

# Flow regulating devices

## Waterwise Business Information Sheet



### What is a flow regulator?

A flow regulator is a simple device which regulates the flow of water to a predetermined flow rate. For example, if the usual flow rate through a tap is 20 litres per minute, a flow regulator could be installed to achieve a reduced flow rate of say six, nine or 12 litres per minute – adequate to achieve the desired purpose. This prevents excess water from being wasted.

Some regulators maintain a constant flow, irrespective of the supply pressure, whereas the flow rate through others can vary with pressure. This can be significant in multi level buildings where water pressure can vary from floor to floor and different regulators may be required on each floor to achieve the desired flow rate.

Note that flow regulators may not be compatible with instantaneous hot water systems.

Flow regulators take many forms, such as tap outlet aerators, tap inserts, in-line regulators, water saving shower heads, trigger operated hose nozzles and floor service hose nozzles. However the user still has discretion on the duration of use.

Where greater control is required, such as in public areas where taps could be left running, a higher order control may be achieved by timed releases of water via spring loaded taps, push button taps and infra red sensors.

### Tap outlet regulators

Tap outlet regulators can be fitted to vanity basin outlets or to kitchen sink outlets to reduce the flow rate from around 15 to 20 litres per minute to down to six litres per minute. They are relatively inexpensive, starting from around \$3 for a regulator insert for compatible outlets, up to \$30 for a swivel unit for the kitchen sink. They can also aerate the water which improves its wetting property.

### Tap insert regulators

Tap insert regulators are fitted within the body of the tap and reduce the flow rate of water passing through. Regulators can be fitted into taps serving a vanity basin or kitchen sink. In this case, a tap outlet regulator would not be required as the flow regulation occurs within the tap.

They can be also fitted to the taps serving a shower, thereby reducing the flow rate of the shower. In this case water efficient shower heads are not required.

Tap insert regulators are out of sight, and most users would not be aware that they are in place.

In hotels and buildings where hot water systems may operate at a different pressure than the cold water system, regulator selection is a specialist task.

Flow regulators are available in several flow rates and need to be installed by a licensed plumber.

### In-line regulators

In-line regulators are fitted into the water line and can be used to regulate the flow leading to a lever operated tap (flick-mixer) or vanity basins. Other types can be fitted between the shower arm and the wall. They are available in several flow rates to suit the application.

### Water saving shower heads

Water saving shower heads are widely available in many designs, including vandal resistant shower heads for public areas. They regulate water flow from around 20 litres per minute down to nine litres per minute or less – make sure that you select a AAA rated shower head or better.



### Trigger operated hose nozzles

Hose nozzles are an important fitting given that uncontrolled flows from hoses can be as high as 40 litres per minute. Trigger operating hose nozzles save water by delivering a high pressure stream of water at a regulated flow rate, and shut off when the trigger is released.

To further save water, practice dry sweep or squeegee techniques first and use hoses as a final rinse if necessary.



### Food service hose nozzles

Food service hose nozzles provide a convenient and water efficient way of rinsing off dishes prior to dish washing. They have a designed spray pattern to remove food scraps with little water; and are trigger operated to shut off when not in use.

### Spring loaded taps

Spring loaded taps automatically shut off when the tap is released, and are effective for public facilities such as drinking fountains and beach facilities, where taps could be left running.

### Push button taps

Push button taps have the advantage of delivering a preset amount of water then shutting off. This prevents water wastage when taps are left running, and is more hygienic as once the hands are washed there is no need to turn off the tap. They can also be used for public showers to deliver a preset amount of water. Thermostatic valves can be plumbed in to deliver warm water; thereby ensuring user comfort.

### Infra red sensors

Infra red sensors detect the presence of a user and deliver water whilst the user's hands remain the beam. thermostatic mixing valves can be plumbed in to deliver warm water; ensuring user comfort.

Infra red sensors can also be installed to flush urinals on a preset basis, typically based on several visits before flushing, thereby saving water.