

NIBE air/water programme for
commercial and residential use
Air/Water heat pump NIBE™ F2300

NEW

Features of NIBE™ F2300

COP levels are among the best on the market

Supply temperature 63 °C at -25 °C ambient

Very low noise level

Extended real working range down to -25 °C ambient

Built-in condensate water tray

NIBE F2300

The NIBE monobloc air/water programme consists of the NIBE F2300, mainly for commercial use. The updated programme gives complete coverage of building heating power demand in the 5 – 22 kW range.

F2300-14 and -20 are two air/water outdoor units that are particularly suitable for large residential or commercial buildings. Great efforts have been made to create attractive system combinations.

Special attention has been given to minimizing the noise level. F2300-20 kW is one of the quietest units available on the market.

These NIBE products have been developed with special attention to making installation as smooth as possible. For example, we always include anti-vibration water connections with the outdoor unit. A broad accessory programme is available, and there are numerous recommended possible combinations.

Please visit www.nibe.eu for further information.

Flexible system solutions

With the new NIBE F2300 range we can provide installations for both commercial and residential use.

NIBE offers a broad selection of accessories and complete indoor modules. These have been developed with our air/water heat pumps to optimize their efficiency and give you the highest possible savings. Factors such as the size of your house, where you live and your domestic hot water demand will decide which system solution is most appropriate for you.

For the best combination, please consult your installer or NIBE partner.



VVM 500 system

Combinations

Outdoor unit	Indoor unit	For docking principles, please see www.nibe.eu/air-water/docking .
NIBE F2300-14	VVM 500	
NIBE F2300-20	VVM 500	



All-in-one indoor unit cabinet solution VVM 500

NIBE VVM 500 indoor unit takes care of your hot water demand and ensures that the correct heating power is sent to your heating system in the most efficient way. Heat production is reliable and economical with integrated hot water coil, circulations pumps, solar coil, control system and immersion heater.

NIBE VVM 500 is equipped with the new generation controller for good comfort, good economy and safe operation. Clear information about status, operating time and all temperatures in the system is shown on the large and easy to read display.

The indoor unit is connected to the air/water outdoor unit and your house heating distribution system. It is prepared for connection to a number of different products and accessories, e.g solar or other external heat source, extra water heater, swimming pool and climate systems with different temperatures.

SMO 20/40 system

Combinations

Outdoor unit	Controller	For docking principles, please see www.nibe.eu/air-water/docking .
NIBE F2300-14	SMO 20/40	
NIBE F2300-20	SMO 20/40	



Individual set-up with the NIBE SMO 20/40 advanced controller

The NIBE SMO 20/40 is an advanced controller module that supports a broad range of different hydraulic schemes. NIBE SMO 20/40 enables you to combine a NIBE F2300 air/water heat pump with other equipment and create your own customised heating system. Start with one NIBE F2300 heat pump; if you need more power, you can install as many as eight NIBE F2300 heat pumps together in the same system. The addition of the SMO 20/40 intelligent control module allows your NIBE F2300 to work smoothly in a variety of ways. For example:

- Connected to another heating system such as gas, oil, electricity or district heating.
- Connected to a NIBE water heater of the size required to meet your domestic hot water needs.
- If you have a swimming pool, the SMO 40 can connect your heat pump to your pool and heat that too.
- Systems controlled by the SMO 40 can also incorporate solar panels, enabling you to use solar energy as a complementary heat source when available.

Existing boiler system

For docking principles, please see www.nibe.eu/air-water/docking.



Existing boiler

This system set up is often used to back up an existing heating system. The built-in controller in the outdoor unit can work with a thermostat.

In the case of a wood-fired boiler, the NIBE F2300 is connected to the accumulator tank, which contains a water heater. When the wood-fired boiler is not in use, the heat pump starts automatically, providing an economical heat source. It is controlled by a thermostat in the accumulator tank.

In the case of an oil or gas boiler, the heat pump is connected to the heating circuit just before the boiler, and contributes to heating the house (but not the hot water). It is controlled by a room thermostat.

Both of these installations make use of existing equipment and thus keep installation costs down. However, the energy savings that can be achieved are not as high as with the two other systems described.

Technical specifications

NIBE™ F2300 outdoor module

Type	F2300-14	F2300-20
COP at 2/35 °C*	3.84	3.53
COP at 2/45 °C*	3.28	3.02
COP at 7/35 °C*	4.39	4.04
COP at 7/45 °C *	3.69	3.41
COP at 7/55 °C*	3.18	2.91
COP at -7/45 °C*	2.65	2.58
COP at -15/45 °C*	2.20	2.16
Operating voltage	3 x 400 V + N + PE 50 Hz	3 x 400 V + N + PE 50 Hz
Compressor	Scroll EVI compressor	Scroll EVI compressor
Fuse	A 16	A 16
Max outgoing heating medium temperature	°C 65	°C 65
Refrigerant quantity (R407C)	kg 2.2	kg 2.8
Connection heating medium ext thread	mm G 1 ¼ (Ø35mm)	mm G 1 ¼ (Ø35mm)
Height with stand	mm 1324	mm 1324
Width	mm 1455	mm 1455
Depth	mm 620	mm 620
Weight	kg 224	kg 230
Lowest operational point. Outdoor air supply	°C -25/63 °C (-10/65 °C)	°C -25/63 °C (-10/65 °C)

*In accordance with EN 14511.

Range

Name	Building heating demand*
NIBE F2300-14	12 – 18 kW
NIBE F2300-20	16 – 22 kW

* Please discuss size with your NIBE partner for the correct dimensioning in your country.

Docking options

NIBE F2300 can be installed in several different ways. The requisite safety equipment must be installed in accordance with current regulations for all docking options. For docking options, please see www.nibe.eu/air-water/docking.

When docking with the NIBE F2300, a total water volume in the boiler and accumulator of at least 20 litres boiler water per kW output on the heat pump is recommended.

	F2300-14	F2300-20
Sound power level according to EN12102 at 7/45	Lw(A) 50/62	Lw(A) 53/62
Max sound pressure level at 2 m	dB(A) 39/51	dB(A) 42/51

The COP, supply temperature and working range are the best ever achieved by a NIBE air/water heat pump. For example, the F2300-14 is measured at COP=3.84 (A2/W35, EN14511). The supply temperature is 64 °C at -20 °C ambient. The real working range is extended down to -25 °C with the supply temperature still maintained at 63 °C. The heat pump works most efficiently with low-temperature heating systems, but for hot water production and if a building requires high temperatures the new limitation for the building heating system is 65/55 °C.

