



◆ **Eco-Heating**

Smart heating to save energy



◆ **Boost Mode**

For emergency hot water requirements



◆ **Variable Temperature Setting**

Choose from 55°C to 65°C



◆ **De-Frosting Function**

Automatic de-frosting in frost conditions

Heat Pump Water Heating

Solar Water Heating

Solar Power Plant

- ✓ Energy-efficient
- ✓ Quiet- Operation
- ✓ Reliable Hot Water

70%
Savings

Life Time Saving,
One Time Investment!



 **Green Heat⁺**
NOT JUST WATER HEATING *savings* ALSO

DOMESTIC

Air Source Heat Pumps

An extensive range of heat pumps for residential use.

Model	GH 4.9	GH 6.8	GH 9.5	GH 11.5
Heating Capacity (Kw)	4.9	6.8	9.5	11.5
Heating Power Input (Kw)	1.34	1.87	2.64	2.9
Rated Current (A)	6.2	8.6	11.5	5.9
Coeff. of Performance (COP)	3.66	3.64	3.66	3.90
Maximum Water Temp. (°C)	55	55	55	55
Max. Thermostat Setting (°C)	75	75	75	75
Production Capacity (LPH)	105	146	190	247
Noise (db[A])	≤50	≤50	≤55	≤55
Net / Gross Weight (KG)	55/60	59/64	65/71	104/110
Water Connection (mm)	DN 20	DN 20	DN 20	DN 25
Casing	Galvanized Steel/Color Spray			
Body Size (W*D*H)	985*305*520	985*305*520	995*315*520	710*710*870
Compressor	Rotary Type (Copeland)			Scrol Type (Copeland)
Refrigerant	R410a	R410a	R410a	R417a
Circulation Water Pump	Inbuilt (Wilo/Grundfos)			External
Power Supply	220V/1ph/50Hz	220V/1ph/50Hz	380V/3ph/50Hz	380V/3ph/50Hz
Condenser	Efficient tank heat exchanger			Tube in Tube heat exchanger
Evaporator	L-2/900*500/Ø 9.52			U-1/1660*650/Ø 9.52
Four Way Valve	DSF-9	DSF-9	DSF-11	DSF-11
Expansion valve	Capillary Tube	Capillary Tube	Capillary Tube	Sanhua
AC Contactor	Eaton(220-18A)	Eaton(220-18A)	Eaton(220-12A)	Eaton(220-12A)
Controller	Single System (Motorola Chip)			
Storage Tank Capacity	200 Ltrs	300 Ltrs	500 Ltrs	500 Ltrs

*Testing at ambient temp.: 20/15 °C (Dry Bulb/Wet Bulb) and ambient temp. from 15 °C to 55 °C for water heater Operation. Maximum water temperature heating 75 °C

Frequently Asked Questions (FAQ's)

1) Why should I use a Heat Pump Water Heater instead of Electrical Storage Water Heater?

- Heat Pump Water Heater can save more than 70% of electricity when compared to a normal Electric Water Heater. Electricity is used to run the compressor and not to heat the water.

2) Where should I install a Heat Pump Water Heater?

- Heat Pump Water Heater can be installed at rooftop, balcony, kitchen, storeroom, etc., virtually anywhere in the house without affecting the outlook of the building.

3) What is the heat source of the Heat Pump Water Heater?

- It draws heat from air (atmosphere) so that product continues to supply hot water in all weather conditions irrespective of the water heater location.



The product comes with a 2 year warranty on inner tank & 2 year on the product, assuring a dependable service



Green Heat+
NOT JUST WATER HEATING *savings* ALSO





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NOT JUST WATER HEATING *savings* ALSO

COMMERCIAL Heat Pumps

An extensive range of heat pumps for Commercial use.



Low Operating Cost

The operating cost is very low compared with conventional heat source, such as electricity, coal, gas and diesel.



Environmental Friendly

Adopting refrigerant of lower GWP, the air pollution emission is zero, which is very environmental-friendly compared with coal.



55°C to 80°C Hot Water Outlet

With stable high temperature hot water supply, the unit can be widely used in different industrial applications.



EVI Technology

With EVI technology, the unit can work stably for high temperature hot water application.



Multiple-Protections

The multiple protective design ensure the unit's long service life and stable operation.



Wide Operation Range

With advanced 4-way-valve applied in the unit, the unit can be used in environment from -7°C to 45°C.

Model	GH 11.5	GH 38	GH 52	GH 18.8
Heating Capacity (Kw)	11.5	38	52	18.8
Heating Power Input (Kw)	2.9	9.6	13.2	4.8
Rated Current (A)	5.9	17.6	25.9	9
Coeff. of Performance (COP)	3.90	3.96	3.94	3.92
Maximum Water Temp. (°C)	55	55	55	55
Max. Thermostat Setting (°C)	75	75	75	75
Production Capacity (LPH)	247	817	1118	404
Water Circulation (LPH)	1978	6535	8942	3233
Noise (db[A])	<=55	<=66	<=66	<=58
Net / Gross Weight (KG)	104/110	280/300	372/412	145/1556
Water Connection (mm)	DN 25	DN 32	DN 32	DN 25
Casing	Galvanized Steel/Color Spray			
Body Size (W*D*H)	710*710*870	1500*750*1030	1500*800*1600	810*800*1030
Compressor	Scrol Type (Copeland)			
Refrigerant	R417A			
Circulation Water Pump	External			
Power Supply	380V/3ph/50Hz			
Condenser	Tube in Tube heat exchanger			
Evaporator	U-1/1660*650/Ø 9.52	U-2/1100*900/Ø 9.52	V-3/650*1260*3/Ø 9.52	U-1/1860*900/Ø 9.52
Four Way Valve	DSF-11	DSF-20	DSF20	DSF-20
Expansion valve	Sanhua			
AC Contactor	Eaton(220-12A)	Eaton(220-18A)*2	Eaton(220-32A)*2	Eaton(220-18A)
Controller	Single System (Motorola Chip)			

*Testing at ambient temp.: 20/15 °C (Dry Bulb/Wet Bulb) and ambient temp. from 15 °C to 55 °C for water heater Operation. Maximum water temperature heating 75 °C

Applications

- Hotel
- Hospitals
- Food Processing Industry
- Residences
- Hostels
- Swimming Pool Heating
- Group Housing
- Dairy
- Textile Industries

Swimming Pool Heating Heat Pumps

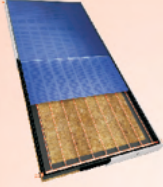
Ideal For Residence, Resorts, Hotels, Office Blocks.



Model	GH 17.5	GH 38.3	GH 51.3
Heating Capacity (Kw)	17.5	38.3	51.3
Heating Power Input (Kw)	3.9	8.3	11.2
Rated Current (A)	7.5	15.6	21.6
Coeff. of Performance (COP)	4.49	4.61	4.58
Advised Water Flux (m3/hr)	10.8	21.3	29.5
Heating Capacity (BTU/hr)	59700	130700	175000
Noise (db[A])	<=58	<=66	<=68
Net / Gross Weight (KG)	145/155	300/320	372/412
Water Connection (mm)	DN 50	DN 63	DN 75
Casing	Galvanized Steel/Color Spray		
Body Size (W*D*H)	710*710*870	1580*800*1600	1580*800*1600
Compressor	Scrol Type (Copeland)		
Refrigerant	R407C		
Circulation Water Pump	External		
Power Supply	220V/3ph/50Hz	380V/3ph/50Hz	380V/3ph/50Hz
Condenser	Titanium		
Evaporator	U-1/1660*650/Ø 9.52	V-2/650*1260*2/Ø 9.52	V-3/650*1260*3/Ø 9.52
Four Way Valve	DSF-20	DSF-20	DSF20
Expansion valve	Danfoss/Emerson		
AC Contactor	Eaton(220-25A)	Eaton(220-18A)*2	Eaton(220-32A)*2
Controller	Dual System (Motorola Chip)		



SOLAR WATER HEATING SYSTEM TYPES



Solar Flat Plate Collector

Solar Water Heating Basic Operation

Flat plate absorbers absorb sunlight and convert it to usable heat, which is transferred to the risers / heat pipes welded to the underside of the solar absorber sheet. The risers / heat pipes contains a small amount liquid which forms steam when heated, rapidly transferring the heat up to the header pipe which is connected to the storage tank directly or can be connected indirectly with designed heat exchanger .

In **Direct Heating** Water in the storage tank gradually circulates through the header pipe heating up the tank throughout the day.

In **InDirect Heating** Food Grade Coolant gradually circulates in close loop in between heat exchanger and solar collector header pipe , and heat up the tank indirectly throughout the day.

Features

- High efficiency heat pipe type flat plate collector
- Anti Scaling design for hard water/Anti-freeze Design for snow bound areas
- Well insulated solar storage tank
- Thermosiphon / Gravity Flow or Pump Forced compatible force flow design.
- As per site requirement designs.
- Solar plus Heat Pump Combo designs for ultimate output with savings.



FPC Solar Water Heating System



ETC Solar Water Heating System

Accessories

- Electric Heating Element (for non sunny days or when hot water required more than installed capacity)
- Pressure relief valve cum temperature relief valve
- Recirculation of hot water for instant hot water in tapes with nil wastage of water.
- Digital timer and temperature controlled Control Panel for system operation.
- Magnesium / Sacrificial anode.



Solar Water Heating Solutions

Proven Designs upto 80°C Applications

20+ Years Maintenance Free Life Span

Hot Water Specialist A Brighter Way To Solar

Commercial Designs – Adds to Business

Digital Control (Timer & Temperature Controlled)

Scale Free Design (Coolent Based Indirect Heating)

Over Heat & Excess Pressure Protection

Re-circulation System (Timer Controlled)

THERMO-PR SERIES

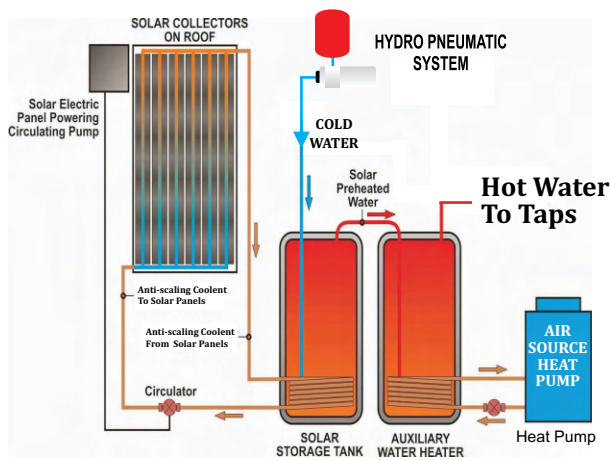
Pressurised Solar Water Heating System

Green Heat Plus Pressurized solar water heaters are an all-in-one solar water heating system. They are ideal for supplying pressurized hot water to residential / institutional / commercial hot water projects who require a sustainable, easy to install, high efficiency and reliable solar hot water solution.

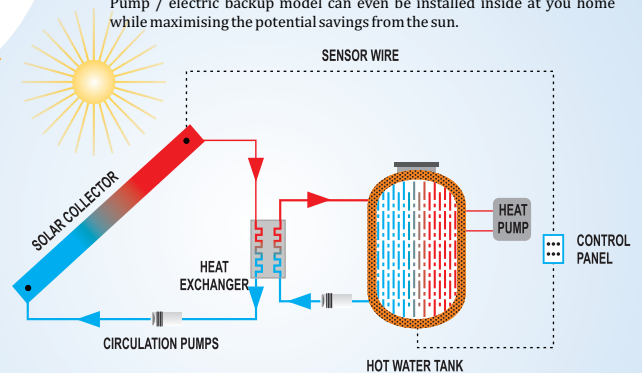
In good solar radiation days, Green Heat Plus solar water heaters can be the sole energy source for hot water supply. In moderate sunny or non sunny days Green Heat Plus System can provide pre-heated hot water to Heat Pump Tanks which saves traditional electric / Gas energy costs. The tank also has an optional electrical heating element for boosting.

Basic heating Operation will be same as shown in indirect type solar water heating system.

FPC Solar Water Heater & Heat Pump Combination



Hybrid Hot Water Solution



SPLIT FORCE FLOW SERIES

Green Heat split solar water heaters is designed to give customer maximum flexibility at installation location by placing tank and panels at desired level.

Unobtrusive, Solar Collectors are mounted on a south facing roof, while the storage tank is mounted at ground level of the installation site. The Heat Pump / electric backup model can even be installed inside at you home while maximising the potential savings from the sun.

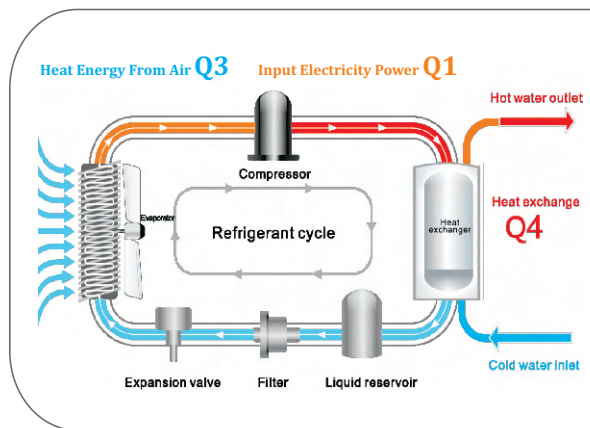


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Channel Partner



How Heat Pump Works

The heat pump is an energy moving device.

- The refrigerant absorbs the free air source energy **Q3** from the air by the evaporator.
- The compressor compresses the refrigerant into high temperature and pressure refrigerant via electric energy **Q1**.
- The heat energy **Q4** transmits to water in the heat exchanger.
- According to the law of conservation of energy, **Heat energy Q4 = air energy Q3 + electric energy Q1**.

Q3 + **Q1** = **Q4**

Note :- ALL PICTURES SHOWN ARE FOR ILLUSTRATION PURPOSE ONLY. ACTUAL PRODUCT MAY VARY DUE TO PRODUCT ENHANCEMENT.