

DATASHEET

DIRECT AGENT RELEASE (DAR) SYSTEM

PRODUCT DESCRIPTION

FIRESCI's Direct Agent Release (DAR) System is a compact and reliable fire suppression solution designed for small, enclosed spaces like electrical cabinets, control panels, and other critical enclosures. Utilizing the FIRESCI Heat Sensing tube (HST), the system detects fire at its source and automatically releases the clean agent directly through the rupture point. With a simple design requiring no external power or electronics, the DAR system provides fast, targeted fire suppression, minimizing damage and downtime. Built for efficiency and durability, it is ideal for protecting sensitive equipment in high-risk areas.

WHAT IT DOES

The DAR system uses pressurized heat-sensitive tubing routed inside the enclosure to detect fire. When exposed to high temperatures, the tubing ruptures at the hottest point, acting as a nozzle to release the clean agent directly onto the flames. This rapid and localized suppression quickly extinguishes the fire, preventing its spread and safeguarding critical assets.

FEATURES & BENEFITS

- Direct Fire Suppression at the Source
- No External Power Required
- Fast and Reliable Activation
- 195 PSI pressurization
- Clean Agent Technology (HFC227ea / FK5-1-12)
- Simple Design and Installation
- Compact and Space Saving
- Low Maintenance Requirements



Cylinder Part No.	Description	Total Height	Discharge Height	Outside Diameter
3DARXXX	3LB Cylinder w/ DAR Valve	11.74" (298.20mm)	8.83" (224.28mm)	4.3" (109.22mm)
6DARXXX	6LB Cylinder w/ DAR Valve	15.59" (395.99mm)	12.68" (322.07mm)	4.3" (109.22mm)
12DARXXX	12LB Cylinder w/ DAR Valve	16.73" (424.94mm)	13.82" (351.03mm)	5.9" (149.86mm)
18DARXXX	18LB Cylinder w/ DAR Valve	22.44" (569.98mm)	19.53" (503.43mm)	5.9" (149.86mm)
25DARXXX	25LB Cylinder w/ DAR Valve	28.76" (730.50mm)	25.85" (656.59mm)	5.9" (149.86mm)

ORDERING INFORMATION

Part Number: 3DARXXX
6DARXXX
12DARXXX
18DARXXX
25DARXXX

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SECONDARY AGENT RELEASE (SAR) SYSTEM

PRODUCT DESCRIPTION

The FIRESCI Secondary Agent Release (SAR) System is a cutting-edge fire suppression solution engineered to provide reliable protection for larger or more complex enclosures. Designed with precision, the SAR system delivers clean agents like FK-5-1-12 or HFC227ea through strategically placed stainless steel nozzles, ensuring even and effective fire suppression throughout the protected space.

The system offers flexible actuation methods, including heat-sensitive tubing (HST) for direct fire detection, advanced smoke detectors for early warning, and a manual release station as a fail-safe option. With the agent stored in an external cylinder, the SAR system saves valuable internal space, simplifies maintenance, and ensures uninterrupted readiness.

Built to meet modern safety standards, the SAR system provides environmentally friendly, residue-free fire suppression, making it ideal for sensitive applications such as server rooms, electrical cabinets, telecom enclosures, and industrial control panels. Its robust design, customizable configurations, and 24/7 automatic operation make it a dependable solution for critical environments.

FEATURES & BENEFITS

- Clean Agent Technology:** Safe for sensitive equipment and environmentally friendly.
- External Cylinder Placement:** Simplifies maintenance and preserves internal enclosure space.
- Multi-Method Actuation:**
 - HST:** Direct fire detection and actuation.
 - Smoke Detector:** Early warning and automatic activation.
 - Manual Activation:** Fail-safe for user-initiated discharge.
- Stainless Steel Nozzles:** Durable and optimized for uniform agent distribution.
- Fully Automatic Operation:** Ready 24/7 with no human intervention required.
- Customizable Configurations:** Tailored for different enclosure sizes and layouts.



Parameter	Value
Agent Options	Fk5-1-12 / HFC227ea
Cylinder Pressure	195 psi / 13.5 BAR
Operating Temperature	-10°C - 50°C
Nozzle Material	Stainless Steel
Nozzle Spray Angle	15° - 360°
Actuation Methods	Heat Sensing Tube, Smoke Detection, Manual Release
Cylinder Sizes	3 lb, 6 lb, 12 lb, 18 lb, 25lb
Response Time	Immediate upon fire detection
Approvals and Compliance	UL/FM

ORDERING INFORMATION

Part Number: 3SARXXX
6SARXXX
12SARXXX
18SARXXX
25SARXXX

Fire Safety Science LLC. 945 Concorde St., #1210, Framingham, MA, 01701

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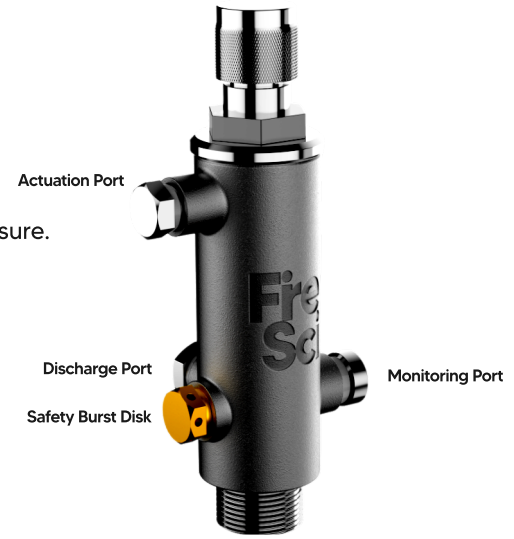
SECONDARY AGENT RELEASE (SAR) VALVE

PRODUCT DESCRIPTION

The FIRESCI SAR Valve is engineered for precision and reliability in fire suppression systems, specifically tailored for the Secondary Agent Release (SAR) configuration. With its durable construction and advanced piston-based design, the SAR Valve ensures optimal control of clean agent discharge, providing dependable performance in protecting critical enclosures such as server rooms, industrial equipment cabinets, and control panels.

FEATURES & BENEFITS

- ▀ **Piston-Driven Design:** Ensures consistent performance by maintaining cylinder pressure until actuation.
- ▀ **Burst Disc for Safety:** Protects against overpressure by safely venting excess pressure.
- ▀ **External Cylinder Integration:** Simplifies maintenance and enhances system reliability.
- ▀ **Heat-Sensitive Tubing (HST) Compatibility:** Responds quickly to fire detection when connected to HST.
- ▀ **Manual and Solenoid Actuation:** Offers flexible options for system activation, including manual release or smoke detection-triggered solenoids.
- ▀ **Corrosion-Resistant Material:** Built from high-quality materials to withstand harsh environments.



Parameter	Value
Material	Stainless Steel (Grade 304 or 316)
Valve Type	Piston-based
Operating Pressure	195 PSI (13.5 bar)
Test Pressure	600 PSI (41.4 bar)
Actuation Options	Heat-Sensitive Tubing (HST), Smoke Detection, Manual Release

ORDERING INFORMATION

Part Number: Included in SAR System

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DIRECT AGENT RELEASE (DAR) VALVE

PRODUCT DESCRIPTION

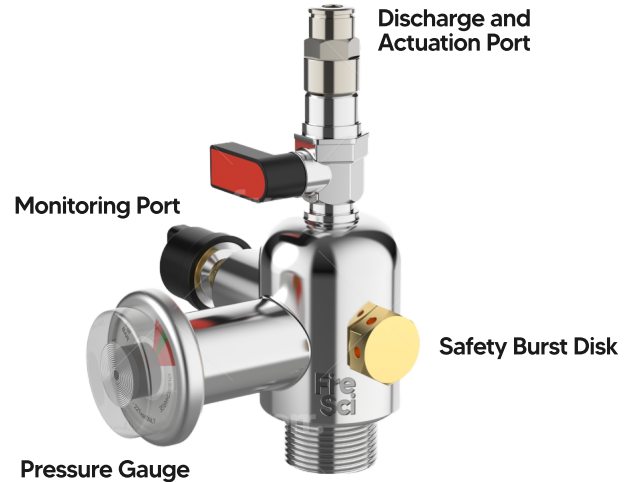
The FIRESCI DAR valve is a critical component of our Direct Agent Release (DAR) system, designed to ensure precise and reliable fire suppression. Manufactured from high-grade materials, the valve is engineered to withstand high operating pressures of up to 195 PSI and is rigorously tested at 600 PSI to guarantee durability and performance..

WHAT IT DOES

Equipped with a piston-based mechanism, the valve maintains consistent pressure within the cylinder, ensuring optimal performance during activation. When the heat-sensitive tubing (HST) detects a fire and ruptures, the valve quickly responds by releasing the clean agent through the discharge port and into the enclosure, suppressing the fire at its source.

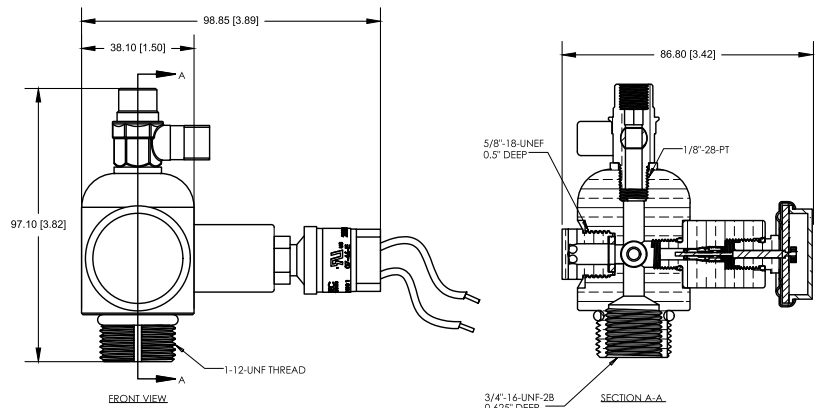
The valve's robust design includes safety features like a burst disc to prevent overpressure incidents and ensure system integrity. Its smooth operation and compatibility with various clean agents, including FK-5-1-12 and HFC227ea, make it ideal for protecting sensitive equipment in compact spaces like electrical cabinets, control panels, and industrial enclosures.

The FIRESCI DAR valve is an integral part of a fire suppression system you can trust, combining reliability, safety, and efficiency in a compact, durable design.



FEATURES & BENEFITS

- ▀ High Pressure Capacity
- ▀ Piston Based Mechanism
- ▀ Heat Sensing Tube (HST) Integration
- ▀ Burst Safety Disc Feature
- ▀ Durable Stainless Steel Construction
- ▀ Industry Compliant Standards
- ▀ Compact and Space Saving
- ▀ Smooth Activation



ORDERING INFORMATION

Part Number: OCI 99011-R6-142
 OCI 99011-R6-191
 OCI 99011-R8-142
 OCI 99011-R8-191

DATASHEET

NOZZLES

KEY FEATURES

Material: Constructed from high-grade stainless steel for durability and corrosion resistance in harsh environments.

Flow Rate Options: Available in various flow rates to match system requirements and provide efficient agent dispersion.

Wide Coverage: Designed to distribute clean agents uniformly, ensuring comprehensive fire suppression with minimal blind spots.

Low-Turbulence Design: Minimizes disturbance to sensitive equipment, making it ideal for server rooms, control panels, and compact enclosures.

Thread Compatibility: Compatible with industry-standard fittings for easy installation and system integration.

Parameter	Value
Material	Brass / Stainless Steel Grade (304 / 316)
Thread Type	BSPT/NPT
Pressure Range	180 psi to 300 psi
Finish	Polished



No.	Applications	Agents	Spray Pattern
1	Tight Spaces / Inside Cabinet	Fk5-1-12 / HFC227ea	Shallow 360°
2	Tight Spaces / Inside Cabinet	Fk5-1-12 / HFC227ea	Shallow 360°
3	Inside Cabinet	Fk5-1-12 / HFC227ea	360° Cone / 45°
4	Surface Advantage	Fk5-1-12 / HFC227ea	Micro-Mist
5	Vehicle / Kitchen	Fk5-1-12 / HFC227ea	360° Cone / 15° / 30°

PERFORMANCE

Spray Angle: 15° - 360°

Coverage: Designed for full enclosure saturation within seconds of activation.

Agent Compatibility: FK5-1-12 / HFC 227ea

Compliance: Meets International Standards for Fire Suppression (UL,FM)

Durable Stainless Steel Construction

ORDERING INFORMATION

Part Number: OCI 990001-XP
OCI 990002-IP
OCI 99730
OCI 99715

DATASHEET

HEAT SENSING TUBE (HST) SYSTEM

PRODUCT DESCRIPTION

FIRESCI's Heat-Sensing Tubing (HST) is a reliable and efficient fire detection and activation solution designed for compact enclosures and critical fire-prone areas. Acting as both a detector and actuator, the HST is pressurized and routed throughout the protected space, where it directly senses heat at the fire's source. Upon reaching a critical temperature, the tubing ruptures, triggering the release of clean agent through the system's discharge mechanism.

Built for precision and durability, FIRESCI's HST operates independently of electrical power, making it ideal for remote or high-risk environments. Its simple installation, minimal maintenance requirements, and rapid response time ensure dependable fire suppression where it matters most.

WHAT IT DOES

FIRESCI's Heat-Sensing Tubing (HST) detects fire by sensing heat at its source. When exposed to high temperatures, the tubing ruptures, triggering the release of the clean agent to suppress the fire quickly and effectively.

FEATURES & BENEFITS

- ▀ Continuous linear pneumatic heat detection device
- ▀ Humidity and vibration resistant
- ▀ 150mm Bend Radius
- ▀ Outside Diameter: 6mm / 8mm
- ▀ Inside Diameter: 4mm / 6mm
- ▀ Operating Pressure: 195 PSI / 13 BAR
- ▀ 100m Rolls



UL 521 Temperature Rating

Dial Diameter	109° C	Intermediate
Thread Size	142° C	High
Pressure Range	191° C	Very High

Heat Sensing Tube (HST)

ORDERING INFORMATION

Part Number: OCI 99011-R6-142
 OCI 99011-R6-191
 OCI 99011-R8-142
 OCI 99011-R8-191

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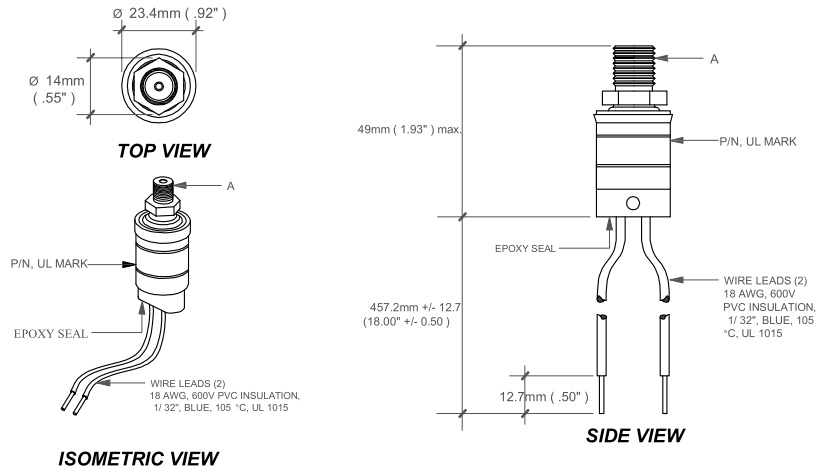
PRESSURE SUPERVISORY SWITCH

PRODUCT DESCRIPTION

The Pressure Supervisory Switch is used to monitor the pressure within the Clean Agent cylinder. If a cylinder leak occurs, and its pressure drops below 291 +/- 10 psig, the switch contacts will be activated, providing a signal to the Release Control Panel to indicate loss of pressure and/ or leakages. The Pressure Supervisory is wired into a supervised circuit to give a trouble signal upon activation.

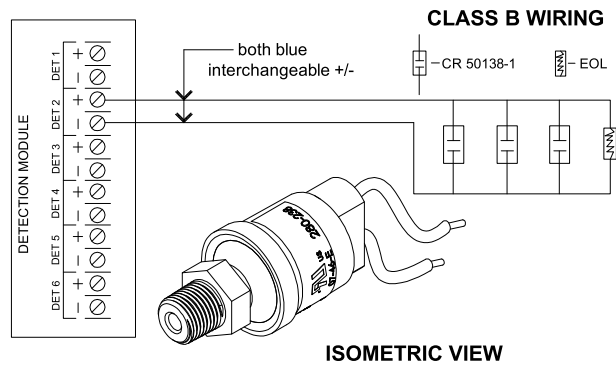
SPECIFICATIONS: 195 PSIG NORMALLY OPEN

1. Auto-reset pressure switch (SPST)
2. Type: Normally Open (N.O.) at atmospheric condition
3. Operation: Open: 291 +/- 10 psig
Close: 360 +/- 10 psig
4. Proof Pressure: 600 psig
5. Burst Pressure: 5000 psig
6. Electrical Ratings: 120/ 240 VAC - 375 VA
24 VAC - 125 VA
7. Cycle Life: 100,000 minimum
8. Ambient Temperature: -30 to +70° C
9. Fluid Temperature: -54 to +135° C
10. Agency Recognition: CE and UL Listed



FEATURES & BENEFITS

- ▀ Real Time Monitoring
- ▀ Early Issue Detection
- ▀ Enhanced Safety
- ▀ System Reliability
- ▀ Remote Alerts
- ▀ Compliance and Certification
- ▀ Ease of Integration
- ▀ Low Maintenance Requirements



ORDERING INFORMATION

Part Number: OCI 50138-11-S

DATASHEET

LATCHING SOLENOID WITH SUPERVISION

KEY FEATURES

Latching Mechanism: Retains its position after activation, reducing power consumption and improving system efficiency.

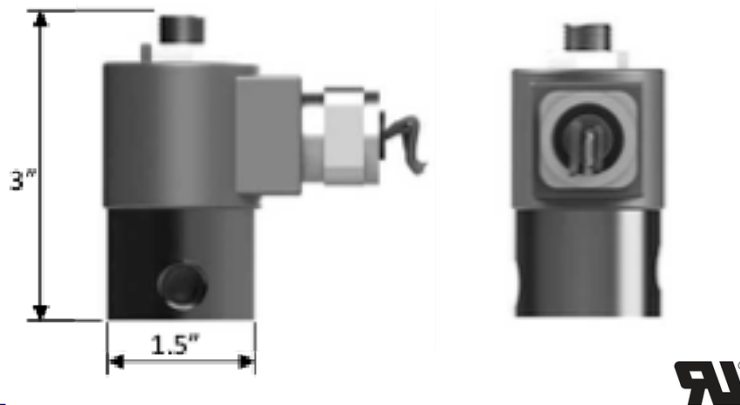
Supervised Operation: Continuous supervision ensures the solenoid's status is monitored in real-time for enhanced system reliability.

Compact Design: Streamlined profile allows for easy integration into fire suppression systems without requiring additional local control.

Durable Construction: Built from high-grade materials to withstand harsh environments and extended operation cycles.

Low Power Consumption: Operates efficiently at 11W, minimizing strain on system power resources.

Parameter	Value
Voltage	24V DC
Power Consumption	11W
Connection Type	2 Wire, Polarity Insensitive
Supervision	Continuous supervision via control panel integration
Latching Mechanism	Yes
Material	Corrosion-resistant stainless steel



PERFORMANCE

- ▀ **Energy Efficiency:** Requires power only during activation, conserving energy during standby.
- ▀ **System Safety:** Supervision ensures that solenoid functionality is monitored and reported to the control panel.
- ▀ **Versatile Integration:** Compatible with various fire suppression systems and easy to connect with existing setups.
- ▀ **Robust and Reliable:** Withstands high-pressure environments and offers long service life.

ORDERING INFORMATION

Part Number: FS-50025-2

DATASHEET

DIRECT MANUAL RELEASE WITH PRESSURE GAUGE (WALL MOUNT)

PRODUCT DESCRIPTION

The FIRESCI Wall-Mounted Direct Manual Release is an operator-controlled activation device designed specifically for FIRESCI SAR (Secondary Agent Release) systems. This unit provides an additional layer of safety, allowing for manual discharge of the suppression agent in case of a detected fire or emergency. When activated, the module depressurizes the heat-sensitive tubing (HST), triggering the INDIREL™ valve to release the clean agent through the installed nozzles.

Equipped with an integrated pressure gauge, the module also allows for easy visual inspection of the system's pressure status, ensuring operational readiness.

KEY FEATURES

- ▀ Operator Controlled Discharge
- ▀ Integrated Pressure Gauge
- ▀ Depressurization Activation
- ▀ Wall Mounted Design
- ▀ Durable and Corrosion Resistant



TECHNICAL SPECIFICATIONS

Parameter	Value
System Compatibility	Secondary Agent Release (SAR) System
Activation Method	Direct Manual Pull Handle
Pressure Rating	195 PSI Operating - 600 PSI Tested
Housing Material	Stainless Steel
Mounting	Wall Mounted
Connection Type	HST Depressurization Line
Environment	Indoor / Outdoor Use
Approvals and Compliance	UL/FM

ORDERING INFORMATION

Part Number: OCI 62033

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FIRE SUPPRESSION PRESSURE GAUGE

PRODUCT DESCRIPTION

FIRESCI pressure gauges are precision-engineered instruments designed to monitor cylinder pressure in fire suppression systems accurately. Featuring a compact and corrosion-resistant design, our gauges are built to withstand high-pressure environments, ensuring durability and long-term reliability. The easy-to-read dial provides clear, real-time pressure readings, making system checks efficient and straightforward.

Calibrated to match FIRESCI's 195 PSI DAR and SAR systems' operating pressures, these gauges ensure compatibility and enhance overall system safety. Ideal for industrial facilities, data centers, and other critical applications, FIRESCI pressure gauges provide dependable performance, helping ensure that fire suppression systems are always in optimal working condition.

WHAT IT DOES

FIRESCI's pressure gauges accurately report tank pressures up to 7,500 PSI and ensure a true full charge, recharge, or optimal pressure reading. If pressure falls below a predetermined level, the pressure gauge triggers a signal indicating the cylinder needs attention.

FEATURES & BENEFITS

- Made in the USA**
- ISO 9001 Certified**
- UL Listed:** With pressure ranges from 185-205 PSI.
- Superior Quality and Dependability:** Designed to meet the strict requirements of the fire protection and medical industries.
- Precision Engineering:** Ensures accurate pressure readings with minimal deviation.
- Corrosion Resistance:** Stainless steel materials for long lasting protection.
- Wide Compatibility:** Designed to integrate seamlessly with FIRESCI's SAR and DAR systems.

Parameter	Value
Dial Diameter	1.25" (31.75mm)
Thread Size	M10
Pressure Range	185-205 PSI
Depth	1.09" (27.686mm)



ORDERING INFORMATION

Part Number: CR 27-15-18-DC-3

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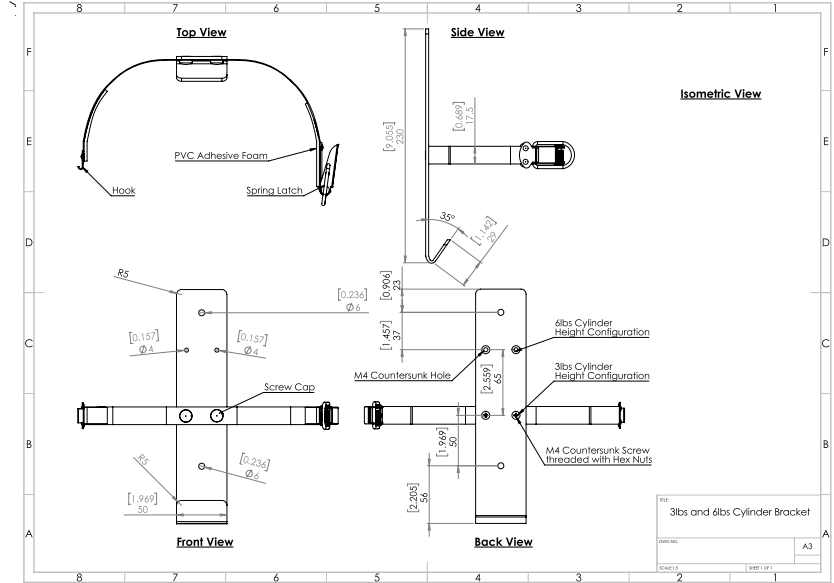
UNIVERSAL CYLINDER BRACKET SYSTEM

PRODUCT DESCRIPTION

Our Universal Bracket in FIRESCI's fire suppression systems is a versatile and sturdy component designed to securely hold cylinders ranging from 3 lbs to 18 lbs in size, including both standard and SMARTILT™ versions. Constructed from stainless steel, this bracket provides exceptional durability and resistance to corrosion, making it suitable for various environments where long-term reliability is essential.

ADJUSTABLE DESIGN

The universal bracket is adjustable, accommodating FIRESCI's full range of cylinder sizes (3 lbs, 6 lbs, 12 lbs, and 18 lbs). This flexibility ensures compatibility across different setups and cylinder requirements, enabling efficient protection in diverse applications.



NO DRILL OPTION

For installations that require non-invasive mounting, the bracket includes a non-drill type option. This version allows for secure cylinder attachment without the need for drilling or altering the mounting surface, preserving the integrity of protected areas.

ENHANCED STABILITY

The robust stainless steel construction provides stable, secure mounting for the cylinder, even in environments with high vibration or movement. This stability is critical for maintaining the integrity of the fire suppression system under various conditions. The robust stainless steel construction provides stable, secure mounting for the cylinder, even in environments with high vibration or movement. This stability is critical for maintaining the integrity of the fire suppression system under various conditions.

ORDERING INFORMATION

Part Number: OCI 10130-FS
OCI 10131-FS

