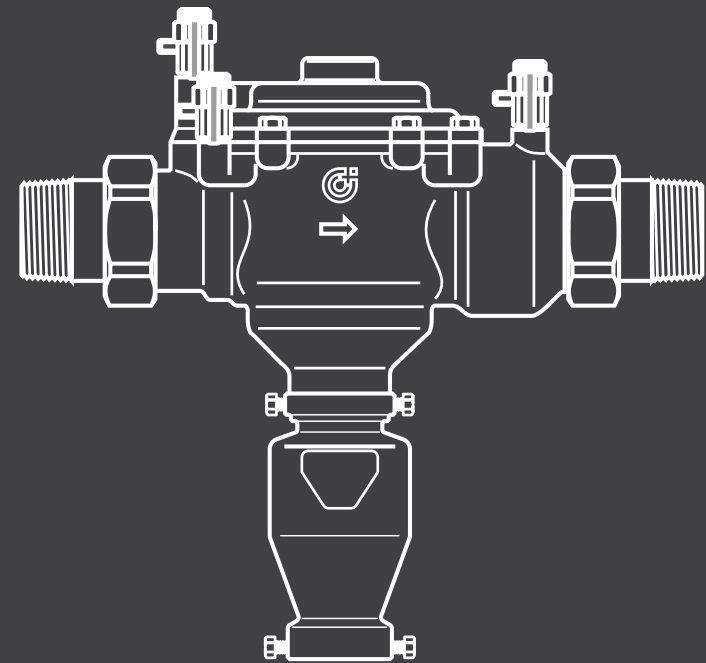


WATERWARE

Reduced Pressure Zone

15-50mm



Installation Manual

PH 09 273 9191 | info@waterware.co.nz
PO Box 58 776 Botany, Manukau
waterware.co.nz

WARRANTY

If any material defect arising from the manufacturing process is found in a new tap or valve Waterware Services Ltd. will undertake to repair or replace it (at its option). This undertaking will not apply if:

1. The defect is brought to Waterware's attention later than 5 years from the date of manufacture.
2. Failure by any person to follow installation instructions or installation in an environment outside the recommended limitations or relevant NZ and or Australian Standards and local plumbing codes. No installation should proceed without installation instructions and claims instructions were missing are not accepted as a means of avoiding this condition.
3. Evidence cannot be produced which confirms that the relevant tap or valve was purchased from a known customer of Waterware Services Ltd.
4. Repair work is undertaken without prior arrangement with Waterware Services Ltd.
5. Normal maintenance requirements, refer to specific product maintenance guides.

Waterware Services Ltd. shall in no way be liable for any loss, damage (direct, indirect or consequential), cost or expense suffered or incurred by the purchaser. Obligations accepted by Waterware Products Ltd. are....

..... in addition to all other rights and remedies had by the Purchaser in law in respect of the valve and does not limit the right the Consumer may have under the Consumers Guarantee Act 1993.

..... subject to the exceptions and conditions previously listed. All expressed or implied conditions, statements or warranties as to the quality or fitness on any purpose of a tap or valve or otherwise are hereby expressly excluded to the fullest extent permitted by law except under conditions and warrants which cannot be legally excluded by law and which are intended in the contract for the supply of the valve by the Trade Practises and any other Act of Law.

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CALEFFI REDUCED PRESSURE ZONE - HIGH HAZARD

Description

The RPZ Backflow Preventor should be installed at the inlet to the pipework which connects the water mains to the system in which the drinking water provided by the supply network can be contaminated.

On the other hand in the case of delivery systems connected to an internal distribution network the RPZ Backflow Preventer should be mounted near the areas of the network which are likely to cause contamination.

The installation site should be easily accessible and should not be subject to flooding.

Operation

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

Features

- Reduced overall dimensions
- Standard with bronze isolating ball valves
- A non linking discharge outlet preventing back siphonage
- Fixing and centering collar for the drain pipe
- An internal profile designed to avoid the build up of deposits of debris
- Easy to install and inspect and service in line
- Maximum operating pressure: 10 Bar
- Maximum water temperature: 65°C

Materials

Body and covers 15 - 32mm Dezincification Resistant Brass

Body and covers 40 & 50mm	Bronze
Check valve spindles	Stainless Steel
Springs	Stainless Steel
Seals	Silicone Rubber
Fasteners	Stainless Steel
Replaceable Seats	Stainless Steel

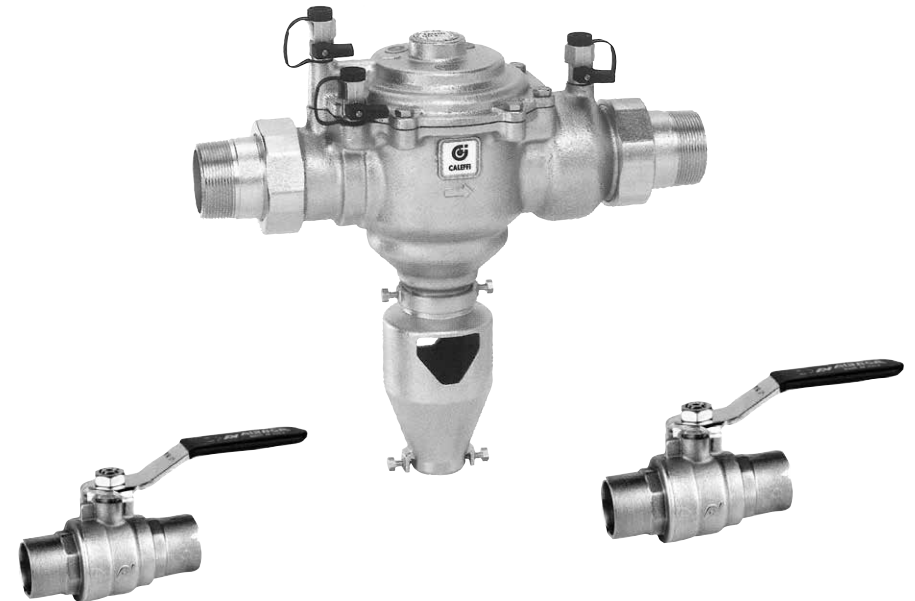
SPARE PARTS

Code	Description
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BF59469 15	- 20mm Upstream check assembly
BF59470 15	- 20mm Downstream check assembly
BF59471 15	- 20mm Relief assembly
BF59472 15	- 20mm Relief valve seat

BF59455 25	- 32mm Upstream check assembly
BF59456 25	- 32mm Downstream check assembly
BF59457 25	- 32mm Relief assembly
BF59458 25	- 32mm Relief valve seat

BF59459 40	- 50mm Upstream check assembly
BF59460 40	- 50mm Downstream check assembly
BF59461 40	- 50mm Relief assembly
BF59462 40	- 50mm Relief valve seat



MAINTENANCE INSTRUCTIONS

15 - 20mm

1. Release the pressure using the cocks fitted to the backflow prevention valve. 2. Remove the cover bolts. Pull out the central assembly and contrast spring.
3. Pull out the seat of the discharge valve by pushing it from the outside whilst handling it with care so as not to damage it.

Caution: It is not removed, protect it from possible damage which could result from changing the check valves.

4. Remove the split rings holding the check valves in place with a pair of long-jaw pliers.
5. Remove the upstream and downstream check valves using a common pipe wrench or suitable size pliers.
6. After carrying out the inspection and after replacing any necessary components when refitting the check valves make sure that the split rings are perfectly located in the seat.

25 - 32mm

1. Release the pressure using the cocks fitted to the backflow prevention valve.
2. Remove the cover bolts. Pull out the central assembly and contrast spring.
3. Pull out the seat of the discharge valve by pushing it from the outside whilst handling it with care so as not to damage it.

Caution: If it is not removed, protect it from possible damage which could result from changing the check valves.

4. Remove the split rings holding the check valves in place with a pair of long jaw pliers.
5. Remove the upstream and downstream check valves using a common pipe wrench or suitable size pliers.
6. After carrying out the inspection and after replacing any necessary components when refitting the check valves make sure that the split rings are perfectly located in the seat.

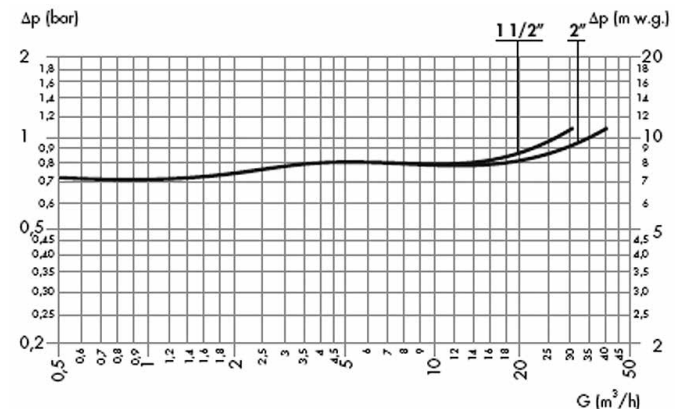
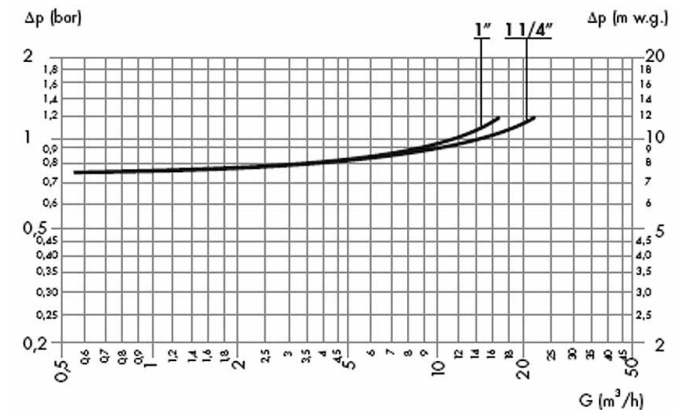
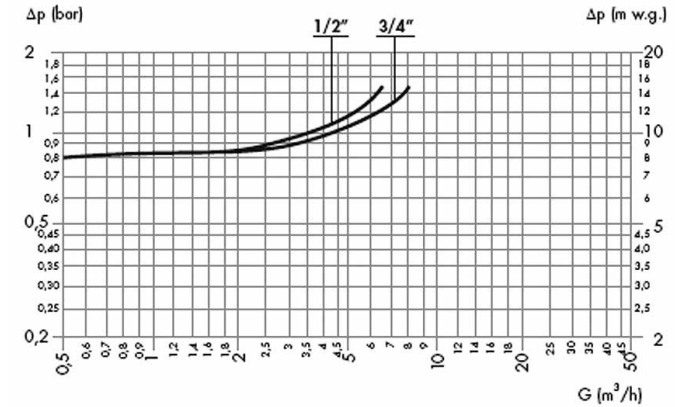
40 - 50mm

1. Release the pressure using the cocks fitted to the backflow prevention valve.
2. Remove the cover bolts. Pull out the central assembly and contrast spring.
3. Pull out the seat of the discharge valve by pushing it from the outside whilst handling it with care so as not to damage it.

Caution: If it is not removed, protect it from possible damage which could result from changing the check valves.

4. Remove the stop-check flexible rings with a pair of long-jaw pliers.
5. Remove the upstream and downstream check valves using a common pipe wrench or suitable size pliers.
6. After carrying out the inspection and after replacing any necessary components when refitting the check valves make sure that the split rings are perfectly located in the seat.

FLOW CHARTS

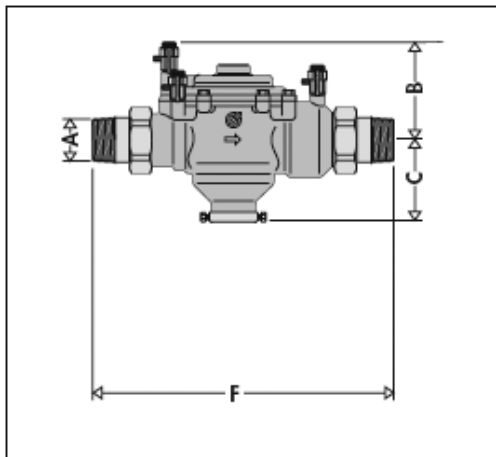


INSTALLATION

1. The RPZ must be installed in an accessible location to facilitate periodic field testing and maintenance.
2. The location selected should have adequate drainage for relief valve discharge. Drainage may be piped away, provided an approved air gap device is used. The device should never be placed where it may become submerged in standing water.
3. Flush all upstream piping thoroughly to remove foreign matter prior to installing the device.
4. The device should be installed horizontally. A clearance between the lower most portion of the device and flood grade or floor should be provided for ease of maintenance.
5. A 'Y' strainer should be installed just upstream of the device to eliminate any debris from entering the device.
6. After installing the assembly and with downstream isolator valve closed, pressurize the device and bleed air through test cock #4, then open isolator.

DIMENSIONS (mm)

Code	A	B	C	D	E	F	G
574040	15mm	103	44,5	226,5	63	30	147,5
574050	20mm	103	44,5	226,5	63	30	147,5
574600	25mm	99,5	72,5	280	85	30	172
574700	32mm	99,5	72,5	280	85	30	172
574800	40mm	129,6	103,4	387	112	31	233
574900	50mm	129,6	103,4	395	112	31	233



TESTING PROCEDURE



Test No1 - To test the pressure differential relief valve maintains a zone between the two check valves at a minimum of 2 psi less than the supply pressure.

1. Bleed water through all of the test cocks Note: open test cock 2 slowly to avoid accidental dumping of the relief valve.
 2. Connect the high side hose to test cock 2 and the low side hose to test cock 3.
 3. Open valves #1, #2 and #3 on the test set.
 4. Slowly open test cock 3 and bleed all the air from the gauge and hoses through the vent hose. With test cock 3 in the open position, slowly open test cock 2 and bleed air again through the vent hose. Close valve #3, then valve #2
 5. Close the downstream isolator valve.
 6. Slowly open valve #3 until the differential pressure gauge needle starts to drop.
- Note: It is important the differential pressure gauge needle drops slowly. Watch the gauge drop slowly to the relief valve opening point and record the reading.

Test No2 - To test check valve 2 for tightness against reverse flow.

1. Maintain the downstream isolator in the off position.
2. Loosely attach the vent hose to test cock #4.
3. Bleed vent hose by opening downstream isolator then close again once bleed.
4. Tighten vent hose and open test cock 4.
5. Loosen the low side hose at test cock #3 and re-establish the normal reduced pressure within the zone and retighten hose.
6. Open downstream isolator. If the differential pressure remains steady then check valve 2 is reported as OK. If the differential pressure falls until the relief valve opens then check valve 2 is recorded as leaking and test 3 cannot be completed.

Test No3 - Is the static pressure drop across check valve 1 maintained at no less than 3 psi above the relief valve opening point as recorded in test 1.

1. With testing equipment installed as stated in test 2, the static differential pressure against check valve 1 will be indicated on the gauge and should be recorded as such. The needle should be steady and not falling.
2. Close all test cocks. Open the downstream isolator. Remove all test equipment. Drain test kit.