

## Subtype Buderus Logatherm WPS 13-1

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 13-1
Registration number	011-1W0183
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	2.65 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 13-1

Model name	Buderus Logatherm WPS 13-1
Application	Heating (medium 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 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	12.92 kW	11.84 kW
El input	2.85 kW	3.97 kW
COP	4.53	2.98

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	140 %
Prated	14 kW	13 kW
SCOP	4.88	3.69
Tbiv	-8 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.95 kW	11.99 kW
COP Tj = -7°C	4.61	3.15
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	13.05 kW	12.35 kW
COP Tj = +2°C	4.86	3.66
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	13.15 kW	12.57 kW
COP Tj = +7°C	5.1	4.04

Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	13.24 kW	12.78 kW
COP Tj = 12°C	5.36	4.49
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	12.95 kW	11.99 kW
COP Tj = Tbiv	4.6	3.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.92 kW	11.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.53	2.98
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	1.08 kW	1.16 kW
Annual energy consumption Qhe	5924 kWh	7269 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	192 %	143 %
Prated	14.00 kW	13.00 kW
SCOP	5	3.78
Tbiv	-19 °C	-18 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.07 kW	12.28 kW
COP Tj = -7°C	4.9	3.54
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	13.15 kW	12.53 kW
COP Tj = +2°C	5.12	3.97
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	13.22 kW	12.72 kW
COP Tj = +7°C	5.29	4.35
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	13.23 kW	12.85 kW
COP Tj = 12°C	5.33	4.67
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	12.96 kW	11.99 kW
COP Tj = Tbiv	4.64	3.15

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.92 kW	11.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.53	2.98
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	1.08 kW	1.16 kW
Annual energy consumption Qhe	6904 kWh	8477 kWh
Cdh Tj = -15 °C	1.00	1.00

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	189 %	140 %
Prated	14.00 kW	13.00 kW
SCOP	4.92	3.71
Tbiv	4 °C	4 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.92 kW	11.84 kW
COP Tj = +2°C	4.53	2.98
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	13.03 kW	12.19 kW
COP Tj = +7°C	4.81	3.41
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	13.18 kW	12.64 kW
COP Tj = 12°C	5.19	4.19
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	12.98 kW	12.01 kW
COP Tj = Tbiv	4.67	3.17
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.92 kW	11.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.53	2.98
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	1.08 kW	1.16 kW
Annual energy consumption Q <sub>he</sub>	3801 kWh	4680 kWh