



## Water Heaters

India with its favorable demographics and the growing adoption of advanced technologies represents an attractive market for water heaters. With a growth of 5 percent registered last year, the domestic market in 2010 is estimated to be 1.7 million units, at a value of ₹600 crore.

Although electric, gas, and solar water heaters are all available, the Indian consumer has a preference for electric water heaters, which with a commanding 65 percent of the value market share, dominate the market with sales of ₹470 crore. Solar heater sales are estimated at ₹95 crore (15 percent) and gas water heaters at ₹63 crore (10 percent).

Racold, Bajaj, Venus, V-Guard, and Crompton Greaves together account for more than 60 percent of the market. Other aggressive players are Haier, Kenstar, Symphony, Usha and AO Smith (marketed by Jaguar), Remson, Thermoking, Inalsa, Havells, and Spherehot.

The growth of new dwellings has brought in opportunities. It has been doing well with the real estate developers offering geysers as a standard fixture in bathrooms and kitchens. Water heating has emerged as a proven way to reduce customers' environmental footprint and water heating costs while hedging against volatile energy prices. Consumers are conscious about star ratings and select models with a higher star rating. The

companies are offering more energy-efficient models with innovative features such as intelligent timers and remote control. The inner tank material is being transitioned from copper to polymer-coated materials, leading to better corrosive-resistant materials, giving a more energy-efficient and durable product. These aspects still need to be communicated to the customer in an effective manner.

New product offerings with the latest technology ensure added customer benefits. The anti-bacteria feature has been introduced to meet customer's hygiene expectations. Polymer coating, vitreous coating, and polymer tanks are some of the latest advancements. Technologies such as integrated assembly to maintain specifications and standards without increasing the base price are recent phenomena.

Storage water heaters find favor with Indian customers. They are typically vertical, cylindrical tanks, standing on the floor or on a raised platform. Volume storage water heaters in India are mainly vertical. They are simple heating appliances. A gas water heater is nearly identical to an electric water heater, except that it does not contain the two heating elements, but instead has a gas burner at the bottom, with the chimney running up through the middle of the tank. Solar water heaters (SWHs) supplying hot water at 60 °C to 80 °C use only solar thermal energy and need no other fuel.

Increasingly, the discerning customer is opting for the solar-powered water heater. Solar collectors are installed outside houses, typically on the roof or walls or nearby. Many models are the direct-gain type, consisting of flat panels in which water circulates, heating itself directly. This is inherently more efficient than heating it indirectly via antifreeze and heat exchangers. However, with hard water supplies, direct solar heaters may need lime-scale control.

Environment friendly and efficient compared to traditional water heaters, economics of a solar water heater compares quite favorably with that of an electric water heater, while the economics is not quite so attractive when compared with that of a gas water heater. Solar heating has long-term benefits, such as being cushioned from future fuel shortages, price increase, and environmental benefits.

In order to transform the solar water heaters market in India, the Ministry of New and Renewable Energy (MNRE) has joined hands with UNDP/UNEP/GEF Global Solar Water Heating Market Transformation Strengthening Initiative. Under this project, India aims to achieve an additional collector area by 2012. International Copper Promotion Council (India) is also a partner to this project. The gross potential for solar water heating systems here has been estimated at 140 million sq. m. of collector area. Of this, 40 million sq. m. has been estimated as the realizable techno-economic potential at this stage. A total of 2.6 million sq. m. of collector area has been installed in this country. The achievement so far has been modest compared to the overall potential. However, a reasonable infrastructure has emerged for manufacture and installation of solar water heating systems. A target of 5 million sq. m. has been set for the period 2007–2012 and a goal of 20 million sq. m. for 2020. In the Indian home comfort segment, however, electric water heater continues to reign supreme. ■

*Based on research conducted by TVJ in December 2011*