

# ACTUATION BOX ASSEMBLY

P/N: SHG00C1AB/C2AB/C3AB

## 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.



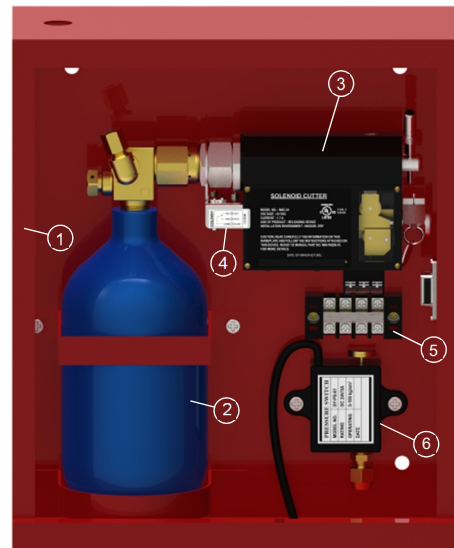
## TECHNICAL INFORMATION

Approvals for use with HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

Box material ..... Cold 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)
SHG00C1AB	310 x 135 x 360 (12.2 x 5.3 x 14.2)	4.5 (9.9)
SHG00C2AB	390 x 155 x 380 (15.4 x 6.1 x 15.0)	6.9 (15.2)
SHG00C3AB*	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
SHG00C1AB	Actuation box, size 310x135x360
SHG00C2AB	Actuation box, size 390x155x380
SHG00C3AB*	Actuation box, size 360x135x517

## Assembly components

Item	Part No.	Description
1	ACB-06-05 ACB-06-05b ACB-06-05c*	Actuation box enclosure (case) for SHG00C1AB Actuation box enclosure (case) for SHG00C2AB Actuation box enclosure
2	SHG00C01AC MAC-02'	(case) for SHG00C3AB CO <sub>2</sub> Actuation (pilot) cylinder for SHG00C1AB/C2 N <sub>2</sub> Actuation (pilot)
3	SHG0001SC	Solenoid cutter
4	SHG0001SS	Solenoid cutter supervisor
5	SHG001PS	Pressure switch (optional)
6	ACB-06-04 ACB-06-04b ACB-06-04c*	Terminal block, 4P Terminal block, 6P Terminal block, 8P (required for SHG00C3AB)
-	SHG001WL**	Remove/tamper seal (not shown)

\*Not UL Listed; Not FM Approved

Remove/tamper seal (not shown)

\*\*The remove/tamper seal is not needed when the solenoid cutter supervisor is installed.

**Actual product may differ from the images shown.**

# HEDS® AGENT CYLINDER ASSEMBLY

P/N: SHG024030/40/65/90/120/180

## DESCRIPTION

The HEDS® agent cylinder assembly stores liquid INNOVEX®227 (HFC-227ea) superpressurized with Nitrogen to 24.8 bars at 21°C. The 26.8 L, 40.2 L, 63 L, and 89 L cylinders are fitted with 40-mm discharge valve while the 115 L and 175 L 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 INNOVEX®227 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 system .....UL  
UL File Number: EX27878

Approvals for cylinder .....DOT-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.



HEDS® Agent Cylinder Assembly P/N:  
SHG024030/40/65/90/120/180

### 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		
SHG024030	26.8	13.3 – 25.6	40	350	608	508	20.3	Standard or 2n1 <sup>c</sup>
SHG024040	40.2	19.9 – 38.4	40	350	755	655	31.6	
SHG024065	63.0	31.2 – 60.6	40	350	1,005	905	52.9	
SHG024090	89.0	44.1 – 85.6	40	350	1,290	1,190	66.3	
SHG250120	115.4	57.2 – 111.0	50	350	1,610	1,495	83.6	
SHG250180	175.0	86.7 – 168.3	50	450	1512	1397	122.2	

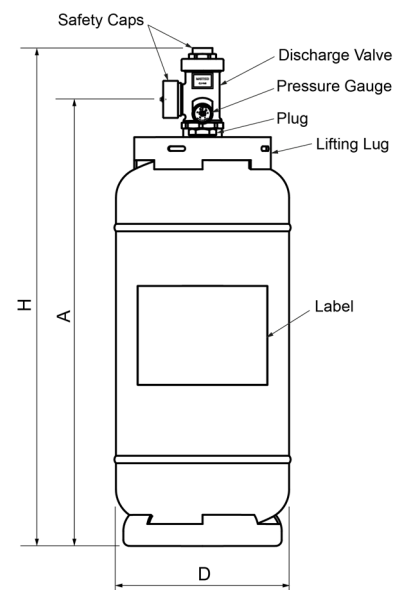
### US Units

Part No.	Water Capacity (lb)	Agent Fill Range (lb)	Valve Size (in)	Dimension (in)			Empty Weight (lb)	Pressure Gauge Option
				D	H	A		
SHG024030	59.1	29.3 – 56.4	1 1/2	13.8	23.9	20.0	44.8	Standard or 2n1 <sup>c</sup>
SHG024040	88.6	43.9 – 84.7	1 1/2	13.8	29.7	25.8	69.7	
SHG024065	138.9	68.8 – 133.6	1 1/2	13.8	39.6	35.6	116.6	
SHG024090	196.2	97.2 – 188.7	1 1/2	13.8	50.8	46.8	146.2	
SHG250120	254.4	126.1 – 244.7	2	13.8	63.4	58.9	184.3	
SHG250180	385.9	191.2 – 371.10	2	17.7	59.5	55.0	269.4	

<sup>a</sup>Fitted with only one centrally-located neckring (no Plug)

<sup>b</sup>Not FM Approved; See image for the lifting lug configuration

<sup>c</sup>Refer to pressure gauge datasheet for scope of approvals



Actual product may differ from the images shown.

# UHEDS® AGENT CYLINDER ASSEMBLY

P/N: SHG150180/SHG014090/SHG150120/SHG014065

## DESCRIPTION

The UHEDS® agent cylinder assembly stores liquid INNOVEX®227 (HFC-227ea) superpressurized with Nitrogen to 24.8 bars at 21°C. These cylinders are fitted with discharge valves identical to those in HEDS® 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 INNOVEX®227 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  
UL File Number: EX27878

Approvals for cylinder .....DOT-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, fill weight, and pressure gauge option when ordering.

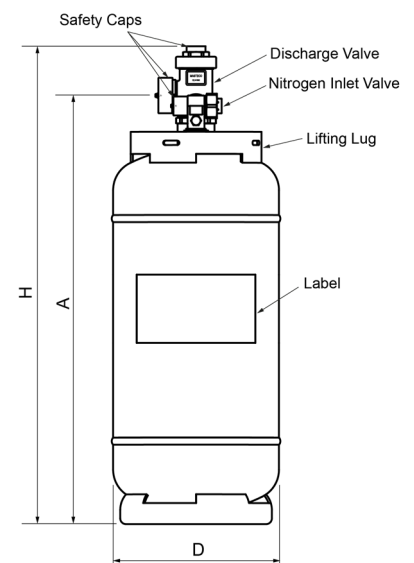
### SI Units

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		
SHG014065	SHG060N68	63.0	31.2 – 60.6	40	350	1,005	905	53.4	Standard or 2n1 <sup>b</sup>
SHG014090	SHG070N69	89.0	44.1 – 85.6	40	350	1,290	1,190	66.8	
SHG150120	SHG080N70	115.4	57.2 – 111.0	50	350	1,610	1,495	84.1	
SHG150180	SHG080N70	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		
SHG014065	SHG060N68	138.9	68.8 – 133.6	1 1/2	13.8	39.6	35.6	117.5	Standard or 2n1 <sup>b</sup>
SHG014090	SHG070N69	196.2	97.2 – 188.7	1 1/2	13.8	50.8	46.8	147.0	
SHG150120	SHG080N70	254.4	126.1 – 244.7	2	13.8	63.4	58.9	185.0	
SHG150180	SHG080N70	385.9	191.2 – 371.1	2	17.7	59.5	55.0	269.9	

<sup>a</sup>Not FM Approved; See image for the lifting lug configuration  
<sup>b</sup>Refer to pressure gauge datasheet for scope of approvals



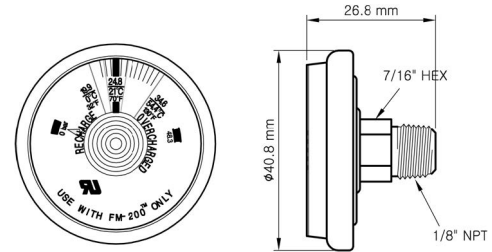
Actual product may differ from the images shown.

## AGENT CYLINDER PRESSURE GAUGES

P/N: SHGSG0F01/SHGLS0F01

### 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 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.


**INNOVEX®227 (HFC-227ea) standard pressure gauge**

### TECHNICAL INFORMATION

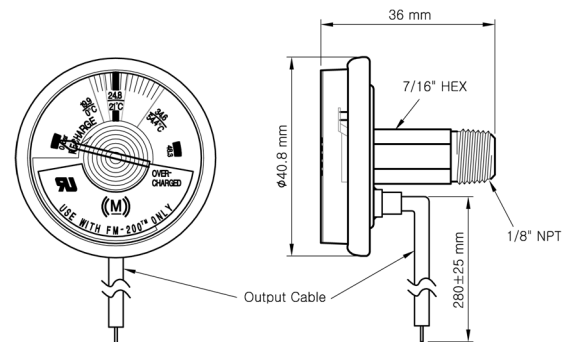
 Approvals for use with HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

Working pressure ..... 24.8 bar (360 psi)  
 Pressure range ..... 0-24.8-48.2 bar (0-360-700 psi)  
 Output contact rating ..... 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

### ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHGSG0F01	Agent cylinder standard pressure gauge
SHGLS0F01	Agent cylinder 2n1 pressure gauge (low pressure switch)


**INNOVEX®227 (HFC-227ea) 2n1 pressure gauge**
*Actual product may differ from the images shown.*

# AGENT NEEDLE CYLINDER

P/N: SHG0006NC

## 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 HEDS®/UHEDS®. 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 HEDS®/UHEDS®.....UL  
 UL File Number: EX27878

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

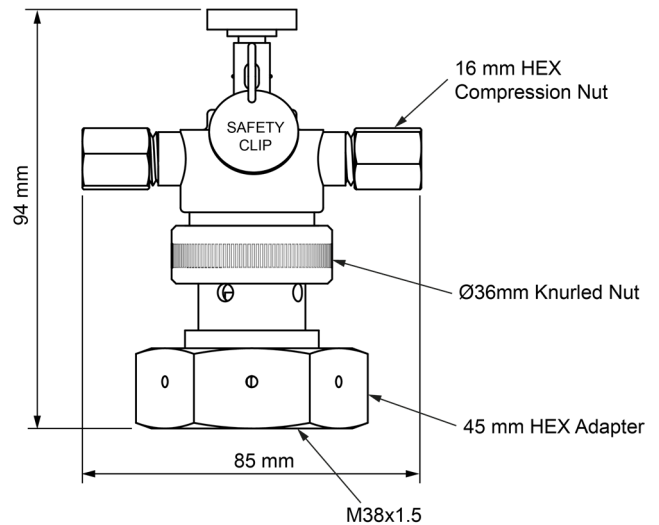
Copper tubing nominal size ..... 6A (1/4 in)  
 Copper tubing connection..... Compression joint

Weight..... 0.5 kg (1.1 lb)

Discharge valve size compatibility..... 40 mm (1 1/2 in), 50 mm (2 in)

### Maximum installation quantity (Not FM Approved)

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
SHG0006NC	Needle cylinder for agent discharge valve

Actual product may differ from the images shown.

## COMPACT PRESSURE SWITCH

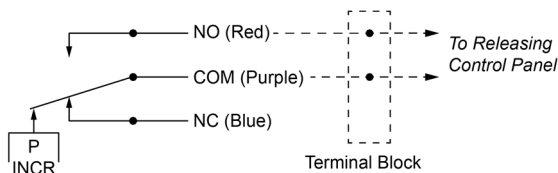
P/N: SHG096211-S1637

### DESCRIPTION

The compact pressure switch is a compact-size pressure switch that is used to initiate the discharge alarm in HEDS® or UHEDS® 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

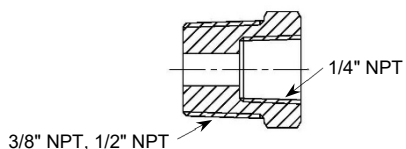
Approvals for use with HEDS®/UHEDS®.....UL  
 UL File Number: EX 27878  
 Pressure switch approvals.....c-UL, CSA  
 Electrical rating.....30VDC 5A  
 Pressure port size.....1/4" NPT  
 Factory set pressure.....25 psi (1.7 bar)  
 Proof pressure.....1000 psi (68 bar)  
 Wiring diagram



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.



Factory-supplied optional brass bushing

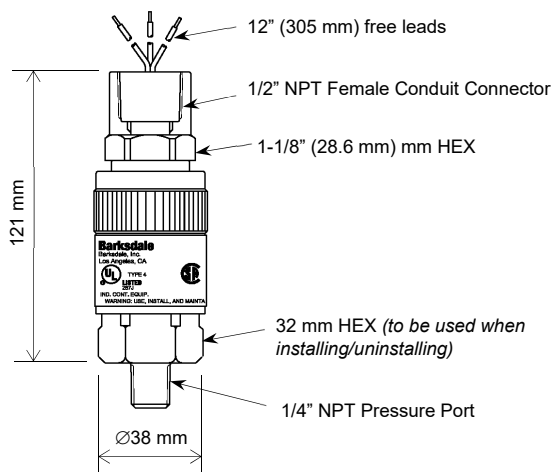
### ORDERING INFORMATION

Specify part number and description when ordering.

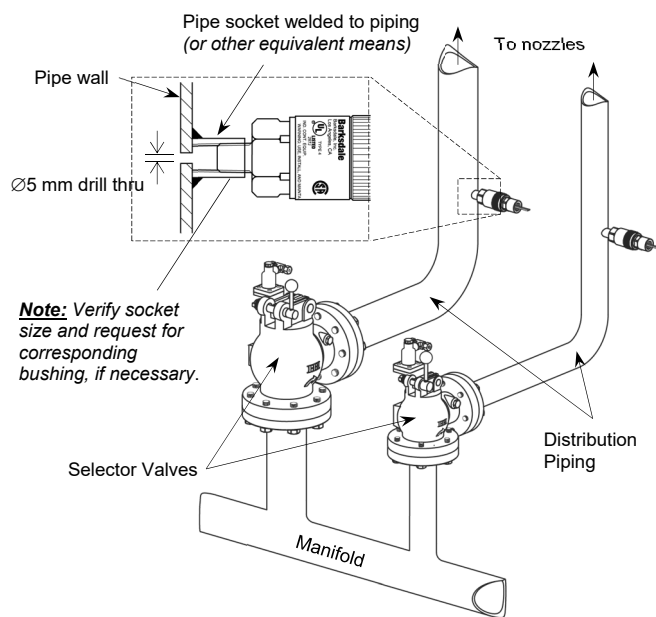
Part No.	Description
SHG096211-S1637	Compact Pressure Switch
SHG610BN	3/8" x 1/4" NPT Bushing (optional)
SHG615BN	1/2" x 1/4" NPT Bushing (optional)

### 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 sufficient amount of PTFE tape, then mount the compact pressure switch to the pipe socket or bushing and tighten by hand plus one full turn using a 32 mm hex wrench.



Physical Dimension



Illustrative guide for installing the compact pressure switch

Actual product may differ from the image shown.

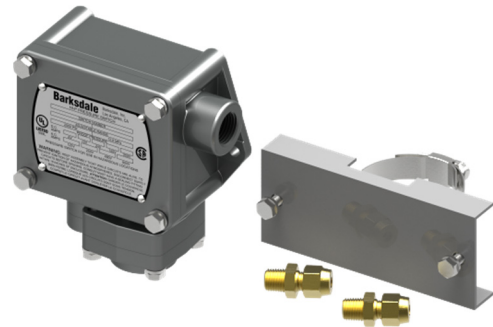
# EXPLOSION-PROOF PRESSURE SWITCH

P/N: SHGP1XB30-S0426

## DESCRIPTION

The explosion-proof pressure switch is a type of discharge pressure switch available with HEDS® and UHEDS® that is recommended for use in rugged and hazardous locations. It can be connected to the discharge pressure port of the selector valve or to a 1/4" NPT socket on the distribution piping via the supplied copper tube and fittings. The explosion-proof pressure switch is also provided with steel mounting bracket that can be easily mounted to the piping.

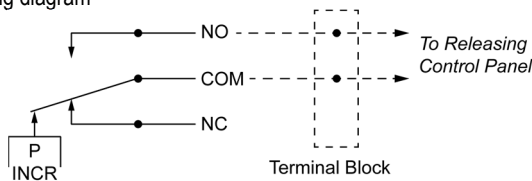
As the discharged extinguishing agent reaches the selector valve or location in piping where the pressure switch is connected, the pressure from the flowing agent is used to operate the switch. The operation of the pressure switch shall result to the activation of the discharge alarm system if properly connected to a compatible releasing control panel.



Explosion-Proof Pressure Switch with Mounting Bracket and 1/4" Flare Adapters

## TECHNICAL INFORMATION

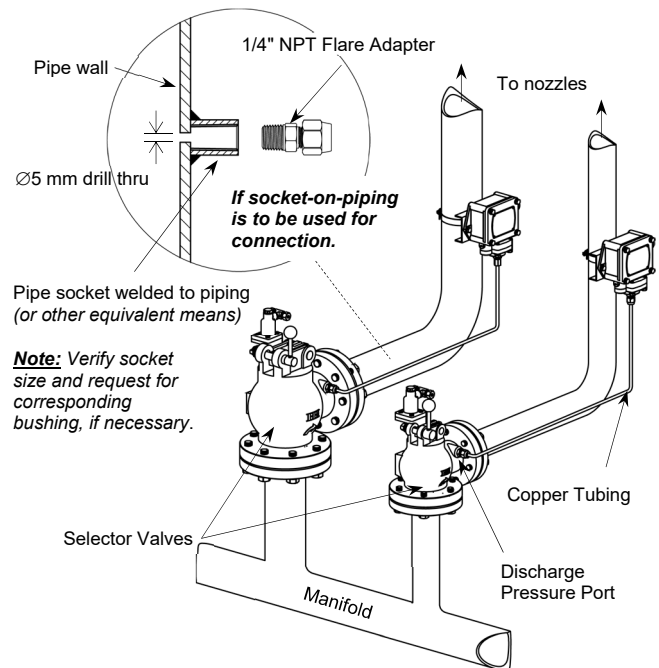
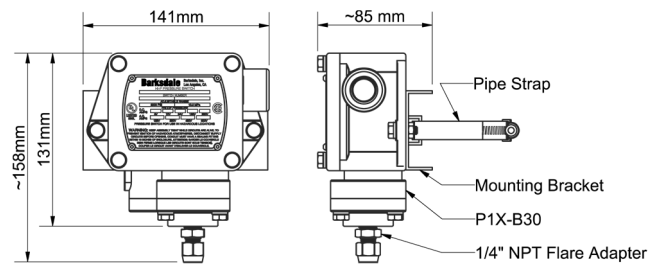
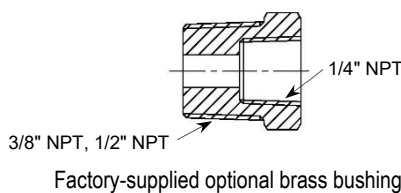
Approvals for use with HEDS®/UHEDS® ..... UL  
 UL File Number: EX27878  
 Pressure switch independent approvals ..... c-UL, CSA  
 Electrical rating ..... 0.03 A at 250 VDC  
 Pressure port size ..... 1/4" NPT  
 Factory set pressure ..... 25 psi (1.7 bar)  
 Proof pressure ..... 2000 psi (138 bar)  
 Wiring diagram



See product datasheet from Barksdale 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 order. Refer to illustration for installation guide.



Illustrative guide for installing the explosion-proof pressure switch.

## ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHGP1XB30-S0426	Compact Pressure Switch
SHG001MB	Mounting bracket set
SHG006FA	1/4" NPT flare adapter (to pressure switch)
SHG001SU	PT 1/4" flare adapter (to selector valve)
SHG610BN	3/8" x 1/4" NPT bushing (optional)
SHG615BN	1/2" x 1/4" NPT bushing (optional)

## INSTALLATION

The explosion-proof pressure switch may be connected to the selector valve discharge pressure port using 6A (1/4") copper tubing and a 1/4" NPT flare adapter. If the system does not use selector valve or if preferred, connect the pressure switch to a 1/4" NPT socket or suitable socket-bushing combination welded over a 5-mm hole on one side of the distribution piping.

Actual product may differ from the images shown.

## CHECK VALVE 6A

P/N: SHG0006CV

### 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

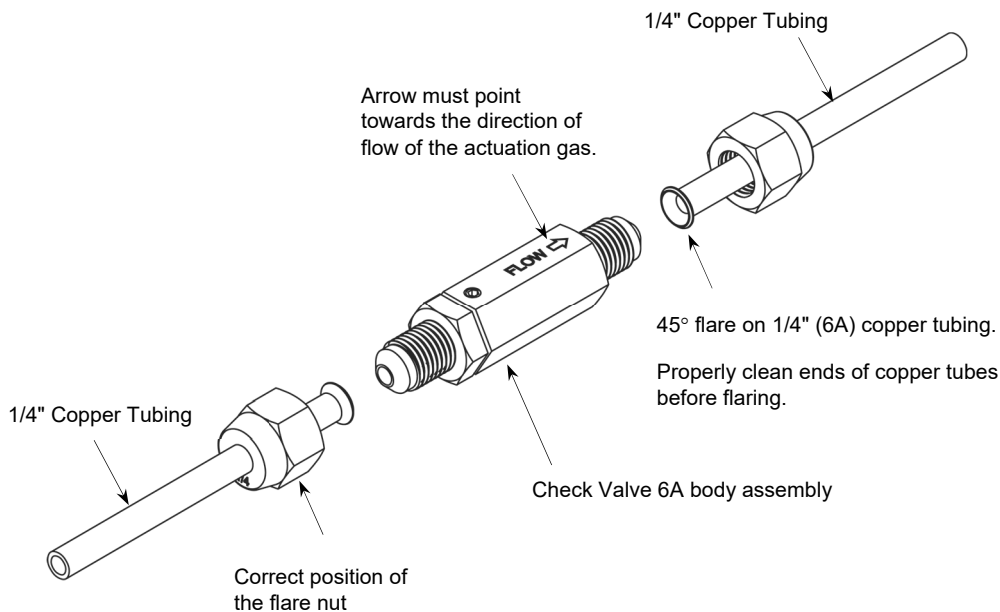
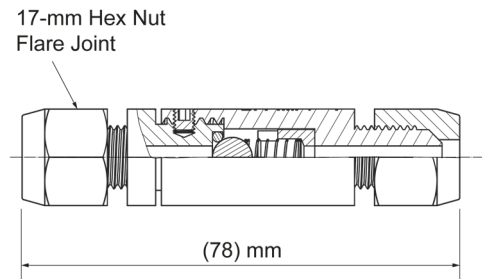
Approval for use with HEDS®/UHEDS® ..... UL  
 UL File Number: EX27878

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
SHG0006CV	Check valve 6A



Illustrative guide for installing the pressure relief device

Actual product may differ from the images shown.



## CHECK VALVE 50A

P/N: SHG0050CV

### 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 air-tight connection.



Check Valve with Packing Seal

### TECHNICAL INFORMATION

 Approvals for use with HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

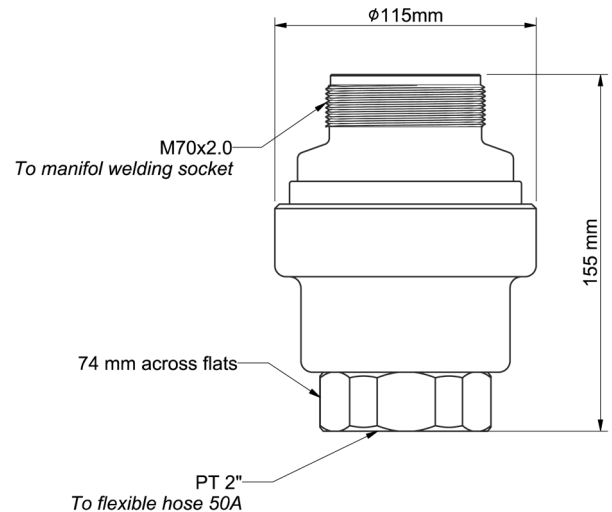
#### Materials

 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
SHG0050CV.	Check valve 50A with packing seal
SHG504RS	Rubber packing seal



Actual product may differ from the images shown.

## 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 HEDS®/UHEDS®, 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 HEDS®/UHEDS® ..... UL  
 UL File Number: EX27878

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.

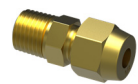
Part No.	Description
SHG001ACT/002	Copper tubing ( <i>specify total tube length in meter</i> )
SHG0061TU	PT 3/8 flare fitting
SHG001SU	PT 1/4 compression fitting
SHG320AFT	Agent interconnect actuation tube ( <i>Loop or Bend 90°</i> )
SHG0500TN	500 mm interlock tube with PT 3/8 compression fitting
SHG0530TN	530 mm interlock tube with PT 3/8 compression fitting
SHG0600TN	600 mm interlock tube with PT 3/8 compression fitting



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

*Actual product may differ from the images shown.*

## CYLINDER STRAP

P/N: HEDS® and UHEDS® Series

### DESCRIPTION

The HEDS® 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
SHG0035ES	HEDS® agent cylinder SHG024030, 40, 65, 90, 120
SHG0045ES	HEDS® agent cylinder SHG250180
SHG0035PS	UHEDS® agent cylinder SHG150180, P90, P120
SHG0045PS	UHEDS® agent cylinder SHG014065

### TECHNICAL INFORMATION

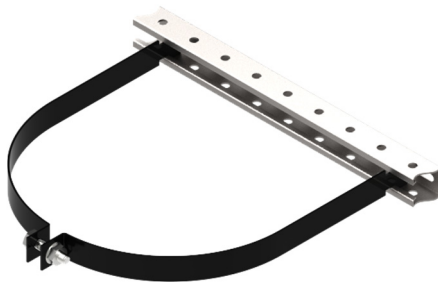
Approval for use with HEDS®/UHEDS®.....UL  
 UL File Number: EX27878

#### Material

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

#### Finish

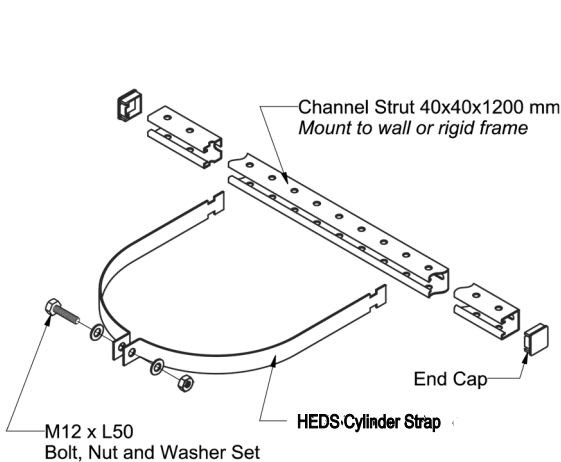
Cylinder strap.....Black powder coating  
 Channel strut.....Hot dip galvanizing



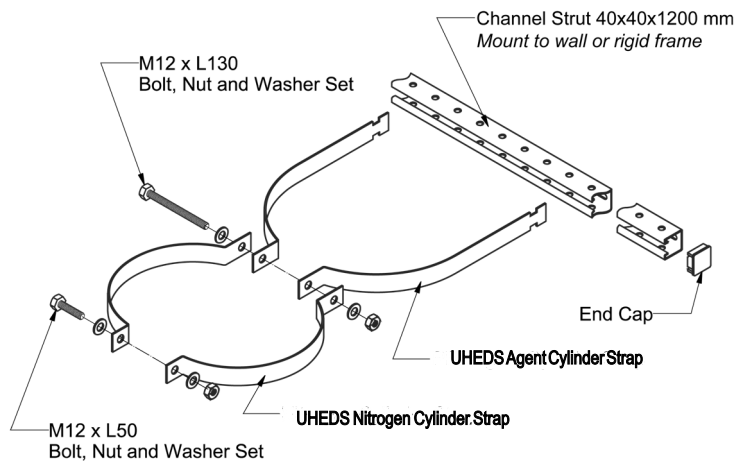
Cylinder Strap for HEDS® Agent Cylinders (P/N: SHG0035ES, SHG0035ES)



Cylinder Strap for HEDS® Agent Cylinders (P/N: SHG0035ES, SHG0035ES)



HEDS® cylinder strap components



UHEDS® cylinder strap components

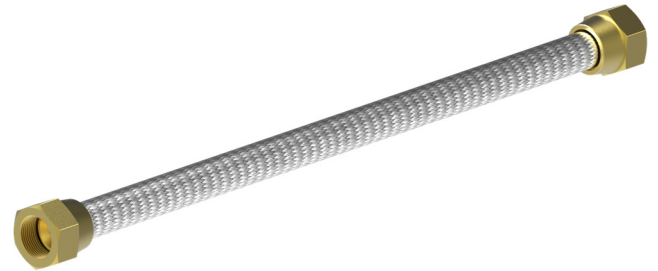
*Actual product may differ from the images shown.*

## FLEXIBLE HOSE 20A

P/N: SHG0206FH/207/209

### DESCRIPTION

The flexible hose 20A is used in UHEDS® to direct the flow of pressurized nitrogen from the nitrogen cylinder to the INNOVEX®227 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 20-mm valves.



**Flexible Hose 20A P/N:**  
SHG0206FH/207/209

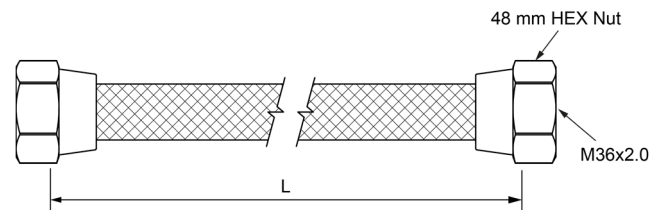
### TECHNICAL INFORMATION

Approvals for use with UHEDS® .....UL  
 UL File Number: EX27878

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	
			UHEDS® Agent Cylinder	Nitrogen Cylinder
SHG0206FH	600 (23.6)	1.27 (2.8)	SHG150120, SHG150180	SHG080N70
SHG0207FH	700 (27.6)	1.37 (3.0)	SHG014090	SHG070N69
SHG0209FH	900 (35.4)	1.54 (3.4)	SHG014065	SHG060N68

**Note:** To ensure ordering of correct part, refer to the UHEDS® cylinders coupling information.

*Actual product may differ from the images shown.*

# FLEXIBLE HOSE 50A

P/N: SHG0050FH

## DESCRIPTION

The flexible hose 50A is used in HEDS® or UHEDS® to direct the flow of INNOVEX®227 (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 (2" PT) end is connected to the check valve 50A.

## TECHNICAL INFORMATION

Approvals for use with HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

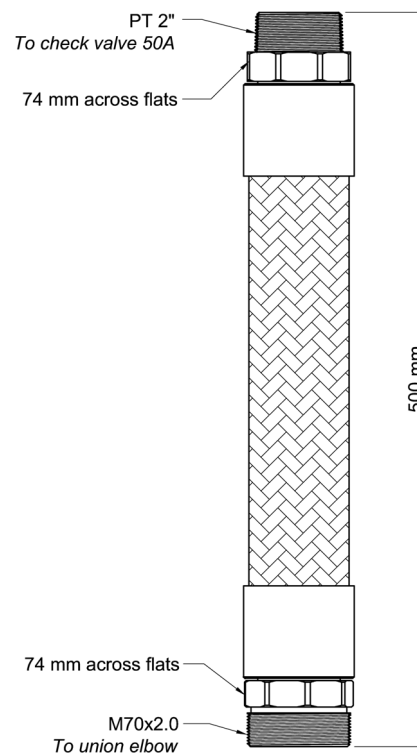
Minimum bending radius ..... 350 mm (13.8 in)  
 Hydrostatically tested at ..... 137.9 bar (2000 psi)  
 Materials  
   Hose ..... EPDM, Stainless Steel (SUS304)  
   Nut ..... Brass (C3771)  
 Overall length ..... 500 mm (19.7 in)  
 Weight ..... 3.6 kg (7.9 lb)



## ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG0050FH	Flexible hose 50A



*Actual product may differ from the images shown.*

# MANIFOLD WELDING SOCKET

P/N: SHG50MWS

## 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

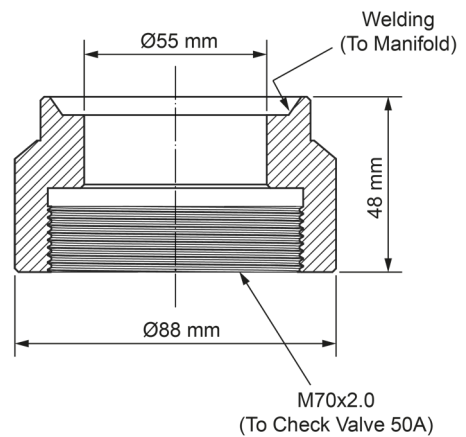
Approvals\* .....UL  
 UL File Number: EX27878

Body material ..... Carbon Steel (S20C)  
 Weight ..... 1 kg (2.2 lb)

## ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG50MWS	Manifold welding socket



*Actual product may differ from the images shown.*

# NITROGEN CYLINDER ASSEMBLY

P/N: SHG060N68/70/80

## DESCRIPTION

The nitrogen cylinder assembly stores nitrogen pressurized to 60/70/80 bar at 21°C that is used as propellant for INNOVEX®227 (HFC-227ea) extinguishing agent contained in a separate UHEDS® 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 UHEDS® nitrogen cylinder assembly is fitted with 20-mm valve that enables interconnection with and delivery of pressurized nitrogen to UHEDS® 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 UHEDS® .....UL  
 UL File Number: EX27878

 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.


**Nitrogen Cylinder Assembly**  
 P/N: SHG060N68/70/80

## ORDERING INFORMATION

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

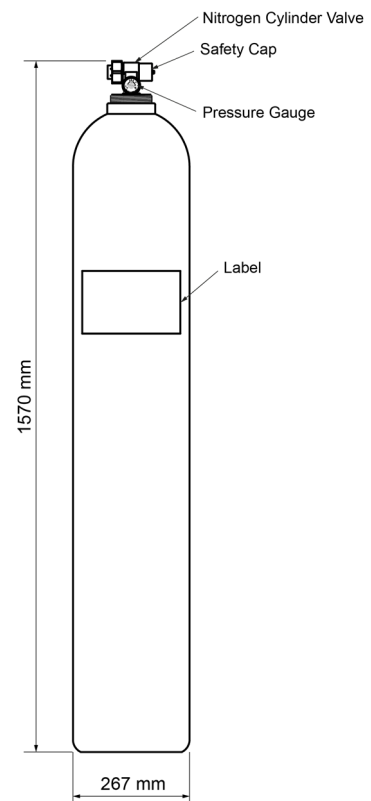
### SI Units

Part No.	Partner UHEDS® Agent Cylinder	Water Capacity (L)	Fill Pressure (bar)	Valve Size (mm)	Empty Weight (kg)	Pressure Gauge Option
SHG060N68	SHG014065	68	60	20	74.5	Standard or 2n1 <sup>b</sup>
SHG070N69	SHG014090		70			
SHG080N70	SHG150120, SHG150180		80			

### US Units

Part No.	Partner UHEDS® Agent Cylinder	Water Capacity (lb)	Fill Pressure (psi)	Valve Size (in)	Empty Weight (lb)	Pressure Gauge Option
SHG060N68	SHG014065	150	870	3/4	164	Standard or 2n1 <sup>b</sup>
SHG070N69	SHG014090		1016			
SHG080N70	SHG150120, SHG150180		1161			

<sup>a</sup>Not FM Approved

<sup>b</sup>Refer to pressure gauge datasheet for scope of approvals


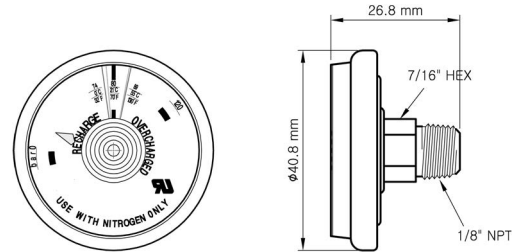
Actual product may differ from the image shown.

# NITROGEN CYLINDER PRESSURE GAUGES

P/N: SHGSG0N60/N70/N80; SHGLS0N60/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.

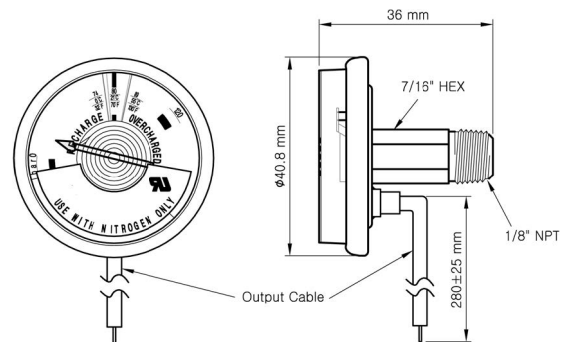

**Nitrogen standard pressure gauge**

## TECHNICAL INFORMATION

 Approvals for use with UHEDS® .....UL  
 UL File Number: EX27878

 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)
SHGSG0N60	60 (870)	0-60-90 (0-870-1306)	N/A
SHGSG0N70	70 (1016)	0-70-105 (0-1016-1523)	N/A
SHGSG0N80	80 (1061)	0-80-120 (0-1061-1741)	N/A
SHGLS0N60	60 (870)	0-60-90 (0-870-1306)	56 ± 3.6 (812 ± 52)
SHGLS0N70	70 (1016)	0-70-105 (0-1016-1523)	65 + 0.7/-3.5 (943 +10/-51)
SHGLS0N80	80 (1061)	0-80-120 (0-1061-1741)	74 ± 2.8 (1073 ± 41)


**Nitrogen 2n1 pressure gauge**

## 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)

Actual product may differ from the images shown.



# NITROGEN NEEDLE CYLINDER

P/N: SHG0006NN

## DESCRIPTION

The nitrogen needle cylinder is used for the pneumatic operation of the nitrogen cylinder assembly during UHEDS® 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 INNOVEX®227 (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).



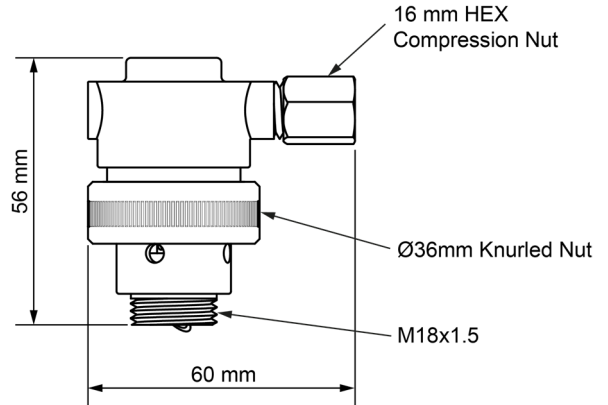
### **▲ WARNING**

Sharp needle hazard.

## TECHNICAL INFORMATION

 Approvals for use with HEDS®/UHEDS®.....UL  
 UL File Number: EX27878

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  
 Weight ..... 0.25 kg (0.55 lb)



## ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG0006NN	Nitrogen needle cylinder

*Actual product may differ from the images shown.*

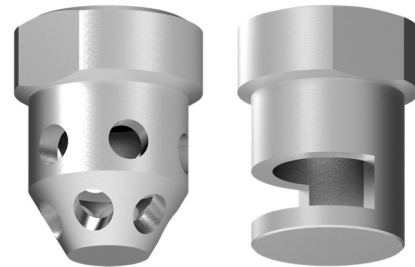
# DISCHARGE NOZZLE

P/N: See table

## DESCRIPTION

Discharge nozzle is used to facilitate the uniform distribution of INNOVEX®227 (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.



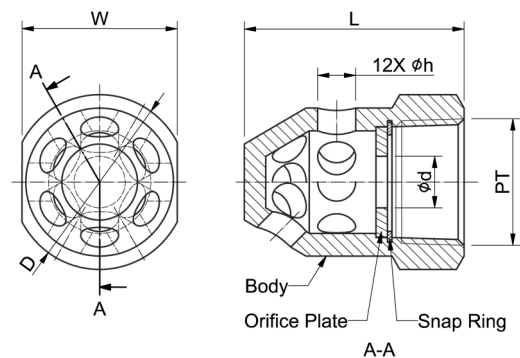
HEDS®/UHEDS® 360° and 180° Discharge Nozzles

## TECHNICAL INFORMATION

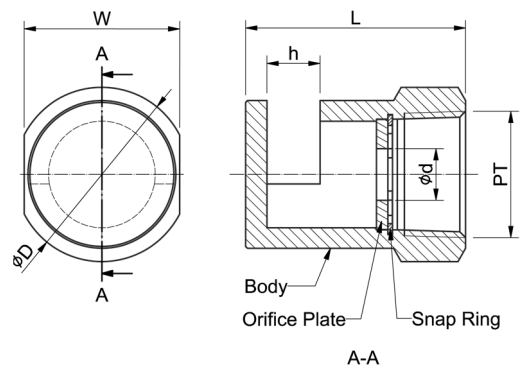
Approvals for use with HEDS®/UHEDS® ..... UL  
 UL File Number: EX27878

### 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



180° discharge nozzles dimension

## ORDERING INFORMATION

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

## Nozzle sizes and part number convention.

Part No. Series	Nominal Size		D (mm)	W (mm)	L (mm)	h (mm)		Orifice Plate		Est. Max. Weight (g)
	JIS	PT				360°	180°	Drill Size, d	Drill Size Increment	
SHG36015N	15A	½	32	28	45	5	10	8.2 – 13.4	0.2	120
SHG36020N	20A	¾	38	34	50	8	12	10.8 – 17.8	0.2	170
SHG36025N	25A	1	46	41	58	10	14	13.6 – 22.6	0.2	270
SHG36032N	32A	1 ¼	58	50	68	12	16	18.0 – 29.5	0.5	470
SHG36040N	40A	1 ½	63	57	74	14	18	21.0 – 34.0	0.5	570
SHG36050N	50A	2	75	68	84	16	20	26.5 – 44.0	0.5	850

10d is a number obtained by multiplying the orifice plate drill size by 10. For example, the part number for a 25A (PT 1) nozzle with orifice plate drill size of 13.8 mm would be SHG36025N-138.

*Actual product may differ from the images shown.*

# ACTUATION (PILOT) CYLINDER

P/N: SHG0C01AC

## DESCRIPTION

The actuation (pilot) cylinder is used to provide for the storage of liquid CO<sub>2</sub>. When the actuation (pilot) cylinder is operated, the CO<sub>2</sub> is released and directed to the actuator of selector valve (if installed) and needle cylinder through 6-mm copper tubing connected to the elbow assembly at the valve outlet. The pressure of the CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub>. 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

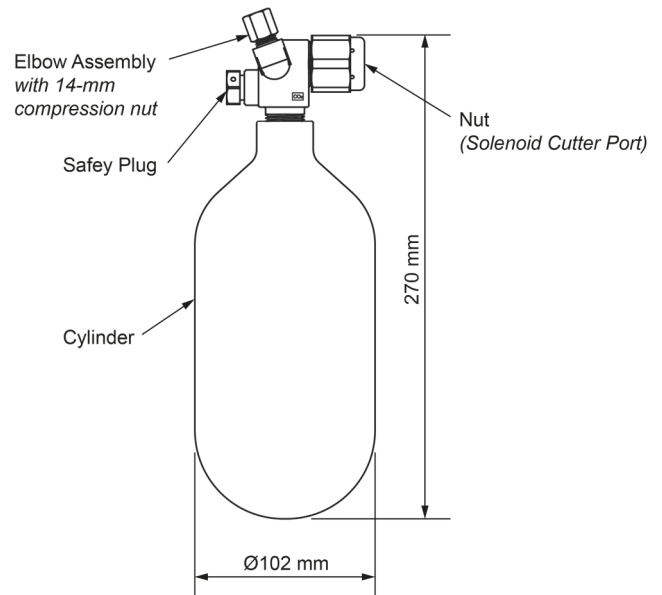
 Approval for use with HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

Cylinder nominal water capacity.....	1.1 L
CO <sub>2</sub> fill weight.....	0.65 kg
CO <sub>2</sub> pressure at fill.....	55 bar at 21 °C
Nominal gross weight.....	3.3 kg
Cylinder material.....	Manganese steel
Cylinder hydrostatically tested at.....	297.8 bar (4320 psi)
Valve body material.....	Brass
Valve hydrostatically tested at.....	413.6 bar (6000 psi)
Cylinder finish.....	Powder coating

## ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG0C01AC	Actuation (Pilot) Cylinder



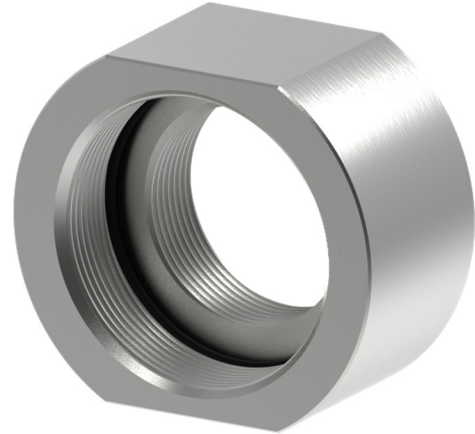
Actual product may differ from the image shown.

## PIPE ADAPTER

P/N: SHG04025PA/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 HEDS®/UHEDS.....UL  
 UL File Number: EX27878

#### Materials

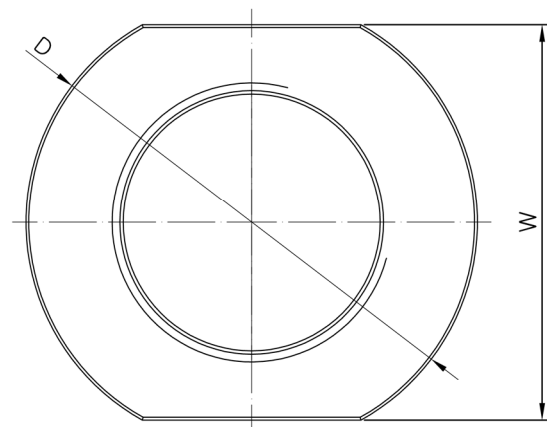
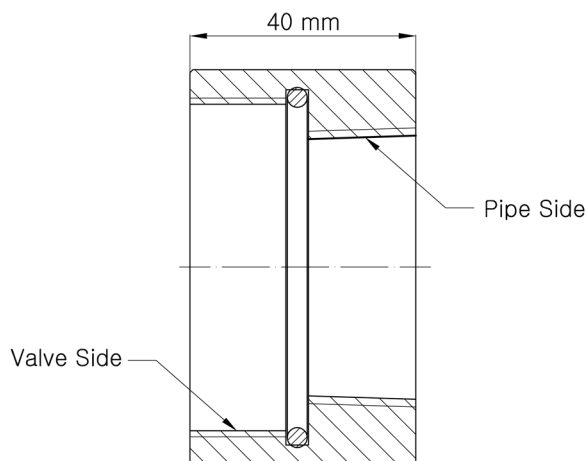
 Body ..... Stainless steel (SUS304)  
 O-ring Seal ..... NBR  
 Weight..... 1.2 kg (2.6 lb) max.

Part No.	Threaded Connection		D (mm)	W (mm)
	Pipe Side	Valve Side		
SHG04025PA	1" NPT/PT (25A)	40A, M60x2	80	70
SHG04032PA	1-1/4" NPT/PT (32A)			
SHG04040PA	1-1/2" NPT/PT (40A)			
SHG05032PA	1-1/4" NPT/PT (32A)	50A, M70x2.5	90	80
SHG05040PA	1-1/2" NPT/PT (40A)			
SHG05050PA	2" NPT/PT (50A)			

### ORDERING INFORMATION

Specify part number and description when ordering.

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

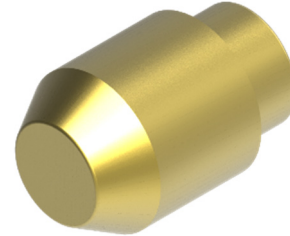

*Actual product may differ from the images shown.*

## PLUG PIN

P/N: SHG0001PP

### DESCRIPTION

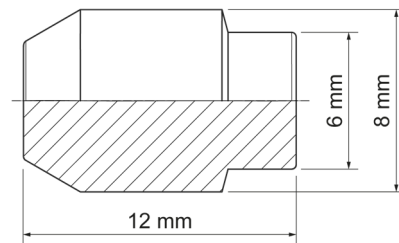
The plug pin is used to shut off or plug the end of the pneumatic actuation line at the needle cylinder (discharge valve actuator). Instead of the ferrule (compression ring), the plug pin can be inserted into the inlet/outlet port of the last needle cylinder in the agent cylinder bank and forced-in further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



### TECHNICAL INFORMATION

Approval for use with HEDS®/UHEDS® ..... UL  
 UL File Number: EX27878

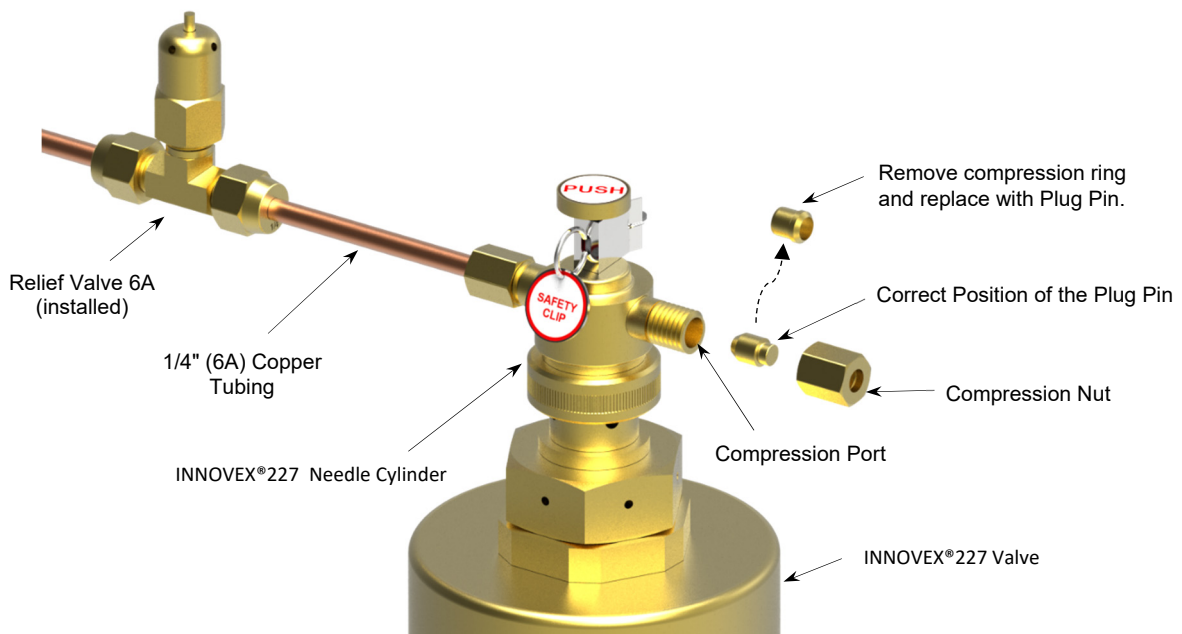
Nominal size ..... 6A (1/4")  
 Material ..... Brass



### ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG0001PP	Plug pin for pneumatic actuation line



*Actual product may differ from the images shown.*

## PRESSURE RELIEF DEVICE

P/N: SHG0020SF

### 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 HEDS®/UHEDS® ..... UL  
 UL File Number: EX27878

Nominal Size ..... 20A (3/4")

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

Material:

Safety Plug, Rupture Disc and Body ..... Brass

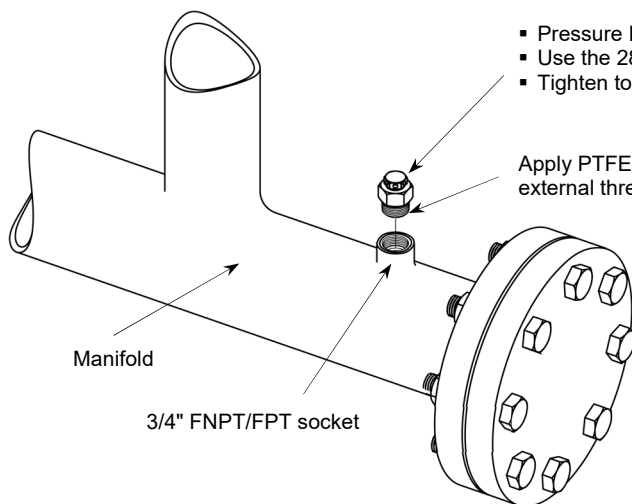
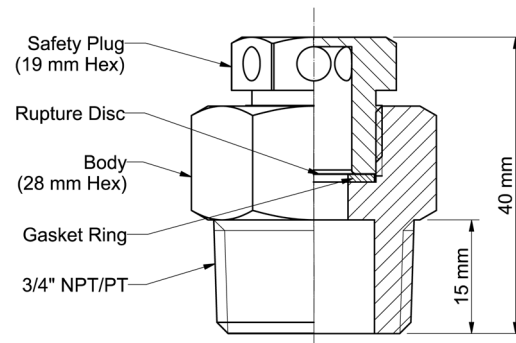
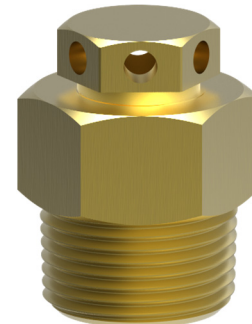
Gasket Ring ..... Bakelite

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

### ORDERING INFORMATION

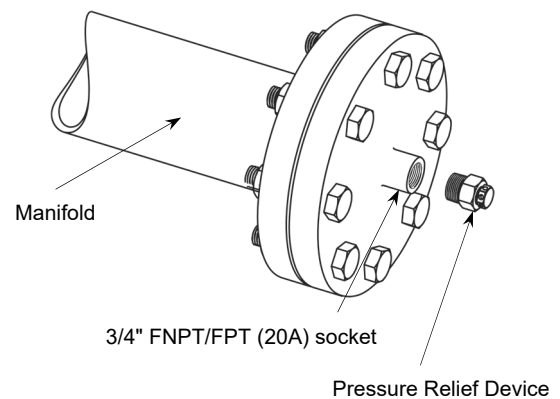
Specify part number and description when ordering.

Part No.	Description
SHG0020SF	Pressure relief device full assembly
SHG0020SF-04	Rupture disc
SHG0020SF-03	Gasket ring
SHG0020SF-02	Safety plug
SHG0020SF-01	Body



Option 1: On manifold pipe

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



Option 2: On end-of-manifold pipe cap

### Illustrative guide for installing the pressure relief device

*Actual product may differ from the images shown.*

## DISCHARGE PRESSURE SWITCH (OPTIONAL)

P/N: SHG001PS (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.

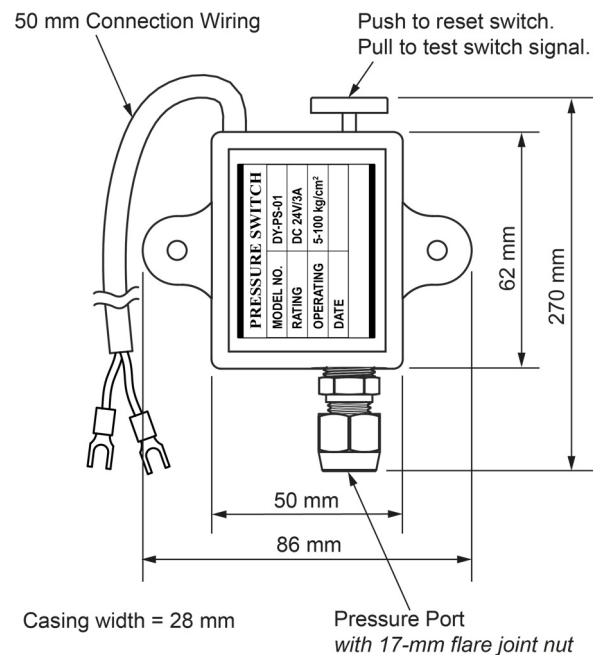
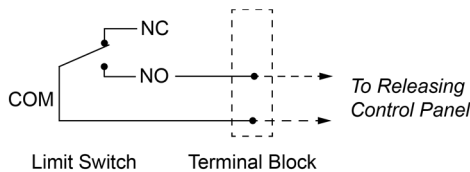


### NOTE:

INNOVEX®227 (HFC-227ea) HEDS®/UHEDS® 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 HEDS®/UHEDS® .....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
SHG001PS(DY-PS-01)	Discharge pressure switch (optional)

*Actual product may differ from the image shown.*

## RELIEF VALVE 6A

P/N: SHG0006RV

### 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

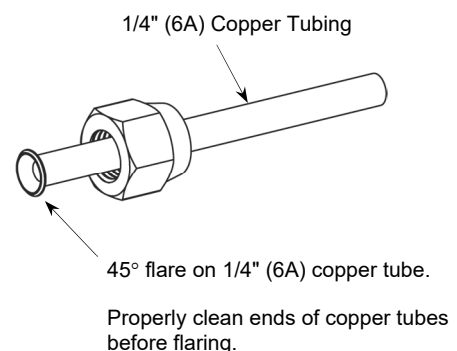
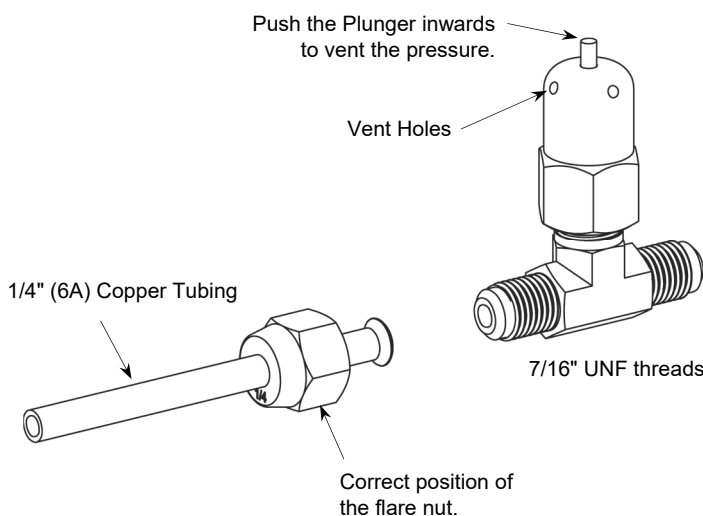
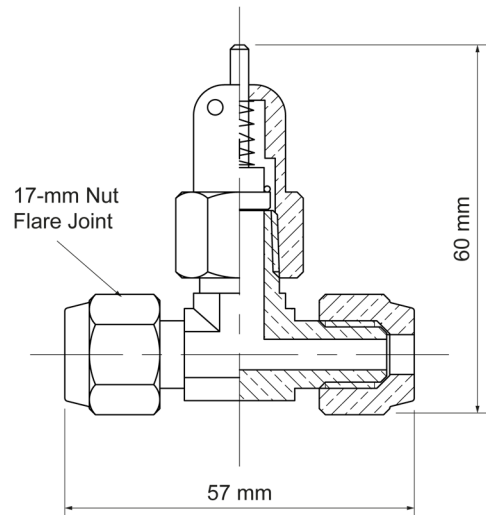
Approvals for use with HEDS®/UHEDS® ..... UL  
 UL File Number: EX 27878

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 connection ..... Flare Joint  
 Connection thread ..... 7/16" UNF  
 Installation position ..... Plunger vertically up or down

### ORDERING INFORMATION

Specify part number and description when ordering

Part No.	Description
SHG0006RV	Relief valve 6A



**Illustrative guide for installing the relief valve 6A**

*Actual product may differ from the images shown.*

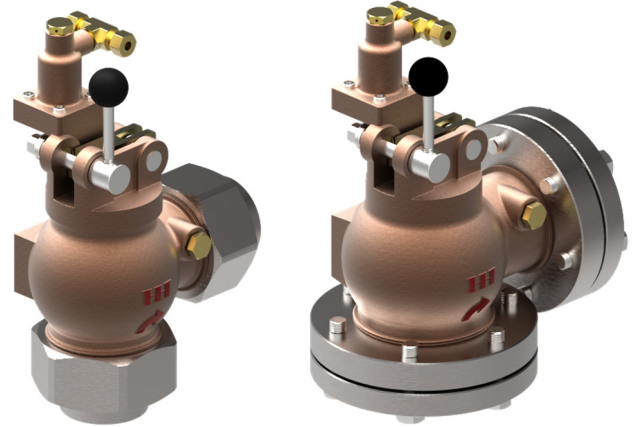


## SELECTOR VALVE

P/N: SHG0032SV/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 32 mm and 40 mm are fixed to the manifold/piping via the hex union nuts while size 50/65/80/100/125/150 mm are fixed to the manifold/piping via the flanges hex bolts



P/N: SHG0032SV/40

P/N: SHG0050SV/65/80/100/125/150

### TECHNICAL INFORMATION

 Approvals ..... UL  
 UL File Number: EX27878

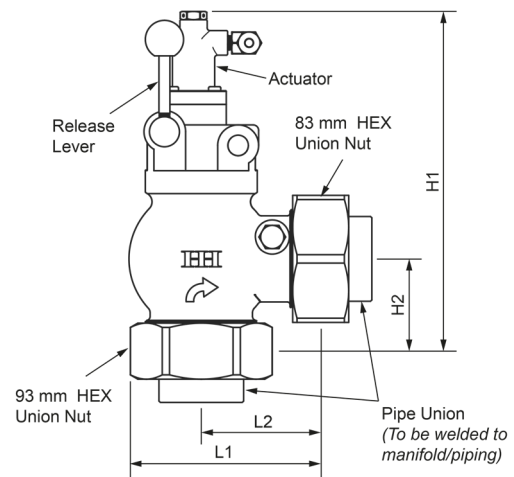
#### Material

 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)

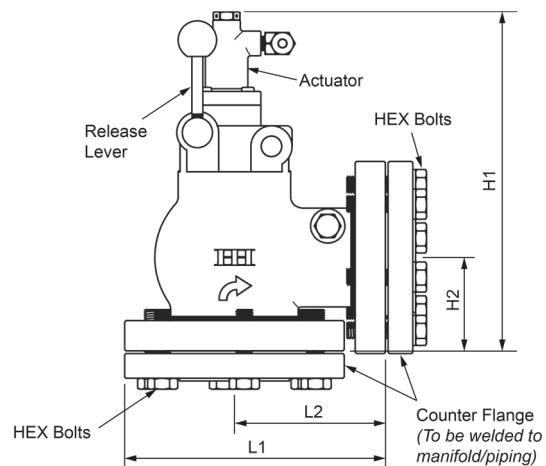
### ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	ID In/Out, mm (in)	Weight, kg (lb)	L1, mm (in)	L2, mm (in)	H1, mm (in)	H2, mm (in)	HEX Bolt Size, mm (in)
SHG0032SV	32 (1-1/4)	10.9 (24.0)	142 (5.6)	90 (3.5)	249 (9.8)	70 (2.8)	N.A.
SHG0040SV	40 (1-1/2)	10.2 (22.5)	142 (5.6)	90 (3.5)	249 (9.8)	70 (2.8)	N.A.
SHG0050SV	50 (2)	18.1 (40.0)	190 (7.5)	110 (4.3)	247 (9.7)	68 (2.7)	19 (3/4)
SHG01065SV	65 (2-1/2)	25.3 (55.8)	215 (8.5)	125 (5)	286 (11.3)	85 (3.3)	19 (3/4)
SHG0080SV	80 (3)	38.2 (84.2)	240 (9.4)	140 (5.5)	328 (12.9)	110 (4.3)	24 (15/16)
SHG0100SV	100 (4)	67.3 (148.4)	288 (11.3)	175 (6.9)	396 (13.6)	135 (5.3)	30 (1 3/16)
SHG0125SV	125 (5)	98.7 (217.6)	350 (13.8)	200 (7.9)	438 (17.2)	158 (6.2)	30 (1 3/16)
SHG0150SV	150 (6)	136.7 (301.4)	395 (15.6)	230 (9.0)	461 (18.1)	168 (6.6)	36 (1 7/16)



P/N: SHG0032SV/40



P/N: SHG0050SV/65/80/100/125/150

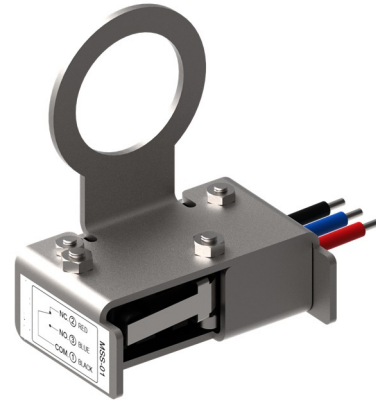
Actual product may differ from the images shown.

# SOLENOID CUTTER SUPERVISOR

P/N: SHG0001SS

## DESCRIPTION

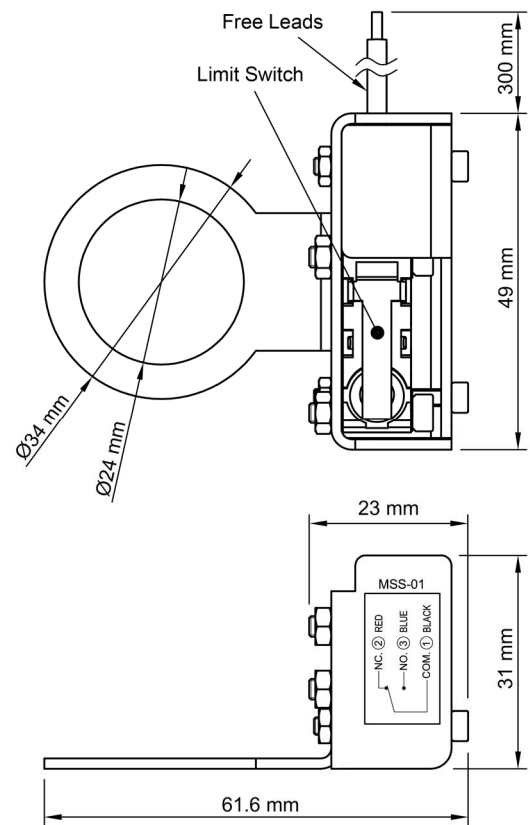
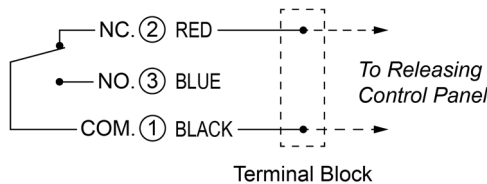
The solenoid cutter supervisor is used to monitor the position of the solenoid cutter (electric actuator) in the agent actuation (pilot) cylinder valve or master cylinder discharge valve. It is fitted with a normally closed water-resistant micro limit switch such that when the device is properly installed 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 HEDS®/UHEDS® ..... UL  
 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

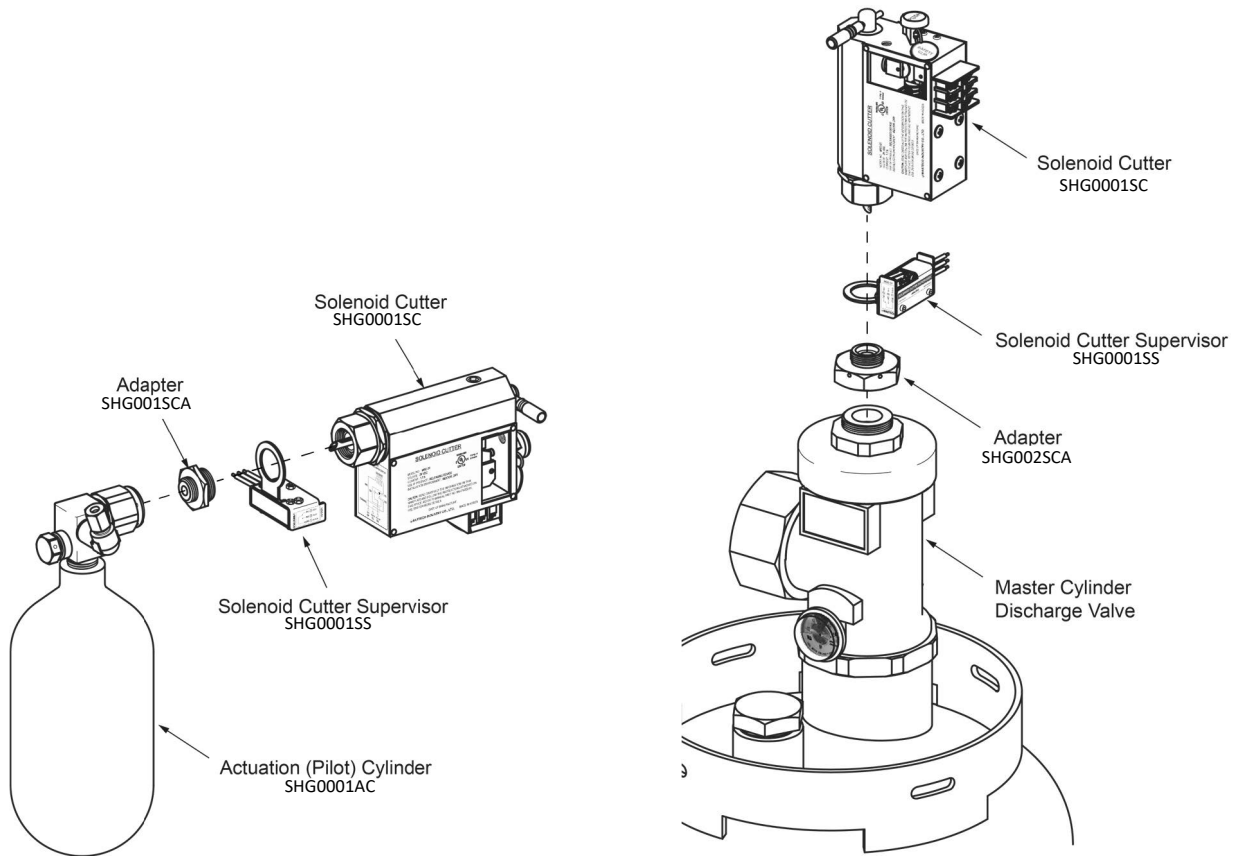


## ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG0001SS	Solenoid cutter supervisor

*Actual product may differ from the image shown.*



(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**

# SOLENOID CUTTER with ADAPTER

P/N: SHG0001SC

## DESCRIPTION

The solenoid cutter is used as a releasing device for the INNOVEX® 227 (HFC-227ea) HEDS® and UHEDS®. 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 HEDS®/UHEDS® .....UL  
UL File Number: EX27878

Device independent approvals .....c-UL-us  
UL File Number: S35406

Use of device .....Releasing device

Electrical rating ..... 24VDC, 1.7A

Material

Needle .....Stainless steel

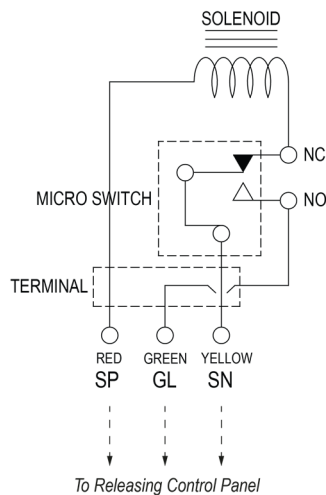
Enclosure/Frame ..... Zinc alloy

Gross weight ..... 2 kg (4.4 lb)

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

Wiring Diagram

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



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

## ORDERING INFORMATION

Specify part number and description when ordering.

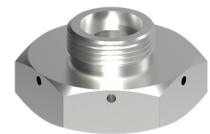
Part No.	Description
SHG0001SC	Solenoid Cutter
SHG001SCA	Adapter for pilot cylinder valve
SHG002SCA	Adapter for master cylinder valve



**WARNING** Sharp needle hazard.

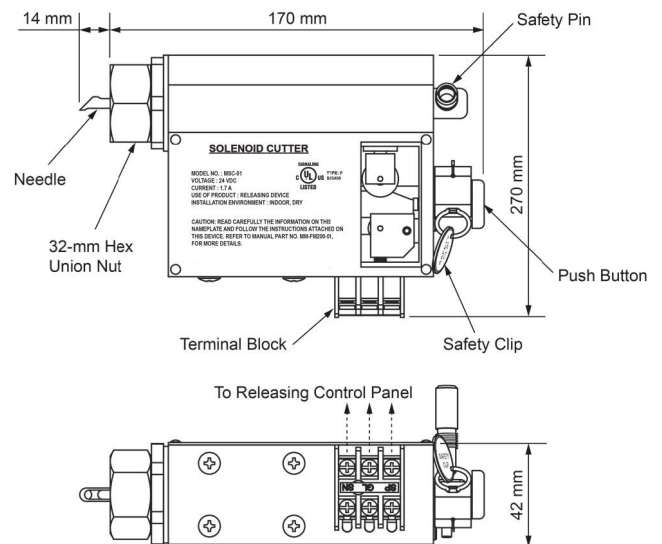


For Pilot Cylinder Valve  
(P/N: SHG001SCA)



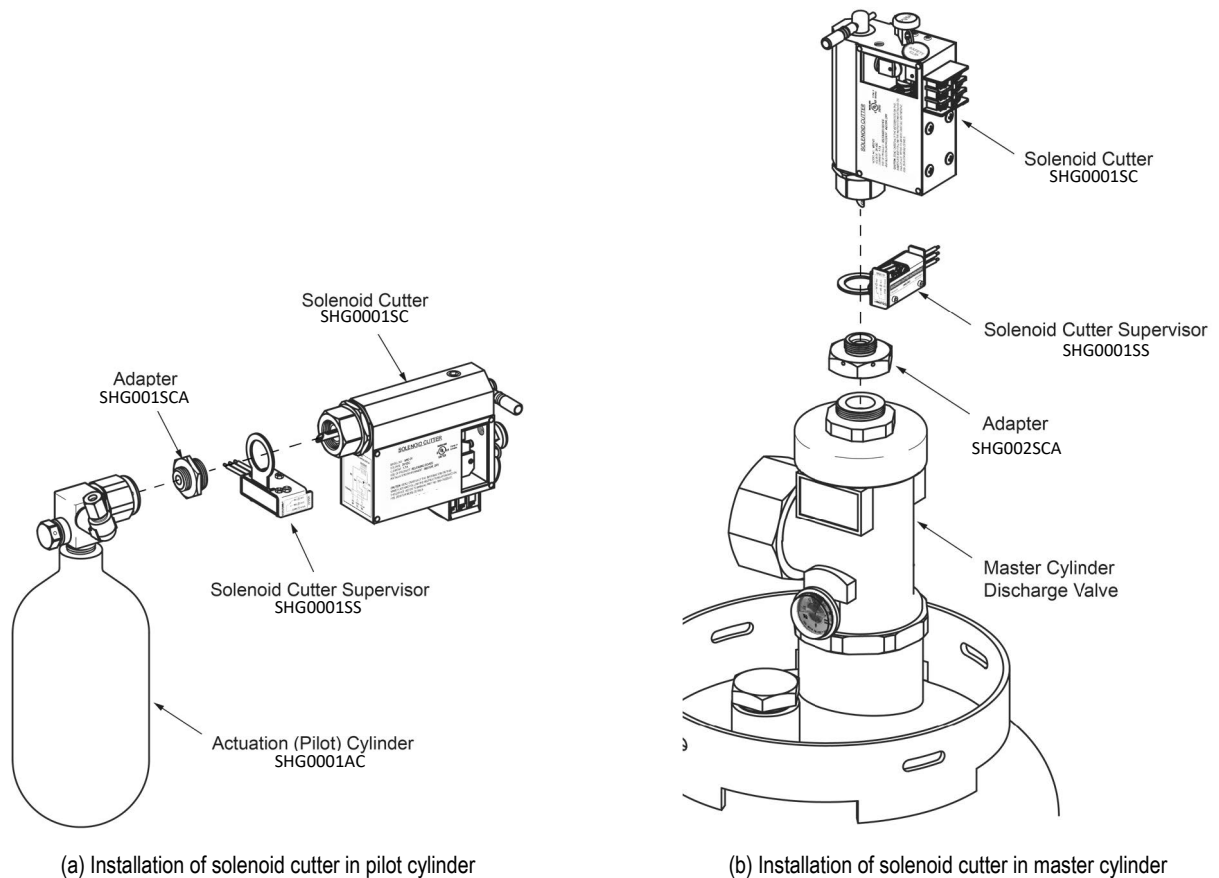
For Master Cylinder Valve  
(P/N: SHG002SCA)

## Solenoid Cutter Adapters



## Physical Dimension

Actual products may differ from the images shown.



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

## TEE 6A

P/N: SHG0006TF

### 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

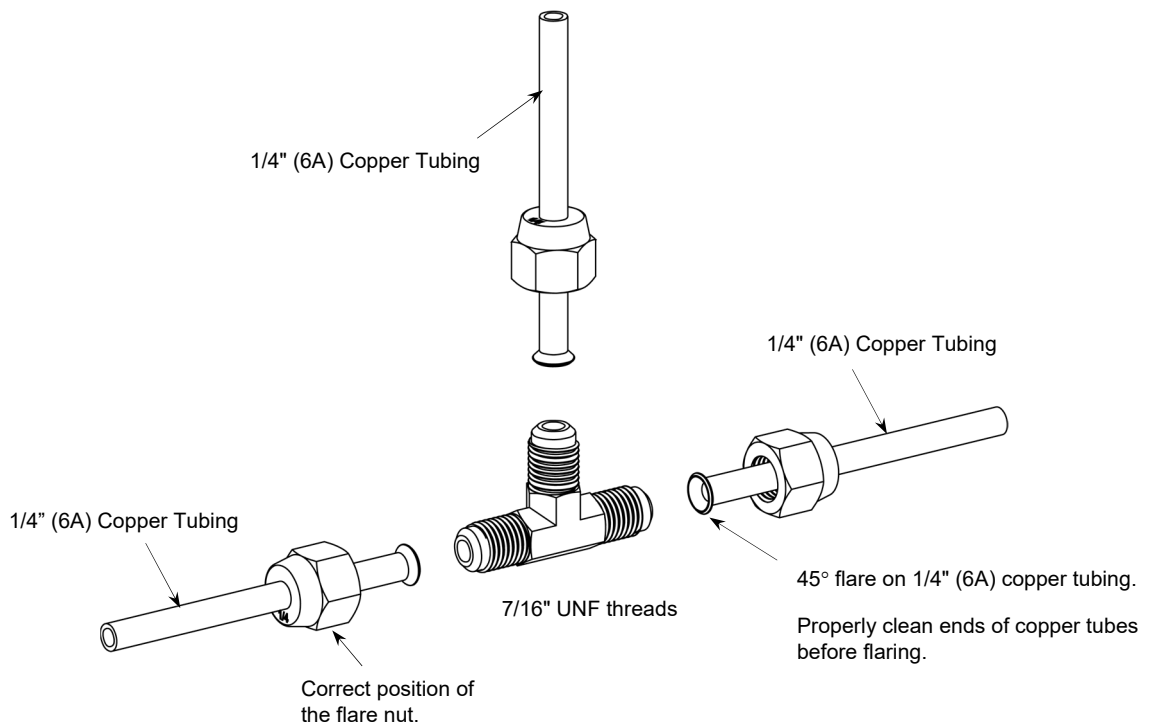
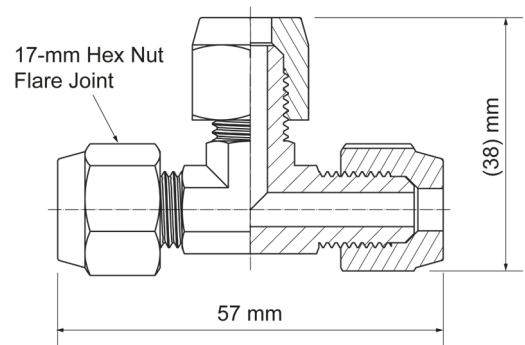
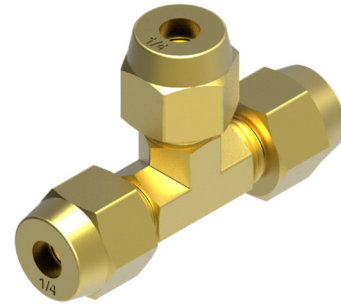
Approvals for use with HEDS®/UHEDS®..... UL  
 UL File Number: EX27878

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
SHG0006TF	Tee 6A



Illustrative guide for installing the tee 6A

*Actual product may differ from the images shown.*

## UNION ELBOW

P/N: SHG0125UE/502

### 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 HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

#### Materials

Elbow and Union ..... Stainless Steel (STS304)  
 Union Nut ..... Brass (C3771)  
 Packing Seal ..... NBR

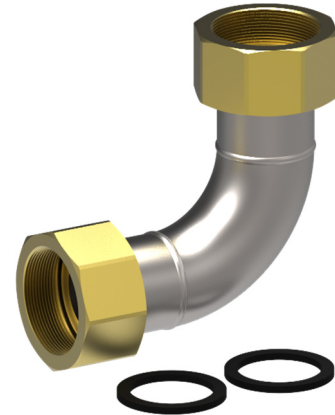
#### Length, L

MEU-501 ..... 125 mm (4.9 in)  
 MEU-502 ..... 225 mm (8.8 in)

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

#### Weight

MEU-501 ..... 3.0 kg (6.6 lb)  
 MEU-502 ..... 3.7 kg (8.1 lb)

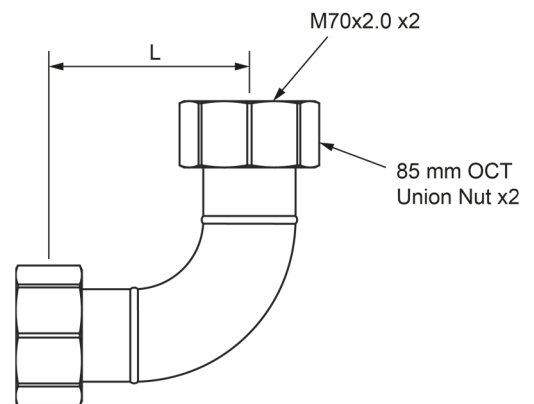


Union Elbow Set

### ORDERING INFORMATION

Specify part number and description when ordering.

Part No.	Description
SHG0125UE	125 mm Union elbow
SHG0502UE	225 mm Union elbow
SHG504RS	Rubber packing



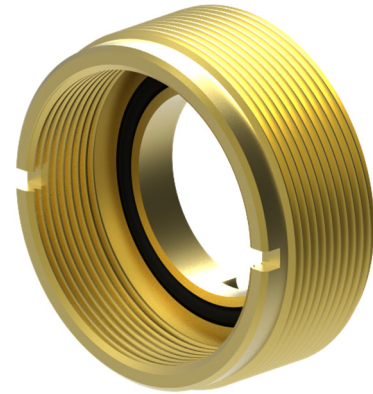
*Actual product may differ from the images shown.*

## UNION ELBOW ADAPTER

P/N: SHG040VA

### DESCRIPTION

The union elbow adapter is used when the agent cylinder assemblies having 40 mm discharge valves are to be installed in the system. 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 HEDS®/UHEDS® .....UL  
 UL File Number: EX27878

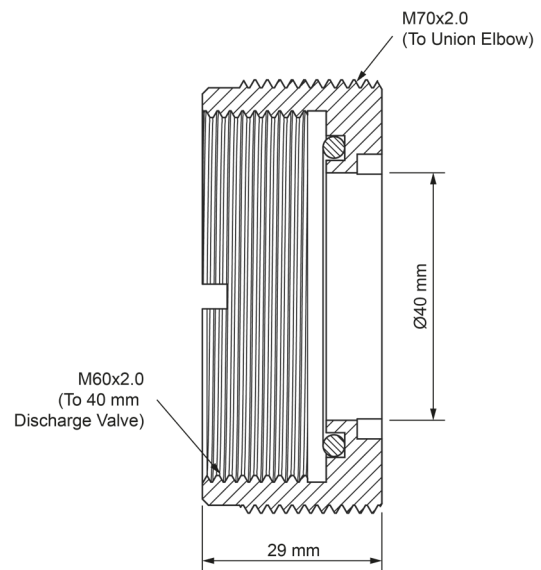
#### Materials

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
SHG040VA	Union elbow adapter
SHG000RO	Rubber O-ring



*Actual product may differ from the images shown.*