

Maric Flow
 Control Valves

Constant
 Flow Rate
 Regardless
 of Pressure

Valves must be installed the right way around or immediate valve failure may result. A direction of flow arrow is stamped on the outside diameter of the valve body.

It is recommended to orientate the valves stamped data toward the top, or in such a position to facilitate identification.

Bends or elbows immediately in front of valve will not affect the valves performance, however due to the relative high velocity of the water jets exiting the valve, and possible erosion issues, it is recommended that a straight pipe, the length of approximately the nominal diameter of the fitting, be fitted on valves outlet.

Use of Sieves;

The installation of a sieve upstream of the Maric valve is recommended where solid particles larger than one third of the valves orifice diameter is likely to be encountered. The mesh aperture should be around one quarter to one third of the valves orifice diameter.

Screwed Valves;

Refer to direction of flow arrow. Standard threads are BSPT (sealing/tapered) , Male series R, Female RP. The use of thread tape or similar is recommended for a watertight seal.

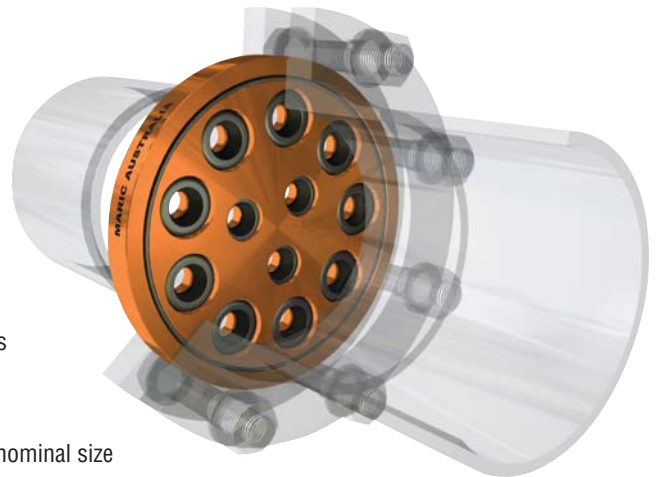
Wafer Type Valves;

Wafer type valves are designed for mounting between smooth flat faced pipe flanges.

Wafers are fitted with an o’ring in each face for sealing purposes. Gaskets are therefore not required. If flange faces are rough, or grooved on a diameter close to that on the o’ring of the wafer, then either the flange grooves should be removed by machining, or the wafer o’rings removed, and flange gaskets fitted. Remove the tape holding the o’rings in place prior to assembly. The application of a light smear of grease in the o’ring groove will prevent the o’ring falling out during assembly.

Standard wafers are orifice plate style,

i.e. they are not **full flange** type, see diagram
 Flange bolts will locate the wafer concentrically, and remain visible between the flanges when viewing the assembly.



There will be some clearance (generally around 2 to 3mm, but up to 5 mm on larger wafer sizes) between wafer O.D. and the bolts. This is normal. The wafer should be located as close as possible to concentric prior to final clamping.

Flanges must have aperture dimensions of no less than the nominal size of the flange. i.e. a 100NB flange, must have an internal diameter, (where it butts up against the wafer valve), of no less than 100.0 mm. If it is less than this, then the flanges will either require machining (chamfering) at an angle of 45 degrees, out to the nominal diameter, or spacers, below, fitted. Otherwise the valves inlet and outlet orifii will be covered more than is permitted and will restrict flow rate to less than the specification of the valve. It is common for a large portion of the outer aperture of the inlet orifii to be covered by the flanges, and up to 3mm of the outlet orifii to be covered by the flanges. This is normal, and will not affect performance.

PVC & Poly stub flanges usually have smaller inside diameters which can restrict valve flow as above. Therefore, optional spacers are usually required. Contact Maric for a recommendation.

Insert Type Valves;

Installation varies according to application. They must be installed as per the direction of flow arrow.

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Operating Instructions;

Maric valves automatically maintain a constant, pre-set, flow rate, irrespective of pressure (within a range), by means of a rubber control ring, whose orifice diameter varies, as the pressure differential across it varies.

The greater the pressure, the smaller the orifice, and vice versa. Therefore constant flow rate.

The valve has no external actuations and requires no adjustments. Provided the valve is supplied with a pressure sufficient to produce a pressure differential across it within its specified range, then the valve will deliver its rated flow within rated flow rate accuracy. Refer also to Installation Instructions for more information.

Maintenance;

No specific maintenance requirements are pertinent to Maric Flow Control Valves.

Spare Parts;

Due to the valves unique design and lack of wearing components, spare parts are not available for Maric flow control valves.

Troubleshooting Guide;

Problem	Cause	Remedy
No flow	Valve is blocked	Remove valve and clear the blockage – Install sieve
	There is no pressure differential across valve	Turn on the supply to the valve
Flow rate is below spec	Pressure differential across valve is below the minimum requirement	Increase pressure to within the pressure differential range of the valve
	Pressure differential across valve is above its maximum limit	Reduce pressure to within the pressure differential range of the valve
	Valve is partly blocked	Clear blockage
	Incompatible environment has attacked control rubber affecting control rubber performance	Replace valve with one fitted with control rubber suitable for the environment
Flow rate is above spec	Control rubber has blown through valve orifice resulting from excessive pressure differential or a high pressure spike	Replace control valve and asses installation for cause of excessive pressure
	Control rubber has blown through orifice due to valve being installed backwards	Replace valve and re-install in accordance with direction of flow arrow stamped on body
	Incompatible environment has caused control rubber to harden	Replace valve with one fitted with control rubber suitable for the environment
Valve is noisy	Valves can be noisy. Noise is often proportional to valve size, and pressure differential across it. If none of the techniques to the right are a practical solution to your issue, please contact a Maric Rep for other possible alternative remedies	<ul style="list-style-type: none"> • Use Kwyflo valves designed for quiet operation • Reduce or increase pressure differential • Relocate valve or bury it underground • Lag the valve and outlet pipe in an acoustic enclosure or material • Alter the valves outlet pipework construction, to alter its resonant characteristics

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Valve Identification;

Valves are stamped with; Maric Australia, WaterMark details if applicable, direction of flow arrow, flow rate, manufacture date and a part number. Comparing the part number with the “Establishing Part Numbers” page in the product catalogue, will enable identification of full valve specifications.

Noise;

Both flow rate and external factors affect the noise emitted from a maric valve. in most situations the noise level will be between 75 and 85 dB. However in some circumstances may attain 95 dB.

Life Expectancy;

Approximately 20 years, depending on accuracy required. Flow rate increases generally one half to one percent per year. Therefore in 20 years time, flow rate may be 10% to 20 % higher than when valve was originally supplied.

After Sales Service;

Your nearest Maric distributor or representative, as listed on our website; www.maric.com.au

