



Model FCIS (Connected Flood Control System)

Reduced Pressure Principle Assembly w/ Integral Relief Valve Monitor and Automatic ACV Shutoff

Application

The Zurn Wilkins Connected Flood Control System (Model FCIS) prevents flooding of a building, caused by the discharge from a catastrophically fouled Reduced Pressure Principle backflow preventer.

The pre-wired FCIS package includes a Model 375W1 Reduced Pressure Principle backflow Preventer that detects and measures relief valve discharge in real-time, and is attached to a Solenoid Control Valve to shut-off the water supply when excessive discharge happens using a built-in relief valve position monitor.

Standards Compliance

For compliance approvals reference spec sheets
Sizes (2 1/2" - 10") 375ASTW1, 375AW1, 375W1
Sizes (2 1/2" - 10") ZW206
Zurn Connected Notifications Box - UL 1951
at www.zurn.com

Features

- Model 375ASTW1, 375AW1 or 375W1 Reduced Pressure Backflow Preventer with Relief Valve Monitor
- ZW206 Solenoid Control Valve, 24 VAC operation, Normally Open (water is on during power failure) A manual operator on the solenoid is provided to operate the valve during power failure
- Zurn Connected End-Point Controller

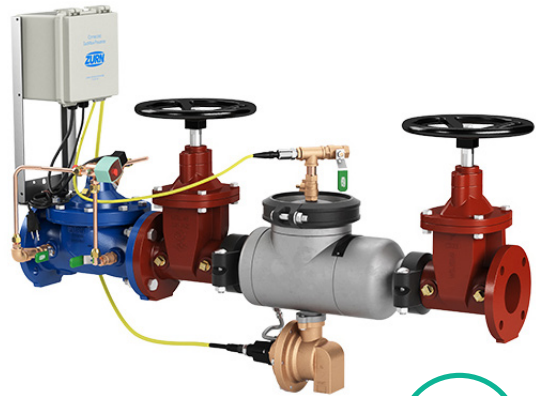
Sizes: 2 1/2", 3", 4", 6", 8", 10"

| | |
|-----------------------------------------|-----------------------|
| Maximum working water pressure | 175 PSI |
| Maximum working water temperature | 140°F |
| Hydrostatic test pressure | 350 PSI |
| End connections | |
| (2 1/2" - 10") (Grooved for steel pipe) | AWWA C606 |
| (Flanged Bolt Pattern) | ASME B16.42 Class 150 |

Alarm Output contacts

For additional component features reference spec sheet ZW206

CAUTION: To prevent water damage, an adequately sized drain MUST still be installed to handle water discharge from the backflow relief valve. The relief valve monitor senses relief valve position and zone pressure to determine discharged water volume. When it has measured 50 gallons of continuous discharge it will shut off the inlet water supply. This shut off threshold may be modified via the Zurn Connected Portal by authorized users, and will remain an active function of the Connected Flood Control System regardless of Internet connection or Portal subscription status. Designated users of the Portal may also receive alerts and notifications via email and/or text message when discharge exceeds preset thresholds and when inlet water supply has been shut off.



(Model FCISAST Shown)



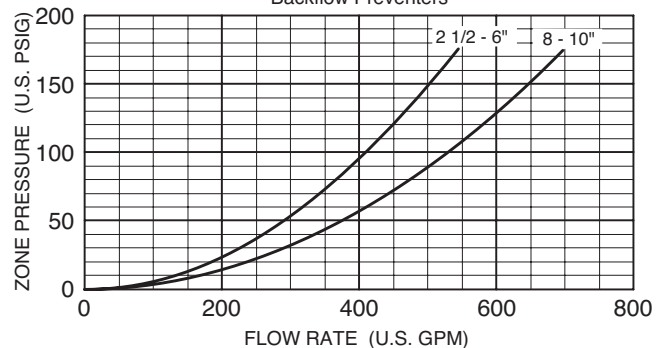
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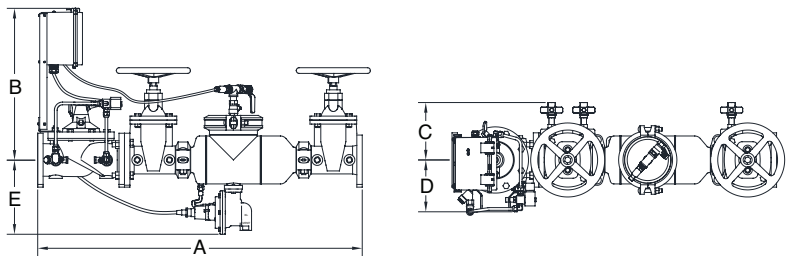
Options

(Suffixes can be combined)

- AST - with Stainless Steel Backflow Body, Grooved Ends
- A - with Ductile Iron Backflow Body, Grooved Ends
- with Ductile Iron Backflow Body, Flanged Ends
- with NRS Gate Valves
- OSY - with OS&Y gate valves
- B - with Butterfly Valves
- User Connections
 - Flange x Flange User Connections
 - FG Flange x Groove User Connections
 - G Groove x Groove User Connections
 - GF Groove x Flange User Connections
- FSC - "Wye" Type Strainer on Inlet (2 1/2" - 10") (not available on Grooved)
- AG - Air Gap Fitting
- Solenoid Operation
 - Normally Open (Opens on power failure)
 - NC Normally Closed (Closes on power failure)
- RV - ACV Pilot Installed on Reverse Side

Relief Valve Discharge Rates
(Worst case condition- If 1st check or relief valve is lodged wide open)
Model 375, 475 & 975 RP & RPDA
Backflow Preventers





Dimensions & Weights (do not include pkg.)

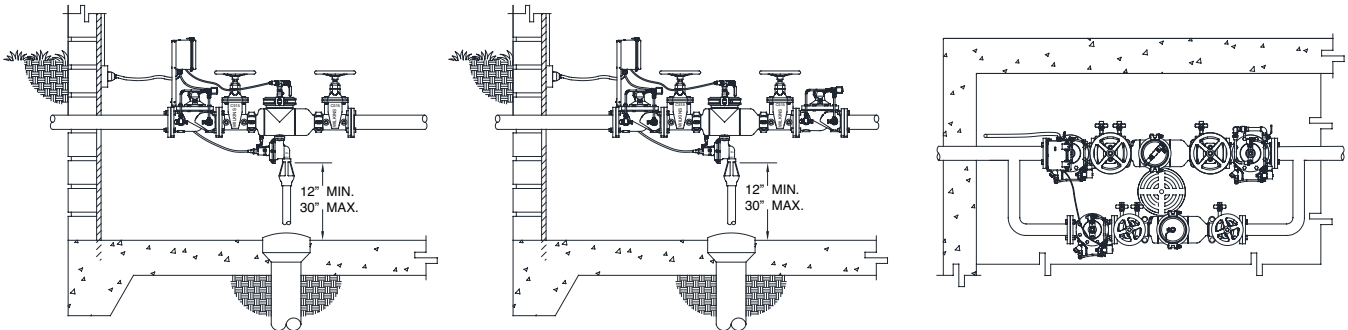
| MODEL FCIS SIZE | | DIMENSION (approximate) | | | | | | | | | | | | WEIGHT | |
|-----------------|-----|-------------------------|-------|----------|-----|---------|-----|-------|-----|--------|-----|--------|-----|--------|--------|
| | | A* | | B | | B** | | C | | D | | E | | | |
| in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm | lbs. | kg |
| 2 1/2 | 65 | 43* | 1092* | 17 1/2 | 445 | 21 | 533 | 7 1/4 | 184 | 7 | 178 | 9 3/4 | 248 | 153* | 69.4* |
| 3 | 80 | 45* | 1143* | 17 15/16 | 456 | 21 4/9 | 545 | 7 1/4 | 184 | 7 1/2 | 191 | 9 3/4 | 248 | 185* | 84* |
| 4 | 100 | 50* | 1270* | 21 | 533 | 24 1/2 | 622 | 8 | 203 | 11 | 279 | 9 3/4 | 248 | 301* | 137* |
| 6 | 150 | 63 5/8* | 1616* | 22 | 559 | 27 | 686 | 10 | 254 | 12 | 305 | 10 3/4 | 273 | 518* | 235* |
| 8 | 200 | 78 1/4* | 1988* | 25 5/16 | 643 | 25 5/16 | 643 | 11 | 279 | 14 1/4 | 362 | 15 5/8 | 397 | 999* | 453.1* |
| 10 | 250 | 85 5/8* | 2175* | 27 1/8 | 689 | 27 1/8 | 689 | 12 | 305 | 15 1/4 | 387 | 16 5/8 | 423 | 1484* | 673.1* |

- * Dimension A and weight shown are for backflow Model 975XL2MS (1 1/4" - 2) and Model 375AST (2 1/2" - 10") see individual backflow specification sheets for o
- ** This dimension is with position indicator on a ZW206.

Installation

Modular system simplifies installation. Install ZW206 Solenoid Valve with relief valve monitor on the water inlet flange. Install Model 375W1 backflow preventer to outlet of solenoid valve. From the relief valve monitor, route the yellow cable to the relief valve cover. Screw connector onto relief valve cover and secure the cable to the assembly. Provide 120 VAC power to relief valve monitor and test operation per provided instructions. Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

Typical Installation



Single Water Shutdown

A single ZW206 Solenoid Control Valve to shutdown the water supply to the backflow preventer and system is our standard installation. This will prevent the discharge of water through a fouled first check in the static condition.

Double Water Shutdown

Two ZW206 Solenoid Control Valves to isolate the Reduced Pressure Backflow Assembly on both the inlet and outlet. A second ZW206 installed downstream will prevent water discharge due to a fouled second check.

Critical Water Supply Condition

Three ZW206 Solenoid Control Valves. A third ACV will open to divert the water supply to a bypass containing a backup backflow preventer, providing continuous water supply to the building.

Specifications

The Connected Flood Control System (Model FCIS) shall consist of a Reduced Pressure Principle Assembly (RP) (Model 375ASTW1, 375AW1, 375W1), a Solenoid Control Valve(SCV) (Model ZW206), and a Zurn Relief Valve Monitor and shall be constructed and tested at the factory as a complete assembly. The RP shall be certified to NSF/ANSI 61, and shall be ASSE 1013 Listed. The RP shall be furnished with full port, resilient seated shut-off valves, and shall be equipped with an integral Relief Valve Monitor that monitors the Relief Valve in a closed position. The seat ring and the check valves shall be Noryl, the stems and springs shall be Stainless Steel, and the elastomers shall be EPDM. The SCV shall be a single seated, line-pressure-operated, diaphragm-actuated, pilot-controlled valve. The SCV shall seal by means of a corrosion resistant seat and a resilient, rectangular seat disc. The stem of the SCV shall be guided top and bottom by integral bushings, and shall contain no packing glands or stuffing boxes. The SCV shall be protected with internal and external FDA approved epoxy coating, and the diaphragm shall not be used as a seating surface. The Relief Valve Monitor shall have an input voltage of 120 VAC, and shall be provided with outputs of 24 VAC and 120 VAC controlled by a relay. The Relief Valve Monitor shall be housed in a water-tight NEMA enclosure, and shall have both normally open and normally closed outputs. The three components, the RP, SVC, and Relief Valve Monitor, when combined together, automatically shut off the water supply in the event of catastrophic relief valve discharge. The Reduced Pressure Principle Assembly, Solenoid Control Valve, and assembled as a complete unit shall be the Zurn Wilkins FCIS.

Job Name _____ **Contractor** _____
Job Location _____ **Engineer** _____