

## Subtype Buderus Logatherm WPS 10K-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 10K-1
Registration number	011-1W0179
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	2.2 kg
Certification Date	17.11.2017
Testing basis	HP KEYMARK certification scheme rules rev. 14
Testing laboratory	Universität Stuttgart, Prüfstelle HLK am Institut für Gebäudeenergetik, Thermotechnik und Energiespeicherung (IGTE), DE

## Model Buderus Logatherm WPS 10K-1

Model name	Buderus Logatherm WPS 10K-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 $\eta_{DHW}$	83 %
COP	2.03
Heating up time	1:02 h:min
Standby power input	25.4 W
Reference hot water temperature	44.6 °C
Mixed water at 40°C	179 l

### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	83 %
COP	2.03
Heating up time	61.9 h:min
Standby power input	25.4 W
Reference hot water temperature	44.6 °C
Mixed water at 40°C	179 l

### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	83 %
COP	2.03
Heating up time	61.9 h:min
Standby power input	25.4 W
Reference hot water temperature	44.6 °C
Mixed water at 40°C	179 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	9.87 kW	9.15 kW
El input	2.27 kW	3.26 kW
COP	4.34	2.81

## EN 12102-1 | Average Climate

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

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	181 %	133 %
Prated	11 kW	11 kW
SCOP	4.73	3.51
Tbiv	-7 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.9 kW	9.24 kW
COP Tj = -7°C	4.46	2.98
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	9.96 kW	9.45 kW
COP Tj = +2°C	4.72	3.49
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	10.01 kW	9.58 kW
COP Tj = +7°C	4.97	3.89
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	10.07 kW	9.72 kW
COP Tj = 12°C	5.23	4.35
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	9.9 kW	9.29 kW
COP Tj = Tbiv	4.46	3.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.87 kW	9.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.34	2.81
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	1.13 kW	1.85 kW
Annual energy consumption Q <sub>he</sub>	4809 kWh	6469 kWh

#### EN 12102-1 | Colder Climate

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

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	186 %	136 %
Prated	11.00 kW	11.00 kW
SCOP	4.85	3.6
T <sub>biv</sub>	-18 °C	-16 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7 °C	9.97 kW	9.4 kW
COP T <sub>j</sub> = -7 °C	4.77	3.38
C <sub>dh</sub> T <sub>j</sub> = -7 °C	1.00	1.00
P <sub>dh</sub> T <sub>j</sub> = +2 °C	10.02 kW	9.55 kW
COP T <sub>j</sub> = +2 °C	4.99	3.81
C <sub>dh</sub> T <sub>j</sub> = +2 °C	1.00	1.00
P <sub>dh</sub> T <sub>j</sub> = +7 °C	10.05 kW	9.68 kW
COP T <sub>j</sub> = +7 °C	5.16	4.21
C <sub>dh</sub> T <sub>j</sub> = +7 °C	1.00	1.00
P <sub>dh</sub> T <sub>j</sub> = 12 °C	10.06 kW	9.77 kW
COP T <sub>j</sub> = 12 °C	5.2	4.54
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>	9.91 kW	9.28 kW
COP T <sub>j</sub> = T <sub>biv</sub>	4.51	3.06
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>	9.87 kW	9.15 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	4.34	2.81
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	1.13 kW	1.85 kW
Annual energy consumption Q <sub>he</sub>	5588 kWh	7524 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	53 dB(A)	53 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	182 %	133 %
Prated	11.00 kW	11.00 kW
SCOP	4.76	3.53
Tbiv	4 °C	5 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	9.87 kW	9.15 kW
COP Tj = +2°C	4.34	2.81
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	9.95 kW	9.36 kW
COP Tj = +7°C	4.67	3.25
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	10.03 kW	9.62 kW
COP Tj = 12°C	5.06	4.04
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	9.91 kW	9.29 kW
COP Tj = Tbiv	4.52	3.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.87 kW	9.15 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.34	2.81
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	1.13 kW	1.85 kW
Annual energy consumption Qhe	3086 kWh	4163 kWh