

## Subtype F2120-20

Certificate Holder	NIBE ENERGY SYSTEMS FRANCE
Address	Route Departementale 28
ZIP	01600
City	Reyrieux
Country	FR
Certification Body	RISE CERT
Subtype title	F2120-20
Registration number	012-C700330
Heat Pump Type	Outdoor Air/Water
Refrigerant	R410A
Mass of Refrigerant	3 kg
Certification Date	26.06.2024
Testing basis	EN 14511:2013, EN 14825:2013, EN 12102:2013
Testing laboratory	Danish Technological Institute (DTI), DK

Model F2120-20		
Model name	F2120-20	
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	n/a	
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	6.94 kW	7.25 kW
El input	1.43 kW	2.35 kW
COP	4.85	3.08
EN 12102-1   Average Climate		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	55 dB(A)
EN 14825   Average Climate		
	Low temperature	Medium temperature
ηs	199 %	153 %
Prated	11.00 kW	12.30 kW
SCOP	5.05	3.90
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.74 kW	10.91 kW
COP Tj = -7°C	3.41	2.48
Pdh Tj = +2°C	6.47 kW	6.66 kW
COP Tj = +2°C	5.08	3.96
Pdh Tj = +7°C	6.86 kW	5.93 kW
COP Tj = +7°C	5.95	4.69
Pdh Tj = 12°C	6.76 kW	6.49 kW
COP Tj = 12°C	7.36	5.81

Pdh Tj = Tbiv	9.74 kW	10.91 kW
COP Tj = Tbiv	3.41	2.48
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.80 kW	11.59 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.11	2.40
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	12 W
PSB	25 W	25 W
PCK	37 W	37 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	0.70 kW
Annual energy consumption Qhe	4508 kWh	6530 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	165 %	134 %
Prated	13.00 kW	14.00 kW
SCOP	4.19	3.41
Tbiv	-12 °C	-12 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	7.87 kW	8.47 kW
COP Tj = -7°C	3.50	2.85
Pdh Tj = +2°C	6.20 kW	6.10 kW
COP Tj = +2°C	5.25	4.15
Pdh Tj = +7°C	5.90 kW	6.00 kW
COP Tj = +7°C	5.60	4.80
Pdh Tj = 12°C	6.70 kW	6.40 kW
COP Tj = 12°C	7.00	5.80
Pdh Tj = Tbiv	9.58 kW	10.32 kW
COP Tj = Tbiv	3.15	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.30 kW	8.69 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.94
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	12 W
PSB	25 W	25 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.70 kW	5.30 kW
Annual energy consumption Qhe	7639 kWh	10108 kWh