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Ultra-sonic nozzle to clean water!

London: British scientists say they have come up with a revolutionary ultra-sonic attachment for taps, which massively purifies water. A team at the University of Southampton has developed the device which works with cold water, minimal additives and consumes as much electrical power as a light bulb. In fact, its applic



ation will be wide as the technology consumes less water and power than the established competitor technologies.

“Society runs on its ability to clean. Ineffective cleaning leads to food poisoning; failure of manufactured products such as precision watches and microchips; and poor construction – from shipbuilding to space shuttles – since dirty surfaces do not bond. “The impact in healthcare is huge – hospital-acquired infections, from instruments that aren’t properly cleaned.



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There’s a very obvious need for technologies that improve our ability to clean while saving on our most important resources, water and energy,” Prof Tim Leighton, who led the team, said. Now, the team hopes to develop products based on the ultrasonic nozzle which can fit on the end of a tap or hose.

The device uses less water and power than the equivalent pressure washer and is also far less damaging as the stream pressure is less than 1/100th that of a pressure washer. Another advantage is that it generates far less runoff and aerosol (tiny atmospheric particles of water that can carry contaminants into the air to then settle and contaminate other surfaces). As it is able to use cold water, energy is saved on heating water, say its developers.

The new nozzle generates both bubbles and ultrasound. Both travel down the water stream to the dirty surface and there the bubbles act as microscopic “smart scrubbers” seeking and entering crevices to remove dirt there using shear forces in the same way that currents in a babbling brook can strip off riverbank soil. The device can be used at a high-power and a low-power setting – the latter being suitable for delicate products like hands and foodstuffs, say the scientists.