

# SHW

## Heat pump water heater

- New R290 ecological refrigerant gas.
- Production of hot water up to 65°C (75°C with the electric heater)
- Full inverter system
- Enamelled tank
- Electronic anode
- Micro-channel exchanger



### DESCRIPTION

The heat pump water heater line Aermec represents a sustainable solution for domestic hot water production, ensuring high energy savings due to their high efficiency.

Unlike conventional water heaters, heat pump water heaters generate hot water by utilising heat in the air, thus reducing electricity costs.

The new air to water heat pump water heaters SHW feature a new natural refrigerant R290, a cutting-edge choice in domestic solutions, to provide hot water in a sustainable, environmentally friendly and comfortable manner. R290 is a natural refrigerant with a global warming potential (GWP) of 3.

The series SHW is an innovation that perfectly combines silent operation and compact design with unrivalled efficiency. Its space-saving design lends itself to any home environment, while its advanced heat pump technology optimises energy saving, ensuring high energy performance.

The units SHW200S and SHW250S are also equipped with an additional coil that enables integration of an auxiliary heat source.

### FEATURES

The heat pump water heater SHW is designed to provide the best possible experience and maximum savings by means of:

- **optimised to reduce noise and energy consumption**
- **coil for integral sources:** (only for models SHW200S and SHW250S)
- **automatic anti-legionella cycle:** to eliminate and prevent potential legionella formation
- **ductable up to 40m:** for models with wall installation and up to 11m for models with floor installation
- **standard electric heater**
- **The units SHW080 - SHW110 - SHW150 are equipped with an electric power supply cable with Schuko plug**

All units in the series SHW are equipped with a micro-channel heat exchanger. This fully covers the tank, significantly increasing the exchange surface area with respect to a classic tank with an internal coil. Furthermore, the heat exchanger is made up of high-quality materials that increase its resistance to high temperatures and corrosion.

### VERSIONS

**Wall-mount installation/ductable unit.**

SHW080 - SHW110 - SHW150

**Floor installation/ductable unit.**

SHW200 - SHW250

**Floor installation/ductable unit with solar coil.**

SHW200S - SHW250S

### special functions

**Eco:** allows the user to set time periods during which priority for DHW production is assigned to the heat pump.

**Boost:** this function enables to heat water faster by using both the heat pump and the electric heater simultaneously.

**Holiday Mode:** this function ensures hot water is available when returning home after a holiday period, preventing the tank from remaining operational during the absence period. Furthermore, the unit activates the anti-legionella cycle to obtain hot, bacteria-free water.

**Quantity display:** the dedicated icon on the display enables to immediately check the amount of water available in the tank

**Photovoltaic Contact:** when this contact is enabled, the unit's set point is increased, enabling electrical heater and compressor simultaneous operation.

**External Contact:** When this contact is enabled, the unit can start according to the set point.

## TECHNICAL DATA

|                                                                     |                   | SHW080           | SHW110           | SHW150           | SHW200            | SHW200S           | SHW250            | SHW250S           |
|---------------------------------------------------------------------|-------------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Storage tank (DHW)</b>                                           |                   |                  |                  |                  |                   |                   |                   |                   |
| Nominal volume of the tank                                          | L                 | 82               | 102              | 149              | 192               | 185               | 246               | 240               |
| Operating range                                                     | °C                | -7 ~ 45          | -7 ~ 45          | -7 ~ 45          | -7 ~ 45           | -7 ~ 45           | -7 ~ 45           | -7 ~ 45           |
| Power supply                                                        |                   | 220-240V~50Hz    | 220-240V~50Hz    | 220-240V~50Hz    | 220-240V~50Hz     | 220-240V~50Hz     | 220-240V~50Hz     | 220-240V~50Hz     |
| Maximum operating pressure                                          | Mpa               | 0,8              | 0,8              | 0,8              | 0,7               | 0,7               | 0,7               | 0,7               |
| Solar heat exchanger                                                |                   | no               | no               | no               | no                | si                | no                | si                |
| Anode type                                                          |                   | Electronic anode | Electronic anode | Electronic anode | Electronic anode  | Electronic anode  | Electronic anode  | Electronic anode  |
| Protection rating                                                   |                   | IPX4             | IPX4             | IPX4             | IPX4              | IPX4              | IPX4              | IPX4              |
| Insulation thickness                                                | mm                | 40               | 40               | 40               | 50                | 50                | 50                | 50                |
| Set temperature                                                     | °C                | 56               | 56               | 56               | 56                | 56                | 56                | 56                |
| Rated power input (PdC)                                             | W                 | 370              | 370              | 370              | 535               | 535               | 535               | 535               |
| Rated power input (electrical heater)                               | W                 | 1200             | 1200             | 1200             | 1500              | 1500              | 1500              | 1500              |
| Rated total power input                                             | W                 | 1570             | 1570             | 1570             | 2035              | 2035              | 2035              | 2035              |
| DHW temperature produced (heat pump only)                           | °C                | 35 ~ 65          | 35 ~ 65          | 35 ~ 65          | 35 ~ 65           | 35 ~ 65           | 35 ~ 65           | 35 ~ 65           |
| DHW temperature produced (heat pump only + electrical heater)       | °C                | 35 ~ 75          | 35 ~ 75          | 35 ~ 75          | 35 ~ 75           | 35 ~ 75           | 35 ~ 75           | 35 ~ 75           |
| <b>Refrigerant gas</b>                                              |                   |                  |                  |                  |                   |                   |                   |                   |
| Type                                                                | type              | R290             | R290             | R290             | R290              | R290              | R290              | R290              |
| Refrigerant charge                                                  | kg                | 0,12             | 0,12             | 0,12             | 0,15              | 0,15              | 0,15              | 0,15              |
| GWP                                                                 |                   | 3,0              | 3,0              | 3,0              | 3,0               | 3,0               | 3,0               | 3,0               |
| <b>Sound data</b>                                                   |                   |                  |                  |                  |                   |                   |                   |                   |
| Sound power level                                                   | dB(A)             | 50,0             | 50,0             | 50,0             | 50,0              | 50,0              | 50,0              | 50,0              |
| Sound pressure level (1 m)                                          | dB(A)             | 37,7             | 37,7             | 37,7             | 36,0              | 36,0              | 36,0              | 36,0              |
| <b>Electric data</b>                                                |                   |                  |                  |                  |                   |                   |                   |                   |
| Type of electrical connection                                       | type              | Schuko           | Schuko           | Schuko           | Al magnetotermico | Al magnetotermico | Al magnetotermico | Al magnetotermico |
| Magnet circuit breaker                                              | A                 | 16               | 16               | 16               | 16                | 16                | 16                | 16                |
| Section of the power cable                                          | mm <sup>2</sup>   | 3*1,5            | 3*1,5            | 3*1,5            | 3*1,5             | 3*1,5             | 3*1,5             | 3*1,5             |
| <b>Performance specifications</b>                                   |                   |                  |                  |                  |                   |                   |                   |                   |
| COP (external air 2°C)                                              | W/W               | 2,38             | 2,55             | 2,65             | 2,80              | 2,43              | 2,67              | 2,81              |
| COP (external air 7°C)                                              | W/W               | 2,91             | 2,79             | 3,03             | 3,27              | 3,27              | 3,20              | 3,29              |
| COP (external air 14°C)                                             | W/W               | 3,07             | 3,32             | 3,39             | 3,52              | 3,55              | 3,45              | 3,46              |
| Heating time (external air 7°C)                                     | h                 | 4h26             | 5h38             | 8h37             | 8h20              | 6h43              | 10h31             | 10h5              |
| Heating time (external air 14°C)                                    | h                 | 3h48             | 4h47             | 7h11             | 6h55              | 6h07              | 9h02              | 8h42              |
| Air flow rate                                                       | m <sup>3</sup> /h | 180              | 180              | 180              | 300               | 300               | 300               | 300               |
| Load Profile of Water Heaters, type                                 |                   | M                | M                | L                | L                 | L                 | XL                | L                 |
| Input power in standby (Pes)                                        | W                 | 15,3             | 19,3             | 22,5             | 22,0              | 35,0              | 43,0              | 35,0              |
| Maximum volume of usable hot water at 40°C / V40                    | l                 | 103,8            | 133,0            | 190,0            | 221,0             | 229,0             | 314,0             | 313,0             |
| Efficiency energy class                                             |                   | A+               | A+               | A+               | A+                | A+                | A+                | A+                |
| Reference temperature of hot water (θ <sub>WH</sub> )               | °C                | 53,75            | 53,88            | 52,98            | 54,11             | 53,11             | 54,05             | 53,70             |
| <b>Connections</b>                                                  |                   |                  |                  |                  |                   |                   |                   |                   |
| Water outlet                                                        | inch              | R 1/2" M         | R 1/2" M         | R 1/2" M         | Rp 3/4            | Rp 3/4            | Rp 3/4            | Rp 3/4            |
| Inlet water / Condensate drainage                                   | inch              | R 1/2" M         | R 1/2" M         | R 1/2" M         | Rp 3/4            | Rp 3/4            | Rp 3/4            | Rp 3/4            |
| Safety valve                                                        | inch              | R 1/2" M         | R 1/2" M         | R 1/2" M         | Rp 3/4            | Rp 3/4            | Rp 3/4            | Rp 3/4            |
| Maximum length of ducts (supply + exhaust) (Ø160 - PVC pipe)        | m                 | 40               | 40               | 40               | 11                | 11                | 11                | 11                |
| Maximum length of ducts (supply + exhaust) (Ø160 - corrugated pipe) | m                 | 22               | 22               | 22               | 6                 | 6                 | 6                 | 6                 |
| Maximum length of ducts (supply + exhaust) (Ø180 - PVC pipe)        | m                 | -                | -                | -                | 22                | 22                | 22                | 22                |
| Maximum length of ducts (supply + exhaust) (Ø180 - corrugated pipe) | m                 | -                | -                | -                | 13                | 13                | 13                | 13                |
| Maximum working pressure of auxiliary coil                          | MPa               | -                | -                | -                | -                 | 2,0               | -                 | 2,0               |
| Auxiliary serpentine surface                                        | m <sup>2</sup>    | -                | -                | -                | -                 | 0,585             | -                 | 0,585             |
| <b>Dimensions and weights</b>                                       |                   |                  |                  |                  |                   |                   |                   |                   |
| Empty weight                                                        | kg                | 51               | 54               | 64               | 87                | 97                | 99                | 108               |
| Weight for transport                                                | kg                | 58,0             | 62,0             | 83,0             | 110,0             | 120,0             | 122,0             | 132,0             |

**Performance specifications:** in accordance EN 16147;

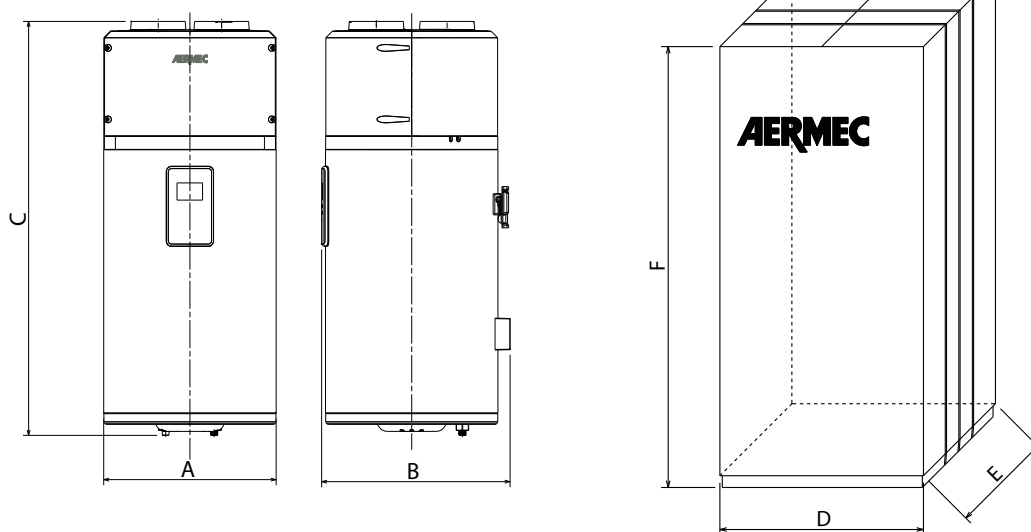
**COP and noise data are calculated in the laboratory:** The COP value is obtained with an outside air temperature of 2°C - 7°C - 14°C, inlet water temperature 10°C and the produced water set of 55°C for the (units SHW080-SHW110 according to EN 16147), inlet water temperature of 10°C and produced water set of 54°C for the (units SHW150-SHW200-SHW200S-SHW250-SHW250S).

**Sound power level:** measured with an outdoor air temperature of 7°C, an inlet water temperature of 10°C, and a supply water temperature setpoint of 55°C in accordance with EN12102.

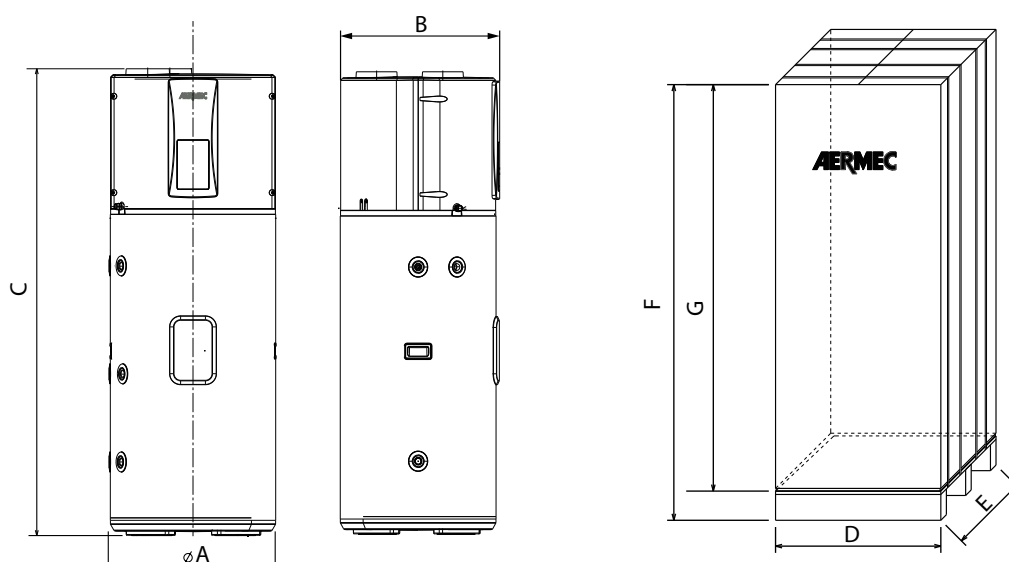
**In addition to the electronic anode, the unit is also equipped with a magnesium rod to protect the unit in the event of a power outage.**

## DIMENSIONS

### SHW080 - SHW110 - SHW150



### SHW200 - SHW200S - SHW250 - SHW250S



|                                             |    | SHW080 | SHW110 | SHW150 | SHW200 | SHW200S | SHW250 | SHW250S |
|---------------------------------------------|----|--------|--------|--------|--------|---------|--------|---------|
| <b>Dimensions and weights</b>               |    |        |        |        |        |         |        |         |
| A                                           | mm | 492    | 492    | 492    | 600    | 600     | 600    | 600     |
| B                                           | mm | 538    | 538    | 538    | 615    | 615     | 615    | 615     |
| C                                           | mm | 1184   | 1334   | 1694   | 1697   | 1697    | 1985   | 1985    |
| Net weight                                  | kg | 51,0   | 54,0   | 64,0   | 87,0   | 97,0    | 99,0   | 108,0   |
| <b>Dimensions and weights for transport</b> |    |        |        |        |        |         |        |         |
| D                                           | mm | 587    | 587    | 587    | 736    | 736     | 736    | 736     |
| E                                           | mm | 587    | 587    | 587    | 695    | 695     | 695    | 695     |
| F                                           | mm | 1247   | 1397   | 1894   | 1940   | 1940    | 2250   | 2250    |
| G                                           | mm | -      | -      | -      | 1810   | 1810    | 2120   | 2120    |
| Weight for transport                        | kg | 58,0   | 62,0   | 83,0   | 110,0  | 120,0   | 122,0  | 132,0   |

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