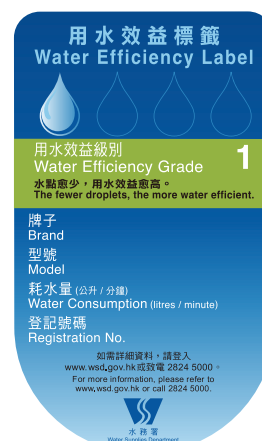


## Water Efficiency Labelling Scheme (WELS)

The voluntary Water Efficiency Labelling Scheme (WELS) launched in September 2009 is a water conservation initiative of the HKSAR Government. WELS will cover the common types of plumbing fixtures and water-consuming appliances. Products registered in WELS shall incorporate a water efficiency label that informs consumers of the level of water consumption and water efficiency in order to help consumers to choose water efficient products for water conservation. WELS is being implemented in different phases. The first product implementing WELS is shower for bathing, which is followed by water tap, washing machine, urinal equipment, flow controller and water closet.







The water efficiencies of the products under WELS are rated to different grades according to their types and water consumptions. Grade 1 is the most water efficient whereas grade 4 is the least water efficient.

Water efficiency grading tables for showers for bathing, water taps, washing machines, urinal equipment, flow controllers and water closets are listed below.





### - Showers for bathing

Conversion of Nominal Flow Rates to Water Efficiency Grade for Showers for Bathing





Nominal Flow Rate : $f$ (litres/minute)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$f \leq 9.0$	Grade 1	1 water droplet 
$9.0 < f \leq 12.0$	Grade 2	2 water droplets 
$12.0 < f \leq 16.0$	Grade 3	3 water droplets 
$f > 16.0$	Grade 4	4 water droplets 

- **Water Taps**

Conversion of Nominal Flow Rates to Water Efficiency Grades for Non-mixing Type Water Taps





Nominal Flow Rate : $f$ (litres/minute)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$f \leq 2.0$	Grade 1	1 water droplet 
$2.0 < f \leq 4.0$	Grade 2	2 water droplets 
$4.0 < f \leq 6.0$	Grade 3	3 water droplets 
$f > 6.0$	Grade 4	4 water droplets 

Conversion of Nominal Flow Rates to Water Efficiency Grades for Mixing Type Water Taps





Nominal Flow Rate : $f$ (litres/minute)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$f \leq 5.0$	Grade 1	1 water droplet 
$5.0 < f \leq 7.0$	Grade 2	2 water droplets 
$7.0 < f \leq 9.0$	Grade 3	3 water droplets 
$f > 9.0$	Grade 4	4 water droplets 

- **Washing Machines**

Conversion of Water Consumption to Water Efficiency Grades for Washing Machines of Horizontal Drum Type

Water Consumption : $w$ (litre/kg/cycle)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$w \leq 9.0$	Grade 1	1 water droplet 
$9.0 < w \leq 11.0$	Grade 2	2 water droplets 
$11.0 < w \leq 13.0$	Grade 3	3 water droplets 
$13.0 < w$	Grade 4	4 water droplets 











Conversion of Water Consumption to Water Efficiency Grades for Washing Machines of Impeller or Agitator Type

Water Consumption : $w$ (litre/kg/cycle)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$w \leq 16.0$	Grade 1	1 water droplet 
$16.0 < w \leq 19.0$	Grade 2	2 water droplets 
$19.0 < w \leq 22.0$	Grade 3	3 water droplets 
$22.0 < w$	Grade 4	4 water droplets 

- **Urinal Equipment**





Conversion of Water Flush Volume per Cycle to Water Efficiency

Grades for Urinal Equipment under normal or low pressure application

Water flush volume per cycle $f$ (litres/cycle)	Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label
$f \leq 1.5$	Grade 1	1 water droplet 
$1.5 < f \leq 2.5$	Grade 2	2 water droplets  
$2.5 < f \leq 4.5$	Grade 3	3 water droplets   
$4.5 < f$	Grade 4	4 water droplets    





- **Flow Controllers**

Conversion of Water Consumption to Water Efficiency Grades for Flow Controllers for Water Taps and Showers for Bathing

Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label	Water Consumption $f$ (litre/minute)	
		Flow Controllers for Water Taps	Flow Controllers for Showers for Bathing
Grade 1	1 water droplet 	$f \leq 5.0$	$f \leq 9.0$
Grade 2	2 water droplets 	$5.0 < f \leq 7.0$	$9.0 < f \leq 12.0$
Grade 3	3 water droplets 	$7.0 < f \leq 9.0$	$12.0 < f \leq 16.0$
Grade 4	4 water droplets 	$9.0 < f$	$16.0 < f$

- **Water Closets**

Conversion of Water Consumption to Water Efficiency Grades for Water Closets

Water Efficiency Grade	Symbolic Presentation on the Water Efficiency Label	Water flush volume for full flush: $f_F$ (litres/flush)	Water flush volume for reduced-flush: $f_R$ (litres/flush)
Grade 1	1 water droplet 	$4.5 \leq f_F \leq 4.8$	$3.0 \leq f_R \leq 3.2$
Grade 2	2 water droplets 	$4.8 < f_F \leq 6.5$	$3.0 \leq f_R \leq 3.5$
Grade 3	3 water droplets 	$4.5 \leq f_F \leq 6.5$	Not specified
Grade 4	4 water droplets 	$6.5 < f_F \leq 15$	Not specified

For more information, please visit the website <http://www.wsd.gov.hk/en/wels>