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Summary of	Buderus Logatherm WLW196i-4 AR	Reg. No.	011-1W0127	
Certificate Holder				
Name	Bosch Thermotechnik GmbH (Buderus)	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 WLW196i-4 AR			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R410A			
Mass of Refrigerant	1.7 kg			
Certification Date	18.07.2017			
Testing basis	HP KEYMARK certification scheme rules rev. 8			



Model: Buderus Logatherm WLW196i-4 ARE

Configure model			
Model name	Buderus Logatherm WLW196i-4 ARE		
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	2.14 kW	1.88 kW		
El input	0.46 kW	0.72 kW		
СОР	4.68	2.60		

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



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

EN 14825		
	Low temperature	Medium temperature
η_{s}	183 %	131 %
Prated	4.40 kW	4.10 kW
SCOP	4.65	3.34
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.88 kW	3.57 kW
COP Tj = -7°C	3.07	2.16
Pdh Tj = +2°C	2.51 kW	2.34 kW
COP Tj = +2°C	4.69	3.29
Pdh Tj = +7°C	1.50 kW	2.13 kW
COP Tj = +7°C	5.78	4.29
Pdh Tj = 12°C	1.23 kW	2.52 kW
COP Tj = 12°C	6.13	5.53
Pdh Tj = Tbiv	4.37 kW	4.05 kW





COP Tj = Tbiv	2.76	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.37 kW	4.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	22 W	22 W
PSB	17 W	17 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1955 kWh	2533 kWh

Colder Climate

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

EN 14825		
	Low temperature	Medium temperature





	TK database on 18 Mai 2022
159 %	117 %
3.90 kW	4.00 kW
4.04	3.00
-17 °C	-16 °C
-20 °C	-18 °C
2.46 kW	2.32 kW
3.56	2.57
1.48 kW	1.79 kW
4.86	3.66
1.13 kW	2.13 kW
5.53	4.54
1.21 kW	2.55 kW
5.75	5.82
3.43 kW	3.37 kW
2.36	1.78
3.08 kW	3.11 kW
2.16	1.61
60 °C	60 °C
17 W	17 W
22 W	22 W
17 W	17 W
	159 % 3.90 kW 4.04 -17 °C -20 °C 2.46 kW 3.56 1.48 kW 4.86 1.13 kW 5.53 1.21 kW 5.75 3.43 kW 2.36 3.08 kW 2.16 60 °C 17 W 22 W





PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	4.00 kW
Annual energy consumption Qhe	2378 kWh	3287 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.27	1.88
COP Tj = -15°C (if TOL $<$ -20°C)	2.55	1.88

Warmer Climate

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

EN 14825		
	Low temperature	Medium temperature
η _s	224 %	161 %
Prated	5.30 kW	5.60 kW
SCOP	5.69	4.10
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.28 kW	5.65 kW





3.08 3.22 kW	2.22 3.92 kW
	3.92 kW
5.31	3.54
1.50 kW	2.49 kW
6.79	5.35
5.28 kW	5.65 kW
3.08	2.22
5.28 kW	5.65 kW
3.08	2.22
60 °C	60 °C
17 W	17 W
22 W	22 W
17 W	17 W
0 W	0 W
Electricity	Electricity
0.00 kW	0.00 kW
1245 kWh	1823 kWh
	6.79 5.28 kW 3.08 5.28 kW 3.08 60 °C 17 W 22 W 17 W 0 W Electricity 0.00 kW

Model: Buderus Logatherm WLW196i-4 ARB

Configure model		
Model name Buderus Logatherm WLW196i-4 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	2.14 kW	1.88 kW
El input	0.46 kW	0.72 kW
СОР	4.68	2.60

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



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

EN 14825		
	Low temperature	Medium temperature
η_{s}	183 %	131 %
Prated	4.40 kW	4.10 kW
SCOP	4.65	3.34
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.88 kW	3.57 kW
COP Tj = -7°C	3.07	2.16
Pdh Tj = +2°C	2.51 kW	2.34 kW
COP Tj = +2°C	4.69	3.29
Pdh Tj = $+7^{\circ}$ C	1.50 kW	2.13 kW
COP Tj = +7°C	5.78	4.29
Pdh Tj = 12°C	1.23 kW	2.52 kW
COP Tj = 12°C	6.13	5.53
Pdh Tj = Tbiv	4.37 kW	4.05 kW





COP Tj = Tbiv	2.76	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.37 kW	4.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	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	1955 kWh	2533 kWh

Colder Climate

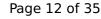
EN 12102-1 Low temperature Medium temperature Sound power level indoor 29 dB(A) 29 dB(A) Sound power level outdoor 47 dB(A) 47 dB(A)

EN 14825		
	Low temperature	Medium temperature





	TK database on 18 Mai 2022
159 %	117 %
3.90 kW	4.00 kW
4.04	3.00
-17 °C	-16 °C
-20 °C	-18 °C
2.46 kW	2.32 kW
3.56	2.57
1.48 kW	1.79 kW
4.86	3.66
1.13 kW	2.13 kW
5.53	4.54
1.21 kW	2.55 kW
5.75	5.82
3.43 kW	3.37 kW
2.36	1.78
3.08 kW	3.11 kW
2.16	1.61
60 °C	60 °C
17 W	17 W
22 W	22 W
17 W	17 W
	159 % 3.90 kW 4.04 -17 °C -20 °C 2.46 kW 3.56 1.48 kW 4.86 1.13 kW 5.53 1.21 kW 5.75 3.43 kW 2.36 3.08 kW 2.16 60 °C 17 W 22 W





PCK	o 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	2378 kWh	3287 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.27	1.88
COP Tj = -15°C (if TOL $<$ -20°C)	2.55	1.88

Warmer Climate

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

EN 14825		
	Low temperature	Medium temperature
η _s	224 %	161 %
Prated	5.30 kW	5.60 kW
SCOP	5.69	4.10
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.28 kW	5.65 kW



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COP Tj = +2°C	3.08	2.22
Pdh Tj = +7°C	3.22 kW	3.92 kW
$COP Tj = +7^{\circ}C$	5.31	3.54
Pdh Tj = 12°C	1.50 kW	2.49 kW
COP Tj = 12°C	6.79	5.35
Pdh Tj = Tbiv	5.28 kW	5.65 kW
COP Tj = Tbiv	3.08	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.28 kW	5.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.08	2.22
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	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	1245 kWh	1823 kWh

Model: Buderus Logatherm WLW196i-4 ARTS185

Configure model		
Model name Buderus Logatherm WLW196i-4 ARTS185		
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	2.14 kW	1.88 kW	
El input	0.46 kW	0.72 kW	
СОР	4.68	2.60	

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



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

EN 14825		
	Low temperature	Medium temperature
η_{s}	183 %	131 %
Prated	4.40 kW	4.10 kW
SCOP	4.65	3.34
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.88 kW	3.57 kW
COP Tj = -7°C	3.07	2.16
Pdh Tj = +2°C	2.51 kW	2.34 kW
COP Tj = +2°C	4.69	3.29
Pdh Tj = +7°C	1.50 kW	2.13 kW
$COP Tj = +7^{\circ}C$	5.78	4.29
Pdh Tj = 12°C	1.23 kW	2.52 kW
COP Tj = 12°C	6.13	5.53
Pdh Tj = Tbiv	4.37 kW	4.05 kW





COP Tj = Tbiv	2.76	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.37 kW	4.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	22 W	22 W
PSB	17 W	17 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1955 kWh	2533 kWh

Colder Climate

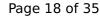
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	25 dB(A)	25 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	Medium temperature





	TK database on 18 Mai 2022
159 %	117 %
3.90 kW	4.00 kW
4.04	3.00
-17 °C	-16 °C
-20 °C	-18 °C
2.46 kW	2.32 kW
3.56	2.57
1.48 kW	1.79 kW
4.86	3.66
1.13 kW	2.13 kW
5.53	4.54
1.21 kW	2.55 kW
5.75	5.82
3.43 kW	3.37 kW
2.36	1.78
3.08 kW	3.11 kW
2.16	1.61
60 °C	60 °C
17 W	17 W
22 W	22 W
17 W	17 W
	159 % 3.90 kW 4.04 -17 °C -20 °C 2.46 kW 3.56 1.48 kW 4.86 1.13 kW 5.53 1.21 kW 5.75 3.43 kW 2.36 3.08 kW 2.16 60 °C 17 W 22 W



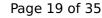


PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	4.00 kW
Annual energy consumption Qhe	2378 kWh	3287 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.27	1.88
COP Tj = -15°C (if TOL $<$ -20°C)	2.55	1.88

Warmer Climate

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

	Low temperature	Medium temperature
η_{s}	224 %	161 %
Prated	5.30 kW	5.60 kW
SCOP	5.69	4.10
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.28 kW	5.65 kW





COP Tj = +2°C	3.08	2.22
Pdh Tj = $+7^{\circ}$ C	3.22 kW	3.92 kW
COP Tj = +7°C	5.31	3.54
Pdh Tj = 12°C	1.50 kW	2.49 kW
COP Tj = 12°C	6.79	5.35
Pdh Tj = Tbiv	5.28 kW	5.65 kW
COP Tj = Tbiv	3.08	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.28 kW	5.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.08	2.22
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	22 W	22 W
PSB	17 W	17 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1245 kWh	1823 kWh

Domestic Hot Water (DHW)

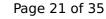


EN 16147		
Declared load profile	L	
Efficiency ηDHW	96 %	
СОР	2.25	
Heating up time	03:30 h:min	
Standby power input	55.0 W	
Reference hot water temperature	52.1 °C	
Mixed water at 40°C	272	

Colder Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	81 %	
СОР	1.90	
Heating up time	04:18 h:min	
Standby power input	65.0 W	
Reference hot water temperature	52.4 °C	
Mixed water at 40°C	275 I	

Warmer Climate





EN 16147		
Declared load profile	L	
Efficiency ηDHW	119 %	
СОР	2.80	
Heating up time	03:00 h:min	
Standby power input	47.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	272	

Model: Buderus Logatherm WLW196i-4 ART190

Configure model		
Model name	Buderus Logatherm WLW196i-4 ART190	
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	2.14 kW	1.88 kW
El input	0.46 kW	0.72 kW
СОР	4.68	2.60

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



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

EN 14825		
	Low temperature	Medium temperature
η_{s}	183 %	131 %
Prated	4.40 kW	4.10 kW
SCOP	4.65	3.34
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.88 kW	3.57 kW
COP Tj = -7°C	3.07	2.16
Pdh Tj = +2°C	2.51 kW	2.34 kW
COP Tj = +2°C	4.69	3.29
Pdh Tj = +7°C	1.50 kW	2.13 kW
$COP Tj = +7^{\circ}C$	5.78	4.29
Pdh Tj = 12°C	1.23 kW	2.52 kW
COP Tj = 12°C	6.13	5.53
Pdh Tj = Tbiv	4.37 kW	4.05 kW





COP Tj = Tbiv	2.76	1.85
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.37 kW	4.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.76	1.85
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
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	1955 kWh	2533 kWh

Colder Climate

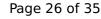
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	25 dB(A)	25 dB(A)	
Sound power level outdoor	47 dB(A)	47 dB(A)	

EN 14825		
	Low temperature	Medium temperature





η_{s}	159 %	117 %
Prated	3.90 kW	4.00 kW
SCOP	4.04	3.00
Tbiv	-17 °C	-16 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.46 kW	2.32 kW
$COPTj = -7^{\circ}C$	3.56	2.57
Pdh Tj = $+2$ °C	1.48 kW	1.79 kW
$COPTj = +2^{\circ}C$	4.86	3.66
Pdh Tj = $+7^{\circ}$ C	1.13 kW	2.13 kW
$COP Tj = +7^{\circ}C$	5.53	4.54
Pdh Tj = 12°C	1.21 kW	2.55 kW
COP Tj = 12°C	5.75	5.82
Pdh Tj = Tbiv	3.43 kW	3.37 kW
COP Tj = Tbiv	2.36	1.78
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.08 kW	3.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.16	1.61
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	22 W	22 W
PSB	17 W	17 W



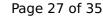


PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	4.00 kW
Annual energy consumption Qhe	2378 kWh	3287 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.27	1.88
COP Tj = -15°C (if TOL $<$ -20°C)	2.55	1.88

Warmer Climate

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

EN 14825		
	Low temperature	e Medium temperature
η_{s}	224 %	161 %
Prated	5.30 kW	5.60 kW
SCOP	5.69	4.10
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.28 kW	5.65 kW





COP Tj = +2°C	3.08	2.22
Pdh Tj = $+7^{\circ}$ C	3.22 kW	3.92 kW
COP Tj = +7°C	5.31	3.54
Pdh Tj = 12°C	1.50 kW	2.49 kW
COP Tj = 12°C	6.79	5.35
Pdh Tj = Tbiv	5.28 kW	5.65 kW
COP Tj = Tbiv	3.08	2.22
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.28 kW	5.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.08	2.22
WTOL	60 °C	60 °C
Poff	17 W	17 W
РТО	22 W	22 W
PSB	17 W	17 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1245 kWh	1823 kWh

Domestic Hot Water (DHW)

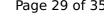


EN 16147		
Declared load profile	L	
Efficiency ηDHW	96 %	
СОР	2.25	
Heating up time	03:30 h:min	
Standby power input	55.0 W	
Reference hot water temperature	52.1 °C	
Mixed water at 40°C	272	

Colder Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	81 %	
СОР	1.90	
Heating up time	04:18 h:min	
Standby power input	65.0 W	
Reference hot water temperature	52.4 °C	
Mixed water at 40°C	275 I	

Warmer Climate





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EN 16147		
Declared load profile	L	
Efficiency ηDHW	119 %	
СОР	2.80	
Heating up time	03:00 h:min	
Standby power input	47.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	272	



Model: Buderus Logatherm WLW196i-4 ARTP120

Configure model		
Model name	Buderus Logatherm WLW196i-4 ARTP120	
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

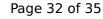
EN 14511-2			
Low temperature Medium temperature			
Heat output	2.14 kW	1.88 kW	
El input	0.48 kW	0.75 kW	
СОР	4.44	2.52	

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



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

EN 14825		
	Low temperature	Medium temperature
η_{s}	172 %	125 %
Prated	4.40 kW	4.10 kW
SCOP	4.39	3.20
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.88 kW	3.57 kW
COP Tj = -7°C	2.99	2.13
Pdh Tj = +2°C	2.51 kW	2.34 kW
COP Tj = +2°C	4.50	3.20
Pdh Tj = +7°C	1.50 kW	2.13 kW
COP Tj = +7°C	5.32	4.08
Pdh Tj = 12°C	1.23 kW	2.52 kW
COP Tj = 12°C	5.57	5.22
Pdh Tj = Tbiv	4.37 kW	4.05 kW



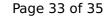


COP Tj = Tbiv	2.70	1.83
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.37 kW	4.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.83
WTOL	60 °C	60 °C
Poff	22 W	22 W
PTO	22 W	22 W
PSB	22 W	22 W
PCK	4 W	4 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2072 kWh	2647 kWh

Colder Climate

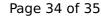
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	49 dB(A)	49 dB(A)
Sound power level outdoor	47 dB(A)	47 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	150 %	112 %





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Prated	3.90 kW	4.00 kW
SCOP	3.83	2.87
Tbiv	-17 °C	-16 °C
TOL	-20 °C	-18 °C
Pdh Tj = -7°C	2.46 kW	2.32 kW
COP Tj = -7°C	3.43	2.52
Pdh Tj = +2°C	1.48 kW	1.79 kW
COPTj = +2°C	4.59	3.51
Pdh Tj = $+7^{\circ}$ C	1.13 kW	2.13 kW
$COPTj = +7^{\circ}C$	5.13	4.33
Pdh Tj = 12°C	1.21 kW	2.55 kW
COP Tj = 12°C	5.24	5.51
Pdh Tj = Tbiv	3.43 kW	3.37 kW
COP Tj = Tbiv	2.31	1.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.08 kW	3.11 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.12	1.59
WTOL	60 °C	60 °C
Poff	22 W	22 W
РТО	22 W	22 W
PSB	22 W	22 W
РСК	4 W	4 W
	1	-





Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.90 kW	4.00 kW
Annual energy consumption Qhe	2511 kWh	3430 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.27	3.29
COP Tj = -15°C (if TOL $<$ -20°C)	2.49	1.85

Warmer Climate

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

EN 14825			
	Low temperature	Medium temperature	
η_{s}	208 %	153 %	
Prated	5.30 kW	5.60 kW	
SCOP	5.28	3.90	
Tbiv	2 °C	2 °C	
TOL	2 °C	2 °C	
Pdh Tj = +2°C	5.28 kW	5.65 kW	
COP Tj = +2°C	2.98	2.19	



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This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = +7°C	3.22 kW	3.92 kW
COP Tj = +7°C	5.01	3.45
Pdh Tj = 12°C	1.50 kW	2.49 kW
COP Tj = 12°C	6.19	5.05
Pdh Tj = Tbiv	5.28 kW	5.65 kW
COP Tj = Tbiv	2.98	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.28 kW	5.65 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.98	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	1341 kWh	1918 kWh