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Summary of	Buderus Logatherm WSW196i.2/186 -12	Reg. No.	011-1W0435
Certificate Holder			
Name	Bosch Thermotechnik GmbH (Buderus)		
Address	Sophienstraße 30-32	Zip	35576
City	Wetzlar	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Buderus Logatherm WSW196i.2/186 -12		
Heat Pump Type	Brine/Water		
Refrigerant	R410A		
Mass of Refrigerant	2 kg		
Certification Date	08.12.2020		
Testing basis	HP KEYMARK certification scheme rules rev. 7		

# Model: WSW196i.2-12 T180 (+W) / 186-12 T180

Configure model	
Model name	WSW196i.2-12 T180 (+W) / 186-12 T180
Application	Heating + DHW + low temp
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz
Off-peak product	No

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.53 kW	11.31 kW
El input	3.11 kW	4.30 kW
COP	4.02	2.63

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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### EN 12102-1

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

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	214 %	159 %
Prated	12.53 kW	11.31 kW
SCOP	5.55	4.17
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.11 kW	10.14 kW
COP Tj = -7°C	4.36	2.91
Pdh Tj = +2°C	7.10 kW	6.21 kW
COP Tj = +2°C	5.67	4.28
Pdh Tj = +7°C	4.60 kW	3.71 kW
COP Tj = +7°C	6.35	4.97
Pdh Tj = 12°C	3.92 kW	3.72 kW
COP Tj = 12°C	6.37	5.20
Pdh Tj = Tbiv	12.53 kW	11.31 kW
COP Tj = Tbiv	4.02	2.63

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$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	12.53 kW	11.31 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	4.02	2.63
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 kW	0 kW
Annual energy consumption Qhe	4660 kWh	5606 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	226 %	168 %
Prated	12.53 kW	11.31 kW
SCOP	5.85	4.39

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Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.98 kW	7.02 kW
COP Tj = -7°C	5.50	3.98
Pdh Tj = +2°C	4.53 kW	4.30 kW
COP Tj = +2°C	6.46	4.95
Pdh Tj = +7°C	3.89 kW	3.72 kW
COP Tj = +7°C	6.56	5.28
Pdh Tj = 12°C	3.87 kW	3.73 kW
COP Tj = 12°C	6.17	5.40
Pdh Tj = Tbiv	12.53 kW	11.31 kW
COP Tj = Tbiv	4.02	2.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.53 kW	11.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.02	2.63
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 kW	0 kW

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Annual energy consumption $Q_{he}$	5276 kWh	6350 kWh
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## Warmer Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	214 %	159 %
Prated	12.53 kW	11.31 kW
SCOP	5.55	4.18
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.53 kW	11.31 kW
COP Tj = +2°C	4.02	2.63
Pdh Tj = +7°C	7.88 kW	7.26 kW
COP Tj = +7°C	5.27	3.73
Pdh Tj = 12°C	3.86 kW	3.71 kW
COP Tj = 12°C	6.38	5.17
Pdh Tj = Tbiv	12.53 kW	11.31 kW

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COP $T_j = T_{biv}$	4.02	2.63
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	12.53 kW	11.31 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	4.02	2.63
WTOL	71 °C	71 °C
P <sub>off</sub>	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 kW	0 kW
Annual energy consumption Q <sub>he</sub>	3016 kWh	3618 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	129 %
COP	3.11
Heating up time	01:28 h:min
Standby power input	41.2 W
Reference hot water temperature	47.3 °C
Mixed water at 40°C	208 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	129 %
COP	3.11
Heating up time	01:28 h:min
Standby power input	41.2 W
Reference hot water temperature	47.3 °C
Mixed water at 40°C	208 l

## Warmer Climate



<b>EN 16147</b>	
Declared load profile	XL
Efficiency $\eta_{DHW}$	129 %
COP	3.11
Heating up time	01:28 h:min
Standby power input	41.2 W
Reference hot water temperature	47.3 °C
Mixed water at 40°C	208 l

## Model: WSW196i.2-12 (+W) / 186-12

Configure model	
Model name	WSW196i.2-12 (+W) / 186-12
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.53 kW	11.31 kW
El input	3.11 kW	4.30 kW
COP	4.02	2.63

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Average Climate

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	Low temperature	Medium temperature
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Poff	14 W	14 W
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PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW
Annual energy consumption Qhe	4660 kWh	5606 kWh

## Colder Climate

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	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0 kW

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Annual energy consumption $Q_{he}$	5276 kWh	6350 kWh
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## Warmer Climate

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	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	214 %	159 %
Prated	12.53 kW	11.31 kW
SCOP	5.55	4.18
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.53 kW	11.31 kW
COP Tj = +2°C	4.02	2.63
Pdh Tj = +7°C	7.88 kW	7.26 kW
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COP Tj = 12°C	6.38	5.17
Pdh Tj = Tbiv	12.53 kW	11.31 kW

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COP Tj = Tbiv	4.02	2.63
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.53 kW	11.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.02	2.63
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 kW	0 kW
Annual energy consumption Qhe	3016 kWh	3618 kWh