SUNNIVA™
Create • Conserve • Sustain

Domestic Series of Heat Pumps

All-in-One Heat Pumps

Monoblock Heat Pumps

Glass-Lined Tanks

www.sunnivaencon.com

About us

Sunniva Encon is a Heat Pump and Chiller manufacturing company based out of Mumbai, India. We have a complete range of HVAC products catering to various industries since 2013 across India with production capacity of 100 machines per month and a focus on service and customer satisfaction. Our machines are well built for Indian conditions.

Vision

To be a world-class heat-pump and chiller manufacturer with all its allied products and services under one roof.

Mission

To be a leading provider of clean technologies in energy conservation, enabling our clients to reduce their carbon footprint with attractive ROI.

Economic Benefits of Heat Pump

Operating cost per 100 liters of hot water

	₹37	₹32	₹23	₹10
	Electric Geyser	**GasBoilers (LPG)**	**Gas Boilers (PNG)**	**Heat Pump**
Efficiency	95%	90%	90%	350%
Heat Required in Kcals	60000	60000	60000	60000
Calorific Value	-	11200	8400	-
Power Required Kilowatt	69.77			69.77
Power Consumption In KWh	73.44			19.93
heat Delivered In per Kg	-	10080	7560	-
Total Fuel Required Kg / Ltrs	-	6.6	8.82	-
Cost / Unit (₹)	10	95	51	10
Total Cost /Day (₹)	734	628	450	199
Total Cost/ Month (₹)	22,032	18,849	13,492	5,980
Total Cost/Year (₹)	264,382	226,190	161,905	71,761

Above Calculations are based on following Data
Quantity of Hot water Estimated (Liters.) 2000; Cold Water Inlet Temperature (20°C); Hot water Temperature (50°C)

All in One Heat Pumps

Applications

Bungalows

Villas

Farm Houses

Description

In an all-in-one heat pump water heater, the heated refrigerant is usually conveyed through a heat exchanger that's wrapped around the outside of the tank, under the insulation. The refrigerant heats the tank by conduction, transferring heat from the condenser coil through the tank shell, to the water inside.

Heat pump is a device in which the refrigerant R134a is continuously changing the shape from gas to liquid. It pumps out the solar energy from the air in the room and together with electrical energy consumed by compressor it gives out the total heating capacity which is accumulated in the water storage tank.

Evaporator is an air-refrigerant heat exchanger. In the evaporator the refrigerant is vaporized at low pressure and relatively low temperature. Because of vaporization the heat transfer from air to refrigerant begins. Vaporized refrigerant comes in the compressor where the pressure increases and so does temperature.

From compressor the vaporized and high temperature steam goes in the condenser (refrigerant-water) where again the heat is transferred from refrigerant to water. The refrigerant is now in liquid shape at a high pressure. After it flows through the expansion valve it reaches the basic shape and the process begins again. The circuit is in process until the water temperature in the water storage tank reaches the set point.

Benefits

- No circulation pump
- No plumbing
- Can operate in as low as -5°C temperature
- Less maintenance
- Can operate with hard water
- Inbuilt electric backup heater
- Low noise operation
- Glass enamel tank
- Easy to operate

Sunniva has selected a water tank equipped with an external microchannel heat exchanger, effectively preventing direct contact between water and the exchanger, thus mitigating scaling issues in regions with hard water. Our pioneering heat exchanger is intricately wound around the outer surface of the tank, enhancing contact area, improving heat efficiency, and ensuring greater stability and durability. Additionally, our innovative variable programming flow technology optimizes the heat exchanger's effectiveness.

Features

High efficiency micro channel heat exchanger

Glass enamel water tank

High efficiency compressor with defrosting

Silent operation

Intelligent control electronic expansion valve

Suitable for all kinds of water

		SE-AH-2-200	SE-AH-3-300	SE-AH-6-420
Rated Volume	L	200	300	420
Inner Tank Material		Enameled steel (2.5mm)		
Outer Casing		Painted galvanized steel		
Insulation		Polyurethane foam, 45mm		
Ambient Temperature	°C	0~45	-5~43	-5~43
Color		White	White	Grey
COP		3.85	4.08	4.08
Power Supply		~220-240V/50Hz/1Ph		
Heating Capacity (W)	W	1600	3300	5300
Rated Hot Water Output	L/H	36	75	118
Max. Water Temp.	°C	75	75	75
Max. Input Power	W	3200	4000	5000
Max. Input Current	A	16	19	23
Rated Input Power	W	415	827	1300
Electric Heater Power	W	2500		
Water Pressure	MPa	0.8		
Noise	dB(A)	≤48	≤45	≤45
Net Weight	kg	114	129	207
Refrigerant		R134a		
Compressor Brand		Panasonic		
Condenser		Micro-channel heat exchanger		
Control Method		Remote display		
Product Size	mm	Ø525 × 1955	Ø650 × 1950	Ø735 × 1006 × 1720

Note: Colour Subject to Change.
All-in-one Heat Pump Models Are Available up to 500 Litres.

Split Heat Pumps
(Refrigerant Circulation)

Applications

- Hotels
- Motels
- Boarding Houses

Description

This heat pump can be connected with the glass lined tank to transfer the heat from the refrigerant to the water. This indirect method of heating the water makes it an ideal choice for hard water.

		Heat Pump			
		SE-RC-3/150	SE-RC-3/200	SE-RC-3/300	SE-RC-3/500
Heating Capacity	KW	3.2	3.2	3.2	7.2
COP		4.1	4.1	4.1	4.15
Rated Hot Water Output	L/H	75	75	75	150
Power Supply		~220-240V/50Hz/1Ph			
Rated Power Input	KW	800	800	800	1750
Rated Current	A	3.8	3.8	3.8	8
Max Power Input	KW	1.2	1.2	1.2	2.6
Max Current	A	5.5	5.5	5.5	12
Compressor		Rotary (Highly)			
Refrigerant		R410A			
Noise at 1m Distance	dB(A)	54	54	54	57
Weight	kg	30	30	30	50
Product Dimensions (L×W×H)	mm	780 x 250 x 550	780 x 250 x 550	780 x 250 x 550	800 x 300 x 550
Tank					
Rated Volume	L	150	200	300	500
Working Pressure	Bar	8			
Insulation		Polyurethane foam, 50mm			
Inlet/Outlet Size	Inch	3/4"	3/4"	1"	1"
Weight	kg	50	60	90	140
Product Dimensions (Dia x Height)	mm	440 x 1600	475 x 1800	580 x 1850	710 x 1900

Testing Condition: Ambient Temp.(DB/WB) = 20°C/15°C, Input/Output Water Temp. = 15°C/55°C

Monoblock Heat Pumps
(Water Circulation)

Applications

Hotels
Motels
Boarding Houses
Back-up for Solar Water Heaters

Glass-Lined Tank

Description

Specifically designed for Indian conditions, these heat pumps comes with inbuilt water circulation pump so we only need to connect the pipes and plug the machine. This range of heat pumps comes with Panasonic rotary compressor for high life.

Inbuilt circulation pump

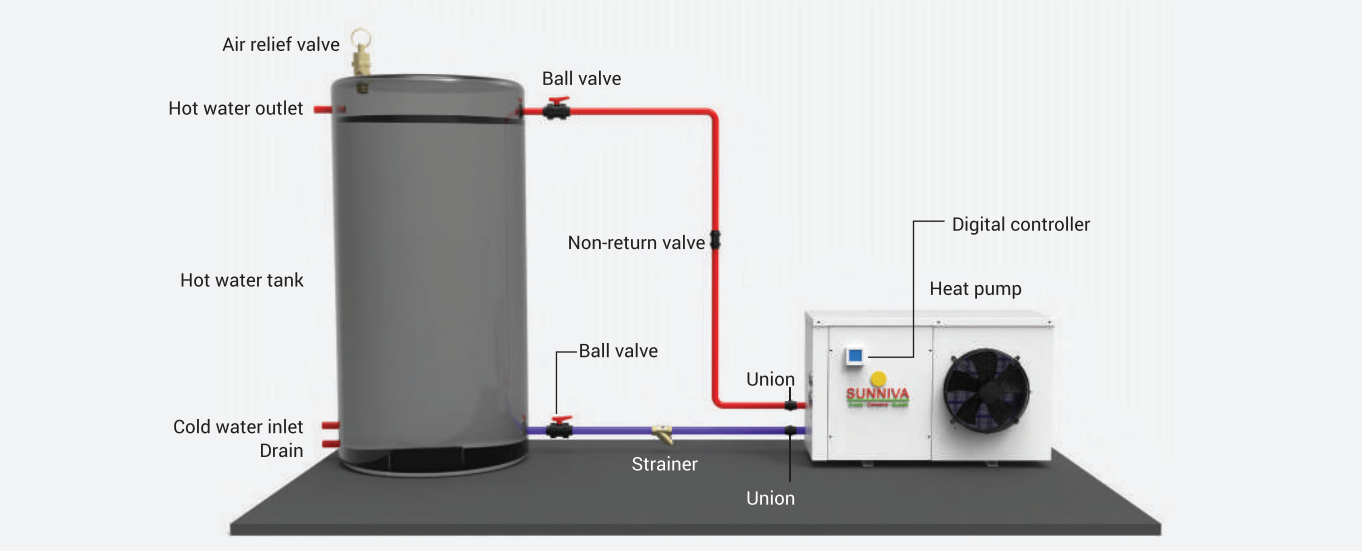
Silent operation

Less maintenance

Features

- Panasonic/equivalent (highly efficient rotary compressor)
- Automatic defrosting
- Low noise & vibration
- Inbuilt circulation pump
- Closed loop system possible
- Long working life
- Safe, reliable and stable running
- Easy to install
- Intelligent control

Schematic Diagram



Heat Pump				
		SE-AH-4M	SE-AH-7M	SE-AH-10M
Heating Capacity	KW	3.5	7.4	9.3
COP		4.12	4	4
Rated Heated Water Output	L/H	105	215	280
Rated Outlet Water Temp.	℃	55		
Max Outlet Water Temp.	℃	60		
Rated Power Input	KW	0.85	1.85	2.33
Rated Current	A	4.07	8.85	11.20
Power Supply		~220-240V/50Hz/1Ph		
Compressor Type		Rotary		
Throttling Device		Electronic Expansion Valve		
Fan Quantity	Piece	1		
Fan Input	W	25	40	50
Fan Speed	RPM	830	850	850
Ambient Temperature	℃	-7~43		
Refrigerant		R410A/R417A		
Circulation Pump		Wilo/Equivalent		
Noise At 1m Distance	dB(A)	≤54	≤55	≤57
Water Pipe Size	inch	Rc3/4		
Product Dimension (L×W×H)	mm	930 × 350 × 550	1005 × 350 × 620	1110 × 400 × 750
Net Weight	kg	48	66	85
Tank				
Rated Volume	L	300L	400L	500L
Inner Tank		Enameled Steel		
Thickness	mm	2.5		
Outer Tank		Galvanized Steel		
Color		White/Grey		
Insulation	mm	Polyurethane 50		
Inlet/Outlet Size		3/4'		
Rated Working Pressure	Bar	7		
Electric Heater	KW	3	5	5
Thermostat		Included		
P/T Valve		Included		
Magnesium Anode		Included		

Testing Condition: Ambient Temp.(DB/WB) = 30℃/25℃, Input/Output Water Temp. = 25℃/55℃
** T&C apply*

Our Range of Products

Commercial Heat Pump

Swimming Pool Heat Pump

EVI Heat Pump

High Temperature Heat Pump

Ultra High Temperature Heat Pump

Chiller

Pan-India Network

Head Office Mumbai
Sunniva Encon LLP. 209, East West Industrial Centre, Safed Pool, Sakinaka, Andheri (East), Mumbai - 400 072
Factory Address
Unit No. 23/24, Rukma Udyog Nagar, Asangaon, Thane - 421601

All India Customer Service Number
+91 88505 31951

www.sunnivaencon.com

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