Subtype Buderus Logatherm WSW196i.2/186 -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.2/186 -12
Registration number	011-1W0435
Heat Pump Type	Brine/Water and Water/Water
Refrigerant	R410A
Mass of Refrigerant	2 kg
Certification Date	08.12.2020
Testing basis	HP KEYMARK certification scheme rules rev. 10
Testing laboratory	RISE Research Institutes of Sweden

Model WSW196i.2-12 T180 (+W) / 186-12 T180	
Model name	WSW196i.2-12 T180 (+W) / 186-12 T180
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Brine
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	XL
Efficiency ηDHW	129 %
COP	3.11
Heating up time	1:28 h:min
Standby power input	41.2 W
Reference hot water temperature	47.3 °C
Mixed water at 40°C	208 l
EN 16147 | Colder Climate	
Declared load profile	XL
Efficiency ηDHW	129 %
COP	3.11
Heating up time	1:28 h:min
Standby power input	41.2 W
Reference hot water temperature	47.3 °C
Mixed water at 40°C	208 l
EN 16147 | Warmer Climate	
Declared load profile	XL
Efficiency ηDHW	129 %
COP	3.11
Heating up time	1:28 h:min
Standby power input	41.2 W
Reference hot water temperature	47.3 °C
Mixed water at 40°C	208 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	12.54 kW	11.32 kW
El input	3.14 kW	4.32 kW
COP	4.00	2.62

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	212 %	154 %
Prated	12.54 kW	11.32 kW
SCOP	5.49	4.05
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.12 kW	10.14 kW
COP Tj = -7°C	4.33	2.90
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.12 kW	6.21 kW
COP Tj = +2°C	5.61	4.23
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	4.60 kW	3.72 kW
COP Tj = +7°C	6.23	4.88
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.92 kW	3.72 kW
COP Tj = 12°C	6.15	5.10
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.54 kW	11.32 kW
COP Tj = Tbiv	4.00	2.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	11.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.00	2.62
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	71 °C	71 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4721 kWh	5773 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	220 %	165 %
Prated	12.54 kW	11.32 kW
SCOP	5.70	4.34
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.99 kW	7.02 kW
COP Tj = -7°C	5.43	3.94
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.54 kW	4.31 kW
COP Tj = +2°C	6.30	4.87
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	3.89 kW	3.72 kW
COP Tj = +7°C	6.35	5.15
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	3.87 kW	3.73 kW
COP Tj = 12°C	5.99	5.31
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.53 kW	11.32 kW
COP Tj = Tbiv	4.00	2.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	11.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.00	2.62
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	71 °C	71 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5419 kWh	6437 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	206 %	158 %
Prated	12.54 kW	11.32 kW
SCOP	5.34	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.54 kW	11.32 kW
COP Tj = +2°C	4.00	2.62
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.89 kW	7.27 kW
COP Tj = +7°C	5.21	3.71
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.87 kW	3.71 kW
COP Tj = 12°C	6.18	5.07
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.54 kW	11.32 kW
COP Tj = Tbiv	4.00	2.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	11.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.00	2.62
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	71 °C	71 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3135 kWh	3648 kWh

Water/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency ηDHW	155 %
COP	3.73
Heating up time	1:08 h:min
Standby power input	36.0 W
Reference hot water temperature	46.9 °C
Mixed water at 40°C	204 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	15.37 kW	14.07 kW
El input	3.18 kW	4.52 kW
COP	4.83	3.11

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	285 %	203 %
Prated	15.37 kW	14.07 kW
SCOP	7.33	5.28
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.02 kW	12.73 kW
COP Tj = -7°C	5.31	3.50
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	9.05 kW	7.89 kW
COP Tj = +2°C	7.35	5.34
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.81 kW	5.07 kW
COP Tj = +7°C	8.99	6.62
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.00 kW	4.79 kW
COP Tj = 12°C	9.28	7.04
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	15.37 kW	14.07 kW
COP Tj = Tbiv	4.83	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.37 kW	14.07 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.83	3.11
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	71 °C	71 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW

Annual energy consumption Qhe	4330 kWh	5506 kWh

Model WSW196i.2-12 (+W) / 186-12	
Model name	WSW196i.2-12 (+W) / 186-12
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Heat Source	Brine
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	12.54 kW	11.32 kW
El input	3.14 kW	4.32 kW
COP	4.00	2.62

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	212 %	154 %
Prated	12.54 kW	11.32 kW
SCOP	5.49	4.05
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.12 kW	10.14 kW
COP Tj = -7°C	4.33	2.90
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	7.12 kW	6.21 kW
COP Tj = +2°C	5.61	4.23
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	4.60 kW	3.72 kW

COP Tj = +7°C	6.23	4.88
Cdh Tj = +7 °C	0.980	0.990
Pdh Tj = 12°C	3.92 kW	3.72 kW
COP Tj = 12°C	6.15	5.10
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.54 kW	11.32 kW
COP Tj = Tbiv	4.00	2.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	11.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.00	2.62
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	71 °C	71 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4721 kWh	5773 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	220 %	165 %
Prated	12.54 kW	11.32 kW
SCOP	5.70	4.34
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.99 kW	7.02 kW
COP Tj = -7°C	5.43	3.94
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	4.54 kW	4.31 kW
COP Tj = +2°C	6.30	4.87
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	3.89 kW	3.72 kW
COP Tj = +7°C	6.35	5.15
Cdh Tj = +7 °C	0.980	0.980
Pdh Tj = 12°C	3.87 kW	3.73 kW
COP Tj = 12°C	5.99	5.31
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.53 kW	11.32 kW

COP Tj = Tbiv	4.00	2.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	11.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.00	2.62
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	71 °C	71 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5419 kWh	6437 kWh

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	41 dB(A)	41 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	206 %	158 %
Prated	12.54 kW	11.32 kW
SCOP	5.34	4.15
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.54 kW	11.32 kW
COP Tj = +2°C	4.00	2.62
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.89 kW	7.27 kW
COP Tj = +7°C	5.21	3.71
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	3.87 kW	3.71 kW
COP Tj = 12°C	6.18	5.07
Cdh Tj = +12 °C	0.980	0.980
Pdh Tj = Tbiv	12.54 kW	11.32 kW
COP Tj = Tbiv	4.00	2.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.54 kW	11.32 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.00	2.62
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.000	1.000
WTOL	71 °C	71 °C
Poff	11 W	11 W

PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3135 kWh	3648 kWh

Water/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	15.37 kW	14.07 kW
El input	3.18 kW	4.52 kW
COP	4.83	3.11

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	285 %	203 %
Prated	15.37 kW	14.07 kW
SCOP	7.33	5.28
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.02 kW	12.73 kW
COP Tj = -7°C	5.31	3.50
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	9.05 kW	7.89 kW
COP Tj = +2°C	7.35	5.34
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.81 kW	5.07 kW
COP Tj = +7°C	8.99	6.62
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	5.00 kW	4.79 kW
COP Tj = 12°C	9.28	7.04
Cdh Tj = +12 °C	0.970	0.980
Pdh Tj = Tbiv	15.37 kW	14.07 kW
COP Tj = Tbiv	4.83	3.11
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.37 kW	14.07 kW

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.83	3.11
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	71 °C	71 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4330 kWh	5506 kWh