

Subtype RASM-2VTW2E

|                     |  |
|---------------------|--|
| Certificate Holder  | Johnson Controls-Hitachi AirConditioning Spain       |
| Address             | Ronda Shimizu, 1. Pol. Ind. Can Torrella             |
| ZIP                 | 08233  |
| City                | Vacarisses, Barcelona                                |
| Country             | ES   |
| Certification Body  | BRE Global Limited                                   |
| Subtype title       | RASM-2VTW2E  |
| Registration number | 041-K002-76  |
| Heat Pump Type      | Outdoor Air/Water                                    |
| Refrigerant         | R290   |
| Mass of Refrigerant | 0.9 kg   |
| Certification Date  | 05.09.2025   |
| Testing basis       | Heat Pump Keymark Scheme Rules Rev 15                |
| Testing laboratory  | Centro de Ensayos, Innovación y Servicios (CEIS), ES |

**Model RASM-2VTW2E & ATW-CBX-01 - Heating Only**

|                                     |   |
|-------------------------------------|---|
| Model name                          | RASM-2VTW2E & ATW-CBX-01 - Heating Only |
| Application                         | Heating (medium temp)                   |
| Units                               | Outdoor                                 |
| Climate zone (for heating)          | n/a                                     |
| Reversibility                       | Yes                                     |
| Cooling mode application (optional) | n/a                                     |
| Any additional heat sources         | n/a                                     |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

|                               |        |
|-------------------------------|--------|
| Complete power supply failure | passed |
| Defrost test                  | passed |
| Starting and operating test   | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4.00 kW         | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.70            | 3.00               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 177 %           | 127 %              |
| Prated         | 4.00 kW         | 4.00 kW            |
| SCOP           | 4.50            | 3.25               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 3.54 kW         | 3.54 kW            |
| COP Tj = -7°C  | 2.64            | 2.18               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 2.15 kW         | 2.15 kW            |
| COP Tj = +2°C  | 4.66            | 3.12               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |
| Pdh Tj = +7°C  | 2.89 kW         | 2.86 kW            |

|   |          |          |
|---|----------|----------|
| COP Tj = +7°C                                       | 6.89     | 4.94     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.96 kW  | 2.80 kW  |
| COP Tj = 12°C                                       | 9.27     | 7.28     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 3.54 kW  | 3.54 kW  |
| COP Tj = Tbiv                                       | 2.64     | 2.18     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW  | 3.54 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52     | 1.86     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL  | 75 °C    | 75 °C    |
| Poff  | 13 W     | 13 W     |
| PTO   | 13 W     | 13 W     |
| PSB   | 13 W     | 13 W     |
| PCK   | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.46 kW  | 0.46 kW  |
| Annual energy consumption Qhe                       | 1836 kWh | 2539 kWh |

**Model RASM-2VTW2E & HWM-W2E - Heating Only**

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Model name                          | RASM-2VTW2E & HWM-W2E - Heating Only |
| Application                         | Heating (medium temp)                |
| Units                               | Indoor, Outdoor                      |
| Climate zone (for heating)          | n/a                                  |
| Reversibility                       | Yes                                  |
| Cooling mode application (optional) | n/a                                  |
| Any additional heat sources         | n/a                                  |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

|                               |        |
|-------------------------------|--------|
| Complete power supply failure | passed |
| Defrost test                  | passed |
| Starting and operating test   | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4.00 kW         | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.70            | 3.00               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 177 %           | 127 %              |
| Prated         | 4.00 kW         | 4.00 kW            |
| SCOP           | 4.50            | 3.25               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 3.54 kW         | 3.54 kW            |
| COP Tj = -7°C  | 2.64            | 2.18               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 2.15 kW         | 2.15 kW            |
| COP Tj = +2°C  | 4.66            | 3.12               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |

|   |             |             |
|---|-------------|-------------|
| Pdh Tj = +7°C                                       | 2.89 kW     | 2.86 kW     |
| COP Tj = +7°C                                       | 6.89        | 4.94        |
| Cdh Tj = +7 °C                                      | 0.900       | 0.900       |
| Pdh Tj = 12°C                                       | 2.96 kW     | 2.80 kW     |
| COP Tj = 12°C                                       | 9.27        | 7.28        |
| Cdh Tj = +12 °C                                     | 0.900       | 0.900       |
| Pdh Tj = Tbiv                                       | 3.54 kW     | 3.54 kW     |
| COP Tj = Tbiv                                       | 2.64        | 2.18        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW     | 3.54 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52        | 1.86        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900       | 0.900       |
| WTOL  | 75 °C       | 75 °C       |
| Poff  | 13 W        | 13 W        |
| PTO   | 13 W        | 13 W        |
| PSB   | 13 W        | 13 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.46 kW     | 0.46 kW     |
| Annual energy consumption Qhe                       | 1836 kWh    | 2539 kWh    |

**Model RASM-2VTW2E & HWM-W2E-B - Heating Only**

|                                     |  |
|-------------------------------------|--|
| Model name                          | RASM-2VTW2E & HWM-W2E-B - Heating Only |
| Application                         | Heating (medium temp)                  |
| Units                               | Indoor, Outdoor                        |
| Climate zone (for heating)          | n/a                                    |
| Reversibility                       | Yes                                    |
| Cooling mode application (optional) | n/a                                    |
| Any additional heat sources         | n/a                                    |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

|                               |        |
|-------------------------------|--------|
| Complete power supply failure | passed |
| Defrost test                  | passed |
| Starting and operating test   | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4.00 kW         | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.70            | 3.00               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
| $\eta_s$                               | 177 %           | 127 %              |
| P <sub>rated</sub>                     | 4.00 kW         | 4.00 kW            |
| SCOP                                   | 4.50            | 3.25               |
| T <sub>biv</sub>                       | -7 °C           | -7 °C              |
| T <sub>OL</sub>                        | -10 °C          | -10 °C             |
| P <sub>dh</sub> T <sub>j</sub> = -7 °C | 3.54 kW         | 3.54 kW            |
| COP T <sub>j</sub> = -7 °C             | 2.64            | 2.18               |
| C <sub>dh</sub> T <sub>j</sub> = -7 °C | 0.900           | 0.900              |
| P <sub>dh</sub> T <sub>j</sub> = +2 °C | 2.15 kW         | 2.15 kW            |
| COP T <sub>j</sub> = +2 °C             | 4.66            | 3.12               |
| C <sub>dh</sub> T <sub>j</sub> = +2 °C | 0.900           | 0.900              |

|   |          |          |
|---|----------|----------|
| Pdh Tj = +7°C                                       | 2.89 kW  | 2.86 kW  |
| COP Tj = +7°C                                       | 6.89     | 4.94     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.96 kW  | 2.80 kW  |
| COP Tj = 12°C                                       | 9.27     | 7.28     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 3.54 kW  | 3.54 kW  |
| COP Tj = Tbiv                                       | 2.64     | 2.18     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW  | 3.54 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52     | 1.86     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL  | 75 °C    | 75 °C    |
| Poff  | 13 W     | 13 W     |
| PTO   | 13 W     | 13 W     |
| PSB   | 13 W     | 13 W     |
| PCK   | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.46 kW  | 0.46 kW  |
| Annual energy consumption Qhe                       | 1836 kWh | 2539 kWh |

**Model RASM-2VTW2E & HWD-W2E-220S(-K) - Heating Only**

|                                     |   |
|-------------------------------------|---|
| Model name                          | RASM-2VTW2E & HWD-W2E-220S(-K) - Heating Only |
| Application                         | Heating + DHW                                 |
| Units                               | Indoor, Outdoor                               |
| Climate zone (for heating)          | n/a   |
| Reversibility                       | Yes   |
| Cooling mode application (optional) | n/a   |
| Any additional heat sources         | n/a   |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 16147 | Average Climate**

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 130 %      |
| COP                             | 3.19       |
| Heating up time                 | 1:36 h:min |
| Standby power input             | 35.0 W     |
| Reference hot water temperature | 52.0 °C    |
| Mixed water at 40°C             | 288 l      |

**EN 14511-4 | Heating**

|  |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4 kW            | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.7             | 3.00               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|          | Low temperature | Medium temperature |
|----------|-----------------|--------------------|
| $\eta_S$ | 177 %           | 127 %              |

|   |          |             |
|---|----------|-------------|
| Prated  | 4.00 kW  | 4.00 kW     |
| SCOP  | 4.50     | 3.25        |
| Tbiv  | -7 °C    | -7 °C       |
| TOL   | -10 °C   | -10 °C      |
| Pdh Tj = -7°C                                       | 3.54 kW  | 3.54 kW     |
| COP Tj = -7°C                                       | 2.64     | 2.18        |
| Cdh Tj = -7 °C                                      |          | 0.900       |
| Pdh Tj = +2°C                                       | 4.66 kW  | 2.15 kW     |
| COP Tj = +2°C                                       | 2.89     | 3.12        |
| Cdh Tj = +2 °C                                      |          | 0.900       |
| Pdh Tj = +7°C                                       | 2.96 kW  | 2.86 kW     |
| COP Tj = +7°C                                       | 9.27     | 4.94        |
| Cdh Tj = +7 °C                                      |          | 0.900       |
| Pdh Tj = 12°C                                       | 2.96 kW  | 2.80 kW     |
| COP Tj = 12°C                                       | 9.27     | 7.28        |
| Cdh Tj = +12 °C                                     |          | 0.900       |
| Pdh Tj = Tbiv                                       | 3.54 kW  | 3.54 kW     |
| COP Tj = Tbiv                                       | 2.64     | 2.18        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW  | 3.54 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52     | 1.86        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |          | 0.900       |
| WTOL  | 35 °C    | 75 °C       |
| Poff  | 13 W     | 13 W        |
| PTO   | 13 W     | 13 W        |
| PSB   | 13 W     | 13 W        |
| PCK   | 0 W      | 0 W         |
| Supplementary Heater: Type of energy input          | n/a      | Electricity |
| Supplementary Heater: PSUP                          | 0.46 kW  | 0.46 kW     |
| Annual energy consumption Qhe                       | 1836 kWh | 2539 kWh    |

**Model RASM-2VTW2E & ATW-CBX-01 - With Cooling Kit**

|                                     |   |
|-------------------------------------|---|
| Model name                          | RASM-2VTW2E & ATW-CBX-01 - With Cooling Kit |
| Application                         | Heating (medium temp)                       |
| Units                               | Outdoor                                     |
| Climate zone (for heating)          | n/a   |
| Reversibility                       | Yes   |
| Cooling mode application (optional) | +7°C/12°C, +18°C/+23°C                      |
| Any additional heat sources         | n/a   |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water****EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

|                               |        |
|-------------------------------|--------|
| Complete power supply failure | passed |
| Defrost test                  | passed |
| Starting and operating test   | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4.00 kW         | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.70            | 3.00               |

**EN 14511-2 | Cooling**

|                  |            |             |
|------------------|------------|-------------|
|                  | +7°C/+12°C | +18°C/+23°C |
| El input         | 1.44 kW    | 0.92 kW     |
| Cooling capacity | 4.00       | 4.00        |
| EER              | 2.78       | 4.34        |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|        | Low temperature | Medium temperature |
|--------|-----------------|--------------------|
| ηs     | 182 %           | 130 %              |
| Prated | 4.00 kW         | 4.00 kW            |
| SCOP   | 4.62            | 3.32               |
| Tbiv   | -7 °C           | -7 °C              |
| TOL    | -10 °C          | -10 °C             |

|   |          |          |
|---|----------|----------|
| Pdh Tj = -7°C                                       | 3.54 kW  | 3.54 kW  |
| COP Tj = -7°C                                       | 2.64     | 2.18     |
| Cdh Tj = -7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +2°C                                       | 2.15 kW  | 2.15 kW  |
| COP Tj = +2°C                                       | 4.66     | 3.12     |
| Cdh Tj = +2 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +7°C                                       | 2.89 kW  | 2.86 kW  |
| COP Tj = +7°C                                       | 6.89     | 4.94     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.96 kW  | 2.80 kW  |
| COP Tj = 12°C                                       | 9.27     | 7.28     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 3.54 kW  | 3.54 kW  |
| COP Tj = Tbiv                                       | 2.64     | 2.18     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW  | 3.54 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52     | 1.86     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL  | 75 °C    | 75 °C    |
| Poff  | 13 W     | 13 W     |
| PTO   | 13 W     | 13 W     |
| PSB   | 13 W     | 13 W     |
| PCK   | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.46 kW  | 0.46 kW  |
| Annual energy consumption Qhe                       | 1788 kWh | 2492 kWh |

### EN 14825 | Cooling

|                | +7°C/+12°C | +18°C/+23°C |
|----------------|------------|-------------|
| Pdesignc       | 4.00 kW    | 4.00 kW     |
| SEER           | 3.45       | 4.76        |
| Pdc Tj = 35°C  | 4.00 kW    | 4.00 kW     |
| EER Tj = 35°C  | 2.78       | 4.34        |
| Cdc Tj = 35 °C | 0.900      | 0.900       |
| Pdc Tj = 30°C  | 3.00 kW    | 3.00 kW     |
| EER Tj = 30°C  | 3.42       | 4.80        |
| Cdc Tj = 30 °C | 0.900      | 0.900       |
| Pdc Tj = 25°C  | 2.80 kW    | 2.80 kW     |
| EER Tj = 25°C  | 3.91       | 5.55        |
| Cdc Tj = 25 °C | 0.900      | 0.900       |
| Pdc Tj = 20°C  | 2.76 kW    | 3.26 kW     |
| EER Tj = 20°C  | 4.74       | 6.57        |
| Cdc Tj = 20 °C | 0.900      | 0.900       |
| Poff           | 13 W       | 13 W        |

|                               |         |         |
|-------------------------------|---------|---------|
| PTO                           | 0 W     | 0 W     |
| PSB                           | 13 W    | 13 W    |
| PCK                           | 0 W     | 0 W     |
| Annual energy consumption Qce | 696 kWh | 504 kWh |

**Model RASM-2VTW2E & HWM-W2E - With Cooling Kit**

|                                     |  |
|-------------------------------------|--|
| Model name                          | RASM-2VTW2E & HWM-W2E - With Cooling Kit |
| Application                         | Heating (medium temp)                    |
| Units                               | Indoor, Outdoor                          |
| Climate zone (for heating)          | n/a                                      |
| Reversibility                       | Yes                                      |
| Cooling mode application (optional) | +7°C/12°C, +18°C/+23°C                   |
| Any additional heat sources         | n/a                                      |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

|                               |        |
|-------------------------------|--------|
| Complete power supply failure | passed |
| Defrost test                  | passed |
| Starting and operating test   | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4.00 kW         | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.70            | 3.00               |

**EN 14511-2 | Cooling**

|                  |            |             |
|------------------|------------|-------------|
|                  | +7°C/+12°C | +18°C/+23°C |
| El input         | 1.44 kW    | 0.92 kW     |
| Cooling capacity | 4.00       | 4.00        |
| EER              | 2.78       | 4.34        |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|        | Low temperature | Medium temperature |
|--------|-----------------|--------------------|
| ηs     | 182 %           | 130 %              |
| Prated | 4.00 kW         | 4.00 kW            |
| SCOP   | 4.62            | 3.32               |
| Tbiv   | -7 °C           | -7 °C              |

|   |             |             |
|---|-------------|-------------|
| TOL   | -10 °C      | -10 °C      |
| Pdh Tj = -7°C                                       | 3.54 kW     | 3.54 kW     |
| COP Tj = -7°C                                       | 2.64        | 2.18        |
| Cdh Tj = -7 °C                                      | 0.900       | 0.900       |
| Pdh Tj = +2°C                                       | 2.15 kW     | 2.15 kW     |
| COP Tj = +2°C                                       | 4.66        | 3.12        |
| Cdh Tj = +2 °C                                      | 0.900       | 0.900       |
| Pdh Tj = +7°C                                       | 2.89 kW     | 2.86 kW     |
| COP Tj = +7°C                                       | 6.89        | 4.94        |
| Cdh Tj = +7 °C                                      | 0.900       | 0.900       |
| Pdh Tj = 12°C                                       | 2.96 kW     | 2.80 kW     |
| COP Tj = 12°C                                       | 9.27        | 7.28        |
| Cdh Tj = +12 °C                                     | 0.900       | 0.900       |
| Pdh Tj = Tbiv                                       | 3.54 kW     | 3.54 kW     |
| COP Tj = Tbiv                                       | 2.64        | 2.18        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW     | 3.54 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52        | 1.86        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900       | 0.900       |
| WTOL  | 75 °C       | 75 °C       |
| Poff  | 13 W        | 13 W        |
| PTO   | 13 W        | 13 W        |
| PSB   | 13 W        | 13 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.46 kW     | 0.46 kW     |
| Annual energy consumption Qhe                       | 1788 kWh    | 2492 kWh    |

#### EN 14825 | Cooling

|                | +7°C/+12°C | +18°C/+23°C |
|----------------|------------|-------------|
| Pdesignc       | 4.00 kW    | 4.00 kW     |
| SEER           | 3.45       | 4.76        |
| Pdc Tj = 35°C  | 4.00 kW    | 4.00 kW     |
| EER Tj = 35°C  | 2.78       | 4.34        |
| Cdc Tj = 35 °C | 0.900      | 0.900       |
| Pdc Tj = 30°C  | 3.00 kW    | 3.00 kW     |
| EER Tj = 30°C  | 3.42       | 4.80        |
| Cdc Tj = 30 °C | 0.900      | 0.900       |
| Pdc Tj = 25°C  | 2.80 kW    | 2.80 kW     |
| EER Tj = 25°C  | 3.91       | 5.55        |
| Cdc Tj = 25 °C | 0.900      | 0.900       |
| Pdc Tj = 20°C  | 2.76 kW    | 3.26 kW     |
| EER Tj = 20°C  | 4.74       | 6.57        |
| Cdc Tj = 20 °C | 0.900      | 0.900       |

|                               |         |         |
|-------------------------------|---------|---------|
| Poff                          | 13 W    | 13 W    |
| PTO                           | 0 W     | 0 W     |
| PSB                           | 13 W    | 13 W    |
| PCK                           | 0 W     | 0 W     |
| Annual energy consumption Qce | 696 kWh | 504 kWh |

**Model RASM-2VTW2E & HWM-W2E-B - With Cooling Kit**

|                                     |  |
|-------------------------------------|--|
| Model name                          | RASM-2VTW2E & HWM-W2E-B - With Cooling Kit |
| Application                         | Heating (medium temp)                      |
| Units                               | Indoor, Outdoor                            |
| Climate zone (for heating)          | n/a  |
| Reversibility                       | Yes  |
| Cooling mode application (optional) | +7°C/12°C, +18°C/+23°C                     |
| Any additional heat sources         | n/a  |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

|                               |        |
|-------------------------------|--------|
| Complete power supply failure | passed |
| Defrost test                  | passed |
| Starting and operating test   | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4.00 kW         | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.70            | 3.00               |

**EN 14511-2 | Cooling**

|                  |            |             |
|------------------|------------|-------------|
|                  | +7°C/+12°C | +18°C/+23°C |
| El input         | 1.44 kW    | 0.92 kW     |
| Cooling capacity | 4.00       | 4.00        |
| EER              | 2.78       | 4.34        |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 41 dB(A)        | 41 dB(A)           |
| Sound power level outdoor | 55 dB(A)        | 55 dB(A)           |

**EN 14825 | Average Climate**

|        | Low temperature | Medium temperature |
|--------|-----------------|--------------------|
| ηs     | 182 %           | 130 %              |
| Prated | 4.00 kW         | 4.00 kW            |
| SCOP   | 4.62            | 3.32               |
| Tbiv   | -7 °C           | -7 °C              |

|   |          |          |
|---|----------|----------|
| TOL   | -10 °C   | -10 °C   |
| Pdh Tj = -7°C                                       | 3.54 kW  | 3.54 kW  |
| COP Tj = -7°C                                       | 2.64     | 2.18     |
| Cdh Tj = -7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +2°C                                       | 2.15 kW  | 2.15 kW  |
| COP Tj = +2°C                                       | 4.66     | 3.12     |
| Cdh Tj = +2 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +7°C                                       | 2.89 kW  | 2.86 kW  |
| COP Tj = +7°C                                       | 6.89     | 4.94     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.96 kW  | 2.80 kW  |
| COP Tj = 12°C                                       | 9.27     | 7.28     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 3.54 kW  | 3.54 kW  |
| COP Tj = Tbiv                                       | 2.64     | 2.18     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 3.54 kW  | 3.54 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.52     | 1.86     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh |          |          |
| WTOL  | 75 °C    | 75 °C    |
| Poff  | 13 W     | 13 W     |
| PTO   | 13 W     | 13 W     |
| PSB   | 13 W     | 13 W     |
| PCK   | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.46 kW  | 0.46 kW  |
| Annual energy consumption Qhe                       | 1788 kWh | 2492 kWh |

### EN 14825 | Cooling

|                | +7°C/+12°C | +18°C/+23°C |
|----------------|------------|-------------|
| Pdesignc       | 4.00 kW    | 4.00 kW     |
| SEER           | 3.45       | 4.76        |
| Pdc Tj = 35°C  | 4.00 kW    | 4.00 kW     |
| EER Tj = 35°C  | 2.78       | 4.34        |
| Cdc Tj = 35 °C | 0.900      | 0.900       |
| Pdc Tj = 30°C  | 3.00 kW    | 3.00 kW     |
| EER Tj = 30°C  | 3.42       | 4.80        |
| Cdc Tj = 30 °C | 0.900      | 0.900       |
| Pdc Tj = 25°C  | 2.80 kW    | 2.80 kW     |
| EER Tj = 25°C  | 3.91       | 5.55        |
| Cdc Tj = 25 °C | 0.900      | 0.900       |
| Pdc Tj = 20°C  | 2.76 kW    | 3.26 kW     |
| EER Tj = 20°C  | 4.74       | 6.57        |
| Cdc Tj = 20 °C | 0.900      | 0.900       |

|                               |         |         |
|-------------------------------|---------|---------|
| Poff                          | 13 W    | 13 W    |
| PTO                           | 0 W     | 0 W     |
| PSB                           | 13 W    | 13 W    |
| PCK                           | 0 W     | 0 W     |
| Annual energy consumption Qce | 696 kWh | 504 kWh |

**Model RASM-2VTW2E & HWD-W2E-220S(-K) - With Cooling Kit**

|                                     |   |
|-------------------------------------|---|
| Model name                          | RASM-2VTW2E & HWD-W2E-220S(-K) - With Cooling Kit |
| Application                         | Heating + DHW                                     |
| Units                               | Indoor, Outdoor                                   |
| Climate zone (for heating)          | n/a   |
| Reversibility                       | Yes   |
| Cooling mode application (optional) | +7°C/12°C, +18°C/+23°C                            |
| Any additional heat sources         | n/a   |

**General data**

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

**Outdoor Air/Water**
**EN 16147 | Average Climate**

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency ηDHW                 | 130 %      |
| COP                             | 3.19       |
| Heating up time                 | 1:36 h:min |
| Standby power input             | 35.0 W     |
| Reference hot water temperature | 52.0 °C    |
| Mixed water at 40°C             | 288 l      |

**EN 14511-4 | Heating**

|  |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

**EN 14511-2 | Heating**

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 4 kW            | 4.00 kW            |
| El input    | 0.85 kW         | 1.33 kW            |
| COP         | 4.7             | 3.00               |

**EN 14511-2 | Cooling**

|                  | +7°C/+12°C | +18°C/+23°C |
|------------------|------------|-------------|
| El input         | 1.44 kW    | 0.92 kW     |
| Cooling capacity | 4.00       | 4.00        |
| EER              | 2.78       | 4.34        |

**EN 12102-1 | Average Climate**

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
|--|-----------------|--------------------|

|                           |          |          |
|---------------------------|----------|----------|
| Sound power level indoor  | 41 dB(A) | 41 dB(A) |
| Sound power level outdoor | 55 dB(A) | 55 dB(A) |

**EN 14825 | Average Climate**

|  | Low temperature | Medium temperature |
|--|-----------------|--------------------|
| $\eta_s$   | 177 %           | 130 %              |
| P <sub>rated</sub>   | 4.00 kW         | 4.00 kW            |
| SCOP   | 4.50            | 3.32               |
| T <sub>biv</sub>   | -7 °C           | -7 °C              |
| T <sub>OL</sub>  | -10 °C          | -10 °C             |
| P <sub>dh T<sub>j</sub></sub> = -7°C   | 3.54 kW         | 3.54 kW            |
| COP T <sub>j</sub> = -7°C  | 2.64            | 2.18               |
| Cd <sub>h</sub> T <sub>j</sub> = -7 °C   |                 | 0.900              |
| P <sub>dh T<sub>j</sub></sub> = +2°C   | 4.66 kW         | 2.15 kW            |
| COP T <sub>j</sub> = +2°C  | 2.89            | 3.12               |
| Cd <sub>h</sub> T <sub>j</sub> = +2 °C   |                 | 0.900              |
| P <sub>dh T<sub>j</sub></sub> = +7°C   | 2.96 kW         | 2.86 kW            |
| COP T <sub>j</sub> = +7°C  | 9.27            | 4.94               |
| Cd <sub>h</sub> T <sub>j</sub> = +7 °C   |                 | 0.900              |
| P <sub>dh T<sub>j</sub></sub> = 12°C   | 2.96 kW         | 2.80 kW            |
| COP T <sub>j</sub> = 12°C  | 9.27            | 7.28               |
| Cd <sub>h</sub> T <sub>j</sub> = +12 °C  |                 | 0.900              |
| P <sub>dh T<sub>j</sub></sub> = T <sub>biv</sub>   | 3.54 kW         | 3.54 kW            |
| COP T <sub>j</sub> = T <sub>biv</sub>  | 2.64            | 2.18               |
| P <sub>dh T<sub>j</sub></sub> = T <sub>OL</sub> or P <sub>dh T<sub>j</sub></sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>  | 3.54 kW         | 3.54 kW            |
| COP T <sub>j</sub> = T <sub>OL</sub> or COP T <sub>j</sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub>                        | 2.52            | 1.86               |
| Cd <sub>h</sub> T <sub>j</sub> = T <sub>OL</sub> or P <sub>dh T<sub>j</sub></sub> = T <sub>designh</sub> if T <sub>OL</sub> < T <sub>designh</sub> |                 | 0.900              |
| WT <sub>OL</sub>   | 35 °C           | 75 °C              |
| P <sub>off</sub>   | 13 W            | 13 W               |
| PTO  | 13 W            | 13 W               |
| PSB  | 13 W            | 13 W               |
| PCK  | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input   | n/a             | Electricity        |
| Supplementary Heater: PSUP   | 0.46 kW         | 0.46 kW            |
| Annual energy consumption Q <sub>he</sub>  | 1836 kWh        | 2492 kWh           |

**EN 14825 | Cooling**

|  | +7°C/+12°C | +18°C/+23°C |
|--|------------|-------------|
| P <sub>designc</sub>                   | 4.00 kW    | 4.00 kW     |
| SEER                                   | 3.45       | 4.76        |
| P <sub>dc T<sub>j</sub></sub> = 35°C   | 4.00 kW    | 4.00 kW     |
| EER T <sub>j</sub> = 35°C              | 2.78       | 4.34        |
| C <sub>dc</sub> T <sub>j</sub> = 35 °C | 0.900      | 0.900       |

|                               |         |         |
|-------------------------------|---------|---------|
| Pdc Tj = 30°C                 | 3.00 kW | 3.00 kW |
| EER Tj = 30°C                 | 3.42    | 4.80    |
| Cdc Tj = 30 °C                | 0.900   | 0.900   |
| Pdc Tj = 25°C                 | 2.80 kW | 2.80 kW |
| EER Tj = 25°C                 | 3.91    | 5.55    |
| Cdc Tj = 25 °C                | 0.900   | 0.900   |
| Pdc Tj = 20°C                 | 2.76 kW | 3.26 kW |
| EER Tj = 20°C                 | 4.74    | 6.57    |
| Cdc Tj = 20 °C                | 0.900   | 0.900   |
| Poff                          | 13 W    | 13 W    |
| PTO                           | 0 W     | 0 W     |
| PSB                           | 13 W    | 13 W    |
| PCK                           | 0 W     | 0 W     |
| Annual energy consumption Qce | 696 kWh | 504 kWh |