



# BENCHMARK®

## 20 YEARS OF EXCELLENCE

### Air to Water Split Heat Pump System

(Refrigerant Based)

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.

Benchmark Heat Pump produces **Domestic Hot Water** thanks to the heat energy naturally present in air, allowing considerable energy savings.

The energy (heat) is transferred from air to water through a condenser coil wrapped outside tank, avoiding any possible contact between the fluid and sanitary water ensuring therefore maximum hygiene and safety



- ✓ Glass enamel coated steel inner tank
- ✓ Micro channel heat exchanger
- ✓ High COP
- ✓ R410a Eco-friendly refrigerant
- ✓ HIGHLY special compressor
- ✓ Low noise level
- ✓ 50 mm PUF insulation
- ✓ Suitable for low temperature environment



5 Year Warranty on Tank



2 Year Warranty on Compressor

*Setting new quality standards*

## 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.

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

- ◆ **1<sup>st</sup> 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.
- ◆ **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:** R410a 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.
- ◆ **360° insulation:** Extremely thick and high intensity insulation for better thermal protection.
- ◆ **Suitable for low temperature environment:** The ambient temperature range for Heat Pump operation is -5°C to 43°C.

REFRIGERANT CIRCULATION SPLIT HEAT PUMP WITH MICRO CHANNEL HEAT EXCHANGER					
Model (Same as Sample )		BMHPRC-1P/150	BMHPRC-1P/200	BMHPRC-1P/300	BMHPRC-2P/500
<b>Heat Pump</b>					
Power supply	V-Hz	220V/1PH/50HZ	220V/1PH/50HZ	220V/1PH/50HZ	220V/1PH/50HZ
Working temp.	°C	-5°C~43°C	-5°C~43°C	-5°C~43°C	-5°C~43°C
Max. outlet Water temp.	°C	60°C	60°C	60°C	60°C
Output Power	W	3360	3360	3360	7200
Input Power	W	800	800	800	1750
COP	W/W	4.2	4.2	4.2	4.11
Rated current	A	3.71	3.71	3.71	8.08
Water Heating Capacity	L/h	75	75	75	155
Max. input consumption	W	1190	1190	1190	2600
Max. input current	A	5.49	5.49	5.49	12
Max. input current in Hybrid mode	A	15	15	15	30
Compressor	Type	Rotary compressor	Rotary compressor	Rotary compressor	Rotary compressor
	Brand	HIGHLY	HIGHLY	HIGHLY	HIGHLY
Refrigerant	g	R410a/800g	R410a/800g	R410a/800g	R410a/1760g
Outdoor noise level (1 meter)	dB(A)	52	52	52	55
Weight	kg	28	28	28	48
Dimension(L*W*H)	mm	765*260*530	765*260*530	765*260*530	800*300*540
<b>Tank</b>					
Capacity	L	150	200	300	500
Working pressure	Kg	8	8	8	8
Electric heater	kw	2	2	2	4
Insulation material/thickness	mm	PUF/50	PUF/50	PUF/50	PUF/50
Inlet/Outlet size	Inch	3/4"	3/4"	1"	1"
T/P valve connection size	Inch	3/4"	3/4"	3/4"	3/4"
Drain connection	Inch	3/4"	3/4"	3/4"	3/4"
Size	mm	450*450*1551	470*470*1795	580*580*1845	710*710*1885
Weight	Kg	48	60	87	135

▲ Testing Condition: Ambient Dry/Wet Bulb Temp.: 20°C/15°C, Water Inlet/Outlet Temp.: 15°C/55°C.

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