

## Subtype SWCV 162 Inverter

|                     |                                    |
|---------------------|------------------------------------|
| Certificate Holder  | ait-deutschland GmbH               |
| Address             | Industriestr. 3                    |
| ZIP                 | 95359                              |
| City                | Kasendorf                          |
| Country             | DE                                 |
| Certification Body  | BRE Global Limited                 |
| Subtype title       | SWCV 162 Inverter                  |
| Registration number | 041-K001-14                        |
| Heat Pump Type      | Brine/Water                        |
| Refrigerant         | R407c                              |
| Mass of Refrigerant | 2.2 kg                             |
| Certification Date  | 12.05.2017                         |
| Testing basis       | HP Keymark Scheme Transition Rules |

## Model SWCV 162(H)(K)3

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | SWCV 162(H)(K)3                |
| Application                         | Heating (medium temp)          |
| Units                               | Indoor                         |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | n/a         |

## Brine/Water

### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |

### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 9.42 kW         | 9.06 kW            |
| El input    | 1.91 kW         | 1.88 kW            |
| COP         | 4.92            | 3.22               |

### EN 12102-1 | Average Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

### EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 199 %           | 154 %              |
| Prated         | 15.90 kW        | 16.00 kW           |
| SCOP           | 5.17            | 4.05               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 14.20 kW        | 14.20 kW           |
| COP Tj = -7°C  | 4.19            | 3.00               |
| Cdh Tj = -7 °C | 1.00            | 1.00               |
| Pdh Tj = +2°C  | 8.70 kW         | 8.70 kW            |
| COP Tj = +2°C  | 5.26            | 4.10               |
| Cdh Tj = +2 °C | 1.00            | 1.00               |
| Pdh Tj = +7°C  | 5.70 kW         | 5.60 kW            |
| COP Tj = +7°C  | 6.06            | 4.90               |
| Cdh Tj = +7 °C | 1.00            | 1.00               |
| Pdh Tj = 12°C  | 5.80 kW         | 5.50 kW            |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = 12°C                                       | 5.88        | 5.00        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.97        |
| Pdh Tj = Tbiv                                       | 15.90 kW    | 15.40 kW    |
| COP Tj = Tbiv                                       | 3.90        | 2.80        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW    | 15.40 kW    |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.90        | 2.80        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00        | 1.00        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 20 W        |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 30 W        | 30 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 6355 kWh    | 8154 kWh    |

#### EN 12102-1 | Colder Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

#### EN 14825 | Colder Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| ηs                                                  | 210 %           | 160 %              |
| Prated                                              | 15.90 kW        | 16.00 kW           |
| SCOP                                                | 5.44            | 4.19               |
| Tbiv                                                | -22 °C          | -22 °C             |
| TOL                                                 | -22 °C          | -22 °C             |
| Pdh Tj = -7°C                                       | 9.80 kW         | 9.80 kW            |
| COP Tj = -7°C                                       | 5.10            | 3.80               |
| Cdh Tj = -7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +2°C                                       | 6.00 kW         | 6.00 kW            |
| COP Tj = +2°C                                       | 6.10            | 4.70               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 5.70 kW         | 5.60 kW            |
| COP Tj = +7°C                                       | 6.10            | 5.00               |
| Cdh Tj = +7 °C                                      | 0.97            | 0.97               |
| Pdh Tj = 12°C                                       | 5.70 kW         | 5.60 kW            |
| COP Tj = 12°C                                       | 5.60            | 5.00               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = Tbiv                                       | 3.90            | 2.80               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW        | 15.40 kW           |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.90        | 2.80        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00        | 1.00        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 20 W        |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 30 W        | 30 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 7198 kWh    | 9415 kWh    |

#### EN 12102-1 | Warmer Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 197 %           | 151 %              |
| Prated                                              | 15.90 kW        | 16.00 kW           |
| SCOP                                                | 5.12            | 3.98               |
| Tbiv                                                | 2 °C            | 2 °C               |
| TOL                                                 | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = +2°C                                       | 3.89            | 2.80               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 10.40 kW        | 10.40 kW           |
| COP Tj = +7°C                                       | 4.93            | 3.61               |
| Cdh Tj = +7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = 12°C                                       | 5.80 kW         | 5.50 kW            |
| COP Tj = 12°C                                       | 6.05            | 4.92               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = Tbiv                                       | 3.89            | 2.80               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW        | 15.40 kW           |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.89            | 2.80               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00            | 1.00               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 2 W             | 2 W                |
| PTO                                                 | 20 W            | 20 W               |
| PSB                                                 | 7 W             | 7 W                |
| PCK                                                 | 30 W            | 30 W               |

|                                            |             |             |
|--------------------------------------------|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Q <sub>he</sub>  | 4150 kWh    | 5365 kWh    |

## Model WZSV 162(H)(K)3M

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | WZSV 162(H)(K)3M               |
| Application                         | Heating (medium temp)          |
| Units                               | Indoor                         |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | Yes         |

## Brine/Water

### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |

### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 9.42 kW         | 9.06 kW            |
| El input    | 1.91 kW         | 1.88 kW            |
| COP         | 4.92            | 3.22               |

### EN 12102-1 | Average Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

### EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 199 %           | 154 %              |
| Prated         | 15.90 kW        | 16.00 kW           |
| SCOP           | 5.17            | 4.05               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 14.20 kW        | 14.20 kW           |
| COP Tj = -7°C  | 4.19            | 3.00               |
| Cdh Tj = -7 °C | 1.00            | 1.00               |
| Pdh Tj = +2°C  | 8.70 kW         | 8.70 kW            |
| COP Tj = +2°C  | 5.26            | 4.10               |
| Cdh Tj = +2 °C | 1.00            | 1.00               |
| Pdh Tj = +7°C  | 5.70 kW         | 5.60 kW            |
| COP Tj = +7°C  | 6.06            | 4.90               |
| Cdh Tj = +7 °C | 1.00            | 1.00               |
| Pdh Tj = 12°C  | 5.80 kW         | 5.50 kW            |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = 12°C                                       | 5.88        | 5.00        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.97        |
| Pdh Tj = Tbiv                                       | 15.90 kW    | 15.40 kW    |
| COP Tj = Tbiv                                       | 3.90        | 2.80        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW    | 15.40 kW    |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.90        | 2.80        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00        | 1.00        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 20 W        |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 30 W        | 30 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 6355 kWh    | 8154 kWh    |

#### EN 12102-1 | Colder Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

#### EN 14825 | Colder Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| ηs                                                  | 210 %           | 160 %              |
| Prated                                              | 15.90 kW        | 16.00 kW           |
| SCOP                                                | 5.44            | 4.19               |
| Tbiv                                                | -22 °C          | -22 °C             |
| TOL                                                 | -22 °C          | -22 °C             |
| Pdh Tj = -7°C                                       | 9.80 kW         | 9.80 kW            |
| COP Tj = -7°C                                       | 5.10            | 3.80               |
| Cdh Tj = -7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +2°C                                       | 6.00 kW         | 6.00 kW            |
| COP Tj = +2°C                                       | 6.10            | 4.70               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 5.70 kW         | 5.60 kW            |
| COP Tj = +7°C                                       | 6.10            | 5.00               |
| Cdh Tj = +7 °C                                      | 0.97            | 0.97               |
| Pdh Tj = 12°C                                       | 5.70 kW         | 5.60 kW            |
| COP Tj = 12°C                                       | 5.60            | 5.00               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = Tbiv                                       | 3.90            | 2.80               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW        | 15.40 kW           |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.90        | 2.80        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00        | 1.00        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 20 W        |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 30 W        | 30 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 7198 kWh    | 9415 kWh    |

#### EN 12102-1 | Warmer Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 197 %           | 151 %              |
| Prated                                              | 15.90 kW        | 16.00 kW           |
| SCOP                                                | 5.12            | 3.98               |
| Tbiv                                                | 2 °C            | 2 °C               |
| TOL                                                 | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = +2°C                                       | 3.89            | 2.80               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 10.40 kW        | 10.40 kW           |
| COP Tj = +7°C                                       | 4.93            | 3.61               |
| Cdh Tj = +7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = 12°C                                       | 5.80 kW         | 5.50 kW            |
| COP Tj = 12°C                                       | 6.05            | 4.92               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = Tbiv                                       | 3.89            | 2.80               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW        | 15.40 kW           |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.89            | 2.80               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00            | 1.00               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 2 W             | 2 W                |
| PTO                                                 | 20 W            | 20 W               |
| PSB                                                 | 7 W             | 7 W                |
| PCK                                                 | 30 W            | 30 W               |

|                                            |             |             |
|--------------------------------------------|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Q <sub>he</sub>  | 4150 kWh    | 5365 kWh    |

## Model PWZSV 162H3S

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | PWZSV 162H3S                   |
| Application                         | Heating (medium temp)          |
| Units                               | Indoor                         |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | Yes         |

## Brine/Water

### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |

### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 9.42 kW         | 9.06 kW            |
| El input    | 1.91 kW         | 1.88 kW            |
| COP         | 4.92            | 3.22               |

### EN 12102-1 | Average Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

### EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 199 %           | 154 %              |
| Prated         | 15.90 kW        | 16.00 kW           |
| SCOP           | 5.17            | 4.05               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 14.20 kW        | 14.20 kW           |
| COP Tj = -7°C  | 4.19            | 3.00               |
| Cdh Tj = -7 °C | 1.00            | 1.00               |
| Pdh Tj = +2°C  | 8.70 kW         | 8.70 kW            |
| COP Tj = +2°C  | 5.26            | 4.10               |
| Cdh Tj = +2 °C | 1.00            | 1.00               |
| Pdh Tj = +7°C  | 5.70 kW         | 5.60 kW            |
| COP Tj = +7°C  | 6.06            | 4.90               |
| Cdh Tj = +7 °C | 1.00            | 1.00               |
| Pdh Tj = 12°C  | 5.80 kW         | 5.50 kW            |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = 12 °C                                      | 5.88        | 5.00        |
| Cdh Tj = +12 °C                                     | 0.98        | 0.97        |
| Pdh Tj = Tbiv                                       | 15.90 kW    | 15.40 kW    |
| COP Tj = Tbiv                                       | 3.90        | 2.80        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW    | 15.40 kW    |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.90        | 2.80        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00        | 1.00        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 20 W        |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 30 W        | 30 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 6355 kWh    | 8154 kWh    |

#### EN 12102-1 | Colder Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

#### EN 14825 | Colder Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 210 %           | 160 %              |
| Prated                                              | 15.90 kW        | 16.00 kW           |
| SCOP                                                | 5.44            | 4.19               |
| Tbiv                                                | -22 °C          | -22 °C             |
| TOL                                                 | -22 °C          | -22 °C             |
| Pdh Tj = -7 °C                                      | 9.80 kW         | 9.80 kW            |
| COP Tj = -7 °C                                      | 5.10            | 3.80               |
| Cdh Tj = -7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +2 °C                                      | 6.00 kW         | 6.00 kW            |
| COP Tj = +2 °C                                      | 6.10            | 4.70               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7 °C                                      | 5.70 kW         | 5.60 kW            |
| COP Tj = +7 °C                                      | 6.10            | 5.00               |
| Cdh Tj = +7 °C                                      | 0.97            | 0.97               |
| Pdh Tj = 12 °C                                      | 5.70 kW         | 5.60 kW            |
| COP Tj = 12 °C                                      | 5.60            | 5.00               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = Tbiv                                       | 3.90            | 2.80               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW        | 15.40 kW           |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.90        | 2.80        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00        | 1.00        |
| WTOL                                                | 65 °C       | 65 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 20 W        |
| PSB                                                 | 7 W         | 7 W         |
| PCK                                                 | 30 W        | 30 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                       | 7198 kWh    | 9415 kWh    |

#### EN 12102-1 | Warmer Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 43 dB(A)        | 43 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 197 %           | 151 %              |
| Prated                                              | 15.90 kW        | 16.00 kW           |
| SCOP                                                | 5.12            | 3.98               |
| Tbiv                                                | 2 °C            | 2 °C               |
| TOL                                                 | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = +2°C                                       | 3.89            | 2.80               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 10.40 kW        | 10.40 kW           |
| COP Tj = +7°C                                       | 4.93            | 3.61               |
| Cdh Tj = +7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = 12°C                                       | 5.80 kW         | 5.50 kW            |
| COP Tj = 12°C                                       | 6.05            | 4.92               |
| Cdh Tj = +12 °C                                     | 0.97            | 0.97               |
| Pdh Tj = Tbiv                                       | 15.90 kW        | 15.40 kW           |
| COP Tj = Tbiv                                       | 3.89            | 2.80               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 15.90 kW        | 15.40 kW           |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.89            | 2.80               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00            | 1.00               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 2 W             | 2 W                |
| PTO                                                 | 20 W            | 20 W               |
| PSB                                                 | 7 W             | 7 W                |
| PCK                                                 | 30 W            | 30 W               |

|                                            |             |             |
|--------------------------------------------|-------------|-------------|
| Supplementary Heater: Type of energy input | Electricity | Electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Q <sub>he</sub>  | 4150 kWh    | 5365 kWh    |