

Resilient Building Toolkit Adaptation Measures Factsheet

Name and description of measure: Water efficient taps & shower heads

Water Efficient Taps. In commercial premises around 25% of 'domestic' water is used when operating taps. To reduce this, water efficient taps can be brought as a unit or can be retrofitted; there are 3 main types of taps that can also be retrofitted. These are;

- Aerated taps – come in various sizes and flow rates.
- Flow regulated taps (as above).
- Auto stop taps (e.g. percussion or push button) -release limited amount of water per use and close automatically.

Water efficient shower heads. Traditional showers typically use between 12 and 16 litres per minute. Water efficient shower heads save water and energy by restricting the water flow, but whilst still maintaining the pressure. Shower heads come in two types; aerating (mixing restricted flow of water with air) or non-aerating (restricting water flow through squeezing it through very small holes), and are available as hand-held or fixed models (They deliver between 3 to 1.5 gallons per minute at the same pressure as older shower heads) These are most effective on power and mixer showers with a high flow rate.

Cost of measure (high, medium or low):

Low – medium.

Pros and Cons:

Aerated taps

Pros

Water savings of up to 10 litres/min.
Retrofit option available.
Flow rate reduced to 2.5 - 8 litres/min.

Cons

Not effective at pressure < 1 bar.
Standard aerators do not regulate pressure.

Flow regulated taps

Pros

Water savings of up to 10 litres/min.
Can be used as an isolating valve.
Retrofit available.
Cheap and easy to install.

Cons

Orifice may block with scale build-up.
Does not regulate pressure.

Auto stop taps

Pros

Retrofit available.
Automatically closes after use.
Savings can vary.

Cons

Delay cycle needs to be set correctly.
Mechanism can jam (hard water can be a contributor).
Payback period can be 2 - 3 years.

Water efficient shower heads

Pros

Reduced water consumption.

Reduced electric/gas bill as less water is heated.
Easy to install and fit.
Low cost.

Cons

Reduced water pressure.
Not all shower heads are the same, so can end up using more water due to the water pressure.

Effectiveness of measure (high, medium or low):

Medium- high.

Photos:



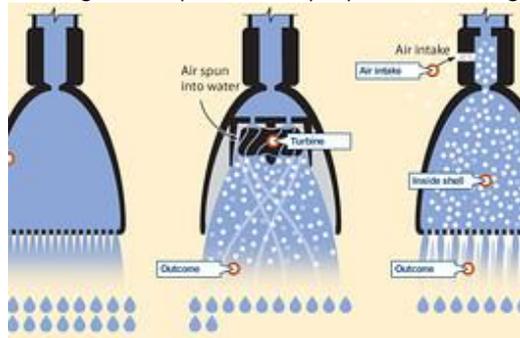
Flow regulated tap

Auto stop tap

Aerating shower head

Non-aerating shower head

Low flow shower head



Water flow restrictors can be installed in the shower head reduce the amount of water being used

Product review site:

WRAP – reducing water in washrooms: taps and other measures -

http://www.wrap.org.uk/sites/files/wrap/EN664_v5.pdf

Waterwise - <http://www.waterwise.org.uk/pages/save-water.html>

Which website review - <http://www.which.co.uk/energy/creating-an-energy-saving-home/reviews-ns/water-saving-shower-heads/>

Additional information:

The Enhanced Capital Allowance (ECA) scheme is managed by the Defra and HM Revenue & Customs, (HMRC) in partnership with AEA Technology, who manages the scheme on behalf of Defra. It lets businesses claim 100% first year allowances for new water efficient technology and equipment (i.e. tax relief, on investments in certain technologies and products), including water efficient taps, toilets, monitoring equipment and industrial cleaning. Used or second hand machinery does not qualify for the scheme.

For more information, on the ECA scheme and water efficient products see link below -

<http://www.hmrc.gov.uk/capital-allowances/fya/water.htm>

There are also packs which can be purchased to retro fit taps to make them aerated -

<http://bathroom.savewatersavemoney.co.uk/buy/tap-inserts-twin-pack/744>

Link to case study:

Westminster hotel case study:

<http://www.wrap.org.uk/content/water-efficiency-case-study-park-plaza-westminster-bridge-london>