

Subtype F1x45-15

Certificate Holder	Nibe AB
Address	Box 14
ZIP	S-28521
City	Markaryd
Country	SE
Certification Body	RISE CERT
Subtype title	F1x45-15
Registration number	012-045
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 F1145-15**

Model name	F1145-15
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	3x400V 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	15.42 kW	14.83 kW
El input	3.63 kW	5.05 kW
COP	4.25	2.94

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	175 %	138 %
Prated	18.00 kW	18.00 kW
SCOP	4.57	3.65
Tbiv	-6 °C	-5 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	15.40 kW	14.60 kW
COP Tj = -7°C	4.52	3.16
Cdh Tj = -7 °C		
Pdh Tj = +2°C	15.60 kW	14.80 kW
COP Tj = +2°C	4.70	3.72
Cdh Tj = +2 °C		
Pdh Tj = +7°C	15.70 kW	15.10 kW
COP Tj = +7°C	4.82	4.01
Cdh Tj = +7 °C		
Pdh Tj = 12°C	15.80 kW	15.40 kW

COP Tj = 12°C	4.73	4.27
Cdh Tj = +12 °C		
Pdh Tj = Tbiv	15.50 kW	14.60 kW
COP Tj = Tbiv	4.55	3.27
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.40 kW	14.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.41	2.96
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.980	0.990
WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	60 W	60 W
PSB	7 W	7 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.60 kW	3.40 kW
Annual energy consumption Qhe	8134 kWh	10194 kWh

**EN 12102-1 | Colder Climate**

	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)

**EN 14825 | Colder Climate**

	Low temperature	Medium temperature
ηs	180 %	141 %
Prated	18.00 kW	18.00 kW
SCOP	4.70	3.72
Tbiv	-17 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	15.60 kW	14.70 kW
COP Tj = -7°C	4.73	3.60
Pdh Tj = +2°C	15.70 kW	15.00 kW
COP Tj = +2°C	4.85	3.95
Pdh Tj = +7°C	15.80 kW	15.30 kW
COP Tj = +7°C	4.84	4.21
Pdh Tj = 12°C	15.80 kW	15.50 kW
COP Tj = 12°C	4.49	4.35
Pdh Tj = Tbiv	15.50 kW	14.60 kW
COP Tj = Tbiv	4.58	3.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.40 kW	14.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.41	2.96
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.98	0.99

WTOL	65 °C	65 °C
Poff	2 W	2 W
PTO	60 W	60 W
PSB	7 W	7 W
PCK	35 W	35 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.60 kW	3.40 kW
Annual energy consumption Qhe	9454 kWh	11893 kWh