ENERGY CALCULATION

Installer
First name Last name
The Company
Box 14
285 21 Hometown
+461012312345
nn@thecompany.com

SUMMARY

Together, we have gone through the building conditions in order to select and size the most efficient heat pump solution based on your circumstances. The calculations are based on both facts and assumptions which means that small deviations from the final installation can occur.

Please give me a call if you have further questions or visit our website to find out more about the heat pump solutions.

Best regards
The Installer

CUSTOMER

MIERCUREA CIUC
Romania

BUILDING PERFORMANCE

Energy need for heating	19170	kWh/year
- of which is hotwater	4258	kWh/year
Heat demand	6.5	kW

AFTER HEATPUMP INSTALLED

Energy to purchase	-Electricity	4868	kWh/year

SAVINGS

Energy Savings	**14302**	**kWh/year**
CO2 Savings	1316	kg/year

CLIMATE CONDITIONS

Annual mean outdoor temperature	5.6	°C
Design outdoor temperature	-21.0	°C

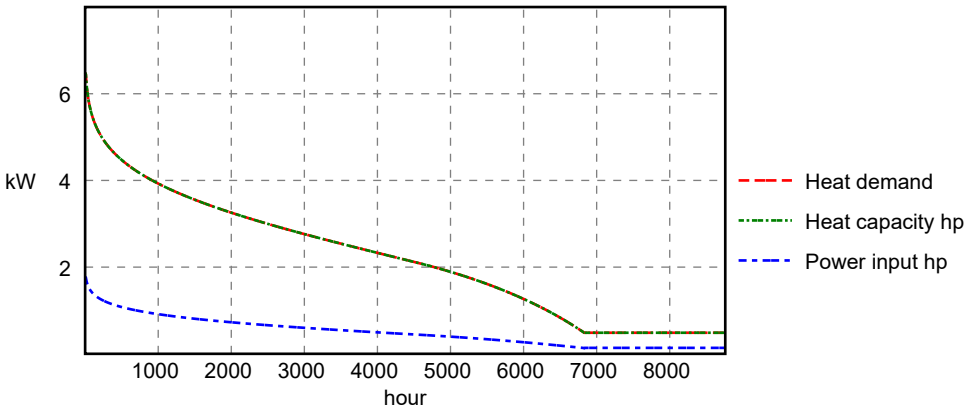
BUILDING CONDITIONS

Room temperature	23.0	°C
Space heating turns off	16.0	°C
Flow temperature at DOT	55	°C
Return temperature at DOT	45	°C

ENERGY PERFORMANCE WITH -NIBE F1245-8 Cu

Energy delivered hp	19170	kWh/year
Energy supplied hp	4553	kWh/year
Supplementary energy, total (<50kWh)	0	kWh/year
Energy for heating circulation pump	315	kWh/year
Energy coverage	100	%
Annual heating factor, net	4.2	
Annual heating factor, total	3.9	
Fixed or floating condensing	Floating	
Heat capacity hp at DOT	6.5	kW
Power input hp at DOT	1.8	kW
Recommended supplementary power	0.0	kW
Power coverage	100	%

ENERGY DIAGRAM



GROUND WATER

Annual water demand	4242	m³
Average flow during operation time	0.6	kg/s
Brine flow	0.7	kg/s
Incoming mean brine temperature	6.0	°C

ENERG Y IJA IE IA

енергия · ενεργεια

NIBE NIBE F1245-8 M0012-A-008

	55 °C	35 °C
	A++	A+++

A+++
A++
A+
A
B
C
D

42 db

- dB

	9	10
	9	**10**
	9	10
	kW	kW

2019 811/2013

ENERG Y IJA IE IA

енергия · ενεργεια

NIBE NIBE F1245-8 M0012-A-008

XL

A+++
A++
A+
A
B
C
D

A++

A+
A
B
C
D
E
F

A

42 db

- dB

9 kW
9 kW
9 kW

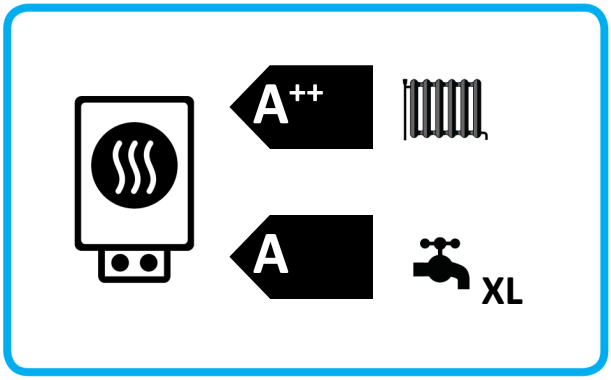
2019

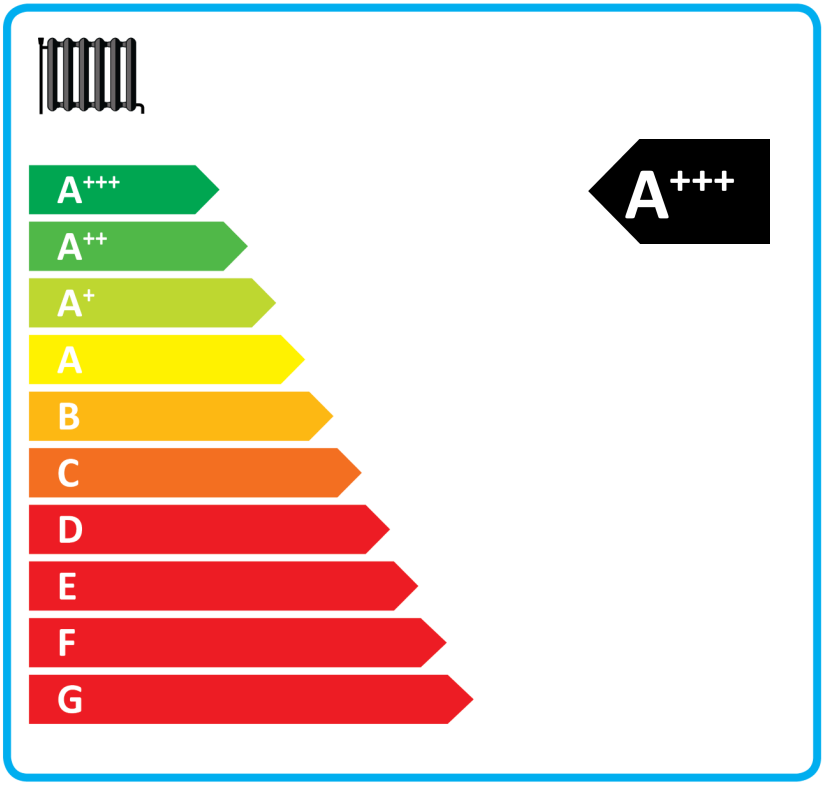
811/2013

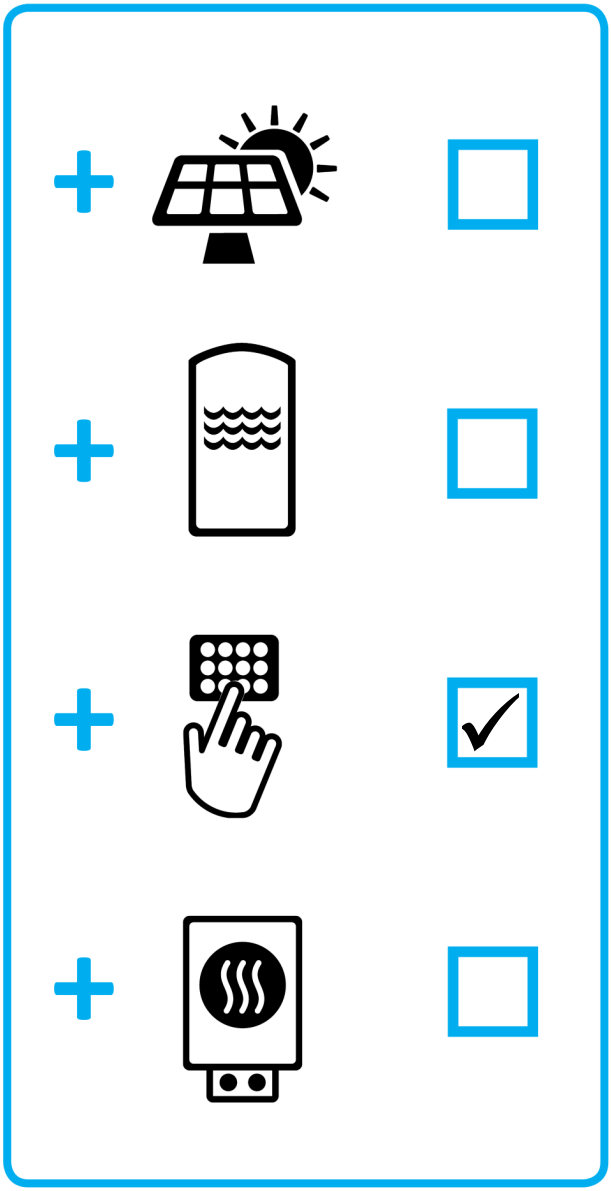
ENERG
енергия · ενεργεια
Y IJA IE IA

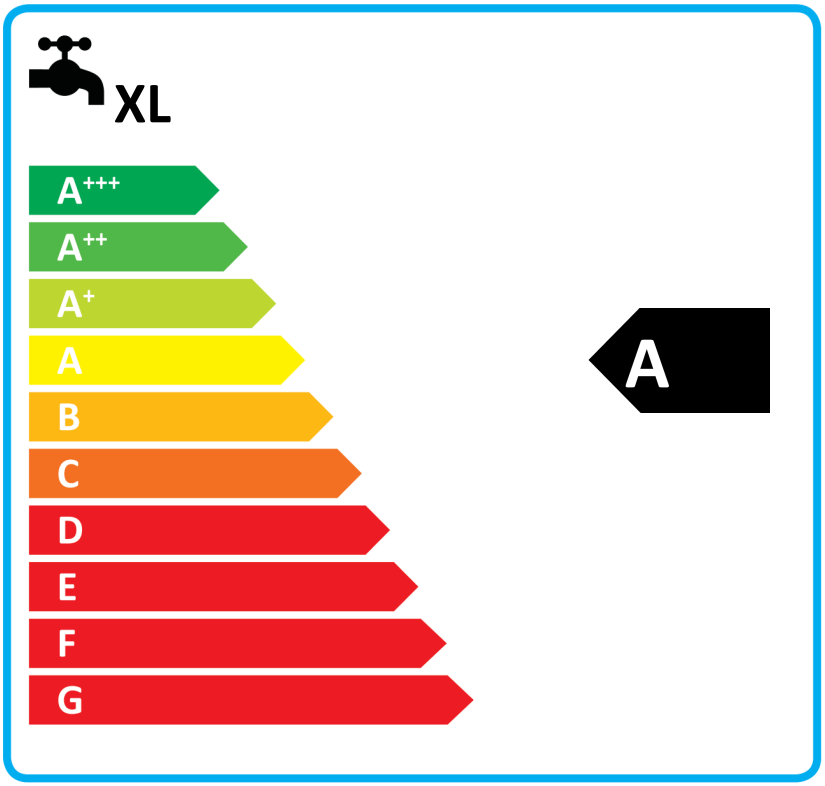
NIBE

NIBE F1245-8 M0012-A-008









2015

811/2013

Supplier's name:	NIBE		
Model:	NIBE F1245-8 M0012-A-008		
Temperature application:	Low (35 °C)	Medium (55 °C)	
Declared load profile for water heating:	XL		
Seasonal space heating energy efficiency class, average climate:	**A+++**	**A++**	
Water heating energy efficiency class, average climate:	**A**		
Rated heat output, average climate:	10	9	kW
Annual energy consumption for space heating, average climate:	4,238	4,798	kWh
Annual energy consumption for water heating, average climate:	1,671		kWh
Seasonal space heating energy efficiency, average climate:	187	147	%
Water heating energy efficiency, average climate:	100		%
Sound power level indoors:	42		dB
Rated heat output, cold climate:	10	9	kW
Rated heat output, warm climate:	10	9	kW
Annual energy consumption for space heating, cold climate:	4,905	5,546	kWh
Annual energy consumption for water heating, cold climate:	1,671		kWh
Annual energy consumption for space heating, average climate:	2,755	3,123	kWh
Annual energy consumption for water heating, average climate:	1,671		kWh
Seasonal space heating energy efficiency, cold climate:	193	152	%
Water heating energy efficiency, cold climate:	100		%
Seasonal space heating energy efficiency, warm climate:	186	146	%
Water heating energy efficiency, warm climate:	100		%
Sound power level outdoors:	-		dB

Information for package fiche

Class of the controller:	VII	
Contribution to the energy efficiency:	3.5	%

Space heating

System temperature:					Low (35 °C)	Medium (55 °C)	
Prated:					10	9	kW
Seasonal space heating energy efficiency of heat pumps:					187	147	%
Temperature control:			Class VII		3.5	3.5	%
Supplementary boiler:	Efficiency, %	Prated / (Prated + Psup)	Storage tank	II			
	-	-		-	-	-	%
Solar contribution:	Collector area, m2	Tank volume, m3	Collector efficiency, %	Tank rating			
	-	-	-	-	-	-	%
Seasonal space heating energy efficiency of package under average climate:					**191**	**151**	**%**
Seasonal space heating energy efficiency class of package under average climate:					**A+++**	**A+++**	
Seasonal space heating energy efficiency of package under colder climate:					**197**	**156**	**%**
Seasonal space heating energy efficiency of package under warmer climate:					**190**	**150**	**%**

Water heating

Water heating energy efficiency of combination heater:					100	%
Declared load profile:		**XL**				
Solar contribution:	Qnonsol	Qaux				
	-	-			-	%
Water heating energy efficiency of package under average climate:					**100**	**%**
Water heating energy efficiency class of package under average climate:					**A**	