



Model FCIS (Connected Flood Control System)

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

Architectural/Engineering Specification:

Zurn Connected Flood Control Systems transmit data 24/7 to the Zurn plumbSMART™ web portal and mobile app. Proactively monitor your relief water discharge and system pressure data, receive real-time alerts for preset discharge volumes and low pressure parameters, and access system data for trends and predictive maintenance anytime and anywhere.

Zurn Connected Flood Control Systems are designed to prevent flooding of a building caused by 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.

Products Features:

plumbSMART™ Portal

- Monitor discharge volume and pressure anywhere in your building
- Receive real-time alerts
- Manage maintenance tasks
- Receive insights on your data

FCIS

- 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)
- Manual Operator on solenoid in case of power failure
- Reference spec sheet ZW206 for additional component features

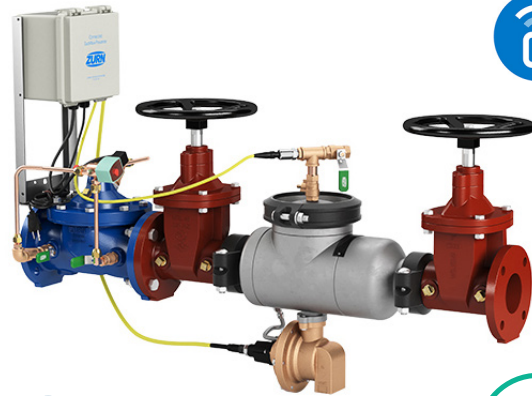
Sizes: 2 1/2", 3", 4", 6", 8", 10"

Technical Specification:

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

Zurn Gateway:

- Communicates via Ethernet or LTE
- Works with all Zurn connected devices
- Connects all endpoints up to 1,000 ft radius
- After purchase request your gateway at: zurn.com/plumbsmart-gateway or Call 1-844-987-6737



(Model FCISAST Shown)



NSF/ANSI/CAN 61 & 372

LEAD FREE

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

Gateway Options

(Required & Sold Separately)

- LTE ZGW-LORA-W1-LTE
- Ethernet ZGW-LORA-W1-ETH

Note: plumbSMART™ is free-to-connect to a basic plan

Note: LTE charges will apply to basic plan

Compliance and Certification

- Meets the requirements of NSF/ANSI/CAN 61 & 372* (LESS THAN 0.25% WEIGHTED AVERAGE LEAD CONTENT)

This device complies with Part 15 of the FCC Rules and ISED Canada RSS Standards.

How it works

The FCIS (Connected Flood Control System) continuously monitors relief water discharge and system water pressure. Once per hour, water pressure data is transmitted to the plumbSMART™ portal. Facilities managers and/or maintenance personnel can view all data and trends in the plumbSMART™ portal and may opt to receive real-time alerts via email or text message if any of these readings exceed or fall below customizable parameters for high and low pressure levels. All notifications and alert parameters are adjustable via the plumbSMART™ portal. For more information, visit <https://www.zurn.com/innovation-efficiency/plumbsmart>.

Zurn Connected plumbing products are equipped with advanced sensors that track product usage and performance. This data is transmitted wirelessly via the built-in LoRa radio system to a Zurn Gateway, which then sends the data to the Zurn Cloud via Ethernet connection to the local area network (LAN) or via LTE cellular. The LTE cellular option means the data never touches your local network. Algorithms in the Zurn Cloud analyze the data, which is displayed on our secure web portal and mobile app, plumbSMART™. Zurn Connected plumbing products and data from plumbSMART™ may be customized to communicate with existing building management systems (BMS), depending on the communication protocols in use. Each Zurn Connected plumbing product comes with default alert parameters for water pressure, product usage, etc. Alert parameters can be customized in plumbSMART™ based on the specific needs of your building and maintenance protocols. Depending on the functionality of the equipment, some Zurn Connected Products can sense when to act in order to protect your building.

To access the plumbSMART™ portal, a Zurn Gateway must be installed within 1,000 feet of the connected product, and Connected products must be registered with Zurn plumbSMART™. A single Zurn Gateway can be used to connect hundreds of Zurn Connected plumbing products.

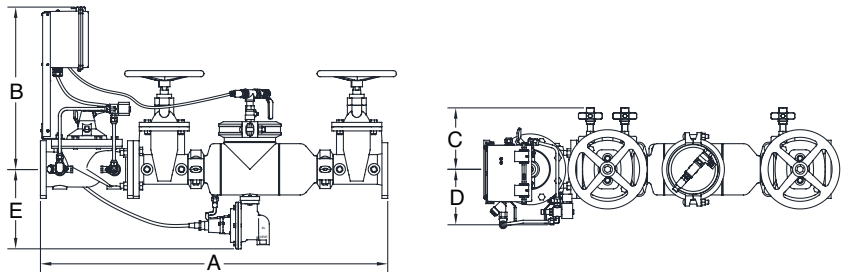
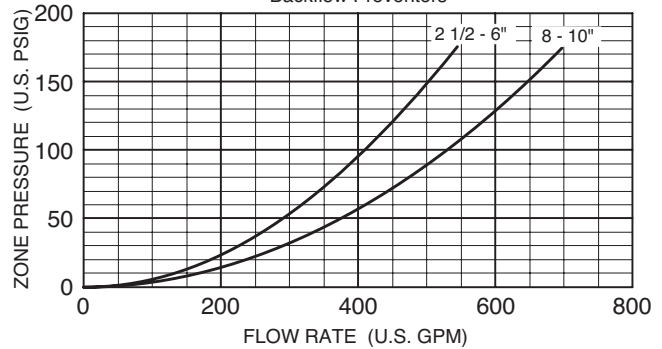
Connecting to the plumbSMART™ Portal:

1. Document the serial number from the label inside the electronics enclosure. The serial number is printed on the left side of the label below the QR code.
2. Visit www.zurn.com/plumbSMART-connect to save time and money on your installation. You can also call us at 844-987-6737.
3. Provide the serial number and contact name, email address, and basic information about the installation site.
4. We will activate your plumbSMART™ account, set up your enterprise, and give you guidance on how to register each connected product as you install it.
5. We will send a confirmation email with a link, or you can go to plumbsmart.zurn.com to log into your plumbSMART™ account for the first time.
6. Add other users and installers to your plumbSMART™ account.
7. Make sure you and/or your installers have the plumbSMART™ mobile app, which you can download from the iPhone App Store or Google Play.
8. Using the mobile app, scan or enter the serial number to register and locate each connected plumbing product as you install it.
9. Watch the how-to videos in the plumbSMART™ portal's support section if you get stuck, or call us at 844-987-6737 for support.



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.

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.)

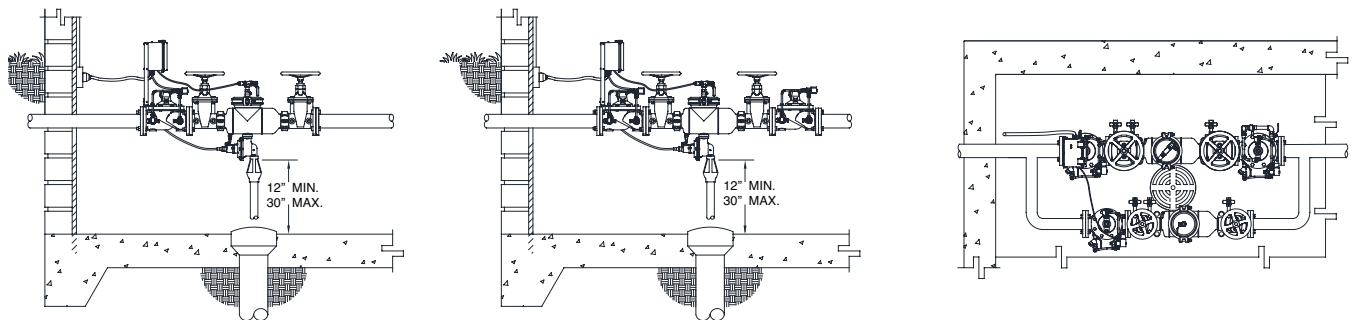
MODEL FCIS SIZE	DIMENSION (approximate)												WEIGHT		
	A*		B		B**		C		D		E		lbs.	kg	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm			
2 1/2	65	43*	1092*	17 1/2	445	21	533	7 1/4	184	7	178	9 3/4	248	153*	69.4*
3	80	45*	1143*	17 15/16	456	21 4/9	545	7 1/4	184	7 1/2	191	9 3/4	248	185*	84*
4	100	50*	1270*	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 375AST (2 1/2" - 10") see individual backflow specification sheets for other models and options.
- ** 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.

Detailed 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/CAN 61 & 372, 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** _____