

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 new NIBE F2026 for residential use and the new NIBE F2300, mainly for commercial use. The updated programme gives complete coverage of building heating power demand in the 5 – 22 kW range. The NIBE F2300 series can handle a building heating power demand of 12 – 22 kW.

The F2300-14 and -20 are two new air/water outdoor units that are particularly suitable for larger houses/buildings. Great efforts have been made to create attractive system combinations.

Special attention has been given to minimising the noise level. For example, the noise level for the F2300-20 kW is no more than that of a small 2026-8 kW, 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.



## 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.



## SMO 05 system

### Combinations

| Outdoor unit  | Controller | NIBE water heater  |
|---------------|------------|--|
| NIBE F2300-14 | SMO 05     | VPB 500, VPB 750, VPB 1000, VPA 300/200, VPA 450/300, VPAS 300/450 |
| NIBE F2300-20 | SMO 05     | VPB 500, VPB 750, VPB 1000, VPA 300/200, VPA 450/300, VPAS 300/450 |



### Individual set up with the NIBE SMO 05 basic controller

The NIBE SMO 05 controller has the new generation of icon-based user interface. You can install it in any room, from where you can read and make adjustments to your heating systems.

We believe the functionality will satisfy most of our customers. For installers, the standard combinations we have designed will make life easier.

The NIBE SMO 05 supports one basic heating scheme that enables different sizes of outdoor units and NIBE water heaters to be combined.

## SMO 10 system

### Combinations

| Outdoor unit  | Controller | For docking principles, please see |
|---------------|------------|------------------------------------|
| NIBE F2300-14 | SMO 10     |                                    |
| NIBE F2300-20 | SMO 10     |                                    |

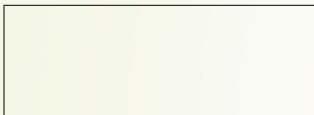


### Individual setup with the NIBE SMO 10 advanced controller

The NIBE SMO 10 is an advanced controller module that supports a broad range of different hydraulic schemes. The SMO 10 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 nine NIBE F2300 heat pumps together in the same system. The addition of the SMO 10 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 can connect your heat pump to your pool and heat that too.
- Systems controlled by the SMO can also incorporate solar panels, enabling you to use solar energy as a complementary heat source when available.

## Existing boiler system



### 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) |

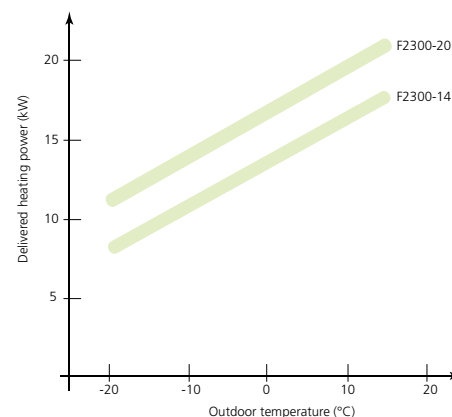
\*In accordance with EN 14511.

### 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.

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.



### Docking options

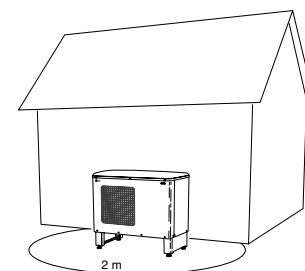
The NIBE F2300 can be installed in several different ways. The requisite safety equipment must be installed in accordance with current regulations for all docking options.

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 | 53/62    |
| Max sound pressure level at 2 m                | dB(A) 39/51 | 42/51    |

Sound pressure level may vary depending on surroundings. Our calculation is based on a worst case scenario with sound reflection from the house wall.



NIBE makes reservations for any factual or printing errors in this brochure. ©NIBE 2011