



Pipes, valves and fittings

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MetCheck RPZ Valves



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We are pleased to advise Hydromet in recent times commissioned AWQC to carry out an updated and significant testing program of sampled components supplied into the marketplace on behalf of Hydromet, with the result of this testing program conforming with the requirements of AS/NZS 4020.

WaterMark Certification – NATA approved test reports form part of the conditions of WaterMark certification which is maintained for over 40 models of backflow prevention valves under the MiniMet and MetCheck ranges. These valves are certified on the Hydromet WM license WM-022473 and Hydromet are subject to annual surveillance by IAPMO Oceania for continued compliance with the WaterMark Certification Scheme.

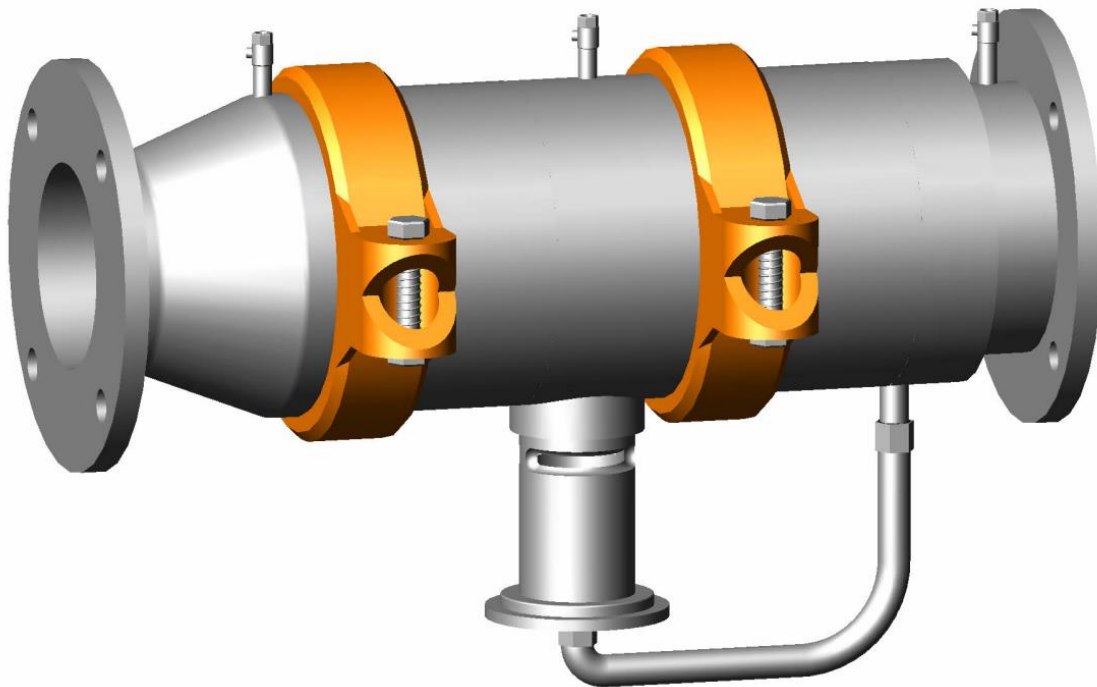
AS/NZS 2845.1 – All MiniMet and MetCheck valves have been tested to, and conform with, the requirements of AS/NZS 2845.1. All MiniMet and MetCheck valves have a classification of either a low, medium or High hazard rating, as defined in AS/NZS 3500.1.

Flanged stainless steel pipework – The AS/NZS 4020 test reports also extend to cover the various SS316 flanged pipes manufactured by Hydromet, with these components being available to suit the installation of any backflow prevention valve or water meter assemblies.

Why Choose a MetCheck Valve

- The valve Body is made from 316 Sch10 Stainless Steel to ensure the maximum resistance to corrosion with no rusting internal debris or blistering paint passing through checks, damaging seals, or causing severe damage to the internal componentry.
- Earth support tags can be supplied if current is suspected to be within the valve assembly of the pipe line. Earth leakage can reduce the life span of any valve assembly due to osmosis which will attack the valves close to weld lines.
- Full back up technical support from the Manufacturer.
- Made in Australia with quick access to all spare parts and accessories for every application.
- All Hydromet Valves are highly rated to PN16 in all models.
- Valves come with optional strainer boxes, valve support stands, Met-Coated Nuts and Bolts anti-galling specific for high tension applications, and numerous J & S -Pipe rises all in 316 Stainless Steel to accommodate a full assembly.
- Ribbed seal anti-slip gaskets purposely designed by Hydromet.
- Due to the lightweight 316 Sch10 Stainless Steel design the Hydromet Valves are among the lightest Backflow preventers on the Market.
- The Valves are designed for ease of access and adjustment, having been built with roll groove couplings. This enables the plumber to completely pull apart and reassemble the Valve with just a Spanner.
- 5 year warranty on the main body and 12months warrant on all moving parts that are shown to be not damaged by debris or incorrect installation.

MetCheck RPZ



MetCheck RPZ Dimensions

Valve Size (DN)	Length (mm)	Width (mm)	Height (mm)
65	535	280	475
80	535	280	475
100	535	280	475
150	685	420	920

MetCheck RPZ valves are designed to the following parameters:

- Manufactured to AS2845.1 2020
- Size Range: 65mm to 150mm.
- Temperature Range: +1C to +60C.
- End Connections: Flanged to AS4087 **PN16** rated minimum.
- Max Working Pressure: 1600kpa
- Flange Options:
 - Flanged T/D to AS4087 PN16: 1600kpa
 - Flanged T/E to AS4087 PN16: 1600kpa
- Max Shell Pressure, and Back Pressure: 1.5 times Max Working Pressure above.

Installation Instructions:

- MetCheck & MiniMet Valves to be installed by a licensed plumber. Appropriate PPE (Personal Protection Equipment), should be worn by those installing.
- All site risk assessment should be carried out before attempting to install. Installation should be carried out in accordance with AS3500.1, the plumbing and drainage code.
- The MetCheck & MiniMet should be installed in accordance with the direction of flow arrow, relative to the direction of flow of the water. All end connection bolts should be tightened appropriately, to overcome leaks.
- Minimum clearance: 300mm Minimum Clearance from Bottom of the valve.
- Isolation valves should be installed immediately upstream and downstream of MetCheck's and MiniMet's.
- Strainers are not normally used in main pipelines for fire situations.
- Dual use fire and domestic installs may have an option inline strainer to protect the check valve componentry.
- High Hazard installs require the use of an inline strainer to protect the check valve componentry. This is to be installed Before the RPZ device and after the Up-stream isolation valve.

Commissioning Instruction:

- MetCheck & MiniMet Valves should be installed by a licensed plumber, with a license endorsed for backflow prevention.
- Commissioning and testing should be conducted in accordance with AS2845.3- 2010 Backflow Prevention Devices Field Test.
- Commissioning should be carried out after installation and prior to allowing normal water flow through the valve for consumption use.

Maintenance Instructions:

MetCheck & MiniMet Valves should be maintained by a licensed plumber, with a license endorsed for backflow prevention.

Any commissioning and testing after maintenance, should be conducted in accordance with AS2845.3- 2010, by a licensed plumber

Maintenance is based upon the need for maintenance determined by the annual testing standards as per AS2845.3- 2010.

If the main check valve does not meet the minimum test requirements as per AS2845.3- 2010, then the fault should be found and rectified.

Fault Finding:

If the differential pressure is holding, but below the differential pressure pass rate, typically the check module spring has become weak. If the differential pressure drops to zero, typically the check module rubber seals are leaking.

Identifying which check valve needs maintenance, the individual check module should be removed, and parts cleaned or replaced as necessary.

Often a good flush at high flow will clear any lingering debris, and may fix the problem. Retest after flushing.

Maintaining the 1st & 2nd Check Modules:

When performing maintenance on the Metcheck RPZ valves, it is important to first remove the Relief valve hose connection, to allow the bodies to move seperately.

For maintenance on the main check modules, remove the Victaulic roll grove fittings.

Once the couplings are removed, slide the sealing ring to one side of the joint.

Inside the MetCheck RPZ, the center vessel and inlet sides contain the check modules. It is crucial to support the valve during this process so that the centre vessel does not drop to the ground and cause any damage.

By removing the Centre vessel this will expose both the 1st & 2nd check modules.

Locate the circlip and spacer at the back end of the module, and remove both.

Pull out the check module. This should come out by hand but may require a slight tap from the front of the check body.

If the check module needs to be maintained, remove the four nuts at the back of the check module using a **ring spanner** (A This will prevent the nuts from distortion and allow for them to be re-installed once maintenance is complete).

Once the four nuts have been removed, maintenance can now be performed on the check module.

Reassembly is the opposite of disassembly.

Maintaining the relief module

When removing the relief module, it is important that you **do not** wrench on the RV housing, place wrench on flange and cover only.

Once the Relief has been removed, you can remove the cover bolts.

Remove piston and sleeve by sliding them out through the flange side of the RV housing.

The RV seat is a machined part of the housing, to replace the seat you must replace the housing.

Remove sleeve from the piston assembly, please note the piston assembly is spring loaded.

Hold the piston firmly in one hand and unscrew the hex head bolt.

Carefully inspect the disc holder and O-rings for damage or debris and Replace the RV disc holder, and the O-rings on the hex head bolt where required.

Reassemble the disc holder and spring to the diaphragm / piston assembly.

Slide the sleeve over the diaphragm.

Position the bead of the diaphragm over the edge of the sleeve.

While holding the sleeve in one hand, place the bolt end of the assembly on a flat surface. Using the other hand, cup the palm slightly over the diaphragm to form an air trap.

Rapidly slap the diaphragm down over the piston assembly and inside the sleeve. If the diaphragm is wrinkled then it is not in the correct position. Repeat this step if necessary.

Lastly slide the piston assembly and sleeve into the housing in reverse order.

Spare Parts:

1st & 2nd Checks:

- 1st or 2nd Check Rubber Rebuild Kit Includes: Check Disc, Seat O-Ring and Cover O-Ring
- O-Ring seals for Check Modules.
- Complete module, 15kpa nominal
- Complete module, 50kpa nominal
- Circlip
- Spacer

Relief Valve:

- Relief Valve Module
- RV Rebuild kit Includes: Diaphragm, Piston, RV Disc, RV Disc O-Ring, and Lube

Hydromet's MetCheck RPZ ranges are currently undergoing WaterMark accreditation.

The valves have been put through their paces and passed the flow-rate test and PN16 testing with flying colors.

The last of the testing procedures is currently underway with the taste test & endurance tests currently being completed.

We have been advised of a completion date in June and are preparing the full ranges to be launched into the market in the later half of 2024.