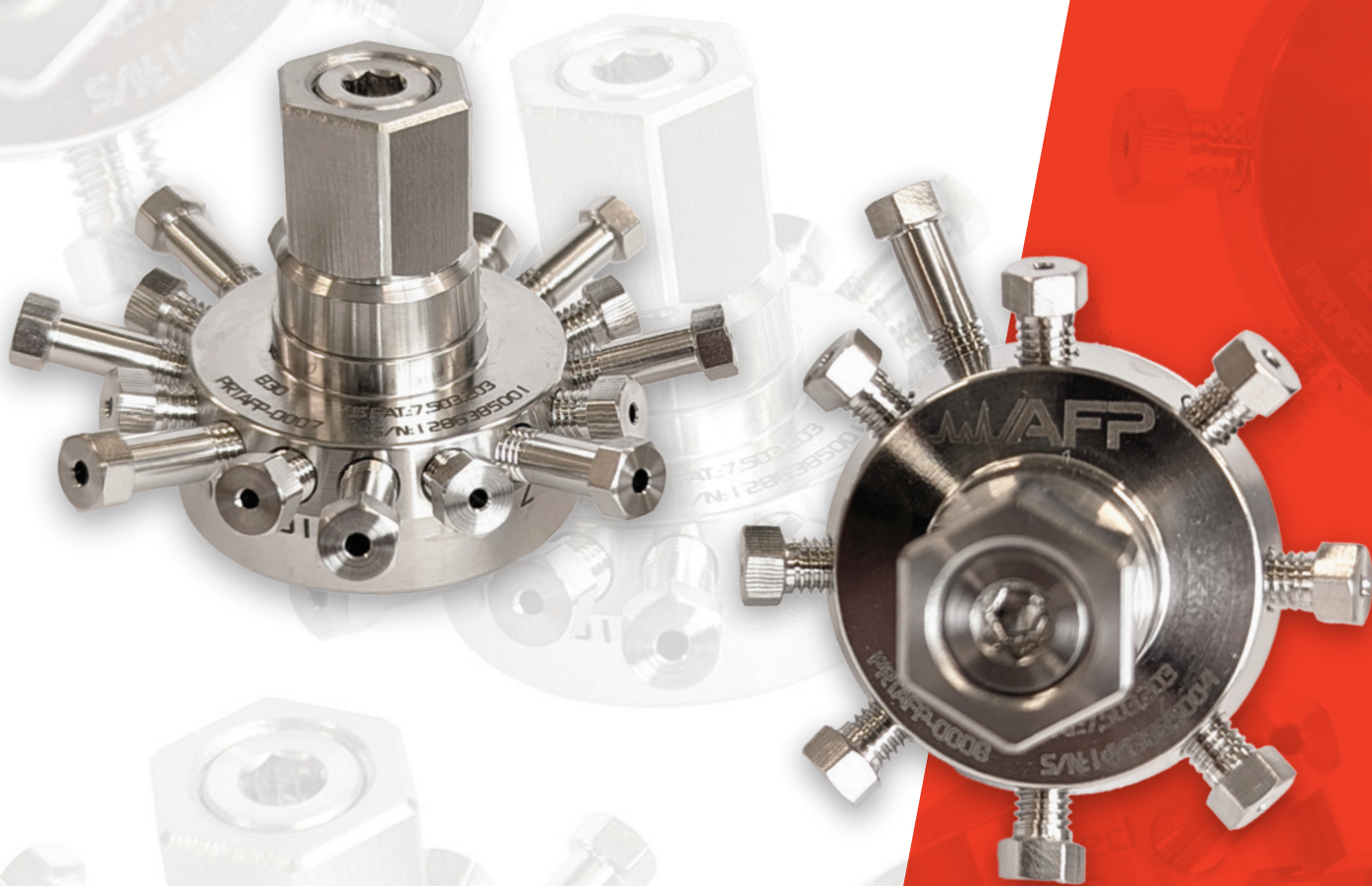


GAS CHROMATOGRAPHY

STREAM SELECTION ROTARY VALVES (RVS)



**Precise, repeatable flow path
selection for demanding
GC applications**

www.afplifesciences.com

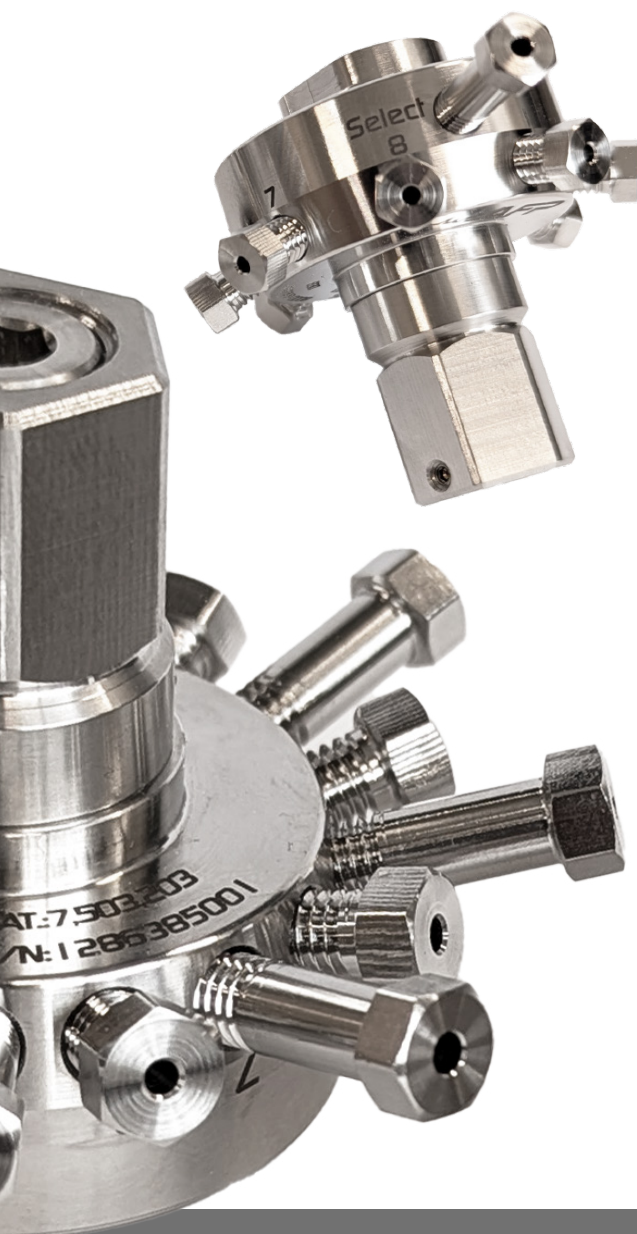
AFP
Schivo Group

STREAM SELECTION ROTARY VALVE SERIES

RVS-SD (DEAD END)

In modern gas chromatography (GC), analytical accuracy and system efficiency depend heavily on precise control of multiple sample streams.

Stream selection rotary valves play a critical role by enabling automated, repeatable switching between numerous gas sources without compromising sample integrity or flow stability. By minimizing dead volume, preventing cross-contamination, and maintaining consistent pressure and flow characteristics, these valves ensure reliable data quality even in complex, multi-stream GC applications. Robust stream selection rotary valve design not only enhances throughput and uptime, but also simplifies system architecture—making it an essential component for laboratories and process environments that demand accuracy, reliability, and long-term performance.



AFP now offers Stream Selector Rotary Valves (RVS) featuring Nitronic® 60 valve bodies paired with AFP's R2 rotor, engineered from a PEEK/PTFE composite. Initial configurations are available in a standard dead-end design, allowing one selected flow path while all remaining ports are blocked.

The new standoff design incorporates a dual-flat positive-lock shaft interface, replacing the traditional clamp ring arrangement.

Matching internal features in the collar provide secure anti-rotation engagement, improved assembly robustness, and enhanced long-term reliability.

The RVS-SD series is compatible with inert coatings, making it well suited for demanding applications. Stream selection rotary valves require a multi-communication electronic actuator (MEA-2100) for operation.

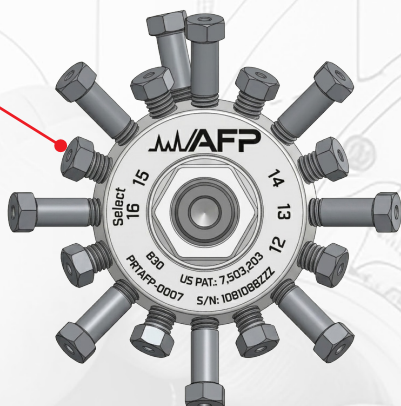
KEY FEATURES:

- Stator material – Nitronic 60 alloy resists wear and galling
- Rotor material – PEEK/PTFE AFP R2 rotors preserve sample integrity at 400 psi and up to 225°C
- Every valve is leak-tested prior to shipment at no additional cost
- Inert coating such as Dursan®
- Number of streams: 4 to 16
- Port Size: 0.030" with 1/16" port connection
- Dual-Flat Positive-Lock Shaft Interface

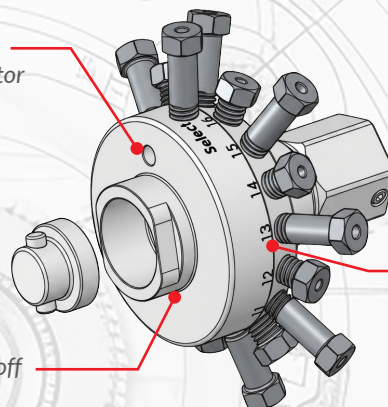
KEY DESIGN FEATURES

(16 STREAM MODEL)

Short + long screws for easier tube installation



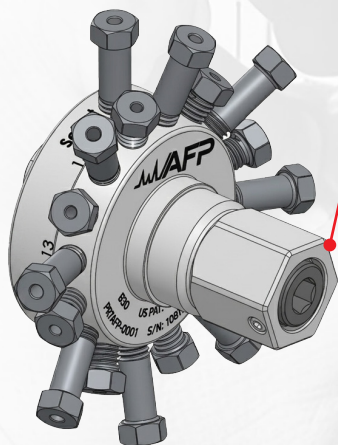
Compatible with competitor Standoffs



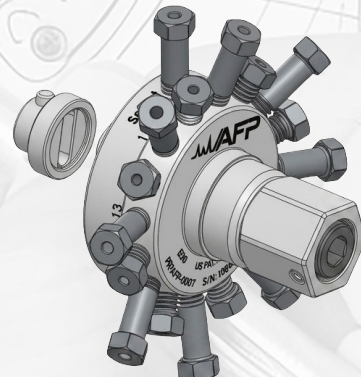
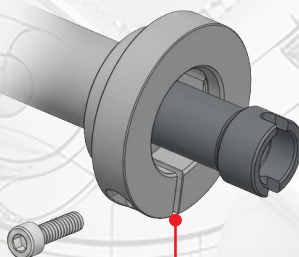
Laser marking for stream identification

Alignment feature on valve for correct installation on Standoff

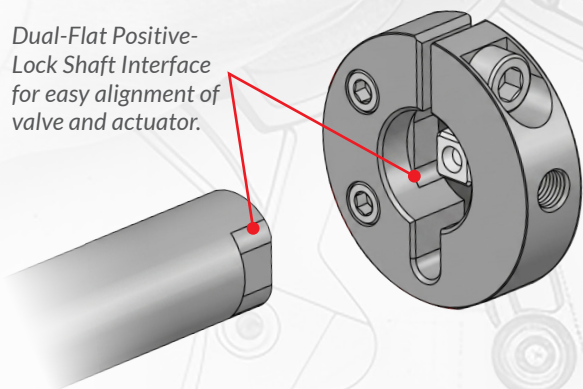
New preload design compatible with standard hex keys for easier maintenance



New Standoff designed for stream selector valves (no stoppers)



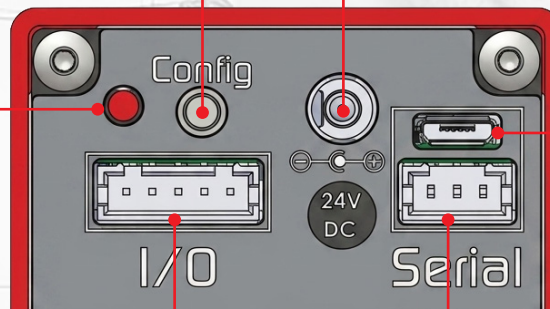
Dual-Flat Positive-Lock Shaft Interface for easy alignment of valve and actuator.



Config Button

24V DC Power

Status LED



USB Port

Digital I/O

1. Out No. 1
2. GND
3. Out No. 2
4. IN No. 1
5. IN No. 2

RS-232 Port

1. TX/A+
2. RX/B-
3. GND

FLOWPATH MODELS

AFP Stream Selection Rotary Valves are available with multiple flowpath configurations designed to provide precise control, routing, and isolation of multiple gas streams in advanced analytical systems. These valves allow one selected stream from multiple inputs to be directed through a common outlet to downstream components such as sample valves, detectors, columns, pressure sensors, or other analytical devices. Depending on the required system architecture, non-selected streams can be isolated, continuously vented, or routed through dedicated flow paths to maintain sample integrity, reduce contamination risk, and optimize analytical performance.

Flowpath Model Types:

SD Dead-End Flow Selector (SD Style)

CO Common Outlet Flow Selector (SC Style)

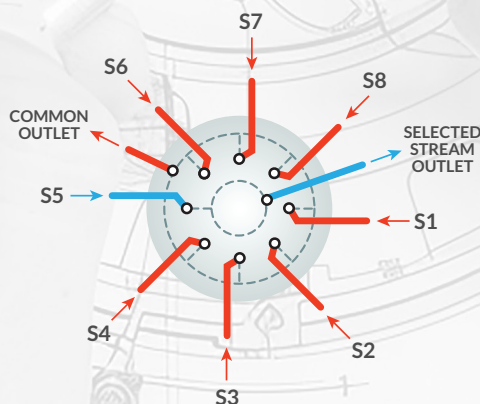
FT Flow-Through Flow Selector (SF Style)

TP Trapping Flow Selector (ST Style)

TF Trapping/Flow-Through Flow Selector (STF Style)

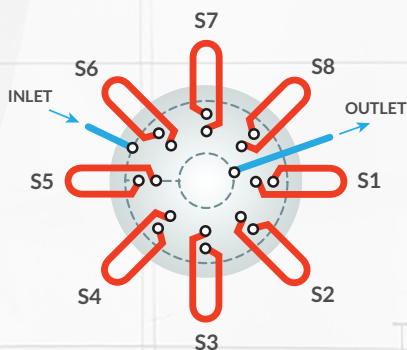
The CO model

(Common Outlet Flowpath Selectors)



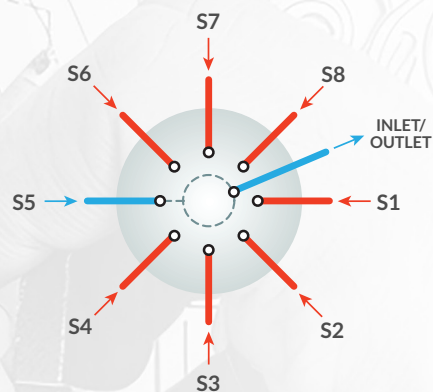
The TP model

(Trapping Flowpath Selectors)



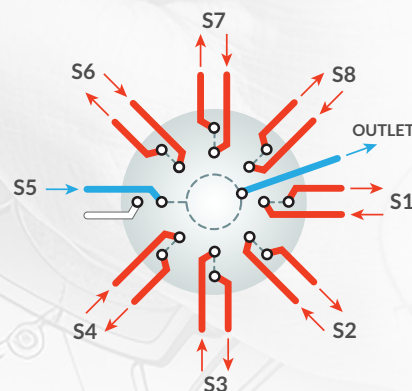
The SD model

(Dead-end Flowpath Selectors)



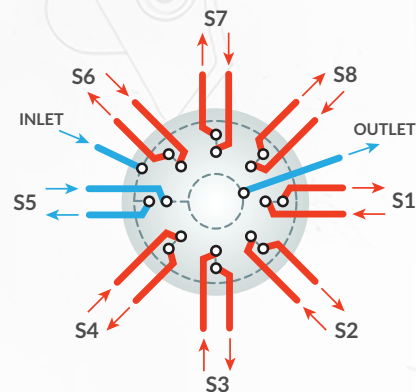
The FT model

(Flow-Through Flowpath Selectors)



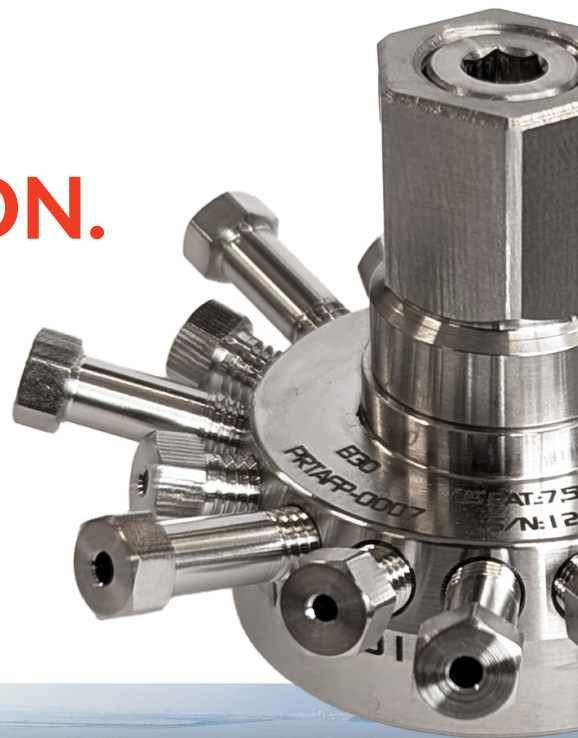
The TF model

(Trapping/Flow-Through Flowpath Selectors)



MULTIPLE STREAMS. ONE RELIABLE SOLUTION.

For applications requiring continuous sample flow or reduced response time during stream changes, AFP offers flowpath designs that allow non-selected streams to remain active by routing them to common or individual outlets. This approach helps maintain stable flow conditions, minimize stagnant volumes, and ensure representative sample availability when switching between streams. Additional multi-position configurations support advanced applications such as multi-column selection, multi-sample analysis, and multi-trap workflows where accurate and repeatable routing between multiple analytical paths is essential.



Engineered with precision-machined Nitronic® 60 valve bodies and AFP's advanced R2 rotor technology, AFP Stream Selection Rotary Valves deliver reliable sealing performance, excellent chemical compatibility, and long-term durability.

Combined with AFP intelligent actuator technology, these valves provide automated, repeatable stream control for demanding GC, process monitoring, and analytical instrumentation applications.



ORDERING INFORMATION

Stream Selector Valves, 4 Streams

Product Description	Part No.
Stream Selector Valve, dead end, 4 streams, R2, N60, Replacement Valve	RVS04-SD-16R2-01-00
Stream Selector Valve, dead end, 4 streams, R2, N60, MEA + STO-2"	RVS04-SD-16R2-01-2I
Stream Selector Valve, dead end, 4 streams, R2, N60, MEA + STO-3"	RVS04-SD-16R2-01-3I
Stream Selector Valve, dead end, 4 streams, R2, N60, MEA + STO-4"	RVS04-SD-16R2-01-4I
Stream Selector Valve, dead end, 4 streams, R2, Dursan coating, Replacement Valve	RVS04-SD-16R2-02-00
Stream Selector Valve, dead end, 4 streams, R2, Dursan coating, MEA + STO-2"	RVS04-SD-16R2-02-2I
Stream Selector Valve, dead end, 4 streams, R2, Dursan coating, MEA + STO-3"	RVS04-SD-16R2-02-3I
Stream Selector Valve, dead end, 4 streams, R2, Dursan coating, MEA + STO-4"	RVS04-SD-16R2-02-4I
Spare Rotor, Stream Selector Valve, dead end, 4 streams R2	RVS-ROTSD-R2-04

Stream Selector Valves, 8 Streams

Product Description	Part No.
Stream Selector Valve, dead end, 8 streams, R2, N60, Replacement Valve	RVS08-SD-16R2-01-00
Stream Selector Valve, dead end, 8 streams, R2, N60, MEA + STO-2"	RVS08-SD-16R2-01-2I
Stream Selector Valve, dead end, 8 streams, R2, N60, MEA + STO-3"	RVS08-SD-16R2-01-3I
Stream Selector Valve, dead end, 8 streams, R2, N60, MEA + STO-4"	RVS08-SD-16R2-01-4I
Stream Selector Valve, dead end, 8 streams, R2, Dursan coating, Replacement Valve	RVS08-SD-16R2-02-00
Stream Selector Valve, dead end, 8 streams, R2, Dursan coating, MEA + STO-2"	RVS08-SD-16R2-02-2I
Stream Selector Valve, dead end, 8 streams, R2, Dursan coating, MEA + STO-3"	RVS08-SD-16R2-02-3I
Stream Selector Valve, dead end, 8 streams, R2, Dursan coating, MEA + STO-4"	RVS08-SD-16R2-02-4I
Spare Rotor, Stream Selector Valve, dead end, 8 streams R2	RVS-ROTSD-R2-08

Stream Selector Valves, 16 Streams

Product Description	Part No.
Stream Selector Valve, dead end, 16 streams, R2, N60, Replacement Valve	RVS16-SD-16R2-01-00
Stream Selector Valve, dead end, 16 streams, R2, N60, MEA + STO-2"	RVS16-SD-16R2-01-2I
Stream Selector Valve, dead end, 16 streams, R2, N60, MEA + STO-3"	RVS16-SD-16R2-01-3I
Stream Selector Valve, dead end, 16 streams, R2, N60, MEA + STO-4"	RVS16-SD-16R2-01-4I
Stream Selector Valve, dead end, 16 streams, R2, Dursan coating, Replacement Valve	RVS16-SD-16R2-02-00
Stream Selector Valve, dead end, 16 streams, R2, Dursan coating, MEA + STO-2"	RVS16-SD-16R2-02-2I
Stream Selector Valve, dead end, 16 streams, R2, Dursan coating, MEA + STO-3"	RVS16-SD-16R2-02-3I
Stream Selector Valve, dead end, 16 streams, R2, Dursan coating, MEA + STO-4"	RVS16-SD-16R2-02-4I
Spare Rotor, Stream Selector Valve, dead end, 16 streams R2	RVS-ROTSD-R2-16

ORDERING INFORMATION

Spare Parts MEA

Product Description	Part No.
MEA-2100 replacement with USB cable - without Standoff or power supply.	MEA-2100-00
MEA-2100 replacement with RS-232 cable - without Standoff or power supply.	MEA-2100-01
MEA-2100 replacement with RS-485 cable - without Standoff or power supply.	MEA-2100-02

Accessories

Product Description	Part No.
Power supply for MEA-2100	EA00-9010-1050
RS-232 cable	EA00-9010-1020
RS-485 cable	EA00-9010-1030
North America power supply cable 120V	EA00-9010-1000

Standoff Kits

Product Description	Part No.
2" Standoff Kit for MEA-2100, Dual Flat Design	STO-07
3" Standoff Kit for MEA-2100, Dual Flat Design	STO-08
4" Standoff Kit for MEA-2100, Dual Flat Design	STO-09
2" Standoff Kit for MEA-2100, Dual Flat Design - VICI compatible	STO-VS-07

AFP: Precision Manufacturing for the Highest-Quality, Ultra-Reliable Valves

AFP's manufacturing capabilities produce high-quality, ultra-reliable rotary valves, diaphragm valves, and accessories that minimize leaks and downtime in chromatography systems. Our valves go through meticulous quality control and 100% testing to eliminate the need for OEM pre-production inspection and validation. This rigorous quality process ensures uninterrupted manufacturing flow for OEMs plus less maintenance and lower cost of ownership for end-users.

AFP is the preferred supplier for customers desiring the highest-quality chromatography valves and accessories that offer superior performance in the most challenging environments.





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