

Domestic Hot Water Heat Pump

NIBE™ MT-WH2029-F

NIBE™ MT-WH2029-1FS

NEW



Features of NIBE™ MT-WH2029-F/1FS

Domestic hot water heat pump with an integrated 285 liter hot water boiler

Uses the energy of the extract air to heat up the domestic hot water

Ready to connect e.g. to solar panels, a second heat source

Easy to install for instance in the basement, in the installations room or in the utility room.

NIBE MT-WH2029-F/1FS

NIBE MT-WH2029-F/1FS is a domestic hot water heat pump with an integrated 285 liter hot water boiler, extract air fan, heat pump and electrical connection. NIBE MT-WH2029-1FS is delivered with an internal heating coil ready to connect e.g. to solar panels, a second heat source.

With its modern design and practical pipe connections the NIBE MT-WH2029-F/1FS is easy to install, for instance in the basement, in the installations room or in the utility room.

With its 285 liter boiler NIBE MT-WH2029-1F/1FS is able to meet the demand of a family for hot water.

NIBE™ MT-WH2029-F/1FS

Capacity

The heat pump can produce approx. 367 l of hot water within 11.5 hours at a temperature of 52.5°C. The capacity is dependent on the extract air temperature, the supply temperature of the cold water and the drawing pattern.

It is possible to connect a 1.5 kW electric heating cartridge at peak loads to provide hot water again quickly. When the desired temperature has been reached, the electric cartridge can be switched off. The energy consumption of a NIBE MT-WH2029-F/1FS is 28 % of the consumption using an electric water heater.

Suitability

The NIBE MT-WH2029-F/1FS is a very energy saving domestic hot water heat pump, which uses the energy of the extract air to heat up the domestic hot water. The heat pump heats the domestic water in a very energy efficient way with an actual efficiency (COP) of 2.72 at a extract air temperature of 7°C and heating the water from 10°C to 52.5°C and a circulated air volume of 250 m³/h.

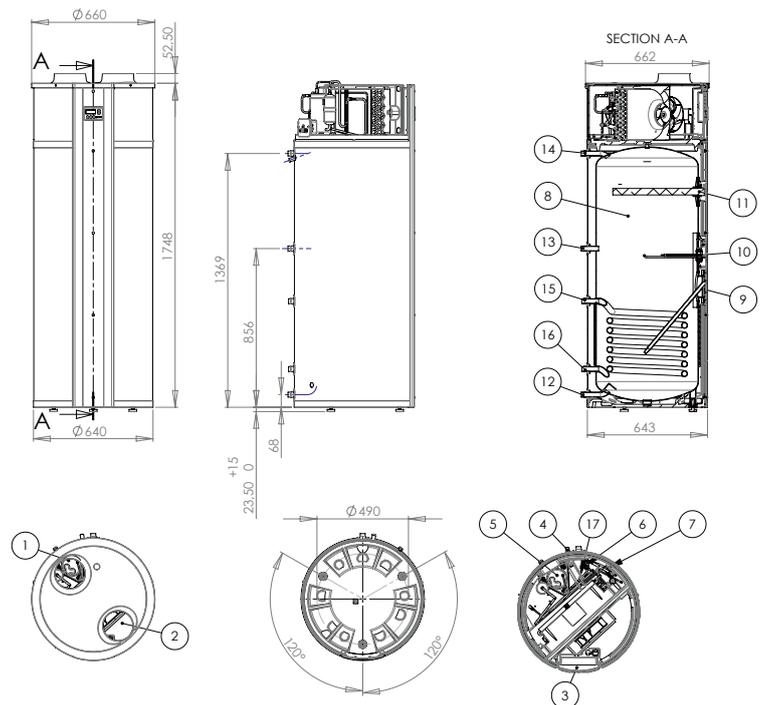
Hot water temperature with heat pump alone, max.: 55°C. Hot water temperature with heat pump + electric cartridge, max.: 65°C.

Measurement

Dimensions

NIBE MT-WH2029-F/1FS
Dimensions in mm.

01. Extract air
02. Exhaust air
03. Circuit board
04. Condensation drain
05. Compressor
06. Magnetic valve
07. Check valve
08. 285 liter boiler
09. Service connecting
10. 1.5 kW electric cartridge
11. Anode
12. Cold water connecting 3/4" rg
13. Hot water circulation 3/4" rg
14. Hot water connecting 3/4" rg
15. Coil for solar a second heat source (NIBE MT-WH2029-1FS)
16. Coil for solar a second heat source (NIBE MT-WH2029-1FS)
17. High pressure switch



Automatic

The NIBE MT-WH2029-F/1FS is equipped with a complete Optima control and a display. The operating status can be read in the display and the operating conditions of the unit can easily be changed.

The following operating modes can be set:

P1: Level

With this key it is possible to switch between: Standby, automatic operation, constant operation and timer controlled constant operation. (Level 0, level 1, level 2, level 3).

Level 0: The heat pump is now turned off, only the control is active.

Level 1: The fan only runs when domestic water is heated. (1. priority)

Level 2: The fan runs, even after the compressor has stopped, providing constant air extraction from the home.

Level 3: The fan runs in a chosen period of time, even after the compressor has stopped, before it switches back to normal operation.

Factory setting: 1

P2: Control of the electric cartridge

The heat pump is supplied with an electric cartridge for heating the domestic water. This key gives signal to the electric cartridge to turn on when needed.

By adjusting the set point to 1, the electric cartridge will turn on when needed.

By adjusting the set point to 0, the electric cartridge will not turn on if needed.

At an outdoor temperature below 0°C it is an advantage to use the electric cartridge as a supplement to the domestic hot water heating.

Factory setting: 0°C.



P3: The operating thermostat

The required domestic water temperature may be set between 0 and 55°C, which is heated by the heat pump.

Factory setting: 50°C

P4: Stop defrosting

As a standard setting the defrosting period ends when the temperature has reached 10°C. During extraordinary operating conditions, it may be necessary to change this temperature. The temperature may be adjusted between 0 and 25°C.

Factory setting: 10°C

P5: Electric cartridge

The domestic hot water temperature may be adjusted between 0 and 65°C. The electric cartridge solely heats the top half of the boiler, while the heat pump still heats the lower half of the boiler.

Factory setting: 50°C

Display view

The different temperatures can be seen in the display by pressing the arrow keys until the number of the desired sensor is reached. The temperature will be displayed after appr. 3 seconds. The temperature remains for about 30 seconds before the display goes back to normal view.

The following values can be displayed:

T4: Additional sensor for free or forced operation input

T5: Inled air, evaporator

T6: Evaporator

T7: Boiler, top

T8: Boiler, bottom

T9: Additional sensor

CL: The current time from the built-in clock



Technical specifications

NIBE™ MT-WH2029-F/1FS

Electrical connection:	1 x 230V+ N + PE, 13 A, 50 Hz
Fan	RH19V
Condenser	2.0 µF
Motor	AC
Isolation class	B
Protection class	IP21
Fan speed	2500 RPM
Fan power consumption max.	58 W
Fan current consumption	0.26 A
Compressor	WHP01900BSV
Operating temperature range of the heat pump	-5°C to 35°C extract air temperature
Effect collection	0.4 kW at an extract air temperature of 7°C (water 10°C-52.5°C)
10°C-52.5°C	
Heat performance	1.1 kW at an extract air temperature of 7°C (Water 10°C-52.5°C)
10°C-52.5°C	
COP	2.72 acc. to EN 16147 class L
Refrigerant	R134a
Filling	1100 g
Power consumption of the electric cartridge	1.5 kW
Boiler capacity	285 liters
Heat loss	2.3 W/K
Max. operating pressure	10 Bar

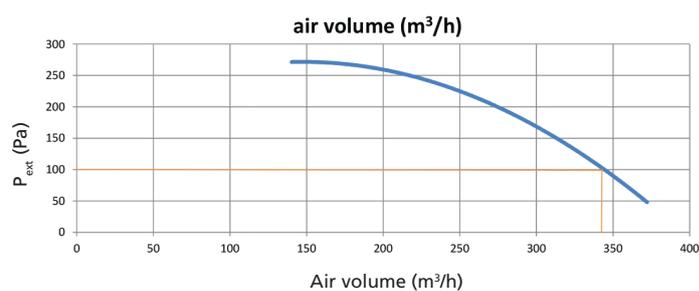
Construction	
Main dimensions:	Ø660 x 1837 mm incl. connecting pieces
Cabinet construction:	Coloured steel casing with 45 mm insulation
Top plate:	Cast en bloc with duct connection 2 x Ø160 mm
Protection of the boiler:	Enamelled inside and magnesium anode
Condenser:	D-pipe condenser coiled at the outside of the cylinder*
Condensation drain:	Ø 19
Weight without /with water:	113 kg/398 kg

*This structure prevents formation of limit scale on the condenser

Sound data

Measuring point	1 m in front of unit	Extract air duct	Supply air duct
Airvolume	100%	100%	100%
	L dB	Lw dB	Lw dB
63 Hz	58	98	86
125 Hz	53	95	88
250 Hz	54	89	83
500 Hz	47	84	77
1000 Hz	44	78	71
2000 Hz	46	78	68
4000 Hz	35	69	62
8000 Hz	30	61	51
Sum (A-weighted)	L dB(A) 52	Lw dB(A) 86	Lw dB(A) 79

Fan capacity



It is recommended to keep the external pressure loss less than 100 Pa.