

W75 Series PMO Compliant

DOUBLE SEAT MIX PROOF VALVES



Food and beverage processing has never been more challenging. Margins are being squeezed, food safety is paramount and consumer demands for new products make formulation changes a regular occurrence.

To meet these challenges head on, you need a partner with a deep understanding of process engineering and a broad portfolio of equipment. Look to SPX FLOW and its industry leading brands to provide unparalleled technical support, equipment versatility and food processing expertise. Explore the endless solutions that SPX FLOW has to offer. You're sure to find answers that will improve plant performance, increase profitability and enhance the value of your brand.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit www.spxflow.com.

W75 Series Double-Seat Mix Proof Valves for PMO Compliant Continuous Processing

W75CP2 FEATURES AND BENEFITS:

CONTINUOUS PRODUCTION AND CLEANING

- Newest generation continuous process (CP) PMO valve maximizes plant uptime and capacity.
- Allows greatest flexibility in cleaning and dairy production schedule.
- Demonstrated ability to clean all product-contact surfaces without full actuation of the valve. Integrated flow channels designed into the lower balancer clean product-contact portion of the balancer during lower seat clean movement so no cumbersome adapters or external piping are required.

SECURE AND RELIABLE

- Unique vent separator technology creates two independent vent paths (inner and outer) for leakage and CIP during upper and lower seat cleaning.
- Zero pressure or less is maintained in the vent cavity during seat cleaning meaning there is no risk of cross contamination between CIP process fluids.
- Mechanical barrier of vent separator is not dependent upon complicated internal flow dynamics and delicate stem profiles that could jeopardize PMO compliance if damaged.
- Robust stem design to withstand operations and mishandlings of active plant environments and maintenance.
- Vent separator design allows instant visual leak detection if separator seal is damaged and valve not in PMO compliance.
- Integrated fail safe control system electronically monitors position of both valve stems at all times to ensure safe and proper operation.

COMPACT

- Meets latest 3-A Sanitary Standard 85-02 to allow reduced diameter vent drain and smaller valve overall.
- Up to 36% reduced weight for easier maintenance.
- Up to 50% smaller actuator reduces air consumption by up to 70%, providing utility cost savings.
- Same port-to-port center line dimensions as original W75CP & W75RS to easily add on to existing manifolds

COMPLETELY AND EASILY SERVICEABLE

- Fully maintainable actuator with caged spring.
- Metal-to-metal seat clean adjustment stop to ensure factory setting and easy assembly.
- Compressed air not required for disassembly, maintenance, or assembly procedures after removal from product zone.
- With quick-disconnect pin connectors, control top can remain on valve during disassembly & maintenance. No added steps for removal or operator exposure to electrical controls.
- Minimal proprietary elastomers in product zone and actuator lowers cost of ownership.

ROBUST

- Waukesha Cherry-Burrell's signature machined-from-bar bodies and components offer a robust and reliable valve solution.
- Heavy duty valve construction can withstand mishandlings of an active plant environment & lead to long service life.
- Balanced design for resistance to hydraulic shock.

Typical product applications

Dairy

Cream

Milk

Milk concentrate

Raw milk

Skimmed milk

Whey

Whey concentrate

Raw receiving

Raw storage and handling

Supply and discharge on HTST/pasteurization

Filler supply lines

Batching system ingredient feeding

Batching/blending distribution

CIP supply and return distribution



PRODUCT SPECIFICATIONS

Application

W75CP2 for safe separation of dairy product from CIP plus single seat-lift separation compliance. Fully independent operation and cleaning of either the upper or lower housing is achieved due to:

1. 3-A sanitary standard 85-02 approval
2. PMO Section 15p(B) compliance for single seat lift separation while product is in the opposite housing
3. PMO Section 12p compliance for ability to clean all product contact surfaces

Materials

Product Wetted: Stainless Steel, ASTM 316L (UNS-S31603); (DIN-1.4404)

Non-Product: Stainless Steel, ASTM 304 (UNS-S30400); (DIN-1.4301)

Elastomers: FKM (Fluoroelastomer)

Internal Surface Finish: <32 Ra (<0.8 μm) Other finishes available upon request

Maximum Holding Pressure: All sizes = 150 psi (10.3 bar)

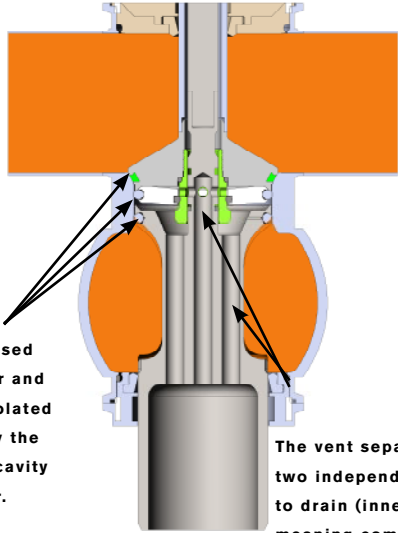
Maximum Operating Pressure: All sizes = 150 psi (10.3 bar)



THEORY OF OPERATION:

 Product  CIP

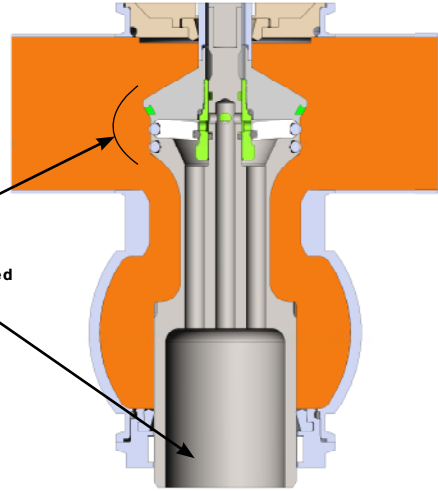
Valve Closed



In the fail-safe closed position, the upper and lower seats are isolated from each other by the atmospheric vent cavity and vent separator.

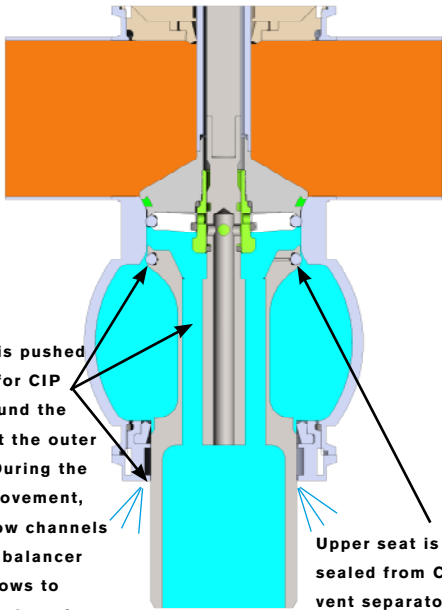
The vent separator creates two independent vent paths to drain (inner and outer) meaning completely safe production and no risk of cross contamination if the seat seals fail.

Valve Open



When the valve is open, the vent drain is sealed off to prevent spillage and allow visual leak indication if the vent separator seal is damaged and not within PMO compliance.

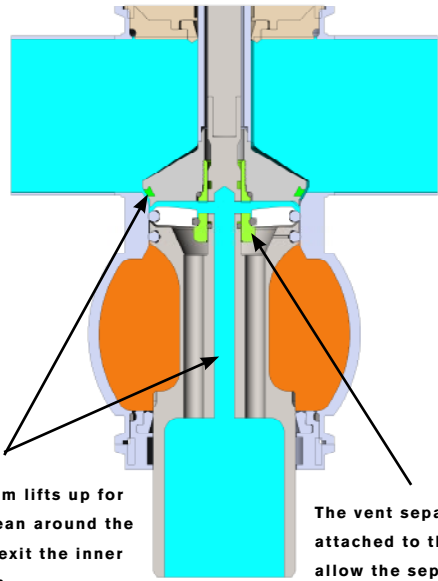
Lower Seat Clean



Lower stem is pushed out of bore for CIP to clean around the seat and exit the outer vent drain. During the downward movement, machined flow channels in the lower balancer direct CIP flows to clean the portion of lower balancer exposed to product when open.

Upper seat is completely sealed from CIP via the vent separator to prevent any impingement on seal and safely process dairy product in the upper line simultaneously.

Upper Seat Clean



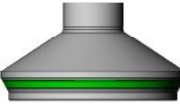

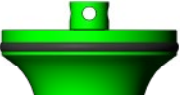
Upper stem lifts up for CIP to clean around the seat and exit the inner vent drain.

The vent separator is attached to the upper stem to allow the separator to move for cleaning during the seat clean movement.



OPTIONS AND ACCESSORIES


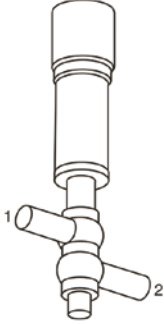
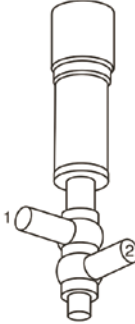
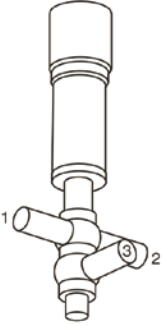
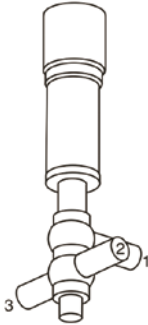
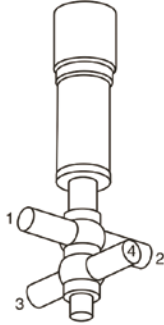
SEAT OPTIONS

SEAT TYPE	MATERIAL / MAXIMUM TEMPERATURE	
	Tri Ring - Upper (TR)	
	Vent Separator	FKM (Fluoroelastomer)
	Radial - Lower	Oper. 350°F (176°C) Steril. - Consult Factory

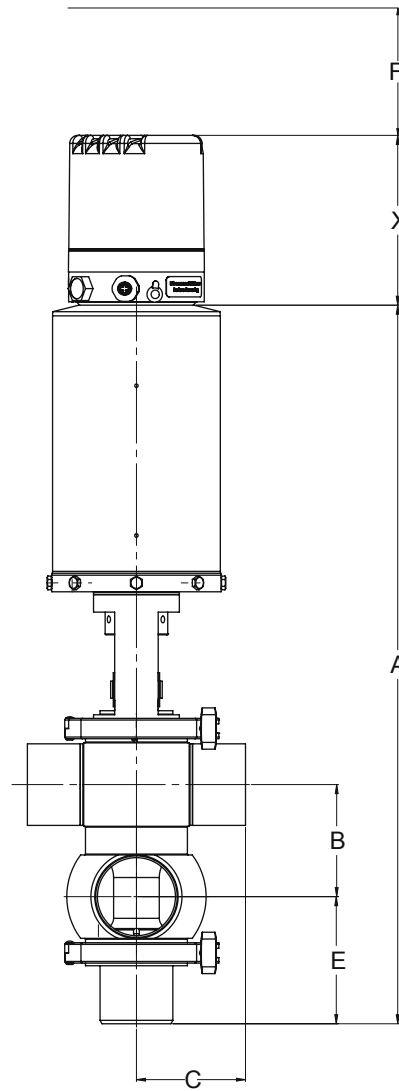
NOTE: For higher temperature applications than those listed, please consult the factory.

BODY CONFIGURATIONS

ONE PIECE BODIES

<p style="text-align: center;">B1</p> 	<p style="text-align: center;">B2</p> 	<p style="text-align: center;">B3</p> 
<p style="text-align: center;">A1</p> 	<p style="text-align: center;">C1</p> 	<p style="text-align: center;">E1</p> 

PRODUCT DIMENSIONS



VALVE SIZE INCH (mm)	A	B	C	E	F
1.5/2.0 (38)/(51)	24.2 (616)	3.1 (679)	4.0 (102)	3.7 (93)	8.8 (223)
2.5 (64)	25.6 (651)	3.6 (92)	4.0 (102)	4.2 (108)	10.2 (258)
3.0 (76)	26.8 (681)	4.1 (105)	4.0 (102)	4.7 (119)	11.4 (289)
4.0 (102)	28.6 (727)	5.1 (130)	6.0 (153)	5.0 (127)	13.2 (334)

F Dimension - Minimum clearance required for valve removal

X Dimension - Control top adder, 6.3" (159 mm) for WCB control top; 9.5" (241 mm) for 8681 control top

FEATURES AND BENEFITS:

W75CP TANK OUTLET AND TANK OUTLET CURD

These valves are used for safe separation of dairy product from CIP including large particulate (curd) product plus single seat-lift separation compliance. Fully independent operation and cleaning of either the tank inlet/outlet pipeline while product in tank vessel, or cleaning of tank while running product in pipeline due to:

1. PMO Section 15p(B) compliance for single seat lift separation while product is in the opposite housing
2. PMO Section 12p compliance for ability to clean all product contact surfaces

- Same single seat-lift separation compliance as W75CP
- Proven blocker technology to impinge CIP spray inside vent cavity
- Available in 3" (76 mm) and 4" (102 mm) OD tube sizes
- Extended stroke length on tank outlet curd valve to allow particulates of up to 2.0" (51 mm) based on size of valve
- Vessel side radial seal for minimal spillage of product when valve transitioning to open or close
- Accommodates standard weld-in flanges for direct vessel connection to simplify piping and reduce floor footprint
- Balanced stem design for resistance against hydraulic shock in pipeline
- Metal-to-metal seat lift adjustment stop to ensure factory setting
- Optional External Flush Adapter to clean vent cavity and drain port when full CIP not readily available

PRODUCT SPECIFICATIONS

Materials

Product Wetted: Stainless Steel, ASTM 316L (UNS-S31603); (DIN-1.4404)

Non-Product: Stainless Steel, ASTM 304 (UNS-S30400); (DIN-1.4301)

Elastomers: FKM (Fluoroelastomer)

Internal Surface Finish: <32 Ra (<0.8 µm) Other finishes available upon request

Maximum Holding Pressure: All sizes = 150 psi (10.3 bar) in pipeline

Maximum Operating Pressure: All sizes = 150 psi (10.3 bar) in pipeline

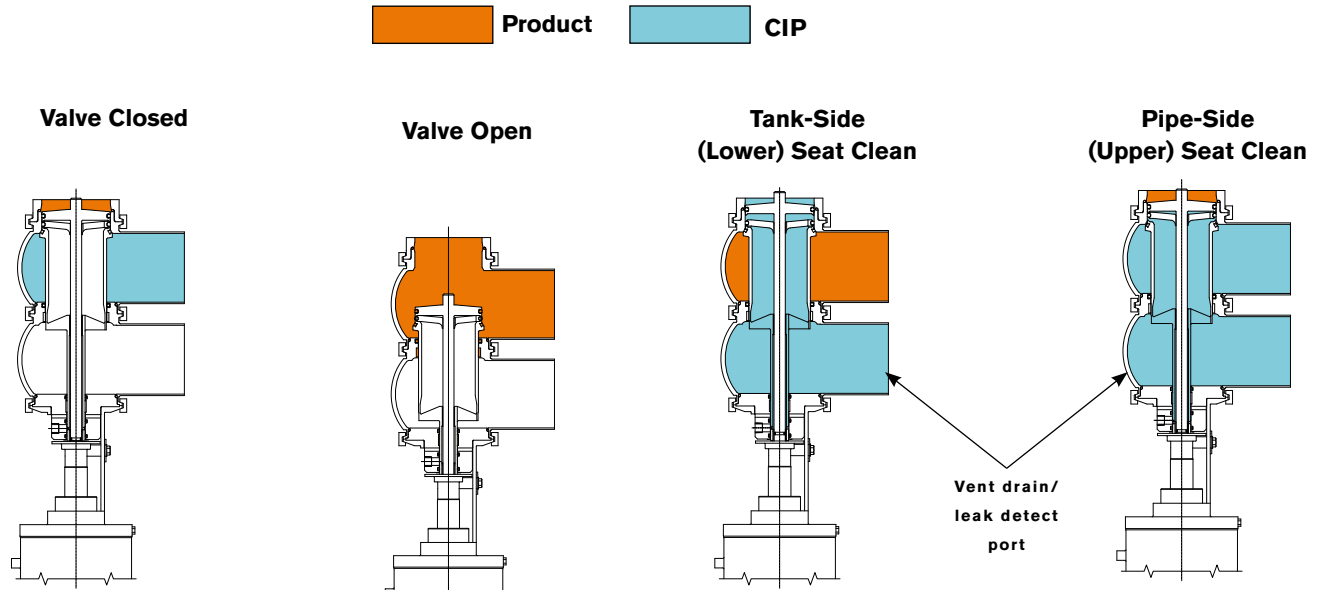


THEORY OF OPERATION:

- For safe separation of dairy products including, large particulate (curd) product from CIP plus single seat-lift separation compliance
- Fully independent operation and cleaning of tank inlet/outlet pipeline while product is contained in tank vessel, OR cleaning of tank while running product in pipeline
- Compliance with PMO Section 15p(B) for single seat lift separation while product is in the opposite housing and PMO Section 12p compliance for ability to clean all product contact surfaces

Mix proof valves provide safe separation of dissimilar products within the same valve body.

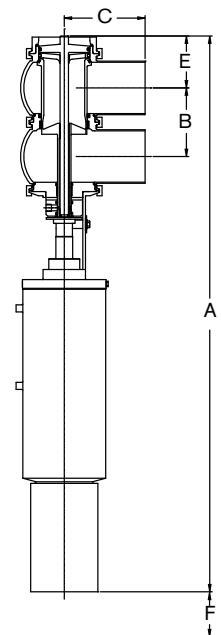
For Example: Product vs. CIP



PRODUCT DIMENSIONS

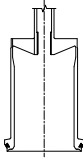
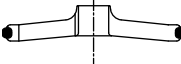
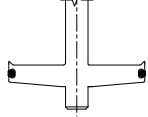
VALVE SIZE INCH (mm)	A TANK OUTLET	A CURD	B	C	E	F*
3.0 (76)	31.6 (803)	39.4 (1001)	4.1 (105)	6.0 (152)	3.3 (84)	9.5 (241)
4.0 (102)	33.5 (851)	41.3 (1049)	5.1 (129)	6.0 (152)	3.8 (96)	11.4 (290)

* F dimension - Minimum clearance required for valve removal.



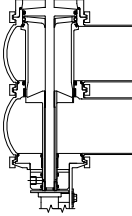
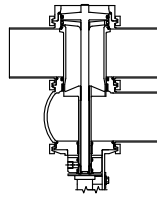
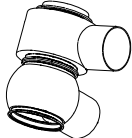
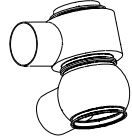
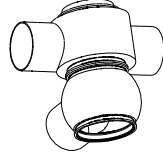
OPTIONS AND ACCESSORIES

SEAT OPTIONS

SEAT TYPE	MATERIAL/MAXIMUM TEMPERATURE	
	Tri Ring - Upper (TR)	FKM (Fluoroelastomer) Oper. 350°F (176°C) Steril. - Consult Factory
	Blocker	
	Radial -Lower	

NOTE: For higher temperature applications than those listed, please consult the factory.

BODY CONFIGURATIONS

 <p>T1</p>	 <p>T2</p>	
 <p>TOP R</p>	 <p>TOP L</p>	 <p>COP</p>

NOTE: This valve meets all of the requirements to be PMO compliant when mounted in the inverted (upside down) orientation because only in this position is the valve free draining by itself.

OPTIONS AND ACCESSORIES

CONTROL TOPS FOR W75CP2 AND W75CP TANK OUTLET AND TANK OUTLET CURD

WCB CONTROL TOPS

Features

- Transparent Control Top keeps all electrical components visible.
- Designed with the user in mind, making assembly and troubleshooting worry free and easy
- WCB uses the industry's most widely recognized electrical components, so access to off-the-shelf replacement parts is easy, ensuring quick delivery and less down time
- NEMA 4x (IP66)
- Removal without disassembly
- Stainless Steel Control Top Option



Connector Options

- S/O Cord Grip for hard wire (STD)
- Quick Disconnect Pin Connectors

Interface Options

- AS-i Field® Bus Card
- DeviceNet™ Field Bus Network Card

Position Indication

- (3) Proximity Switches to Comply with PMO requirements.
- (2) in control top,
- (1) mounted on yoke

Solenoid Valves

- 24V DC or 110V AC
- Up to (3) available in control top

8681 CONTROL TOPS

Features

- Contact free position sensor including (3) programmable feedback signals
- Positions easily taught via intuitive push buttons or Autotune feature to ensure quick & easy set-up
- Ultra-bright 360° visual LED position indication with adjustable red, yellow, & green color assignments provide clarity from all points of view and avoid confusion
- Manual override and air throttle adjustable solenoids to assist start-up, maintenance, and troubleshooting
- Up to IP69K washdown rating available (IP65/67 as standard) for high washdown environments
- Built-in microcontroller tracks cycles and alerts operator when preventive maintenance is required
- Simple and robust stainless steel adapter & chemically resistant polycarbonate head
- Patented magnetic controller can actuate valve for maintenance & disassembly from body without removing cover
- Software interface via USB or Bluetooth to adjust sensor tolerances, teach positions and set maintenance cycles
- Similar price as WCB control tops



Connector Options

- S/O Cord Grip for hard wire (STD)
- Quick Disconnect Pin Connectors

Interface Options

- AS-i Field® Bus Card
- DeviceNet™ Field Bus Network Card

Position Indication

- (3) programmable position sensors in control top and (1) prox switch mounted in yoke to Comply with PMO requirements

Solenoid Valves

- 24V DC or 110V AC
- Manual override and air throttle adjustment
- Up to (3) available in control top

Made in Wisconsin for the unique needs of U.S. dairies

- Nationwide network of recognized solution providers and System Integrators for Dairy Processes
- Dependable spare parts - made and stocked in Wisconsin
- Nationwide Service network



For pressure loss curves and Cv values, please contact factory.

W75 Series PM0 Compliant

**DOUBLE SEAT MIX PROOF
VALVES**

SPXFLOW

Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit www.spxflow.com

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SPX FLOW, Inc. reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction, dimensional data and certifications as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit www.spxflow.com.

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