

KLUDI
RAK

Water Saving System



"We Stand for Water Saving"

KLUDI RAK Water Saving System

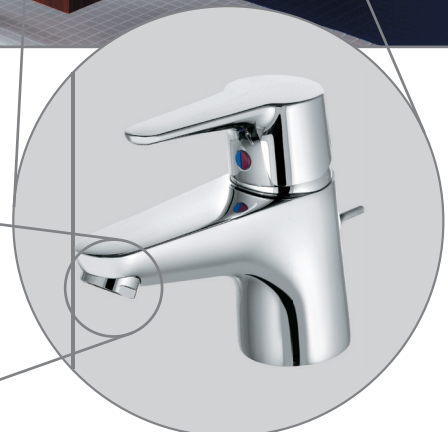
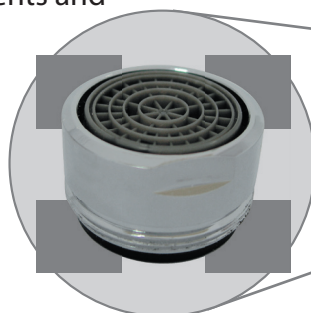
The Idea of the system depends on controlling the water pressure at the water outlets. Units are installed at the water outlets controlling the pressure to enforce fixed pressure. It admits fixed water flow of 6 Litre/Minute at pressure 1 to 10 Bars.

An aerator is a key component in the overall performance of a faucet. Here is what should be expected from your aerator:

- w Provide optimum performance at the prevailing line pressure in your country
- w Control stream straightness and diameter
- w Reduce splash with aerated or laminar flow streams
- w Save water and reduce energy costs

Features & Benefits

- w Superior Lime Protection
- w Extended Life
- w Perfect stream quality under difficult flow conditions.
- w Damage proof: Unlike conventional wire mesh this cannot be crushed.
- w Integrated anti-clogging dome screen filter sediments and particles.



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The first trial to regulate the water flow

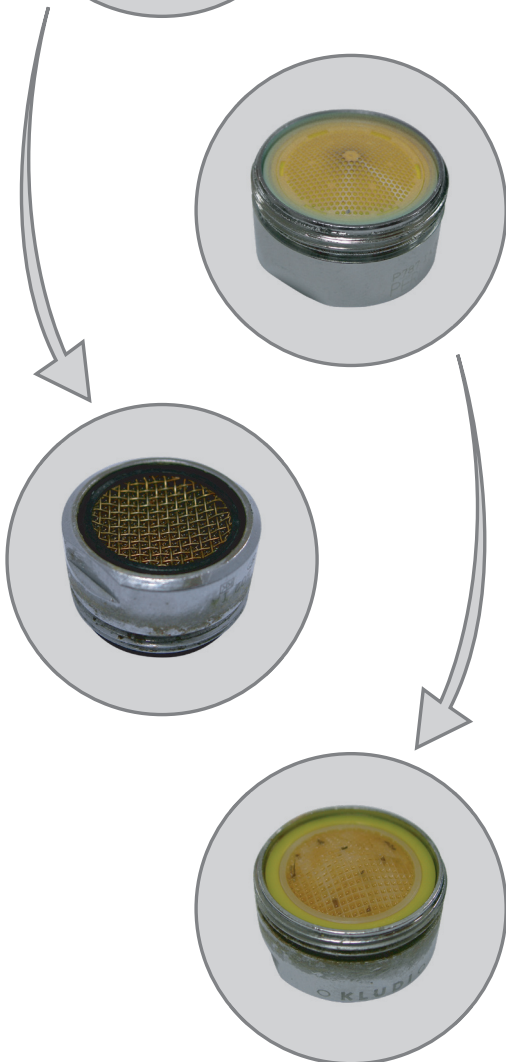
- w Part has been designed to be fixed at the mixers outlets to stop water splashing.
- w It doesn't save water.
- w When it is used, the water flow reaches its maximum level according to the water pressure in the building.

First trial to save water using Aerator

- w The Idea is to mix air with water to decrease water flow rate since this decreases water flow, while weak water flow is not felt.
- w The water flow rate is between 12 -14 Litres/min, when the pressure is between 1 to 3 bars.
- w The water flow rate increases when the water pressure increases(Ejective Relation)
- w It is composed of wire-mesh + plastic broached piece + rubber ring + Housing from brass.

Comparison after one year of usage

- w As it is made of regular steel (not rust resistant), it has a very short life time.
- w It becomes after a short period rusty, full of bacteria and lime.
- w It is safe place for germs and bacteria mixing with the used water.



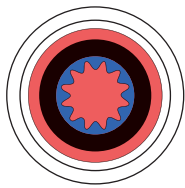
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Pressure Compensating Aerator:

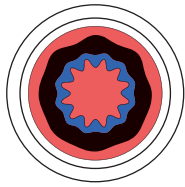
With the standard aerators the flow rate of water goes up as the pressure increases. The pressure compensating aerators produces a constant out-flow of water regardless the in



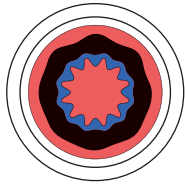
Working Principle:



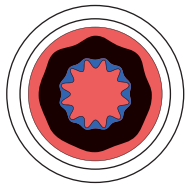
No Pressure: The O-Ring is relaxed. No flow.



Low Pressure: The O-Ring is subjected to low pressure, resulting low compression of the O-Ring, which reduces the water flow rate.



Normal Pressure: When the pressure increases, the O-Ring is more compressed and reduces the water passage.



High Pressure: When the pressure increases to a high, the O-Ring is compressed and further reduces the water passage.

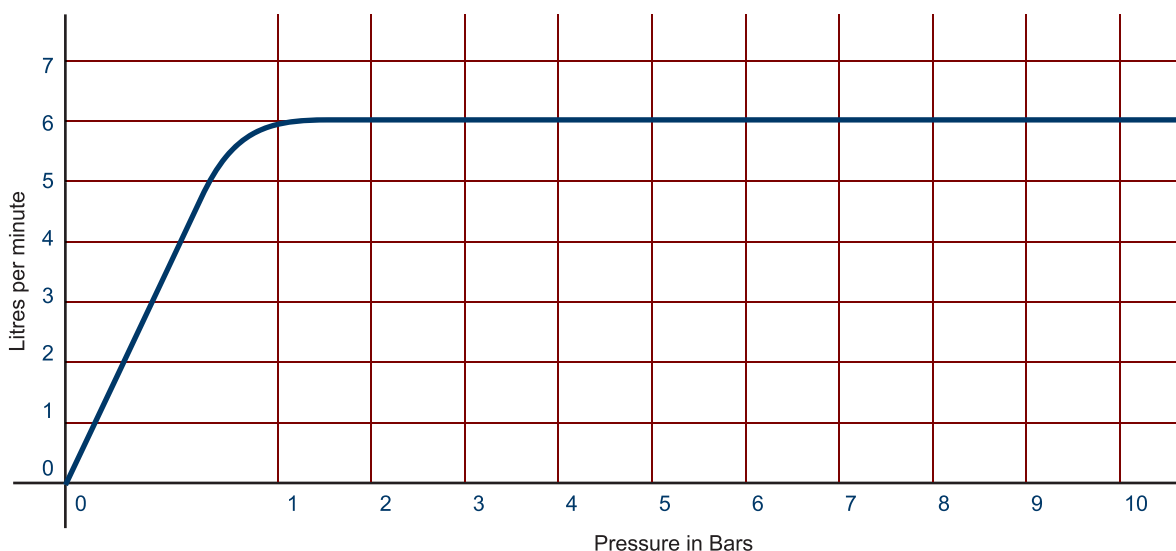
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Features & Benefits



- w Maximum lime resistance
- w Maximum lifespan
- w You can rub the line away with a finger, and you will get the faucet stream straight and soft
- w No need to disassemble the aerator for cleaning
- w Perfect stream quality even under different flow conditions
- w Very low noise level
- w Damage proof: unlike sonventional wire mesh screens, it can't be crushed
- w Integrated anti clogging dome screen filters sediments and particles.
- w Constant flow rate of 6 Litres/Minute with irrespective of input pressure

Graphical Representation of the Flow Rate at Different Pressures:



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Flow Regulator:

Flow regulators are used to maintain a defined flow rate regardless of pressure variations of the supply line.

This consists of a dynamic elastomer, an engineered circular seating area (core) and a body (housing). The gap between the core and the elastomer is the opening passage for the water flow. The core openings can be on the inside of the elastomer or on the outside of the elastomer.



Working Principle:

No or Low Pressure (0 Bar)

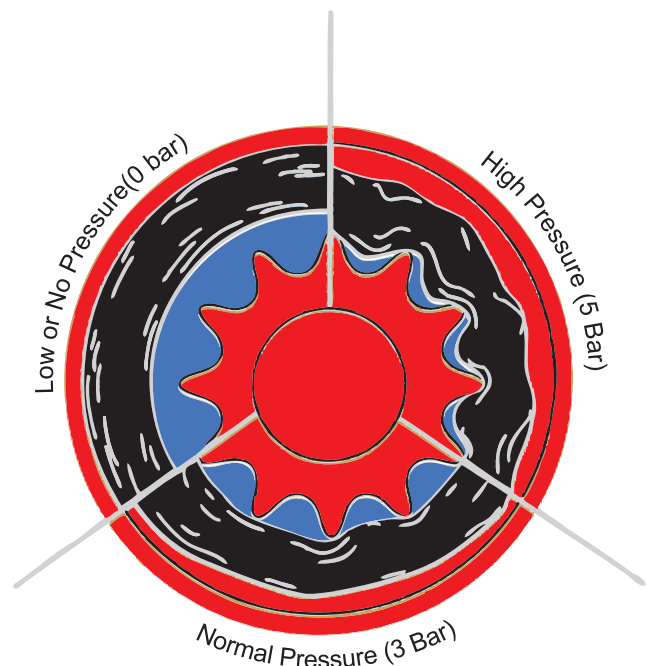
The pressure is 0 bar, the O-ring is relaxed

Normal Pressure (3 Bar)

The pressure is 3 bar, the O-ring is subjected to pressure and compressed into the seating area which reduces the water passage.

High Pressure (5 Bar)

The pressure increases and the O-ring is subjected to more pressure therefore it is further compressed and hence reduces the water passage.



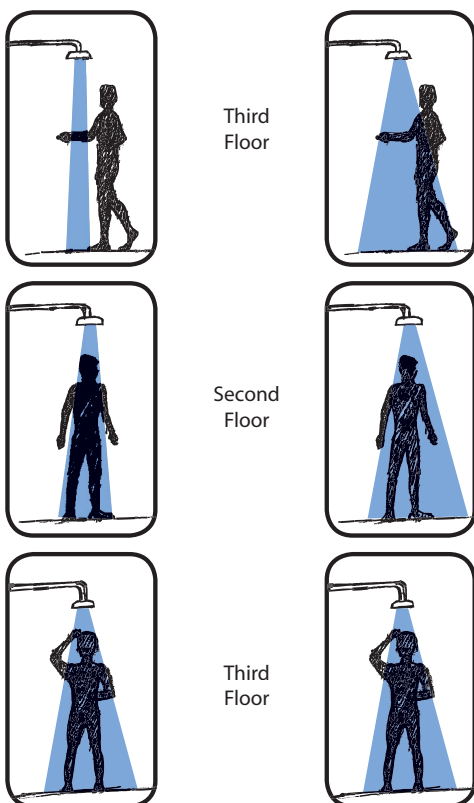
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Features & Benefits

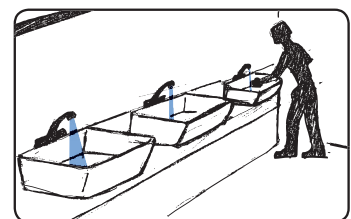
- w The unique flow regulator technology keeps the flow rate constant, independent from the line pressure. Consequently, the use of flow regulators not only save a lot of money, but also guarantees an even water distribution.
- w To meet code and standard requirements flow regulators are inserted into shower heads and shower hand spray. In commercial and institutional installations (multiple faucets supplied by a single hot/cold water system), flow regulators improve the distribution of water and help save water and energy.

Vertical Water Distribution in a Multi-Storied Building : Solution



Horizontal Water Distribution: Solution

Without Flow-Regulator



With Flow-Regulator

