

This information was generated by the HP KEYMARK database on 21 Jun 2022

[Login](#)

|                     |                      |          |             |
|---------------------|----------------------|----------|-------------|
| Summary of          | WWC 100 H/X          | Reg. No. | 041-K001-31 |
| Certificate Holder  |                      |          |             |
| Name                | ait-deutschland GmbH |          |             |
| Address             | Industriestr. 3      | Zip      | 95359       |
| City                | Kasendorf            | Country  | Germany     |
| Certification Body  | BRE Global Limited   |          |             |
| Subtype title       | WWC 100 H/X          |          |             |
| Heat Pump Type      | Water/Water          |          |             |
| Refrigerant         | R407c                |          |             |
| Mass of Refrigerant | 2.95 kg              |          |             |
| Certification Date  | 06.09.2019           |          |             |

## Model: WWC 100H/X

| Configure model                     |                                 |
|-------------------------------------|---------------------------------|
| Model name                          | WWC 100H/X                      |
| Application                         | Heating (medium temp)           |
| Units                               | Indoor                          |
| Climate Zone                        | Colder Climate + Warmer Climate |
| Reversibility                       | No                              |
| Cooling mode application (optional) | n/a                             |

| General Data |             |
|--------------|-------------|
| Power supply | 3x400V 50Hz |

### Heating

| EN 14511-2  |                 |                    |
|-------------|-----------------|--------------------|
|             | Low temperature | Medium temperature |
| Heat output | 11.00 kW        | 9.00 kW            |
| El input    | 1.96 kW         | 2.92 kW            |
| COP         | 5.60            | 3.08               |

| EN 14511-4                                 |        |
|--|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Starting and operating test                | passed |

### Average Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

### EN 12102-1

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 53 dB(A)        | 53 dB(A)           |

### EN 14825

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 232 %           | 174 %              |
| Prated         | 11.00 kW        | 9.93 kW            |
| SCOP           | 5.99            | 4.56               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 11.02 kW        | 10.09 kW           |
| COP Tj = -7°C  | 5.62            | 3.52               |
| Cdh Tj = -7 °C | 1.00            | 1.00               |
| Pdh Tj = +2°C  | 11.14 kW        | 10.63 kW           |
| COP Tj = +2°C  | 6.01            | 4.51               |
| Cdh Tj = +2 °C | 1.00            | 1.00               |
| Pdh Tj = +7°C  | 11.25 kW        | 10.95 kW           |
| COP Tj = +7°C  | 6.39            | 5.33               |
| Cdh Tj = +7 °C | 0.99            | 1.00               |
| Pdh Tj = 12°C  | 11.35 kW        | 11.27 kW           |

This information was generated by the HP KEYMARK database on 21 Jun 2022

|   |             |             |
|---|-------------|-------------|
| COP Tj = 12°C                                       | 6.70        | 6.32        |
| Cdh Tj = +12 °C                                     | 0.99        | 0.99        |
| Pdh Tj = Tbiv                                       | 11.00 kW    | 9.93 kW     |
| COP Tj = Tbiv                                       | 5.56        | 3.29        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW    | 9.93 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 5.56        | 3.29        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 10 W        | 10 W        |
| PTO   | 10 W        | 10 W        |
| PSB   | 10 W        | 10 W        |
| PCK   | 10 W        | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 3796 kWh    | 4499 kWh    |

## Warmer Climate

| <b>EN 14825</b> |                        |                           |
|-----------------|------------------------|---------------------------|
|                 | <b>Low temperature</b> | <b>Medium temperature</b> |
| $\eta_s$        | 233 %                  | 176 %                     |
| Prated          | 11.00 kW               | 9.93 kW                   |
| SCOP            | 6.01                   | 4.59                      |

This information was generated by the HP KEYMARK database on 21 Jun 2022

|   |             |             |
|---|-------------|-------------|
| Tbiv  | 2 °C        | 2 °C        |
| TOL   | 2 °C        | 2 °C        |
| Pdh Tj = +2°C                                       | 11.00 kW    | 9.93 kW     |
| COP Tj = +2°C                                       | 5.56        | 3.29        |
| Cdh Tj = +2 °C                                      | 1.00        | 1.00        |
| Pdh Tj = +7°C                                       | 11.12 kW    | 10.41 kW    |
| COP Tj = +7°C                                       | 5.93        | 4.07        |
| Cdh Tj = +7 °C                                      | 1.00        | 1.00        |
| Pdh Tj = 12°C                                       | 11.28 kW    | 11.05 kW    |
| COP Tj = 12°C                                       | 6.52        | 5.65        |
| Cdh Tj = +12 °C                                     | 0.99        | 1.00        |
| Pdh Tj = Tbiv                                       | 11.00 kW    | 9.93 kW     |
| COP Tj = Tbiv                                       | 5.56        | 3.29        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW    | 9.93 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 5.56        | 3.29        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 10 W        | 10 W        |
| PTO   | 10 W        | 10 W        |
| PSB   | 10 W        | 10 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |

This information was generated by the HP KEYMARK database on 21 Jun 2022

|   |          |          |
|---|----------|----------|
| Supplementary Heater: PSUP                | 0.00 kW  | 0.00 kW  |
| Annual energy consumption Q <sub>he</sub> | 2443 kWh | 2887 kWh |

## Colder Climate

| <b>EN 14825</b>                        |                        |                           |
|--|------------------------|---------------------------|
|  | <b>Low temperature</b> | <b>Medium temperature</b> |
| $\eta_s$                               | 239 %                  | 182 %                     |
| Prated                                 | 11.00 kW               | 9.93 kW                   |
| SCOP                                   | 6.18                   | 4.74                      |
| T <sub>biv</sub>                       | -22 °C                 | -22 °C                    |
| TOL                                    | -22 °C                 | -22 °C                    |
| P <sub>dh</sub> T <sub>j</sub> = -7°C  | 11.16 kW               | 10.52 kW                  |
| COP T <sub>j</sub> = -7°C              | 6.09                   | 4.28                      |
| C <sub>dh</sub> T <sub>j</sub> = -7 °C | 1.00                   | 1.00                      |
| P <sub>dh</sub> T <sub>j</sub> = +2°C  | 11.25 kW               | 10.89 kW                  |
| COP T <sub>j</sub> = +2°C              | 6.42                   | 5.18                      |
| C <sub>dh</sub> T <sub>j</sub> = +2 °C | 0.99                   | 1.00                      |
| P <sub>dh</sub> T <sub>j</sub> = +7°C  | 11.32 kW               | 11.16 kW                  |
| COP T <sub>j</sub> = +7°C              | 6.66                   | 6.00                      |
| C <sub>dh</sub> T <sub>j</sub> = +7 °C | 0.99                   | 1.00                      |
| P <sub>dh</sub> T <sub>j</sub> = 12°C  | 11.34 kW               | 11.37 kW                  |

This information was generated by the HP KEYMARK database on 21 Jun 2022

|   |             |             |
|---|-------------|-------------|
| COP Tj = 12°C                                       | 6.53        | 6.63        |
| Cdh Tj = +12 °C                                     | 0.99        | 0.99        |
| Pdh Tj = Tbiv                                       | 11.00 kW    | 9.93 kW     |
| COP Tj = Tbiv                                       | 5.56        | 3.29        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.00 kW    | 9.93 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 5.56        | 3.29        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 10 W        | 10 W        |
| PTO   | 10 W        | 10 W        |
| PSB   | 10 W        | 10 W        |
| PCK   | 0 W         | 0 W         |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 4389 kWh    | 5165 kWh    |
| Pdh Tj = -15°C (if TOL<-20°C)                       | 0.01        | 0.01        |
| COP Tj = -15°C (if TOL<-20°C)                       | 0.01        | 0.01        |
| Cdh Tj = -15 °C                                     | 1.00        | 1.00        |