Subtype F2120-12

Certificate Holder	Nibe AB
Address	Box 14
ZIP	S-28521
City	Markaryd
Country	SE
Certification Body	RISE CERT
Subtype title	F2120-12
Registration number	012-030
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	2.6 kg
Testing laboratory	Danish Technological Institute (DTI), DK

Model F2120-12 1x230

Model name	F2120-12 1x230
Application	Heating (medium temp)
Units	Outdoor
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

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	3.54 kW	3.64 kW
El input	0.69 kW	1.18 kW
COP	5.12	3.08

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	190 %	148 %
Prated	8.00 kW	8.30 kW
SCOP	4.82	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.30 kW
COP Tj = -7°C	3.05	2.39
Pdh Tj = +2°C	4.70 kW	4.70 kW
COP Tj = +2°C	4.57	3.85
Pdh Tj = +7°C	3.10 kW	2.90 kW
COP Tj = +7°C	5.86	4.48
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	7.22	5.30
Pdh Tj = Tbiv	7.10 kW	7.30 kW

COP Tj = Tbiv	2.95	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.30 kW	7.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.05	2.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	7 W	7 W
PSB	25 W	25 W
PCK	37 W	37 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.70 kW	0.50 kW
Annual energy consumption Qhe	3409 kWh	4529 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	159 %	130 %
Prated	9.30 kW	9.80 kW
SCOP	4.05	3.32
Tbiv	-12 °C	-12 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.70 kW	5.90 kW
COP Tj = -7°C	3.33	2.74
Pdh Tj = +2°C	3.40 kW	3.60 kW
COP Tj = +2°C	5.18	4.14
Pdh Tj = +7°C	2.90 kW	2.90 kW
COP Tj = +7°C	5.73	4.70
Pdh Tj = 12°C	3.30 kW	3.30 kW
COP Tj = 12°C	6.44	5.41
Pdh Tj = Tbiv	6.90 kW	7.30 kW
COP Tj = Tbiv	2.99	2.47
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.20 kW	6.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.31	1.84
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	7 W	7 W

PSB	25 W	25 W
PCK	37 W	37 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.10 kW	3.80 kW
Annual energy consumption Qhe	5666 kWh	7239 kWh

Model F2120-12 3x400

Model name	F2120-12 3x400
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	3x400V 50Hz
Off-peak product	No

Outdoor Air/Water

EN 14511-4 | Heating

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

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	3.54 kW	3.64 kW
El input	0.69 kW	1.18 kW
COP	5.12	3.08

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
ηs	190 %	148 %
Prated	8.00 kW	8.30 kW
SCOP	4.82	3.27
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.10 kW	7.30 kW
COP Tj = -7°C	3.05	2.39
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Pdh Tj = +7°C	3.10 kW	2.90 kW
COP Tj = +7°C	5.86	4.48
Pdh Tj = 12°C	3.60 kW	3.30 kW
COP Tj = 12°C	7.22	5.30
Pdh Tj = Tbiv	7.10 kW	7.30 kW

COP Tj = Tbiv	2.95	2.28
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.30 kW	7.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.05	2.39
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.99	0.99
WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	7 W	7 W
PSB	25 W	25 W
PCK	37 W	37 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.70 kW	0.50 kW
Annual energy consumption Qhe	3409 kWh	4529 kWh

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WTOL	65 °C	65 °C
Poff	25 W	25 W
PTO	7 W	7 W

PSB	25 W	25 W
PCK	37 W	37 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.10 kW	3.80 kW
Annual energy consumption Qhe	5666 kWh	7239 kWh