / CD Yes No

Drawings Yes No

Samples Yes No

Technical Data Yes No

Others Yes No

REVISIONS (BS7)

Revisions (BS7)	Initial Approval				Remarks
	A	B	C	D	
<input type="checkbox"/> Architectural					
<input type="checkbox"/> Structural					
<input checked="" type="checkbox"/> Mechanical					Fire Fighting - Zone Control Valve - American Fire Control - Mueller - Potter - Ashcroft - AGF - Giacomini
<input type="checkbox"/> Electrical					
<input type="checkbox"/> Contract Administrator					
<input type="checkbox"/> PCM & Planning					
<input type="checkbox"/> Quality Assurance					
<input type="checkbox"/> Safety					
<input type="checkbox"/> Surveying					
<input type="checkbox"/> Others					

Final Approval Gate:

A - Approved

B - Approved as Noted, Resubmittal Not Required

C - Revise and Resubmit

D - Not Approved

Consultant's Comments

Accepted.

UDC Representative

Name : Mahmoud Isamell Mohamed

Signature :

Date :

Stamp :

Consultant or Client Representative

Name :

Signature :

Date :

Stamp :

Masoud
20/06/23

EXHIBIT

Design Department

Review & Approval

Documentation

Material List

Sr.#	Description	Brand Name	Model
1.1	OS&Y Gate Valve	American Fire Control	A-3000
1.2	OS&Y Gate Valve	Mueller	R-MFP2
2	Swing Check Valve	American Fire Control	A-3150
3	Water Flow Switch	Potter	VSR
4	Supervisory / Tamper Switch	Potter	OSYSU
5.1	Pressure Guge	Ashcroft	1005P
5.2	Pressure Guge	AGF	7500
6.1	Test & Drain Valve	American Fire Control	TDF-100
6.2	Test & Drain Valve	GIACOMINI	A61

Material Submittal

Submittal Ref:	RAC-AEC-MK27-TSL-MEC-0035	Rev No:	00	Date:	04/07/2024
Program Title:	Developmental Housing Program of Saudi Arabia				
Project Title:	AL-SADAN, Jeddah, P1&P3, (Contract # 23001513)				
The Employer:	National Housing Company (NHC)				
Third party:	Dar AL Riyadh				
Consultant:	Al Mnabr Consulting Engineering				
Contractor:	REZAIK ABDULAH SAEID ALGEDRAWY ALSEBAITY AND PARTNERS COMPANY LTD.				

Guidance notes:
The submission should only include documents which are deemed compliant with the SOPR, Applicable Codes and have been reviewed and coordinated between the Contractor and Designer (and Engineer if applicable) and should include any authorised variations/changes as instructed.

Review Discipline:

Architectural	<input type="checkbox"/>	Structural/Civil	<input type="checkbox"/>	MECH/Plumb	<input checked="" type="checkbox"/>	Elec.	<input type="checkbox"/>	Others (specify)	<input type="checkbox"/>
---------------	--------------------------	------------------	--------------------------	------------	-------------------------------------	-------	--------------------------	------------------	--------------------------

Material Details:		DAR AL RIYADH Review	
Notes: DAR AL RIYADH review will recommend either Objection or No Objection to each item. Non-Objected shall be issued to the NHC with the recommendation to approve. Objected shall be returned to the Contractor with an Objection report.			
Proposed by: REZAIK AL GEDRAWY CO.		The Consultant (Designer & The Engineer)	
Sign/Stamp		Sign/Stamp	

Material Information		Checklist	
Location/element Ref:	Mechanical Works	Drawing/Specification	<input type="checkbox"/>
Specified Material:	FIREFIGHTING VALVES AND SPRINKLER SYSTEM	Product Datasheet	<input checked="" type="checkbox"/>
Proposed Material:	FIREFIGHTING VALVES AND SPRINKLER SYSTEM	Compliance Certificates/Documents	<input checked="" type="checkbox"/>
Manufacturer & Product code ref:	United Diamond Contractors Company.	Compliance Statement	<input checked="" type="checkbox"/>
Remarks/Notes:	Pre-Qualification Approved - RAC-AEC-MK27-SAT-MEC-0027	Sample (available)	<input checked="" type="checkbox"/>

THE ENGINEER*	Review Date:		Rejected	Approved	Signed:	
	Print Name:					

PMC	Recommendations to NHC Date:		Objection	No Objection	Signed:	
	Print Name:			✓		

NHC	Review Date:		Objection	No Objection	Signed:	
	Print Name:					

Supplier Approval Request

Submittal Ref:	RAC-AEC-MK27-SAT-MEC-0027	Rev No:	00	Date:	20/02/2024
Program Title:	Developmental Housing Program of Saudi Arabia				
Project Title:	AL-SADAN, Jeddah, P1&P3, (Contract # 23001513)				
The Employer:	National Housing Company (NHC)				
Third party:	Dar AL Riyadh				
Consultant:	Al Mnabr Consulting Engineering				
Contractor:	REZAIK ABDULAH SAEID ALGEDRAWY ALSEBAITY AND PARTNERS COMPANY LTD.				

Guidance notes:

The submission should only include documents which are deemed compliant with the SOPR, Applicable Codes and have been reviewed and coordinated between the Contractor and Designer (and Engineer if applicable) and should include any authorised variations/changes as instructed.

Review Discipline:

Architectural	<input type="checkbox"/>	Structural/Civil	<input type="checkbox"/>	MECH/Plumb	<input checked="" type="checkbox"/>	Elec.	<input type="checkbox"/>	Others (specify)	<input type="checkbox"/>
---------------	--------------------------	------------------	--------------------------	------------	-------------------------------------	-------	--------------------------	------------------	--------------------------

Document Details: ✓

DAR AL RIYADH Review

Notes: DAR AL RIYADH review will recommend either Objection or No Objection to each item. Non-Objected shall be issued to the NHC with the recommendation to approve. Objected shall be returned to the Contractor with an Objection report.

The Title: Pre-Qualification of United Diamond Contractors Co.

Proposed by: REZAIK AL GEDRAWY CO.

The Consultant (Designer & The Engineer)

Sign/Stamp		Sign/Stamp	
------------	--	------------	--

S. No:	Document Title/Description:	Reference No:	Rev No:	Remarks
1	Pre-Qualification of United Diamond Contractors Co.			Attached file

Reviewed for compliance by:

Notes: The Engineer* shall review and approve when the Supervision Consultant differs from the Designer only. DAR AL RIYADH shall only issue recommendations based upon 'No Objection' to the Client. Any 'Objections' shall be returned to the Contractor with a review report for action and may be copied to the NHC when necessary.

THE ENGINEER*	Review Date:		Rejected	Approved	Signed:	
	Print Name:					

PMC	Recommendations to NHC Date:		Objection	No Objection	Signed:	
	Print Name:			✓		

NHC	Review Date:		Objection	No Objection	Signed:	
	Print Name:					

TECHNICAL SUBMITTAL

Project Name	:	El Sadan Society Jeddah
Client	:	National Housing Company
Consultant	:	Dar Al Riyadh
FF Consultant	:	Al Mnabr Consultng
Main Contractor	:	Rezaik Al Gedrawy Company
FF Supplier	:	United Diamond Contractors
Scope Of Work	:	1-Fire Fighting Valves – AFC 2-Fire Fighting Valves 3-Sprinkler System
Ref. #	:	UDC-P698-ME-FF-MAT-002

Date : 1 July 2024



INDEX

Sr. #	Description
1	Fire Fighting Valves – AFC
2	Fire Fighting Valves
3	Sprinkler System



The American AG-3000 Grooved OS&Y (Outside Screw and Yoke) Gate Valve is a reliable and robust valve designed for various industrial applications. This valve complies with the AWWA C515 standard ensuring high-quality performance and adherence to industry standards. It features a heavy-duty handwheel and attachment nut and high-quality graphite.

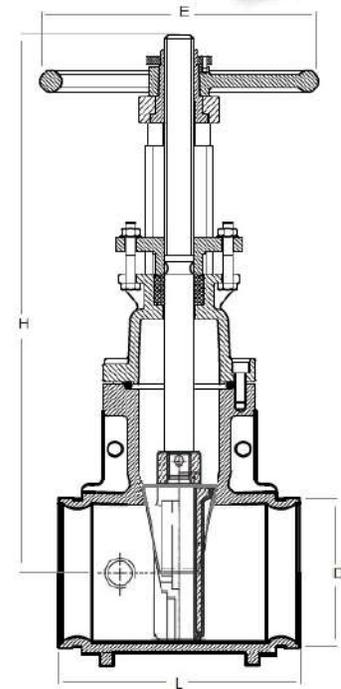


SPECIFICATIONS

- Complies with AWWA C515 standard
- End Connections: Groove to AWWA C606
- Size Range: Available in sizes ranging from 2.5" to 12"
- Max working pressure: 300PSI (21 bar) /Max testing pressure: 600PSI (42bar)
- Working Temperature: 0°C to 80°C (32°F to 176°F)
- Fusion-bonded epoxy coating inside and outside complying with AWWA C550 standards
- Approvals: UL listed , FM approved

PART LIST

ID	PART	MATERIAL
1	Valve Body	Ductile Iron ASTM A536 65-45-12
2	Resilient Wedge	Ductile Iron ASTM A536/EPDM ASTM D2000
3	Wedge Nut	Stainless Steel 304
4	Dowel Pin	Stainless Steel 304
5	Stem Back Seat O-Ring	EPDM ASTM D2000
6	Bonnet Gasket	EPDM ASTM D2000
7	Bonnet	Ductile Iron ASTM A536
8	Packing	PTFE Graphite
9	Threaded Rod	Stainless Steel 304
10	Gland	Ductile Iron ASTM A536 65-45-12
11	Gland Nut	Stainless Steel 304
12	Yoke	Ductile Iron ASTM A536 65-45-12
13	Handwheel	Ductile Iron ASTM A536 65-45-12
14	Handwheel Nut	C95400 Aluminum Bronze
15	Stem	Stainless Steel 304
16	Bolt	Stainless Steel 304
17	Yoke Screw	C95400 Aluminum Bronze
18	NPT Plug	C95400 Aluminum Bronze



DIMENSIONS

SIZE		L		H OPEN		H CLOSED		E		D	
IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.
2.5	65	7.48	190	16.96	431	14.56	370	7.87	200	2.99	76
3	80	7.99	203	18.46	469	16.53	420	7.87	200	3.5	88.9
4	100	9.01	229	21.22	539	17.59	447	10.24	260	4.5	114.3
6	150	10.51	267	28.18	716	23.89	607	12.39	315	6.62	168.3
8	200	11.49	292	36.29	922	29.68	754	14.75	375	8.62	219.1
10	250	12.99	330	44.64	1134	35.03	890	16.37	416	10.74	273
12	300	14.01	356	51.96	1320	40.59	1031	17.51	445	12.75	323.9

WEIGHTS

VALVE SIZE	2.5"	3"	4"	6"	8"	10"	12"
WEIGHT LB (KG)	36.4(16.5)	48.5(22)	57.3(26)	105.8(48)	158.7(72)	240.3(109)	337.3(153)

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The American AG-3500 Grooved swing check valves are designed to exclusively permit the flow of water in one direction. Inside the valve a swing-type clapper equipped with a spring mechanism ensures that water can only move in the intended direction preventing any backflow. This critical feature is essential for maintaining the effectiveness and reliability of fire protection systems.



SPECIFICATIONS

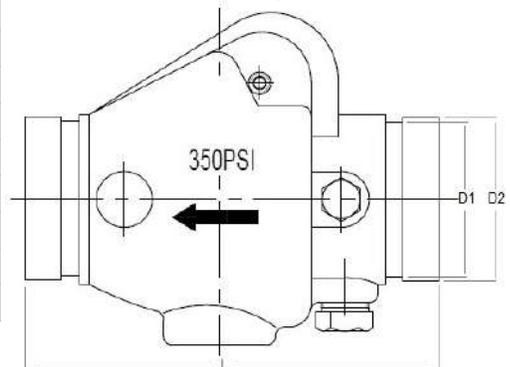
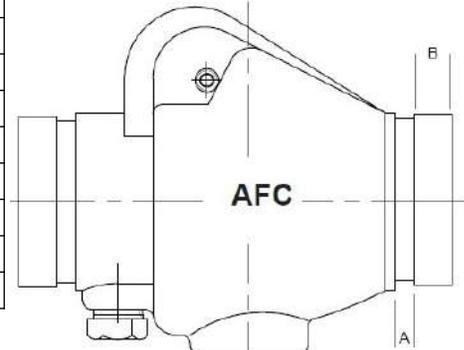
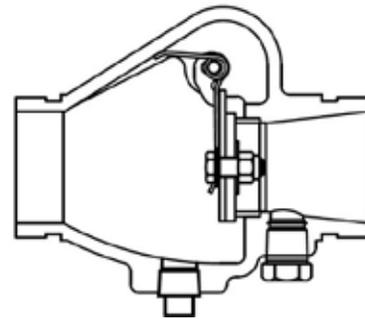
- Grooved dimensions comply with metric or AWWA C606 standard
- Max working pressure:350PSI (24 bar) /Max testing pressure 700PSI (48 bar)
- Approvals: UL listed, FM approved
- Min/Max working temperature: 0°C to 80°C (32°F to 176°F)
- Application: indoor and outdoor use
- Installation: horizontal or vertical

COATINGS

- The interior and exterior of the valve coated with fusion-bonded epoxy in accordance with ANSI/AWWA C550 or painting according to request

PART LIST

ID	PART	MATERIAL
1	Valve Body	Ductile Iron ASTM, A536 65-45-12
2	Clapper	Stainless Steel ASTM A276, 304
3	Coil Spring	Stainless Steel ASTM A276, 304
4	Nut	Stainless Steel ASTM A276, 304
5	Bolt	Stainless Steel ASTM A276, 304
6	Spring Washer	Stainless Steel ASTM A276, 304
7	Seal Ring	EPDM ASTM D2000
8	Seat	Bronze , C95400
9	Drain Plug	Stainless Steel ASTM A276, 304
10	Pin Plug	Stainless Steel ASTM A276, 304
11	Gasket	EPDM ASTM D2000
12	Hinge Pin	Stainless Steel ASTM A276, 304



DIMENSIONS

IN	DN	A	B	D1	D2	L
2"	DN50	0.31"	0.63"	2.25"	2.37"	6.65"
2.5"	DN65	0.31"	0.63"	2.84"	2.99"	7.12"
3"	DN80	0.31"	0.63"	3.34"	3.50"	7.79"
4"	DN100	0.37"	0.63"	4.33"	4.50"	8.42"
6"	DN150	0.37"	0.63"	6.33"	6.62"	10.63"
8"	DN200	0.44"	0.75"	8.44"	8.63"	12.80"
10"	DN250	0.50"	0.75"	10.75"	10.55"	17.99"
12"	DN300	0.50"	0.75"	12.75"	12.53"	21.06"

WEIGHTS

VALVE SIZE	2"	2.5"	3"	4"	6"	8"	10"	12"
WEIGHT LB	6.17	10.14	13.66	19.62	44.75	78.70	124.12	173.72
(KG)	(2.80)	(4.60)	(6.20)	(8.90)	(20.30)	(35.70)	(56.30)	(78.80)

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DATA SHEET

A-3000 OS&Y Resilient Wedge Gate Valve - Flanged Ends



AMERICAN FIRE CONTROL
QUALITY IS A PRIORITY

The American A-3000 Flange OS&Y (Outside Screw and Yoke) Gate Valve is a reliable and robust valve designed for various industrial applications. This valve complies with the AWWA C515 standard ensuring high-quality performance and adherence to industry standards. It features a heavy-duty handwheel and attachment nut and high-quality graphite packing.

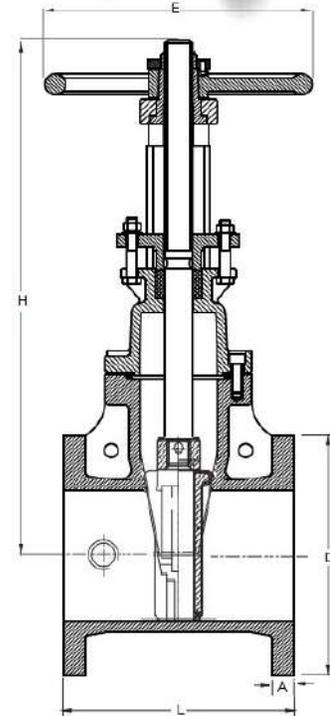


SPECIFICATIONS

- Complies with AWWA C515 standard
- Flanged end to ANSI B16.1 Class 125/ANSI B16.42 Class 150/BS EN1092-2 PN16
- Size Range: Available in sizes ranging from 2.5" to 12"
- Max working pressure: 300PSI (21 bar) /Max testing pressure: 600PSI (42bar)
- Working Temperature: 0°C to 80°C (32°F to 176°F)
- Fusion-bonded epoxy coating inside and outside complying with AWWA C550 standards
- Approvals: UL listed , FM approved

PART LIST

ID	PART	MATERIAL
1	Valve Body	Ductile Iron ASTM A536 65-45-12
2	Resilient Wedge	Ductile Iron ASTM A536/EPDM ASTM D2000
3	Wedge Nut	Stainless Steel 304
4	Dowel Pin	Stainless Steel 304
5	Stem Back Seat O-Ring	EPDM ASTM D2000
6	Bonnet Gasket	EPDM ASTM D2000
7	Bonnet	Ductile Iron ASTM A536
8	Packing	PTFE Graphite
9	Threaded Rod	Stainless Steel 304
10	Gland	Ductile Iron ASTM A536 65-45-12
11	Gland Nut	Stainless Steel 304
12	Yoke	Ductile Iron ASTM A536 65-45-12
13	Handwheel	Ductile Iron ASTM A536 65-45-12
14	Handwheel Nut	C95400 Aluminum Bronze
15	Stem	Stainless Steel 304
16	Bolt	Stainless Steel 304
17	Yoke Screw	C95400 Aluminum Bronze
18	NPT Plug	C95400 Aluminum Bronze



DIMENSIONS

SIZE		L		H OPEN		H CLOSED		A		D		E	
IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.
2.5	65	7.48	190	16.96	431	14.56	370	0.70	18	7	178	7.87	200
3	80	7.99	203	18.46	469	16.53	420	0.74	19	7.51	191	7.87	200
4	100	9.01	229	21.22	539	17.59	447	0.94	24	9.01	229	10.24	260
6	150	10.51	267	28.18	716	23.89	607	0.98	25	10.98	279	12.39	315
8	200	11.49	292	36.29	922	29.68	754	1.14	29	13.50	343	14.75	375
10	250	12.99	330	44.64	1134	35.03	890	1.18	30	15.98	406	16.37	416
12	300	14.01	356	51.96	1320	40.59	1031	1.25	32	19.01	483	17.51	445

WEIGHTS

VALVE SIZE	2.5"	3"	4"	6"	8"	10"	12"
WEIGHT LB (KG)	46.3 (21)	64 (29)	79.4 (36)	136.7 (62)	213.8 (97)	315.3 (143)	425.5 (193)

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The American A-3150 Swing check valves are designed only for fire protection services, also referred to as non-return, retention, or one-way valve, a check valve is designed to only allow the flow of water in one direction, a swing type clapper is found inside the valve which is spring loaded preventing water from flowing in a return direction.

SPECIFICATIONS

- Meet or exceed the requirements of AWWA C508 Standard,
- Full waterway designed
- Max working pressure:300PSI (21 bar) /Max testing pressure 600PSI (42bar)
- Approvals:UL listed, FM approved
- Flanged ends to ANSI B 16.1 class 125 or ANSI B16.42 class 150
- Min/Max working temperature: 0°C to 80°C (32°F to 176°F)

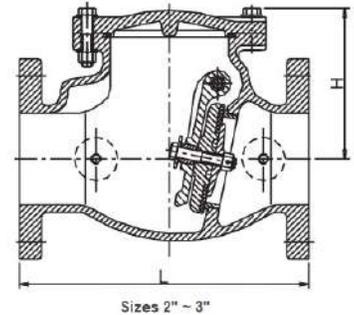


COATINGS

- The interior and exterior of the valve coated with fusion-bonded epoxy in accordance with ANSI/AWWA C550

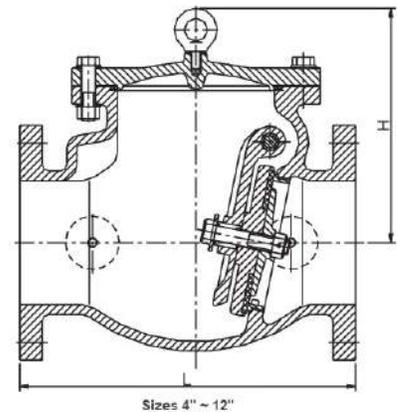
PART LIST

ID	PART	MATERIAL
1	Valve Body	Ductile Iron ASTM, A536 65-45-12
2	Cover	Ductile Iron ASTM, A536 65-45-12
3	Gasket	EPDM ASTM D2000
4	Clapper Arm	Ductile Iron ASTM, A536 65-45-12
5	Disc Ring	EPDM ASTM D2000
6	Disc	Ductile Iron ASTM, A536 65-45-12
7	Retainer Washer	Bronze ASTM A148
8	Hinge Pin	Stainless Steel ASTM A276, 304
9	Pin Plug	Stainless Steel ASTM A276, 304
10	Seat Ring	Bronze ASTM A148



DIMENSIONS

IN	DN	L	H
2"	DN50	8"	5.6"
2.5"	DN65	8.5"	5.8"
3"	DN80	9.5"	6.4"
4"	DN100	11.5"	6.8"
6"	DN150	14"	9.2"
8"	DN200	19.5"	11.8"
10"	DN250	24.5"	13.7"
12"	DN300	27.5"	16.5"



WEIGHTS

VALVE SIZE	2"	2.5"	3"	4"	6"	8"	10"	12"
WEIGHT LB (KG)	33(15)	44(20)	55(25)	75(34)	143(65)	251(114)	408(185)	617(280)

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	Design Change Notice	DCN No. JCP-DCN-0106
	JAFURAH COGENERATION PLANT	GRADE: A

REQUESTER :

CIVIL ARCHI. MECH. ELEC. I&C PIPING Others ()

REFERENCE DOCUMENT / DCN NO.(*)	REV	REMARKS / TITLE
JCP-YT01-00SGA-130003	1	HYDRANT, WATER MONITOR & VALVES MATERIAL SUBMITTAL
JCP-DCN-0106		Previous latest DCN No.

REASONS FOR CHANGE:

HYDRANT Valve from “American Fire Control” is added to this submittal as the approved brand from “Viking” are facing problems in supplying within the targeted schedule. The selected new brand “American Fire Control” is UL-listed / FM-approved as well and is suitable for this application.

EXISTING CONDITION:

Control Valves & Devices | Hydrants & Risk Equipment | Fire Hydrant | HW Wet Barrel Fire Hydrant



Approvals 	Maximum working pressure 11.2 bar (162 psi)
Maximum working temperature 0°C to 80°C	Connections 4" (DN100) Flanged (ANSI B16.5) / PN16
Weight 68 kg	Outputs - 1 x Pumper Outlet - 4 x 1.5" NPT Outlet - 2 x 1.5" NPT Outlet - 2 x 1.5" NPT Outlet
Material (body) Cast Iron	Finish Reddish Primer painted name enamel letter color
Specifications Conforms to ISO 7 AWWA C550	Part Numbers 4176 (100-1) HW-A-JAG2

Some data hydrant complies with a hydrant standard.

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DESCRIPTION OF CHANGE

DATA SHEET  **AMERICAN FIRE CONTROL**

FW-9000 Wet Barrel Fire Hydrant

American AFC FW-9000 Wet Barrel Hydrants provide a connection point for firefighters to tap into a water supply. Wet Barrel Hydrants are used in climates where freezing is not an issue. The simple construction involves the mechanical parts of a wet barrel hydrant being above ground, with a main valve to prevent any debris from entering the hydrant. There is water in the barrel and hydrant at all times.

SPECIFICATIONS

- Design and materials comply with AWWA C503
- Flanges conform to ASTM B16.5 class 150 (6")
- Fusion bonded epoxy coated inside and outside per AWWA C550
- 250 PSI working pressure factory tested 100% to 500 PSI
- Working temperature: 0°C to 80°C (32°F to 176°F)
- (1) 4.5" pumper nozzle and (2) 2.5" hose nozzle
- Designed to prevent damage to main valve if hit accidentally
- UL listed and FM approved



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OWNER'S COMMENTS

Status-1 : Approved

Comment specified by Owner after review

1. Noted

PREPARED BY		25.09.24
CHECKED BY		25.09.24
APPROVED BY		25.09.24
OWNER'S REVIEW	NAME :	DATE :

DOCUMENT INCORPORATION (DOCUMENT(S) TO BE REVISED TO INCORPORATE DCN)

DOCUMENT NO.	REV NO.	REMARKS/TITLE
JCP-YT01-00SGA-130003	1INT1	HYDRANT, WATER MONITOR & VALVES MATERIAL SUBMITTAL

GRADE : A: Urgent major change

 B: Major change, not urgent

 C: Minor Change

Authorization Letter.

Date: October 28,2024

Ref.: 01027/24

Subject: Distribution in Saudi Arabia

To whom it may concern

This is to confirm that Azeidk Group is our authorized distributor in Saudi Arabia for American Fire Control's range of fire protection products.

Azeidk Group will be responsible for the distribution and support of our products throughout the Kingdom.

We trust that this information provides the reassurance you require. Should you need any further details or wish to discuss this matter further, please do not hesitate to contact us.

Yours sincerely,

Mark Smith
Sales & Marketing Director

