



BENCHMARK[®]

20 YEARS OF EXCELLENCE

Split Heat Pump System

(Water Circulation Based)

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.



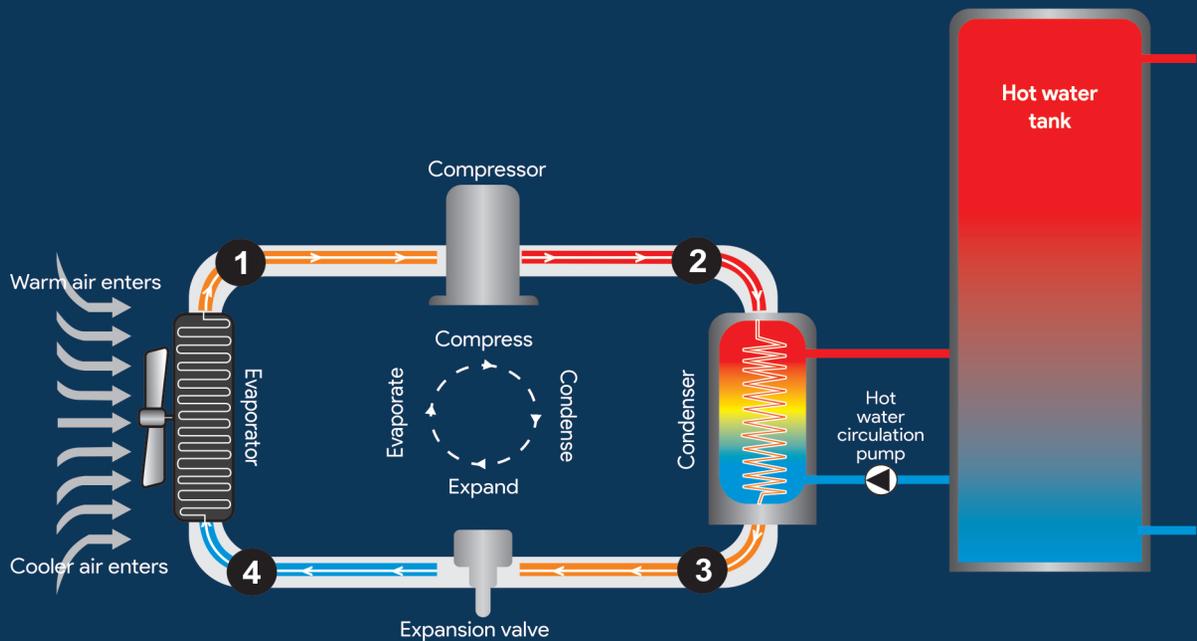
Setting new quality standards

Heat Pump

Benchmark Agencies Pvt. Ltd. began its operation in 2004 with the objective of providing world class water heaters suitable to Indian water conditions and great value for money to consumers.

- BENCHMARK introduces a Fifth Generation series in water heater with an innovative approach involving a creative design – A Heat Pump.
- Ultra-efficient equipment with amazing SEER [Seasonal Energy Efficiency Ratio] of more than 5.0 is the foundation feature of device performance. This reflects in drastic reduction in running cost to $\frac{1}{4}$ of resistive electrical heater, $\frac{1}{3}$ of gas heater and $\frac{1}{2}$ of oil-fired heater
- Using Reverse Carnot Cycle as the principle of operation, the device has inbuilt safety feature and fully protected against electrical hazards like shocks, leakages etc.
- Electricity heats the refrigerant through compression and in turn hot refrigerant heats the water. This arrangement of two-step heating completely isolates water from electrical power and thus provides a totally safe operation.
- Can be used as a source to the single point consumer of hot water or as a centralized source for multiple uses at various out lets in the premises. Multiple applications can be supported like bathing, laundries and dish washing.
- Sturdy construction and durable design with life span of 10 to 15 years of trouble free operation with minimum of maintenance.
- Fully automatic digital control hardware and software to regulate the un-manned operation on 365x24x7 basis for temperature, flow and heat buffering of heat energy.
- Fully supporting the de-frosting phenomenon.
- Eco-friendly with zero ozone depletion layer performance and reduction of greenhouse effect.

Working principle



1. Cold refrigerant absorb heat from the air/water and become warm refrigerant.
2. Warm refrigerant be compressed as hot refrigerant.
3. Hot refrigerant transfer heat to water.
4. Hot refrigerant become cold after expanding.

Latest generation water heater working on the principle of Reverse Carnot Cycle

Highly energy efficient

25% to 30% energy consumption as compared to conventional resistive electric heaters

COP from 3.8 to 4.5

Ideally suited for centralized hot water system, swimming pool and as backup equipment for large solar projects

Economic electric backup for large solar system

Hot and cold water option

World famous components

Copeland & Panasonic compressor

R410a / R 417a - Eco friendly refrigerant

Emerson expansion valve

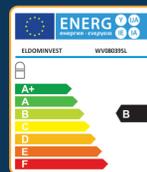
Wilo circulation pump

High efficiency heat exchanger

Multi-function digital control panel

Glass Enamel Tank

- ◆ Consists of hot rolled steel with double internal layer of enamel, processed at 860°C according to DIN 4753 standard.
- ◆ Floor standing model.
- ◆ Magnesium anodes for hard water.
- ◆ Electric tubular heating element produced in Eldominvest using the last generation technology.
- ◆ Thick insulation made of CFC free polyurethane foam, ensuring minimal heat losses and energy saving.
- ◆ Precision thermometer for all models.
- ◆ Water, suitable for drinking.
- ◆ High pressure tolerance.



SVP Hospital
Ahmedabad • 50,000 Ltr.



Sardardham
Ahmedabad • 15,000 Ltr.



Specification							
Heat Pump		BMHP 4.7	BMHP 6.5	BMHP 9.3	BMHP 13	BMHP 19	BMHP 39
Power supply	V-Hz	220V/1PH/50HZ			415V/3PH/50HZ		
Working temp.	°C	-5°C~43°C			-5°C~43°C		
Min. / Max. outlet water temp.	°C	55/60°C			55/60°C		
Output Heating Capacity	KW	4.64	6.5	9.28	13	19	39
Hot water	L/h	100	140	200	280	410	820
Input Power	KW	1.22	1.71	2.45	2.8	4.3	8.47
COP	W/W	3.80	3.80	3.80	4.60	4.40	4.60
Rated current	A	6.3	8	11.3	4	8	15
Compressor / Brand		Rotary / Panasonic			Scroll / Emerson Copeland		
No. of compressor	PCS	1	1	1	1	1	2
Refrigerant		R410a			R417a		
Condenser		Copper tube in shell					
Evaporator		Ultra Gold color Hydrophilic aluminium					
Wire controller		Intelligent & LCD					
Set temp. range	°C	20~60	20~60	20~60	20~60	20~60	20~60
Auto Defrosting Function		Included	Included	Included	Included	Included	Included
Water pump		WILO	WILO	WILO			
Water flow m3		2	2	2	2.5	3.5	7
Outdoor noise level (1 meter)	dB(A)	52	52	52	65	65	65
Dimension(L*W*H)	mm	930x360x560	930x360x560	1000x370x630	710x710x850	810x810x1055	1450x705x1180
NW/GW	kg	50/53	55/58	70/74	100/115	147/170	280/320

▲ Testing condition: ambient Dry/Wet Bulb Temp.: 20°C/15°C; Water Inlet Outlet Temp.: 15°C/55°C.

Tank							
Capacity	Ltr	300/400	400/500	800/1000	1000/1500	1500/2000	2000
Working Pressure	bar	8	8	8	8	8	8
Inner coating		Glass Enamel Coating					
Insulation Thickness	mm	50	50	50	50	50	50
Insulation Material		PUF	PUF	EPS	EPS	EPS	EPS
Inlet/Outlet connection	Inch	1"	1"	1"/1.1/2"	1.1/2" / 2"	2"	2"
Heat Pump circulation connection	Inch	3/4"	3/4"	1.1/2"	1.1/2"	1.1/2"	1.1/2"
Flange	mm	*	*	200	200/400	400	400
Electric Heater Connection	Inch	1"	1"	1.1/2" x 3	1.1/2" x 3	1.1/2" x 3	1.1/2" x 3
Electric Heater	kw	4	4/6	Optional	Optional	Optional	Optional
Power supply	V-Hz	220V/1PH/50HZ					
Rated Courant	A	20	20/30				
Dimension (Ø x H)	mm	650x1500 710x1525	710x1525 710x1900	900x1880 1000x1920	1000x1920 1200x2000	1200x2000 1350x2050	1350x2050
Weight	Kg	89 / 118	118 / 155	210 / 238	238 / 367	367 / 420	420



2 Year Warranty
on Compressor



4 Year Warranty
on Commercial Tank



5 Year Warranty
on Domestic Tank

Benchmark Agencies Pvt. Ltd.

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