



BENCHMARK®

ALL IN ONE AIR SOURCE HEAT PUMP

Quality at the forefront of Technology
Safety features you can Trust
Service you can count on
WE REDEFINE BENCHMARK

Benchmark excels in providing simple installations to customized
Water Heating Solutions to discerning buyers.
Be it Heat Pump, Gas, Solar or Electric an amalgamation of technologies.
No wonder why our customers Trust Us
when it comes to providing Hot Water Solution.



Setting new quality standards

About Benchmark

Promoted by professionals with over two decades of experience, Benchmark Agencies Pvt Ltd commenced operations in 2004 with the objective of providing world class Water Heaters suitable to Indian conditions and great value for money to consumers.

Benchmark has emerged as innovator and system integrator for large residential, commercial and industrial Hot Water Solutions. Gas, Electric, Solar, Heat Pump and now customized hybrid water heating solutions have now propelled Benchmark as India's leading Water Heater company.

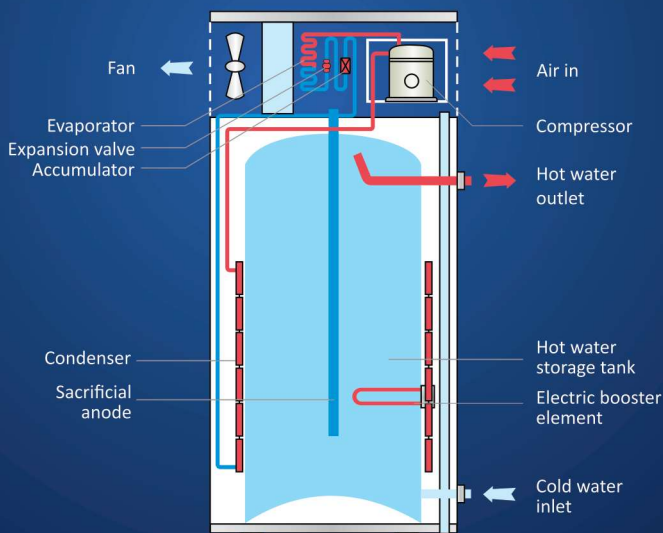
Heat Pump working principle

Benchmark Air Source Heat Pump is a water heater that sources the heat from the air to heat water. Working principle is based on the Reversed Carnot Cycle. Usually, a Heat Pump water heater has four main components: evaporator, compressor, condenser and expansion device. The refrigerant is the medium to connect the four parts. With our technology the liquid refrigerant in the compressor will be pumped into high temperature and high pressure gas by using very little amount of electricity.

Benchmark Heat Pump water heater consumes only $\frac{1}{4}$ electric power compared to regular electric water heater. This way our product is not just saves money by its power saver mode but also is an environment friendly new generation water heater.

Benchmark is also a proud supplier of split Heat Pump, swimming pool Heat Pump and high temperature Heat Pump.

Working diagram



Safety

High voltage protection

Compressor over heating protection

Hot water over heating protection

Refrigerant high pressure protection

Refrigerant low pressure protection

Over water pressure protection

Circuit failure protection



Tank



Compressor



Electronics Parts

How to choose an excellent air source Heat Pump water heater: Key features



New
Micro Channel
Heat Exchanger
Technology

1st time in India

Micro channel heat exchanger

Benchmark has developed external micro channel heat exchanger fitted water tank which avoids direct contact between water and heat exchanger, that helps in preventing scaling problems in hard water regions. This innovative heat exchanger is wound closely on the outer surface of the water tank resulting into increased contact area, higher heat efficiency, making the system more stable and a longer service life. Our variable programming flow technology maximizes the effectiveness of heat exchanger.



Old Technology

- ◆ **Glass enamel tank:** Enamel coated inner tank in the heat pump is manufactured in an international advanced automatic plant, making it the highest quality tank available in the market.
- ◆ **Eco-friendly refrigerant:** R134a is an environment friendly, non-poisonous, non-flammable, non-explosive, non-irritant and non-corrosive refrigerant.
- ◆ **High COP:** Micro channel heat exchanger enhances the surface between inner tank and heat exchanger thus enhances the performance of Heat Pump. The COP of this kind of unit can reach upto 4.28 based on European standard.
- ◆ **Panasonic special compressor:** A special compressor with operating range of -7°C to 45°C.
- ◆ **Low noise:** Benchmark Heat Pumps are specially designed to reduce noise level to as low as 40 to 45dB.
- ◆ **Advanced anode protection:** The anode rod is a highly effective corrosion fighting system which protects internal tank surfaces from corrosive elements.
- ◆ **360° insulation:** Extremely thick and high intensity insulation for better thermal protection.
- ◆ **Controller:** User friendly controller.
- ◆ **Suitable for low temperature environment:** The ambient temperature range for Heat Pump operation is -7°C to 43°C.