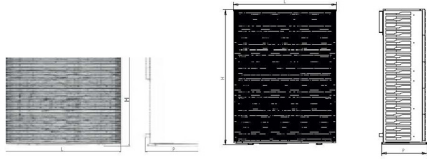




Rinnai - Low-GWP R290 Heat Pumps

**Rinnai**

# Technical Specification - 6kW - 18kW



| Dimensions |    | 0106 | 0109 | 0112 | 0115 | 0118 |
|------------|----|------|------|------|------|------|
| L          | mm | 1105 | 1105 | 1105 | 1105 | 1105 |
| P          | mm | 490  | 490  | 490  | 490  | 490  |
| H          | mm | 870  | 870  | 1440 | 1440 | 1440 |

| Cooling                | R290 |     | 0106       | 0109       | 0112         | 0115         | 0118         |
|------------------------|------|-----|------------|------------|--------------|--------------|--------------|
| Cooling capacity (1)   |      | kW  | 5,8* / 5,4 | 9,2* / 8,6 | 11,2* / 10,7 | 13,5* / 12,4 | 14,3* / 13,8 |
| Power input (1)        |      | kW  | 2,0        | 2,8        | 3,8          | 3,7          | 4,3          |
| E.E.R. (1)             |      | W/W | 2,8        | 3,1        | 2,6          | 3,4          | 3,2          |
| Cooling capacity (2)   |      | kW  | 6,2* / 5,6 | 9,9* / 9,2 | 13,3* / 12,6 | 14,4* / 12,9 | 14,8* / 13,9 |
| Power input (2)        |      | kW  | 1,3        | 1,9        | 2,8          | 2,4          | 2,7          |
| E.E.R. (2)             |      | W/W | 4,5        | 4,8        | 4,4          | 5,4          | 5,2          |
| SEER (5)               |      | W/W | 4,8        | 5,4        | 4,7          | 5,0          | 5,0          |
| Water flow (1)         |      | L/s | 0,3        | 0,4        | 0,5          | 0,6          | 0,7          |
| Available pressure (1) |      | kPa | 66         | 57         | 81           | 80           | 74           |

| Heating                             |  |     | 0106        | 0109        | 0112          | 0115          | 0118          |
|-------------------------------------|--|-----|-------------|-------------|---------------|---------------|---------------|
| Heating capacity (3)                |  | kW  | 6,9* / 6,2  | 10,4* / 9,7 | 13,7* / 12,6  | 17,7* / 16,3  | 19,84* / 18,7 |
| Power input (3)                     |  | kW  | 1,3         | 2,1         | 2,6           | 3,3           | 4,1           |
| C.O.P. (3)                          |  | W/W | 4,8         | 4,7         | 4,8           | 4,9           | 4,6           |
| Heating capacity (4)                |  | kW  | 6,4* / 6,0  | 9,75* / 9,1 | 12,77* / 11,6 | 17,69* / 15,2 | 18,7* / 17,4  |
| Power input (4)                     |  | kW  | 1,9         | 2,9         | 3,6           | 4,5           | 5,3           |
| C.O.P. (4)                          |  | W/W | 3,1         | 3,2         | 3,2           | 3,4           | 3,3           |
| Heating capacity (11)               |  | kW  | 6,41* / 5,9 | 9,81* / 9,1 | 13,08* / 12,0 | 16,64* / 14,7 | 17,7* / 16,7  |
| Power input (11)                    |  | kW  | 2,3         | 3,4         | 4,6           | 5,2           | 6,0           |
| C.O.P. (11)                         |  | W/W | 2,6         | 2,7         | 2,6           | 2,8           | 2,8           |
| SCOP (6)                            |  | W/W | 4,7         | 5,2         | 4,9           | 4,9           | 4,8           |
| Water flow (3)                      |  | L/s | 0,3         | 0,4         | 0,6           | 0,8           | 0,9           |
| Available pressure (3)              |  | kPa | 63          | 52          | 79            | 68            | 60            |
| Energy efficiency (Water 35°C-65°C) |  |     | A+++ / A++  | A+++ / A+++ | A+++ / A++    | A+++ / A++    | A+++ / A++    |

| Compressor             |    | Twin Rotary DC Inverter |      |      |      |      |
|------------------------|----|-------------------------|------|------|------|------|
| Type                   |    |                         |      |      |      |      |
| Compressors            | n° | 1                       | 1    | 1    | 1    | 1    |
| Refrigerant circuits   | n° | 1                       | 1    | 1    | 1    | 1    |
| Refrigerant charge (7) | kg | 0,43                    | 0,75 | 1,00 | 1,27 | 1,27 |

| Hydraulic circuit     |      |     |     |     |     |     |
|-----------------------|------|-----|-----|-----|-----|-----|
| Water connections     | inch | G1" | G1" | G1" | G1" | G1" |
| Min. water volume (8) | L    | 40  | 40  | 60  | 70  | 70  |

| Sound level                             |       |    |    |    |    |    |
|---|-------|----|----|----|----|----|
| Sound power Lw (9)                      | dB(A) | 59 | 60 | 62 | 64 | 64 |
| Sound pressure at 1 m distance Lp1 (10) | dB(A) | 44 | 45 | 47 | 49 | 49 |

| Electrical data    |    |             |             |             |             |             |
|--------------------|----|-------------|-------------|-------------|-------------|-------------|
| Power supply       |    | 230V/1/50Hz | 230V/1/50Hz | 230V/1/50Hz | 400V/3/50Hz | 400V/3/50Hz |
| Max. power input   | kW | 3           | 4           | 5           | 8           | 8           |
| Max. current input | A  | 14          | 21          | 26          | 16          | 16          |

| Weight       |    |     |     |     |     |     |
|--------------|----|-----|-----|-----|-----|-----|
| Gross weight | kg | 121 | 121 | 175 | 175 | 175 |

Operating conditions:  
 (1) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 12/7°C.  
 (2) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 23/18°C.  
 (3) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 30/35°C.  
 (4) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 47/55°C.  
 (5) Cooling: low temperature, variable outlet, fixed flow.  
 (6) Heating: in average climate condition, T<sub>db</sub>=7°C; low temperature, variable outlet, fixed flow.  
 (7) The data are only indicative and subject to change. For the correct data, refer to the technical label stuck on the unit.  
 (8) Calculated for a decrease of the water temperature of the plant with 10°C with a defrosting cycle of 6 minutes.  
 (9) Sound power heating mode according with EN 12102:2022; the value is determined respecting the measurements taken in accordance with the regulations UNI EN ISO 9614-1, in compliance with the Eurovent certification.  
 (10) Sound pressure level obtained with internal measurements made in accordance with ISO 3744, at 1m distance.  
 (11) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 55/65°C.

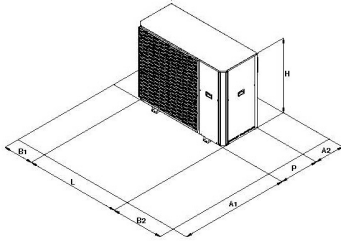
## Accessories

|                    |  |
|--------------------|--|
| <b>AWHP-AG</b>     | Heat Pump Vibration Damper               |
| <b>AWHP-eLite</b>  | Multifunctional Remote Control System    |
| <b>AWHP-EXOGEL</b> | Frost Protection                         |
| <b>AWHP-FD</b>     | Dirt Separator Filter                    |
| <b>AWHP-FY</b>     | Y-Filter                                 |
| <b>AWHP-Gi3</b>    | Hardware Expansion Module                |
| <b>AWHP-TV415</b>  | Remote Touch Screen Display              |
| <b>AWHP-KA</b>     | Heat Exchanger Resistance + Base         |
| <b>AWHP-KA3</b>    | Base Resistance                          |
| <b>AWHP-RP</b>     | Battery Protection Grilles               |
| <b>AWHP-SAS</b>    | Heat Pump Remote Probe                   |
| <b>AWHP-TR2</b>    | Remote Plant Probe                       |
| <b>AWHP-VDIS3</b>  | 3 Way Diverter Valve for Thermal Storage |
| <b>AWHP-VRC</b>    | Condensate Collection Tray               |

Scan QR code for more technical data



# Technical Specification - 21kW - 27kW



| Spaces of respect |    | 0121-0123 | 0125-0127 |
|-------------------|----|-----------|-----------|
| A1                | mm | 1500      | 1500      |
| A2                | mm | 400       | 400       |
| B1                | mm | 400       | 400       |
| B2                | mm | 700       | 700       |

| Dimensions |    | 0121-0127 |
|------------|----|-----------|
| L          | mm | 1600      |
| P          | mm | 680       |
| H          | mm | 1315      |



| Cooling                             | R290               | 0121             | 0123     | 0125     | 0127     |
|-------------------------------------|--------------------|------------------|----------|----------|----------|
| Cooling capacity (1)                | kW                 | 17,4             | 19,0     | 19,8     | 22,3     |
| Power input (1)                     | kW                 | 5,2              | 5,8      | 6,1      | 7,2      |
| E.E.R. (1)                          | W/W                | 3,4              | 3,3      | 3,2      | 3,1      |
| Cooling capacity (2)                | kW                 | 19,7             | 21,1     | 25,4     | 28,5     |
| Power input (2)                     | kW                 | 4,0              | 4,4      | 5,3      | 6,4      |
| E.E.R. (2)                          | W/W                | 5,0              | 4,8      | 4,8      | 4,5      |
| SEER (5)                            | W/W                | ≥ 4,6            | ≥ 4,6    | ≥ 4,6    | ≥ 4,6    |
| Water flow (1)                      | L/s                | 0,8              | 0,9      | 1,0      | 1,1      |
| Available pressure (1)              | kPa                | 133              | 125      | 132      | 121      |
| <b>Heating</b>                      |                    |                  |          |          |          |
| Heating capacity (3)                | kW                 | 21,0             | 22,8     | 24,8     | 27,0     |
| Power input (3)                     | kW                 | 4,28             | 4,8      | 5,4      | 6,2      |
| C.O.P. (3)                          | W/W                | 4,91             | 4,8      | 4,6      | 4,4      |
| Heating capacity (4)                | kW                 | 19,6             | 21,4     | 23,7     | 26,9     |
| Power input (4)                     | kW                 | 6,1              | 6,7      | 7,6      | 8,7      |
| C.O.P. (4)                          | W/W                | 3,2              | 3,2      | 3,1      | 3,1      |
| SCOP (6)                            | W/W                | ≥ 4,0            | ≥ 4,0    | ≥ 4,0    | ≥ 4,0    |
| Water flow (4)                      | L/s                | 0,9              | 1,0      | 1,1      | 1,3      |
| Available pressure (4)              | kPa                | 122              | 112      | 114      | 97       |
| Energy efficiency (Water 35°C-65°C) |                    | A++ / A+         | A++ / A+ | A++ / A+ | A++ / A+ |
| <b>Compressor</b>                   |                    |                  |          |          |          |
| Type                                | Scroll DC Inverter |                  |          |          |          |
| Compressors                         | n°                 | 1                | 1        | 1        | 1        |
| Refrigerant circuits                | n°                 | 1                | 1        | 1        | 1        |
| Refrigerant charge (7)              | kg                 | 1,7              | 1,7      | 2,1      | 2,1      |
| <b>Hydraulic circuit</b>            |                    |                  |          |          |          |
| Water connections                   | inch               | 1"1/4 M          | 1"1/4 M  | 1"1/4 M  | 1"1/4 M  |
| Min. water volume (8)               | L                  | 110              | 110      | 110      | 110      |
| <b>Electrical data</b>              |                    |                  |          |          |          |
| Power supply                        |                    | 400V/3P+N+T/50Hz |          |          |          |
| Max. power input                    | kW                 | 11               | 11       | 13       | 13       |
| Max. current input                  | A                  | 19               | 19       | 21       | 21       |
| <b>Weight</b>                       |                    |                  |          |          |          |
| Gross weight                        | kg                 | 250              | 250      | 265      | 265      |

Operating conditions:  
 (1) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 12/7°C.  
 (2) Cooling: Outdoor air temperature 35°C; inlet/outlet water temperature 23/16°C.  
 (3) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 30/35°C.  
 (4) Heating: Outdoor air temperature 7°C DB 6°C WB; inlet/outlet water temperature 47/55°C.  
 (5) Cooling: low temperature, variable outlet, fixed flow.  
 (6) Heating: in average climate condition; T<sub>biv</sub>=-7°C; low temperature, variable outlet, fixed flow.  
 (7) The data are only indicative and subject to change. For the correct data, refer to the technical label sticker on the unit.  
 (8) The indicated volume refers to the total needed; the designer must satisfy it considering the quantity already present inside the unit according to the chosen hydronic kit. (please check this value in the technical sheet).

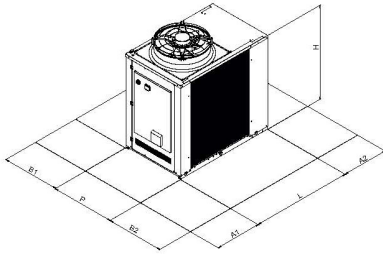
## Accessories

- AWHP-AG**
  - AWHP-eLite**
  - AWHP-EXOGEL**
  - AWHP-FD**
  - AWHP-FY**
  - AWHP-Gi3**
  - AWHP-TV415**
  - AWHP-KA**
  - AWHP-KA3**
  - AWHP-RP**
  - AWHP-SAS**
  - AWHP-TR2**
  - AWHP-VDIS3**
  - AWHP-VRC**
- Heat Pump Vibration Damper
  - Multifunctional Remote Control System
  - Frost Protection
  - Dirt Separator Filter
  - Y-Filter
  - Hardware Expansion Module
  - Remote Touch Screen Display
  - Heat Exchanger Resistance + Base
  - Base Resistance
  - Battery Protection Grilles
  - Heat Pump Remote Probe
  - Remote Plant Probe
  - 3 Way Diverter Valve for Thermal Storage
  - Condensate Collection Tray

Scan QR code for more technical data



# Technical Specification - 40kW - 50 kW



| Spaces of respect |    | 0240-0250 |
|-------------------|----|-----------|
| A1                | mm | 1200      |
| A2                | mm | 1000      |
| B1                | mm | 1500      |
| B2                | mm | 1500      |

| Dimensions    |    | 0240-0250 |
|---------------|----|-----------|
| L             | mm | 1850      |
| L (with tank) | mm | 2460      |
| P             | mm | 1110      |
| H             | mm | 1920      |
| H (SSL)       | mm | 1980      |

| Cooling              | R290+ PSI | 0240  | 0250  |
|----------------------|-----------|-------|-------|
| Cooling capacity (1) | kW        | 30,2  | 34,5  |
| Power input (1)      | kW        | 10,2  | 11,1  |
| E.E.R. (1)           | W/W       | 3,0   | 3,1   |
| Cooling capacity (2) | kW        | 35,8  | 37,5  |
| Power input (2)      | kW        | 8,5   | 8,6   |
| E.E.R. (2)           | W/W       | 4,2   | 4,4   |
| SEER(5)              | W/W       | ≥ 4,6 | ≥ 4,6 |
| Water flow (1)       | L/s       | 1,4   | 1,7   |

| Heating                             |        |          |          |
|-------------------------------------|--------|----------|----------|
| Heating capacity (3)                | kW     | 40,2     | 50,4     |
| Power input (3)                     | kW     | 9,61     | 11,8     |
| C.O.P.(3)                           | W/W    | 4,2      | 4,3      |
| Heating capacity (4)                | kW     | 38,3     | 48,9     |
| Power input (4)                     | kW     | 13,1     | 16,5     |
| C.O.P.(4)                           | W/W    | 2,9      | 3,0      |
| SCOP (6)                            | W/W    | ≥ 4,0    | ≥ 4,0    |
| Energy Efficiency water 35°C / 55°C | Classe | A++ / A+ | A++ / A+ |
| Water flow (1)                      | L/s    | 1,8      | 2,3      |

| Compressor           |    |                    |                    |
|----------------------|----|--------------------|--------------------|
| Type                 |    | Scroll DC Inverter | Scroll DC Inverter |
| Compressors          | n° | 2                  | 2                  |
| Refrigerant circuits | n° | 1                  | 1                  |
| Refrigerant R290     | kg | 3,15               | 3,5                |

| Fan              |      |       |       |
|------------------|------|-------|-------|
| Nominal air flow | m³/h | 17540 | 18910 |

| Hydraulic circuit      |      |                |                |
|------------------------|------|----------------|----------------|
| Available head (1) (*) | kPa  | 139            | 138            |
| Available head (4) (*) | kPa  | 120            | 106            |
| Water connections      | inch | 1" 1/2 (DN 40) | 1" 1/2 (DN 40) |
| Minimum water volume   | L    | 286            | 389            |

| Electrical data    |    |                  |                  |
|--------------------|----|------------------|------------------|
| Power supply       |    | 400V/3P+N+T/50Hz | 400V/3P+N+T/50Hz |
| Max. power input   | kW | 21               | 26               |
| Max. current input | A  | 35               | 44               |

| Weight       |    |     |     |
|--------------|----|-----|-----|
| Gross weight | kg | 505 | 525 |

| Hydronic kit (Optional) |   |     |     |
|-------------------------|---|-----|-----|
| Tank volume             | l | 400 | 400 |
| Expansion vessel volume | l | 24  | 24  |

Data referred to the following condition:  
 (1) Cooling: outdoor air temperature 35°C, in/out water temperature 12/7°C.  
 (2) Cooling: outdoor air temperature 35°C, in/out water temperature 23/18°C.  
 (3) Heating: outdoor air temperature 7°C vs. 6°C b.u.; in/out water temperature 30/35°C.  
 (4) Heating: outdoor air temperature 7°C vs. 6°C b.u.; in/out water temperature 47/55°C.  
 (5) Cooling: low temperature, variable outlet, fixed flow.  
 (6) Heating: Average climatic conditions; T<sub>biv</sub>=-7°C, low temperature, fixed flow.  
 (7) Data indicative and subject to change. For the correct data, always refer to the technical label on the unit, fixed flow.  
 (8) The indicated volume refers to the total needed, the designer must satisfy it considering the quantity already present inside the unit according to the chosen hydronic kit (please check this value in the technical sheet).

**Remote Controls**  
**e-LITE**  
**Hi-TV415**  
**i-CR**

*Multifunctional remote control system*  
*Multifunctioning touch screen remote control*  
*Remote wall controller*

**Scan QR code for**  
**more technical data**



## The new generation of heat pumps



R290 refrigerant gas is known for its excellent thermodynamic properties in both heat pumps and refrigeration units.

The advantages of R290 refrigerant gas is that it has a particularly low global warming potential. This factor ensures that it is exempt from the EU-wide F-gas regulation, creating a long term safe and sustainable solution.

The increasing attention to climate change, fuel security and government policy has favoured investments in research and development aimed at the optimisation of low GWP natural refrigerant gases.

The new generation of Rinnai heat pumps that use this environmentally friendly refrigerant gas can boast the following benefits:

- **GWP (Global Warming Potential) = 3**
- **Greater efficiency up to +10%**
- **Water temperature up to 75 °C**
- **Compliance with the phase down on refrigerants provided by the European F-Gas Regulation**
- **Quiet operation**
- **Suitable for retrofit projects**

## Creating a healthier way of living with air source heat pumps



The Rinnai range of heat pumps with R290 natural refrigerant gas is one of the widest on today's market, the R290 range is complimented by Rinnai controls and cylinders, creating a complete solution.

The range includes eleven different sizes from 6kw to 50kw. The innovative portfolio shares the same smart control system that allows for real time system management, including demand side response. The technologically advanced heat pumps come with a substantial range of accessories to fulfil your specification needs.



Scan here or email us at [sales@rinnaiuk.com](mailto:sales@rinnaiuk.com) to ask us a question or arrange a site visit with one of our support consultants.

**Scan QR code to visit our website**

