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Editorial

Sustainability of Water Conservation Gadgets for Modern Styled Era

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Using less water doesn't always mean doing without. We can easily cut back without changing our lifestyle, by simply changing our slapdash towards water and by installing water-saving devices. Today, consumers are shifting their focus from conventional gadgets of water usage to modern water saving gadgets like air assisted flush, air assisted shower, flow limiting taps, sensor taps, instant water heater, and from loading washing machines. By selecting and installing these water-saving devices and appliances, one can reduce water consumption, especially in newly constructed homes. In existing homes, one can modify the water fixtures in place to.

Water Flow Restriction Devices

These devices detect and shut off the supply to burst or leaking pipes automatically. It monitors the complete water system day and night and shuts down the supply if a leak is detected. It works on a system that monitors the duration of flow every time water is used, and flow automatically stops on reaching a pre-selected maximum flow time. It's a battery operated device that monitors water supply 24 hours a day, 365 days a year. It allows water to be used normally, but if a leak or abnormal flow is detected, it cuts off the water supply instantly saving one from irrational water wastage and water bills.

Bangalore-based MV instruments have introduced the water level control unit. This is an electronic device, which is electrically connected to the pump set motor. Once connected, it automatically switches on or off the pump set motor depending upon the water levels in the overhead tank and underground sump/well/bore well. The systems work on the basis of low voltage signals to sense the water level in tanks. Sensors are placed at the required levels in the tank, so when water reaches particular set levels, a signal is transmitted to the water level controller unit and the pump set motor automatically switches off.

Tap Flow Regulators

The tap flow regulators reduce the flow of the average washroom tap from current per unit flow to an adequate flow capacity. This brings the individual taps up to their optimum flow and efficiency, saving in excess of 50 per cent of water without compromise on hygiene standard.

Shower Flow Regulators

Shower flow regulators are designed to prevent water wastage from showers that discharge flow rates far in excess of the rates required for them to perform. Its flow can be customized according to water flow requirements i.e. approximately 6 litres/min for wash hand basins and 8 litres/min for domestic sinks.

Flow Limiting Devices

These valves are simple, inexpensive, reliable, self-cleaning and easily installed. It is available in various flows ranges from 0.2 litres/min and above. Flow limiting valves are low cost automatic valves that are factory set to the maximum limit of flow chosen by the customer and will not exceed even with high pressures, since they adjust themselves automatically as pressure fluctuates throughout the day. They can be used in a number of applications such as sinks, showers, water heaters and coolers, appliances that use water, pumps, sprinklers, and water-cooled machines.

Aerators

The aeration process is used in designing taps and showers to expand the water droplets with air, allowing total volume flow to be reduced without the end user perceiving it. This means that the

substantial water savings can be achieved (and associated water heating costs) without compromising the cleaning performance or end-user satisfaction.

Flush Control Devices

Using water displacement devices can restrict flush water flow. The device is placed into the cistern; it saves a minimum of one litre of water with each flush. Once immersed in water the contents of the perforated sachet absorb water and swell to occupy a one-litre space within the cistern. This device enables the use of minimum quantity of water that is necessary for each flush. CERA has launched India's first twin action coupled water closets with a view to conserving precious water resources. The twin action closets have two knobs on the cistern. The user can press the smaller knob for a half flush and the bigger knob for a more substantial flush, depending upon the need. A half flush will discharge 3 litres of water and a full flush will discharge 6 litres. The discharge quantities are adjustable. This innovation from CERA comes with a very nominal extra cost. Internationally, twin flush systems are in vogue, the objective being limiting the quantity of water being used to the extent that is required – and not a drop more. CERA hopes that in India too, as more people become aware of the need for conserving water, they will switch to twin action flush systems, in the near future.

Self-Closing Taps

These are reliable water gadgets that reduce water consumption. This mechanism automatically shuts off taps when it is not in use and avoids flooding. Pressing the tap down induces water flow. Once the pressure is off the taps it shuts off again, thus preventing water wastage.

Point-of-Use Water Heaters

Installing separate units beneath the kitchen and bathroom sinks delivers instant hot water and also saves water and electricity. One doesn't have to run the tap and wait for the water to get warm.

Sensor Systems

These systems help in flushing urinals only when the infrared sensor detects a user. These sensors are generally battery powered for easy installation. Sensors help in conserving water by preventing unnecessary flushing when the washroom is empty. It maintains hygiene standards by flushing every 24 hours if the wash room is unoccupied for long periods. It can be set to flush at regular intervals. Jaguar & Co Ltd has introduced sensor taps in the country. Popularly known as intelligent taps, Jaguar sensor taps on and off automatically. They use the world's foremost sensor technology from Aquis for automatic flow control and are fitted with special advanced microchips. Jaguar sensor taps are not only convenient and hygienic but also act as an excellent water pressure. Function like distance and timing can be easily set with a remote.

Conclusively its front forwarded that there are widespread ranges of gadgets available for water conservation (Courtesy: Vashisht, S. Water & You, April-June 2006, New Delhi).