

## Subtype Sphera EVO 2.0 Tower 250L 4.1, 5.1

|                     |                                                 |
|---------------------|-------------------------------------------------|
| Certificate Holder  | Clivet s.p.a.                                   |
| Address             | Via camp lonc 25 c.ap.                          |
| ZIP                 | I-32032                                         |
| City                | z.i. Villapaiera - Feltre (BL)                  |
| Country             | IT                                              |
| Certification Body  | ICIM S.p.A.                                     |
| Subtype title       | Sphera EVO 2.0 Tower 250L 4.1, 5.1              |
| Registration number | ICIM-PDC-000169                                 |
| Heat Pump Type      | Outdoor Air/Water                               |
| Refrigerant         | R32                                             |
| Mass of Refrigerant | 1.65 kg                                         |
| Certification Date  | 10.06.2022                                      |
| Testing basis       | HP KEYMARK certification scheme rules rev. n. 9 |

## Model SQKN-YEE 1 TC A 250 + MiSAN-YEE 1 S 4.1

|                                     |                                         |
|-------------------------------------|-----------------------------------------|
| Model name                          | SQKN-YEE 1 TC A 250 + MiSAN-YEE 1 S 4.1 |
| Application                         | Heating + DHW + low temp                |
| Units                               | Indoor, Outdoor                         |
| Climate zone (for heating)          | n/a                                     |
| Reversibility                       | Yes                                     |
| Cooling mode application (optional) | n/a                                     |
| Any additional heat sources         | n/a                                     |

## General data

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

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 123 %       |
| COP                             | 2.95        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 44.0 W      |
| Reference hot water temperature | 50.0 °C     |
| Mixed water at 40°C             | 265 l       |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 8.30 kW         | 7.50 kW            |
| El input    | 1.56 kW         | 2.35 kW            |
| COP         | 5.31            | 3.19               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | dB(A)           | 41 dB(A)           |
| Sound power level outdoor | dB(A)           | 58 dB(A)           |

## EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 210 %           | 146 %              |
| Prated         | 8.08 kW         | 6.88 kW            |
| SCOP           | 5.32            | 3.72               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 7.15 kW         | 6.09 kW            |
| COP Tj = -7°C  | 3.30            | 2.27               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |

|                                                     |          |          |
|-----------------------------------------------------|----------|----------|
| Pdh Tj = +2°C                                       | 4.65 kW  | 3.94 kW  |
| COP Tj = +2°C                                       | 5.17     | 3.56     |
| Cdh Tj = +2 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +7°C                                       | 2.91 kW  | 2.52 kW  |
| COP Tj = +7°C                                       | 7.08     | 4.70     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 1.85 kW  | 1.72 kW  |
| COP Tj = 12°C                                       | 9.46     | 9.71     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 7.15 kW  | 6.09 kW  |
| COP Tj = Tbiv                                       | 3.30     | 2.27     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.42 kW  | 4.97 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.06     | 1.88     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL                                                | 65 °C    | 65 °C    |
| Poff                                                | 15 W     | 15 W     |
| PTO                                                 | 15 W     | 15 W     |
| PSB                                                 | 15 W     | 15 W     |
| PCK                                                 | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 1.66 kW  | 1.91 kW  |
| Annual energy consumption Qhe                       | 3141 kWh | 3824 kWh |

## Model SQKN-YEE 1 TC A 250 + MiSAN-YEE 1 S 5.1

|                                     |                                         |
|-------------------------------------|-----------------------------------------|
| Model name                          | SQKN-YEE 1 TC A 250 + MiSAN-YEE 1 S 5.1 |
| Application                         | Heating + DHW + low temp                |
| Units                               | Indoor, Outdoor                         |
| Climate zone (for heating)          | n/a                                     |
| Reversibility                       | Yes                                     |
| Cooling mode application (optional) | n/a                                     |
| Any additional heat sources         | n/a                                     |

## General data

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

## Outdoor Air/Water

## EN 16147 | Average Climate

|                                 |             |
|---------------------------------|-------------|
| Declared load profile           | XL          |
| Efficiency $\eta_{DHW}$         | 123 %       |
| COP                             | 2.95        |
| Heating up time                 | 02:10 h:min |
| Standby power input             | 50.0 W      |
| Reference hot water temperature | 44.0 °C     |
| Mixed water at 40°C             | 265 l       |

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 10.09 kW        | 9.60 kW            |
| El input    | 2.01 kW         | 3.10 kW            |
| COP         | 5.01            | 3.10               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | dB(A)           | 41 dB(A)           |
| Sound power level outdoor | dB(A)           | 60 dB(A)           |

## EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 208 %           | 143 %              |
| Prated         | 9.55 kW         | 8.57 kW            |
| SCOP           | 5.27            | 3.73               |
| Tbiv           | -7 °C           | -7 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 8.45 kW         | 7.58 kW            |
| COP Tj = -7°C  | 3.18            | 2.02               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |

|                                                     |          |          |
|-----------------------------------------------------|----------|----------|
| Pdh Tj = +2°C                                       | 5.23 kW  | 4.44 kW  |
| COP Tj = +2°C                                       | 5.03     | 3.63     |
| Cdh Tj = +2 °C                                      | 0.900    | 0.900    |
| Pdh Tj = +7°C                                       | 3.47 kW  | 2.92 kW  |
| COP Tj = +7°C                                       | 7.33     | 4.95     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 1.96 kW  | 1.71 kW  |
| COP Tj = 12°C                                       | 9.94     | 6.56     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 8.45 kW  | 7.58 kW  |
| COP Tj = Tbiv                                       | 3.18     | 2.02     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.38 kW  | 5.46 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.97     | 1.87     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL                                                | 65 °C    | 65 °C    |
| Poff                                                | 15 W     | 15 W     |
| PTO                                                 | 15 W     | 15 W     |
| PSB                                                 | 15 W     | 15 W     |
| PCK                                                 | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 2.17 kW  | 3.11 kW  |
| Annual energy consumption Qhe                       | 3747 kWh | 4749 kWh |