Backflow Prevention Guide

CONTENTS

INTRODUCTION

This guide contains information relating to the installation, testing and servicing of Zurn backflow prevention devices in Australia. All information is sourced from the relevant standards and from the manufacturer.

As with all publications, information is believed to be accurate at time of publication and is subject to change without notice.

Please note that it is the plumbing contractor's responsibility to ensure they follow the relevant standards and procedures including testing procedures as set out by local, state and national standards.

GENERAL INFORMATION

What is Backflow?

Backflow is when water flows in the opposite direction to its intended flow, which can result in contamination of the potable or drinking water supply.

There are two main causes of backflow. The first is backsiphonage where pressure on the inlet side suddenly drops below outlet side (such as a broken mains pipe) and causes water to flow back to the inlet. The second is backpressure when pressure on the outlet (user's) side is greater than the inlet (supply) pressure causing the water to be pushed back towards the supply. Another cause is debris caught in a backflow prevention device or damage to the device.

Relevant Standards and Local Codes

Backflow prevention devices are required under Australian Standards AS/NZS 2845 (Water Supply – Backflow Prevention) and AS/NZS 3500 (Plumbing and Drainage) and is referenced in the National Construction Code Volume Three, The Plumbing Code of Australia.

In addition, state and local codes may determine what devices should be installed, how they are to be installed and what testing is required. It is the responsibility of the installing contractor to be licenced and where applicable backflow accredited to test and service backflow devices as well as complete installation, testing and maintenance according to relevant standards and codes.

Relevant National Construction Codes:

Cross Connection Control

Cross Connection Hazards

Hazard Ratings

The device to be used is determined by the level of risk or hazard rating of the site according to Australian Standards and relevant codes. The three hazard ratings identified by AS/NZS 3500.1 are:

High hazard
(RPZ Required)

Any condition, device or practice which, in connection with the water supply system, has the potential to cause death.

Medium hazard
(DCV Required)

Any condition, device or practice which, in connection with the water supply system, could endanger health.

Low hazard
(non-testable device/single check or dual check required)

Any condition, device or practice which, in connection with the water supply system, is a nuisance but does not endanger health or cause injury.

How does Backflow Prevention work?

Backflow prevention devices are designed to stop the reverse flow of water. They work by utilising one way or non-return check valves, relief valves, and other mechanisms to prevent water from flowing back into the water supply.

All devices require inlet or upstream pressure to be higher/ greater than pressure on the outlet or downstream side of the device. If this pressure differential is not maintained the non-return valves will close and/or the relief port (on an RPZD) will open and discharge or leak.

Each type of backflow prevention device is suitable for different applications and offers varying levels of protection depending on the potential contamination risk or hazard rating.

TYPES OF BACKFLOW PREVENTION DEVICES

TYPES OF BACKFLOW PREVENTION DEVICES

Standard Devices

1. Reduced Pressure Zone Device (RPZD)

The Reduced Pressure Zone Device (RPZD) offers the highest level of protection against backflow and is used in high-risk applications where contamination is a significant concern.

How it works:
RPZs feature two spring loaded check valves and a relief valve. The relief valve is an additional safeguard that opens when a backflow condition occurs. When open, water will drip, leak or fully discharge from the RPZD. This gives a visual indication that a backflow condition may be occurring and attempts to expel contaminants to prevent them entering the potable water supply.

Maintenance:
RPZs require regular testing by a backflow accredited professional to ensure they are functioning correctly. This must be done in accordance with the Australian Standards and local requirements. Maintenance and testing must be completed at least once every 12 months. Maintenance or repair is required anytime a backflow condition is present or if the valve does not pass a backflow test.

Note: A backflow test must be completed after any repairs or maintenance is performed on the device to ensure it is functional.

2. Double Check Valve (DCV)

The Double Check Valve Assembly (DCV) offers protection for medium hazard sites. It consists of two check valves arranged in series to prevent backflow.

How it works:
The DCV uses two spring loaded check valves that close when a backflow condition occurs.

Maintenance:
DCVs require regular testing by a backflow accredited professional to ensure they are functioning correctly. This must be done in accordance with the Australian Standards and local requirements. Maintenance and testing must be completed at least once every 12 months. Maintenance or repair is required anytime a backflow condition is present or if the valve does not pass a backflow test.

Note: A backflow test must be completed after any repairs or maintenance is performed on the device to ensure it is functional.

Fire Service Devices

Backflow prevention devices used for fire services often include a metered bypass to monitor unauthorised use of water.

3. Single Check Valve (SCV)

The Single Check Valve Assembly (SCV) offers protection for low hazard sites. It consists of one check valve to prevent backflow. These devices can be testable and non-testable.

How it works:
The SCV uses one spring loaded check valves that close when a backflow condition occurs.

Maintenance:
Testable SCV's require regular testing by a backflow accredited professional to ensure they are functioning correctly. This must be done in accordance with the Australian Standards and local requirements. Maintenance and testing must be completed at least once every 12 months. Maintenance or repair is required anytime a backflow condition is present or if the valve does not pass a backflow test.

Note: A backflow test must be completed after any repairs or maintenance is performed on the device to ensure it is functional.

4. Double Check Detector Assembly (DDCV or DCDA)

The DCDA offers protection for fire services on medium hazard sites. It consists of a main valve (usually 65-250mm) with two check valves arranged in series and a by-pass assembly valve (usually 20-25mm) with two check (non-return) valves to prevent backflow.

Bypass:
A bypass is included to monitor water usage at lower pressures used for purposes other than fire suppression. A water meter is usually included and water is charged to the site as usual by the network utility operator. When used for fire suppression higher pressures are required which will open the main valve.

How it works:
The DCDA's uses two spring loaded check valves in the main large-bore valve and the small-bore by-pass valve that close when a backflow condition occurs.

Maintenance:
DCDA's require regular testing by a backflow accredited professional to ensure they are functioning correctly. This must be done in accordance with the Australian Standards and local requirements. Maintenance and testing must be completed at least once every 12 months. Maintenance or repair is required anytime a backflow condition is present or if the valve does not pass a backflow test.

Note: A backflow test must be completed after any repairs or maintenance is performed on the device to ensure it is functional.

TYPES OF BACKFLOW PREVENTION DEVICES

Fire Service Devices

Backflow prevention devices used for fire services often include a metered bypass to monitor unauthorised use of water.

5. Single Check Detector Assembly (SCDV or SDCA)

The SCDA offers protection for fire services on low to medium hazard sites. It consists of a main valve (usually 65-250mm) with one check valve and a by-pass assembly valve (usually 20-25mm) with two check valves to prevent backflow.

Bypass:
A bypass is included to monitor water usage at lower pressures used for purposes other than fire suppression. A water meter us usually included and water is charged to the site as usual by the network utility operator. When used for fire suppression higher pressures are required which will open the main valve.

How it works:
The SCDA's uses one spring loaded check valve in the main large-bore valve and two checks in the small-bore by-pass valve that close when a backflow condition occurs. Note: Some by-passes do not require a second backflow device. Check local codes.

Maintenance:
SCDA's require regular testing by a backflow accredited professional to ensure they are functioning correctly. This must be done in accordance with the Australian Standards and local requirements. Maintenance and testing must be completed at least once every 12 months. Maintenance or repair is required anytime a backflow condition is present or if the valve does not pass a backflow test.

Note: A backflow test must be completed after any repairs or maintenance is performed on the device to ensure it is functional.

Backflow Facts

A leaking RPZ is not necessarily faulty

RPZ's are designed to leak or discharge whenever a backflow condition is present. This is not a fault and does not indicate a warranty condition but rather the valve is operating as designed. Please follow any manufacturer's maintenance or service procedures to ensure the device is functioning properly. If unsure contact your local supplier.

A failed backflow test does not mean a device is faulty

Backflow testing is mandated to ensure backflow prevention devices are working properly. If your device fails test it is recommended to inspect and clean the valves internals, look for damage, clear it of debris and repair if needed. Unless the product is deemed defective on arrival by the manufacturer this is not covered under warranty by any manufacturer.

Opening a valve for inspection does not void warranty

A licenced and backflow accredited plumber may open and inspect a backflow prevention device without voiding the warranty. Most devices require a clean and repair before beginning the warranty process. If unsure contact your local supplier.

Design Considerations

Pressure loss considerations

As with all valves and fittings, installing a backflow prevention device will effect the pressure of a system. Installing a backflow prevention device will cause pressure lose through the valve and is indicated in the manufacturer's flow charts (page 19 to 47). The pressure drop can range from 30-150+kPa depending on a variety of factors. It is the contractors/design consultant's responsibility to ensure the site has sufficient pressure to operate adequately once a backflow device is installed.

RPZ Discharging

An RPZ will discharge anytime pressure on the outlet side is greater than that of the inlet side. It will continue to discharge until the pressure differential is greater on the inlet.

If the discharge is sporadic, it is likely due to back pressure from water hammer or a drop in supply pressure.

Water hammer:
Pumps, machines, solenoids, sprinklers or any fast acting shut off downstream has the potential to cause water hammer. Water hammer can cause system pressure to spike up to 8 times standard pressure. This pressure build up will cause discharge once it reaches the RPZ, this is the device preventing backflow. To help reduce this effect it is recommended that a water hammer arrestor or a non-return valve be installed downstream of the backflow device before products that may cause water hammer.

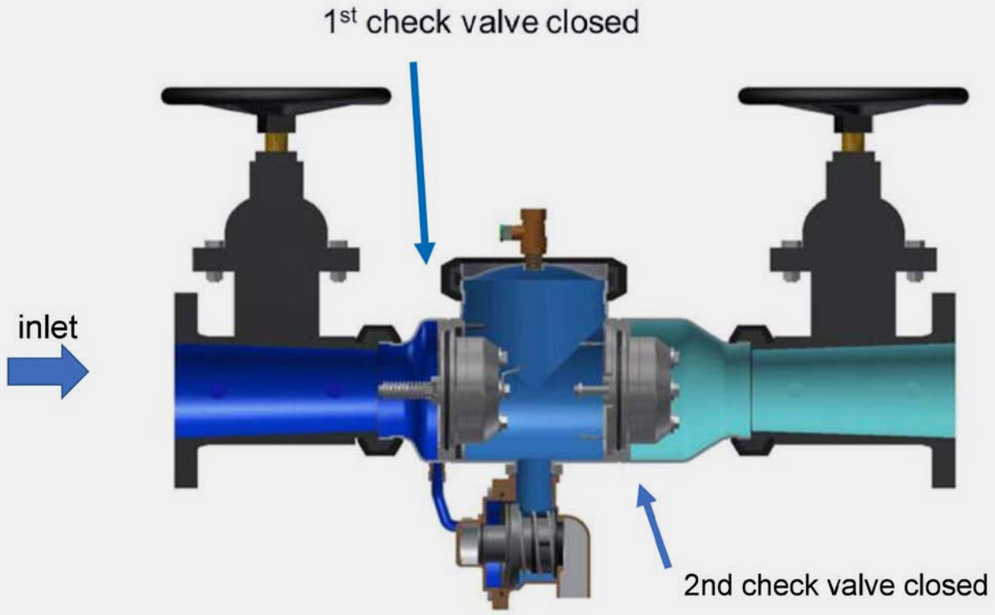
Drop in supply pressure:
If supply pressure drops below the outlet pressure the RPZ will discharge. This will often correct itself and stop discharging once the supply pressure returns to a higher level than the outlet pressure. Where a drop in supply pressure or discharge is causing problems for users the installation of a tank and pump may be required to allow a steady, reliable supply of water and pressure.

TYPES OF BACKFLOW PREVENTION DEVICES

How it works RPZ Functions

Static (no flow) condition

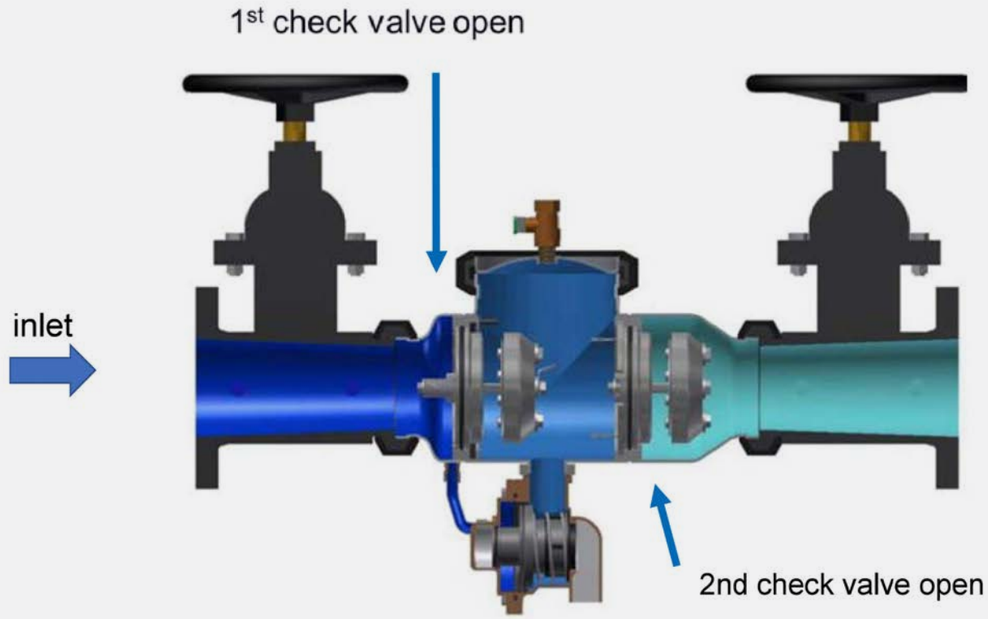
both check valves and the relief valve are in the closed position. Pressure on supply side is greater holding the relief in closed position.



Difference in color reflects the pressure drop across each check valve

Normal flow

both check valves have lifted off their seats and the relief valve remains in the closed position because of the higher pressure on the supply side of the valve.



Difference in color reflects the pressure drop across each check valve

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

375 Series RPZ

15-25mm

LEAD FREE

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Reduced Pressure Zone Device Assembly shall provide protection where a potential health hazard exists. (High Hazard)

Standards Compliance

Australian WaterMark (AS/NZS 2845.1) Certified Lic. 1379

Materials

Housing: Reinforced Nylon

Fasteners: Stainless Steel, 300 Series

Elastomers: Silicone, Buna Nitrile

Internals: Delrin, Nylon

Springs: Stainless steel, 300 series

Tailpieces: Cast Bronze, Lead Free

Struts: Stainless steel, 300 series

End connections: ISO 7.1 R Tapered Pipe Thread

Test connections: 1/4" SAE 45° Flare

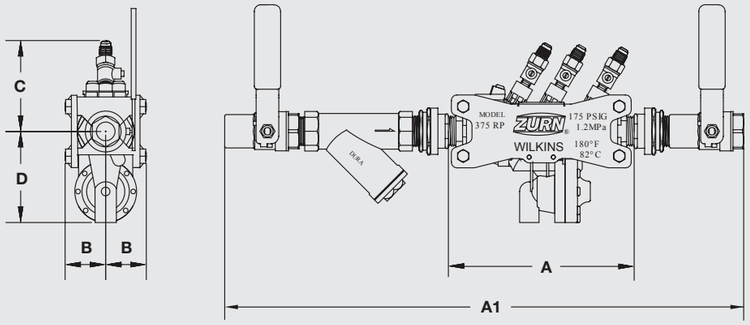
Operating Parameters

Maximum working water pressure: 1200kPa

Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400kPa

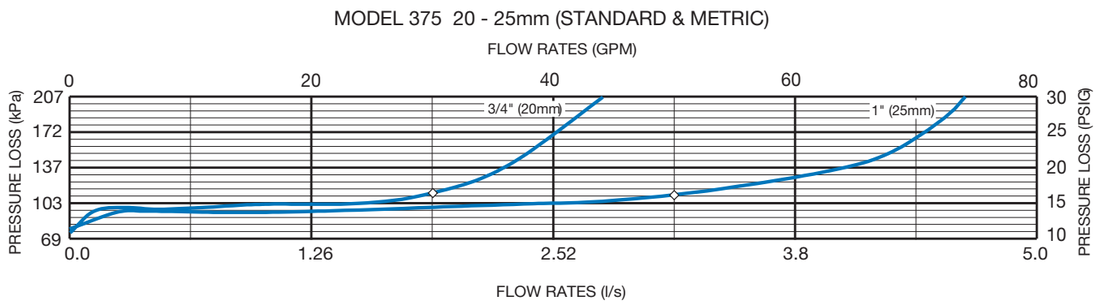
WATERMARK
AS/NZS 2845.1
LIC. WMKA1379



Dimensions & Weights (do not include pkg.)

VALVE SIZE	REECE CODE (valve only)	ZURN CODE (valve only)	DURA INSTALL KIT	DIMENSIONS (approximate)					WEIGHT (valve only) kg
				A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	
15	180476	12-375LFTBT	1011843	181	445	41	85	98	2.1
20	4000105	34-375LFTBT	1011844	181	485	41	85	98	2.1
25	4000124	1-375LFTBT	1011845	225	590	57	97	102	3.7

Flow Characteristics

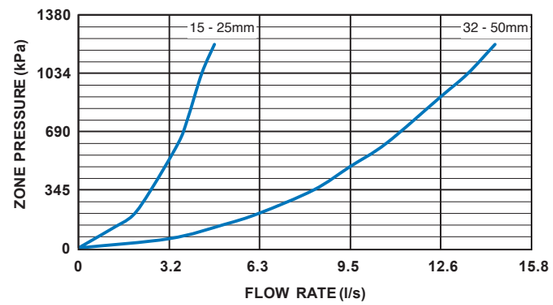


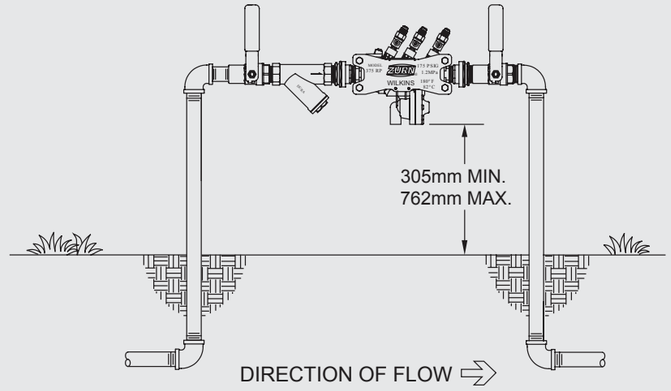
Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Plumbing Code of Australia and/or AS/NZS 3500. 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)





TYPICAL INSTALLATION

Specifications

The Reduced Pressure Principle Backflow Preventer shall be Australian WaterMark Certified (AS/NZS 2845.1), rated to 82°C and supplied male pipe thread tailpieces. The main body shall be Nylon and the seat disc elastomers shall be silicone. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 375.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

375 Series RPZ

32-50mm

LEAD FREE

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Reduced Pressure Zone Device Assembly shall provide protection where a potential health hazard exists. (High Hazard)

Standards Compliance

Australian WaterMark (AS/NZS 2845.1) Certified Lic. 1379

Materials

Housing: Reinforced Nylon

Fasteners: Stainless Steel, 300 Series

Elastomers: Silicone, Buna Nitrile

Internals: Delrin, Nylon

Springs: Stainless steel, 300 series

Tailpieces: Cast Bronze, Lead Free

Struts: Stainless steel, 300 series

End connections: ISO 7.1 R Tapered Pipe Thread

Test connections: 1/4" SAE 45° Flare

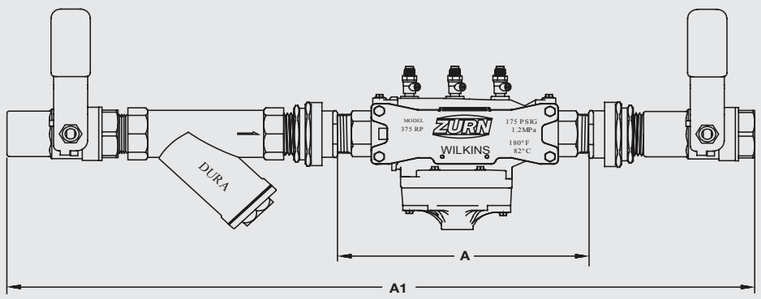
Operating Parameters

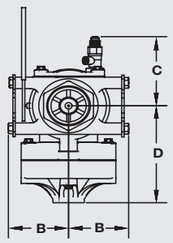
Maximum working water pressure: 1200kPa

Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400kPa

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

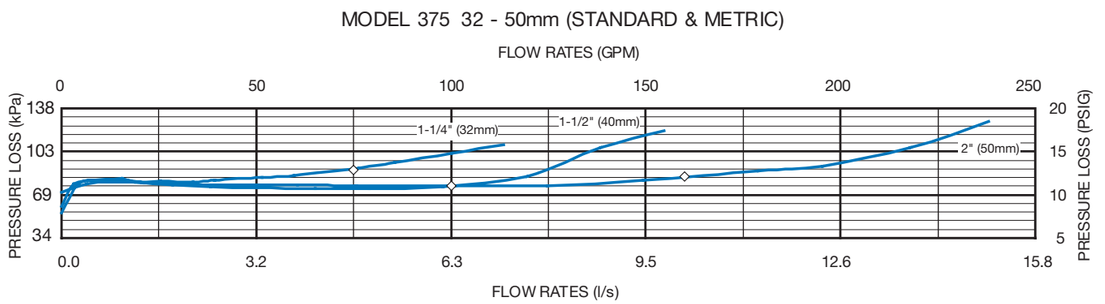




Dimensions & Weights (do not include pkg.)

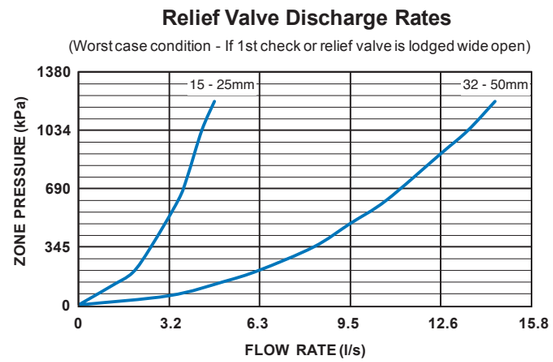
VALVE SIZE	REECE CODE (valve only)	ZURN CODE (valve only)	DURA INSTALL KIT	DIMENSIONS (approximate)					WEIGHT (valve only) kg
				A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	
32	4000151	114-375LFTBT	1011846	367	783	86	105	146	8.5
40	1001689	112-375LFTBT	1011847	367	816	86	105	146	8.0
50	1001690	2-375LFTBT	1011848	367	899	86	105	146	8.8

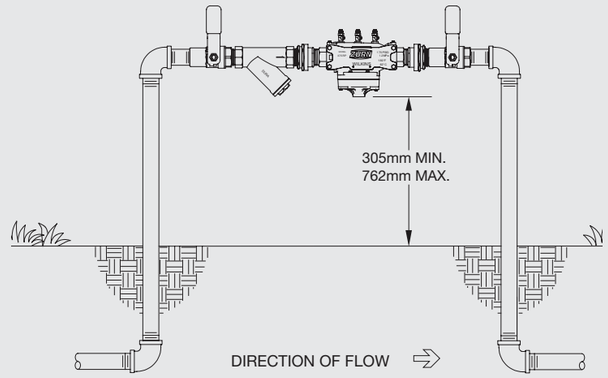
Flow Characteristics



Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Plumbing Code of Australia and/or AS/NZS 3500. 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

Specifications

The Reduced Pressure Principle Backflow Preventer shall be Australian WaterMark Certified (AS/NZS 2845.1), rated to 82°C and supplied male pipe thread tailpieces. The main body shall be Nylon and the seat disc elastomers shall be silicone. The Reduced Pressure Principle Backflow Preventer shall be a ZURN WILKINS Model 375.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

350 Series DCV

20-25mm

LEAD FREE

Application

Designed for installation on water lines to protect against both backsiphonage and backpressure of polluted water into the water supply. Double Check Valve Assembly shall provide protection where a potential health hazard exists. (Medium Hazard)

Standards Compliance

Australian Watermark (AS/NZS 2845.1) Certified Lic. 1379

Materials

Housing: Reinforced Nylon

Fasteners: Stainless Steel, 300 Series

Elastomers: Silicone, Buna Nitrile

Internals: Delrin

Springs: Stainless steel, 300 series

Body: Cast Bronze, Lead Free

End connections: ISO 7.1 R Tapered Pipe Thread

Test connections: 1/4" SAE 45˚ Flare

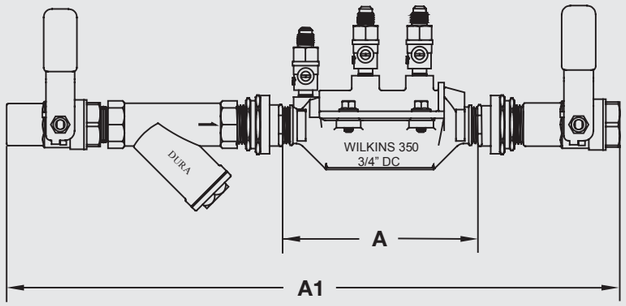
Operating Parameters

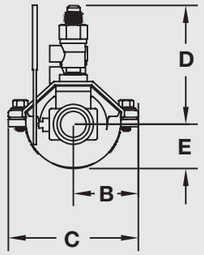
Maximum working water pressure: 1200kPa

Maximum working water temperature: 82˚C

Hydrostatic test pressure: 2400kPa

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

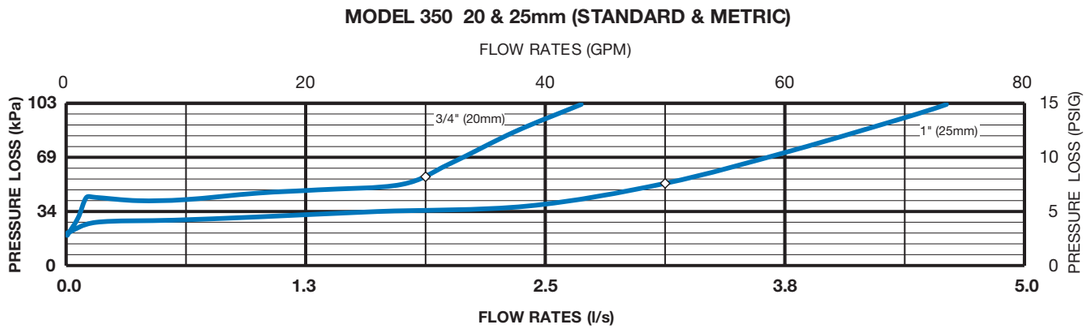




Dimensions & Weights (do not include pkg.)

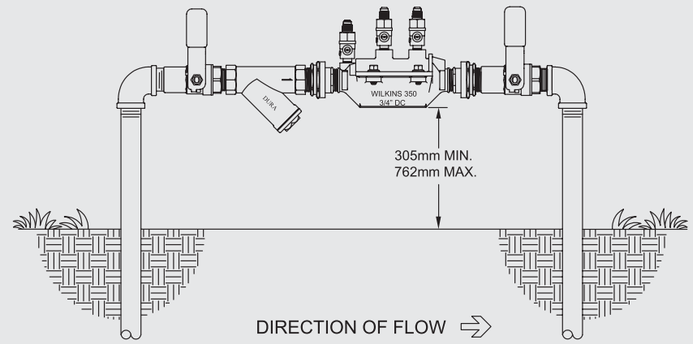
VALVE SIZE	REECE CODE (valve only)	ZURN CODE (valve only)	DURA INSTALL KIT	DIMENSIONS (approximate)						WEIGHT (valve only) kg
				A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	
20	4000102	34-350LFTBT	1011844	168	473	48	95	86	32	1.0
25	4000121	1-350LFTBT	1011845	178	541	52	105	93	45	1.4

Flow Characteristics



Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Plumbing Code of Australia and/or AS/NZS 3500. 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. If installed below grade, be certain adequate drainage is provided to prevent the device from being submerged.



TYPICAL INSTALLATION

Specifications

The Double Check Valve Backflow Preventer shall be Australian WaterMark Certified (AZ/NZS 2845.1), rated to 82˚C and supplied with male pipe thread tailpieces. The main body shall be Bronze. The housing shall be reinforced Nylon and the seat disc elastomers shall be silicone. The first and second checks shall be accessible for maintenance without removing the device from the line. The Double Check Valve Backflow Preventer shall be a ZURN WILKINS Model 350.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

350 Series DCV

32-50mm

LEAD FREE

Application

Designed for installation on water lines to protect against both backsiphonage and backpressure of polluted water into the water supply. Double Check Valve Assembly shall provide protection where a potential health hazard exists. (Medium Hazard)

Standards Compliance

Australian Watermark (AS/NZS 2845.1) Certified Lic. 1379

Materials

Housing: Reinforced Nylon

Fasteners: Stainless Steel, 300 Series

Elastomers: Silicone, Buna Nitrile

Internals: Delrin

Springs: Stainless steel, 300 series

Tailpieces: Cast Bronze, Lead Free

Struts: Stainless Steel, 300 Series

End connections: ISO 7.1 R Tapered Pipe Thread

Test connections: 1/4" SAE 45° Flare

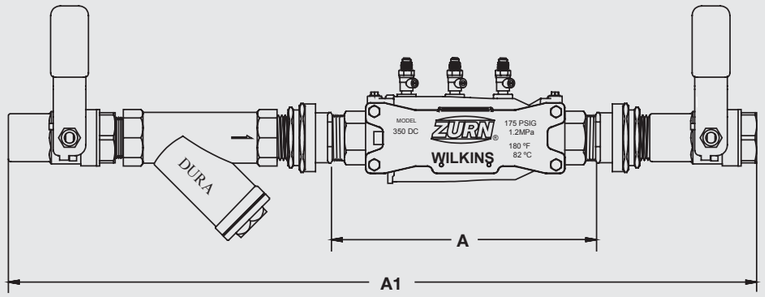
Operating Parameters

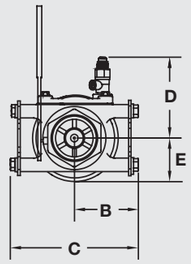
Maximum working water pressure: 1200kPa

Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400kPa

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379





Dimensions & Weights (do not include pkg.)

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				A (mm)	A1 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	
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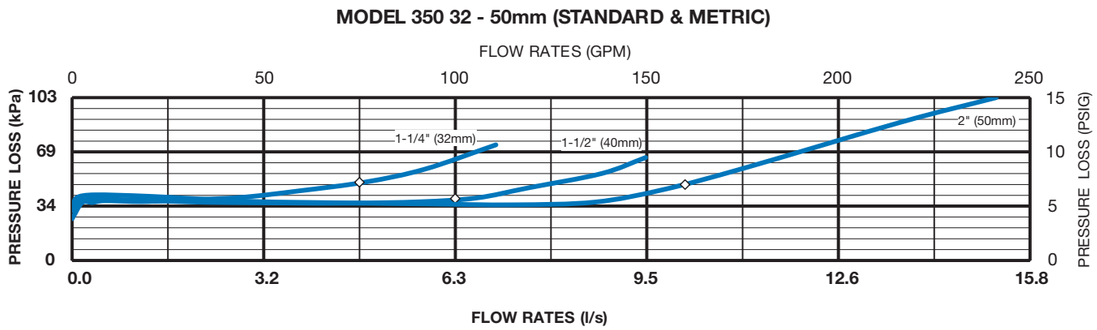
40	4000154	112-350LFTBT	1011847	367	816	86	171	105	57	7.7
50	4000160	2-350LFTBT	1011848	367	899	86	171	105	57	8.2

Flow Characteristics



Typical Installation

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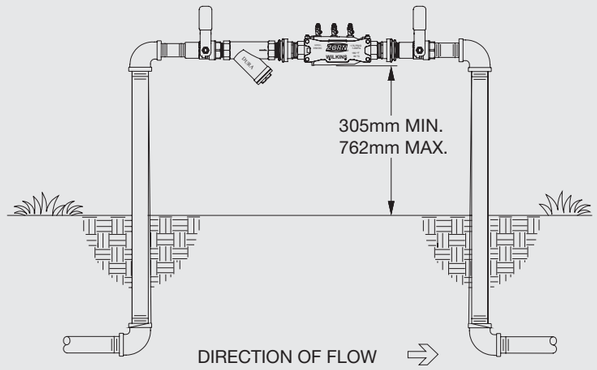


TYPICAL INSTALLATION

Specifications

The Double Check Valve Backflow Preventer shall be Australian WaterMark Certified (AZ/NZS 2845.1), rated to 82°C and supplied with male pipe thread tailpieces. The housing shall be reinforced Nylon and the seat disc elastomers shall be silicone. The first and second checks shall be accessible for maintenance without removing the device from the line. The Double Check Valve Backflow Preventer shall be a ZURN WILKINS Model 350.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

375 Series RPZ

65-250mm

LEAD FREE

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of contaminated water into the potable water supply. Reduced Pressure Zone Device Assembly shall provide protection where a potential health hazard exists. (High Hazard)

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron ASTM A536 Grade 4

Access Covers: Ductile Iron ASTM A536 Grade 4

Coatings: Fusion Epoxy

Fasteners: Stainless Steel 300 Series

Internals: Stainless Steel 300 Series, Noryl™

Seal Ring: EPDM

O-ring: Buna Nitrile

Springs: Stainless Steel 300 Series

Sensing Line: Stainless Steel, Braided Hose

Operating Parameters

Max. Working Water Pressure: 1200kPa

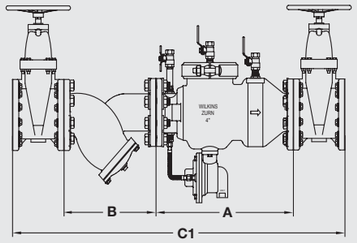
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

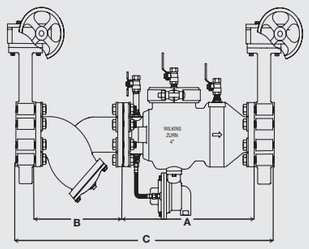
End Connections: Flanges to AS2129

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

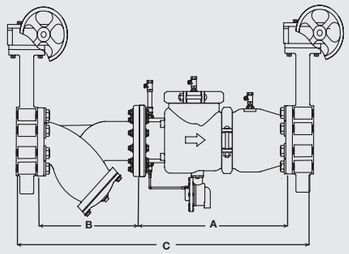
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



GATE VALVE - 65, 80, 100 & 150mm



BUTTERFLY VALVE - 65, 80, 100 & 150mm



BUTTERFLY VALVE - 200 & 250mm

Product Codes

ZURN CODE	REECE CODE	DESCRIPTION
212-375LBSE	1023602	65mm RPZ (TBL. E)
3-375LBSE	1023603	80mm RPZ (TBL. E)
4-375LBSE	1023604	100mm RPZ (TBL. E)
4-375LBSD	1023613	100mm RPZ (TBL. D)
6-375LBSE	1023605	150mm RPZ (TBL. E)
8-375LBSE	1023606	200mm RPZ (TBL. E)
10-375LBSE	4000110	250mm RPZ (TBL. E)

RPZ Assemblies (65-250mm) - Reece Codes

	65mm	80mm	100mm	150mm	200mm	250mm
Wafer Gear Operated Butterfly Valve & Strainer	4001516	4001554	4001555	4001556	4001503	4001507
Lugged Gear Operated Butterfly Valve & Strainer	4001532	4001533	4001534	4001535	4001536	4001537
Wafer Butterfly Valve & Line Strainer	4001515	4001525	4001487	4001497		
Lugged Butterfly Valve & Strainer	4001513	4001523	4001486	4001495		
Gate Valve & Line Strainer	4001517	4001527	4001489	4001499		

Dimensions & Weights (do not include pkg.)

VALVE SIZE	DIMENSIONS (approximate)				FLANGE TYPE	# OF BOLT HOLES	DEVICE WEIGHT KG	BOLTS		WASHERS		NUTS	
	A (mm)	B (mm)	C (mm)	C1 (mm)				QTY	SIZE (mm)	QTY	SIZE (mm)	QTY	SIZE (mm)
65	403	273	768	1056	TABLE D	4	27	4	M16x65	24	M16	4	M16
								16	M16x35				
80	403	295	790	1104	TABLE D	4	27	4	M16x65	24	M16	4	M16
								16	M16x35				
100	535	380	1019	1373	TABLE D	4	44	4	M16x70	24	M16	4	M16
								16	M16x40				
100	535	352	991	1345	TABLE E	8	44	8	M16x70	48	M16	8	M16
								32	M16x40				
150	675	470	1257	1679	TABLE E	8	79	8	M16x70	48	M20	8	M20
								32	M16x40				
200	959	543	1622		TABLE E	8	171	8	M20x80	48	M20	8	M20
								32	M20x55				
250	959	660	1755		TABLE E	12	185	12	M20x90	72	M20	12	M20
								48	M20x60				

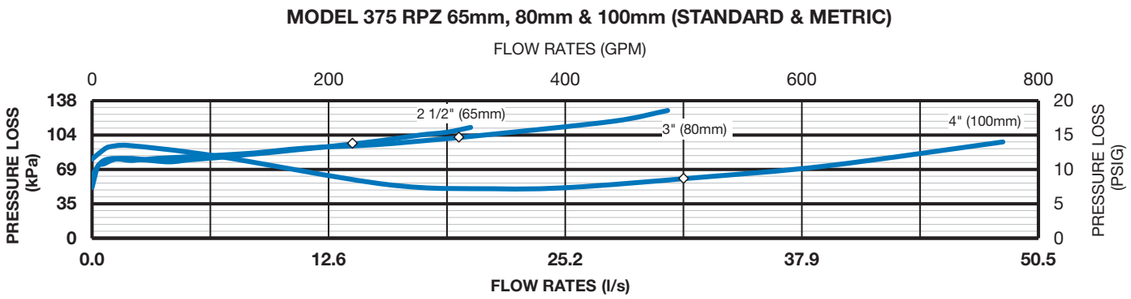
Bolt, washer and nut quantities and sizes are for lugged butterfly valves only. Dimax Backflow Bolt Kits are available, containing all bolts, nuts, washers and gaskets for all Zurn RPZ Assemblies below. Ask your local Reece store for more information.

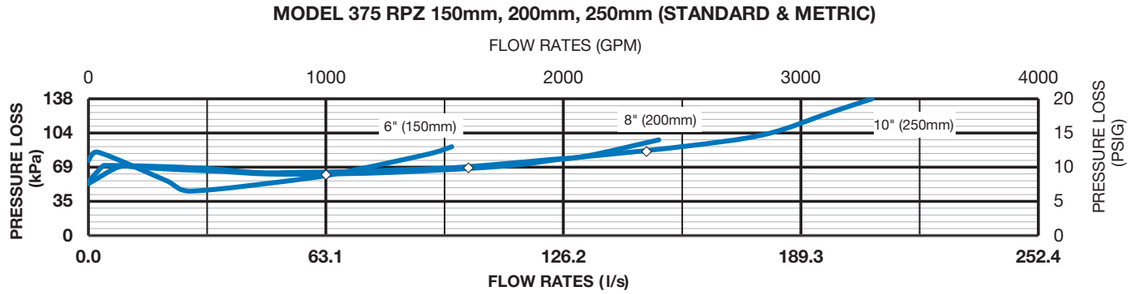
ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

375 Series RPZ

65-250mm

Flow Characteristics





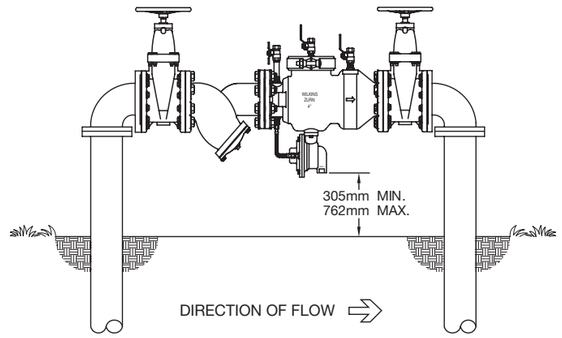
Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

Specifications

The Reduced Pressure Zone Device shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 Zone Device shall be a ZURN Model 375.

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Plumbing Code of Australia and/or AS/NZS 3500. 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

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

375A Series RPZ

100-150mm

LEAD FREE

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of polluted water into the potable water supply. The Model 375A shall provide protection where a potential health hazard exists (High Hazard)

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron ASTM A536 Grade 4

Access Covers: Ductile Iron ASTM A536 Grade 4

Coatings: Fusion Epoxy

Fasteners: Stainless Steel 300 Series

Internals: Stainless Steel 300 Series, Noryl™

Seal Ring: EPDM

O-ring: Buna Nitrile

Springs: Stainless Steel 300 Series

Sensing Line: Stainless Steel, Braided Hose

Operating Parameters

Max. Working Water Pressure: 1200kPa

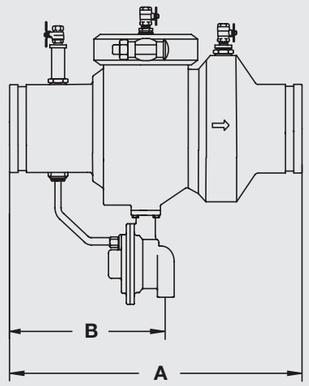
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

End Connections: Grooved, AWWA C606

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

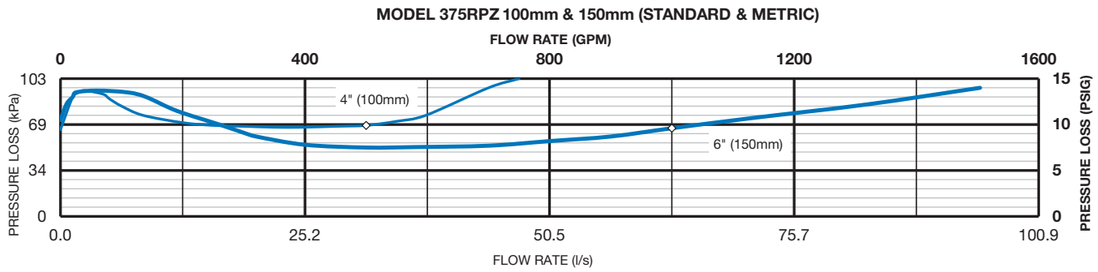
Certified Product™
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



Dimensions & Weights (do not include pkg.)

VALVE SIZE	REECE CODE	ZURN CODE	DIMENSIONS (approximate)		WEIGHT kg
			A (mm)	B (mm)	
100	4000030	4-350ALBS	535	247	38
150	4000060	6-350ALBS	657	330	68

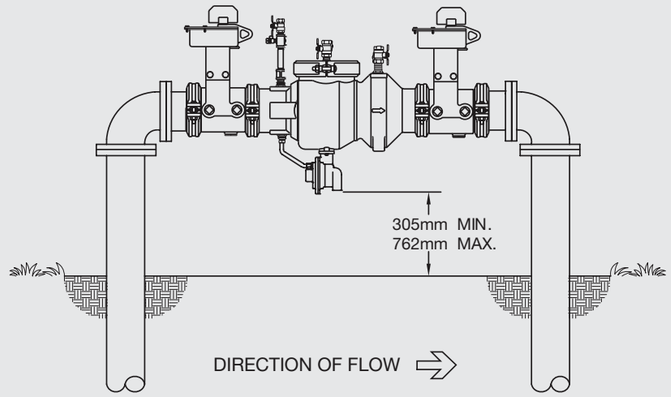
Flow Characteristics



Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Plumbing Code of Australia and/or AS/NZS 3500. 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

Specifications

The Reduced Pressure Zone Device shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 Zone Device shall be a ZURN Model 375A.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

350 Series DCV

65-250mm

LEAD FREE

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of polluted water into the potable water supply. The Model 350 shall provide protection where a potential health hazard exists (Medium Hazard)

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron ASTM A536 Grade 4

Access Covers: Ductile Iron ASTM A536 Grade 4

Coatings: Fusion Epoxy

Fasteners: Stainless Steel 304

Internals: Stainless Steel 304

Seal Ring: EPDM

O-ring: Buna Nitrile

Springs: Stainless Steel 17-7

Operating Parameters

Max. Working Water Pressure: 1200kPa

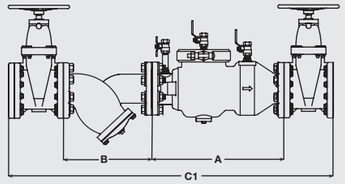
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

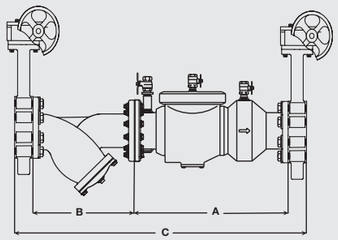
End Connections: Flanges to AS2129

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

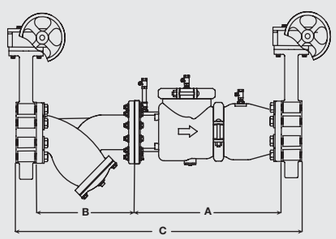
Certified Product™
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



GATE VALVE - 65, 80, 100 & 150mm



BUTTERFLY VALVE - 65, 80, 100 & 150mm



BUTTERFLY VALVE - 200 & 250mm

Product Codes

ZURN CODE	REECE CODE	DESCRIPTION
212-350LBSE	1023607	65mm DCV (TBL. E)
3-350LBSE	1023608	80mm DCV (TBL. E)
4-350LBSD	1023614	100mm DCV (TBL. D)
4-350LBSE	1023609	100mm DCV (TBL. E)
6-350LBSE	1023610	150mm DCV (TBL. E)
8-350LBSE	1023611	200mm DCV (TBL. E)
10-350LBSE	1023612	250mm DCV (TBL. E)

RPZ Assemblies (65-250mm) - Reece Codes

	65mm	80mm	100mm	150mm	200mm	250mm
Wafer Gear Operated Butterfly Valve & Strainer	4001511	4001552	4001553	4001551	4001501	4001505
Lugged Gear Operated Butterfly Valve & Strainer	4001509	4001529	4001530	4001491	4001500	4001531
Wafer Butterfly Valve & Line Strainer	4001510	4001520	4001482	4001492		
Lugged Butterfly Valve & Strainer	4001508	4001518	4001480	4001490		
Gate Valve & Line Strainer	4001512	4001522	4001484	4001494		

Dimensions & Weights (do not include pkg.)

VALVE SIZE	DIMENSIONS (approximate)				FLANGE TYPE	# OF BOLT HOLES	WEIGHT KG	BOLTS		WASHERS		NUTS	
	A (mm)	B (mm)	C (mm)	C1 (mm)				QTY	SIZE (mm)	QTY	SIZE (mm)	QTY	SIZE (mm)
65	403	273	768	1056	TABLE E	4	24	4	M16x65	24	M16	4	M16
								16	M16x35				
80	403	295	790	1104	TABLE E	4	24	4	M16x65	24	M16	4	M16
								16	M16x35				
100	535	380	1019	1373	TABLE D	4	41	4	M16x70	24	M16	4	M16
								16	M16x40				
100	535	352	991	1345	TABLE E	8	41	8	M16x70	48	M16	8	M16
								32	M16x40				
150	675	470	1257	1679	TABLE E	8	75	8	M16x70	48	M20	8	M20
								32	M16x40				
200	959	543	1622		TABLE E	8	162	8	M20x80	48	M20	8	M20
								32	M20x55				
250	959	660	1755		TABLE E	12	176	12	M20x90	72	M20	12	M20
								48	M20x60				

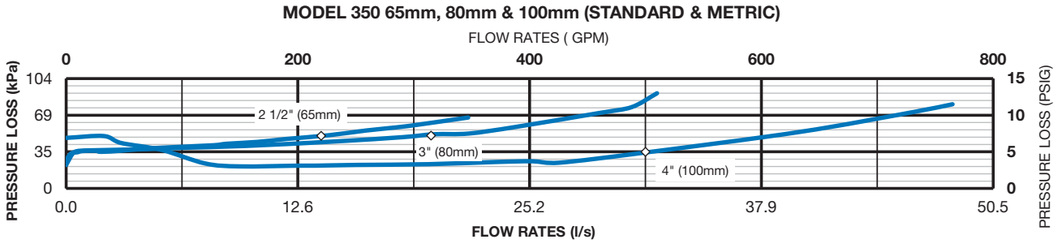
Bolt, washer and nut quantities and sizes are for lugged butterfly valves only. Dimax Backflow Bolt Kits are available, containing all bolts, nuts, washers and gaskets for all Zurn RPZ Assemblies below. Ask your local Reece store for more information.

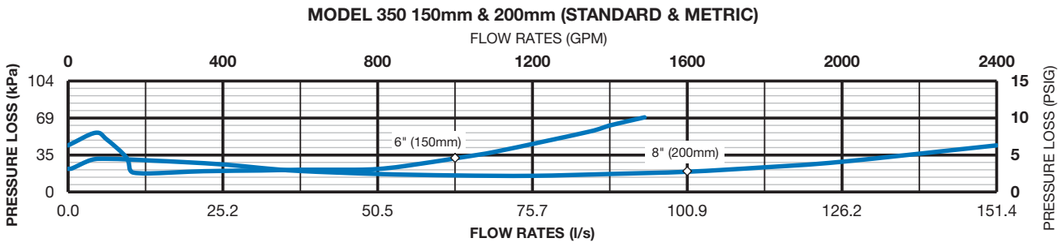
ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

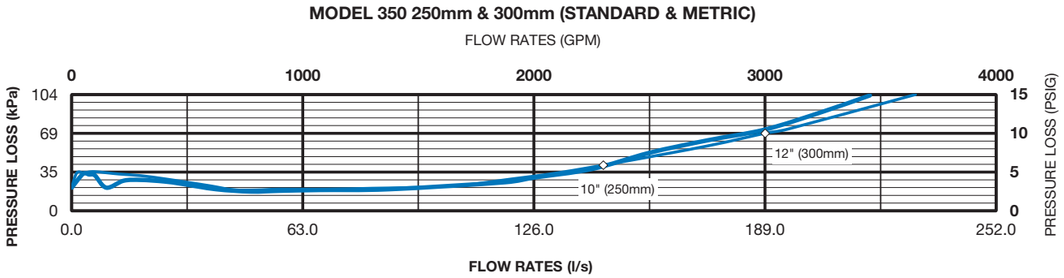
350 Series DCV

65-250mm

Flow Characteristics







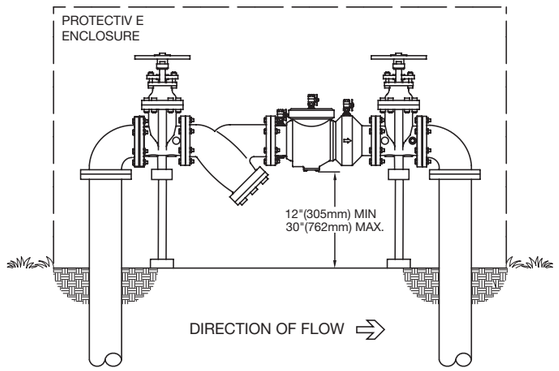
Note: the pressure losses depicted in the tables are for the device only and not the complete assembly.

Specifications

The Double Check Valve shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 shall be accessible for maintenance without removing the device from the line. The Double Check Valve shall be a ZURN Model 350.

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.



TYPICAL INSTALLATION

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

350A Series DCV

100-200mm

LEAD FREE

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of polluted water into the potable water supply. The Model 350A shall provide protection where a potential health hazard exists (Medium Hazard).

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron ASTM A536 Grade 4

Access Covers: Ductile Iron ASTM A536 Grade 4

Coatings: Fusion Epoxy

Fasteners: Stainless Steel 304

Internals: Stainless Steel 304

Seal Ring: EPDM

O-ring: Buna Nitrile

Springs: Stainless Steel 17-7

Operating Parameters

Max. Working Water Pressure: 1200kPa

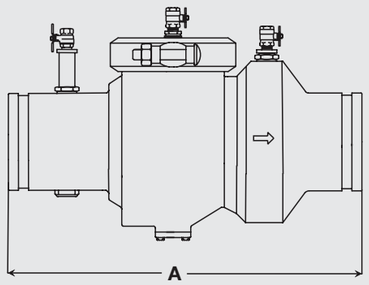
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

End Connections: Grooved, AWWA C606

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

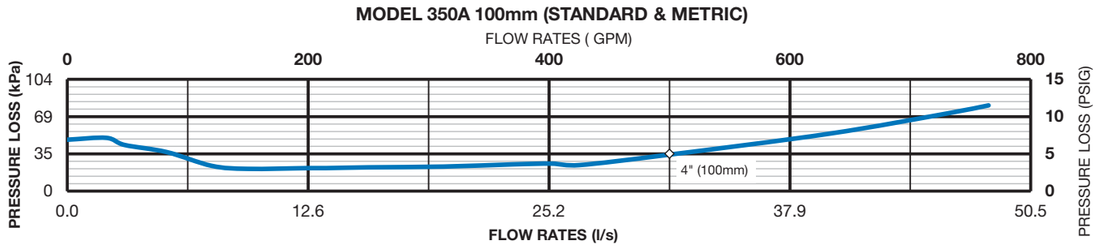
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379

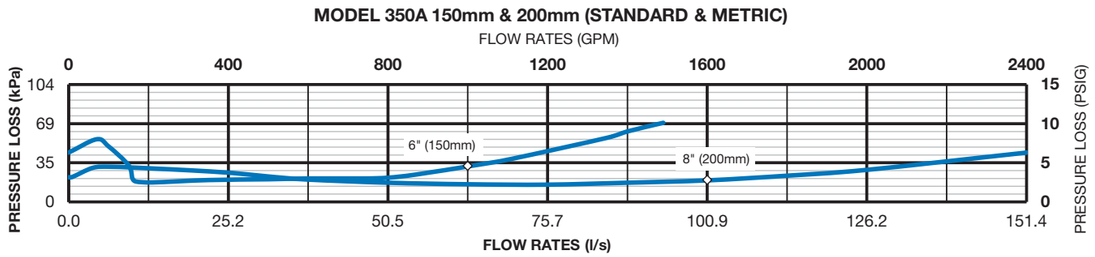


Dimensions & Weights (do not include pkg.)

VALVE SIZE	REECE CODE	ZURN CODE	DIMENSIONS (approximate) A (mm)	WEIGHT kg
100	4000017	4-350ALBS	505	34
150	4000049	6-350ALBS	657	57
200	4000082	8-350ALBS	978	130

Flow Characteristics





Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and the latest edition of the Plumbing Code of Australia and/or AS/NZS 3500. 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. If installed below grade, be certain adequate drainage is provided to prevent the device from being submerged.

Specifications

The Double Check Valve shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 shall be accessible for maintenance without removing the device from the line. The Double Check Valve shall be a ZURN Model 350A.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

310 Series SCV

100-150mm

LEAD FREE

Application

Designed for installation on water lines in fire protection systems to protect against both backsiphonage and backpressure of polluted water into the potable water supply. Assembly shall provide protection where a potential hazard exists (Low Hazard).

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron

Access Covers: Ductile Iron

Coatings: Epoxy

Fasteners: Stainless Steel

Internals: Stainless Steel, NORYL

Elastomers: EPDM, Buna Nitrile

Springs: Stainless Steel

Operating Parameters

Max. Working Water Pressure: 1200kPa

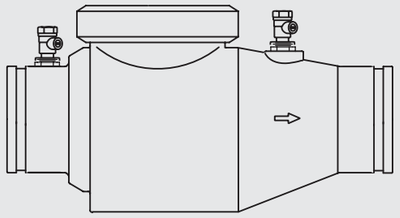
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

End Connections: Grooved AWWA C606

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

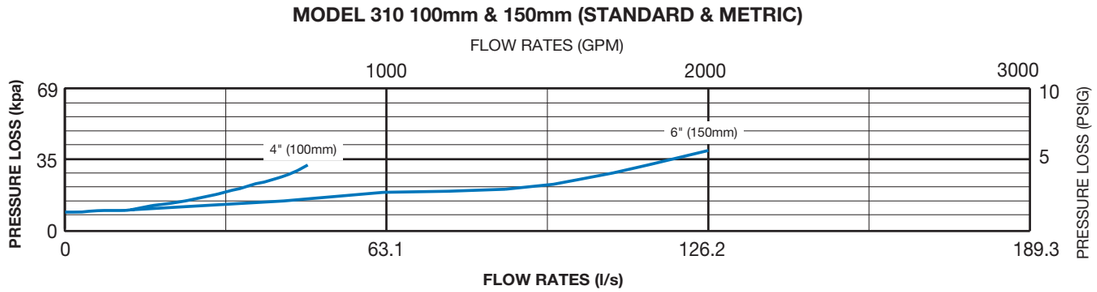
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



Dimensions & Weights (do not include pkg.)

VALVE SIZE (mm)	REECE CODE	ZURN CODE	LENGTH (mm)	WEIGHT kg
100	2120687	4-310BSG	419	17.7
150	1013613	6-310BSG	572	47.2

Flow Characteristics



Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

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.

Specifications

The Single Check Valve shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 check valve shall be spring loaded and accessible for maintenance without removing the device from the line. The Single Check Valve shall be a ZURN Model 310.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

350DA Series DDCV

65-200mm

LEAD FREE

Application

Designed for installation on water lines in fire protection systems to protect against both backsiphonage and backpressure of polluted water into the potable water supply. The Model 350DA shall provide protection where a potential health hazard exists (Medium Hazard).

Incorporates metered by-pass to detect leaks and unauthorised water use.

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron ASTM A 536

Access Covers: Ductile Iron ASTM A 536

Coatings: Fusion Epoxy

Internals: Stainless Steel, 300 Series / NORYL™

Fasteners: Stainless Steel, 300 Series

Elastomers: EPDM / Buna Nitrile

Polymers: NORYL™

Springs: Stainless Steel, 300 Series

Operating Parameters

Max. Working Water Pressure: 1200kPa

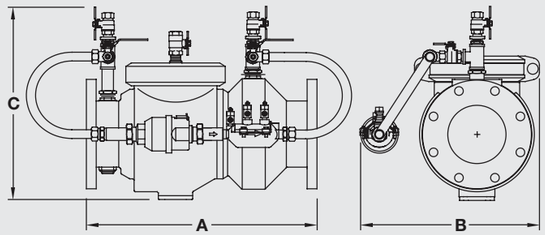
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2000kPa

End Connections: Flanges to AS2129 / Roll Groove to AWWA C606

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

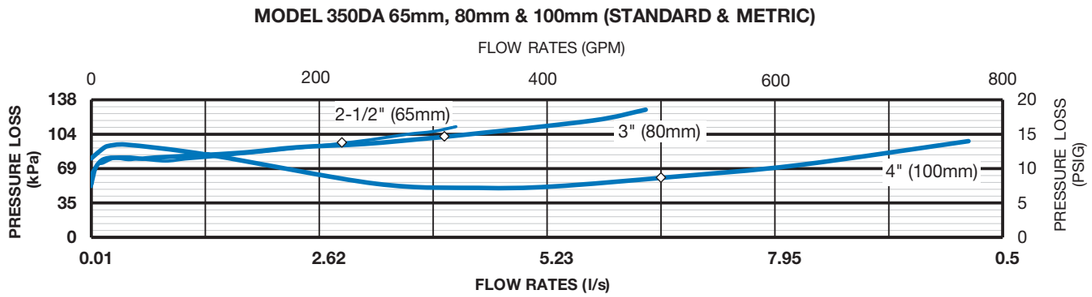
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379

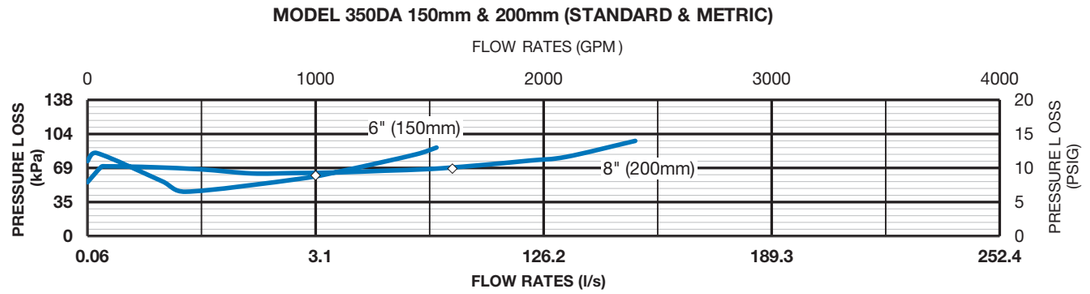


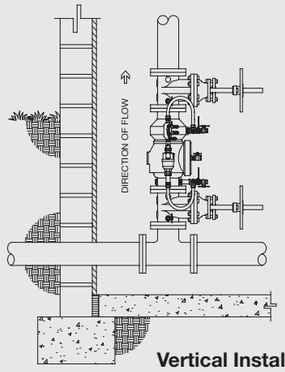
Dimensions & Weights (do not include pkg.)

Valve Size (mm)	BYPASS	CONNECTION	REECE CODE	ZURN CODE	Dimensions (approximate)		
					A (mm)	B (mm)	C (mm)
65	Meter	Table E	4000164	65-350DA20SYD	403	340	380
80	Meter	Table E	4000180	80-350DA20SYD	403	340	380
100	Meter	Roll Groove	4000018	100-350DA20SYDRG	505	340	410
100	Spacer	Roll Groove	4000019	100-350DA20SYDRG-S	505	340	410
100	Meter	Table E	180437	100-350DA20SYD	535	340	400
100	Spacer	Table E	4000020	100-350DA20SYD-S	535	340	400
150	Meter	Roll Groove	4000053	150-350DA20SYDRG	657	410	465
150	Spacer	Roll Groove	4000050	150-350DA20SYDRG-S	657	410	465
150	Meter	Table E	4000052	150-350DA20SYD	675	430	480
150	Spacer	Table E	4000051	150-350DA20SYD-S	675	430	480
200	Meter	Table E	4000083	200-350DA20SYD	959	570	580

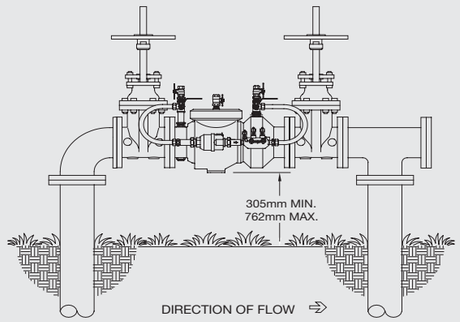
Flow Characteristics







Vertical Installation



Outdoor Installation

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.

Specifications

The Double Check Detector Backflow Prevention Assembly shall be certified to AS/NZS 2845. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 first and second check valve shall be accessible for maintenance without removing the device from the line. The Double Check Detector Backflow Prevention Assembly shall be a ZURN Model 350DA.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

310 Series SCV

100-200mm

LEAD FREE

Application

Designed for installation on water lines in fire protection systems to protect against both backsiphonage and backpressure of polluted water into the potable water supply. Assembly shall provide protection where a potential hazard exists (Low Hazard).

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron

Access Covers: Ductile Iron

Coatings: Epoxy

Fasteners: Stainless Steel

Internals: Stainless Steel, NORYL

Elastomers: EPDM, Buna Nitrile

Springs: Stainless Steel

Operating Parameters

Max. Working Water Pressure: 1200kPa

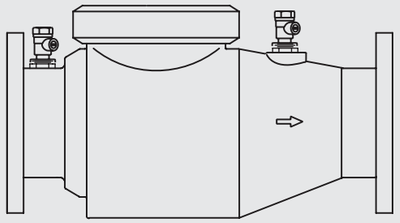
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

End Connections: Flanges to AS2129

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

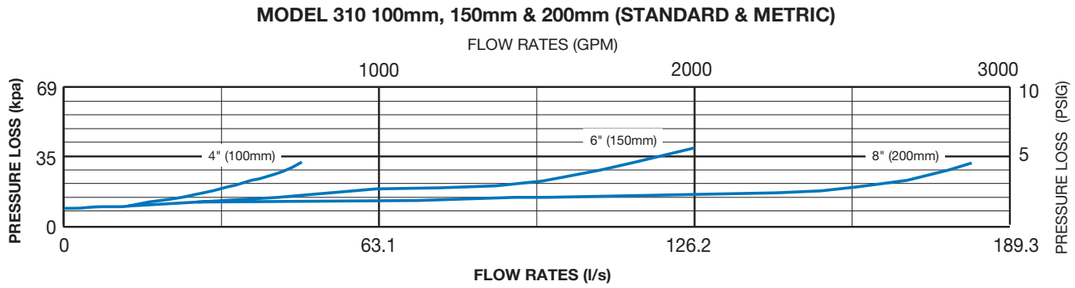
Certified Product™
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



Dimensions & Weights (do not include pkg.)

VALVE SIZE (mm)	TESTING	FLANGE TYPE	REECE CODE	ZURN CODE	LENGTH (mm)	WEIGHT kg
100	TESTABLE	TABLE D	2120737	4-310BSD	419	28.6
100	TESTABLE	TABLE E	1006338	4-310BS	419	28.6
150	TESTABLE	TABLE E	1006339	6-310BS	572	60.4
200	TESTABLE	TABLE E	4000081	8-310BS	673	115.3

Flow Characteristics



Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

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.

Specifications

The Single Check Valve shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 check valve shall be spring loaded and accessible for maintenance without removing the device from the line. The Single Check Valve shall be a ZURN Model 310.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

310 Series SDCV Flanged

100-150mm

Application

Designed for installation on water lines in fire protection systems to protect against both backsiphonage and backpressure of polluted water into the potable water supply. Assembly shall provide protection where a potential hazard exists (Low Hazard).

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron

Access Covers: Ductile Iron

Coatings: Epoxy

Fasteners: Stainless Steel

Internals: Stainless Steel, NORYL

Elastomers: EPDM, Buna Nitrile

Springs: Stainless Steel

Operating Parameters

Max. Working Water Pressure: 1200kPa

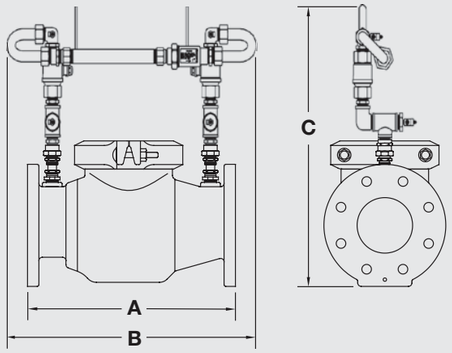
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

End Connections: Flanges to AS2129

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

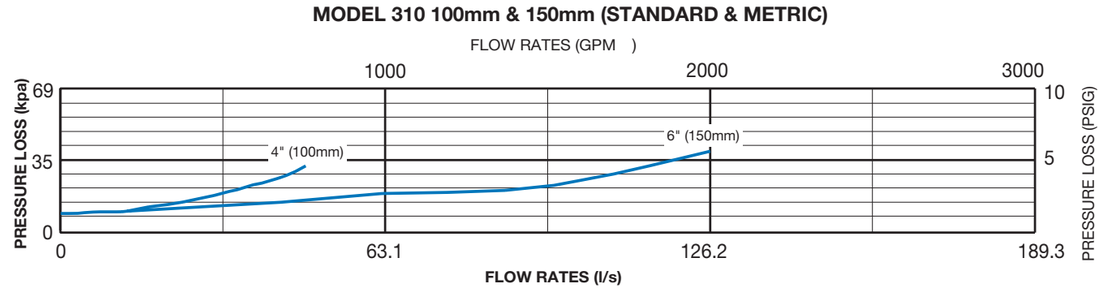
Certified Product™
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



Dimensions & Weights (do not include pkg.)

Valve Size (mm)	BYPASS	FLANGE TYPE	REECE CODE	ZURN CODE	Dimensions (approximate)			WEIGHT kg
					A (mm)	B (mm)	C (mm)	
100	SPACER	TABLE E	1000611	SE100-310DAL25T(FL)	419	552	723	20.3
100	METER	TABLE E	1000626	YVW100-310DAL25T(FL)	419	552	723	20.3
150	SPACER	TABLE E	1000613	SE150-310DAL25T(FL)	572	705	530	50.9
150	METER	TABLE E	1000628	YVW150-310DAL25T(FL)	572	705	530	50.9

Flow Characteristics



Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

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.

Specifications

The Single Detector Check Valve shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 check valve shall be spring loaded and accessible for maintenance without removing the device from the line. The Single Detector Check Valve shall be a ZURN Model 310.

ZURN BACKFLOW PREVENTION SPECIFICATION SHEETS

310 Series SDCV Roll Grooved

100-150mm

LEAD FREE

Application

Designed for installation on water lines in fire protection systems to protect against both backsiphonage and backpressure of polluted water into the potable water supply. Assembly shall provide protection where a potential hazard exists (Low Hazard).

Standards Compliance

Australian Watermark and Standards Mark
UL Classified
FM Approved

Materials

Main Valve Body: Ductile Iron

Access Covers: Ductile Iron

Coatings: Epoxy

Fasteners: Stainless Steel

Internals: Stainless Steel, NORYL

Elastomers: EPDM, Buna Nitrile

Springs: Stainless Steel

Operating Parameters

Max. Working Water Pressure: 1200kPa

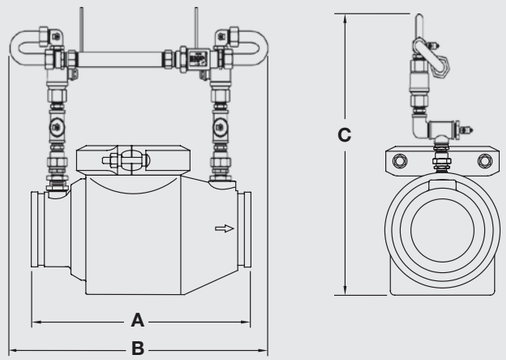
Max. Working Temperature: 60˚C

Hydrostatic Test Pressure: 2400kPa

End Connections: Grooved AWWA C606

WATERMARK
AS/NZS 2845.1
LIC. WMKA1379

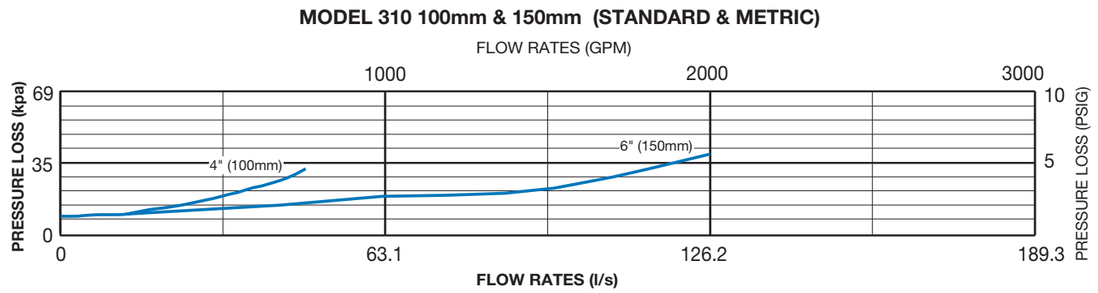
Certified Product™
STANDARDS MARK
AS/NZS 2845.1
LIC. SMK1379



Dimensions & Weights (do not include pkg.)

Valve Size (mm)	BYPASS	REECE CODE	ZURN CODE	Dimensions (approximate)			WEIGHT kg
				A (mm)	B (mm)	C (mm)	
100	SPACER	1000612	SE100-310DAL25T(RG)	419	552	723	20.3
100	METER	1000627	YVW100-310DAL25T(RG)	419	552	723	20.3
150	SPACER	1000614	SE150-310DAL25T(RG)	572	705	530	50.9
150	METER	1000629	YVW150-310DAL25T(RG)	572	705	530	50.9

Flow Characteristics



Note: The pressure losses depicted in the tables are for the device only and not the complete assembly.

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.

Specifications

The Single Detector Check Valve shall be certified to AS/NZS 2845.1. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536), 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 check valve shall be spring loaded and accessible for maintenance without removing the device from the line. The Single Detector Check Valve shall be a ZURN Model 310.

INSTALLATION, TESTING & MAINTENANCE

INSTALLATION, TESTING & MAINTENANCE

375 Series RPZ

15-25mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. The installer should be sure the proper device has been selected for the particular installation. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 375 Reduced Pressure Principle Backflow Preventers are for use on water lines where a health hazard could exist if a backflow situation were to occur.

Proper performance is dependent upon following these installation instructions and prevailing governmental and industry standards and codes. Failure to do so, according to ZURN WILKINS Limited Warranty "... releases ZURN WILKINS of any liability that it might otherwise have with respect to that device." Such failure could also result in an improperly functioning device.

Damage to the device could result wherever water hammer and/ or water thermal expansion could create excessive line pressure. Where this could occur, shock arresters and/or pressure relief valves should be installed downstream of the device.

1. Before installing a Model 375 Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer.

CAUTION: Do not use a strainer in seldom used emergency waterlines such as fire lines.

2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.

3. **WARNING:** If installation of a Model 375 is in a building, a suitable drain arrangement MUST be provided to drain off spillage from the relief valve. (Refer to "re - lief valve discharge" table below). An air gap at least two times the pipe diameter must be provided be - tween the relief valve and the drain piping to prevent a cross-connection.

CAUTION: Do not pipe the relief valve solidly to a floor drain, sewer or sump.

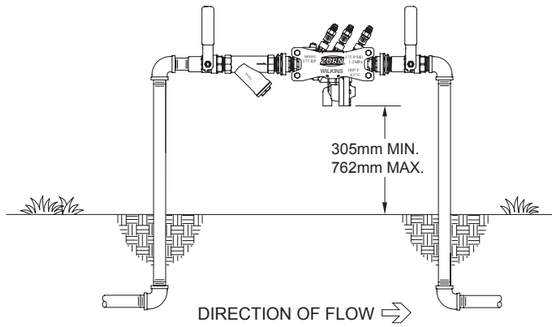
4. Install valve at least 305mm above surrounding flood level.

5. Always consult local codes for installation methods, approvals and guidance.

OUTDOOR INSTALLATION

Model 375 Backflow Preventers may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0˚C. All the basic installation instructions apply.

If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this will cause a cross-connection. Make sure that the pit or vault always remains dry by providing ample drainage



INDOOR INSTALLATION

Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations.

PARALLEL INSTALLATION

Where uninterrupted service from a single meter connection must be maintained, two or more Backflow Preventers may be connected in parallel. All the basic installation instructions apply to parallel installation. Be sure to allow adequate room between the units for testing and repair.

PLACING THE DEVICE IN SERVICE

After the installation of a Model 375 has been completed, place the unit in service as follows:

375 REDUCED PRESSURE PRINCIPLE

1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the backflow preventer is completely pressurised. A brief discharge from the relief valve may occur while the device is pressurising. The discharge should cease by the time the shut-off valve is fully open. Device should function properly. If the discharge does not stop, refer to "MAINTENANCE INSTRUCTIONS" for repair procedures.

2. After the device has been pressurised, vent all trapped air from both check valves by slightly opening each of the three test cocks.

3. Slowly open the downstream shut-off valve. The Model 375 Reduced Pressure Principle Backflow Preventer is now in service.

4. If "spitting" or intermittent discharges from the relief valve are noted, it could be a result of pressure fluctuation and/or a water hammer condition in the system. If such conditions exist, install a ZURN WILKINS water pressure reducing valve, a check valve, or a water hammer shock arrester in compliance with industry standards as needed.

5. After the Model 375 has been properly installed, test the device (see "TEST PROCEDURES"). If the device fails the test, remove the first and second check valves and thoroughly flush the device. If the relief valve fails to operate properly, inspect the sensing passage for clogging (see "MAINTENANCE INSTRUCTIONS"). Clean rubber seals of all debris and place unit back in service.

Testing Procedures

MODEL 375 REDUCED PRESSURE PRINCIPLE ASSEMBLY

Equipment Required: Differential pressure gauge test kit.

TEST NO. 1

Purpose:
Test #2 check valve for tightness against reverse flow.

Requirement:
The valve must close tight against reverse flow under all pressure differentials.

Procedure:

1. Attach the "HIGH" hose to test cock #1 and the "LOW" hose to test cock #2.

2. Close downstream shut-off valve.

3. Open test cocks #1 and #2.

4. Open by-pass valves "C" and "A" and bleed to atmosphere until all air is expelled.

5. Close by-pass valve "A". Open by-pass valve "B" and bleed to atmosphere until all air is expelled. Close by-pass valves "B" and "C".

6. Attach the "VENT" hose to test cock #3.

7. Slowly open by-pass valves "A" and "C" and keep by-pass valve "B" closed.

8. Open test cock #3.

9. Indicated pressure differential will drop slightly. If pressure differential does not continue to decrease, the #2 check valve is considered tight.

TEST NO. 2

Purpose:
Test #1 check valve for tightness and record pressure drop across #1 check valve.

Requirement:
The static pressure drop across #1 check valve shall be greater than the relief valve opening point (test #3), and at least 35 kPa.

Procedure:

1. Close by-pass valve "A"

2. Close test cock #3, and disconnect "VENT" hose from test cock #3.

3. Open by-pass valves "B" and "C" bleeding to atmosphere, then close by-pass valve "B" restoring the system to normal static condition.

4. Observe the pressure differential gauge and note this as the #1 check valve kPa differential.

INSTALLATION, TESTING & MAINTENANCE

375 Series RPZ

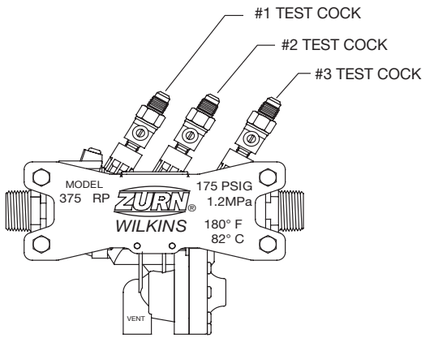
15-25mm

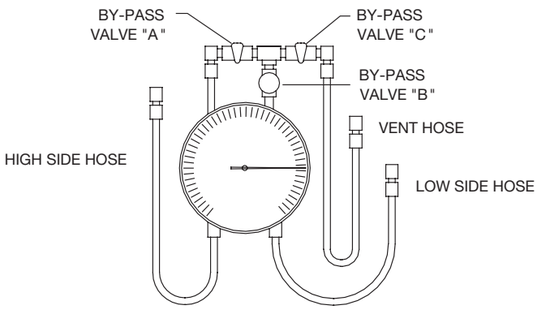
TEST NO. 3
Purpose:
To test operation of the differential relief valve.

Requirement:
The pressure differential relief valve must operate to maintain the "ZONE" between the two check valves at least 14 kPa less than the supply pressure.

Procedure:
1. Close by-pass valve "C" and open by-pass valve "A".

2. Open by-pass valve "B" very slowly until differential gauge needle starts to drop. Hold the valve at this position and observe the gauge reading at the moment the first discharge is noted from the relief valve. Record this as the opening differential pressure of the relief valve.





Please note all installation and testing procedures listed are intended as a guide only. Installation and testing should be in accordance to local standards and plumbing codes.

Maintenance Instructions

All Model 375 Reduced Pressure Principle Backflow Preventers must be inspected and maintained by licenced personnel at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine "ZURN WILKINS" parts. The ZURN WILKINS Certificate of Limited Warranty provides that failure to do so "... releases ZURN WILKINS of any liability that it might otherwise have with respect to that device." Such failure could also result in an improperly functioning device.

The Model 375 Reduced Pressure Principle Assemblies should be thoroughly flushed after backflow conditions occur to prevent any type of corrosive deterioration to its components. Failure to do so could result in malfunction of the device.

GENERAL MAINTENANCE

1. Clean all parts thoroughly with water after disassembly.

2. Carefully inspect rubber seal rings, diaphragms and o-rings for damage.

3. Test unit after reassembly for proper operation (see "Testing Procedures").

SERVICING CHECK VALVES

1. Close inlet and outlet shut-off valves.

2. Open #1, #2 and #3 test cocks to release pressure from valve.

3. Unscrew clamp screws and remove clamp. (Inserting screw in centre hole can remove stuck clamp). Slide sleeve toward inlet pipe. Slide valve body toward inlet and lift upward.

4. Using finger or blunt object, push in outlet end of body, both checks should slide out the body inlet. (A phillips screw driver will work in a 15-20mm valve. The closed ball valve handle will work in a 25mm valve).

5. Twist spring retainers counter-clockwise to remove from seat and access poppets.

6. Inspect the rubber seal ring for cuts or embedded debris. To remove seal ring, remove screw and seal ring retainer. If the reverse side of the seal ring is unused, it is possible to invert the seal ring. This would be considered a temporary solution to fixing a fouled check and should be replaced with a new seal ring as soon as possible.

7. Inspect seat surface for nicks or dings and replace if necessary. Use fingernail to check for dings. Re-grease seat o-rings.

8. Inspect seat o-ring sealing areas in body and wipe clean.

9. Reverse the above procedures to reinstall check valve assembly. (Drop #2 check assembly in body. Then drop #1 check assembly in and turn until #1 spring retainer lines up with #2 seat. Then push both assemblies into body.) Care should be taken to make sure the heavy spring is installed in the #1 check valve. Do not overtighten clamp screws as this can cause leak at the sleeve o-ring.

SERVICING RELIEF VALVE

1. Remove relief valve cover screws and cover. Gently pull on diaphragm to remove the cartridge assembly.

2. Inspect seal ring for cuts and embedded debris. Turn over or replace if required.

3. Disassemble cartridge by unscrewing relief valve retaining screw.

4. Inspect diaphragm and o-ring for damage. Replace required parts and apply a light coat of grease to plunger o-ring, and place on plunger.

5. Carefully reassemble cartridge assembly.

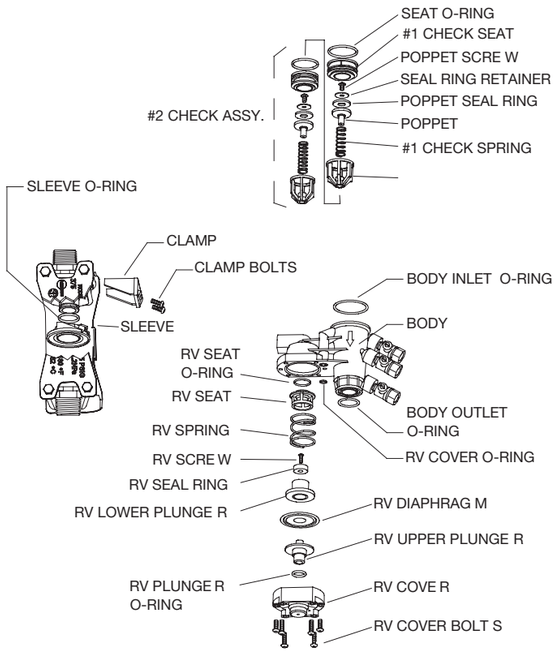
6. Inspect relief valve seat for wear on seating surface. If damaged, replace seat and seat o-ring. (Twist seat and o-ring while inserting to keep it from popping out).

7. Insert cartridge assembly into relief valve cover.

8. Check cover o-ring in groove on body. Clean or replace as necessary.

9. Replace relief valve cover and cover screws.

10. Place device in service and test per "TESTING PROCEDURES".



INSTALLATION, TESTING & MAINTENANCE

375 Series RPZ

15-25mm

Troubleshooting

When the relief valve discharges intermittently, it can be almost always assumed that the device is functioning correctly and that the discharge is caused by system problems such as inlet pressure fluctuations or water hammer due to quick closing valves

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
SUDDEN OR RAPID SPITTING	1. Drop in inlet pressure. 2. Sudden increase in downstream pressure due to water hammer from quick closing shut-off valve installed downstream.	A. Install an in-line spring loaded check valve upstream of backflow. B. Install pressure reducing valve upstream of backflow unit. C. Install in-line spring loaded check valve downstream of backflow as close to source as possible, but not closer than 1.2m.
LIGHT INTERMITTENT DRIP	Slightly fouled #1 check.	Clean #1 check and turn check valve seal ring over or replace.

Continuous discharge of the relief valve signifies a failure of some part of the device. To help determine the specific area of failure, close the #2 shut-off valve. If the discharge stops, the #2 check requires service. If the discharge continues, the #1 check requires service.

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
CONTINUOUS DISCHARGE	1. Fouled #1 check. 2. Fouled relief valve seat. 3. Fouled #2 check.	A. Clean check valves and turn check valve seal rings over or replace. B. Clean relief valve seat and turn relief valve seal ring over or replace.

In summary, the amount of discharge is proportional to degree of fouling. Most problems occur in the #1 check which is where debris enters the backflow preventer first.

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS' specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

SPECIFICATIONS

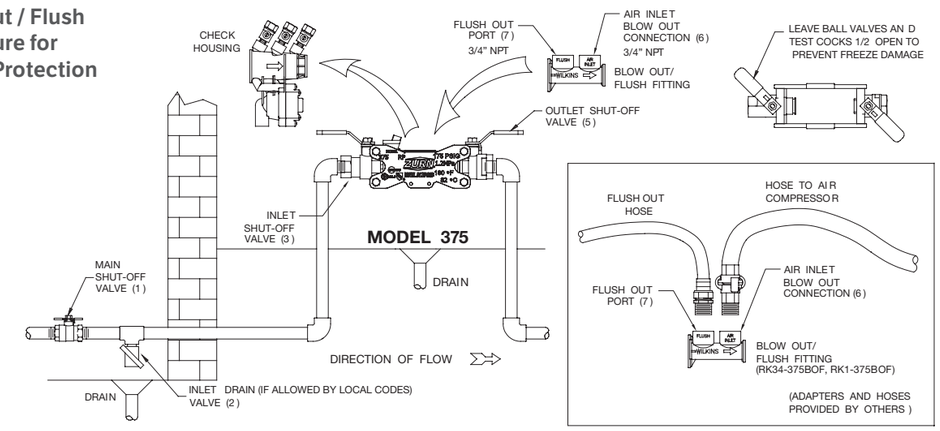
Maximum working water pressure: 1200 kPa

Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400 kPa

End connections: ISO 7.1 R Tapered Pipe Thread

Blow Out / Flush Procedure for Freeze Protection



To blow out system for freeze protection, use the following procedure:

1. Turn off main shut-off valve (1) that supplies water to the system.
2. Open inlet drain valve in the system (2). Open inlet and outlet shut-off valves on the backflow preventer (3 & 5) and all of the test cocks (4). Leave all valves and test cocks in the half open/half closed (45˚) position to allow full drainage of the ball valves and test cocks.
3. Remove black backflow preventer housing. Replace with orange Blow Out / Flush Fitting. Store backflow preventer housing in a safe location for winter. Orange Blow Out / Flush Fitting may remain in valve body during winter. Place plugs in ports to keep debris from entering housing.
4. A hose and adapter can be connected to flush out port (7) to drain water to a safe drain.
5. Connect an air hose and adapter to the air inlet connection (6). Inject an adequate volume of air to remove all water from the downstream portion of the system. Do not allow the fitting to overheat.
6. Leave drain valve (2), shut-off valves (3 & 5) and test cocks (4) in the half open/half closed position (45˚) for the duration of the winter to prevent freezing.
7. Store valve body/check assemblies, clamp

To flush system during installation, use the following procedures:

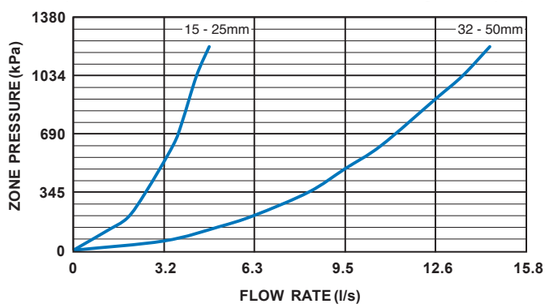
1. Install backflow device in pipe system, leave water off.
2. Remove the black backflow preventer housing from the brass body.
3. Install the orange Blow Out / Flush Fitting into the brass body.
4. Thread a garden hose adapter into flush-out port (7). Connect a hose to the adapter and run to a safe drain. Shut-off valves (3) and (4) should be open.
5. Turn on water supply at main shut-off valve (1) to flush out any debris in the pipe. Turn water off.
6. Remove orange Blow-Out / Flush Fitting and replace black check housing back into the line. Close shut-off valves (3) and (4). Turn water on at main shut-off (1).
7. Slowly open shut-off valve (3) to pressurise backflow preventer. Once fully open, pressurise system by slowly opening shut-off valve (4).

CAUTION: For freeze protection, be certain that main shut-off valve (1) remains tightly closed to prevent refilling of the system. Also, the main shut-off valve must be resilient seated to ensure no leakage of water into the system.

Performance Characteristics

Relief Valve Discharge Rates

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



Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
15	0.3	0.4	0.6	0.9
20	0.5	0.8	1.1	1.6
25	0.8	1.3	1.7	2.5
32	1.5	2.2	3	4.4
40	2	3	4	6
50	3.3	4.9	6.6	10.5

REPAIR KITS FOR 375's	
BLOW OUT/FLUSH FITTING 15-20mm RK34-375BOF 25mm RK1-375BOF	BLOW OUT/ FLUSH FITTING 
COMPLETE INTERNALS 15-20mm RK34-375 (180415) 25mm RK1-375 (180455)	WEDGE/CLAMP 15-20mm RK34-375W (180420) 25mm RK1-375W (4000388)
RUBBER PARTS 15-20mm RK34-375R (180416) 25mm RK1-375R (180425)	VESSEL 15-20mm RK34-375V (180459) 25mm RK1-375V (180464)

INSTALLATION, TESTING & MAINTENANCE

375 Series RPZ

32-50mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. The installer should be sure the proper device has been selected for the particular installation. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 375 Reduced Pressure Principle Backflow Preventers are for use on water lines where a health hazard could exist if a backflow situation were to occur. Proper performance is dependent upon following these installation instructions and prevailing governmental and industry standards and codes. Failure to do so, according to ZURN WILKINS Limited Warranty "...releases ZURN WILKINS of any liability that it might otherwise have with respect to that device." Such failure could also result in an improperly functioning device.

Damage to the device could result wherever water hammer and/ or water thermal expansion could create excessive line pressure. Where this could occur, shock arresters and/or pressure relief valves should be installed downstream of the device.

1. Before installing a Model 375 Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer.

CAUTION: Do not use a strainer in seldom used emergency waterlines such as fire lines.

2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.

3. **WARNING:** If installation of a Model 375 is in a building, a suitable drain arrangement MUST be provided to drain off spillage from the relief valve. (Refer to relief valve discharge table below). An air gap at least two times the pipe diameter must be provided between the relief valve and the drain piping to prevent a crossconnection.

CAUTION: Do not pipe the relief valve solidly to a floor drain, sewer or sump.

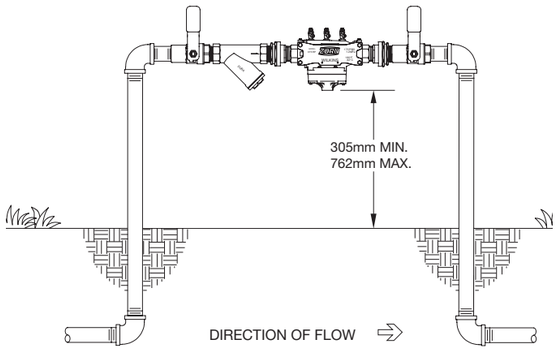
4. Install valve at least 305mm above surrounding flood level.

5. Always consult local codes for installation methods, approvals and guidance.

OUTDOOR INSTALLATION

Model 375 Backflow Preventers may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0˚C. All the basic installation instructions apply.

If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this will cause a crossconnection. Make sure that the pit or vault always remains dry by providing ample drainage.



INDOOR INSTALLATION

Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations.

PARALLEL INSTALLATION

Where uninterrupted service from a single meter connection must be maintained, two or more Backflow Preventers may be connected in parallel. All the basic installation instructions apply to parallel installation. Be sure to allow adequate room between the units for testing and repair.

PLACING THE DEVICE IN SERVICE

After the installation of a Model 375 has been completed, place the unit in service as follows:

375 REDUCED PRESSURE PRINCIPLE

1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the backflow preventer is completely pressurised. A brief discharge from the relief valve may occur while the device is pressurised. The discharge should cease by the time the shut-off valve is fully open. Device should function properly. If the discharge does not stop, refer to "MAINTENANCE INSTRUCTIONS" for repair procedures.

2. After the device has been pressurised, vent all trapped air from both check valves by slightly opening each of the three test cocks.

3. Slowly open the downstream shut-off valve. The Model 375 Reduced Pressure Principle Backflow Preventer is now in service.

4. If "spitting" or intermittent discharges from the relief valve are noted, it could be a result of pressure fluctuation and/or a water hammer condition in the system. If such conditions exist, install a ZURN WILKINS water pressure reducing valve, a check valve, or a water hammer shock arrester in compliance with industry standards as needed.

5. After the Model 375 has been properly installed, test the device (see "TEST PROCEDURES"). If the device fails the test, remove the first and second check valves and thoroughly flush the device. If the relief valve fails to operate properly, inspect the sensing passage for clogging (see "MAINTENANCE INSTRUCTIONS"). Clean rubber seals of all debris and place unit back in service.

Testing Procedures

MODEL 375 REDUCED PRESSURE PRINCIPLE ASSEMBLY

Equipment Required: Differential pressure gauge test kit.

TEST NO. 1

Purpose:
Test #2 check valve for tightness against reverse flow.

Requirement:
The valve must close tight against reverse flow under all pressure differentials.

Procedure:
1. Attach the "HIGH" hose to test cock #1 and the "LOW" hose to test cock #2.

2. Close downstream shut-off valve.

3. Open test cocks #1 and #2.

4. Open by-pass valves "C" and "A" and bleed to atmosphere until all air is expelled.

5. Close by-pass valve "A". Open by-pass valve "B" and bleed to atmosphere until all air is expelled. Close by-pass valves "B" and "C".

6. Attach the "VENT" hose to test cock #3.

7. Slowly open by-pass valves "A" and "C" and keep by-pass valve "B" closed.

8. Open test cock #3.

9. Indicated pressure differential will drop slightly. If pressure differential does not continue to decrease, the #2 check valve is considered tight.

TEST NO. 2

Purpose:
Test #1 check valve for tightness and record pressure drop across #1 check valve.

Requirement:
The static pressure drop across #1 check valve shall be greater than the relief valve opening point (test #3), and at least 35 kPa.

Procedure:
1. Close by-pass valve "A"

2. Close test cock #3, and disconnect "VENT" hose from test cock #3.

3. Open by-pass valves "B" and "C" bleeding to atmosphere, then close by-pass valve "B" restoring the system to normal static condition.

4. Observe the pressure differential gauge and note this as the #1 check valve kPa differential.

INSTALLATION, TESTING & MAINTENANCE

375 Series RPZ

32-50mm

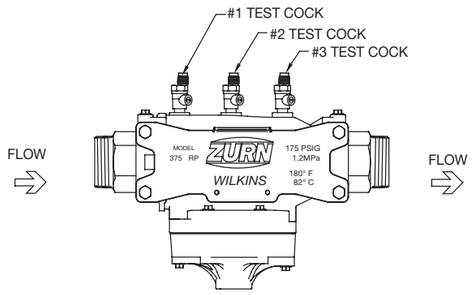
TEST NO. 3

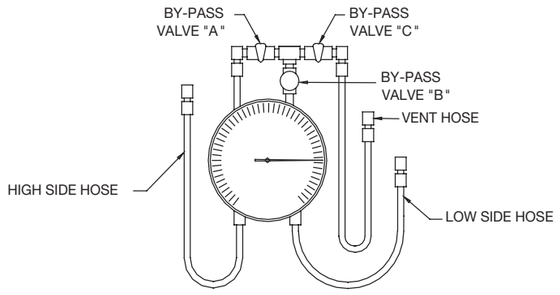
Purpose:
To test operation of the differential relief valve.

Requirement:
The pressure differential relief valve must operate to maintain the "ZONE" between the two check valves at least 14 kPa less than the supply pressure.

Procedure:
1. Close by-pass valve "C" and open by-pass valve "A".

2. Open by-pass valve "B" very slowly until differential gauge needle starts to drop. Hold the valve at this position and observe the gauge reading at the moment the first discharge is noted from the relief valve. Record this as the opening differential pressure of the relief valve.





Please note all installation and testing procedures listed are intended as a guide only. Installation and testing should be in accordance to local standards and plumbing codes

Maintenance Instructions

All Model 375 Reduced Pressure Principle Backflow Preventers must be inspected and maintained by licenced personnel at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine "ZURN WILKINS" parts. The ZURN WILKINS Certificate of Limited Warranty provides that failure to do so "... releases ZURN WILKINS of any liability that it might otherwise have with respect to that device." Such failure could also result in an improperly functioning device.

The Model 375 Reduced Pressure Principle Assemblies should be thoroughly flushed after backflow conditions occur to prevent any type of corrosive deterioration to its components. Failure to do so could result in malfunction of the device.

GENERAL MAINTENANCE

1. Clean all parts thoroughly with water after disassembly.

2. Carefully inspect rubber seal rings, diaphragms and o-rings for damage.

3. Test unit after reassembly for proper operation (see "Testing Procedures").

SERVICING CHECK VALVES

1. Close inlet and outlet shut-off valves.

2. Open #1, #2 and #3 test cocks to release pressure from valve.

3. Unscrew 4 screws holding body down. Lift valve body upward.

4. Twist and remove sleeve from body. Using finger or blunt object, push in outlet end of body, both checks should slide out the body inlet. A short object like a socket can be placed on a flat surface. Place body over object so it pushes into valve outlet and push down on body.

5. Twist spring retainers counter-clockwise to remove from seat and access poppets.

6. Inspect the rubber seal ring for cuts or embedded debris. To remove seal ring, remove screw and seal ring retainer. If the reverse side of the seal ring is unused, it is possible to invert the seal ring. This would be considered a temporary solution to fixing a fouled check and should be replaced with a new seal ring as soon as possible.

7. Inspect seat surface for nicks or dings and replace if necessary. Use fingernail to check for dings. Re-grease seat o-rings.

8. Inspect seat o-ring sealing areas in body and wipe clean.

9. Reverse the above procedures to reinstall check valve assembly. Drop #2 check assembly in body. Then drop #1 check assembly in and turn until #1 spring retainer lines up with #2 seat. Then push both assemblies into body. Insert sleeve against checks. (Place sleeve down against flat surface and push on body with rocking motion.) Care should be taken to make sure the heavy spring is installed in the #1 check valve.

10. Rock body side to side to help o-rings slide in. If it does not drop in completely, do not use screws to force it. An overly greased o-ring might slide out of groove at top of ball valve. Use a screw driver to push o-ring back in groove, then push body down in.

SERVICING RELIEF VALVE

1. Remove three bolts holding relief valve module to body.

2. Pull down and remove relief module to expose seat and seal ring. These can be inspected without further disassembly. **CAUTION:** do not lose small o-ring or large o-ring that fit between module and check body.

3. To inspect diaphragm or replace seat/ diaphragm stem assembly, remove the four screws holding the two module halves together. **CAUTION:** do not lose small o-ring.

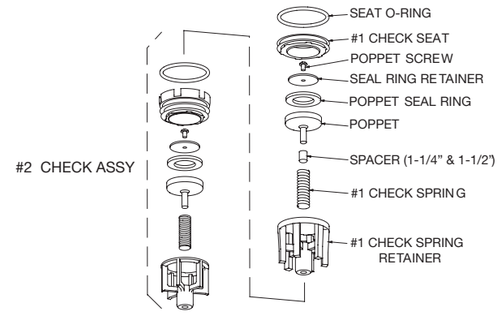
4. Remove stem assembly. Inspect diaphragm and plunger o-ring for damage. Replace any damaged parts and apply a light coat of grease to plunger o-ring and place on plunger. **CAUTION:** stem assembly is internally spring loaded. Seat can be unscrewed from plunger to replace diaphragm or spring. The seat surface must not be nicked during disassembly or reassembly.

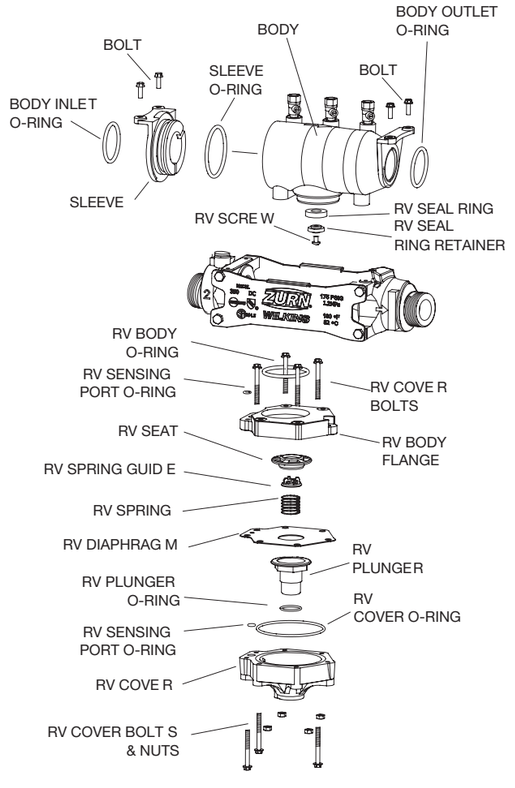
5. There are two o-rings that fit into the cover surface, one large, one small. These o-rings should not be greased. Insert stem into cover. Place second module half onto cover. Push the seat down into the cover with your thumb to align diaphragm bolt holes with cover and then insert four bolts and tighten.

6. Inspect o-ring that seals between module and check body. Replace if necessary. Apply grease to the o-ring and then place on step on check body. Place small o-ring into groove between the two front bolts holes in relief valve module.

7. Slide relief valve module onto check body. Rocking side to side can help it slide on over o-ring. Replace three remaining bolts.

8. Place device in service and test per "TESTING PROCEDURES.



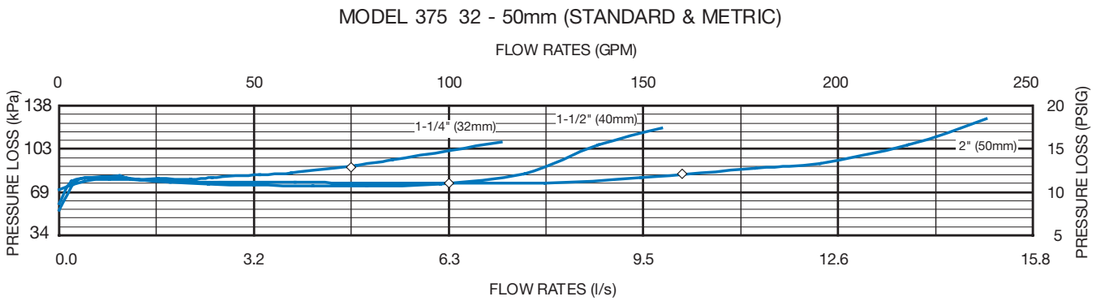


INSTALLATION, TESTING & MAINTENANCE

375 Series RPZ

32-50mm

FLOW CHARACTERISTICS



Troubleshooting

When the relief valve discharges intermittently, it can be almost always assumed that the device is functioning correctly and that the discharge is caused by system problems such as inlet pressure fluctuations or water hammer due to quick closing valves.

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
SUDDEN OR RAPID SPITTING	1. Drop in inlet pressure. 2. Sudden increase in downstream pressure due to water hammer from quick closing shut-off valve installed downstream.	A. Install an in-line spring loaded check valve upstream of backflow. B. Install pressure reducing valve upstream of backflow unit. C. Install in-line spring loaded check valve downstream of backflow as close to source as
LIGHT INTERMITTENT DRIP	Slightly fouled #1 check.	Clean #1 check and turn check valve seal ring over or replace.

Continuous discharge of the relief valve signifies a failure of some part of the device. To help determine the specific area of failure, close the #2 shut-off valve. If the discharge stops, the #2 check requires service. If the discharge continues, the #1 check requires service.

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
CONTINUOUS DISCHARGE	1. Fouled #1 check. 2. Fouled relief valve seat. 3. Fouled #2 check.	A. Clean check valves and turn check valve seal rings over or replace. B. Clean relief valve seat and turn relief valve seal ring over or replace.

In summary, the amount of discharge is proportional to degree of fouling. Most problems occur in the #1 check which is where debris enters the backflow preventer first.

Performance Characteristics

SPECIFICATIONS

Maximum working water pressure: 1200 kPa

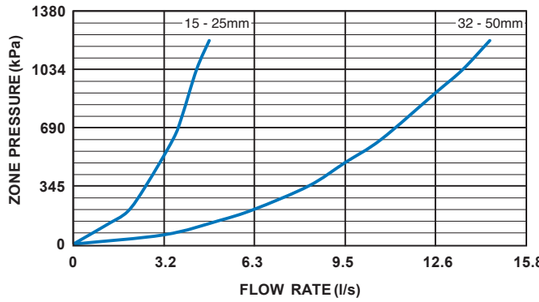
Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400 kPa

End connections: ISO 7.1 R Tapered Pipe Thread

Relief Valve Discharge Rates

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



Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
15	0.3	0.4	0.6	0.9
20	0.5	0.8	1.1	1.6
25	0.8	1.3	1.7	2.5
32	1.5	2.2	3	4.4
40	2	3	4	6
50	3.3	4.9	6.6	10.5

REPAIR KITS FOR 375's
RUBBER PARTS 32-50mm RK114-375R (180430)
COMPLETE INTERNALS 32-50mm RK114-375 (180435)
VESSEL 32-50mm RK114-375V (180471)

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS' specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

INSTALLATION, TESTING & MAINTENANCE

350 Series DCV

20-25mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. The installer should be sure the proper device has been selected for the particular installation. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 350 Double Check Valve assemblies are for use on water lines where a health hazard does not exist in the event of a backflow situation.

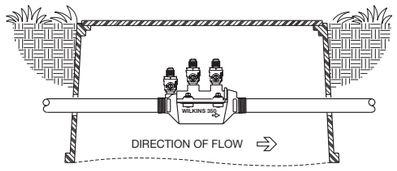
Damage to the device could result wherever water hammer and/or water thermal expansion could create excessive line pressure. Where this could occur, shock arresters, check valves and/or pressure relief valves should be installed downstream of the device.

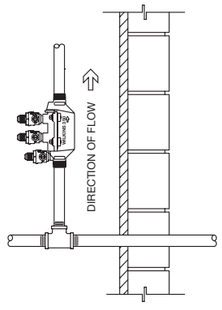
If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this could cause a cross-connection. Make sure that the pit or vault always remains dry by providing ample drainage.

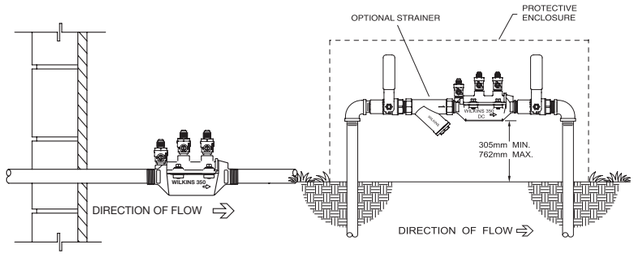
1. Before installing a Model 350 Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer. **CAUTION:** Do not use a strainer in seldom used emergency waterlines such as fire lines.
2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.
3. Install valve at least 305mm above surrounding flood level.
4. Always consult local codes for installation methods, approvals and guidance.

PLACING THE MODEL 350 IN SERVICE

1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the backflow preventer is completely pressurised.
2. When the unit has been pressurised, vent any trapped air by slightly opening each of the four test cocks.
3. Slowly open the downstream shut-off valve. The Model 350 Double Check Valve assembly is now in service.
4. After the Model 350 has been properly installed, test the device (see “TEST PROCEDURES”). If the device fails the test, remove the first and second check valves and thoroughly flush the device. Clean rubber and seats of all debris and place unit back in service.







VERTICAL INSTALLATION

Vertical installation is acceptable in applications where inlet and outlet piping are flowing vertically upwards. All the basic installation instructions apply to such installations. Consult asset owner for approval status.

INDOOR INSTALLATION

Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations.

OUTDOOR INSTALLATION

The Model 350 Backflow Preventer may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0°C. All the basic installation instructions apply.

MODEL 350 DOUBLE CHECK VALVE ASSEMBLY

Equipment Required: Differential pressure gauge test kit.

TEST NO. 1 - TIGHTNESS OF #1 CHECK VALVE

REQUIREMENT:
The static pressure drop across check valve #1 shall be at least 7 kPa. If test cock #3 is not at the highest point of the check valve body, then a vertical tube must be installed on test cock #3 so that it rises to the top of the check valve body.

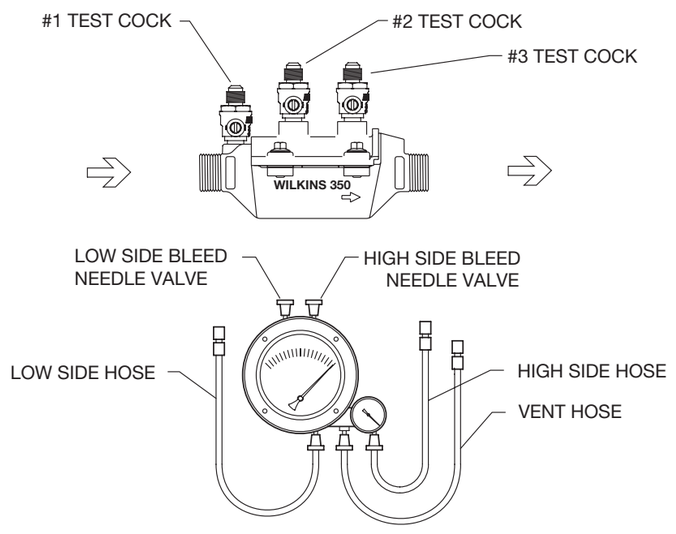
PROCEDURE:
1. Slowly open all 3 test cocks to remove any foreign material and attach fittings.
2. Attach hose from the high side of the test kit to the #1 test cock.
3. Open test cock #1 and bleed all air from the hose and gauge by opening the high side bleed needle valve. Close high side bleed needle valve. Close #2 shut-off valve then close the #1 shut-off valve.
4. Hold gauge at same level as test cock #2. Slowly open test cock #2. Record the static pressure drop across check valve #1 after gauge reading stabilises and water stops running out of test cock #2.
5. Close all test cocks, open shut-off valve #1 and remove test equipment.

TEST NO. 2 - TIGHTNESS OF #2 CHECK VALVE

REQUIREMENT:
The static pressure drop across check valve #2 shall be at least 7 kPa.

PROCEDURE:
1. Attach hose from the high side of the test kit to the #2 test cock.
2. Open test cock #2 and bleed all air from the hose and gauge by opening the high side bleed needle valve. Close high side bleed needle valve. Close #1 shut-off valve.
3. Hold gauge at same level as test cock #3. Slowly open test cock #3. Record the static pressure drop across check valve #2 after gauge reading stabilises and water stops running out of test cock #3.
4. Close all test cocks, slowly open shut-off valve #1 & #2 and remove test equipment.

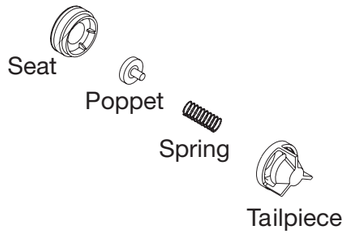
Please note all installation and testing procedures listed are intended as a guide only. Installation and testing should be in accordance to local standards and plumbing codes.



INSTALLATION, TESTING & MAINTENANCE

350 Series DCV
20-25mm

Maintenance Instructions



CHECK ASSEMBLY

All Model 350 Double Check Valve Backflow Preventers must be inspected and maintained by licenced personnel at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine "ZURN WILKINS" parts.

GENERAL MAINTENANCE

1. Clean all parts thoroughly with water after disassembly.
2. Carefully inspect rubber seal rings and o-rings for damage.
3. Test unit after reassembly for proper operation (refer to "TESTING PROCEDURES").

SERVICING CHECK VALVES

1. Close inlet and outlet shut-off valves.
2. Open #1, #2 and #3 test cocks to release pressure from valve.
3. Unscrew the 4 bolts (1/4-20 UNC Hex Flange) holding the housing in place.
4. Using a #2 flathead screwdriver, pry loose housing by placing the screwdriver in the notch between housing and body.
5. Pull housing out of the body and remove checks by sliding them towards the outlet of housing.
6. Using the same screwdriver, locate the notch between seat and tailpiece of each check. Insert screwdriver and twist to "snap" checks apart. **CAUTION:** Checks are spring loaded.
7. Inspect the rubber seal ring around poppet for cuts or embedded debris.
8. If the poppet is damaged, replace with a new poppet.
9. Inspect the remaining check parts and seating areas. Remove any debris.
10. If necessary, replace any damaged parts with new ones.
11. Lightly grease o-rings on checks and reinstall into housing following the above procedures in reverse order.
12. Flush body prior to reinstalling housing.
13. Lightly grease o-rings on housing and reinstall into body following the above procedures in reverse order.

Note: When installing housing, match slight taper on the outlet of the housing with corresponding taper in body.

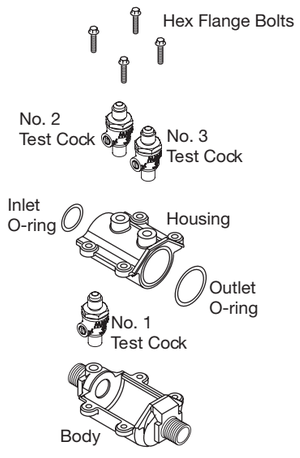


FIGURE 1

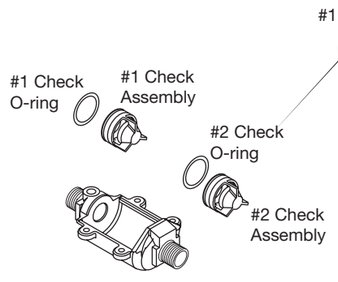


FIGURE 2

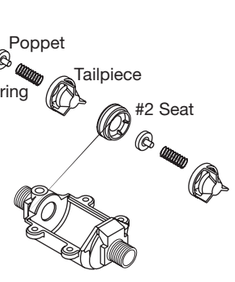


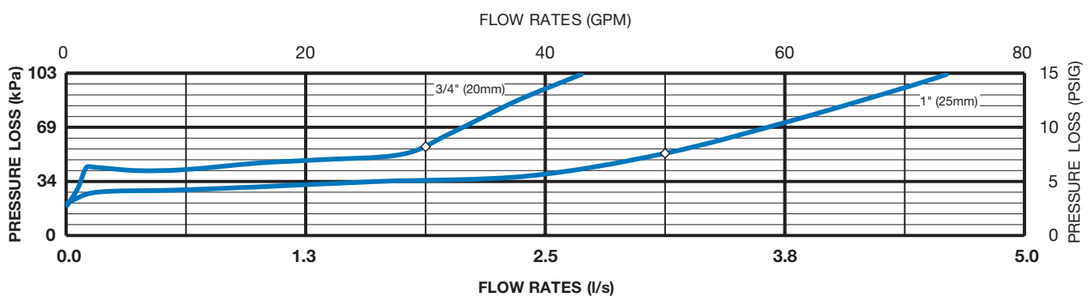
FIGURE 3

Troubleshooting

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
LEAKING CHECK VALVES	1. Debris on seat or seal ring 2. Damaged seat 3. Damaged seal ring 4. Damaged check o-ring	1. Clean seat and seal ring area 2. Replace seat 3. Replace poppet 4. Replace check o-ring
LOW OR NO FLOW	1. Device installed backwards 2. Shut-off valves or valve upstream may not be fully open 3. Low supply pressure	

Performance Characteristics

MODEL 350 20 & 25mm (STANDARD & METRIC)



Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
15	0.3	0.4	0.6	0.9
20	0.5	0.8	1.1	1.6
25	0.8	1.3	1.7	2.5
32	1.5	2.2	3.0	4.4
40	2.0	3.0	4.0	6.0
50	3.3	4.9	6.6	10.5

SPECIFICATIONS

Maximum working water pressure: 1200 kPa

Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400 kPa

End connections: ISO 7.1 R Tapered Pipe Thread

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS' specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

INSTALLATION, TESTING & MAINTENANCE

350 Series DCV

32-50mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. The installer should be sure the proper device has been selected for the particular installation. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 350 Double Check Valve assemblies are for use on water lines where a health hazard does not exist in the event of a backflow situation.

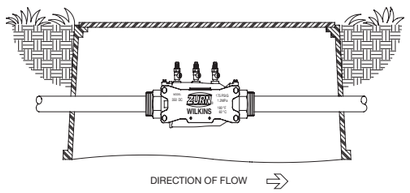
Damage to the device could result wherever water hammer and/or water thermal expansion could create excessive line pressure. Where this could occur, shock arresters, check valves and/or pressure relief valves should be installed downstream of the device.

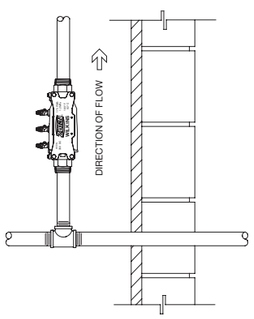
If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this could cause a cross-connection. Make sure that the pit or vault always remains dry by providing ample drainage.

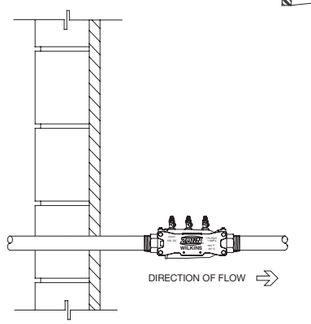
1. Before installing a Model 350 Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer. **CAUTION:** Do not use a strainer in seldom used emergency waterlines such as fire lines.
2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.
3. Install valve at least 305mm above surrounding flood level.
4. Always consult local codes for installation methods, approvals and guidance.

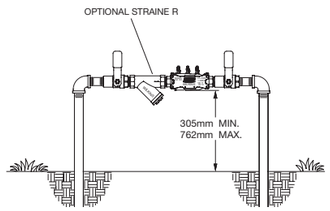
PLACING THE MODEL 350 IN SERVICE

1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the backflow preventer is completely pressurised.
2. When the unit has been pressurised, vent any trapped air by slightly opening each of the three test cocks.
3. Slowly open the downstream shut-off valve. The Model 350 Double Check Valve assembly is now in service.
4. After the Model 350 has been properly installed, test the device (see “TEST PROCEDURES”). If the device fails the test, remove the first and second check valves and thoroughly flush the device. Clean rubber and seats of all debris and place unit back in service.









VERTICAL INSTALLATION

Vertical installation is acceptable in applications where inlet and outlet piping are flowing vertically upwards. All the basic installation instructions apply to such installations. Consult asset owner for approval status.

INDOOR INSTALLATION

Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations.

OUTDOOR INSTALLATION

The Model 350 Backflow Preventer may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0˚C. All the basic installation instructions apply.

Testing Procedures

MODEL 350 DOUBLE CHECK VALVE ASSEMBLY

Equipment Required: Differential pressure gauge test kit.

TEST NO. 1 - TIGHTNESS OF #1 CHECK VALVE

REQUIREMENT:
The static pressure drop across check valve #1 shall be at least 7 kPa. If test cock #3 is not at the highest point of the check valve body, then a vertical tube must be installed on test cock #3 so that it rises to the top of the check valve body.

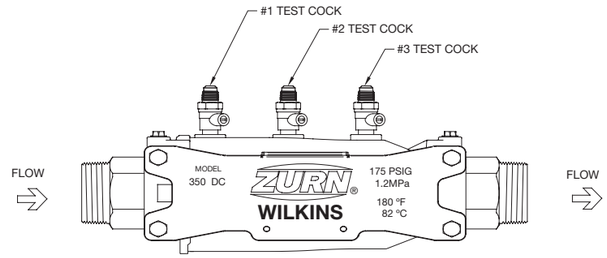
PROCEDURE:
1. Slowly open all 3 test cocks to remove any foreign material and attach fittings.
2. Attach hose from the high side of the test kit to the #1 test cock.
3. Open test cock #1 and bleed all air from the hose and gauge by opening the high side bleed needle valve. Close high side bleed needle valve. Close #2 shut-off valve then close the #1 shut-off valve.
4. Hold gauge at same level as test cock #2. Slowly open test cock #2. Record the static pressure drop across check valve #1 after gauge reading stabilises and water stops running out of test cock #2.
5. Close all test cocks, open shut-off valve #1 and remove test equipment.

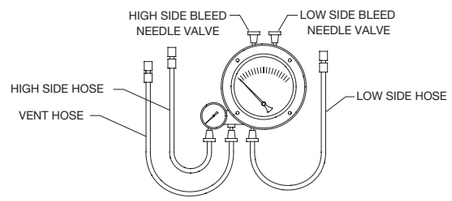
TEST NO. 2 - TIGHTNESS OF #2 CHECK VALVE

REQUIREMENT:
The static pressure drop across check valve #2 shall be at least 7 kPa.

PROCEDURE:
1. Attach hose from the high side of the test kit to the #2 test cock.
2. Open test cock #2 and bleed all air from the hose and gauge by opening the high side bleed needle valve. Close high side bleed needle valve. Close #2 shut-off valve.
3. Hold gauge at same level as test cock #3. Slowly open test cock #3. Record the static pressure drop across check valve #3 after gauge reading stabilises and water stops running out of test cock #3.
4. Close all test cocks, slowly open shut-off valve #1 & #2 and remove test equipment.

Please note all installation and testing procedures listed are intended as a guide only. Installation and testing should be in accordance to local standards and plumbing codes.





INSTALLATION, TESTING & MAINTENANCE

350 Series DCV
32-50mm

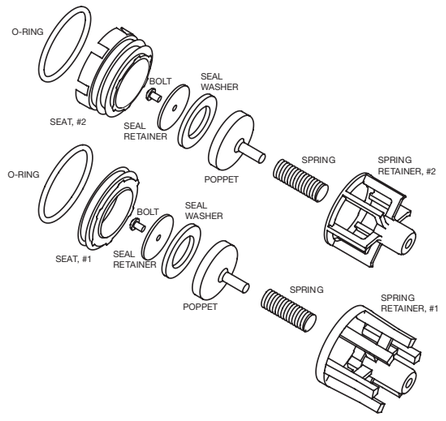
Maintenance Instructions

All Model 350 Double Check Valve Backflow Preventers must be inspected and maintained by licensed personnel at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine "ZURN WILKINS" parts.

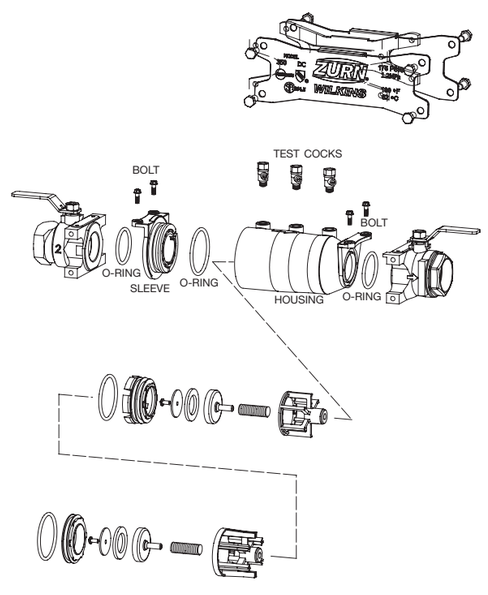
GENERAL MAINTENANCE
1. Clean all parts thoroughly with water after disassembly.
2. Carefully inspect rubber seal rings and o-rings for damage.
3. Test unit after reassembly for proper operation (refer to "TESTING PROCEDURES").

SERVICING CHECK VALVES
1. Close inlet and outlet shut-off valves.
2. Open No. #1, #2 and #3 test cocks to release pressure from valve.
3. Unscrew the 4 bolts (1/4-20 UNC Hex Flange) holding the housing in place. Lift housing up to remove.
4. Twist and remove sleeve from body. Using finger or blunt object, push in outlet end of body, both checks should slide out the body inlet. A short object like a socket can be placed on a flat surface. Place body over object so it pushes into valve outlet and push down on body.
5. Twist spring retainers counter-clockwise to remove from seats and access poppets.
6. Inspect the rubber seal ring for cuts or embedded debris. To remove seal ring, remove screw and seal ring retainer. If the reverse side of the seal ring is unused, it is possible to invert the seal ring. This will be considered a temporary solution to fixing a fouled check and should be replaced with a new seal ring as soon as possible.
7. Inspect seat surface for nicks or dings and replace if necessary. Use fingernail to check for dings. Re-grease seat o-rings.
8. Inspect seat o-ring sealing areas in body and wipe clean.
9. Reverse the above procedures to reinstall check valve assembly. Drop #2 check assembly in body. Then drop #1 check assembly in and turn until #1 spring retainer lines up with #2 seat. Then push both assemblies into body. Insert sleeve against checks. (Place sleeve down against flat surface and push on body with rocking motion.)
10. Lightly grease face of o-rings on housing and reinstall into body following the above procedures in reverse order. Rock body side to side to help o-rings slide in. If it does not drop in completely, do not use screws to force it. An overly greased o-ring might slide out of groove at top of ball valve. Use a screw driver to push o-ring back in groove, then push body down in.

Note: When installing housing, match slight taper on the outlet of the housing with corresponding taper in body.



CHECK ASSEMBLY

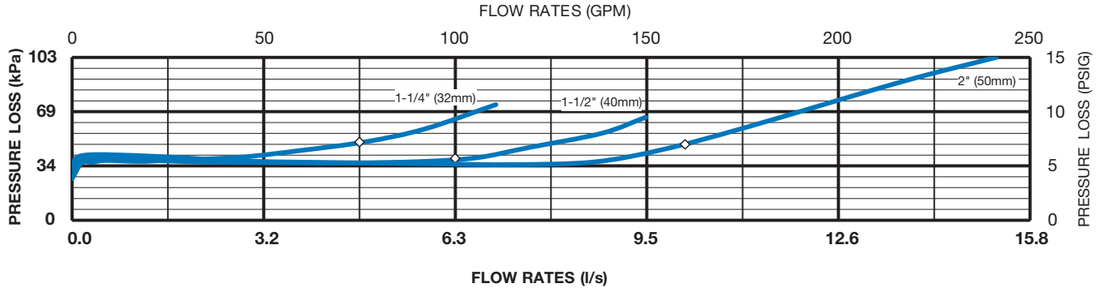


Troubleshooting

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
LEAKING CHECK VALVES	1. Debris on seat or seal ring 2. Damaged seat 3. Damaged seal ring 4. Damaged check o-ring	1. Clean seat and seal ring area 2. Replace seat 3. Replace poppet 4. Replace check o-ring
LOW OR NO FLOW	1. Device installed backwards 2. Shut-off valves or valve upstream may not be fully open 3. Low supply pressure	

Performance Characteristics

MODEL 350 32 - 50mm (STANDARD & METRIC)



Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
15	0.3	0.4	0.6	0.9
20	0.5	0.8	1.1	1.6
25	0.8	1.3	1.7	2.5
32	1.5	2.2	3	4.4
40	2	3	4	6
50	3.3	4.9	6.6	10.5

SPECIFICATIONS
Maximum working water pressure: 1200 kPa

Maximum working water temperature: 82°C

Hydrostatic test pressure: 2400 kPa

End connections: ISO 7.1 R Tapered Pipe Thread

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS' specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

INSTALLATION, TESTING & MAINTENANCE

375 & 375A Series RPZ

65-250mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. The installer should be sure the proper device has been selected for the particular installation. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 375 Series Assemblies are for use on potable water lines where a high health hazard exists in the event of a backflow situation.

Damage to the device could result wherever water hammer and/or water thermal expansion could create excessive line pressure. Where this could occur, shock arrestors, check valves and/or pressure relief valves should be installed downstream of the device.

If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this could cause a cross-connection. Make sure that the pit or vault always remains dry by providing ample drainage.

1. Before installing a Model 375 Series Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer.

CAUTION: Do not use a strainer in seldom used emergency waterlines such as fire lines.

2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.

3. Install valve at least 305mm above surrounding flood level.

4. The Model 375 series has been tested and approved in the horizontal position.

5. Always consult local codes for installation methods, approvals and guidance.

PLACING THE DEVICE IN SERVICE

1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the backflow preventer is completely pressurised. A brief discharge from the relief valve may occur while the device is pressurising. The discharge should cease by the time the shut-off valve is fully open. If the discharge does not stop, refer to "MAINTENANCE INSTRUCTIONS" for repair procedures.

2. After the device has been pressurised, vent all trapped air by slightly opening each of the four test cocks.

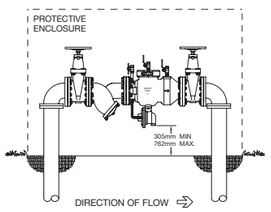
3. Slowly open the downstream shut-off valve. The Model 375 Series Backflow Preventer is now in service.

4. If spitting or intermittent discharges from the relief valve are noted, it could be a result of pressure fluctuation and/ or a water hammer condition in the system. If such conditions exist, install water pressure reducing valves or water hammer shock arrestors in compliance with industry standards as needed.

5. After the Model 375 Series has been properly installed, test the device (see "TEST PROCEDURES"). If the device fails the test, remove the first and second check valves and thoroughly flush the device. If the relief valve fails to operate properly, inspect the sensing passage for clogging (see "MAINTENANCE INSTRUCTIONS"). Clean rubber seals of all debris and place unit back in service.

INDOOR INSTALLATION

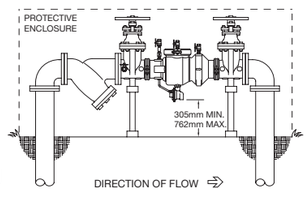
Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations. **CAUTION:** An adequately sized drain is required to prevent possible water damage due to relief valve discharge.



OUTDOOR INSTALLATION
Model 375

OUTDOOR INSTALLATION

The Model 375 Series Backflow Preventer may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0˚C. All the basic installation instructions apply.



OUTDOOR INSTALLATION
Model 375A

Testing Procedures

MODEL 375 SERIES ASSEMBLY

Equipment Required: Differential pressure gauge test kit.

TEST NO. 1 - RELIEF VALVE OPENING POINT

REQUIREMENT:
The differential pressure relief valve must operate to maintain the zone between the two check valves at least 14 kPa less than the supply pressure.

PROCEDURE:

1. Flush water through test cocks #1, #2 (open #2 slowly) and #3 by opening and closing each test cock one at a time, to eliminate foreign material.

2. Install appropriate fittings to test cocks. Attach hose from the high side of the differential pressure gauge to the #2 test cock then attach hose from the low side of the gauge to the #3 test cock. Open test cock #3 slowly and then bleed all air from the hose and gauge by opening the low side bleed needle valve.

3. Maintain the low side bleed needle valve in the open position while test cock #2 is opened slowly. Open the high side bleed needle valve to bleed all air from the hose and gauge. Close the high side bleed needle valve, then close the low side bleed needle valve after the gauge reading has reached the upper end of the scale.

4. Close the #2 shut-off valve. If the gauge reading drops to the low end of the gauge scale and the differential pressure relief valve discharges continuously, then the #1 check valve is leaking.

5. If this occurs, Tests #1, #2 and #3 cannot be completed. However, should the gauge reading remain above the differential pressure relief valve opening point, then observe the gauge reading. This is the apparent pressure drop across the #1 check valve.

6. Open the high side control needle valve approximately one turn, and then open the low side control needle valve no more than 1/4 turn to by-pass water from the #2 test cock to the #3 test cock. Observe the differential pressure reading as it slowly drops to the relief valve opening point. Record this opening point value when the first discharge of water is detected. Close the low side needle valve.

TEST NO. 2 - TIGHTNESS OF #2 CHECK VALVE

REQUIREMENT:
The #2 check valve shall be tight against backpressure.

PROCEDURE:

1. Maintain the #2 shut-off valve in the closed position (from Test #1). Vent all air through the vent hose by opening the vent needle valve. Close the vent needle valve only (the high side control needle valve is to remain open).

2. Attach the vent hose from the gauge to the #3 test cock, then open the #3 test cock. Bleed water from the zone by opening the low side bleed needle valve on the gauge in order to re-establish the normal reduced pressure within the zone. Once the gauge reading reaches a value above the #1 check valve pressure drop, close the low side bleed needle valve.

3. Open the vent needle valve. If the indicated differential pressure reading remains steady then the #2 check valve is reported as "closed tight." Go to Test #3. If the differential pressure reading falls to the relief valve opening point, bleed water through the low side bleed needle valve until the gauge reading reaches a value above the #1 check valve pressure drop. If the gauge reading settles above the relief valve opening point, record the #2 check valve as "closed tight," and proceed to Test #3. If the differential pressure reading falls to the relief valve opening point again, then the #2 check valve is noted as "leaking," and Test #3 cannot be completed. If the differential pressure reading drops, but stabilises above the relief valve opening point, the #2 check valve can still be reported as "closed tight."

Note: Due to disc compression, you may need to bleed off water through low side bleed needle valve several times before the gauge reading will settle above relief valve opening point.

INSTALLATION, TESTING & MAINTENANCE

375 & 375A Series RPZ

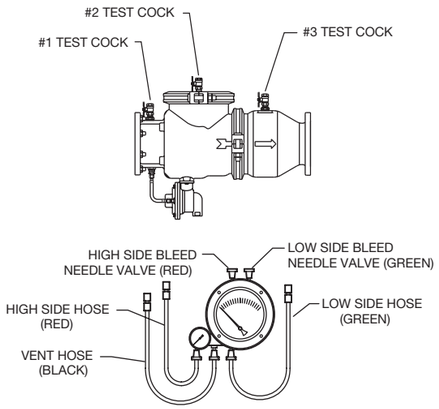
65-250mm

TEST NO.3 - TIGHTNESS OF #1 CHECK VALVE

REQUIREMENT:
The static pressure drop across #1 check valve shall be greater than the relief valve opening point (test #1), and at least 35 kPa.

PROCEDURE:
1. With the vent hose connected to test cock #3 as in step 3 of Test #2, bleed water from the zone through the low side bleed needle valve on the gauge until the reading exceeds the #1 check valve pressure drop. Close the low side bleed needle valve. After the gauge reading settles, the steady state differential pressure reading indicated (reading is not falling on the gauge) is the actual static (i.e. no flow) pressure drop across check valve #1 and is to be recorded as such.

2. Close all test cocks, slowly open shutoff valve #2 and remove equipment.



Please note all installation and testing procedures listed are intended as a guide only. Installation and testing should be in accordance to local standards and plumbing codes.

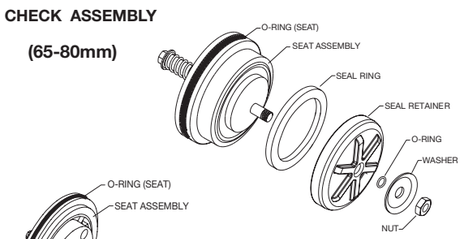
Repair Kits

SIZE	MODEL	MODEL 375 RELIEF RUBBER ONLY (ZURN CODES & REECE CODES)	MODEL 375 RELIEF COMPLETE (ZURN CODES & REECE CODES)	MODEL 375 CHECKS ONLY (ZURN CODES & REECE CODES)
65-80mm	375/375AL	RK212-375R (180413)	RK212-375 (1085056)	RK212-350 (180436)
100mm	375/375AL			RK4-350 (1000888)
150mm	375/375AL			RK6-350 (180414)

Maintenance Instructions

CHECK ASSEMBLY

(65-80mm)



(65-150mm)

All Model 375 Series Backflow Preventers must be inspected and maintained by an accredited backflow prevention tester at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine “ZURN WILKINS” parts.

GENERAL MAINTENANCE

1. Clean all parts thoroughly with water after disassembly.

2. Carefully inspect rubber seal rings and o-rings for damage.

3. Test unit after reassembly for proper operation (refer to “TESTING PROCEDURES”).

SERVICING RELIEF VALVE

1. Remove relief valve cover bolts and cover. Gently pull on diaphragm to remove the cartridge assembly.

2. Inspect seal ring for cuts and embedded debris. Turn over or replace if required.

3. Disassemble cartridge by unscrewing relief valve retaining screw.

4. Inspect diaphragm and o-rings for damage. Replace required parts and apply a light coat of lubricant to plunger o-ring.

5. Carefully reassemble cartridge assembly. Tighten retainer screw to 1.47-1.92 Nm.

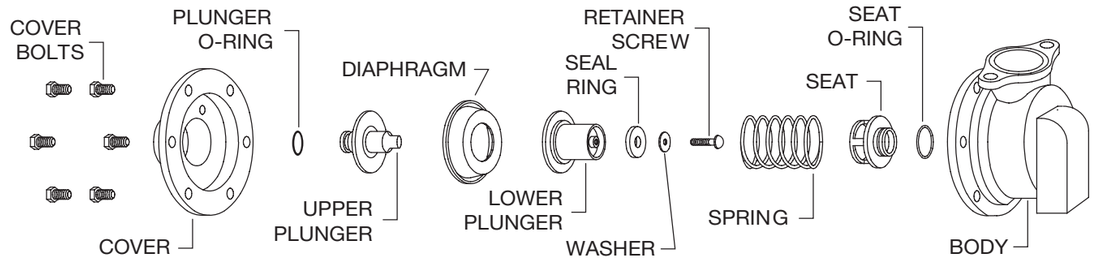
6. Inspect relief valve seat for wear on seating surface. If damaged, replace seat and seat o-ring. Install spring over seat guides

7. Insert cartridge assembly into relief valve body.

8.Replace relief valve cover and cover bolts.

9. Place the device in service and test per “TESTING PROCEDURES” on page 2.

RELIEF VALVE ASSEMBLY



SERVICING CHECK VALVES

1. Close the outlet and then the inlet shut-off valves.

2. Open #1, #2 and #3 test cocks to release internal pressure. Leave them open during check removal and reinstallation.

3. Loosen and remove the two nuts, bolts and seal from the grooved coupling around the access cover.

4. If the valve has a wire retainer on the #1 check assembly, pinch together the exposed ends, pull toward the #2 check and remove from valve.

5. If the valve has a plastic retainer on the #1 check, grasp one of the exposed ends, push down and then pull toward the #2 check. The retainer should “spiral” out of the groove around the check.

6. (65-80mm Models) Remove the #2 retainer and check in the same manner as the #1.

   (100-150mm Models) Remove the #2 check by locating one of the two spring-loaded plate retainers around the face of the check. Pinch the sides of the spring together and rotate the plates out of the body groove one at a time. Remove the 2nd retainer the same way.

7. Always service the checks one at a time to avoid mixing parts. Start by removing the hardware and o-rings from the back of the check assembly (See “Check Assembly” illustration). Separate the seal retainer from the assembly to expose the seal ring.

8. Inspect the seal ring for cuts or embedded debris. If the reverse side of the seal is unused, the seal ring can be inverted and used temporarily until a new seal is obtained. Inspect seat o-ring and replace if cut or damaged in any way. Inspect valve cavity and seating areas. Flush with water to remove any debris.

INSTALLATION, TESTING & MAINTENANCE

375 & 375A Series RPZ

65-250mm

9. (Reassembly, 65-80mm Models) Lubricate the #2 check oring, install in the body and close the #3 test cock to hold it in place. Install the plastic retainer by inserting one end into the body groove and then sliding your hand around the face of the retainer, pushing it into the groove as you go. The retainer will “snap” into place when fully seated. Install #1 check and retainer in the same way.

   (Reassembly, 100-150mm Models) Lubricate the #2 check oring, install in the body and close the #3 test cock. Install the #2 check retainers into the body groove one plate at a time, squeezing the spring ends together to clear the stops on the face of the seat. Lubricate and install the #1 check, close the #2 test cock and install:

   (A) wire retainer by pinching the ends together, placing the lower edge of the ring into the body groove below the check and rotating the top of the ring into the notch above the check.

   (B) plastic retainer as described above in the 65-80mm Models Reassembly section.

10. Lubricate the outside surface of the grooved coupling gasket. Reassemble access cover and grooved coupling, making sure the ends of the coupling touch each other. Close any remaining open test cocks and place valve back in service.

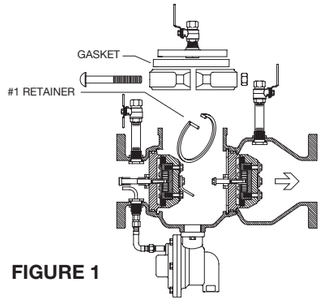


FIGURE 1

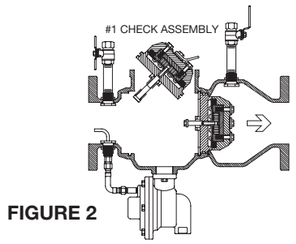


FIGURE 2

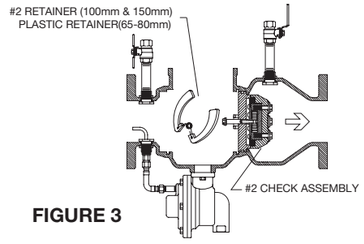


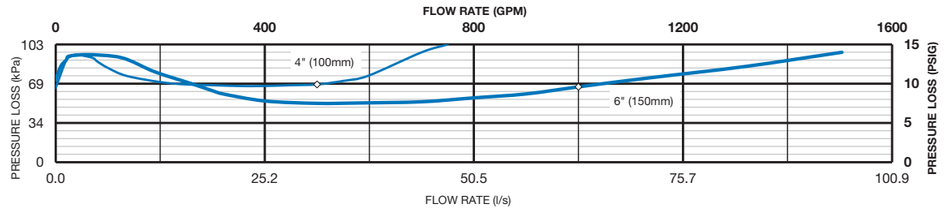
FIGURE 3

Troubleshooting

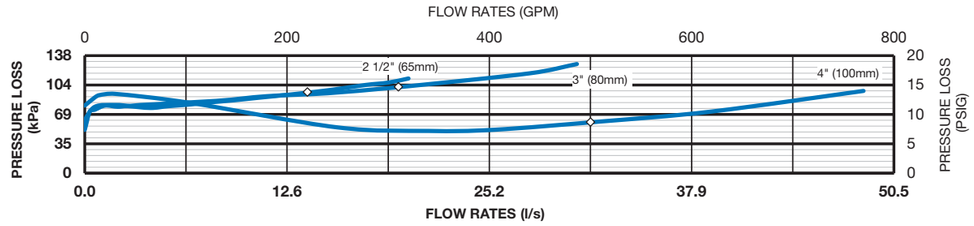
PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
SUDDEN OR RAPID SPITTING	1. Drop in inlet pressure. 2. Sudden increase in downstream pressure due to waterhammer from quick closing shut-off valve installed downstream.	1. Install an in-line spring loaded check valve or pressure reducing valve upstream of Backflow Preventer. 2. Install an in-line spring loaded check valve or pressure reducing valve downstream of Backflow Preventer.
LIGHT INTERMITTENT DRIP	1. Slightly fouled #1 check. 2. Slightly fouled relief valve seat.	1. Clean #1 check and/or turn check valve seal ring over or replace. 2. Clean relief valve seat and/or turn relief valve seal ring over or replace.
CONTINUOUS DISCHARGE	1. Fouled #1 check and/or #2 check. 2. Fouled relief valve seat.	1. Clean check valves and/or turn check valve seal ring over or replace. 2. Clean relief valve seat and/or turn relief valve seal ring over or replace.

Performance Characteristics

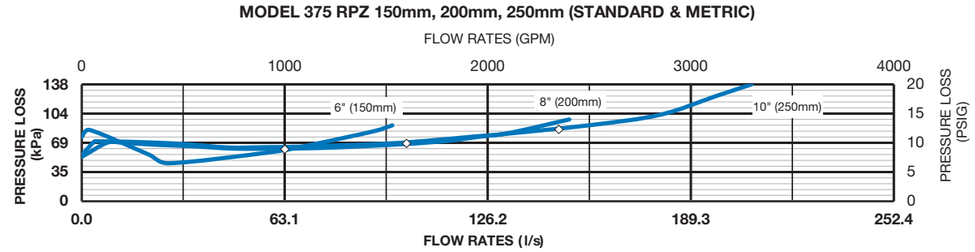
MODEL 375RPZ 100mm & 150mm (STANDARD & METRIC)



MODEL 375 RPZ 65mm, 80mm & 100mm (STANDARD & METRIC)



MODEL 375 RPZ 150mm, 200mm, 250mm (STANDARD & METRIC)



Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
65	4.7	7.1	9.4	14.1
80	7.3	10.9	14.5	21.8
100	12.5	18.8	25	37.5
150	28.4	42.6	56.8	85.2
200	49.2	73.8	98.4	147.6
250	77.5	116.3	155.1	232.6

SPECIFICATIONS

Maximum working water pressure: 1200 kPa

Maximum working water temperature: 60˚C

Hydrostatic test pressure: 2400 kPa

End connections: Flanged AS 2129 Table E (375)
Grooved, AWWA C606 (375A)

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS’ specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

INSTALLATION, TESTING & MAINTENANCE

350, 350A & 350DA Series DCV

65-250mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. The installer should be sure the proper device has been selected for the particular installation. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 350 Series Assemblies are for use on potable water lines where a medium health hazard exists in the event of a backflow situation.

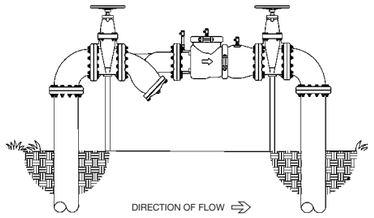
Damage to the device could result wherever water hammer and/or water thermal expansion could create excessive line pressure. Where this could occur, shock arrestors, check valves and/or pressure relief valves should be installed downstream of the device.

If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this could cause a cross-connection. Make sure that the pit or vault always remains dry by providing ample drainage.

1. Before installing a Model 350 Series Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer. **CAUTION:** Do not use a strainer in seldom used emergency waterlines such as fire lines.
2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.
3. Install valve at least 305mm above surrounding flood level.
4. Always consult local codes for installation methods, approvals and guidance.

PLACING THE DEVICE IN SERVICE

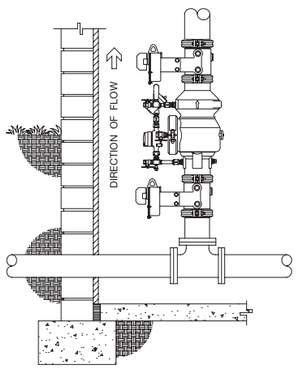
1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the backflow preventer is completely pressurised.
2. When the unit has been pressurised, vent any trapped air by slightly opening each of the four test cocks.
3. Slowly open the downstream shut-off valve. The Model 350 Series Assembly is now in service.
4. After the Model 350 Series has been properly installed, test the device (see “TEST PROCEDURES”). If the device fails the test, remove the first and second check valves and thoroughly flush the device. Clean rubber and seats of all debris and place unit back in service.



OUTDOOR INSTALLATION
Model 350

OUTDOOR INSTALLATION

The Model 350 Series Backflow Preventer may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0˚C. All the basic installation instructions apply.



INDOOR INSTALLATION
Model 350DA

INDOOR & VERTICAL INSTALLATION

Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations.

Vertical installation is acceptable in applications where inlet and outlet piping are flowing vertically upwards. All the basic installation instructions apply to such installations.

Testing Procedures

MODEL 350 SERIES ASSEMBLY

Equipment Required: Differential pressure gauge test kit.

TEST NO. 1 - TIGHTNESS OF #1 CHECK VALVE

REQUIREMENT:
The static pressure drop across check valve #1 shall be at least 7 kPa. If test cock #3 is not at the highest point of the check valve body, then a vertical tube must be installed on test cock #3 so that it rises to the top of the check valve body.

PROCEDURE:
1. Slowly open all 3 test cocks to remove any foreign material and attach fittings.
2. Attach hose from the high side of the test kit to the #1 test cock.
3. Open test cock #1 and bleed all air from the hose and gauge by opening the high side bleed needle valve. Close high side bleed needle valve. Close #2 shut-off valve then close the #1 shut-off valve.
4. Hold gauge at same level as test cock #2. Slowly open test cock #2. Record the static pressure drop across check valve #1 after gauge reading stabilises and water stops running out of test cock #2.
5. Close all test cocks, open shut-off valve #1 and remove test equipment.

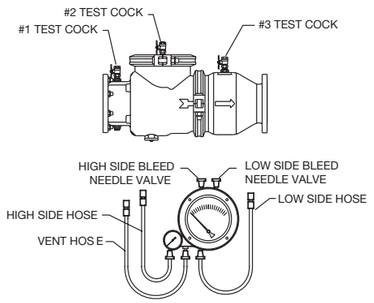
Note: If you are using the duplex gauge method to test the valve, you may see both needles drop simultaneously during test due to disc compression. The high side needle should eventually hold 14 kPa below low side needle if check is not fouled.

Please note all installation and testing procedures listed are intended as a guide only. Installation and testing should be in accordance to local standards and plumbing codes.

REQUIREMENT:
The static pressure drop across check valve #2 shall be at least 7 kPa.

PROCEDURE:
1. Attach hose from the high side of the test kit to the #2 test cock.
2. Open test cock #2 and bleed all air from the hose and gauge by opening the high side bleed needle valve. Close high side bleed needle valve. Close #1 shut-off valve.
3. Hold gauge at same level as test cock #3 or water level in tube. Slowly open test cock #3. Record the static pressure drop across check valve #2 after gauge reading stabilises and water stops running out of test cock #3.
4. Close all test cocks, slowly open shut-off valve #1 & #2 and remove test equipment.

BYPASS (DDCV ONLY):
If the reading of the bypass valve is equal or greater than the main valve, the main valve shall be repaired or replaced. The test shall be repeated. Refer to AS/NZS 2845 for more information.



Repair Kits

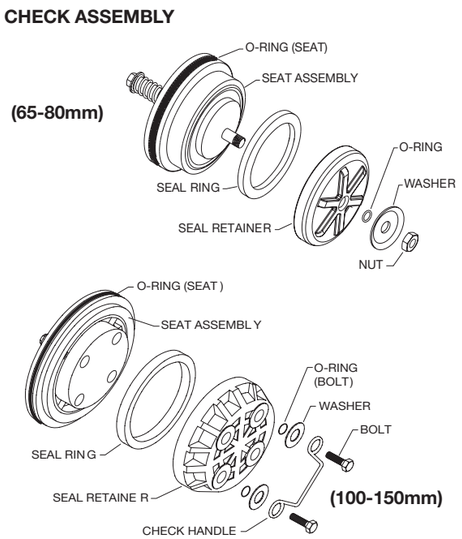
SIZE	MODEL 350/350DA RUBBER ONLY (ZURN CODES & REECE CODES)
65-80mm	RK212-350 (180436)
100mm	RK4-350 (1000888)
150mm	RK6-350 (180414)

INSTALLATION, TESTING & MAINTENANCE

350, 350A & 350DA Series DCV

65-250mm

Maintenance Instructions



All Model 350 Series Backflow Preventers must be inspected and maintained by an accredited backflow prevention tester at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine "ZURN WILKINS" parts.

GENERAL MAINTENANCE

1. Clean all parts thoroughly with water after disassembly.
2. Carefully inspect rubber seal rings and o-rings for damage.
3. Test unit after reassembly for proper operation (refer to "TESTING PROCEDURES").

NOTE: If any portion of the seat assembly is damaged or missing or if the seating surface is damaged in any way, do not attempt to field repair it. Contact your local Reece branch for assistance.

SERVICING CHECK VALVES

1. Close the outlet and then the inlet shut-off valves.
2. Open No. 1, 2 and 3 test cocks to release internal pressure. Leave them open during check removal and reinstallation.
3. Loosen and remove the two nuts, bolts and gasket from the grooved coupling around the access cover.
4. If the valve has a wire retainer on the #1 check assembly, pinch together the exposed ends, pull toward the #2 check and remove from valve.
5. If the valve has a plastic retainer on the #1 check, grasp one of the exposed ends, push down and then pull toward the #2 check. The retainer should "spiral" out of the groove around the check.
6. (65-80mm Models) Remove the #2 retainer and check in the same manner as the #1.

   (100-150mm Models) Remove the #2 check by locating one of the two spring-loaded plate retainers around the face of

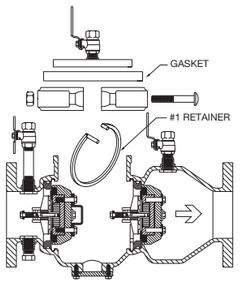


FIGURE 1

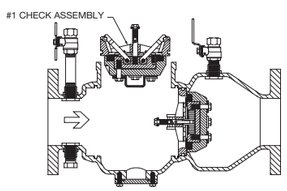


FIGURE 2

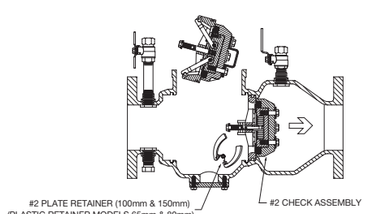
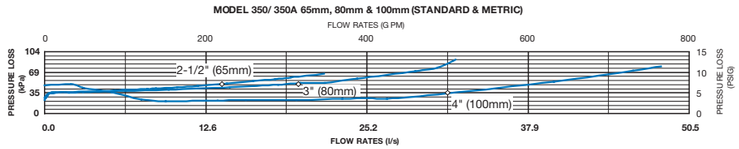


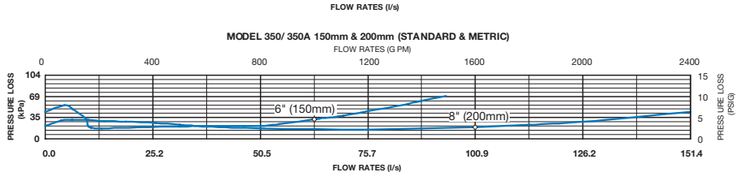
FIGURE 3

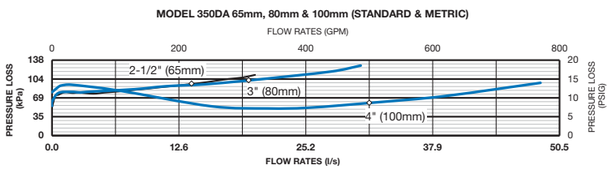
Troubleshooting

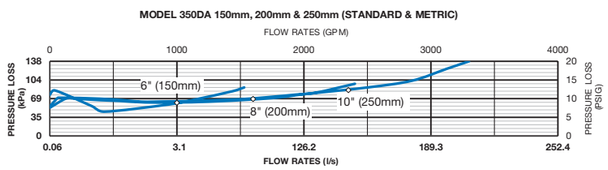
PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
LEAKING CHECK VALVES	1. Debris on seat or seal ring 2. Damaged seat area 3. Damaged seat o-ring 4. Damaged bolt o-ring(s) on check retainer	1. Clean seat area 2. Replace check assembly 3. Replace seat o-ring 4. Replace o-ring(s)
LOW OR NO FLOW	1. Device installed backwards 2. Isolation valves not fully open 3. Low supply pressure	1. Verify flow direction arrow 2. Turn handles counterclockwise 3. Attach pressure gauge to test cock #1 and verify pressure

Performance Characteristics









Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
65	4.7	7.1	9.4	14.1
80	7.3	10.9	14.5	21.8
100	12.5	18.8	25	37.5
150	28.4	42.6	56.8	85.2
200	49.2	73.8	98.4	147.6
250	77.5	116.3	155.1	232.6

SPECIFICATIONS

Maximum working water pressure: 1200 kPa

Maximum working water temperature: 60˚C

Hydrostatic test pressure: 2400 kPa

End connections: Flanged AS 2129 Table E (375)
Grooved, AWWA C606 (375A)

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS' specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

INSTALLATION, TESTING & MAINTENANCE

310 Series SCV & SDCV

100-200mm

Installation Instructions

CAUTION: Installation of Backflow Preventers must be performed by qualified, licenced personnel. It is the responsibility of the installer to ensure the correct device has been selected for the particular application. Faulty installation could result in an improperly functioning device.

ZURN WILKINS Model 310 Series Assemblies are for use on potable water lines where a potential hazard exists (Low Hazard) in the event of a backflow situation.

Damage to the device could result wherever water hammer and/or water thermal expansion could create excessive line pressure. Where this could occur, shock arrestors, check valves and/or pressure relief valves should be installed downstream of the device.

If installation is in a pit or vault, the Backflow Preventer must never be submerged in water because this could cause a cross-connection. Make sure that the pit or vault always remains dry by providing ample drainage.

1. Before installing a Model 310 Series Backflow Preventer, flush the line thoroughly to remove all debris, chips and other foreign matter. If required, a strainer should be placed upstream of the Backflow Preventer.

CAUTION: Do not use a strainer in seldom used emergency waterlines such as fire lines.

2. Provide adequate space around the installed unit so that the test cocks will be accessible for testing and servicing.

3. Install valve at least 305mm above surrounding flood level.

4. Always consult local codes for installation methods, approvals and guidance.

PLACING THE DEVICE IN SERVICE

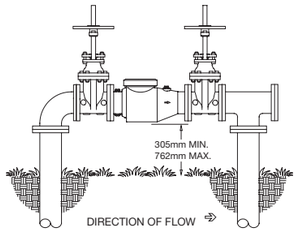
1. Start with both shut-off valves closed. Slowly open the inlet shut-off valve until the Backflow Preventer is completely pressurised.

2. When the unit has been pressurised, vent any trapped air by slightly opening each of the two test cocks on the body, and the plug on the cover.

3. Slowly open the downstream shut-off valve. The Model 310 Series Assembly is now in service.

4. After the Model 310 Series has been properly installed, test the device (see "TEST PROCEDURES"). If the device fails the test, remove the check valve and thoroughly flush the device. Clean rubber and seats of all debris and place unit back in service.

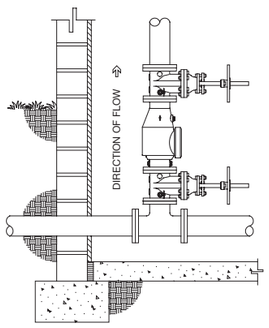
5. If step 4 fails, repeat the step. If the device still fails, contact your local Reece branch for support.



OUTDOOR INSTALLATION
Model 310

OUTDOOR INSTALLATION

The Model 310 Series Backflow Preventer may be installed outdoors only if the device is protected against freezing conditions. Exposure to freezing conditions will result in improper function or damage to the device. The installation location must be kept above 0°C. All the basic installation instructions apply.



VERTICAL INSTALLATION
Model 310

INDOOR & VERTICAL INSTALLATION

Indoor installation is preferred in areas that are subject to freezing conditions. All the basic installation instructions apply to such installations.

Vertical installation is acceptable in applications where inlet and outlet piping are flowing vertically upwards. All the basic installation instructions apply to such installations.

Testing Procedures

MODEL 310 SERIES

Equipment Required: Differential pressure gauge test kit. (Backflow test kit)

Testing must be done in accordance with the latest version of AS/NZS 2845.3

The below instructions are specific to Zurn and act as a guide only.

SCV

TEST

REQUIREMENT:
The static pressure drop across the valve shall be at least 7 kPa. If this is not reached, repair and clean the valve then test again. If it still fails, contact your local Reece branch for assistance.

PROCEDURE:

1. Slowly open the 2 test cocks to remove any foreign material and attach fittings. Close before continuing.

2. Attach hose from the high side of the test kit to the #1 test cock.

3. Attach hose from the low side of the test kit to the #2 test cock.

4. Open test cock #1 and bleed out all content by opening the high side bleed needle valve. Close the needle valve before continuing.

5. Open test cock #2 and bleed out all content by opening the low side bleed needle valve. Close the needle valve before continuing.

6. Record the static pressure drop across the valve after gauge reading stabilises.

7. Close all test cocks and remove test equipment.

SDCV

TEST i- Main Valve

REQUIREMENT:
The static pressure drop across the valve shall be at least 7 kPa and at least 10kPa higher than the actual reading of the pressure drop measured across the bypass for test ii. If this is not reached, repair and clean the valve then test again. If it still fails, contact your local Reece branch for assistance.

PROCEDURE:

8. Slowly open 2 test cocks to remove any foreign material and attach fittings. Close before continuing.

9. Attach hose from the high side of the test kit to the #1 test cock.

10. Attack hose from the low side of the test kit to the #2 test cock.

Please note all installation and testing procedures listed are intended as a guide only. Installation and testing must be in accordance to local standards and plumbing codes.

11. Open test cock #1 and bleed out all content by opening the high side bleed needle valve. Close the needle valve before continuing.

12. Open test cock #2 and bleed out all content by opening the low side bleed needle valve. Close the needle valve before continuing.

13. Record the static pressure drop across the valve after gauge reading stabilises.

14. Close all test cocks and remove test equipment.

TEST ii - Bypass

REQUIREMENT:
The static pressure drop across the valve shall be at least 7 kPa. If this is not reached, repair and clean the valve then test again. If it still fails, contact your local Reece branch for assistance.

PROCEDURE:

1. Close isolating valves on bypass valve.

2. Slowly open upstream (inlet) test cock on bypass to remove any foreign material and attach fittings. Close before continuing.

3. Attach hose from the high side of the test kit to upstream (inlet) test cock of the bypass.

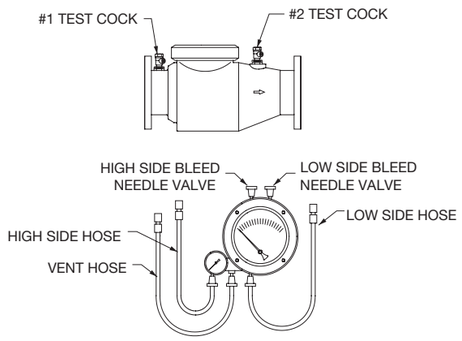
4. Attach hose from the low side of the test kit to test cock #2 of main valve.

INSTALLATION, TESTING & MAINTENANCE

310 Series SCV & SDCV

100-200mm

5. Open both test cocks and bleed out all content by opening the high side bleed needle valve. Close the needle valve before continuing.
6. Slowly open low side bleed needle valve. Close needle valve before continuing.
7. Record the static pressure drop across the valve after gauge reading stabilises.
8. Close all test cocks and remove test equipment.

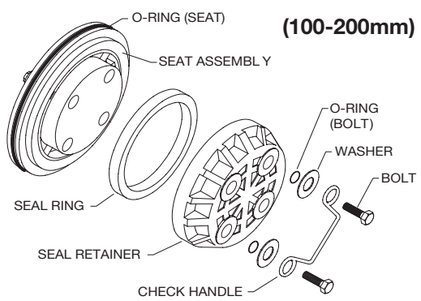


Repair Kits

SIZE	MODEL 310 RUBBER ONLY (ZURN CODES & REECE CODES)
100mm	RK4-310 (180469)
150mm	RK6-310 (180465)
250mm	RK8-310 (4000415)

Maintenance Instructions

CHECK ASSEMBLY



All Model 310 Series Backflow Preventers must be inspected and maintained by an accredited backflow prevention tester at least once a year or more frequently as specified by local codes. Replacement of worn or damaged parts must only be made with genuine “ZURN WILKINS” parts.

GENERAL MAINTENANCE

1. Clean all parts thoroughly with water after disassembly.
2. Carefully inspect rubber seal rings and O-rings for damage.
3. Test unit after reassembly for proper operation (refer to “TESTING PROCEDURES”).

NOTE: If any portion of the seat assembly is damaged or missing or if the seating surface is damaged in any way, do not attempt to field repair it. Contact your local Reece branch for assistance.

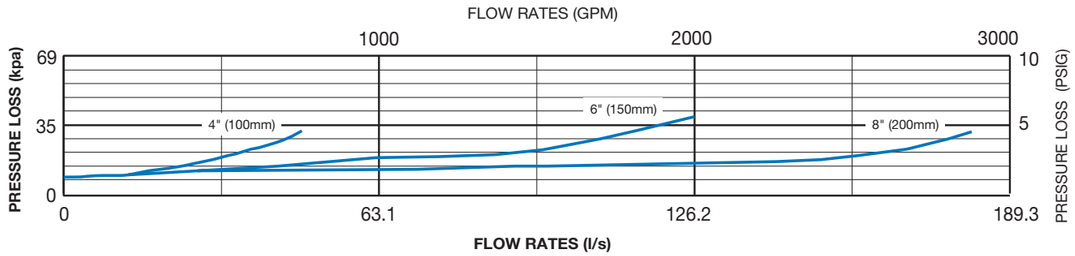
SERVICING CHECK VALVES

1. Close inlet and outlet shut-off valves.
2. Loosen and remove the two nuts, bolts and gasket from the grooved coupling around the access cover. Remove access cover.
3. The valve has a plastic retainer securing the check, grasp one of the exposed ends, push down and then pull. The retainer should “spiral” out of the groove around the check.
4. Remove the hardware and O-rings from the back of the check assembly (See “Check Assembly” illustration). Separate the seal retainer from the assembly to expose the seal ring.
5. Inspect the seal ring for cuts or embedded debris and replace if cut or damaged in any way. If the reverse side of the seal is unused, the seal ring can be inverted and used temporarily until a new seal is obtained.
6. Inspect valve cavity and seating areas. Flush with water to remove any debris.
7. To reassemble, lubricate the O-ring and reinstall check in the body.
8. Install the plastic retainer by inserting one end into the body groove and then sliding your hand around the face of the retainer, pushing it into the groove as you go. The retainer will “snap” into place when fully seated..
9. Install the access cover and grooved coupling, lubricate the outside surface of the coupling gasket, making sure the ends of the coupling touch each other. Tighten coupling nuts to proper torque and place valve back in service.

Troubleshooting

PROBLEM	POSSIBLE CAUSES	CORRECTIVE ACTION
LEAKING CHECK VALVES	1. Debris on seat or seal ring 2. Damaged seat area 3. Damaged seat o-ring 4. Damaged bolt o-ring(s) on check retainer	1. Clean seat area 2. Replace check assembly 3. Replace seat o-ring 4. Replace o-ring(s)
LOW OR NO FLOW	1. Device installed backwards 2. Isolation valves not fully open 3. Low supply pressure	1. Verify flow direction arrow 2. Turn handles counterclockwise 3. Attach pressure gauge to test cock #1 and verify pressure

Performance Characteristics



Capacity through Schedule 40 Pipe (l/s)				
Pipe size (mm)	**1.5 (m/s)**	**2.3 (m/s)**	**3.0 (m/s)**	**4.6 (m/s)**
100	12.5	18.8	25	37.5
150	28.4	42.6	56.8	85.2
200	49.2	73.8	98.4	147.6

SPECIFICATIONS

Maximum working water pressure: 1200 kPa

Maximum working water temperature: 60˚C

Hydrostatic test pressure: 2400 kPa

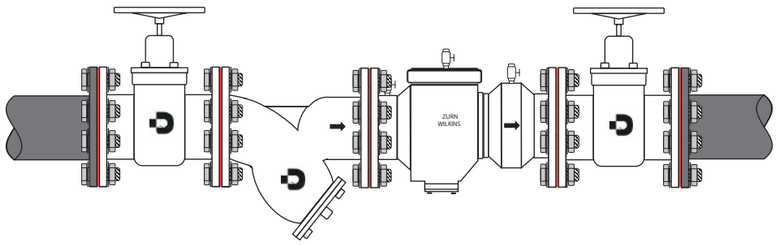
End connections: Flanged AS 2129 Table E
Grooved, AWWA C606

Proper performance is dependent upon licenced, qualified personnel performing regular, periodic testing according to ZURN WILKINS’ specifications and prevailing governmental and industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.

DIMAX BOLT KITS FOR ZURN BACKFLOW ASSEMBLIES

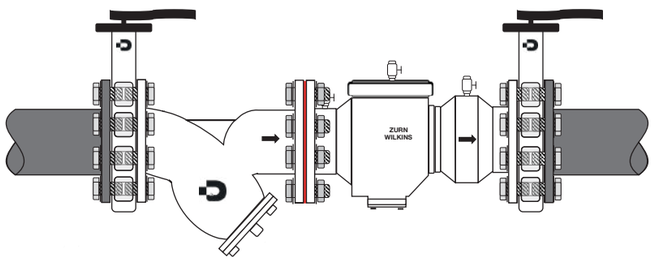
DIMAX BOLT KITS FOR ZURN BACKFLOW ASSEMBLIES

Zurn Backflow Assembly with RSGVs



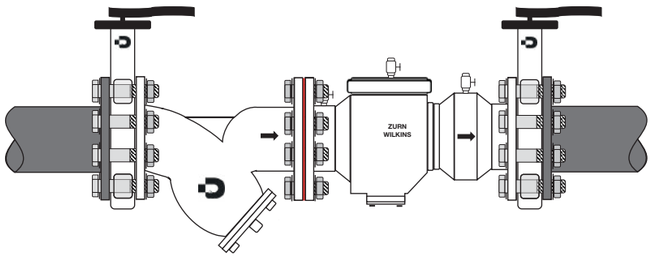
Reece Code	DN	Flange Table	Gaskets		Bolts			Hex Set Screws			Nuts		Washers	
			3MM EPDM ROUND		316 SS			316 SS			316 SS, Molybond		316 SS, 3MM	
			Qty	Size	Qty	Size	Length	Qty	Size	Length	Qty	Size	Qty	Size
1015500	65	AS2129 TE	5	65	20	M16	65				20	M16	20	M16
1015501	80	AS2129 TE	5	80	20	M16	65				20	M16	20	M16
1015502	100	AS2129 TD / AS4087 B5	5	100	20	M16	75				20	M16	20	M16
1015503	100	AS2129 TE	5	100	40	M16	75				40	M16	40	M16
1015504	150	AS2129 TE	5	150	40	M20	90				40	M20	40	M20
1015505	200	AS2129 TE	5	200	40	M20	90				40	M20	40	M20
1015506	250	AS2129 TE	5	250	60	M20	90				60	M20	60	M20

Zurn Backflow Assembly with Lugged Butterfly Valves



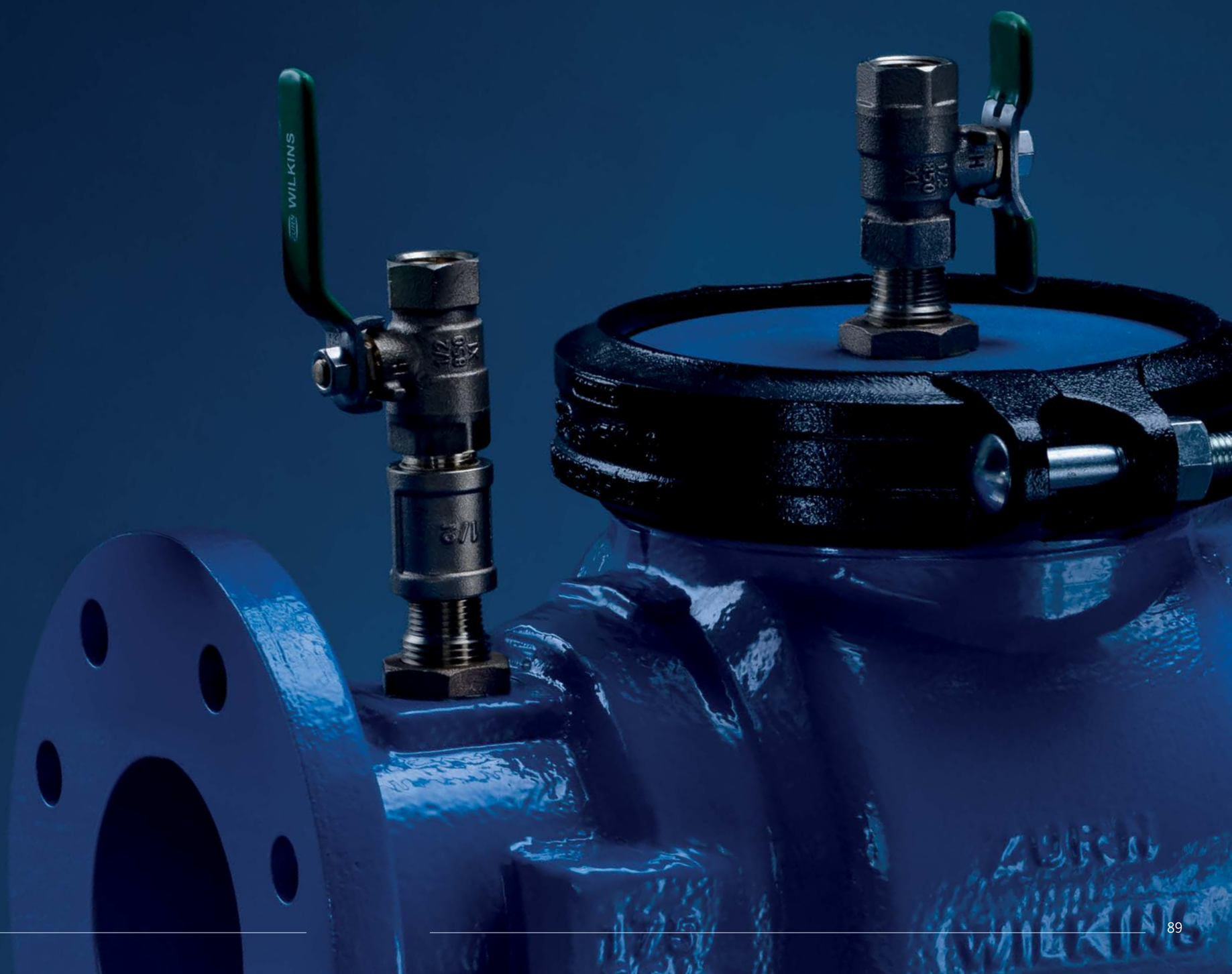
Reece Code	DN	Flange Table	Gaskets		Bolts			Hex Set Screws			Nuts		Washers	
			3MM EPDM ROUND		316 SS			316 SS			316 SS, Molybond		316 SS, 3MM	
			Qty	Size	Qty	Size	Length	Qty	Size	Length	Qty	Size	Qty	Size
1015507	65	AS2129 TE	1	65	4	M16	65	16	M16	35	4	M16	40	M16
1015508	80	AS2129 TE	1	80	4	M16	65	16	M16	40	4	M16	40	M16
1015509	100	AS2129 TD / AS4087 B5	1	100	4	M16	75	16	M16	50	4	M16	40	M16
1015510	100	AS2129 TE	1	100	8	M16	75	32	M16	50	8	M16	80	M16
1015511	150	AS2129 TE	1	150	8	M20	90	32	M20	50	8	M20	80	M20
1015512	200	AS2129 TE	1	200	8	M20	90	32	M20	60	8	M20	80	M20
1015513	250	AS2129 TE	1	250	12	M20	90	48	M20	60	12	M20	120	M20

Zurn Backflow Assembly with Wafer Butterfly Valves



Reece Code	DN	Flange Table	Gaskets		Bolts			Long Bolts			Nuts		Washers	
			3MM EPDM ROUND		316 SS			316 SS			316 SS, Molybond		316 SS, 3MM	
			Qty	Size	Qty	Size	Length	Qty	Size	Length	Qty	Size	Qty	Size
1015514	65	AS2129 TE	1	65	4	M16	65	8	M16	110	12	M16	24	M16
1015515	80	AS2129 TE	1	80	4	M16	65	8	M16	110	12	M16	24	M16
1015516	100	AS2129 TD / AS4087 B5	1	100	4	M16	75	8	M16	130	12	M16	24	M16
1015517	100	AS2129 TE	1	100	8	M16	75	16	M16	130	24	M16	48	M16
1015518	150	AS2129 TE	1	150	8	M20	90	16	M20	130	24	M20	48	M20
1015519	200	AS2129 TE	1	200	8	M20	90	16	M20	130	24	M20	48	M20
1015520	250	AS2129 TE	1	250	12	M20	90	24	M20	130	36	M20	72	M20

ZURN BACKFLOW PREVENTION SPARE PARTS



ZURN BACKFLOW PREVENTION SPARE PARTS

RPZ Spare Parts 15-50mm

All spare parts for Zurn Backflow Devices can be ordered from your local Reece store.

375 RPZ Rubber Repair Kit 15-20mm

RK34-375R
Reece: 180416

375 RPZ Rubber Repair Kit Complete 15-20mm

RK34-375
Reece: 180415

375 RPZ Vessel Repair Kit 15-20mm

RK34-375V
Reece: 180459

375 RPZ Rubber Repair Kit 25mm

RK1-375R
Reece: 180425

375 RPZ Rubber Repair Kit Complete 25mm

RK1-375
Reece: 180455

375 RPZ Vessel Repair Kit 25mm

RK1-375V
Reece: 180464

375 RPZ Rubber Repair Kit 32-50mm

RK114-375R
Reece: 180430

375 RPZ Rubber Repair Kit Complete 32-50mm

RK114-375
Reece: 180435

375 RPZ Vessel Repair Kit 32-50mm

RK114-375V
Reece: 180471

DCV Spare Parts 20-50mm

All spare parts for Zurn Backflow Devices can be ordered from your local Reece store.

350 DCV Rubber Repair Kit 20mm

RK34-350R
Reece: 180432

350 DCV Repair Kit Complete 20mm

RK34-350
Reece: 180462

350 DCV Vessel Repair Kit 20mm

RK34-350V
Reece: 4000404

350 DCV Rubber Repair Kit 25mm

RK25-350R
Reece: 4000398

350 DCV Repair Kit Complete 25mm

RK25-350
Reece: 180463

350 DCV Vessel Repair Kit 25mm

RK25-350V
Reece: 180467

350 DCV Rubber Repair Kit 32-50mm

RK114-350R
Reece: 180429

350 DCV Repair Kit Complete 32-50mm

RK114-350
Reece: 180448

350 DCV Vessel Repair Kit 32-50mm

RK114-350V
Reece: 4000387

ZURN BACKFLOW PREVENTION SPARE PARTS

RPZ & DCV Repair Kits 65-250mm

All spare parts for Zurn Backflow Devices can be ordered from your local Reece store.

RPZ & DCV Check Rubber Repair Kit 65-80mm

RK212-350
Reece: 180436

RPZ & DCV Check Rubber Repair Kit 100mm

RK4-350
Reece: 1000888

RPZ & DCV Check Rubber Repair Kit 150mm

RK6-350
Reece: 180414

RPZ & DCV Check Rubber Repair Kit 200-250mm

RK8-350
Reece: 180419

RPZ Relief Port Rubber Repair Kit 65-150mm

RK212-375R
Reece: 180413

RPZ Relief Port Complete Repair Kit 65-150mm

RK212-375
Reece: 1085056

RPZ Relief Port Rubber Repair Kit 200-250mm

RK8-375R
Reece: 4000416

RPZ Relief Port Complete Repair Kit 200-250mm

RK8-375
Reece: 180412

RPZ & DCV Check Assemblies 65-250mm

All spare parts for Zurn Backflow Devices can be ordered from your local Reece store.

RPZ Check Assembly #1 65-80mm

3707-300
Reece: 180433

RPZ check Assembly #1 100mm

3709-300
Reece: 180438

RPZ check Assembly #1 150mm

3710-300
Reece: 180456

RPZ check Assembly #1 200mm

3712-300
Reece: 4001123

DCV Check Assembly #1 65-80mm

3507-300
Reece: 4001103

DCV check Assembly #1 100mm

3509-300A
Reece: 180441

DCV check Assembly #1 150mm

3510-300A
Reece: 180458

DCV O-ring for Cover Plate 65-150mm

031N
Reece: 4001267

RPZ & DCV Check #2 Assembly Kit 65-80mm

RK212-350CK2
Reece: 180478

RPZ & DCV Check #2 Assembly Kit 100mm

RK4-350CK2
Reece: 4001528

RPZ & DCV Check Assembly #2 150mm

3510-300B
Reece: 180422

RPZ Relief Port 65-150mm

3707-CU
Reece: 180457

ZURN BACKFLOW PREVENTION SPARE PARTS

RPZ & DCV Spare Parts 65-250mm

All spare parts for Zurn Backflow Devices can be ordered from your local Reece store.

DCV Diameter Cover Plate 65-150mm

558-3AXL-010F
Reece: 4001132

RPZ Control Unit O-Ring 65-150mm

032N
Reece: 4001268

#1 Check Retainer Clip 65-80mm

3507-14F
Reece: 180450

#2 Check Retainer Clip 65-80mm

3507-14G
Reece: 180449

#1 Check Retainer Clip 100m

3509-14B
Reece: 180470

#2 Check Retainer Clip 100m

3509-140
Reece: 180444

#1 Check Retainer Clip 150mm

3510-14B
Reece: 4001108

#1 Check Retainer Clip 150mm

3510-140
Reece: 180447

Pitot Tube Assembly 100-150mm

3709-360
Reece: 180424

Pitot Tube Assembly 200-250mm

3711-360
Reece: 4001121

Sensing Tube Hose 65-100mm

3509-36
Reece: 4001119

Sensing Tube Hose 150mm

3510-36
Reece: 4001120

Backflow Prevention Guide