MARIC
FLOW CONTROL
AUSTRALIA PTY LTD

Exported worldwide to companies demanding premium quality flow control valves

For Constant Flow Rate Regardless of Pressure

Ever since water has been piped, there has been a definite need for an accurate and inexpensive method of controlling flow rate.

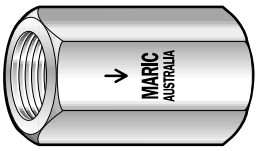
The Maric Flow Control Valve has been developed to provide a constant pre-set flow rate irrespective of pressure or pressure fluctuations.
See *Pressure Drop Operating Ranges* opposite page.

Valves are available in a range of body and elastomer materials and consist of;
- A body manufactured to rigid engineering standards,
- A precision machined recess for the control rubber,
- And a pressure sensitive control rubber meticulously compounded to pass exacting flow tests.

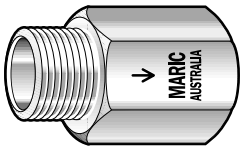
Developed in the interest of conservation of a precious natural resource, the Maric Flow Control Valve boasts automatic, maintenance free and self cleaning operation and has proved itself in industry to be the practical solution to all installations requiring an accurate constant pre-set flow rate.

B.S.P. Screwed

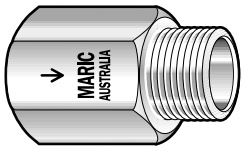
Available in; **DR Brass**, **Chrome**, **Gunmetal**, **UPVC** & **303** & **316 Stainless steel.**
Select desired flow rate from "Flow rate data" on opposite page.
F/F available in all sizes. Other configurations in limited sizes only.
Some models now incorporate a non-return feature.
First letter denotes inlet.



F.F.



M.F.



F.M

Body Size;	⅛"	¼"	⅜"	No 15(½")	No 20(¾")	No 25 (1")	No 32(1¼")	No 40(1½")	No 50(2")
Max. Flow L/Minute;	9	9	9	23	54	114	233	233	342

Wafer Type

Designed for mounting between BSP flanged pipe fittings.
(Table "D" as standard. Other systems to order).

Available in; **UPVC** & **ABS** (plastic) , **Gunmetal** & **316 Stainless Steel.**
Wafers are supplied with an o'ring in each face for sealing.
Standard Wafer O.D. is located by flange bolts. Full flange wafers made to order.

65mm x 4 orifice wafer is shown.

Flow rates available are from 0.4 litres/minute up to the maximum listed below.

Body sizes (mm);	25	32	40	50	65	80	100	150	200	250	300
Max. Flow L/Minute;	233	233	233	342	456	699	1631	3728	4427	6058	8854

Insert Type

Available in various materials and flow rates from 0.4 L/M upwards in various types including;

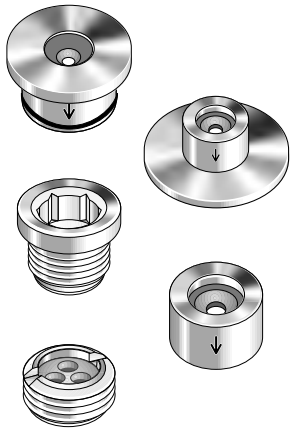
Flanged insert – for water meter flow control. Fitted into 13 to 40 mm meter tails.

Tap insert – for screwing into existing tapware. (⅜" allen key required) Flows up to 9 L/M

Plain insert – various applications including press fitting into OEM's equipment & tapware etc.

Threaded – threaded and other special types made to order

Inserts are out of sight and protected from unauthorized interference.
Dimensions and flow rates available on application.



SAVE: WATER, ELECTRICITY, GAS, OIL, MONEY

Flow Rate Data

Figures below show the various flow rates (in litres per minute) available in the respective body sizes. **Note;** the low flow rates are also available in the larger body sizes.Kwyflo flow rate options, (quiet design) are limited to the flows listed in **underlined bold type**.

1/8", 1/4"& 3/8" BSP bodies (No 6 series control rubbers)

.4 .45 .5 .55 .63 .7 .8 .9 1 1.1 1.2 1.3 1.5 1.6 1.8 2 **2.3** 2.5 2.8 3.2 **3.5** 4 **4.5** 5 5.5 6.3 7 8 9

1/2" (15mm) BSP bodies (No 15 series control rubbers)

1.8 2 2.3 2.5 2.8 3.2 3.5 4 **4.5** 5 5.5 6.3 **7** 8 **9** 10 **11** 12 13 15 16 18 20 23

3/4" (20mm) BSP bodies (No 20 series control rubbers)

8 9 10 11 12 **13** 15 **16** 18 **20** 23 **25** 28 32 36 41 45 49 54

1" (25mm) BSP bodies (No 25 series control rubbers)

15 16 18 20 23 25 28 **32** 36 **41** 45 **49** 54 **59** 66 73 82 91 102 114

1 1/4, 1 1/2 & 2" (32, 40 & 50mm) BSP bodies (No 40 series control rubbers)

125 138 150 162 180 199 216 233

Type	Accuracy	Pressure Drop (PD) Operating Range	Application
-Precision	±10%	140 to 1000 kPa (20-150 psi)	Precision flow control requirements within 140 -1000 kPa range.
-Kwyflo	± 20%	140 to 1000 kPa (20-150 psi)	Where quiet operation is required. e.g. homes, hospitals, motels etc.
-Spotcheck	± 20%	140 to 1000 kPa (20-150 psi)	For economy.
-Low Pressure	± 20%	40 to 200+ kPa (6-30+ psi)	Where low "head-loss" is required. Made to order.
-High Pressure 1	± 20%	100 to 1500 kPa (15-215 psi)	Where pressures over 1000 kPa are encountered. Made to order.
-High Pressure 2	± 20%	170 to 2000 kPa (25-285 psi)	Where pressures over 1500 kPa are encountered. Made to order.

Pressure Drop (P.D.) or "headloss" refers to pressure drop or differential across the valve.
Maximum operating temperature for valves fitted with standard nitrile control rubbers is 75 degrees Celsius intermittent.
EPDM, Silicon & Viton control rubbers are also available for higher temperature applications and / or corrosion resistance.

Headloss or Pressure Drop (P.D.) across valve. *(see also seperate leaflet)*

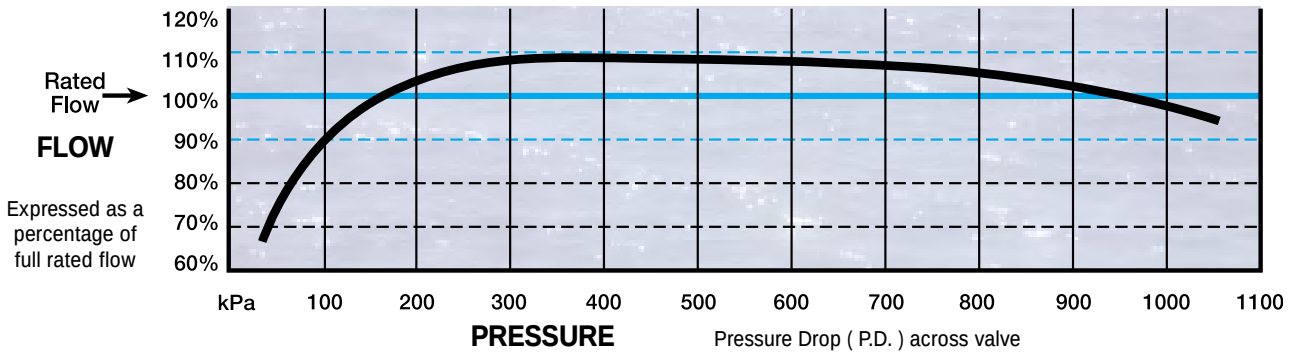
QUESTION; What will be the head loss across the Maric Valve ?

ANSWER; At least 140 kPa, or, between 140 and 1000 kPa if the system is designed and operating correctly. This is because the function of our "*PRECISION*" range of valves is to control the flow when P.D. across the valve is within this range. Therefore, to achieve full rated flow (accurate to within ±10 %), the installation must provide for inlet to be at least 140 kPa above outlet pressure.

TO CALCULATE HEADLOSS; Assume valve is controlling flow as required. Determine what pressure will be at inlet, and what pressure will be at outlet. The P.D. will then simply be the difference between inlet and outlet above. Should this work out to be less than 140 or greater than 1000 kPa, then this *Precision* valve will not provide full flow and the installation will either require altering, or the use of Low Pressure valves (40 - 200 kPa) or High Pressure valves (100 to 1500 kPa or 170 to 2000 kPa).

PERFORMANCE GRAPH

Typical of all "*PRECISION*" valves irrespective of body size or flow rate



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Properties

AUTOMATIC	-	responds instantly to changes in water pressure.
SELF-CLEANING	-	the flexing of the control ring during operation prevents the build-up of mineral salts and allows passage of solid particles.
LIFE EXPECTANCY	-	well in excess of 10 years.
SELF-REGULATING	-	install and forget.
ECONOMICAL	-	low initial cost quickly recovered.
SAFE	-	taste & odour free and approved for drinking water, see Q.A. below.
COMPACT	-	can be easily installed by any handyman.
TEMPERATURE	-	models available up to 250 degrees C.
PRESSURE	-	standard *Precision* range is 140 to 1000 kPa (higher and lower pressure models also available).

Method of testing

Valves are subjected to increasing pressures from 140 to 1000 kPa over a 2 minute cycle. Flow must be within 10% of rated throughout this range. If not, valves are rejected. Note, due to compression set (common to all rubber) flow readings at around 400 kPa may be up to 3% above tolerance when pressure is first applied, however will be in tolerance within seconds or minutes. Likewise, valves subjected to continuous non-changing pressures of around 1000 kPa for months on end, may drop to a few percent below 10% tolerance. Where this situation is likely to occur please contact a Maric sales representative to discuss alternative valve specifications.

Quality Assurance

Based on ISO9002, Maric Products are certified with the 'WaterMark' license. Accordingly, brass, gunmetal, UPVC, ABS and stainless steel valves comply with and exceed the requirements of the Standards Australia MP52 specification, '037-1993-Flow Controllers' and carry the WaterMark imprint.

The WaterMark specification requires flow accuracy to be within ±20% of rated. Maric *Precision* performance is ±10%.

SAI Global (formerly Quality Assurance Services) administer the WaterMark scheme on behalf of the participating Australian water and sewerage authorities under the National Certification of Plumbing and Drainage Products (NCPDP) scheme. This enables participating Water Authorities to accept these products without prior evaluation, testing and stamping.

The WaterMark

WaterMark Quality Assured
Spec. 037 Lic. No. W143
Standards Australia

MARIC utilise the latest CNC machining technology in their ongoing commitment to produce high quality Valves.

Distributed by

Maric Flow Control Valves have many uses

-Water Authority / supply metering
-Mining gland water control
-Water treatment
-Pump / bore protection
-Sprinklers / irrigation
-Showers
-Ultraviolet water sterilisation
-Kitchen sinks-Hand basins/wash troughs
-Water softeners & filters
-Evaporative air conditioners
-Mining / fluid handling
-Water heaters & coolers
-Dust Suppression
-Drinking fountains
-Fire-fighting flow control
-Multistory buildings
-Fire-fighting foam mixture control
-Safety washing equipment
-Fertilizer / irrigation dosing equipment
-Washing / Dishwashing machines
-Distilleries & water cooled equipment
-Vacuum pump water supply

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