Subtype F1x45-12 1x230

Certificate Holder	Nibe AB
Address	Box 14
ZIP	S-28521
City	Markaryd
Country	SE
Certification Body	RISE CERT
Subtype title	F1x45-12 1x230
Registration number	012-044
Heat Pump Type	Brine/Water
Refrigerant	R407c
Mass of Refrigerant	2 kg
Certification Date	15.06.2017
Testing laboratory	Austrian Institute of Technology (AIT)

Model F1145-12 1x230

Model name	F1145-12 1x230
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	No

Brine/Water

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	11.60 kW	10.97 kW
El input	2.72 kW	3.78 kW
COP	4.26	2.90

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	175 %	136 %
Prated	14.00 kW	14.00 kW
SCOP	4.58	3.60
Tbiv	-6 °C	-4 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.70 kW	10.80 kW
COP Tj = -7°C	4.51	3.16
Pdh Tj = +2°C	11.80 kW	11.10 kW
COP Tj = +2°C	4.70	3.68
Pdh Tj = +7°C	11.90 kW	11.40 kW
COP Tj = +7°C	4.86	3.97
Pdh Tj = 12°C	12.00 kW	11.60 kW
COP Tj = 12°C	4.89	4.24
Pdh Tj = Tbiv	11.70 kW	10.90 kW
COP Tj = Tbiv	4.55	3.35

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.60 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.38	2.98
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	30 W	30 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.40 kW	3.40 kW
Annual energy consumption Qhe	6322 kWh	8040 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	45 dB(A)	45 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	181 %	139 %
Prated	14.00 kW	14.00 kW
SCOP	4.73	3.68
Tbiv	-16 °C	-14 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	11.80 kW	11.00 kW
COP Tj = -7°C	4.77	3.59
Cdh Tj = -7 °C		
Pdh Tj = +2°C	11.90 kW	11.30 kW
COP Tj = +2°C	4.88	3.90
Cdh Tj = +2 °C		
Pdh Tj = +7°C	12.00 kW	11.50 kW
COP Tj = +7°C	4.94	4.18
Cdh Tj = +7 °C		
Pdh Tj = 12°C	12.00 kW	11.70 kW
COP Tj = 12°C	4.71	4.30
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	11.70 kW	10.90 kW
COP Tj = Tbiv	4.60	3.37
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.60 kW	10.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.38	2.98
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.990

WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	30 W	30 W
PSB	7 W	7 W
PCK	30 W	30 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.40 kW	3.40 kW
Annual energy consumption Qhe	7313 kWh	9382 kWh

Model F1245-12 1x230

Model name	F1245-12 1x230
Application	Heating + DHW + low temp
Units	Indoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	No

Brine/Water

EN 16147 | Average Climate

Declared load profile	XL
Efficiency ηDHW	96 %
COP	2.40
Heating up time	0:58 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	230 l

EN 16147 | Colder Climate

Declared load profile	XL
Efficiency ηDHW	96 %
COP	2.40
Heating up time	0:58 h:min
Standby power input	55.0 W
Reference hot water temperature	50.0 °C
Mixed water at 40°C	230 l

EN 14511-4 | Heating

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	11.60 kW	10.97 kW
El input	2.72 kW	3.78 kW
COP	4.26	2.90

EN 12102-1 | Average Climate

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Pdh Tj = +7°C	11.90 kW	11.40 kW
COP Tj = +7°C	4.86	3.97
Pdh Tj = 12°C	12.00 kW	11.60 kW
COP Tj = 12°C	4.89	4.24
Pdh Tj = Tbiv	11.70 kW	10.90 kW
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Annual energy consumption Qhe	6322 kWh	8040 kWh

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EN 14825 | Colder Climate

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Cdh Tj = +7 °C		
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COP Tj = 12°C	4.71	4.30
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	11.70 kW	10.90 kW
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