

ZURN Model 375ASTW1 (Connected Backflow w/ Wireless Monitor)

WILKINS Reduced Pressure Principle Assembly with Integral Relief Valve Monitor

Application

Ideal where Lead-Free* valves are required. Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Assembly shall provide protection where a potential health hazard exists. In the event of a backflow condition, the controller monitors zone pressure and relief valve position and sends this data by wireless to the cloud. This data is processed to determine how much water is being discharged, then notifications are sent to the user as desired. The 375ASTW1 is ideal for use in mechanical rooms, basements and enclosures where undetected relief valve discharge could potentially cause water damage.

Standards Compliance

- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- AWWA Compliant C511 (with gates only) and C550
- IAPMO® Listed
- Meets the requirements of NSF/ANSI 61*
*(0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

Materials

Main valve body	304L Stainless Steel
Access covers	304L Stainless Steel
Coatings	FDA Approved electrostatic epoxy finish
Internals	Stainless Steel, 300 Series NORYL™
Fasteners & Springs	Stainless Steel, 300 Series
Seal rings	EPDM (FDA approved)
O-rings	Buna Nitrile (FDA approved)
Sensing line	Stainless Steel, braided hose
Switch Cover	Nylon, UV resistant, glass filled

Features

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 (Grooved for steel pipe)	AWWA C606
(Flanged)	ANSI B16.42
	Class 150

Dimensions & Weights (do not include pkg.)

MODEL 375ASTW1 SIZE	WEIGHT														
	WITHOUT GATES		WITH NRS GATES (GXF)		WITH OS&Y GATES (GXF)		WITH NRS GATES (GXG)		WITH OS&Y GATES (GXG)		WITH BUTTERFLY VALVES (GXG)		WITH BUTTERFLY VALVES (GXF)		
	in.	mm	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	
2 1/2	65	44	20	105	47	123	56	95	43	113	51	90	41	100	45
3	80	45	20	122	55	140	63	110	50	128	58	94	42	107	48
4	100	46	21	179	81	215	97	159	72	195	88	98	44	120	54
6	150	74	34	291	130	349	158	261	118	319	145	161	71	191	86
8	200	177	80	579	263	661	300	539	244	607	275	361	164	407	185
10	250	177	80	784	356	880	399	732	332	822	373	458	208	516	234

MODEL 375ASTW1	DIMENSION (approximate)																						
	A		A WITH BUTTERFLY VALVES		B LESS GATE VALVES		C		D		E NRS GATE		E OS&Y OPEN		E OS&Y CLOSED		E WITH BUTTERFLY VALVES		F		G		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
2 1/2	65	31 7/8	810	28 3/4	730	16 5/8	422	4 1/2	216	8 1/2	184	26 1/8	663	26 1/8	663	26 1/8	663	26 1/8	663	9 3/4	248	8 5/8	219
3	80	32 7/8	835	29 3/8	746	16 5/8	422	4 1/2	216	8 1/2	184	26 5/16	668	26 5/16	668	26 5/16	668	26 5/16	668	9 3/4	248	8 5/8	219
4	100	34 7/8	886	30 1/4	768	16 5/8	422	4 1/2	216	8 1/2	203	26 1/2	673	26 1/2	673	26 1/2	673	26 1/2	673	9 3/4	248	8 5/8	219
6	150	43 1/2	1105	36 1/2	927	22 1/4	565	5 1/2	140	10	254	30 1/2	730	30 1/2	730	30 1/2	730	30 1/2	730	10 3/4	273	11 1/4	286
8	200	52 3/4	1340	45 3/4	1162	29 1/2	749	9 1/4	235	11	279	34 1/2	876	37	940	34 1/2	876	34 1/2	876	15 5/8	397	13 1/4	337
10	250	55 3/4	1416	49 3/4	1264	29 1/2	749	9 1/4	235	12	305	34 1/2	876	45 5/8	1159	34 3/4	883	34 1/2	876	15 5/8	397	13 1/2	343



Model 375ASTW1

See Model FCIS spec sheet to combine with ACV for automatic flood control shutdown system

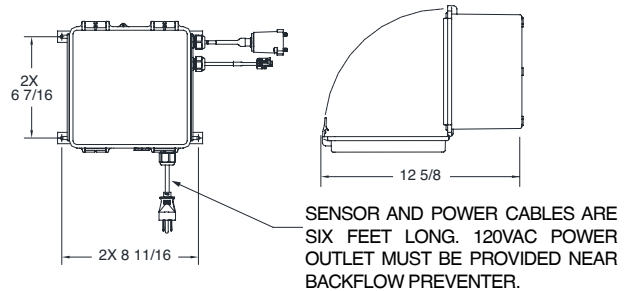
Options

(Suffixes can be combined)

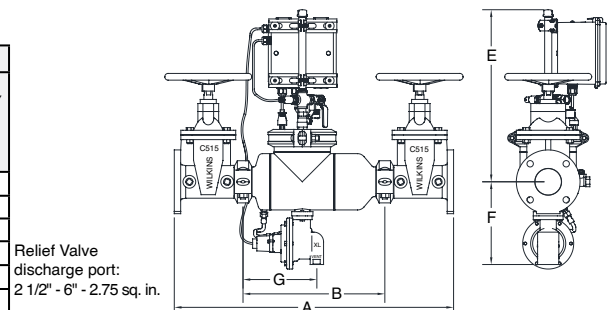
- with flanged end NRS gate valves (standard)
- G - with grooved end NRS gate valves
- GF - with grooved inlet gate connection and flanged outlet gate connection
- FG - with flanged inlet gate connection and grooved outlet gate connection
- OSY - with flanged end OS&Y gate valves
- OSYG - with grooved end OS&Y gate valves
- BG - with grooved end butterfly valves with integral supervisory switches
- BF - with flanged end butterfly valves with integral supervisory switches
- R - with replacement spool (custom length) (see 375ASTR spec sheet for available lengths)

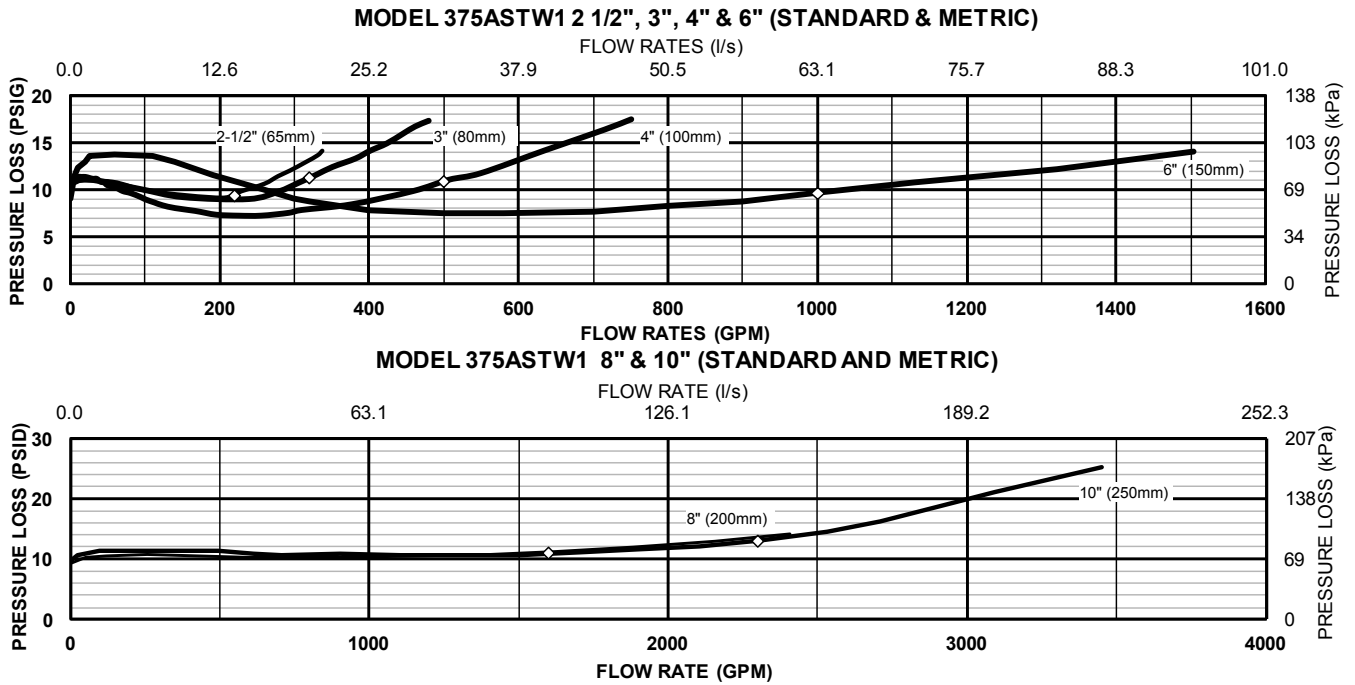
Accessories

- OS & Y Gate valve tamper switch (OSY-40)
- Air gap (Model AG)



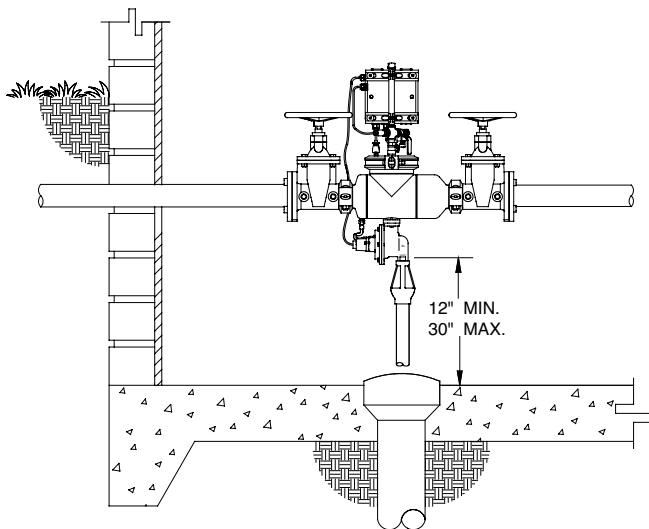
Model 375ASTW1 with NRS option





Typical Installation

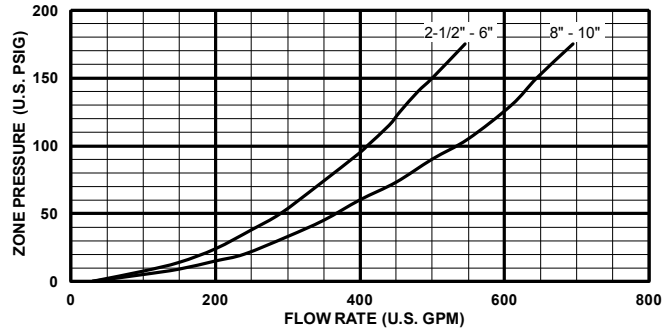
Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.



Relief Valve Discharge Rates

(Worst case condition - If 1st check or relief valve is lodged wide open)

Model 375 & 475 RP & RPDA Backflow Preventers



Operation

The responsive electronics controller constantly monitors zone pressure and the relief valve position to determine if a fouled #1 check, fouled #2 check, or water hammer is causing a relief valve discharge. Upon detection of an event, the controller delivers critical sensor data through a local wireless gateway and then to a powerful cloud server for further analysis. Through a simple web interface, the user can pre-set which relief valve events are of critical importance for alerts and notifications to be communicated to all users as requested. All triggered events are stored in the cloud server for further analysis even if an alert is not requested. Standard AC power is required to operate the controller at all times. The local gateway can use any available wired or wireless internet connected access, as well as cellular data, to connect with its servers.

Specifications

The Reduced Pressure Principle Backflow Prevention Assembly shall be certified to NSF/ANSI 61, ASSE® Listed 1013, and supplied with full port gate valves. The main body and access cover shall be 304L Stainless Steel, the seat ring and check valve shall be NORYL™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The checks and the relief valve shall be accessible for maintenance without removing the device from the line. The Reduced Pressure Principle Backflow Prevention Assembly shall be a ZURN WILKINS Model 375ASTW1.

Electrical Requirements:

Input Power Supply:	Standard 100 – 126V AC, 50/60Hz; 375 mA
Output Voltage:	9.0V DC; 0.44A
Operating Temperature:	20°F to 120°F
Storage Temperature:	-4°F to +175°F
Relative Humidity:	10% – 90%
Pressure Sensor:	Mounted on main backflow valve
Position Sensor:	Mounted on relief valve

Host Network Requirements:

Remote Gateway:	Zurn remote wireless gateway with internet connection via Ethernet or cellular/LTE subscription
Input Power Supply	Standard 100 – 240V AC, 50/60Hz; 400 mA
Output Voltage:	5V DC; 2.5A
Operating Temperature:	14°F to 140°F
Storage Temperature:	-40°F to +185°F
Relative Humidity:	20% – 90%

Features:

Wireless Function:	Range up to 5 miles (based on urban & building layout arrangements)
Electronics Enclosure:	NEMA 4 (IEC 60529 IP66) Rated
Zurn Server:	Secure cloud based data server with comprehensive analytics
Control User Interface:	Web-based dashboard on private secured user account
User Alerts:	Text, Email, Mobile Alerts

The BF-375ASTW1 responsive electronics controller and sensors continuously monitor the backflow analog operating parameters to detect anomalies. Once detected, the monitored analog operating parameters are digitized and transmitted wirelessly to a local gateway connected to the internet by optional Ethernet or cellular LTE connection. The gateway then transmits the secured digitized data to cloud-based computer servers for further analysis and processing. Through an intuitive Zurn Web portal, the users could receive alert levels and notifications of the anomalies using various available options. As time progresses, additional historical performances and trends could be realized using various graphical methods of analysis and reporting formats. The 375ASTW1 responsive electronics requires a standard 120V AC power adaptor, and could operate in the 100-240VAC range. It is recommended that the gateway to be located in a temperature and humidity controlled environment with close proximity to an Ethernet port and a standard 120V AC power outlet. For cellular LTE operation, its best to locate the gateway in the clear cellular LTE signal zone free of interferences. The gateway comes equipped with an AC-DC supply with the input voltage range of 100-240 VAC 50/60 Hz 0.4A and the DC output of 5 VDC 2.5A.