



Water and Energy Saving

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Facts

- 2/3 of the earth's surface is covered with water
- Less than 3 % of the total water quantity on earth is fresh water
- Thereof, only 0,6 % is drinkable water
- 1% of drinkable water is actually used for drinking
- 1/3 of drinkable water is flushed down toilets
- Water is an expensive commodity
- Water consumption is increasing
- U.N. Framework Convention on Climate Change takes intergovernmental efforts to reduce the emission of greenhouse gases
- Kyoto Protocol calls for enhancement of energy efficient products

Why water saving?

Energy saving



- Hot water
- Uses gas and electricity
- Very expensive commodities
- Pollutants / emission of CO₂ into the atmosphere

Environmental cost



- Future generations
- Stabilise eco system
- Natural replacement
- Reduce water pumping
- Waste
- Preserve habitats

Monetary cost



- Reduce water cost
- Reduce gas/electricity cost
- Reduce energy cost

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Water Savings Potential

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<u>Water Saving Calculation</u>	Number per Houshold	estimated consumption without Regulation = Full Flow in l/min	use in minutes per person (2 x shower per day)	persons per household	Total consumption per day without Regulation	Reduced Flow Rates with Neoperl Water Saving Devices	Total Consumption per day with Neoperl Water Saving Devices
Shower	1	18	10	4	720	9	360
Wash Basin Bath	1	10	15	4	600	6	360
Wash Basin WC	1	10	5	4	200	6	120
Kitchen	1	12	15	4	720	8	480
					2240		1320
							Total Water saving per day and houshold (liters)
							Total Water saving per year and houshold (liters)

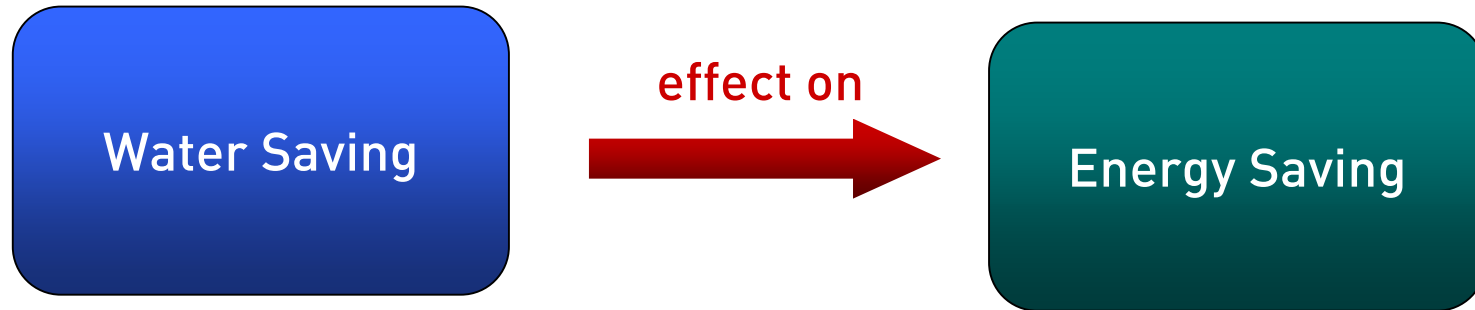
Water saving of 335'800 liter/year = 335.8 m³

Solution

- Select NEOPERL water saving products
- Save precious drinking water !



Energy Saving



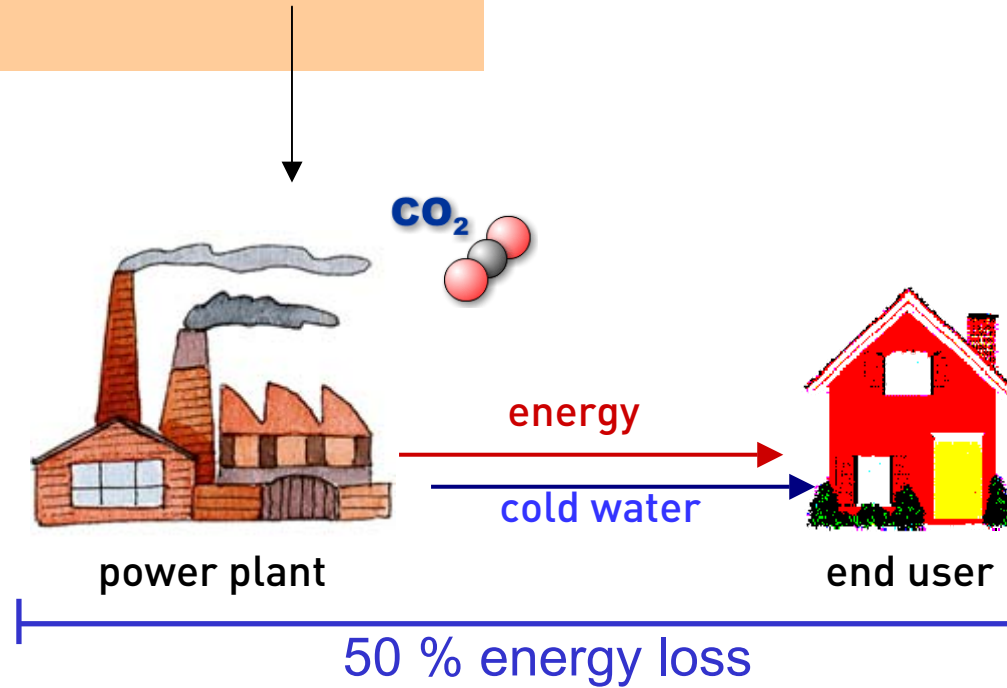
By using water saving products you can help save energy

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Why Energy Saving

Warm water = cold water + ENERGY



Energy production increases CO₂ emission.

Help contribute to global CO₂-reduction by saving warm water.

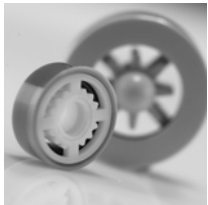
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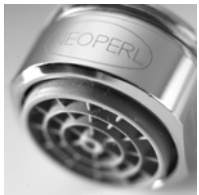


How to save water

NEOPERL offers two major water saving product lines



flow regulators



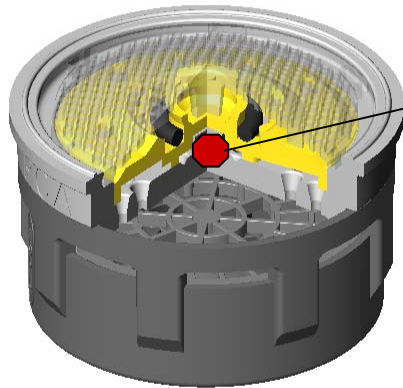
PCA[®] aerators with integrated flow regulators

Calculate your personal annual water savings:

[www.neoperl.net>service>water conservation](http://www.neoperl.net/service/water%20conservation)

CASCADE® PCA® Aerator Composition

With standard aerators, the flow rate rises with increasing line pressure.



Thanks to the unique flow regulator technology, PCA® aerators (pressure compensating aerators) supply - a constant flow rate regardless of pressure fluctuations.

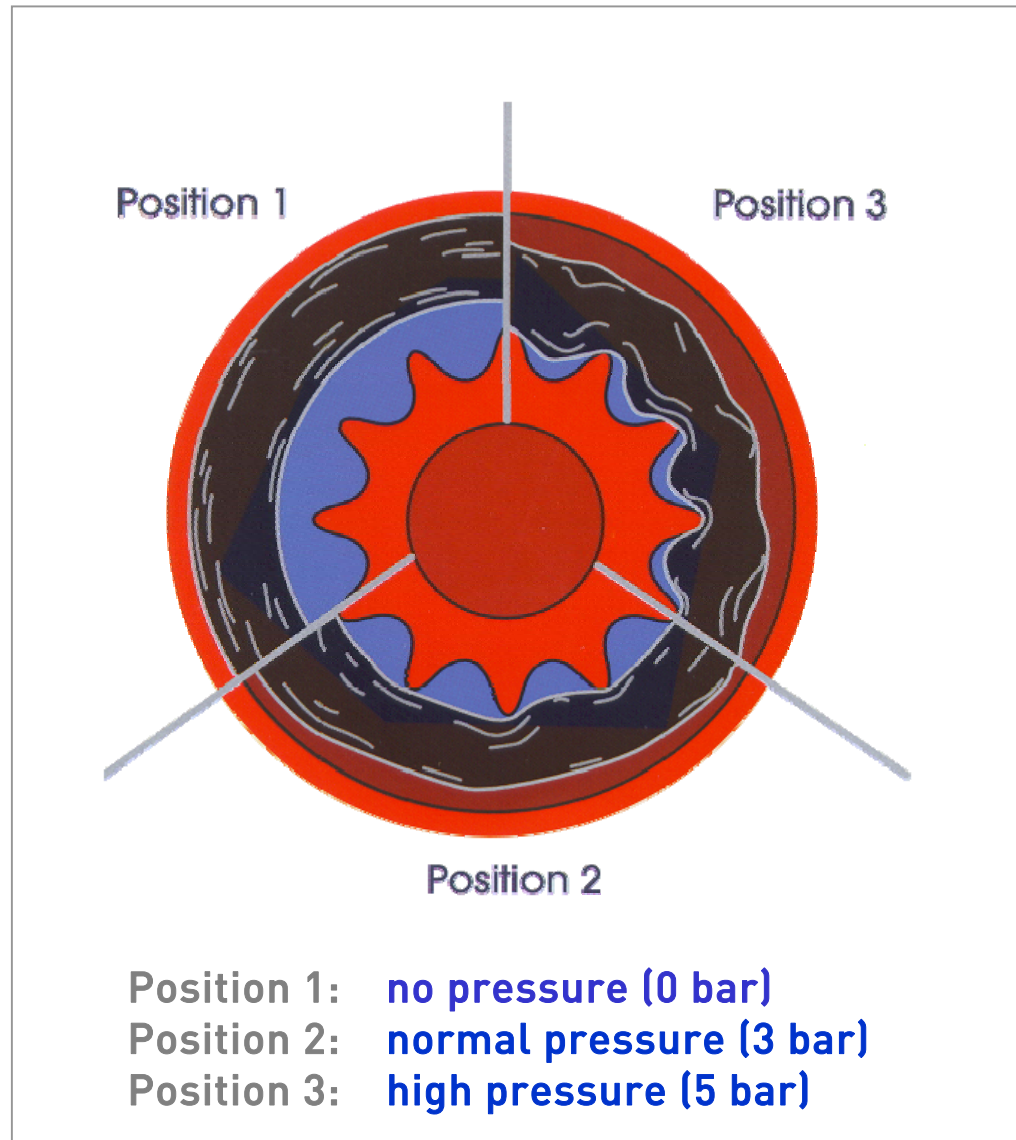
The patented CASCADE® design produces a soft and well aerated water stream



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Flow Regulators Working Principle



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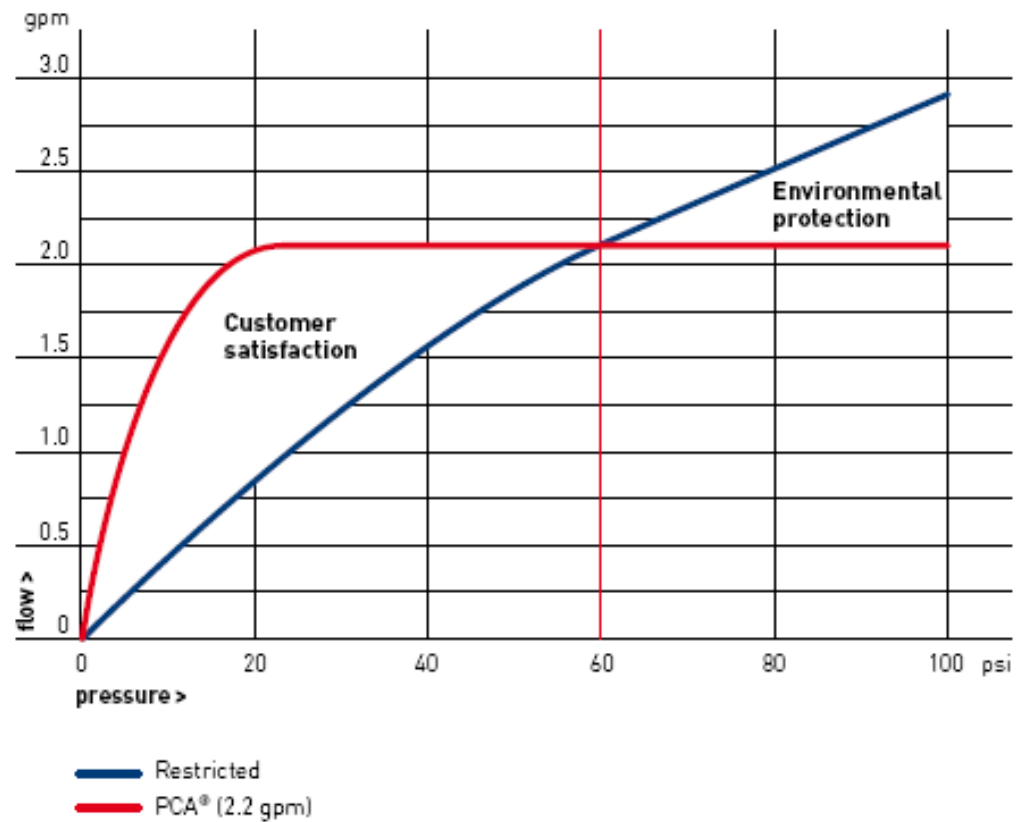
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NEOPERL Flow Regulators

Small investment, great effect

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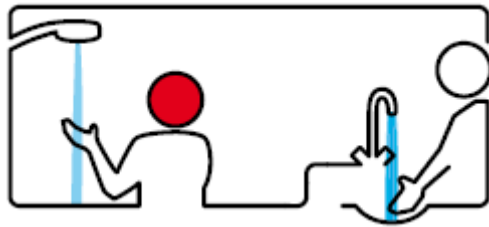
Water Sharing: Application Examples

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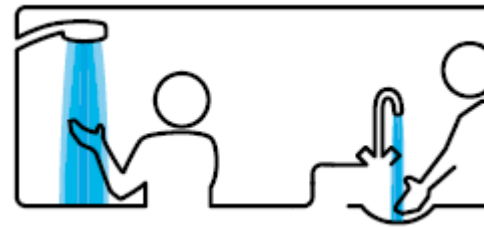
DOMESTIC PLUMBING SYSTEMS

PROBLEM



without NEOPERL® flow regulators

SOLUTION



with NEOPERL® flow regulators

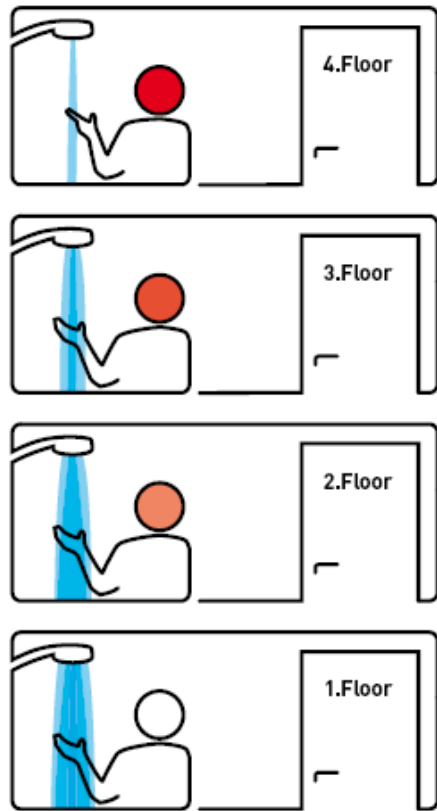
= Water Saving & Convenience

MULTI-STORY BUILDINGS

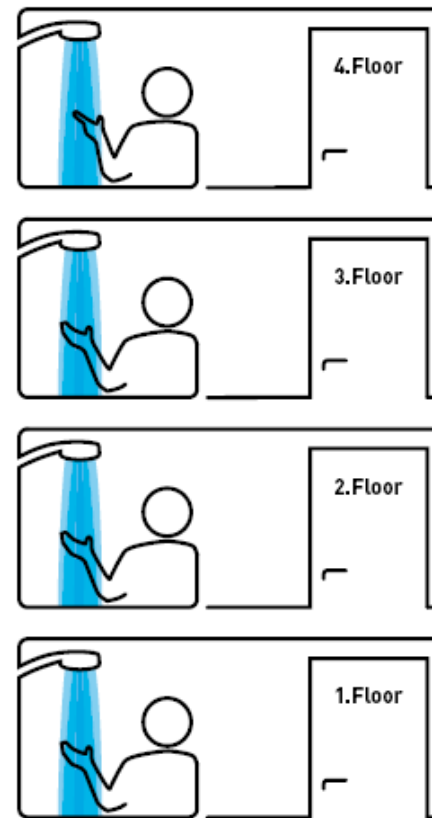
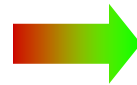
PROBLEM

SOLUTION

HOTEL



without NEOPERL® flow regulators



with NEOPERL® flow regulators

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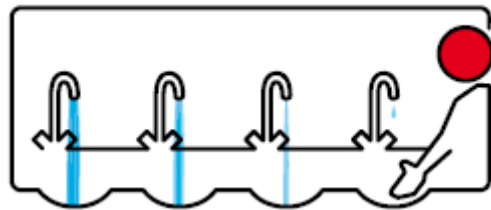
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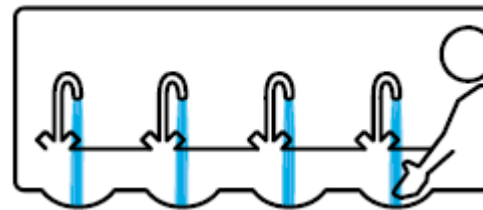
COMMERCIAL AND INSTITUTIONAL INSTALLATIONS

PROBLEM



without NEOPERL® flow regulators

SOLUTION



with NEOPERL® flow regulators

PCA® CASCADE® SLC Aerator Water savers for the washbasin

Small investment – great effect

Proven and reliable NEOPERL technology
Save energy and water at the washbasin without loss of comfort



- Constant flow rate independent from the line pressure
- Controlled water distribution
- Damage proof: the CASCADE® SLC structure cannot be crushed -> protected investment
- Superior lime resistance -> extended life
- Verified by an independent ecological institute:
“excellent with respect to water saving”

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Water savers for the shower

Custom-designed flow regulators for your shower head

Proven and reliable NEOPERL® technology
Save energy and water in the shower



- Save water without loss of comfort
- Combined flow control and backflow prevention possible
- Suitable models for standard shower heads available
- Customized solutions for any shower head design

NEOPERL® PCA® SPRAY Water Savers

Small investment - Huge savings

Recommended for application in in-line lavatory faucets
(public bathrooms exposed to walk-in traffic)









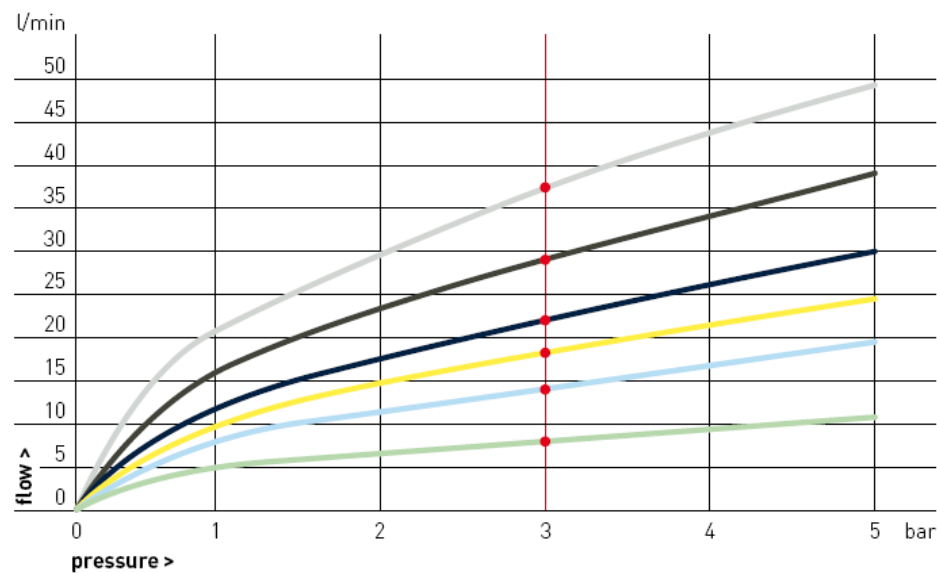
- Supplies all outlets evenly with water
- Provides a non-splashing, non-aerated spray
- Integral anti-clogging dome screen filters sediment and particles
- Extremely high water saving potential

European Flow Rates Overview

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Flow rate class	Flow rate range per l/min	Dynamic pressure
Z 	7.5-9.0 l/min	3 bar
A 	13.5-15.0 l/min	3 bar
S 	18.0-19.8 l/min	3 bar
B 	22.8-25.2 l/min	3 bar
C 	27.0-30.0 l/min	3 bar
D 	34.8-37.8 l/min	3 bar

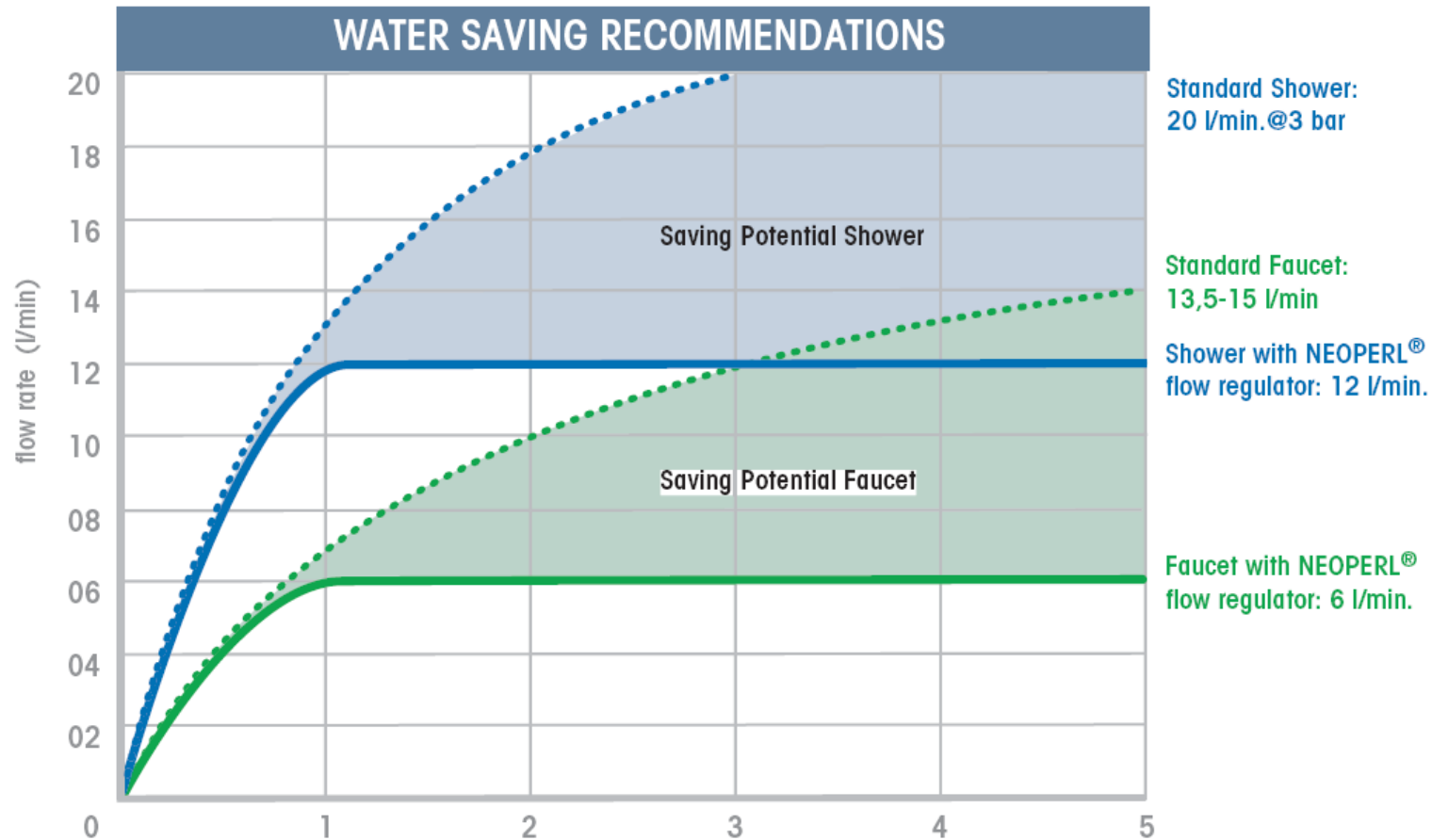


International Standards and Requirements

Europe

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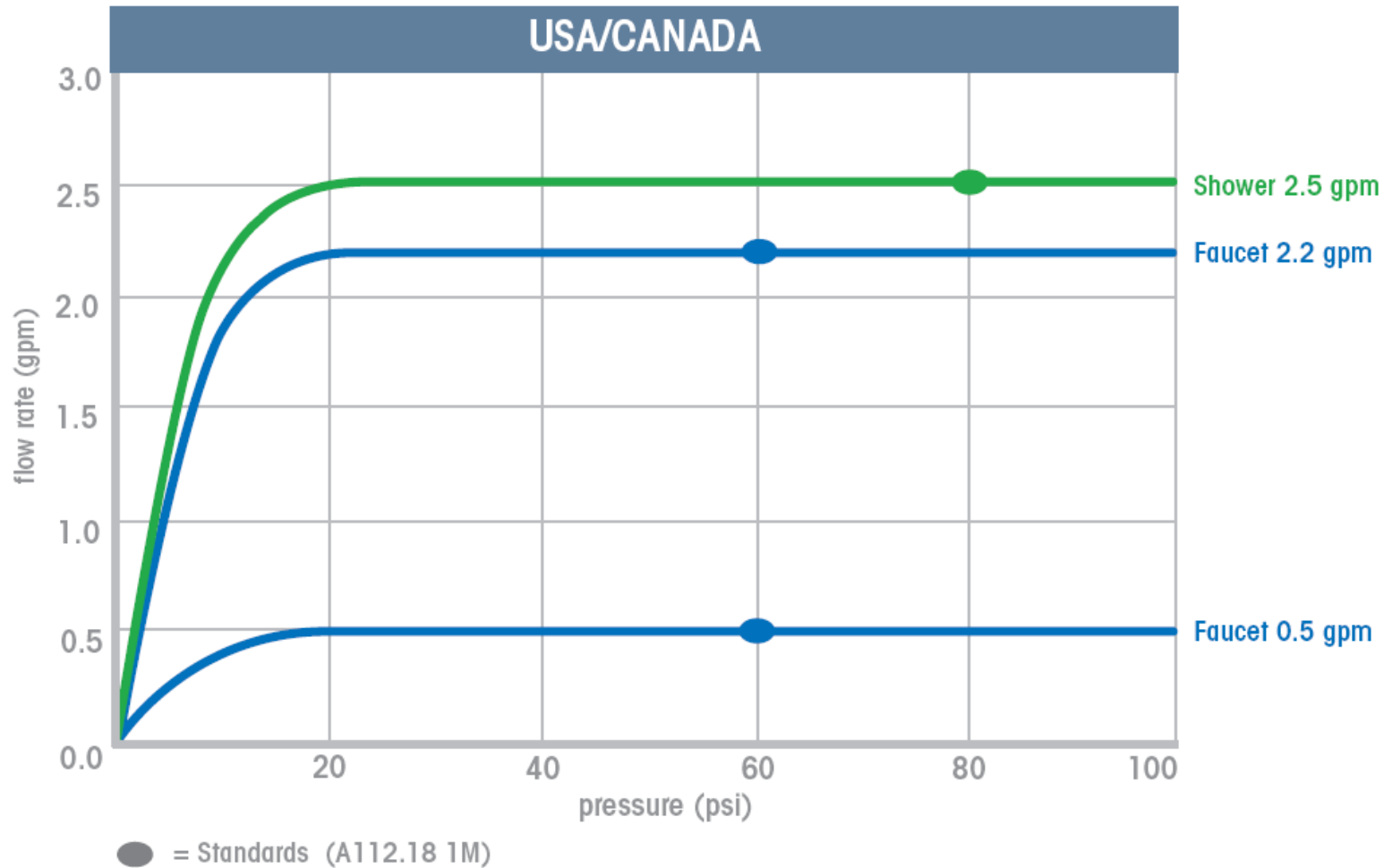


International Standards and Requirements

USA / Canada: ANSI/ASME A112.18.3+ 18.1 M, CSA B125

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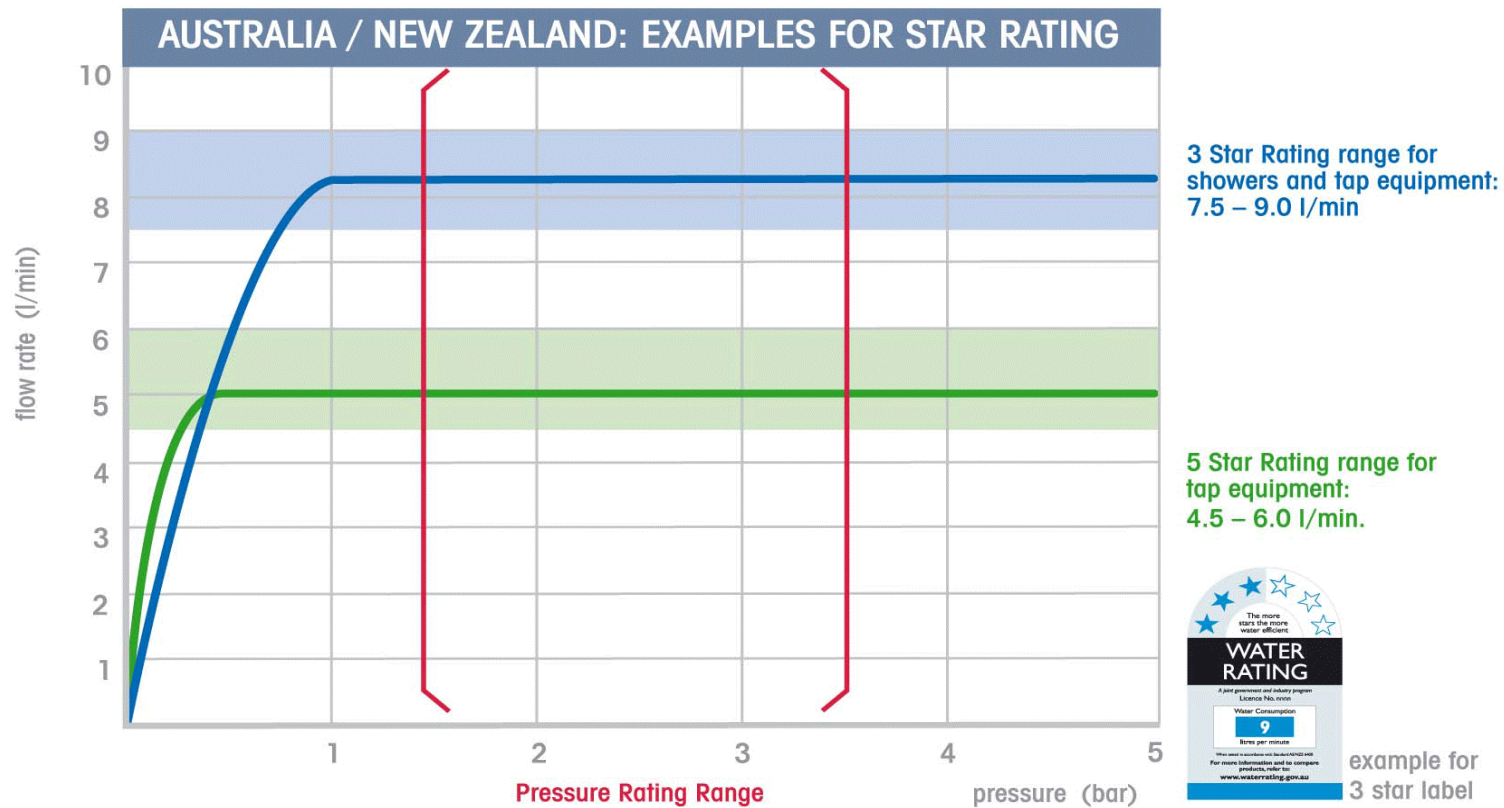


International Standards and Requirements

Australia/New Zealand: AS/NZS 6400, 2005:
Water Efficient Products – Rating and Labelling

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References

WELS: Water Efficiency Labelling and Standards Scheme
For product listings refer to www.waterrating.gov.au



LEED®: Leadership in Energy and Environmental Design
NEOPERL products listings are available at www.csa-international.org, www.nsf.org and www.ul.com



ENEL: World's third largest power /electricity provider with
Italian origin is a NEOPERL customer

