

| Summary of                 | S1x55-6                     | Reg. No. | 012-SC0190-19 |  |
|----------------------------|-----------------------------|----------|---------------|--|
| Certificate Holder         | -                           |          |               |  |
| Name                       | Nibe AB                     | Nibe AB  |               |  |
| Address                    | Box 14                      | Zip      | S-28521       |  |
| City                       | Markaryd                    | Country  | Sweden        |  |
| Certification Body         | RISE CERT                   |          |               |  |
| Name of testing laboratory | AIT                         |          |               |  |
| Subtype title              | S1x55-6                     |          |               |  |
| Heat Pump Type             | Brine/Water and Water/Water |          |               |  |
| Refrigerant                | R407c                       |          |               |  |
| Mass Of Refrigerant        | 1.16 kg                     |          |               |  |
| Certification Date         | 05.08.2019                  |          |               |  |



## Model: S1255-6 PC 3x400

| General Data     |             |  |
|------------------|-------------|--|
| Power supply     | 1x230V 50Hz |  |
| Off-peak product | No          |  |

Brine/Water Heat Pump

#### Heating

| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |  |
|------------------------|-----------------|--------------------|--|
|                        | Low temperature | Medium temperature |  |
| Heat output            | 3.15 kW         | 2.78 kW            |  |
| El input               | 0.67 kW         | 0.93 kW            |  |
| СОР                    | 4.72            | 2.99               |  |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |  |

## Average Climate



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 200 %           | 150 %              |
| Prated        | 5.50 kW         | 5.50 kW            |
| SCOP          | 5.20            | 3.95               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW            |
| COP Tj = -7°C | 4.37            | 3.06               |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW            |
| COP Tj = +2°C | 5.24            | 3.97               |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW            |
| COP Tj = +7°C | 5.92            | 4.63               |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW            |
| COP Tj = 12°C | 5.95            | 4.86               |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW            |
| COP Tj = Tbiv | 4.15            | 2.84               |





| Pdh Tj = TOL                               | 5.40 kW     | 5.40 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 4.15        | 2.84        |
| Cdh  | 0.98        | 0.99        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 10 W        | 7 W         |
| PSB  | 7 W         | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2188 kWh    | 2875 kWh    |

| EN 12102-1               |                 |                    |  |
|--------------------------|-----------------|--------------------|--|
|                          | Low temperature | Medium temperature |  |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |  |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{S}$ | 211 %           | 157 %              |
| Prated     | 5.50 kW         | 6.00 kW            |
|            |                 |                    |





| This information was generated by the HP KEYMARK database on 17 Dec 2020 |         |         |  |
|--|---------|---------|--|
| SCOP   | 5.48    | 4.13    |  |
| Tbiv   | -22 °C  | -22 °C  |  |
| TOL  | -22 °C  | -22 °C  |  |
| Pdh Tj = -7°C  | 3.40 kW | 3.40 kW |  |
| COP Tj = -7°C  | 5.17    | 3.77    |  |
| Pdh Tj = +2°C  | 2.10 kW | 2.10 kW |  |
| COP Tj = +2°C  | 5.91    | 4.51    |  |
| Pdh Tj = $+7^{\circ}$ C  | 1.40 kW | 1.40 kW |  |
| $COPTj = +7^{\circ}C$  | 6.36    | 5.12    |  |
| Pdh Tj = 12°C  | 1.30 kW | 1.20 kW |  |
| COP Tj = 12°C  | 4.15    | 4.81    |  |
| Pdh Tj = Tbiv  | 5.40 kW | 5.50 kW |  |
| COP Tj = Tbiv  | 4.15    | 2.84    |  |
| Pdh Tj = TOL   | 5.40 kW | 5.50 kW |  |
| COP Tj = TOL   | 4.15    | 2.84    |  |
| Cdh  | 0.97    | 0.98    |  |
| WTOL   | 65 °C   | 65 °C   |  |
| Poff   | 2 W     | 2 W     |  |
| РТО  | 10 W    | 7 W     |  |
| PSB  | 7 W     | 7 W     |  |
| PCK  | 9 W     | 9 W     |  |
|  |         |         |  |



| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

## Domestic Hot Water (DHW)

## Average Climate

| EN 16147                        |             |  |
|---------------------------------|-------------|--|
| Declared load profile           | XL          |  |
| Efficiency ηDHW                 | 102 %       |  |
| СОР                             | 2.55        |  |
| Heating up time                 | 02:23 h:min |  |
| Standby power input             | 50.0 W      |  |
| Reference hot water temperature | 50.0 °C     |  |
| Mixed water at 40°C             | 245 I       |  |



| EN 16147                        |             |
|---------------------------------|-------------|
|                                 |             |
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 102 %       |
| СОР                             | 2.55        |
| Heating up time                 | 02:23 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 245 I       |

Water/Water Heat Pump

## Heating

| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |



| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 4.30 kW         | 3.82 kW            |
| El input               | 0.66 kW         | 1.00 kW            |
| СОР                    | 6.00            | 3.83               |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |

## Average Climate

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 270 %           | 214 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 6.95            | 5.55               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 6.30 kW         | 6.30 kW            |
| COP Tj = -7°C | 6.07            | 4.52               |





This information was generated by the HP KEYMARK database on 17 Dec 2020 Pdh Tj =  $+2^{\circ}$ C 3.90 kW 3.90 kW  $COPTj = +2^{\circ}C$ 7.09 5.62 Pdh Tj =  $+7^{\circ}$ C 2.50 kW 2.50 kW  $COPTj = +7^{\circ}C$ 7.84 6.34 Pdh Tj =  $12^{\circ}$ C 1.80 kW 1.60 kW  $COP Tj = 12^{\circ}C$ 7.97 6.57 7.00 kW Pdh Tj = Tbiv7.00 kW COP Tj = Tbiv 5.79 4.21 Pdh Tj = TOL7.00 kW 7.00 kW COPTj = TOL5.79 4.21 0.96 0.97 Cdh 65 °C 65 °C WTOL Poff 2 W 2 W PTO 18 W 15 W **PSB** 10 W 7 W **PCK** 9 W 9 W Supplementary Heater: Type of energy input electricity electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW

#### Colder Climate

Annual energy consumption Qhe

2078 kWh

2611 kWh



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| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 282 %           | 222 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 7.25            | 5.75               |
| Tbiv          | -22 °C          | -22 °C             |
| TOL           | -22 °C          | -22 °C             |
| Pdh Tj = -7°C | 4.30 kW         | 4.30 kW            |
| COP Tj = -7°C | 7.00            | 5.39               |
| Pdh Tj = +2°C | 2.70 kW         | 2.70 kW            |
| COP Tj = +2°C | 7.83            | 6.21               |
| Pdh Tj = +7°C | 1.80 kW         | 1.80 kW            |
| COP Tj = +7°C | 8.14            | 6.85               |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C | 7.70            | 6.64               |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv | 5.79            | 4.21               |



| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.95        | 0.96        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |

Domestic Hot Water (DHW)

**Average Climate** 



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| EN 16147                        |             |
|---------------------------------|-------------|
|                                 |             |
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 117 %       |
| СОР                             | 2.93        |
| Heating up time                 | 02:09 h:min |
| Standby power input             | 45.0 W      |
| Reference hot water temperature | 49.0 °C     |
| Mixed water at 40°C             | 240         |

| EN 16147                        |             |
|---------------------------------|-------------|
|                                 |             |
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 117 %       |
| СОР                             | 2.93        |
| Heating up time                 | 02:09 h:min |
| Standby power input             | 45.0 W      |
| Reference hot water temperature | 49.0 °C     |
| Mixed water at 40°C             | 240         |



## Model: S1255-6 3x400

| General Data     |             |  |
|------------------|-------------|--|
| Power supply     | 1x230V 50Hz |  |
| Off-peak product | No          |  |

Brine/Water Heat Pump

#### Heating

| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |

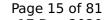
| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 3.15 kW         | 2.78 kW            |
| El input               | 0.67 kW         | 0.93 kW            |
| СОР                    | 4.72            | 2.99               |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |

## Average Climate



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 200 %           | 150 %              |
| Prated        | 5.50 kW         | 5.50 kW            |
| SCOP          | 5.20            | 3.95               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW            |
| COP Tj = -7°C | 4.37            | 3.06               |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW            |
| COP Tj = +2°C | 5.24            | 3.97               |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW            |
| COP Tj = +7°C | 5.92            | 4.63               |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW            |
| COP Tj = 12°C | 5.95            | 4.86               |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW            |
| COP Tj = Tbiv | 4.15            | 2.84               |





|  | -           |             |
|--|-------------|-------------|
| Pdh Tj = TOL                               | 5.40 kW     | 5.40 kW     |
| COP Tj = TOL                               | 4.15        | 2.84        |
| Cdh  | 0.98        | 0.99        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 10 W        | 7 W         |
| PSB  | 7 W         | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2188 kWh    | 2875 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825        |                    |
|-----------------|--------------------|
| Low temperature | Medium temperature |
| 211 %           | 157 %              |
| 5.50 kW         | 6.00 kW            |
|                 | 211 %              |



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| This information was generated by the HP KEYMARK database on 17 Dec 2020 |         |         |
|--|---------|---------|
| SCOP   | 5.48    | 4.13    |
| Tbiv   | -22 °C  | -22 °C  |
| TOL  | -22 °C  | -22 °C  |
| Pdh Tj = -7°C  | 3.40 kW | 3.40 kW |
| COP Tj = -7°C  | 5.17    | 3.77    |
| Pdh Tj = $+2$ °C   | 2.10 kW | 2.10 kW |
| $COPTj = +2^{\circ}C$  | 5.91    | 4.51    |
| Pdh Tj = $+7^{\circ}$ C  | 1.40 kW | 1.40 kW |
| $COPTj = +7^{\circ}C$  | 6.36    | 5.12    |
| Pdh Tj = 12°C  | 1.30 kW | 1.20 kW |
| COP Tj = 12°C  | 4.15    | 4.81    |
| Pdh Tj = Tbiv  | 5.40 kW | 5.50 kW |
| COP Tj = Tbiv  | 4.15    | 2.84    |
| Pdh Tj = TOL   | 5.40 kW | 5.50 kW |
| COP Tj = TOL   | 4.15    | 2.84    |
| Cdh  | 0.97    | 0.98    |
| WTOL   | 65 °C   | 65 °C   |
| Poff   | 2 W     | 2 W     |
| РТО  | 10 W    | 7 W     |
| PSB  | 7 W     | 7 W     |
| РСК  | 9 W     | 9 W     |
|  |         |         |



| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

## Domestic Hot Water (DHW)

## Average Climate

| EN 16147                        |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 102 %       |
| СОР                             | 2.55        |
| Heating up time                 | 02:23 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 245 I       |



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| EN 16147                        |             |
|---------------------------------|-------------|
|                                 |             |
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 102 %       |
| СОР                             | 2.55        |
| Heating up time                 | 02:23 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 245 I       |

Water/Water Heat Pump

## Heating

| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |

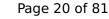


| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 4.30 kW         | 3.82 kW            |
| El input               | 0.66 kW         | 1.00 kW            |
| СОР                    | 6.00            | 3.83               |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |

## **Average Climate**

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

|                |                 | Madium tamanagatuwa |
|----------------|-----------------|---------------------|
|                | Low temperature | Medium temperature  |
| η <sub>s</sub> | 270 %           | 214 %               |
| Prated         | 7.00 kW         | 7.00 kW             |
| SCOP           | 6.95            | 5.55                |
| Tbiv           | -10 °C          | -10 °C              |
| TOL            | -10 °C          | -10 °C              |
| Pdh Tj = -7°C  | 6.30 kW         | 6.30 kW             |
| COP Tj = -7°C  | 6.07            | 4.52                |





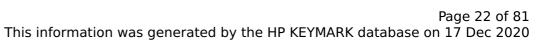
|  | <u> </u>    |             |
|--|-------------|-------------|
| Pdh Tj = $+2$ °C                           | 3.90 kW     | 3.90 kW     |
| COP Tj = +2°C                              | 7.09        | 5.62        |
| Pdh Tj = $+7^{\circ}$ C                    | 2.50 kW     | 2.50 kW     |
| $COP Tj = +7^{\circ}C$                     | 7.84        | 6.34        |
| Pdh Tj = 12°C                              | 1.80 kW     | 1.60 kW     |
| COP Tj = 12°C                              | 7.97        | 6.57        |
| Pdh Tj = Tbiv                              | 7.00 kW     | 7.00 kW     |
| COP Tj = Tbiv                              | 5.79        | 4.21        |
| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.96        | 0.97        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2078 kWh    | 2611 kWh    |
|  |             |             |



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| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 282 %           | 222 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 7.25            | 5.75               |
| Tbiv          | -22 °C          | -22 °C             |
| TOL           | -22 °C          | -22 °C             |
| Pdh Tj = -7°C | 4.30 kW         | 4.30 kW            |
| COP Tj = -7°C | 7.00            | 5.39               |
| Pdh Tj = +2°C | 2.70 kW         | 2.70 kW            |
| COP Tj = +2°C | 7.83            | 6.21               |
| Pdh Tj = +7°C | 1.80 kW         | 1.80 kW            |
| COP Tj = +7°C | 8.14            | 6.85               |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C | 7.70            | 6.64               |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv | 5.79            | 4.21               |





| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.95        | 0.96        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |

Domestic Hot Water (DHW)

**Average Climate** 



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| EN 16147                        |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 117 %       |
| СОР                             | 2.93        |
| Heating up time                 | 02:09 h:min |
| Standby power input             | 45.0 W      |
| Reference hot water temperature | 49.0 °C     |
| Mixed water at 40°C             | 240         |

| EN 16147                        |             |  |
|---------------------------------|-------------|--|
| Declared load profile           | XL          |  |
| Efficiency ηDHW                 | 117 %       |  |
| СОР                             | 2.93        |  |
| Heating up time                 | 02:09 h:min |  |
| Standby power input             | 45.0 W      |  |
| Reference hot water temperature | 49.0 °C     |  |
| Mixed water at 40°C             | 240         |  |



## Model: S1255-6 PC 1x230

| General Data     |             |  |
|------------------|-------------|--|
| Power supply     | 1x230V 50Hz |  |
| Off-peak product | No          |  |

Brine/Water Heat Pump

#### Heating

| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 3.15 kW         | 2.78 kW            |
| El input               | 0.67 kW         | 0.93 kW            |
| СОР                    | 4.72            | 2.99               |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |

## Average Climate



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                                    |  |
|---------------|-----------------|------------------------------------|--|
|               | Low temperature | Low temperature Medium temperature |  |
| $\eta_{s}$    | 200 %           | 150 %                              |  |
| Prated        | 5.50 kW         | 5.50 kW                            |  |
| SCOP          | 5.20            | 3.95                               |  |
| Tbiv          | -10 °C          | -10 °C                             |  |
| TOL           | -10 °C          | -10 °C                             |  |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW                            |  |
| COP Tj = -7°C | 4.37            | 3.06                               |  |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW                            |  |
| COP Tj = +2°C | 5.24            | 3.97                               |  |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW                            |  |
| COP Tj = +7°C | 5.92            | 4.63                               |  |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW                            |  |
| COP Tj = 12°C | 5.95            | 4.86                               |  |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW                            |  |
| COP Tj = Tbiv | 4.15            | 2.84                               |  |

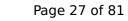




| Pdh Tj = TOL                               | 5.40 kW     | 5.40 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 4.15        | 2.84        |
| Cdh  | 0.98        | 0.99        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 10 W        | 7 W         |
| PSB  | 7 W         | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2188 kWh    | 2875 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

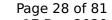
| EN 14825        |                    |  |
|-----------------|--------------------|--|
| Low temperature | Medium temperature |  |
| 211 %           | 157 %              |  |
| 5.50 kW         | 6.00 kW            |  |
|                 | 211 %              |  |





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| TOL -22 °C ~21 °C -22 ° | SCOP          | 5.48    | 4.13    |
|--|---------------|---------|---------|
| Pdh Tj = -7°C       3.40 kW       3.40 kW         COP Tj = -7°C       5.17       3.77         Pdh Tj = +2°C       2.10 kW       2.10 kW         COP Tj = +2°C       5.91       4.51         Pdh Tj = +7°C       1.40 kW       1.40 kW         COP Tj = +7°C       6.36       5.12         Pdh Tj = 12°C       1.30 kW       1.20 kW         COP Tj = 12°C       4.15       4.81         Pdh Tj = Tbiv       5.40 kW       5.50 kW         COP Tj = Tbiv       4.15       2.84         Pdh Tj = TOL       5.40 kW       5.50 kW         COP Tj = TOL       4.15       2.84         COh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W   | Tbiv          | -22 °C  | -22 °C  |
| COP Tj = -7°C  5.17  3.77  Pdh Tj = +2°C  2.10 kW  2.10 kW  COP Tj = +2°C  5.91  4.51  Pdh Tj = +7°C  1.40 kW  1.40 kW  COP Tj = +7°C  6.36  5.12  Pdh Tj = 12°C  1.30 kW  1.20 kW  COP Tj = 12°C  4.15  4.81  Pdh Tj = Tbiv  5.40 kW  5.50 kW  COP Tj = Tbiv  4.15  2.84  Pdh Tj = TOL  5.40 kW  5.50 kW  COP Tj = TOL  65 °C  65 °C  Poff  2 W  PTO  10 W  7 W  PSB  | TOL           | -22 °C  | -22 °C  |
| Pdh Tj = +2°C       2.10 kW       2.10 kW         COP Tj = +2°C       5.91       4.51         Pdh Tj = +7°C       1.40 kW       1.40 kW         COP Tj = +7°C       6.36       5.12         Pdh Tj = 12°C       1.30 kW       1.20 kW         COP Tj = 12°C       4.15       4.81         Pdh Tj = Tbiv       5.40 kW       5.50 kW         COP Tj = Tbiv       4.15       2.84         Pdh Tj = TOL       5.40 kW       5.50 kW         COP Tj = TOL       4.15       2.84         Cdh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | Pdh Tj = -7°C | 3.40 kW | 3.40 kW |
| COP Tj = +2°C       5.91       4.51         Pdh Tj = +7°C       1.40 kW       1.40 kW         COP Tj = +7°C       6.36       5.12         Pdh Tj = 12°C       1.30 kW       1.20 kW         COP Tj = 12°C       4.15       4.81         Pdh Tj = Tbiv       5.40 kW       5.50 kW         COP Tj = Tbiv       4.15       2.84         Pdh Tj = TOL       5.40 kW       5.50 kW         COP Tj = TOL       4.15       2.84         Cdh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | COP Tj = -7°C | 5.17    | 3.77    |
| Pdh Tj = +7°C  1.40 kW  1.40 kW  COP Tj = +7°C  6.36  5.12  Pdh Tj = 12°C  1.30 kW  1.20 kW  COP Tj = 12°C  4.15  4.81  Pdh Tj = Tbiv  5.40 kW  5.50 kW  COP Tj = ToL  5.40 kW  5.50 kW  COP Tj = TOL  6.36  5.12  Pdh Tj = ToL  6.36  6.36  5.12  Pdh Tj = 12°C  4.15  4.81  COP Tj = Tbiv  6.40 kW  6.50 kW  6.50 kW  7 kW  Pdh Tj = TOL  6.5°C  6.5°C  6.5°C  Poff  10 W  7 W  PSB  | Pdh Tj = +2°C | 2.10 kW | 2.10 kW |
| COP Tj = +7°C 6.36 5.12  Pdh Tj = 12°C 1.30 kW 1.20 kW  COP Tj = 12°C 4.15 4.81  Pdh Tj = Tbiv 5.40 kW 5.50 kW  COP Tj = Tbiv 4.15 2.84  Pdh Tj = TOL 5.40 kW 5.50 kW  COP Tj = TOL 5.40 kW 5.50 kW  COP Tj = TOL 4.15 2.84  Cdh 0.97 0.98  WTOL 65 °C 65 °C  Poff 2 W 2 W  PTO 10 W 7 W  PSB 7 W 7 W  | COP Tj = +2°C | 5.91    | 4.51    |
| Pdh Tj = 12°C       1.30 kW       1.20 kW         COP Tj = 12°C       4.15       4.81         Pdh Tj = Tbiv       5.40 kW       5.50 kW         COP Tj = Tbiv       4.15       2.84         Pdh Tj = TOL       5.40 kW       5.50 kW         COP Tj = TOL       4.15       2.84         Cdh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | Pdh Tj = +7°C | 1.40 kW | 1.40 kW |
| COP Tj = 12°C  | COP Tj = +7°C | 6.36    | 5.12    |
| Pdh Tj = Tbiv       5.40 kW       5.50 kW         COP Tj = Tbiv       4.15       2.84         Pdh Tj = TOL       5.40 kW       5.50 kW         COP Tj = TOL       4.15       2.84         Cdh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | Pdh Tj = 12°C | 1.30 kW | 1.20 kW |
| COP Tj = Tbiv  4.15  2.84  Pdh Tj = TOL  5.40 kW  5.50 kW  COP Tj = TOL  4.15  2.84  Cdh  0.97  0.98  WTOL  65 °C  65 °C  Poff  2 W  2 W  PTO  10 W  7 W  PSB  7 W  7 W  | COP Tj = 12°C | 4.15    | 4.81    |
| Pdh Tj = TOL       5.40 kW       5.50 kW         COP Tj = TOL       4.15       2.84         Cdh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | Pdh Tj = Tbiv | 5.40 kW | 5.50 kW |
| COP Tj = TOL 4.15 2.84  Cdh 0.97 0.98  WTOL 65 °C 65 °C  Poff 2 W 2 W  PTO 10 W 7 W  PSB 7 W 7 W   | COP Tj = Tbiv | 4.15    | 2.84    |
| Cdh       0.97       0.98         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | Pdh Tj = TOL  | 5.40 kW | 5.50 kW |
| WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W   | COP Tj = TOL  | 4.15    | 2.84    |
| Poff       2 W       2 W         PTO       10 W       7 W         PSB       7 W       7 W  | Cdh           | 0.97    | 0.98    |
| PTO 10 W 7 W 7 W 7 W   | WTOL          | 65 °C   | 65 °C   |
| PSB 7 W 7 W  | Poff          | 2 W     | 2 W     |
|  | РТО           | 10 W    | 7 W     |
| PCK 9 W 9 W  | PSB           | 7 W     | 7 W     |
|  | PCK           | 9 W     | 9 W     |





# This information was generated by the HP KEYMARK database on 17 Dec 2020 Supplementary Heater: Type of energy input electricity electricity

| Supplementary neater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

## Domestic Hot Water (DHW)

## Average Climate

| EN 16147                        |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 102 %       |
| СОР                             | 2.55        |
| Heating up time                 | 02:23 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 245 I       |



 $$\operatorname{\textit{Page}}\xspace$  29 of 81 This information was generated by the HP KEYMARK database on 17 Dec 2020

| EN 16147                        |             |
|---------------------------------|-------------|
|                                 |             |
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 102 %       |
| СОР                             | 2.55        |
| Heating up time                 | 02:23 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 245 I       |

Water/Water Heat Pump

## Heating

| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |

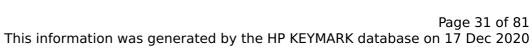


| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 4.30 kW         | 3.82 kW            |
| El input               | 0.66 kW         | 1.00 kW            |
| СОР                    | 6.00            | 3.83               |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |

## Average Climate

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| η <sub>s</sub> | 270 %           | 214 %              |
| Prated         | 7.00 kW         | 7.00 kW            |
| SCOP           | 6.95            | 5.55               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 6.30 kW         | 6.30 kW            |
| COP Tj = -7°C  | 6.07            | 4.52               |



| Pdh Tj = $+2$ °C                           | 3.90 kW     | 3.90 kW     |
|--|-------------|-------------|
| $COP Tj = +2^{\circ}C$                     | 7.09        | 5.62        |
| Pdh Tj = $+7^{\circ}$ C                    | 2.50 kW     | 2.50 kW     |
| $COP Tj = +7^{\circ}C$                     | 7.84        | 6.34        |
| Pdh Tj = 12°C                              | 1.80 kW     | 1.60 kW     |
| COP Tj = 12°C                              | 7.97        | 6.57        |
| Pdh Tj = Tbiv                              | 7.00 kW     | 7.00 kW     |
| COP Tj = Tbiv                              | 5.79        | 4.21        |
| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.96        | 0.97        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2078 kWh    | 2611 kWh    |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 282 %           | 222 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 7.25            | 5.75               |
| Tbiv          | -22 °C          | -22 °C             |
| TOL           | -22 °C          | -22 °C             |
| Pdh Tj = -7°C | 4.30 kW         | 4.30 kW            |
| COP Tj = -7°C | 7.00            | 5.39               |
| Pdh Tj = +2°C | 2.70 kW         | 2.70 kW            |
| COP Tj = +2°C | 7.83            | 6.21               |
| Pdh Tj = +7°C | 1.80 kW         | 1.80 kW            |
| COP Tj = +7°C | 8.14            | 6.85               |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C | 7.70            | 6.64               |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv | 5.79            | 4.21               |



| 7.00 kW     | 7.00 kW   |
|-------------|---|
| 5.79        | 4.21  |
| 0.95        | 0.96  |
| 65 °C       | 65 °C   |
| 2 W         | 2 W   |
| 18 W        | 15 W  |
| 10 W        | 7 W   |
| 9 W         | 9 W   |
| electricity | electricity   |
| 0.00 kW     | 0.00 kW   |
| 2378 kWh    | 3005 kWh  |
|             | 5.79  0.95  65 °C  2 W  18 W  10 W  9 W  electricity  0.00 kW |

Domestic Hot Water (DHW)

Average Climate



 $$\operatorname{\textit{Page}}$  34 of 81 This information was generated by the HP KEYMARK database on 17 Dec 2020

| EN 16147                        |             |  |
|---------------------------------|-------------|--|
| Declared load profile           | XL          |  |
| Efficiency ηDHW                 | 117 %       |  |
| СОР                             | 2.93        |  |
| Heating up time                 | 02:09 h:min |  |
| Standby power input             | 45.0 W      |  |
| Reference hot water temperature | 49.0 °C     |  |
| Mixed water at 40°C             | 240 I       |  |

| EN 16147                        |             |  |
|---------------------------------|-------------|--|
| Declared load profile           | XL          |  |
| Efficiency ηDHW                 | 117 %       |  |
| СОР                             | 2.93        |  |
| Heating up time                 | 02:09 h:min |  |
| Standby power input             | 45.0 W      |  |
| Reference hot water temperature | 49.0 °C     |  |
| Mixed water at 40°C             | 240         |  |



## Model: S1255-6 1x230

| General Data     |             |  |
|------------------|-------------|--|
| Power supply     | 1x230V 50Hz |  |
| Off-peak product | No          |  |

Brine/Water Heat Pump

#### Heating

| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

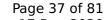
| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 3.15 kW         | 2.78 kW            |
| El input               | 0.67 kW         | 0.93 kW            |
| СОР                    | 4.72            | 2.99               |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |

## Average Climate



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 200 %           | 150 %              |
| Prated        | 5.50 kW         | 5.50 kW            |
| SCOP          | 5.20            | 3.95               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW            |
| COP Tj = -7°C | 4.37            | 3.06               |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW            |
| COP Tj = +2°C | 5.24            | 3.97               |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW            |
| COP Tj = +7°C | 5.92            | 4.63               |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW            |
| COP Tj = 12°C | 5.95            | 4.86               |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW            |
| COP Tj = Tbiv | 4.15            | 2.84               |





| 5.40 kW     | 5.40 kW  |
|-------------|--|
| 4.15        | 2.84   |
| 0.98        | 0.99   |
| 65 °C       | 65 °C  |
| 2 W         | 2 W  |
| 10 W        | 7 W  |
| 7 W         | 7 W  |
| 9 W         | 9 W  |
| electricity | electricity  |
| 0.00 kW     | 0.00 kW  |
| 2188 kWh    | 2875 kWh   |
|             | 4.15 0.98 65 °C 2 W 10 W 7 W 9 W electricity 0.00 kW |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

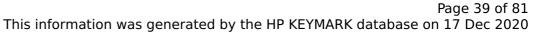
| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{S}$ | 211 %           | 157 %              |
| Prated     | 5.50 kW         | 6.00 kW            |
|            |                 |                    |



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#### This information was generated by the HP KEYMARK database on 17 Dec 2020

| SCOP                   | 5.48    | 4.13    |
|------------------------|---------|---------|
| Tbiv                   | -22 °C  | -22 °C  |
| TOL                    | -22 °C  | -22 °C  |
| Pdh Tj = -7°C          | 3.40 kW | 3.40 kW |
| COP Tj = -7°C          | 5.17    | 3.77    |
| Pdh Tj = +2°C          | 2.10 kW | 2.10 kW |
| COP Tj = +2°C          | 5.91    | 4.51    |
| Pdh Tj = +7°C          | 1.40 kW | 1.40 kW |
| $COP Tj = +7^{\circ}C$ | 6.36    | 5.12    |
| Pdh Tj = 12°C          | 1.30 kW | 1.20 kW |
| COP Tj = 12°C          | 4.15    | 4.81    |
| Pdh Tj = Tbiv          | 5.40 kW | 5.50 kW |
| COP Tj = Tbiv          | 4.15    | 2.84    |
| Pdh Tj = TOL           | 5.40 kW | 5.50 kW |
| COP Tj = TOL           | 4.15    | 2.84    |
| Cdh                    | 0.97    | 0.98    |
| WTOL                   | 65 °C   | 65 °C   |
| Poff                   | 2 W     | 2 W     |
| РТО                    | 10 W    | 7 W     |
| PSB                    | 7 W     | 7 W     |
| РСК                    | 9 W     | 9 W     |
|                        |         |         |





| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

#### Domestic Hot Water (DHW)

#### Average Climate

| EN 16147                        |             |  |
|---------------------------------|-------------|--|
| Declared load profile           | XL          |  |
| Efficiency ηDHW                 | 102 %       |  |
| СОР                             | 2.55        |  |
| Heating up time                 | 02:23 h:min |  |
| Standby power input             | 50.0 W      |  |
| Reference hot water temperature | 50.0 °C     |  |
| Mixed water at 40°C             | 245 I       |  |



| EN 16147                        |             |
|---------------------------------|-------------|
|                                 |             |
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 102 %       |
| СОР                             | 2.55        |
| Heating up time                 | 02:23 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 245 I       |

Water/Water Heat Pump

#### Heating

| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |



| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 4.30 kW         | 3.82 kW            |
| El input               | 0.66 kW         | 1.00 kW            |
| СОР                    | 6.00            | 3.83               |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |

#### Average Climate

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

|                | 1 1             | Madium tamanagatuwa |
|----------------|-----------------|---------------------|
|                | Low temperature | Medium temperature  |
| η <sub>s</sub> | 270 %           | 214 %               |
| Prated         | 7.00 kW         | 7.00 kW             |
| SCOP           | 6.95            | 5.55                |
| Tbiv           | -10 °C          | -10 °C              |
| TOL            | -10 °C          | -10 °C              |
| Pdh Tj = -7°C  | 6.30 kW         | 6.30 kW             |
| COP Tj = -7°C  | 6.07            | 4.52                |





|  | · · · · · · · · · · · · · · · · · · · |             |
|--|---------------------------------------|-------------|
| Pdh Tj = $+2$ °C                           | 3.90 kW                               | 3.90 kW     |
| COP Tj = +2°C                              | 7.09                                  | 5.62        |
| Pdh Tj = $+7^{\circ}$ C                    | 2.50 kW                               | 2.50 kW     |
| $COP Tj = +7^{\circ}C$                     | 7.84                                  | 6.34        |
| Pdh Tj = 12°C                              | 1.80 kW                               | 1.60 kW     |
| COP Tj = 12°C                              | 7.97                                  | 6.57        |
| Pdh Tj = Tbiv                              | 7.00 kW                               | 7.00 kW     |
| COP Tj = Tbiv                              | 5.79                                  | 4.21        |
| Pdh Tj = TOL                               | 7.00 kW                               | 7.00 kW     |
| COP Tj = TOL                               | 5.79                                  | 4.21        |
| Cdh  | 0.96                                  | 0.97        |
| WTOL                                       | 65 °C                                 | 65 °C       |
| Poff                                       | 2 W                                   | 2 W         |
| РТО  | 18 W                                  | 15 W        |
| PSB  | 10 W                                  | 7 W         |
| PCK  | 9 W                                   | 9 W         |
| Supplementary Heater: Type of energy input | electricity                           | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW                               | 0.00 kW     |
| Annual energy consumption Qhe              | 2078 kWh                              | 2611 kWh    |
|  |                                       |             |



| EN 12102-1                         |          |          |  |
|------------------------------------|----------|----------|--|
| Low temperature Medium temperature |          |          |  |
| Sound power level indoor           | 42 dB(A) | 42 dB(A) |  |

| EN 14825       |                 |                    |
|----------------|-----------------|--------------------|
|                | Low temperature | Medium temperature |
| η <sub>s</sub> | 282 %           | 222 %              |
| Prated         | 7.00 kW         | 7.00 kW            |
| SCOP           | 7.25            | 5.75               |
| Tbiv           | -22 °C          | -22 °C             |
| TOL            | -22 °C          | -22 °C             |
| Pdh Tj = -7°C  | 4.30 kW         | 4.30 kW            |
| COP Tj = -7°C  | 7.00            | 5.39               |
| Pdh Tj = +2°C  | 2.70 kW         | 2.70 kW            |
| COP Tj = +2°C  | 7.83            | 6.21               |
| Pdh Tj = +7°C  | 1.80 kW         | 1.80 kW            |
| COP Tj = +7°C  | 8.14            | 6.85               |
| Pdh Tj = 12°C  | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C  | 7.70            | 6.64               |
| Pdh Tj = Tbiv  | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv  | 5.79            | 4.21               |



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| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.95        | 0.96        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| PTO  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |

Domestic Hot Water (DHW)



| EN 16147                        |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency ηDHW                 | 117 %       |
| СОР                             | 2.93        |
| Heating up time                 | 02:09 h:min |
| Standby power input             | 45.0 W      |
| Reference hot water temperature | 49.0 °C     |
| Mixed water at 40°C             | 240         |

| EN 16147                        |             |  |
|---------------------------------|-------------|--|
| Declared load profile           | XL          |  |
| Efficiency ηDHW                 | 117 %       |  |
| COP                             | 2.93        |  |
| Heating up time                 | 02:09 h:min |  |
| Standby power input             | 45.0 W      |  |
|                                 |             |  |
| Reference hot water temperature | 49.0 °C     |  |
| Mixed water at 40°C             | 240 I       |  |



## Model: S1155-6 PC 3x400

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

Brine/Water Heat Pump

#### Heating

| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |  |
|------------------------|-----------------|--------------------|--|
|                        | Low temperature | Medium temperature |  |
| Heat output            | 3.15 kW         | 2.78 kW            |  |
| El input               | 0.67 kW         | 0.93 kW            |  |
| СОР                    | 4.72            | 2.99               |  |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |  |



| EN 12102-1                         |          |          |  |
|------------------------------------|----------|----------|--|
| Low temperature Medium temperature |          |          |  |
| Sound power level indoor           | 42 dB(A) | 42 dB(A) |  |

| Low temperature  200 %  5.50 kW  5.20  -10 °C | Medium temperature  150 %  5.50 kW  3.95  -10 °C           |
|---|--|
| 5.50 kW<br>5.20<br>-10 °C                     | 5.50 kW<br>3.95<br>-10 °C                                  |
| 5.20<br>-10 °C                                | 3.95<br>-10 °C   |
| -10 °C  | -10 °C   |
|   |  |
| -10 °C  | -10 °C   |
|   | -10 C  |
| 5.00 kW                                       | 5.00 kW  |
| 4.37  | 3.06   |
| 3.10 kW                                       | 3.00 kW  |
| 5.24  | 3.97   |
| 2.00 kW                                       | 2.00 kW  |
| 5.92  | 4.63   |
| 1.30 kW                                       | 1.20 kW  |
| 5.95  | 4.86   |
| 5.40 kW                                       | 5.40 kW  |
| 4.15  | 2.84   |
|   | 4.37  3.10 kW  5.24  2.00 kW  5.92  1.30 kW  5.95  5.40 kW |





|  | -           |             |
|--|-------------|-------------|
| Pdh Tj = TOL                               | 5.40 kW     | 5.40 kW     |
| COP Tj = TOL                               | 4.15        | 2.84        |
| Cdh  | 0.98        | 0.99        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 10 W        | 7 W         |
| PSB  | 7 W         | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2188 kWh    | 2875 kWh    |

| EN 12102-1                         |          |          |  |
|------------------------------------|----------|----------|--|
| Low temperature Medium temperature |          |          |  |
| Sound power level indoor           | 42 dB(A) | 42 dB(A) |  |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{S}$ | 211 %           | 157 %              |
| Prated     | 5.50 kW         | 6.00 kW            |
|            |                 |                    |



|   | CEN heat pump<br>KEYMARK |
|---|--------------------------|
| 5 |                          |

| SCOP                   | 5.48    | 4.13    |
|------------------------|---------|---------|
| Tbiv                   | -22 °C  | -22 °C  |
| TOL                    | -22 °C  | -22 °C  |
| Pdh Tj = -7°C          | 3.40 kW | 3.40 kW |
| COP Tj = -7°C          | 5.17    | 3.77    |
| Pdh Tj = +2°C          | 2.10 kW | 2.10 kW |
| $COP Tj = +2^{\circ}C$ | 5.91    | 4.51    |
| Pdh Tj = +7°C          | 1.40 kW | 1.40 kW |
| $COP Tj = +7^{\circ}C$ | 6.36    | 5.12    |
| Pdh Tj = 12°C          | 1.30 kW | 1.20 kW |
| COP Tj = 12°C          | 4.15    | 4.81    |
| Pdh Tj = Tbiv          | 5.40 kW | 5.50 kW |
| COP Tj = Tbiv          | 4.15    | 2.84    |
| Pdh Tj = TOL           | 5.40 kW | 5.50 kW |
| COP Tj = TOL           | 4.15    | 2.84    |
| Cdh                    | 0.97    | 0.98    |
| WTOL                   | 65 °C   | 65 °C   |
| Poff                   | 2 W     | 2 W     |
| РТО                    | 10 W    | 7 W     |
| PSB                    | 7 W     | 7 W     |
| PCK                    | 9 W     | 9 W     |





| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

Water/Water Heat Pump

#### Heating

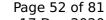
| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |

| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 4.30 kW         | 3.82 kW            |
| El input               | 0.66 kW         | 1.00 kW            |
| СОР                    | 6.00            | 3.83               |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |  |
|---------------|-----------------|--------------------|--|
|               | Low temperature | Medium temperature |  |
| $\eta_{s}$    | 270 %           | 214 %              |  |
| Prated        | 7.00 kW         | 7.00 kW            |  |
| SCOP          | 6.95            | 5.55               |  |
| Tbiv          | -10 °C          | -10 °C             |  |
| TOL           | -10 °C          | -10 °C             |  |
| Pdh Tj = -7°C | 6.30 kW         | 6.30 kW            |  |
| COP Tj = -7°C | 6.07            | 4.52               |  |
| Pdh Tj = +2°C | 3.90 kW         | 3.90 kW            |  |
| COP Tj = +2°C | 7.09            | 5.62               |  |
| Pdh Tj = +7°C | 2.50 kW         | 2.50 kW            |  |
| COP Tj = +7°C | 7.84            | 6.34               |  |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |  |
| COP Tj = 12°C | 7.97            | 6.57               |  |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |  |
| COP Tj = Tbiv | 5.79            | 4.21               |  |





# $$\operatorname{Page}\:52\:of\:81$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.96        | 0.97        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2078 kWh    | 2611 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{s}$ | 282 %           | 222 %              |
| Prated     | 7.00 kW         | 7.00 kW            |



| This information was generated by the HP KEYMARK database on 17 Dec 2020 |         |         |  |  |
|--|---------|---------|--|--|
| SCOP   | 7.25    | 5.75    |  |  |
| Tbiv   | -22 °C  | -22 °C  |  |  |
| TOL  | -22 °C  | -22 °C  |  |  |
| Pdh Tj = -7°C  | 4.30 kW | 4.30 kW |  |  |
| COP Tj = -7°C  | 7.00    | 5.39    |  |  |
| Pdh Tj = +2°C  | 2.70 kW | 2.70 kW |  |  |
| COP Tj = +2°C  | 7.83    | 6.21    |  |  |
| Pdh Tj = $+7^{\circ}$ C  | 1.80 kW | 1.80 kW |  |  |
| $COPTj = +7^{\circ}C$  | 8.14    | 6.85    |  |  |
| Pdh Tj = 12°C  | 1.80 kW | 1.60 kW |  |  |
| COP Tj = 12°C  | 7.70    | 6.64    |  |  |
| Pdh Tj = Tbiv  | 7.00 kW | 7.00 kW |  |  |
| COP Tj = Tbiv  | 5.79    | 4.21    |  |  |
| Pdh Tj = TOL   | 7.00 kW | 7.00 kW |  |  |
| COP Tj = TOL   | 5.79    | 4.21    |  |  |
| Cdh  | 0.95    | 0.96    |  |  |
| WTOL   | 65 °C   | 65 °C   |  |  |
| Poff   | 2 W     | 2 W     |  |  |
| РТО  | 18 W    | 15 W    |  |  |
| PSB  | 10 W    | 7 W     |  |  |
| PCK  | 9 W     | 9 W     |  |  |
|  |         |         |  |  |



# $$\operatorname{\textit{Page}}\xspace$ 54 of 81 This information was generated by the HP KEYMARK database on 17 Dec 2020

| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |



## Model: S1155-6 3x400

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

Brine/Water Heat Pump

#### Heating

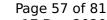
| EN 14511-4   |        |
|--|--------|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |
| Shutting off the heat transfer medium flow                                 | passed |
| Complete power supply failure  | passed |

| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 3.15 kW         | 2.78 kW            |
| El input               | 0.67 kW         | 0.93 kW            |
| СОР                    | 4.72            | 2.99               |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 200 %           | 150 %              |
| Prated        | 5.50 kW         | 5.50 kW            |
| SCOP          | 5.20            | 3.95               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW            |
| COP Tj = -7°C | 4.37            | 3.06               |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW            |
| COP Tj = +2°C | 5.24            | 3.97               |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW            |
| COP Tj = +7°C | 5.92            | 4.63               |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW            |
| COP Tj = 12°C | 5.95            | 4.86               |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW            |
| COP Tj = Tbiv | 4.15            | 2.84               |





| Pdh Tj = TOL                               | 5.40 kW     | 5.40 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 4.15        | 2.84        |
| Cdh  | 0.98        | 0.99        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 10 W        | 7 W         |
| PSB  | 7 W         | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2188 kWh    | 2875 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

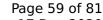
| EN 14825        |                       |  |
|-----------------|-----------------------|--|
| Low temperature | Medium temperature    |  |
| 211 %           | 157 %                 |  |
| 5.50 kW         | 6.00 kW               |  |
|                 | Low temperature 211 % |  |



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#### This information was generated by the HP KEYMARK database on 17 Dec 2020

| SCOP                   | 5.48    | 4.13    |
|------------------------|---------|---------|
| Tbiv                   | -22 °C  | -22 °C  |
| TOL                    | -22 °C  | -22 °C  |
| Pdh Tj = -7°C          | 3.40 kW | 3.40 kW |
| COP Tj = -7°C          | 5.17    | 3.77    |
| Pdh Tj = +2°C          | 2.10 kW | 2.10 kW |
| COP Tj = +2°C          | 5.91    | 4.51    |
| Pdh Tj = +7°C          | 1.40 kW | 1.40 kW |
| $COP Tj = +7^{\circ}C$ | 6.36    | 5.12    |
| Pdh Tj = 12°C          | 1.30 kW | 1.20 kW |
| COP Tj = 12°C          | 4.15    | 4.81    |
| Pdh Tj = Tbiv          | 5.40 kW | 5.50 kW |
| COP Tj = Tbiv          | 4.15    | 2.84    |
| Pdh Tj = TOL           | 5.40 kW | 5.50 kW |
| COP Tj = TOL           | 4.15    | 2.84    |
| Cdh                    | 0.97    | 0.98    |
| WTOL                   | 65 °C   | 65 °C   |
| Poff                   | 2 W     | 2 W     |
| РТО                    | 10 W    | 7 W     |
| PSB                    | 7 W     | 7 W     |
| РСК                    | 9 W     | 9 W     |
|                        |         |         |





| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

Water/Water Heat Pump

#### Heating

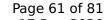
| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 4.30 kW         | 3.82 kW            |
| El input               | 0.66 kW         | 1.00 kW            |
| СОР                    | 6.00            | 3.83               |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 270 %           | 214 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 6.95            | 5.55               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 6.30 kW         | 6.30 kW            |
| COP Tj = -7°C | 6.07            | 4.52               |
| Pdh Tj = +2°C | 3.90 kW         | 3.90 kW            |
| COP Tj = +2°C | 7.09            | 5.62               |
| Pdh Tj = +7°C | 2.50 kW         | 2.50 kW            |
| COP Tj = +7°C | 7.84            | 6.34               |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C | 7.97            | 6.57               |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv | 5.79            | 4.21               |

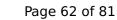




| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.96        | 0.97        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2078 kWh    | 2611 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{s}$ | 282 %           | 222 %              |
| Prated     | 7.00 kW         | 7.00 kW            |





| This information was get | Tierated by the HF KLTM | ARK database on 17 Dec 2020 |
|--------------------------|-------------------------|-----------------------------|
| SCOP                     | 7.25                    | 5.75                        |
| Tbiv                     | -22 °C                  | -22 °C                      |
| TOL                      | -22 °C                  | -22 °C                      |
| Pdh Tj = -7°C            | 4.30 kW                 | 4.30 kW                     |
| COP Tj = -7°C            | 7.00                    | 5.39                        |
| Pdh Tj = +2°C            | 2.70 kW                 | 2.70 kW                     |
| COP Tj = +2°C            | 7.83                    | 6.21                        |
| Pdh Tj = $+7^{\circ}$ C  | 1.80 kW                 | 1.80 kW                     |
| $COPTj = +7^{\circ}C$    | 8.14                    | 6.85                        |
| Pdh Tj = 12°C            | 1.80 kW                 | 1.60 kW                     |
| COP Tj = 12°C            | 7.70                    | 6.64                        |
| Pdh Tj = Tbiv            | 7.00 kW                 | 7.00 kW                     |
| COP Tj = Tbiv            | 5.79                    | 4.21                        |
| Pdh Tj = TOL             | 7.00 kW                 | 7.00 kW                     |
| COP Tj = TOL             | 5.79                    | 4.21                        |
| Cdh                      | 0.95                    | 0.96                        |
| WTOL                     | 65 °C                   | 65 °C                       |
| Poff                     | 2 W                     | 2 W                         |
| РТО                      | 18 W                    | 15 W                        |
| PSB                      | 10 W                    | 7 W                         |
| РСК                      | 9 W                     | 9 W                         |
|                          |                         |                             |



# $$\operatorname{\textit{Page}}\xspace$ 63 of 81 This information was generated by the HP KEYMARK database on 17 Dec 2020

| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |



## Model: S1155-6 PC 1x230

| General Data |             |
|--------------|-------------|
| Power supply | 1x230V 50Hz |

Brine/Water Heat Pump

#### Heating

| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |
|------------------------|-----------------|--------------------|
|                        | Low temperature | Medium temperature |
| Heat output            | 3.15 kW         | 2.78 kW            |
| El input               | 0.67 kW         | 0.93 kW            |
| СОР                    | 4.72            | 2.99               |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 200 %           | 150 %              |
| Prated        | 5.50 kW         | 5.50 kW            |
| SCOP          | 5.20            | 3.95               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW            |
| COP Tj = -7°C | 4.37            | 3.06               |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW            |
| COP Tj = +2°C | 5.24            | 3.97               |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW            |
| COP Tj = +7°C | 5.92            | 4.63               |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW            |
| COP Tj = 12°C | 5.95            | 4.86               |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW            |
| COP Tj = Tbiv | 4.15            | 2.84               |

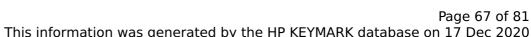




|  | · · · · · · · · · · · · · · · · · · · |             |
|--|---------------------------------------|-------------|
| Pdh Tj = TOL                               | 5.40 kW                               | 5.40 kW     |
| COP Tj = TOL                               | 4.15                                  | 2.84        |
| Cdh  | 0.98                                  | 0.99        |
| WTOL                                       | 65 °C                                 | 65 °C       |
| Poff                                       | 2 W                                   | 2 W         |
| РТО  | 10 W                                  | 7 W         |
| PSB  | 7 W                                   | 7 W         |
| PCK  | 9 W                                   | 9 W         |
| Supplementary Heater: Type of energy input | electricity                           | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW                               | 0.00 kW     |
| Annual energy consumption Qhe              | 2188 kWh                              | 2875 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{S}$ | 211 %           | 157 %              |
| Prated     | 5.50 kW         | 6.00 kW            |
|            |                 |                    |





| This inform            | nation was generated by the HP | KEYMARK database on 17 Dec 202 |
|------------------------|--------------------------------|--------------------------------|
| SCOP                   | 5.48                           | 4.13                           |
| Tbiv                   | -22 °C                         | -22 °C                         |
| TOL                    | -22 °C                         | -22 °C                         |
| Pdh Tj = -7°C          | 3.40 kW                        | 3.40 kW                        |
| COP Tj = -7°C          | 5.17                           | 3.77                           |
| Pdh Tj = +2°C          | 2.10 kW                        | 2.10 kW                        |
| $COP Tj = +2^{\circ}C$ | 5.91                           | 4.51                           |
| Pdh Tj = +7°C          | 1.40 kW                        | 1.40 kW                        |
| $COPTj = +7^{\circ}C$  | 6.36                           | 5.12                           |
| Pdh Tj = 12°C          | 1.30 kW                        | 1.20 kW                        |
| COP Tj = 12°C          | 4.15                           | 4.81                           |
| Pdh Tj = Tbiv          | 5.40 kW                        | 5.50 kW                        |
| COP Tj = Tbiv          | 4.15                           | 2.84                           |
| Pdh Tj = TOL           | 5.40 kW                        | 5.50 kW                        |
| COP Tj = TOL           | 4.15                           | 2.84                           |
| Cdh                    | 0.97                           | 0.98                           |
| WTOL                   | 65 °C                          | 65 °C                          |
| Poff                   | 2 W                            | 2 W                            |
| РТО                    | 10 W                           | 7 W                            |
| PSB                    | 7 W                            | 7 W                            |
| PCK                    | 9 W                            | 9 W                            |





| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

Water/Water Heat Pump

#### Heating

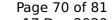
| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |  |
|------------------------|-----------------|--------------------|--|
|                        | Low temperature | Medium temperature |  |
| Heat output            | 4.30 kW         | 3.82 kW            |  |
| El input               | 0.66 kW         | 1.00 kW            |  |
| СОР                    | 6.00            | 3.83               |  |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |  |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 270 %           | 214 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 6.95            | 5.55               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 6.30 kW         | 6.30 kW            |
| COP Tj = -7°C | 6.07            | 4.52               |
| Pdh Tj = +2°C | 3.90 kW         | 3.90 kW            |
| COP Tj = +2°C | 7.09            | 5.62               |
| Pdh Tj = +7°C | 2.50 kW         | 2.50 kW            |
| COP Tj = +7°C | 7.84            | 6.34               |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C | 7.97            | 6.57               |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv | 5.79            | 4.21               |





 $$\operatorname{\textit{Page}}\xspace$  70 of 81 This information was generated by the HP KEYMARK database on 17 Dec 2020

| Pdh Tj = TOL                               | 7.00 kW     | 7.00 kW     |
|--|-------------|-------------|
| COP Tj = TOL                               | 5.79        | 4.21        |
| Cdh  | 0.96        | 0.97        |
| WTOL                                       | 65 °C       | 65 °C       |
| Poff                                       | 2 W         | 2 W         |
| РТО  | 18 W        | 15 W        |
| PSB  | 10 W        | 7 W         |
| PCK  | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input | electricity | electricity |
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2078 kWh    | 2611 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{s}$ | 282 %           | 222 %              |
| Prated     | 7.00 kW         | 7.00 kW            |



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This information was generated by the HP KEYMARK database on 17 Dec 2020

| This information was generated by the HP KEYMARK database on 17 Dec 2020 |         |         |  |  |
|--|---------|---------|--|--|
| SCOP   | 7.25    | 5.75    |  |  |
| Tbiv   | -22 °C  | -22 °C  |  |  |
| TOL  | -22 °C  | -22 °C  |  |  |
| Pdh Tj = -7°C  | 4.30 kW | 4.30 kW |  |  |
| COP Tj = -7°C  | 7.00    | 5.39    |  |  |
| Pdh Tj = +2°C  | 2.70 kW | 2.70 kW |  |  |
| COP Tj = +2°C  | 7.83    | 6.21    |  |  |
| Pdh Tj = $+7^{\circ}$ C  | 1.80 kW | 1.80 kW |  |  |
| $COPTj = +7^{\circ}C$  | 8.14    | 6.85    |  |  |
| Pdh Tj = 12°C  | 1.80 kW | 1.60 kW |  |  |
| COP Tj = 12°C  | 7.70    | 6.64    |  |  |
| Pdh Tj = Tbiv  | 7.00 kW | 7.00 kW |  |  |
| COP Tj = Tbiv  | 5.79    | 4.21    |  |  |
| Pdh Tj = TOL   | 7.00 kW | 7.00 kW |  |  |
| COP Tj = TOL   | 5.79    | 4.21    |  |  |
| Cdh  | 0.95    | 0.96    |  |  |
| WTOL   | 65 °C   | 65 °C   |  |  |
| Poff   | 2 W     | 2 W     |  |  |
| РТО  | 18 W    | 15 W    |  |  |
| PSB  | 10 W    | 7 W     |  |  |
| PCK  | 9 W     | 9 W     |  |  |
|  |         |         |  |  |



# $$\operatorname{\textit{Page}}\ 72$$ of 81 This information was generated by the HP KEYMARK database on 17 Dec 2020

| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |



## Model: S1155-6 1x230

| General Data |             |
|--------------|-------------|
| Power supply | 1x230V 50Hz |

Brine/Water Heat Pump

#### Heating

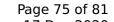
| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |  |
|------------------------|-----------------|--------------------|--|
|                        | Low temperature | Medium temperature |  |
| Heat output            | 3.15 kW         | 2.78 kW            |  |
| El input               | 0.67 kW         | 0.93 kW            |  |
| СОР                    | 4.72            | 2.99               |  |
| Indoor water flow rate | 0.95 m³/h       | 0.59 m³/h          |  |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 200 %           | 150 %              |
| Prated        | 5.50 kW         | 5.50 kW            |
| SCOP          | 5.20            | 3.95               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 5.00 kW         | 5.00 kW            |
| COP Tj = -7°C | 4.37            | 3.06               |
| Pdh Tj = +2°C | 3.10 kW         | 3.00 kW            |
| COP Tj = +2°C | 5.24            | 3.97               |
| Pdh Tj = +7°C | 2.00 kW         | 2.00 kW            |
| COP Tj = +7°C | 5.92            | 4.63               |
| Pdh Tj = 12°C | 1.30 kW         | 1.20 kW            |
| COP Tj = 12°C | 5.95            | 4.86               |
| Pdh Tj = Tbiv | 5.40 kW         | 5.40 kW            |
| COP Tj = Tbiv | 4.15            | 2.84               |





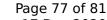
| This information was generated by the HP KEYMARK database on 17 Dec 20 |             |             |  |
|--|-------------|-------------|--|
| Pdh Tj = TOL   | 5.40 kW     | 5.40 kW     |  |
| COP Tj = TOL   | 4.15        | 2.84        |  |
| Cdh  | 0.98        | 0.99        |  |
| WTOL   | 65 °C       | 65 °C       |  |
| Poff   | 2 W         | 2 W         |  |
| РТО  | 10 W        | 7 W         |  |
| PSB  | 7 W         | 7 W         |  |
| PCK  | 9 W         | 9 W         |  |
| Supplementary Heater: Type of energy input                             | electricity | electricity |  |
| Supplementary Heater: PSUP   | 0.00 kW     | 0.00 kW     |  |
| Annual energy consumption Qhe  | 2188 kWh    | 2875 kWh    |  |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825        |                       |  |
|-----------------|-----------------------|--|
| Low temperature | Medium temperature    |  |
| 211 %           | 157 %                 |  |
| 5.50 kW         | 6.00 kW               |  |
|                 | Low temperature 211 % |  |



| This information was generated by the HP KEYMARK database on 17 Dec 2020 |         |         |  |
|--|---------|---------|--|
| SCOP   | 5.48    | 4.13    |  |
| Tbiv   | -22 °C  | -22 °C  |  |
| TOL  | -22 °C  | -22 °C  |  |
| Pdh Tj = -7°C  | 3.40 kW | 3.40 kW |  |
| $COPTj = -7^{\circ}C$  | 5.17    | 3.77    |  |
| Pdh Tj = $+2$ °C   | 2.10 kW | 2.10 kW |  |
| COP Tj = +2°C  | 5.91    | 4.51    |  |
| Pdh Tj = $+7^{\circ}$ C  | 1.40 kW | 1.40 kW |  |
| $COPTj = +7^{\circ}C$  | 6.36    | 5.12    |  |
| Pdh Tj = 12°C  | 1.30 kW | 1.20 kW |  |
| COP Tj = 12°C  | 4.15    | 4.81    |  |
| Pdh Tj = Tbiv  | 5.40 kW | 5.50 kW |  |
| COP Tj = Tbiv  | 4.15    | 2.84    |  |
| Pdh Tj = TOL   | 5.40 kW | 5.50 kW |  |
| COP Tj = TOL   | 4.15    | 2.84    |  |
| Cdh  | 0.97    | 0.98    |  |
| WTOL   | 65 °C   | 65 °C   |  |
| Poff   | 2 W     | 2 W     |  |
| РТО  | 10 W    | 7 W     |  |
| PSB  | 7 W     | 7 W     |  |
| РСК  | 9 W     | 9 W     |  |
|  | •       |         |  |





| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2481 kWh    | 3287 kWh    |

Water/Water Heat Pump

#### Heating

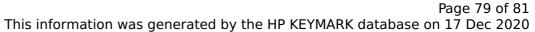
| EN 14511-4   |        |  |
|--|--------|--|
| Operating range outdoor exchanger/indoor exchanger upper limit/upper limit | passed |  |
| Operating range outdoor exchanger/indoor exchanger lower limit/lower limit | passed |  |
| Shutting off the heat transfer medium flow                                 | passed |  |
| Complete power supply failure  | passed |  |

| EN 14511-2             |                 |                    |  |
|------------------------|-----------------|--------------------|--|
|                        | Low temperature | Medium temperature |  |
| Heat output            | 4.30 kW         | 3.82 kW            |  |
| El input               | 0.66 kW         | 1.00 kW            |  |
| СОР                    | 6.00            | 3.83               |  |
| Indoor water flow rate | 1.21 m³/h       | 0.75 m³/h          |  |



| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825      |                 |                    |
|---------------|-----------------|--------------------|
|               | Low temperature | Medium temperature |
| $\eta_{s}$    | 270 %           | 214 %              |
| Prated        | 7.00 kW         | 7.00 kW            |
| SCOP          | 6.95            | 5.55               |
| Tbiv          | -10 °C          | -10 °C             |
| TOL           | -10 °C          | -10 °C             |
| Pdh Tj = -7°C | 6.30 kW         | 6.30 kW            |
| COP Tj = -7°C | 6.07            | 4.52               |
| Pdh Tj = +2°C | 3.90 kW         | 3.90 kW            |
| COP Tj = +2°C | 7.09            | 5.62               |
| Pdh Tj = +7°C | 2.50 kW         | 2.50 kW            |
| COP Tj = +7°C | 7.84            | 6.34               |
| Pdh Tj = 12°C | 1.80 kW         | 1.60 kW            |
| COP Tj = 12°C | 7.97            | 6.57               |
| Pdh Tj = Tbiv | 7.00 kW         | 7.00 kW            |
| COP Tj = Tbiv | 5.79            | 4.21               |

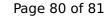




| This information was generated by the In-Kernarak database on 17 be |             |             |
|---|-------------|-------------|
| Pdh Tj = TOL  | 7.00 kW     | 7.00 kW     |
| COP Tj = TOL  | 5.79        | 4.21        |
| Cdh   | 0.96        | 0.97        |
| WTOL  | 65 °C       | 65 °C       |
| Poff  | 2 W         | 2 W         |
| РТО   | 18 W        | 15 W        |
| PSB   | 10 W        | 7 W         |
| PCK   | 9 W         | 9 W         |
| Supplementary Heater: Type of energy input                          | electricity | electricity |
| Supplementary Heater: PSUP  | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe                                       | 2078 kWh    | 2611 kWh    |

| EN 12102-1               |                 |                    |
|--------------------------|-----------------|--------------------|
|                          | Low temperature | Medium temperature |
| Sound power level indoor | 42 dB(A)        | 42 dB(A)           |

| EN 14825   |                 |                    |
|------------|-----------------|--------------------|
|            | Low temperature | Medium temperature |
| $\eta_{s}$ | 282 %           | 222 %              |
| Prated     | 7.00 kW         | 7.00 kW            |





| Tbiv       -22 °C       -22 °C         TOL       -22 °C       -22 °C         Pdh Tj = -7°C       4.30 kW       4.30 kW         COP Tj = -7°C       7.00       5.39         Pdh Tj = +2°C       2.70 kW       2.70 kW         COP Tj = +2°C       7.83       6.21         Pdh Tj = +7°C       1.80 kW       1.80 kW         COP Tj = +7°C       8.14       6.85         Pdh Tj = 12°C       7.70       6.64         Pdh Tj = Tbiv       7.00 kW       7.00 kW         COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W         PTO       18 W       15 W | 5.75    | 7.25    | БСОР          |
|--|---------|---------|---------------|
| Pdh Tj = -7°C  | -22 °C  | -22 °C  | Гbіv          |
| COP Tj = -7°C 7.00 5.39  Pdh Tj = +2°C 2.70 kW 2.70 kW  COP Tj = +2°C 7.83 6.21  Pdh Tj = +7°C 1.80 kW 1.80 kW  COP Tj = +7°C 8.14 6.85  Pdh Tj = 12°C 1.80 kW 1.60 kW  COP Tj = 12°C 7.70 6.64  Pdh Tj = Tbiv 7.00 kW 7.00 kW  COP Tj = Tbiv 5.79 4.21  Pdh Tj = TOL 5.79 4.21  Cdh 0.95 0.96  WTOL 65 °C 65 °C  Poff 2 W 2 W   | -22 °C  | -22 °C  | ΓΟL           |
| Pdh Tj = +2°C       2.70 kW       2.70 kW         COP Tj = +2°C       7.83       6.21         Pdh Tj = +7°C       1.80 kW       1.80 kW         COP Tj = +7°C       8.14       6.85         Pdh Tj = 12°C       1.80 kW       1.60 kW         COP Tj = 12°C       7.70       6.64         Pdh Tj = Tbiv       7.00 kW       7.00 kW         COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       5.79       4.21         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 4.30 kW | 4.30 kW | Pdh Tj = -7°C |
| COP Tj = +2°C 7.83 6.21  Pdh Tj = +7°C 1.80 kW 1.80 kW  COP Tj = +7°C 8.14 6.85  Pdh Tj = 12°C 1.80 kW 1.60 kW  COP Tj = 12°C 7.70 6.64  Pdh Tj = Tbiv 7.00 kW 7.00 kW  COP Tj = Tbiv 5.79 4.21  Pdh Tj = TOL 5.79 4.21  Cdh 0.95 0.96  WTOL 65 °C 65 °C  Poff 2 W 2 W   | 5.39    | 7.00    | COP Tj = -7°C |
| Pdh Tj = +7°C       1.80 kW       1.80 kW         COP Tj = +7°C       8.14       6.85         Pdh Tj = 12°C       1.80 kW       1.60 kW         COP Tj = 12°C       7.70       6.64         Pdh Tj = Tbiv       7.00 kW       7.00 kW         COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 2.70 kW | 2.70 kW | Pdh Tj = +2°C |
| COP Tj = +7°C       8.14       6.85         Pdh Tj = 12°C       1.80 kW       1.60 kW         COP Tj = 12°C       7.70       6.64         Pdh Tj = Tbiv       7.00 kW       7.00 kW         COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 6.21    | 7.83    | COP Tj = +2°C |
| Pdh Tj = 12°C       1.80 kW       1.60 kW         COP Tj = 12°C       7.70       6.64         Pdh Tj = Tbiv       7.00 kW       7.00 kW         COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 1.80 kW | 1.80 kW | Pdh Tj = +7°C |
| COP Tj = 12°C 7.70 6.64  Pdh Tj = Tbiv 7.00 kW 7.00 kW  COP Tj = Tbiv 5.79 4.21  Pdh Tj = TOL 7.00 kW 7.00 kW  COP Tj = TOL 5.79 4.21  Cdh 0.95 0.96  WTOL 65 °C 65 °C  Poff 2 W 2 W   | 6.85    | 8.14    | COP Tj = +7°C |
| Pdh Tj = Tbiv       7.00 kW       7.00 kW         COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 1.60 kW | 1.80 kW | Pdh Tj = 12°C |
| COP Tj = Tbiv       5.79       4.21         Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 6.64    | 7.70    | COP Tj = 12°C |
| Pdh Tj = TOL       7.00 kW       7.00 kW         COP Tj = TOL       5.79       4.21         Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 7.00 kW | 7.00 kW | Pdh Tj = Tbiv |
| COP Tj = TOL 5.79 4.21  Cdh 0.95 0.96  WTOL 65 °C 65 °C  Poff 2 W 2 W  | 4.21    | 5.79    | COP Tj = Tbiv |
| Cdh       0.95       0.96         WTOL       65 °C       65 °C         Poff       2 W       2 W  | 7.00 kW | 7.00 kW | Pdh Tj = TOL  |
| WTOL 65 °C 65 °C  Poff 2 W 2 W   | 4.21    | 5.79    | COP Tj = TOL  |
| Poff 2 W 2 W   | 0.96    | 0.95    | Cdh           |
|  | 65 °C   | 65 °C   | WTOL          |
| PTO 18 W 15 W  | 2 W     | 2 W     | Poff          |
|  | 15 W    | 18 W    | PTO           |
| PSB 10 W 7 W   | 7 W     | 10 W    | PSB           |
| PCK 9 W 9 W  | 9 W     | 9 W     | PCK           |



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| Supplementary Heater: Type of energy input | electricity | electricity |
|--|-------------|-------------|
| Supplementary Heater: PSUP                 | 0.00 kW     | 0.00 kW     |
| Annual energy consumption Qhe              | 2378 kWh    | 3005 kWh    |