


# CERTIFICATE

<b>Certificate holder</b>	<b>Bosch Thermotechnik GmbH</b> <b>Sophienstr. 30-32</b> <b>35576 Wetzlar</b> <b>GERMANY</b>
<b>Production facility</b>	Aveiro, Tranas
<b>Product</b>	Air/Water Heat pumps
<b>Type, Model</b>	Buderus Logatherm WLW196i-6 AR and IR Buderus Logatherm WLW196i.2-4 AR
<b>Testing basis</b>	DIN EN 14511-1; DIN EN 14511-2; DIN EN 14511-3; DIN EN 14511-4:2019-07 DIN EN 14825:2019-07 DIN EN 12102-1:2018-02 DIN EN 16147:2017-08 European KEYMARK Scheme for Heat Pumps Rev. 8 (2020-09)
<b>Mark of conformity</b>	
<b>Registration No.</b>	011-1W0128
<b>Valid until</b>	2027-07-31
<b>Right of use</b>	This certificate entitles the holder to use the mark of conformity shown above in conjunction with the specified registration number.

See annex for further information.

S. Scholz

# ANNEX

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<b>Certificate</b>	011-1W0128 dated 2021-05-17
<b>Technical Data</b>	See Heat Pump KEYMARK database for detailed information
<b>Testing laboratory/ Inspection body</b>	RISE Research Institutes of Sweden AB PO Box 857 501 15 Borås SWEDEN
<b>Test report(s)</b>	3P06665-04 rev 2 dated 2014-10-13



This information was generated by the HP KEYMARK database on 25 Feb 2023

	Buderus Logatherm WLW196i-6 AR and IR, Buderus Logatherm WLW196i.2-4 AR	Reg. No.	011-1W0128
Certificate Holder			
	Bosch Thermotechnik GmbH (Buderus)		
	Sophienstraße 30-32		35576
	Wetzlar		Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Buderus Logatherm WLW196i-6 AR and IR, Buderus Logatherm WLW196i.2-4 AR		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410A		
Mass of Refrigerant	1.75 kg		
Certification Date	18.07.2017		
Testing basis	HP KEYMARK certification scheme rules rev. 8		

## Model: Buderus Logatherm WLW196i-6 ARE

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 ARE
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

### Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.40 kW
El input	0.43 kW	0.88 kW
COP	5.27	2.75

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

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	261 %	175 %
Prated	6.27 kW	5.60 kW
SCOP	6.59	4.45
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.27 kW	5.60 kW
COP Tj = +2°C	3.05	2.19
Pdh Tj = +7°C	4.09 kW	3.77 kW
COP Tj = +7°C	5.70	3.86
Pdh Tj = 12°C	1.79 kW	2.54 kW
COP Tj = 12°C	8.77	5.94
Pdh Tj = Tbiv	6.27 kW	5.60 kW
COP Tj = Tbiv	3.05	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	5.60 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.05	2.19
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1270 kWh	1683 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	178 %	130 %
Prated	5.11 kW	4.82 kW
SCOP	4.53	3.32

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-19 °C
Pdh Tj = -7°C	3.20 kW	3.01 kW
COP Tj = -7°C	3.61	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.19 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	4.20 kW
COP Tj = Tbiv	2.43	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.07 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.11 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption $Q_{he}$	2781 kWh	3575 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	4.15	1.97
$COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	2.68	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	202 %	143 %
Prated	5.43 kW	4.56 kW
SCOP	5.13	3.65
$T_{biv}$	-10 °C	-10 °C
TOL	-10 °C	-10 °C
$P_{dh} T_j = -7^{\circ}\text{C}$	4.91 kW	4.26 kW
$COP T_j = -7^{\circ}\text{C}$	3.08	2.24
$P_{dh} T_j = +2^{\circ}\text{C}$	2.92 kW	2.57 kW
$COP T_j = +2^{\circ}\text{C}$	5.00	3.66



This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.68
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.38	6.14
Pdh Tj = Tbiv	5.43 kW	4.56 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	4.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2190 kWh	2580 kWh

## Model: Buderus Logatherm WLW196i-6 ARB

Configure model	
Model name	Buderus Logatherm WLW196i-6 ARB
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.29 kW	2.40 kW
El input	0.43 kW	0.88 kW
COP	5.27	2.75

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

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	261 %	175 %
Prated	6.27 kW	5.60 kW
SCOP	6.59	4.45
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.27 kW	5.60 kW
COP Tj = +2°C	3.05	2.19
Pdh Tj = +7°C	4.09 kW	3.77 kW
COP Tj = +7°C	5.70	3.86
Pdh Tj = 12°C	1.79 kW	2.54 kW
COP Tj = 12°C	8.77	5.94
Pdh Tj = Tbiv	6.27 kW	5.60 kW
COP Tj = Tbiv	3.05	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	5.60 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.05	2.19
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1270 kWh	1683 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	178 %	130 %
Prated	5.11 kW	4.82 kW
SCOP	4.53	3.32

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-19 °C
Pdh Tj = -7°C	3.20 kW	3.01 kW
COP Tj = -7°C	3.61	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.19 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	4.20 kW
COP Tj = Tbiv	2.43	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.07 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption $Q_{he}$	2781 kWh	3575 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	4.15	1.97
$COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	2.68	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	202 %	143 %
Prated	5.43 kW	4.56 kW
SCOP	5.13	3.65
$T_{biv}$	-10 °C	-10 °C
TOL	-10 °C	-10 °C
$P_{dh} T_j = -7^{\circ}\text{C}$	4.91 kW	4.26 kW
$COP T_j = -7^{\circ}\text{C}$	3.08	2.24
$P_{dh} T_j = +2^{\circ}\text{C}$	2.92 kW	2.57 kW
$COP T_j = +2^{\circ}\text{C}$	5.00	3.66

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.68
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.38	6.14
Pdh Tj = Tbiv	5.43 kW	4.56 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	4.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2190 kWh	2580 kWh

## Model: Buderus Logatherm WLW196i-6 ART190

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 ART190
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

### Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.40 kW
El input	0.43 kW	0.88 kW
COP	5.27	2.75

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

### Warmer Climate



<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	261 %	175 %
Prated	6.27 kW	5.60 kW
SCOP	6.59	4.45
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.27 kW	5.60 kW
COP Tj = +2°C	3.05	2.19
Pdh Tj = +7°C	4.09 kW	3.77 kW
COP Tj = +7°C	5.70	3.86
Pdh Tj = 12°C	1.79 kW	2.54 kW
COP Tj = 12°C	8.77	5.94
Pdh Tj = Tbiv	6.27 kW	5.60 kW
COP Tj = Tbiv	3.05	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	5.60 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.05	2.19
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1270 kWh	1683 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	178 %	130 %
Prated	5.11 kW	4.82 kW
SCOP	4.53	3.32

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-19 °C
Pdh Tj = -7°C	3.20 kW	3.01 kW
COP Tj = -7°C	3.61	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.19 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	4.20 kW
COP Tj = Tbiv	2.43	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.07 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.11 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption Q <sub>he</sub>	2781 kWh	3575 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL < -20°C)	4.15	1.97
COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.68	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	202 %	143 %
Prated	5.43 kW	4.56 kW
SCOP	5.13	3.65
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.91 kW	4.26 kW
COP T <sub>j</sub> = -7°C	3.08	2.24
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.92 kW	2.57 kW
COP T <sub>j</sub> = +2°C	5.00	3.66

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.68
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.38	6.14
Pdh Tj = Tbiv	5.43 kW	4.56 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	4.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2190 kWh	2580 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	119 %
COP	2.79
Heating up time	02:31 h:min
Standby power input	45.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	271 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	97 %
COP	2.26
Heating up time	04:04 h:min
Standby power input	64.0 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	271 l

## Average Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	106 %
COP	2.48
Heating up time	03:14 h:min
Standby power input	51.0 W
Reference hot water temperature	54.3 °C
Mixed water at 40°C	273 l

# Model: Buderus Logatherm WLW196i-6 ARTS185

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 ARTS185
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

## Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.40 kW
El input	0.43 kW	0.88 kW
COP	5.27	2.75

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

## Warmer Climate



This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	261 %	175 %
Prated	6.27 kW	5.60 kW
SCOP	6.59	4.45
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.27 kW	5.60 kW
COP Tj = +2°C	3.05	2.19
Pdh Tj = +7°C	4.09 kW	3.77 kW
COP Tj = +7°C	5.70	3.86
Pdh Tj = 12°C	1.79 kW	2.54 kW
COP Tj = 12°C	8.77	5.94
Pdh Tj = Tbiv	6.27 kW	5.60 kW
COP Tj = Tbiv	3.05	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	5.60 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.05	2.19
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1270 kWh	1683 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	178 %	130 %
Prated	5.11 kW	4.82 kW
SCOP	4.53	3.32

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-19 °C
Pdh Tj = -7°C	3.20 kW	3.01 kW
COP Tj = -7°C	3.61	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.19 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	4.20 kW
COP Tj = Tbiv	2.43	1.75
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.07 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.11 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption $Q_{he}$	2781 kWh	3575 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	4.15	1.97
$COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	2.68	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	202 %	143 %
Prated	5.43 kW	4.56 kW
SCOP	5.13	3.65
$T_{biv}$	-10 °C	-10 °C
TOL	-10 °C	-10 °C
$P_{dh} T_j = -7^{\circ}\text{C}$	4.91 kW	4.26 kW
$COP T_j = -7^{\circ}\text{C}$	3.08	2.24
$P_{dh} T_j = +2^{\circ}\text{C}$	2.92 kW	2.57 kW
$COP T_j = +2^{\circ}\text{C}$	5.00	3.66

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.68
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.38	6.14
Pdh Tj = Tbiv	5.43 kW	4.56 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	4.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2190 kWh	2580 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	109 %
COP	2.58
Heating up time	02:34 h:min
Standby power input	47.0 W
Reference hot water temperature	52.8 °C
Mixed water at 40°C	257 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	95 %
COP	2.21
Heating up time	04:09 h:min
Standby power input	73.0 W
Reference hot water temperature	51.2 °C
Mixed water at 40°C	259 l

## Average Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	103 %
COP	2.43
Heating up time	03:18 h:min
Standby power input	53.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	263 l

## Model: Buderus Logatherm WLW196i-6 IRE

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 IRE
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

### Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.34 kW
El input	0.46 kW	0.87 kW
COP	4.96	2.67

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

### Warmer Climate



This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	255 %	163 %
Prated	5.77 kW	5.08 kW
SCOP	6.45	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.77 kW	5.08 kW
COP Tj = +2°C	2.91	2.09
Pdh Tj = +7°C	3.39 kW	3.55 kW
COP Tj = +7°C	5.70	3.62
Pdh Tj = 12°C	1.79 kW	2.42 kW
COP Tj = 12°C	8.45	5.56
Pdh Tj = Tbiv	5.77 kW	5.08 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.77 kW	5.08 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.09
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1195 kWh	1631 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	128 %
Prated	5.27 kW	4.82 kW
SCOP	4.27	3.28

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-16 °C	-15 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	3.20 kW	2.91 kW
COP Tj = -7°C	3.17	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.14 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	3.89 kW
COP Tj = Tbiv	2.43	1.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.50 kW	3.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.64
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption Q <sub>he</sub>	3040 kWh	3621 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL < -20°C)	4.15	1.97
COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.44	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	184 %	140 %
Prated	5.18 kW	4.20 kW
SCOP	4.68	3.57
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.67 kW	3.86 kW
COP T <sub>j</sub> = -7°C	2.95	2.24
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.81 kW	2.38 kW
COP T <sub>j</sub> = +2°C	4.26	3.66

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.43
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.06	5.56
Pdh Tj = Tbiv	5.18 kW	4.20 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.18 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2289 kWh	2431 kWh

## Model: Buderus Logatherm WLW196i-6 IRB

Configure model	
Model name	Buderus Logatherm WLW196i-6 IRB
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.29 kW	2.34 kW
El input	0.46 kW	0.87 kW
COP	4.96	2.67

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

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	255 %	163 %
Prated	5.77 kW	5.08 kW
SCOP	6.45	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.77 kW	5.08 kW
COP Tj = +2°C	2.91	2.09
Pdh Tj = +7°C	3.39 kW	3.55 kW
COP Tj = +7°C	5.70	3.62
Pdh Tj = 12°C	1.79 kW	2.42 kW
COP Tj = 12°C	8.45	5.56
Pdh Tj = Tbiv	5.77 kW	5.08 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.77 kW	5.08 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.09
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1195 kWh	1631 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	128 %
Prated	5.27 kW	4.82 kW
SCOP	4.27	3.28



This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-16 °C	-15 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	3.20 kW	2.91 kW
COP Tj = -7°C	3.17	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.14 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	3.89 kW
COP Tj = Tbiv	2.43	1.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.50 kW	3.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.64
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption Q <sub>he</sub>	3040 kWh	3621 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL < -20°C)	4.15	1.97
COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.44	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	184 %	140 %
Prated	5.18 kW	4.20 kW
SCOP	4.68	3.57
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.67 kW	3.86 kW
COP T <sub>j</sub> = -7°C	2.95	2.24
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.81 kW	2.38 kW
COP T <sub>j</sub> = +2°C	4.26	3.66

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.43
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.06	5.56
Pdh Tj = Tbiv	5.18 kW	4.20 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.18 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2289 kWh	2431 kWh

## Model: Buderus Logatherm WLW196i-6 IRT190

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 IRT190
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

### Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.34 kW
El input	0.46 kW	0.87 kW
COP	4.96	2.67

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

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	255 %	163 %
Prated	5.77 kW	5.08 kW
SCOP	6.45	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.77 kW	5.08 kW
COP Tj = +2°C	2.91	2.09
Pdh Tj = +7°C	3.39 kW	3.55 kW
COP Tj = +7°C	5.70	3.62
Pdh Tj = 12°C	1.79 kW	2.42 kW
COP Tj = 12°C	8.45	5.56
Pdh Tj = Tbiv	5.77 kW	5.08 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.77 kW	5.08 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.09
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1195 kWh	1631 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	128 %
Prated	5.27 kW	4.82 kW
SCOP	4.27	3.28

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-16 °C	-15 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	3.20 kW	2.91 kW
COP Tj = -7°C	3.17	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.14 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	3.89 kW
COP Tj = Tbiv	2.43	1.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.50 kW	3.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.64
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption Q <sub>he</sub>	3040 kWh	3621 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL < -20°C)	4.15	1.97
COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.44	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	184 %	140 %
Prated	5.18 kW	4.20 kW
SCOP	4.68	3.57
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.67 kW	3.86 kW
COP T <sub>j</sub> = -7°C	2.95	2.24
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.81 kW	2.38 kW
COP T <sub>j</sub> = +2°C	4.26	3.66



This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.43
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.06	5.56
Pdh Tj = Tbiv	5.18 kW	4.20 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.18 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2289 kWh	2431 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	119 %
COP	2.80
Heating up time	02:31 h:min
Standby power input	45.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	271 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	97 %
COP	2.26
Heating up time	04:04 h:min
Standby power input	64.0 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	271 l

## Average Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	106 %
COP	2.48
Heating up time	03:14 h:min
Standby power input	51.0 W
Reference hot water temperature	54.3 °C
Mixed water at 40°C	273 l

## Model: Buderus Logatherm WLW196i-6 IRTS185

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 IRTS185
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

### Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.34 kW
El input	0.46 kW	0.87 kW
COP	4.96	2.67

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

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	255 %	163 %
Prated	5.77 kW	5.08 kW
SCOP	6.45	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.77 kW	5.08 kW
COP Tj = +2°C	2.91	2.09
Pdh Tj = +7°C	3.39 kW	3.55 kW
COP Tj = +7°C	5.70	3.62
Pdh Tj = 12°C	1.79 kW	2.42 kW
COP Tj = 12°C	8.45	5.56
Pdh Tj = Tbiv	5.77 kW	5.08 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.77 kW	5.08 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.91	2.09
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1195 kWh	1631 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	128 %
Prated	5.27 kW	4.82 kW
SCOP	4.27	3.28

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-16 °C	-15 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	3.20 kW	2.91 kW
COP Tj = -7°C	3.17	2.72
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.73	4.24
Pdh Tj = +7°C	1.14 kW	2.15 kW
COP Tj = +7°C	7.41	5.03
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	8.16	6.52
Pdh Tj = Tbiv	4.45 kW	3.89 kW
COP Tj = Tbiv	2.43	1.97
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.50 kW	3.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.64
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption Q <sub>he</sub>	3040 kWh	3621 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL < -20°C)	4.15	1.97
COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.44	1.97

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	184 %	140 %
Prated	5.18 kW	4.20 kW
SCOP	4.68	3.57
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.67 kW	3.86 kW
COP T <sub>j</sub> = -7°C	2.95	2.24
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.81 kW	2.38 kW
COP T <sub>j</sub> = +2°C	4.26	3.66



This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.99	4.43
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	8.06	5.56
Pdh Tj = Tbiv	5.18 kW	4.20 kW
COP Tj = Tbiv	2.64	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.18 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2289 kWh	2431 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	109 %
COP	2.58
Heating up time	02:34 h:min
Standby power input	47.0 W
Reference hot water temperature	52.8 °C
Mixed water at 40°C	257 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	95 %
COP	2.21
Heating up time	04:09 h:min
Standby power input	73.0 W
Reference hot water temperature	51.8 °C
Mixed water at 40°C	259 l

## Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	103 %
COP	2.43
Heating up time	03:18 h:min
Standby power input	53.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	263 l

# Model: Buderus Logatherm WLW196i.2-4 ARB S+

Configure model	
Model name	Buderus Logatherm WLW196i.2-4 ARB S+
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.82 kW	1.78 kW
El input	0.56 kW	0.69 kW
COP	5.01	2.57

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

## Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	240 %	163 %
Prated	5.50 kW	5.40 kW
SCOP	6.07	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.48 kW	5.40 kW
COP Tj = +2°C	3.03	2.10
Pdh Tj = +7°C	3.81 kW	3.56 kW
COP Tj = +7°C	5.16	3.57
Pdh Tj = 12°C	1.71 kW	2.44 kW
COP Tj = 12°C	8.06	5.53
Pdh Tj = Tbiv	5.48 kW	5.40 kW
COP Tj = Tbiv	3.03	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.48 kW	5.40 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.03	2.10
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1211 kWh	1736 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	118 %
Prated	4.30 kW	4.00 kW
SCOP	4.27	3.03

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.50 kW	2.29 kW
COP Tj = -7°C	3.64	2.52
Cdh Tj = -7 °C		
Pdh Tj = +2°C	1.49 kW	1.80 kW
COP Tj = +2°C	5.22	3.82
Cdh Tj = +2 °C		
Pdh Tj = +7°C	1.14 kW	2.08 kW
COP Tj = +7°C	6.44	4.68
Cdh Tj = +7 °C		
Pdh Tj = 12°C	1.24 kW	2.48 kW
COP Tj = 12°C	7.03	6.02
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	3.75 kW	3.53 kW
COP Tj = Tbiv	2.29	1.64
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.44 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.56
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W

This information was generated by the HP KEYMARK database on 25 Feb 2023

PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2482 kWh	3252 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL<-20°C)		
COP T <sub>j</sub> = -15°C (if TOL<-20°C)		
C <sub>dh</sub> T <sub>j</sub> = -15 °C		

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	196 %	133 %
Prated	4.76 kW	4.49 kW
SCOP	4.98	3.40
T <sub>biv</sub>	-10 °C	-10 °C



This information was generated by the HP KEYMARK database on 25 Feb 2023

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.27 kW	3.93 kW
COP Tj = -7°C	3.11	2.11
Pdh Tj = +2°C	2.51 kW	2.41 kW
COP Tj = +2°C	4.96	3.36
Pdh Tj = +7°C	1.51 kW	2.06 kW
COP Tj = +7°C	6.40	4.41
Pdh Tj = 12°C	1.27 kW	2.45 kW
COP Tj = 12°C	7.53	5.76
Pdh Tj = Tbiv	4.76 kW	4.49 kW
COP Tj = Tbiv	2.68	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.76 kW	4.49 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	1.82
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1975 kWh	2724 kWh

# Model: Buderus Logatherm WLW196i.2-4 ARE S+

Configure model	
Model name	Buderus Logatherm WLW196i.2-4 ARE S+
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.82 kW	1.78 kW
El input	0.56 kW	0.69 kW
COP	5.01	2.57

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

## Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	240 %	163 %
Prated	5.50 kW	5.40 kW
SCOP	6.07	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.48 kW	5.40 kW
COP Tj = +2°C	3.03	2.10
Pdh Tj = +7°C	3.81 kW	3.56 kW
COP Tj = +7°C	5.16	3.57
Pdh Tj = 12°C	1.71 kW	2.44 kW
COP Tj = 12°C	8.06	5.53
Pdh Tj = Tbiv	5.48 kW	5.40 kW
COP Tj = Tbiv	3.03	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.48 kW	5.40 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.03	2.10
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1211 kWh	1736 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	118 %
Prated	4.30 kW	4.00 kW
SCOP	4.27	3.03

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.50 kW	2.29 kW
COP Tj = -7°C	3.64	2.52
Cdh Tj = -7 °C		
Pdh Tj = +2°C	1.49 kW	1.80 kW
COP Tj = +2°C	5.22	3.82
Cdh Tj = +2 °C		
Pdh Tj = +7°C	1.14 kW	2.08 kW
COP Tj = +7°C	6.44	4.68
Cdh Tj = +7 °C		
Pdh Tj = 12°C	1.24 kW	2.48 kW
COP Tj = 12°C	7.03	6.02
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	3.75 kW	3.53 kW
COP Tj = Tbiv	2.29	1.64
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.44 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.56
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W

This information was generated by the HP KEYMARK database on 25 Feb 2023

PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.30 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	2482 kWh	3252 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL<-20°C)	3.75	3.53
COP T <sub>j</sub> = -15°C (if TOL<-20°C)	2.29	1.64
C <sub>dh</sub> T <sub>j</sub> = -15 °C		

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	29 dB(A)	29 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	196 %	133 %
Prated	4.76 kW	4.49 kW
SCOP	4.98	3.40
T <sub>biv</sub>	-10 °C	-10 °C

This information was generated by the HP KEYMARK database on 25 Feb 2023

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.27 kW	3.93 kW
COP Tj = -7°C	3.11	2.11
Pdh Tj = +2°C	2.51 kW	2.41 kW
COP Tj = +2°C	4.96	3.36
Pdh Tj = +7°C	1.51 kW	2.06 kW
COP Tj = +7°C	6.40	4.41
Pdh Tj = 12°C	1.27 kW	2.45 kW
COP Tj = 12°C	7.53	5.76
Pdh Tj = Tbiv	4.76 kW	4.49 kW
COP Tj = Tbiv	2.68	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.76 kW	4.49 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	1.82
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1975 kWh	2724 kWh

# Model: Buderus Logatherm WLW196i.2-4 ART190 S+

Configure model	
Model name	Buderus Logatherm WLW196i.2-4 ART190 S+
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.82 kW	1.78 kW
El input	0.56 kW	0.69 kW
COP	5.01	2.57

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

## Warmer Climate



This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	240 %	163 %
Prated	5.50 kW	5.40 kW
SCOP	6.07	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.48 kW	5.40 kW
COP Tj = +2°C	3.03	2.10
Pdh Tj = +7°C	3.81 kW	3.56 kW
COP Tj = +7°C	5.16	3.57
Pdh Tj = 12°C	1.71 kW	2.44 kW
COP Tj = 12°C	8.06	5.53
Pdh Tj = Tbiv	5.48 kW	5.40 kW
COP Tj = Tbiv	3.03	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.48 kW	5.40 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.03	2.10
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1211 kWh	1736 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	118 %
Prated	4.30 kW	4.00 kW
SCOP	4.27	3.03

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.50 kW	2.29 kW
COP Tj = -7°C	3.64	2.52
Cdh Tj = -7 °C		
Pdh Tj = +2°C	1.49 kW	1.80 kW
COP Tj = +2°C	5.22	3.82
Cdh Tj = +2 °C		
Pdh Tj = +7°C	1.14 kW	2.08 kW
COP Tj = +7°C	6.44	4.68
Cdh Tj = +7 °C		
Pdh Tj = 12°C	1.24 kW	2.48 kW
COP Tj = 12°C	7.03	6.02
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	3.75 kW	3.53 kW
COP Tj = Tbiv	2.29	1.64
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.44 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.56
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W

This information was generated by the HP KEYMARK database on 25 Feb 2023

PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.30 kW	4.00 kW
Annual energy consumption Qhe	2482 kWh	3252 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.75	1.64
COP Tj = -15°C (if TOL<-20°C)	2.29	1.64
Cdh Tj = -15 °C		

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	196 %	133 %
Prated	4.76 kW	4.49 kW
SCOP	4.98	3.40
Tbiv	-10 °C	-10 °C

This information was generated by the HP KEYMARK database on 25 Feb 2023

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.27 kW	3.93 kW
COP Tj = -7°C	3.11	2.11
Pdh Tj = +2°C	2.51 kW	2.41 kW
COP Tj = +2°C	4.96	3.36
Pdh Tj = +7°C	1.51 kW	2.06 kW
COP Tj = +7°C	6.40	4.41
Pdh Tj = 12°C	1.27 kW	2.45 kW
COP Tj = 12°C	7.53	5.76
Pdh Tj = Tbiv	4.76 kW	4.49 kW
COP Tj = Tbiv	2.68	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.76 kW	4.49 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	1.82
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1975 kWh	2724 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	119 %
COP	2.80
Heating up time	02:49 h:min
Standby power input	47.0 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	261 l

### Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	84 %
COP	1.96
Heating up time	04:11 h:min
Standby power input	66.0 W
Reference hot water temperature	53.0 °C
Mixed water at 40°C	279 l

## Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	100 %
COP	2.36
Heating up time	03:34 h:min
Standby power input	52.0 W
Reference hot water temperature	53.5 °C
Mixed water at 40°C	271 l

# Model: Buderus Logatherm WLW196i.2-4 ARTS185 S+

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i.2-4 ARTS185 S+
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

## Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.82 kW	1.78 kW
El input	0.56 kW	0.69 kW
COP	5.01	2.57

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

## Warmer Climate



This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	240 %	163 %
Prated	5.50 kW	5.40 kW
SCOP	6.07	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.48 kW	5.40 kW
COP Tj = +2°C	3.03	2.10
Pdh Tj = +7°C	3.81 kW	3.56 kW
COP Tj = +7°C	5.16	3.57
Pdh Tj = 12°C	1.71 kW	2.44 kW
COP Tj = 12°C	8.06	5.53
Pdh Tj = Tbiv	5.48 kW	5.40 kW
COP Tj = Tbiv	3.03	2.10
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.48 kW	5.40 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.03	2.10
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1211 kWh	1736 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	168 %	118 %
Prated	4.30 kW	4.00 kW
SCOP	4.27	3.03

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.50 kW	2.29 kW
COP Tj = -7°C	3.64	2.52
Cdh Tj = -7 °C		
Pdh Tj = +2°C	1.49 kW	1.80 kW
COP Tj = +2°C	5.22	3.82
Cdh Tj = +2 °C		
Pdh Tj = +7°C	1.14 kW	2.08 kW
COP Tj = +7°C	6.44	4.68
Cdh Tj = +7 °C		
Pdh Tj = 12°C	1.24 kW	2.48 kW
COP Tj = 12°C	7.03	6.02
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	3.75 kW	3.53 kW
COP Tj = Tbiv	2.29	1.64
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.44 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.11	1.56
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W

This information was generated by the HP KEYMARK database on 25 Feb 2023

PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.30 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	2482 kWh	3252 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL<-20°C)	3.75	1.64
COP T <sub>j</sub> = -15°C (if TOL<-20°C)	2.29	1.64
C <sub>dh</sub> T <sub>j</sub> = -15 °C		

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	196 %	133 %
Prated	4.76 kW	4.49 kW
SCOP	4.98	3.40
T <sub>biv</sub>	-10 °C	-10 °C

This information was generated by the HP KEYMARK database on 25 Feb 2023

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.27 kW	3.93 kW
COP Tj = -7°C	3.11	2.11
Pdh Tj = +2°C	2.51 kW	2.41 kW
COP Tj = +2°C	4.96	3.36
Pdh Tj = +7°C	1.51 kW	2.06 kW
COP Tj = +7°C	6.40	4.41
Pdh Tj = 12°C	1.27 kW	2.45 kW
COP Tj = 12°C	7.53	5.76
Pdh Tj = Tbiv	4.76 kW	4.49 kW
COP Tj = Tbiv	2.68	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.76 kW	4.49 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	1.82
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1975 kWh	2724 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	110 %
COP	2.58
Heating up time	02:45 h:min
Standby power input	49.0 W
Reference hot water temperature	51.7 °C
Mixed water at 40°C	247 l

### Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	80 %
COP	1.88
Heating up time	04:05 h:min
Standby power input	67.0 W
Reference hot water temperature	51.7 °C
Mixed water at 40°C	259 l

## Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	98 %
COP	2.31
Heating up time	03:12 h:min
Standby power input	54.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	261 l

## Model: Buderus Hybrid-Set WLW196i-6 A H

Configure model	
Model name	Buderus Hybrid-Set WLW196i-6 A H
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.03 kW	7.41 kW
El input	2.4 kW	2.82 kW
COP	3.76	2.62

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

### Warmer Climate



This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	24 dB(A)	24 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	210 %	164 %
Prated	6.54 kW	6.10 kW
SCOP	5.31	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.54 kW	6.1 kW
COP Tj = +2°C	3.04	2.33
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	4.02 kW	4.07 kW
COP Tj = +7°C	5.03	3.47
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	1.77 kW	2.49 kW
COP Tj = 12°C	6.36	5.71
Cdh Tj = +12 °C	1.000	0.950

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = Tbiv	6.54 kW	6.1 kW
COP Tj = Tbiv	3.04	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.54 kW	6.1 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	2.33
WTOL	62 °C	62 °C
Poff	7 W	7 W
PTO	6 W	6 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Gas	Gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1645 kWh	1957 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	24 dB(A)	24 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>

This information was generated by the HP KEYMARK database on 25 Feb 2023

$\eta_s$	152 %	122 %
Prated	5.35 kW	5.29 kW
SCOP	3.87	3.13
Tbiv	-17 °C	-15 °C
TOL	-20 °C	-19 °C
Pdh Tj = -7°C	3.19 kW	3.21 kW
COP Tj = -7°C	3.32	2.52
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	1.18 kW	1.78 kW
COP Tj = +2°C	4.59	3.71
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	1.18 kW	2.13 kW
COP Tj = +7°C	5.00	5.01
Cdh Tj = +7 °C	1.000	0.950
Pdh Tj = 12°C	1.36 kW	2.58 kW
COP Tj = 12°C	6.19	6.89
Cdh Tj = +12 °C	0.900	0.940
Pdh Tj = Tbiv	4.39 kW	4.32 kW
COP Tj = Tbiv	2.31	1.82
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.07 kW	1.77 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.16	1.54

This information was generated by the HP KEYMARK database on 25 Feb 2023

WTOL	62 °C	62 °C
Poff	7 W	7 W
PTO	6 W	6 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Gas	Gas
Supplementary Heater: PSUP	1.28 kW	3.52 kW
Annual energy consumption Qhe	3405 kWh	4162 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh Tj = -15 °C		

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	24 dB(A)	24 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	169 %	133 %

This information was generated by the HP KEYMARK database on 25 Feb 2023

Prated	5.39 kW	6.25 kW
SCOP	4.31	3.4
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.55 kW	5.53 kW
COP Tj = -7°C	2.96	2.02
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	2.63 kW	3.53 kW
COP Tj = +2°C	4.34	3.31
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	1.75 kW	2.13 kW
COP Tj = +7°C	5.24	4.55
Cdh Tj = +7 °C	1.000	1.000
Pdh Tj = 12°C	1.36 kW	2.54 kW
COP Tj = 12°C	6.25	6.41
Cdh Tj = +12 °C	0.900	0.940
Pdh Tj = Tbiv	5.39 kW	5.53 kW
COP Tj = Tbiv	2.56	2.02
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.39 kW	4.61 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.93
WTOL	62 °C	62 °C

This information was generated by the HP KEYMARK database on 25 Feb 2023

Poff	7 W	7 W
PTO	6 W	6 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Gas	Gas
Supplementary Heater: PSUP	0 kW	1.6 kW
Annual energy consumption Qhe	2586 kWh	3800 kWh

## Model: Buderus Logatherm WLW196i-6 IRTP120

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 IRTP120
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

### Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.29 kW	2.34 kW
El input	0.49 kW	0.90 kW
COP	4.69	2.59

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

### Warmer Climate

This information was generated by the HP KEYMARK database on 25 Feb 2023

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	237 %	156 %
Prated	5.77 kW	5.08 kW
SCOP	6.00	3.98
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.77 kW	5.08 kW
COP Tj = +2°C	2.83	2.06
Pdh Tj = +7°C	3.39 kW	3.55 kW
COP Tj = +7°C	5.39	3.53
Pdh Tj = 12°C	1.79 kW	2.42 kW
COP Tj = 12°C	7.60	5.29
Pdh Tj = Tbiv	5.77 kW	5.08 kW
COP Tj = Tbiv	2.83	2.06
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.77 kW	5.08 kW



This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.83	2.06
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 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	1285 kWh	1704 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	158 %	122 %
Prated	5.27 kW	4.82 kW
SCOP	4.03	3.14

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-16 °C	-16 °C
TOL	-20 °C	-17 °C
Pdh Tj = -7°C	3.20 kW	2.91 kW
COP Tj = -7°C	3.07	2.66
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.33	4.05
Pdh Tj = +7°C	1.14 kW	2.15 kW
COP Tj = +7°C	6.53	4.79
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	7.20	6.16
Pdh Tj = Tbiv	4.45 kW	3.93 kW
COP Tj = Tbiv	2.38	1.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.50 kW	3.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.03	1.62
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.27 kW	4.82 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption $Q_{he}$	3222 kWh	3787 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	4.15	3.89
$COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	2.38	1.94

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	48 dB(A)	48 dB(A)
Sound power level outdoor	36 dB(A)	36 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	173 %	134 %
Prated	5.17 kW	4.20 kW
SCOP	4.41	3.44
$T_{biv}$	$-10^{\circ}\text{C}$	$-10^{\circ}\text{C}$
TOL	$-10^{\circ}\text{C}$	$-10^{\circ}\text{C}$
$P_{dh} T_j = -7^{\circ}\text{C}$	4.67 kW	3.86 kW
$COP T_j = -7^{\circ}\text{C}$	2.87	2.21
$P_{dh} T_j = +2^{\circ}\text{C}$	2.81 kW	2.38 kW
$COP T_j = +2^{\circ}\text{C}$	5.33	3.56

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.40	4.26
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	7.13	5.35
Pdh Tj = Tbiv	5.18 kW	4.20 kW
COP Tj = Tbiv	2.58	1.88
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.18 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.88
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 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	2421 kWh	2525 kWh

# Model: Buderus Logatherm WLW196i-6 ARTP120

<b>Configure model</b>	
Model name	Buderus Logatherm WLW196i-6 ARTP120
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

<b>General Data</b>	
Power supply	3x400V 50Hz

## Heating

<b>EN 14511-2</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Heat output	2.28 kW	2.40 kW
El input	0.46 kW	0.90 kW
COP	4.96	2.68

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

## Warmer Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	241 %	167 %
Prated	6.27 kW	5.60 kW
SCOP	6.11	4.25
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.27 kW	5.60 kW
COP Tj = +2°C	2.95	2.16
Pdh Tj = +7°C	4.09 kW	3.77 kW
COP Tj = +7°C	5.41	3.76
Pdh Tj = 12°C	1.79 kW	2.54 kW
COP Tj = 12°C	7.85	5.64
Pdh Tj = Tbiv	6.27 kW	5.60 kW
COP Tj = Tbiv	2.95	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	5.60 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.95	2.16
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1371 kWh	1762 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	167 %	125 %
Prated	5.11 kW	4.82 kW
SCOP	4.26	3.20

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-19 °C
Pdh Tj = -7°C	3.20 kW	3.01 kW
COP Tj = -7°C	3.49	2.66
Pdh Tj = +2°C	1.80 kW	1.91 kW
COP Tj = +2°C	5.32	4.05
Pdh Tj = +7°C	1.19 kW	2.15 kW
COP Tj = +7°C	6.54	4.78
Pdh Tj = 12°C	1.31 kW	2.61 kW
COP Tj = 12°C	7.19	6.16
Pdh Tj = Tbiv	4.45 kW	4.20 kW
COP Tj = Tbiv	2.38	1.73
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.07 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.20	1.62
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.11 kW	4.82 kW



This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption Q <sub>he</sub>	2956 kWh	3715 kWh
P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL < -20°C)	4.15	3.89
COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.62	1.94

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	189 %	137 %
Prated	5.43 kW	4.56 kW
SCOP	4.81	3.50
T <sub>biv</sub>	-10 °C	-10 °C
TOL	-10 °C	-10 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.90 kW	4.26 kW
COP T <sub>j</sub> = -7°C	2.99	2.21
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.92 kW	2.57 kW
COP T <sub>j</sub> = +2°C	4.74	3.55

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.84 kW	2.11 kW
COP Tj = +7°C	6.41	4.47
Pdh Tj = 12°C	1.33 kW	2.56 kW
COP Tj = 12°C	7.37	5.82
Pdh Tj = Tbiv	5.43 kW	4.56 kW
COP Tj = Tbiv	2.58	1.87
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.43 kW	4.56 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.58	1.87
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2335 kWh	2689 kWh

# Model: Buderus Logatherm WLW196i.2-4 ARTP120 S+

Configure model	
Model name	Buderus Logatherm WLW196i.2-4 ARTP120 S+
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	2.82 kW	1.78 kW
El input	0.59 kW	0.71 kW
COP	4.76	2.49

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

## Warmer Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	223 %	158 %
Prated	5.50 kW	5.40 kW
SCOP	5.65	4.01
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.48 kW	5.40 kW
COP Tj = +2°C	2.93	2.07
Pdh Tj = +7°C	3.81 kW	3.56 kW
COP Tj = +7°C	4.91	3.48
Pdh Tj = 12°C	1.71 kW	2.44 kW
COP Tj = 12°C	7.26	5.26
Pdh Tj = Tbiv	5.48 kW	5.40 kW
COP Tj = Tbiv	2.93	2.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.48 kW	5.40 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.93	2.07
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	1301 kWh	1797 kWh

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	157 %	113 %
Prated	4.30 kW	4.00 kW
SCOP	4.00	2.90

This information was generated by the HP KEYMARK database on 25 Feb 2023

Tbiv	-17 °C	-17 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.50 kW	2.29 kW
COP Tj = -7°C	3.50	2.46
Pdh Tj = +2°C	1.49 kW	1.80 kW
COP Tj = +2°C	4.84	3.65
Pdh Tj = +7°C	1.14 kW	2.08 kW
COP Tj = +7°C	5.73	4.46
Pdh Tj = 12°C	1.24 kW	2.48 kW
COP Tj = 12°C	6.26	5.71
Pdh Tj = Tbiv	3.75 kW	3.53 kW
COP Tj = Tbiv	2.24	1.62
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.44 kW	3.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.07	1.54
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.30 kW	4.00 kW

This information was generated by the HP KEYMARK database on 25 Feb 2023

Annual energy consumption $Q_{he}$	2650 kWh	3405 kWh
$P_{dh} T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	3.75	3.53
$COP T_j = -15^{\circ}\text{C}$ (if $TOL < -20^{\circ}\text{C}$ )	2.24	1.62

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	183 %	127 %
Prated	4.76 kW	4.49 kW
SCOP	4.66	3.26
$T_{biv}$	-10 °C	-10 °C
TOL	-10 °C	-10 °C
$P_{dh} T_j = -7^{\circ}\text{C}$	4.27 kW	3.94 kW
$COP T_j = -7^{\circ}\text{C}$	3.02	2.08
$P_{dh} T_j = +2^{\circ}\text{C}$	2.51 kW	2.41 kW
$COP T_j = +2^{\circ}\text{C}$	4.70	3.26

This information was generated by the HP KEYMARK database on 25 Feb 2023

Pdh Tj = +7°C	1.51 kW	2.06 kW
COP Tj = +7°C	5.85	4.21
Pdh Tj = 12°C	1.27 kW	2.45 kW
COP Tj = 12°C	6.67	5.47
Pdh Tj = Tbiv	4.76 kW	4.49 kW
COP Tj = Tbiv	2.62	1.80
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.76 kW	4.49 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.62	1.80
WTOL	60 °C	60 °C
Poff	17 W	17 W
PTO	22 W	22 W
PSB	17 W	17 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	2112 kWh	2843 kWh