

## Subtype Buderus Logatherm WPS 8K-1

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Certificate Holder  | Bosch Thermotechnik GmbH (Buderus)                    |
| Address             | Sophienstraße 30-32                                   |
| ZIP                 | 35576                                                 |
| City                | Wetzlar                                               |
| Country             | DE                                                    |
| Certification Body  | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title       | Buderus Logatherm WPS 8K-1                            |
| Registration number | 011-1W0178                                            |
| Heat Pump Type      | Brine/Water                                           |
| Refrigerant         | R410A                                                 |
| Mass of Refrigerant | 1.95 kg                                               |
| Certification Date  | 17.11.2017                                            |

## Model Buderus Logatherm WPS 8K-1

|                                     |                            |
|-------------------------------------|----------------------------|
| Model name                          | Buderus Logatherm WPS 8K-1 |
| Application                         | Heating + DHW + low temp   |
| Units                               | Indoor                     |
| Climate zone (for heating)          | n/a                        |
| Cooling mode application (optional) | n/a                        |
| Any additional heat sources         | n/a                        |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | No          |

## Brine/Water

### EN 16147 | Average Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 88 %       |
| COP                             | 2.13       |
| Heating up time                 | 1:16 h:min |
| Standby power input             | 33.9 W     |
| Reference hot water temperature | 44.6 °C    |
| Mixed water at 40°C             | 181 l      |

### EN 16147 | Colder Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 88 %       |
| COP                             | 2.13       |
| Heating up time                 | 76.4 h:min |
| Standby power input             | 33.9 W     |
| Reference hot water temperature | 44.6 °C    |
| Mixed water at 40°C             | 181 l      |

### EN 16147 | Warmer Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 88 %       |
| COP                             | 2.13       |
| Heating up time                 | 76.4 h:min |
| Standby power input             | 33.9 W     |
| Reference hot water temperature | 44.6 °C    |
| Mixed water at 40°C             | 181 l      |

### EN 14511-4 | Heating

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

Starting and operating test                      passed

## EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 7.45 kW         | 6.79 kW            |
| El input    | 1.66 kW         | 2.35 kW            |
| COP         | 4.49            | 2.89               |

## EN 12102-1 | Average Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 48 dB(A)        | 48 dB(A)           |

## EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 184 %           | 137 %              |
| Prated                                              | 7 kW            | 8 kW               |
| SCOP                                                | 4.81            | 3.64               |
| Tbiv                                                | -10 °C          | -6 °C              |
| TOL                                                 | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 7.46 kW         | 6.91 kW            |
| COP Tj = -7°C                                       | 4.54            | 3.09               |
| Cdh Tj = -7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +2°C                                       | 7.53 kW         | 7.14 kW            |
| COP Tj = +2°C                                       | 4.81            | 3.62               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 7.59 kW         | 7.27 kW            |
| COP Tj = +7°C                                       | 5.07            | 4.02               |
| Cdh Tj = +7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = 12°C                                       | 7.65 kW         | 7.38 kW            |
| COP Tj = 12°C                                       | 5.36            | 4.47               |
| Cdh Tj = +12 °C                                     | 1.00            | 1.00               |
| Pdh Tj = Tbiv                                       | 7.45 kW         | 6.94 kW            |
| COP Tj = Tbiv                                       | 4.49            | 3.15               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.45 kW         | 6.79 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.49            | 2.89               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00            | 1.00               |
| WTOL                                                | 62 °C           | 62 °C              |
| Poff                                                | 6 W             | 6 W                |
| PTO                                                 | 6 W             | 6 W                |
| PSB                                                 | 6 W             | 6 W                |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |

|                                           |          |          |
|-------------------------------------------|----------|----------|
| Supplementary Heater: PSUP                | 0 kW     | 1.21 kW  |
| Annual energy consumption Q <sub>he</sub> | 3007 kWh | 4547 kWh |

#### EN 12102-1 | Colder Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 48 dB(A)        | 48 dB(A)           |

#### EN 14825 | Colder Climate

|                                                                                                                             | Low temperature | Medium temperature |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|
| η <sub>s</sub>                                                                                                              | 189 %           | 141 %              |
| Prated                                                                                                                      | 7.00 kW         | 8.00 kW            |
| SCOP                                                                                                                        | 4.93            | 3.73               |
| T <sub>biv</sub>                                                                                                            | -22 °C          | -16 °C             |
| TOL                                                                                                                         | -22 °C          | -22 °C             |
| P <sub>dh</sub> T <sub>j</sub> = -7 °C                                                                                      | 7.54 kW         | 7.1 kW             |
| COP T <sub>j</sub> = -7 °C                                                                                                  | 4.85            | 3.51               |
| C <sub>dh</sub> T <sub>j</sub> = -7 °C                                                                                      | 1.00            | 1.00               |
| P <sub>dh</sub> T <sub>j</sub> = +2 °C                                                                                      | 7.59 kW         | 7.25 kW            |
| COP T <sub>j</sub> = +2 °C                                                                                                  | 5.09            | 3.94               |
| C <sub>dh</sub> T <sub>j</sub> = +2 °C                                                                                      | 1.00            | 1.00               |
| P <sub>dh</sub> T <sub>j</sub> = +7 °C                                                                                      | 7.63 kW         | 7.35 kW            |
| COP T <sub>j</sub> = +7 °C                                                                                                  | 5.27            | 4.33               |
| C <sub>dh</sub> T <sub>j</sub> = +7 °C                                                                                      | 1.00            | 1.00               |
| P <sub>dh</sub> T <sub>j</sub> = 12 °C                                                                                      | 7.64 kW         | 7.42 kW            |
| COP T <sub>j</sub> = 12 °C                                                                                                  | 5.33            | 4.65               |
| C <sub>dh</sub> T <sub>j</sub> = +12 °C                                                                                     | 1.00            | 1.00               |
| P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>                                                                           | 7.45 kW         | 6.95 kW            |
| COP T <sub>j</sub> = T <sub>biv</sub>                                                                                       | 4.49            | 3.17               |
| P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub> | 7.45 kW         | 6.79 kW            |
| COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>                         | 4.49            | 2.89               |
| C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub> | 1.00            | 1.00               |
| WTOL                                                                                                                        | 62 °C           | 62 °C              |
| P <sub>off</sub>                                                                                                            | 6 W             | 6 W                |
| PTO                                                                                                                         | 6 W             | 6 W                |
| PSB                                                                                                                         | 6 W             | 6 W                |
| PCK                                                                                                                         | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input                                                                                  | Electricity     | Electricity        |
| Supplementary Heater: PSUP                                                                                                  | 0.00 kW         | 1.21 kW            |
| Annual energy consumption Q <sub>he</sub>                                                                                   | 3498 kWh        | 5289 kWh           |
| C <sub>dh</sub> T <sub>j</sub> = -15 °C                                                                                     | 1.00            | 1.00               |

#### EN 12102-1 | Warmer Climate

|                          | Low temperature | Medium temperature |
|--------------------------|-----------------|--------------------|
| Sound power level indoor | 48 dB(A)        | 48 dB(A)           |

# EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 185 %           | 138 %              |
| Prated                                              | 7.00 kW         | 8.00 kW            |
| SCOP                                                | 4.83            | 3.65               |
| Tbiv                                                | 2 °C            | 4 °C               |
| TOL                                                 | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 7.45 kW         | 6.79 kW            |
| COP Tj = +2°C                                       | 4.49            | 2.89               |
| Cdh Tj = +2 °C                                      | 1.00            | 1.00               |
| Pdh Tj = +7°C                                       | 7.52 kW         | 7.04 kW            |
| COP Tj = +7°C                                       | 4.75            | 3.37               |
| Cdh Tj = +7 °C                                      | 1.00            | 1.00               |
| Pdh Tj = 12°C                                       | 7.61 kW         | 7.31 kW            |
| COP Tj = 12°C                                       | 5.17            | 4.17               |
| Cdh Tj = +12 °C                                     | 1.00            | 1.00               |
| Pdh Tj = Tbiv                                       | 7.45 kW         | 6.93 kW            |
| COP Tj = Tbiv                                       | 4.49            | 3.13               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.45 kW         | 6.79 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 4.49            | 2.89               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 1.00            | 1.00               |
| WTOL                                                | 62 °C           | 62 °C              |
| Poff                                                | 6 W             | 6 W                |
| PTO                                                 | 6 W             | 6 W                |
| PSB                                                 | 6 W             | 6 W                |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.00 kW         | 1.21 kW            |
| Annual energy consumption Qhe                       | 1936 kWh        | 2932 kWh           |