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

#### Login

Summary of	F1x45-5	Reg. No.	012-037
Certificate Holder			
Name	Nibe AB		
Address	Box 14	Zip	S-28521
City	Markaryd	Country	Sweden
Certification Body	RISE CERT		
Subtype title	F1x45-5		
Heat Pump Type	Brine/Water		
Refrigerant	R407c		
Mass of Refrigerant	1.2 kg		

# Model: F1145-5 1x230

Configure model		
Model name	F1145-5 1x230	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder 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	4.65 kW	3.42 kW
El input	1.13 kW	1.27 kW
СОР	4.12	2.69

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
COP Tj = -7°C	4.41	2.99
Pdh Tj = +2°C	4.90 kW	4.10 kW
COP Tj = +2°C	4.60	3.57
Pdh Tj = +7°C	5.00 kW	4.30 kW
COP Tj = +7°C	4.75	3.84
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
COP Tj = Tbiv	4.46	3.26





4.70 kW	3.20 kW
4.30	2.74
0.99	0.99
65 °C	65 °C
2 W	2 W
8 W	8 W
7 W	7 W
12 W	12 W
Electricity	Electricity
1.10 kW	1.80 kW
2669 kWh	3027 kWh
	4.30 0.99 65 °C 2 W 8 W 7 W 12 W Electricity 1.10 kW

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	177 %	133 %
Prated	5.80 kW	5.00 kW





SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
$COP Tj = -7^{\circ}C$	4.65	3.48
Pdh Tj = +2°C	5.00 kW	4.30 kW
COP Tj = +2°C	4.77	3.77
Pdh Tj = $+7$ °C	5.10 kW	4.50 kW
$COPTj = +7^{\circ}C$	4.83	4.02
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.64	4.07
Pdh Tj = Tbiv	4.80 kW	3.90 kW
COP Tj = Tbiv	4.52	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	8 W
PSB	7 W	7 W
РСК	8 W	12 W



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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh



# Model: F1145-5 PC 1x230

Configure model		
Model name	F1145-5 PC 1x230	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder 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	4.65 kW	3.42 kW
El input	1.13 kW	1.27 kW
СОР	4.12	2.69

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
COP Tj = -7°C	4.41	2.99
Pdh Tj = +2°C	4.90 kW	4.10 kW
COP Tj = +2°C	4.60	3.57
Pdh Tj = +7°C	5.00 kW	4.30 kW
COP Tj = +7°C	4.75	3.84
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COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
COP Tj = Tbiv	4.46	3.26





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	8 W	8 W
PSB	7 W	7 W
PCK	12 W	12 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	2669 kWh	3027 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	177 %	133 %
Prated	5.80 kW	5.00 kW
	3.55 KH	





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SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
COP Tj = -7°C	4.65	3.48
Pdh Tj = +2°C	5.00 kW	4.30 kW
$COPTj = +2^{\circ}C$	4.77	3.77
Pdh Tj = $+7$ °C	5.10 kW	4.50 kW
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Pdh Tj = 12°C	5.10 kW	4.60 kW
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	8 W
PSB	7 W	7 W
PCK	8 W	12 W



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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh



# Model: F1145-5 3x400

Configure model		
Model name	F1145-5 3x400	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

### Heating

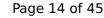
EN 14511-2			
Low temperature Medium temperature			
Heat output	4.65 kW	3.42 kW	
El input	1.13 kW	1.27 kW	
СОР	4.12	2.69	

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
COP Tj = -7°C	4.41	2.99
Pdh Tj = +2°C	4.90 kW	4.10 kW
COP Tj = +2°C	4.60	3.57
Pdh Tj = $+7^{\circ}$ C	5.00 kW	4.30 kW
COP Tj = +7°C	4.75	3.84
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
COP Tj = Tbiv	4.46	3.26
	,	





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	8 W	8 W
PSB	7 W	7 W
PCK	12 W	12 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	2669 kWh	3027 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
Low temperature   Medium temperature		Medium temperature
$\eta_{S}$	177 %	133 %
Prated	5.80 kW	5.00 kW
		1



	CEN heat pump KEYMARK
5	KEYMARK

SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
COP Tj = -7°C	4.65	3.48
Pdh Tj = +2°C	5.00 kW	4.30 kW
$COP Tj = +2^{\circ}C$	4.77	3.77
Pdh Tj = $+7^{\circ}$ C	5.10 kW	4.50 kW
$COP Tj = +7^{\circ}C$	4.83	4.02
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.64	4.07
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COP Tj = Tbiv	4.52	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	8 W
PSB	7 W	7 W
РСК	8 W	12 W



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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh



# Model: F1145-5 PC 3x400

Configure model		
Model name	F1145-5 PC 3x400	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

### Heating

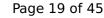
EN 14511-2		
Low temperature Medium temperature		
Heat output	4.65 kW	3.42 kW
El input	1.13 kW	1.27 kW
СОР	4.12	2.69

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
COP Tj = -7°C	4.41	2.99
Pdh Tj = +2°C	4.90 kW	4.10 kW
COP Tj = +2°C	4.60	3.57
Pdh Tj = +7°C	5.00 kW	4.30 kW
COP Tj = +7°C	4.75	3.84
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
COP Tj = Tbiv	4.46	3.26

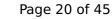




Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	8 W	8 W
PSB	7 W	7 W
PCK	12 W	12 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	2669 kWh	3027 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	177 %	133 %
Prated	5.80 kW	5.00 kW
		1





SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
$COP Tj = -7^{\circ}C$	4.65	3.48
Pdh Tj = +2°C	5.00 kW	4.30 kW
$COPTj = +2^{\circ}C$	4.77	3.77
Pdh Tj = $+7^{\circ}$ C	5.10 kW	4.50 kW
$COPTj = +7^{\circ}C$	4.83	4.02
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.64	4.07
Pdh Tj = Tbiv	4.80 kW	3.90 kW
COP Tj = Tbiv	4.52	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	8 W
PSB	7 W	7 W
PCK	8 W	12 W
	•	



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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh



# Model: F1245-5 1x230

Configure model		
Model name	F1245-5 1x230	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data	
Power supply	1x230V 50Hz
Off-peak product	No

### Heating

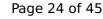
EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.65 kW	3.42 kW
El input	1.13 kW	1.27 kW
СОР	4.12	2.69

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
COP Tj = -7°C	4.41	2.99
Pdh Tj = +2°C	4.90 kW	4.10 kW
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Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
COP Tj = Tbiv	4.46	3.26
	,	

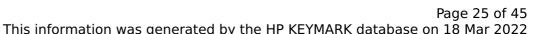




4.70 kW	3.20 kW
4.30	2.74
0.99	0.99
65 °C	65 °C
2 W	2 W
8 W	8 W
7 W	7 W
12 W	12 W
Electricity	Electricity
1.10 kW	1.80 kW
2669 kWh	3027 kWh
	4.30 0.99 65 °C 2 W 8 W 7 W 12 W Electricity 1.10 kW

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	177 %	133 %
Prated	5.80 kW	5.00 kW





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4.63	3.53
-16 °C	-13 °C
-22 °C	-22 °C
4.90 kW	4.10 kW
4.65	3.48
5.00 kW	4.30 kW
4.77	3.77
5.10 kW	4.50 kW
4.83	4.02
5.10 kW	4.60 kW
4.64	4.07
4.80 kW	3.90 kW
4.52	3.29
4.70 kW	3.20 kW
4.30	2.74
0.99	0.99
65 °C	65 °C
2 W	2 W
10 W	8 W
7 W	7 W
8 W	12 W
	4.63  -16 °C  -22 °C  4.90 kW  4.65  5.00 kW  4.77  5.10 kW  4.83  5.10 kW  4.64  4.80 kW  4.52  4.70 kW  4.30  0.99  65 °C  2 W  10 W  7 W

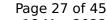


Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh

### Domestic Hot Water (DHW)

### Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	100 %
СОР	2.50
Heating up time	02:50 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	240





EN 16147	
Declared load profile	XL
Efficiency ηDHW	100 %
СОР	2.50
Heating up time	02:50 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	240



# Model: F1245-5 PC 1x230

Configure model		
Model name	F1245-5 PC 1x230	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data			
Power supply	1x230V 50Hz		
Off-peak product No			

### Heating

EN 14511-2		
Low temperature Medium temperature		Medium temperature
Heat output	4.65 kW	3.42 kW
El input	1.13 kW	1.27 kW
СОР	4.12	2.69

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
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COP Tj = +7°C	4.75	3.84
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
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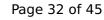
	<u> </u>	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	8 W	8 W
PSB	7 W	7 W
PCK	12 W	12 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	2669 kWh	3027 kWh

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	177 %	133 %
Prated	5.80 kW	5.00 kW



SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
COP Tj = -7°C	4.65	3.48
Pdh Tj = +2°C	5.00 kW	4.30 kW
COP Tj = +2°C	4.77	3.77
Pdh Tj = +7°C	5.10 kW	4.50 kW
$COP Tj = +7^{\circ}C$	4.83	4.02
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.64	4.07
Pdh Tj = Tbiv	4.80 kW	3.90 kW
COP Tj = Tbiv	4.52	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	8 W
PSB	7 W	7 W
РСК	8 W	12 W



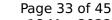


Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh

### Domestic Hot Water (DHW)

### Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	100 %
СОР	2.50
Heating up time	02:50 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	240





EN 16147	
Declared load profile	XL
Efficiency ηDHW	100 %
СОР	2.50
Heating up time	02:50 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	240 I



# Model: F1245-5 3x400

Configure model		
Model name	F1245-5 3x400	
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

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

### Heating

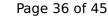
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.65 kW	3.42 kW	
El input	1.13 kW	1.27 kW	
СОР	4.12	2.69	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
COP Tj = -7°C	4.41	2.99
Pdh Tj = +2°C	4.90 kW	4.10 kW
COP Tj = +2°C	4.60	3.57
Pdh Tj = +7°C	5.00 kW	4.30 kW
COP Tj = +7°C	4.75	3.84
Pdh Tj = 12°C	5.10 kW	4.60 kW
COP Tj = 12°C	4.78	4.04
Pdh Tj = Tbiv	4.80 kW	3.80 kW
COP Tj = Tbiv	4.46	3.26





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	8 W	8 W
PSB	7 W	7 W
PCK	12 W	12 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	2669 kWh	3027 kWh

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	177 %	133 %
Prated	5.80 kW	5.00 kW





coop	4.63	2.52
SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
COP Tj = $-7^{\circ}$ C	4.65	3.48
Pdh Tj = +2°C	5.00 kW	4.30 kW
COP Tj = +2°C	4.77	3.77
Pdh Tj = +7°C	5.10 kW	4.50 kW
$COPTj = +7^{\circ}C$	4.83	4.02
Pdh Tj = 12°C	5.10 kW	4.60 kW
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WTOL	65 °C	65 °C
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РТО	10 W	8 W
PSB	7 W	7 W
РСК	8 W	12 W



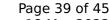


Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh

### Domestic Hot Water (DHW)

### Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	100 %	
СОР	2.50	
Heating up time	02:50 h:min	
Standby power input	55.0 W	
Reference hot water temperature	50.0 °C	
Mixed water at 40°C	240	





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	100 %	
СОР	2.50	
Heating up time	02:50 h:min	
Standby power input	55.0 W	
Reference hot water temperature	50.0 °C	
Mixed water at 40°C	240	

# Model: F1245-5 PC 3x400

Configure model		
Model name F1245-5 PC 3x400		
Application	Heating + DHW + low temp	
Units	Indoor	
Climate Zone	Colder Climate	
Reversibility	No	
Cooling mode application (optional) n/a		

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

### Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.65 kW	3.42 kW	
El input	1.13 kW	1.27 kW	
СОР	4.12	2.69	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	172 %	128 %
Prated	5.80 kW	5.00 kW
SCOP	4.50	3.40
Tbiv	-5 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.70 kW	3.50 kW
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WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	8 W	8 W
PSB	7 W	7 W
PCK	12 W	12 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	2669 kWh	3027 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	177 %	133 %
Prated	5.80 kW	5.00 kW



$\bigcirc$	
	CEN heat pump
5	KEYMARK

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SCOP	4.63	3.53
Tbiv	-16 °C	-13 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.90 kW	4.10 kW
$COPTj = -7^{\circ}C$	4.65	3.48
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Pdh Tj = 12°C	5.10 kW	4.60 kW
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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	4.70 kW	3.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.30	2.74
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	2 W	2 W
РТО	10 W	8 W
PSB	7 W	7 W
РСК	8 W	12 W



Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.10 kW	1.80 kW
Annual energy consumption Qhe	3097 kWh	3495 kWh

### Domestic Hot Water (DHW)

### Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	100 %	
СОР	2.50	
Heating up time	02:50 h:min	
Standby power input	55.0 W	
Reference hot water temperature	50.0 °C	
Mixed water at 40°C	240 I	





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	100 %	
СОР	2.50	
Heating up time	02:50 h:min	
Standby power input	55.0 W	
Reference hot water temperature	50.0 °C	
Mixed water at 40°C	240	