Login

Summary of	Buderus Logatherm WLW196i-4 AR	Reg. No.	011-1W0127
Certificate Holder			
Name	Bosch Thermotechnik GmbH (Buderus)		
Address	Sophienstraße 30-32	Zip	35576
City	Wetzlar	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Buderus Logatherm 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
COP	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

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
COP Tj = +2°C	3.08	2.22
Pdh Tj = +7°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
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	1245 kWh	1823 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**
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
COP Tj = -7°C	3.56	2.57
Pdh Tj = +2°C	1.48 kW	1.79 kW
COP Tj = +2°C	4.86	3.66
Pdh Tj = +7°C	1.13 kW	2.13 kW
COP Tj = +7°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
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	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

Average 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	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
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

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
COP	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

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
COP Tj = +2°C	3.08	2.22
Pdh Tj = +7°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
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	1245 kWh	1823 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**
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
COP Tj = -7°C	3.56	2.57
Pdh Tj = +2°C	1.48 kW	1.79 kW
COP Tj = +2°C	4.86	3.66
Pdh Tj = +7°C	1.13 kW	2.13 kW
COP Tj = +7°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
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	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

Average 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	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
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	1955 kWh	2533 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
COP	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

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	**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°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
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	1245 kWh	1823 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
COP Tj = -7°C	3.56	2.57
Pdh Tj = +2°C	1.48 kW	1.79 kW
COP Tj = +2°C	4.86	3.66
Pdh Tj = +7°C	1.13 kW	2.13 kW
COP Tj = +7°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
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	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

Average 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	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
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

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	119 %
COP	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 l

Colder Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	81 %
COP	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 l

Average Climate

EN 16147

Declared load profile	L
Efficiency ηDHW	96 %
COP	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 l

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
COP	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

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	**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°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
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	1245 kWh	1823 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
COP Tj = -7°C	3.56	2.57
Pdh Tj = +2°C	1.48 kW	1.79 kW
COP Tj = +2°C	4.86	3.66
Pdh Tj = +7°C	1.13 kW	2.13 kW
COP Tj = +7°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
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	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

Average 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	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
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

Domestic Hot Water (DHW)

Warmer Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	119 %
COP	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 l

Colder Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	81 %
COP	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 l

Average Climate

EN 16147

Declared load profile	L
Efficiency ηDHW	96 %
COP	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 l

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
COP	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

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
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

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 %
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
COP Tj = +2°C	4.59	3.51
Pdh Tj = +7°C	1.13 kW	2.13 kW
COP Tj = +7°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
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	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

Average 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	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