

Page 1 of 29

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

#### Login

Summary of	WPF 13, WPF 13 cool, WPC 13, WPC 13 cool	Reg. No.	011-1W0021	
Certificate Holder				
Name	STIEBEL ELTRON GmbH & Co KG			
Address	Dr. Stiebel Straße 33	Zip	37603	
City	Holzminden	Country	Germany	
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH			
Subtype title	WPF 13, WPF 13 cool, WPC 13, WPC 13 cool			
Heat Pump Type	Brine/Water			
Refrigerant	R410A			
Mass of Refrigerant	2.3 kg			
Certification Date	23.08.2016			



## Model: WPF 13

Configure model			
Model name	WPF 13		
Application	Heating (medium temp)		
Units	Indoor		
Climate Zone	Colder Climate + Warmer Climate		
Reversibility	No		
Cooling mode application (optional)	n/a		

General Data		
Power supply	3x400V 50Hz	

### Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	13.21 kW	11.99 kW	
El input	2.73 kW	3.93 kW	
СОР	4.83	3.04	

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

## Average Climate



EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	51 dB(A)	51 dB(A)		

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	203 %	142 %	
Prated	13.00 kW	12.00 kW	
SCOP	5.26	3.75	
Tbiv	2 °C	-10 °C	
TOL	-20 °C	-10 °C	
Pdh Tj = -7°C	12.00 kW	12.10 kW	
COP Tj = -7°C	3.05	3.18	
Cdh Tj = -7 °C			
Pdh Tj = +2°C	12.00 kW	12.50 kW	
COP Tj = +2°C	3.05	3.69	
Cdh Tj = +2 °C			
Pdh Tj = +7°C	12.40 kW	12.80 kW	
COP Tj = +7°C	3.45	4.08	
Cdh Tj = +7 °C			
Pdh Tj = 12°C	12.90 kW	13.10 kW	



COP Tj = 12°C       4.23       4.54         Cdh Tj = +12 °C       13.20 kW       12.00 kW         Pdh Tj = Tbiv       4.84       3.05         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       12.00 kW       12.00 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       4.84       3.05         WTOL       65 °C       65 °C         Poff       0 W       0 W         PTO       84 W       84 W         PSB       9 W       9 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       5186 kWh       6603 kWh		I	
Pdh Tj = Tbiv       13.20 kW       12.00 kW         COP Tj = Tbiv       4.84       3.05         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	COP Tj = 12°C	4.23	4.54
COP Tj = Tbiv       4.84       3.05         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Cdh Tj = +12 °C		
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.84	3.05
WTOL 65 °C 65 °C  Poff 0 W 0 W  PTO 84 W 84 W  PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	12.00 kW
Poff 0 W 0 W  PTO 84 W 84 W  PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
PTO 84 W 84 W  PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	WTOL	65 °C	65 °C
PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	Poff	o w	o w
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	84 W	84 W
Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	9 W	9 W
Supplementary Heater: PSUP 0.00 kW 0.00 kW	PCK	o w	o w
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 5186 kWh 6603 kWh	Supplementary Heater: PSUP	0.00 kW	0.00 kW
	Annual energy consumption Qhe	5186 kWh	6603 kWh

### Warmer Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	51 dB(A)	51 dB(A)		

EN 14825				
	Low temperature	Medium temperature		





This information was genera	•	
$\eta_{s}$	202 %	141 %
Prated	13.00 kW	12.00 kW
SCOP	5.25	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.20 kW	12.00 kW
COP Tj = +2°C	4.84	3.05
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.30 kW	12.40 kW
$COPTj = +7^{\circ}C$	5.13	3.45
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.50 kW	12.90 kW
COP Tj = 12°C	5.61	4.23
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = Tbiv	4.84	3.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.20 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
WTOL	65 °C	65 °C
Poff	0 W	o w





РТО	84 W	84 W
PSB	9 W	9 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	3361 kWh	4287 kWh

#### Colder Climate

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	51 dB(A)	51 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	208 %	147 %
Prated	16.00 kW	15.00 kW
SCOP	5.39	3.88
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.40 kW	12.50 kW
COP Tj = -7°C	5.25	3.68





This information was genera	accuracy cine in inclining	database on 10 man 202
Cdh Tj = -7 °C		
Pdh Tj = +2°C	13.50 kW	12.80 kW
COP Tj = +2°C	5.59	4.08
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.60 kW	13.00 kW
$COP Tj = +7^{\circ}C$	5.78	4.44
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.60 kW	13.20 kW
COP Tj = 12°C	5.82	4.75
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.40 kW	12.40 kW
COP Tj = Tbiv	5.25	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.25	3.05
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	84 W	84 W
PSB	9 W	9 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.21 kW	3.16 kW
	•	•



Page 8 of 29

Annual energy consumption Qhe	7507 kWh	9647 kWh
-------------------------------	----------	----------



# Model: WPF 13 (cool)

Configure model		
Model name	WPF 13 (cool)	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

### Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	13.21 kW	11.99 kW	
El input	2.73 kW	3.93 kW	
СОР	4.83	3.04	

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

## Average Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	51 dB(A)	51 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	203 %	142 %
Prated	13.00 kW	12.00 kW
SCOP	5.26	3.75
Tbiv	2 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	12.00 kW	12.10 kW
COP Tj = -7°C	3.05	3.18
Cdh Tj = -7 °C		
Pdh Tj = +2°C	12.00 kW	12.50 kW
COP Tj = +2°C	3.05	3.69
Cdh Tj = +2 °C		
Pdh Tj = +7°C	12.40 kW	12.80 kW
COP Tj = +7°C	3.45	4.08
Cdh Tj = +7 °C		
Pdh Tj = 12°C	12.90 kW	13.10 kW





COP Tj = 12°C       4.23       4.54         Cdh Tj = +12 °C       13.20 kW       12.00 kW         Pdh Tj = Tbiv       4.84       3.05         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       12.00 kW       12.00 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       4.84       3.05         WTOL       65 °C       65 °C         Poff       0 W       0 W         PTO       84 W       84 W         PSB       9 W       9 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       5186 kWh       6603 kWh		I	
Pdh Tj = Tbiv       13.20 kW       12.00 kW         COP Tj = Tbiv       4.84       3.05         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	COP Tj = 12°C	4.23	4.54
COP Tj = Tbiv       4.84       3.05         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Cdh Tj = +12 °C		
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.84	3.05
WTOL 65 °C 65 °C  Poff 0 W 0 W  PTO 84 W 84 W  PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 0.00 kW 0.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	12.00 kW
Poff 0 W 0 W  PTO 84 W 84 W  PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
PTO 84 W 84 W  PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	WTOL	65 °C	65 °C
PSB 9 W 9 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	Poff	o w	o w
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	РТО	84 W	84 W
Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW	PSB	9 W	9 W
Supplementary Heater: PSUP 0.00 kW 0.00 kW	PCK	o w	o w
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 5186 kWh 6603 kWh	Supplementary Heater: PSUP	0.00 kW	0.00 kW
	Annual energy consumption Qhe	5186 kWh	6603 kWh

### Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	51 dB(A)	51 dB(A)

EN 14825		
	Low temperature	Medium temperature





This information was genera	•	
$\eta_{s}$	202 %	141 %
Prated	13.00 kW	12.00 kW
SCOP	5.25	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.20 kW	12.00 kW
COP Tj = +2°C	4.84	3.05
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.30 kW	12.40 kW
$COPTj = +7^{\circ}C$	5.13	3.45
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.50 kW	12.90 kW
COP Tj = 12°C	5.61	4.23
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = Tbiv	4.84	3.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.20 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
WTOL	65 °C	65 °C
Poff	0 W	o w





РТО	84 W	84 W
PSB	9 W	9 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	3361 kWh	4287 kWh

#### Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	51 dB(A)	51 dB(A)	

EN 14825		
	Low temperature	e Medium temperature
$\eta_{s}$	208 %	147 %
Prated	16.00 kW	15.00 kW
SCOP	5.39	3.88
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.40 kW	12.50 kW
COP Tj = -7°C	5.25	3.68





This information was genera	ted by the HI KLIMAI	N database on 10 Mai 202.
Cdh Tj = -7 °C		
Pdh Tj = +2°C	13.50 kW	12.80 kW
COP Tj = +2°C	5.59	4.08
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.60 kW	13.00 kW
COP Tj = +7°C	5.78	4.44
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.60 kW	13.20 kW
COP Tj = 12°C	5.82	4.75
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.40 kW	12.40 kW
COP Tj = Tbiv	5.25	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.25	3.05
WTOL	65 °C	65 °C
Poff	0 W	0 W
РТО	84 W	84 W
PSB	9 W	9 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.21 kW	3.16 kW



Page 15 of 29

Annual energy consumption Qhe	7507 kWh	9647 kWh
-------------------------------	----------	----------



## Model: WPC 13

Configure model		
Model name	WPC 13	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

### Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	13.21 kW	11.99 kW	
El input	2.73 kW	3.93 kW	
СОР	4.83	3.04	

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

## Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	53 dB(A)	53 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	203 %	142 %
Prated	13.00 kW	12.00 kW
SCOP	5.26	3.75
Tbiv	2 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	12.00 kW	12.10 kW
COP Tj = -7°C	3.05	3.18
Cdh Tj = -7 °C		
Pdh Tj = +2°C	12.00 kW	12.50 kW
COP Tj = +2°C	3.05	3.69
Cdh Tj = +2 °C		
Pdh Tj = +7°C	12.40 kW	12.80 kW
COP Tj = +7°C	3.45	4.08
Cdh Tj = +7 °C		
Pdh Tj = 12°C	12.90 kW	13.10 kW



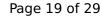


COP Tj = 12°C	4.23	4.54
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = Tbiv	4.84	3.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
WTOL	65 °C	65 °C
Poff	o w	o w
РТО	84 W	84 W
PSB	9 W	9 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5186 kWh	6603 kWh

### Warmer Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	53 dB(A)	53 dB(A)	

EN 14825		
	Low temperature	Medium temperature





This information was genera	•	
$\eta_{s}$	202 %	141 %
Prated	13.00 kW	12.00 kW
SCOP	5.25	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.20 kW	12.00 kW
COP Tj = +2°C	4.84	3.05
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.30 kW	12.40 kW
$COPTj = +7^{\circ}C$	5.13	3.45
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.50 kW	12.90 kW
COP Tj = 12°C	5.61	4.23
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = Tbiv	4.84	3.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.20 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
WTOL	65 °C	65 °C
Poff	0 W	o w



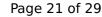


РТО	84 W	84 W
PSB	9 W	9 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	3361 kWh	4287 kWh

#### Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	53 dB(A)	53 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	208 %	147 %
Prated	16.00 kW	15.00 kW
SCOP	5.39	3.88
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.40 kW	12.50 kW
COP Tj = -7°C	5.25	3.68





This information was genera	accuracy cine in inclining	database on 10 man 202
Cdh Tj = -7 °C		
Pdh Tj = +2°C	13.50 kW	12.80 kW
COP Tj = +2°C	5.59	4.08
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.60 kW	13.00 kW
$COP Tj = +7^{\circ}C$	5.78	4.44
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.60 kW	13.20 kW
COP Tj = 12°C	5.82	4.75
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.40 kW	12.40 kW
COP Tj = Tbiv	5.25	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.25	3.05
WTOL	65 °C	65 °C
Poff	o w	0 W
РТО	84 W	84 W
PSB	9 W	9 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.21 kW	3.16 kW
	•	•



 $$\operatorname{Page}\ 22$$  of 29 This information was generated by the HP KEYMARK database on 18 Mar 2022

Annual energy consumption Qhe	7507 kWh	9647 kWh

# Model: WPC 13 (cool)

Configure model		
Model name	WPC 13 (cool)	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

### Heating

EN 14511-2					
Low temperature Medium temperature					
Heat output	13.21 kW	11.90 kW			
El input	2.73 kW	3.93 kW			
СОР	4.83	3.04			

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

## Average Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	53 dB(A)	53 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	203 %	142 %
Prated	13.00 kW	12.00 kW
SCOP	5.26	3.75
Tbiv	2 °C	-10 °C
TOL	-20 °C	-10 °C
Pdh Tj = -7°C	12.00 kW	12.10 kW
COP Tj = -7°C	3.05	3.18
Cdh Tj = -7 °C		
Pdh Tj = +2°C	12.00 kW	12.50 kW
COP Tj = +2°C	3.05	3.69
Cdh Tj = +2 °C		
Pdh Tj = +7°C	12.40 kW	12.80 kW
COP Tj = +7°C	3.45	4.08
Cdh Tj = +7 °C		
Pdh Tj = 12°C	12.90 kW	13.10 kW



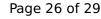


COP Tj = 12°C	4.23	4.54
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = Tbiv	4.84	3.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
WTOL	65 °C	65 °C
Poff	o w	o w
РТО	84 W	84 W
PSB	9 W	9 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5186 kWh	6603 kWh

### Warmer Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	53 dB(A)	53 dB(A)	

EN 14825		
	Low temperature	Medium temperature





		Thirtim database on 10 Hari
$\eta_{s}$	202 %	141 %
Prated	13.00 kW	12.00 kW
SCOP	5.25	3.73
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.20 kW	12.00 kW
$COP Tj = +2^{\circ}C$	4.84	3.05
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.30 kW	12.40 kW
COP Tj = +7°C	5.13	3.45
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.50 kW	12.90 kW
COP Tj = 12°C	5.61	4.23
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.20 kW	12.00 kW
COP Tj = Tbiv	4.84	3.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.20 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.84	3.05
WTOL	65 °C	65 °C
Poff	o w	o w





РТО	84 W	84 W
PSB	9 W	9 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	3361 kWh	4287 kWh

#### Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	53 dB(A)	53 dB(A)	

EN 14825			
	Low temperature	e Medium temperature	
$\eta_{s}$	208 %	147 %	
Prated	16.00 kW	15.00 kW	
SCOP	5.39	3.88	
Tbiv	-15 °C	-15 °C	
TOL	-22 °C	-22 °C	
Pdh Tj = -7°C	13.40 kW	12.50 kW	
COP Tj = -7°C	5.25	3.68	





in an in an in an in a game a	iced by the in item in	III database on 10 Mai 202
Cdh Tj = -7 °C		
Pdh Tj = +2°C	13.50 kW	12.80 kW
COP Tj = +2°C	5.59	4.08
Cdh Tj = +2 °C		
Pdh Tj = +7°C	13.60 kW	13.00 kW
$COP Tj = +7^{\circ}C$	5.78	4.44
Cdh Tj = +7 °C		
Pdh Tj = 12°C	13.60 kW	13.20 kW
COP Tj = 12°C	5.82	4.75
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	13.40 kW	12.40 kW
COP Tj = Tbiv	5.25	3.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.40 kW	12.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.25	3.05
WTOL	65 °C	65 °C
Poff	0 W	0 W
РТО	84 W	84 W
PSB	9 W	9 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.21 kW	3.16 kW
Supplementary fleater. FSOF	J.ZI KVV	J.10 KVV



Page 29 of 29

Annual energy consumption Qhe	7507 kWh	9647 kWh
-------------------------------	----------	----------