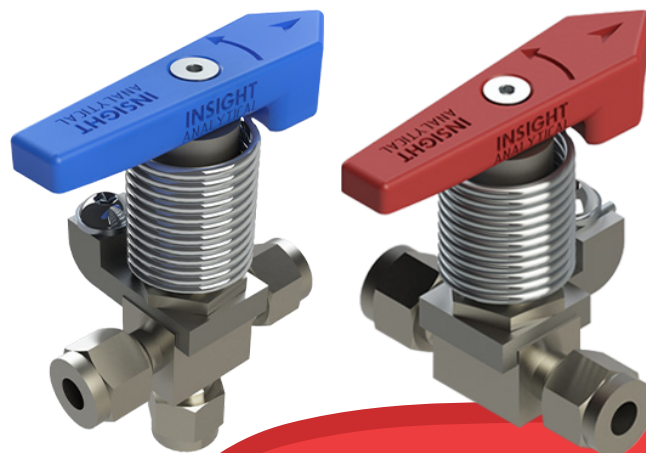


Product Overview

The Insight Analytical Spring Return Valve is a compact, safety-focused manual ball valve designed to return to the closed position when not actively held open. Ideal for applications where an unattended open valve could cause operational or safety issues, this valve ensures process integrity through automatic spring actuation. Available in 2-way and 3-way configurations and multiple sizes, it suits grab sample stations, stream switching, filter drains, and safety-sensitive shutoff scenarios. Based on robust Swagelok valves, the design maintains full pressure and temperature ratings while providing visual handle indicators and CRN certification. Optional aluminum handles extend temperature tolerance for more demanding conditions.



Maximum Pressure Rating: 17,237 kPag (2500 psig)

Temperature Range: -45°C to 149°C (-49°F to 300°F)

Inlet and Outlet Connection Size:
1/8", 1/4", 3/8" or 1/2" Swagelok Tube Fittings

Wetted Materials: 316 Stainless Steel

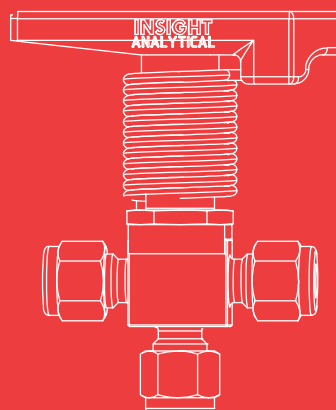
NACE Compliance: NACE MR0175/ISO 15156 and MR0103 Compliant

Field of Application

The Insight Analytical Spring Return Valve is available in 1/8", 1/4", 3/8", and 1/2" sizes and supports both 2-way and 3-way configurations, offering flexibility for a wide range of manual process control needs. These include safety-sensitive environments such as grab sampling systems, coalescing filter drains, and refueling operations.

The auto-return feature ensures that the valve always reverts to a closed or default position when not actively held, which reduces the risk of accidental process exposure or operator error. This is particularly important in applications involving hazardous gases or pressurized systems.

Its compact form and CRN-certified design make it suitable for integration into analyzer shelters, field sample panels, and regulated industrial systems across the oil and gas and chemical sectors.



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Scan the QR Code to Learn More!

See more details on our website, or feel free to contact us with any questions!



Principle of Operation

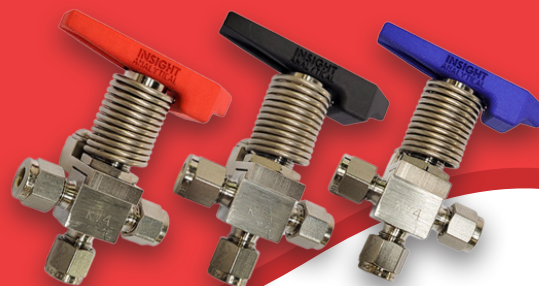
The Insight Analytical Spring Return Valve operates as a manual ball valve equipped with a return spring mechanism. When the handle is manually rotated, the valve opens; once released, the spring automatically returns the valve to its normally closed or default position, preventing unintentional flow or misalignment.

Built on Swagelok SS-42GS4 and SS-43GS4 valve bodies, the spring return versions retain all original performance ratings. These include CRN registration and a working pressure up to 17,237 kPag (2500 psig), with 316 stainless steel wetted parts and modified PTFE packing for chemical compatibility.

The handle is molded from nylon and comes standard in black, with red, yellow, and blue color options available for identification. Nylon handles are rated for temperatures

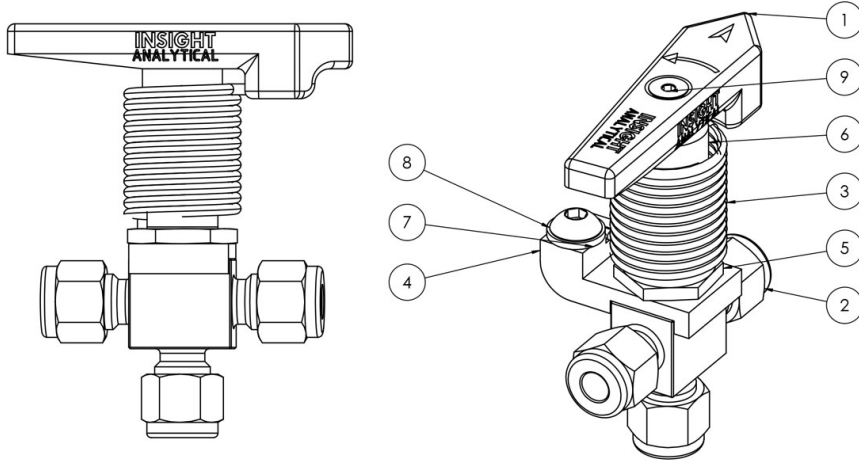
up to 70°C (158°F). For higher-temperature applications, an optional aluminum handle is available, rated for -40°C to 149°C (-40°F to 300°F).

The return spring is integrated directly into the handle mechanism, eliminating the need for external springs or additional assemblies. This allows for a clean, compact footprint that fits well into confined panels or sampling assemblies. Because the valve does not rely on electronics or pneumatic actuation, it is highly reliable in environments with limited infrastructure or hazardous area classification.



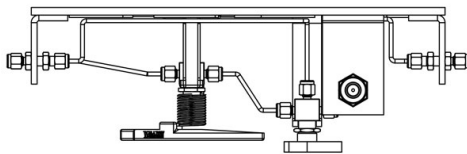
Advantages

- Spring-return mechanism prevents unintentional valve openings and ensures automatic return to the default position, maintaining system safety without requiring operator intervention.
- Available in both 2-way and 3-way configurations to accommodate flow path switching or shutoff duties in compact sample systems.
- Maintains Swagelok base valve ratings including 2500 psig pressure and CRN certification, ensuring compliance with high-pressure process standards.
- 316 stainless steel wetted parts and modified PTFE packing provide robust chemical resistance and long-term reliability in aggressive service conditions.
- Offered in multiple sizes (1/8", 1/4", 3/8", 1/2") to meet a wide range of process requirements while supporting easy integration with existing tubing systems.
- Color-coded nylon handles (black, red, yellow, blue) support easy valve identification and reduce operator confusion during manual operation.
- Optional aluminum handle supports extended temperature service from -40°C to 149°C, expanding the valve's range of application in hot or cold environments.
- Ideal for manual grab sample systems, stream switching, venting operations, and coalescing filter drains where a fail-safe return position is essential.
- Eliminates operator error and supports best practices in safety-critical sampling and maintenance procedures.
- Compact and modular, enabling easy panel mounting or retrofitting into existing installations without additional brackets or supports.
- Reduces downtime and simplifies preventative maintenance by providing consistent mechanical return and fewer failure points.

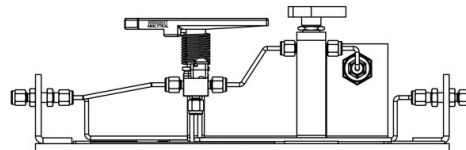


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	HANDLE 3-WAY QUARTER		1
2	SS-42CGSX4 SPRING RETURN VALVE		1
3	TORSION SPRING 3 WAY QUARTER		1
4	MACHINED VALVE PLATE		1
5	NUT		1
6	MACHINED VALVE SHAFT		1
7	30.1342	M6 FLAT WASHER X 12mm OD	1
8	ISO 7380	BUTTON HEAD HEXAGON SOCKET DRIVE SCREW ISO 7380	1
9	DIN 7991	COUNTERSUNK HEAD HEXAGON SOCKET DRIVE SCREW DIN 7991	1

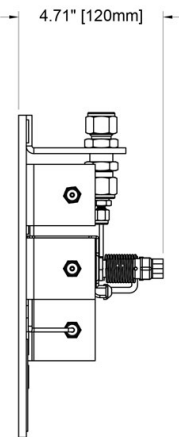
AUTO RETURN VALVE - 3-WAY, 1/4" TUBE



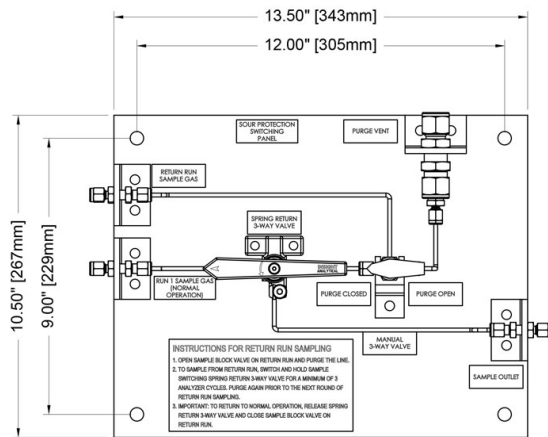
TOP VIEW



BOTTOM VIEW

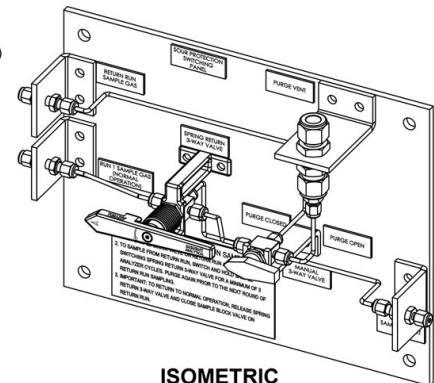


LEFT SIDE VIEW



FRONT VIEW

Ø0.4375"
(4 PLACES)



ISOMETRIC

3-WAY SPRING RETURN VALVE - SOUR PROTECTION SWITCHING PANEL LAYOUT