

## Subtype Buderus Logatherm WSW196i-12

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 WSW196i-12
Registration number	011-1W0151
Heat Pump Type	Brine/Water
Refrigerant	R410A
Mass of Refrigerant	2.39 kg
Certification Date	06.07.2017

## Model Buderus Logatherm WSW196i-12T 190

Model name	Buderus Logatherm WSW196i-12T 190
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	1x230V 50Hz
Off-peak product	No

### Brine/Water

#### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	90 %
COP	2.06
Heating up time	2:35 h:min
Standby power input	86.3 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	259 l

#### EN 16147 | Colder Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	90 %
COP	2.06
Heating up time	154.8 h:min
Standby power input	86.3 W
Reference hot water temperature	53 °C
Mixed water at 40°C	259 l

#### EN 16147 | Warmer Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	90 %
COP	2.06
Heating up time	154.8 h:min
Standby power input	86.3 W
Reference hot water temperature	53 °C
Mixed water at 40°C	259 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	11.01 kW	9.58 kW
El input	2.85 kW	3.43 kW
COP	3.86	2.79

#### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	180 %	139 %
Prated	11.01 kW	9.58 kW
SCOP	4.69	3.68
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.78 kW	8.04 kW
COP Tj = -7°C	4.43	3.12
Cdh Tj = -7 °C	0.99	0.99
Pdh Tj = +2°C	5.90 kW	5.06 kW
COP Tj = +2°C	5.27	3.97
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	3.97 kW	3.29 kW
COP Tj = +7°C	5.68	4.52
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	1.72 kW	2.7 kW
COP Tj = 12°C	5.30	4.66
Cdh Tj = +12 °C	0.94	0.97
Pdh Tj = Tbiv	11.01 kW	9.58 kW
COP Tj = Tbiv	3.86	2.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.01 kW	9.58 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.86	2.79
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	62 °C	62 °C
Poff	18 W	18 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	11 W	11 W
Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Q <sub>he</sub>	4850 kWh	5373 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	187 %	154 %
Prated	11.01 kW	9.58 kW
SCOP	4.87	4.05
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7 °C	6.44 kW	5.9 kW
COP T <sub>j</sub> = -7 °C	5.25	3.79
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.99	0.99
P <sub>dh</sub> T <sub>j</sub> = +2 °C	3.97 kW	3.75 kW
COP T <sub>j</sub> = +2 °C	5.68	4.47
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.97	0.98
P <sub>dh</sub> T <sub>j</sub> = +7 °C	2.87 kW	2.71 kW
COP T <sub>j</sub> = +7 °C	5.89	4.74
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.96	0.97
P <sub>dh</sub> T <sub>j</sub> = 12 °C	1.42 kW	2.71 kW
COP T <sub>j</sub> = 12 °C	4.77	4.74
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.94	0.97
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	11.01 kW	9.58 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.86	2.79
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>	11.01 kW	9.58 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.86	2.79
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>	0.99	1.00
WTOL	62 °C	62 °C
P <sub>off</sub>	18 W	18 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	11 W	11 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0 kW
Annual energy consumption Q <sub>he</sub>	5570 kWh	5825 kWh
C <sub>dh</sub> T <sub>j</sub> = -15 °C	0.99	1.00

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

# EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	159 %	136 %
Prated	11.01 kW	9.58 kW
SCOP	4.19	3.60
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.01 kW	9.58 kW
COP Tj = +2°C	3.86	2.79
Cdh Tj = +2 °C	0.99	1.00
Pdh Tj = +7°C	7.23 kW	5.82 kW
COP Tj = +7°C	4.99	3.62
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	2.91 kW	2.78 kW
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WTOL	62 °C	62 °C
Poff	18 W	18 W
PTO	18 W	18 W
PSB	18 W	18 W
PCK	11 W	11 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0 kW
Annual energy consumption Qhe	3515 kWh	3554 kWh

## Model Buderus Logatherm WSW196i-12TS 185

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Units	Indoor
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Cooling mode application (optional)	n/a
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### General data

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Off-peak product	No

### Brine/Water

#### EN 16147 | Average Climate

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Supplementary Heater: Type of energy input	Electricity	Electricity

Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Q <sub>he</sub>	4850 kWh	5373 kWh

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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0 kW
Annual energy consumption Q <sub>he</sub>	5570 kWh	5825 kWh
C <sub>dh</sub> T <sub>j</sub> = -15 °C	0.99	1.00

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PTO	18 W	18 W
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PCK	11 W	11 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0 kW
Annual energy consumption Qhe	3515 kWh	3554 kWh