

Air/Water Heat Pump NIBE™ SPLIT

A new generation of heat pumps



Features of NIBE™ SPLIT

Tailor-made solar kits for optimal performance

Easy installation. Just connect the indoor and outdoor units and start

Choose from two sizes for the outdoor unit, 8 kW and 12 kW

Complete system for heating, cooling and hot water production

Prepared for external sources such as oil and gas

Heating when you need it cooling when you don't

NIBE SPLIT is a complete, all-in-one, energy-efficient heating and cooling system that gives you a comfortable indoor climate – safely and economically, with low CO₂ emissions. It is specially designed for residential use. Meaning single family properties from smaller to mid size properties.

Using an inverter controlled compressor, NIBE SPLIT produces best-in-class energy savings. It offers scheduling for individual demands and is prepared to handle several climate systems in the building

The indoor module (AVCM 270) consists of a climate control system based on outdoor / indoor temperatures, a large cylinder (with backup immersion heater) used for hot water and heating and low energy DC circulation pumps. The system works according to floating condensation meaning that just enough energy is produced, not more not less, to guarantee a comfortable indoor climate. The module is well prepared for floor or radiator/fan cool heating or cooling. It can be directly connected and control a gas boiler. The unit can be combined with the special developed solar kit.

The compact outdoor modules (AMS 10) function both as heaters and coolers. The modules retrieve heat from outdoor air, while refrigerant circulates in a closed system, transferring the heat to the indoor module.

Technical specifications

NIBE™ SPLIT

NIBE SPLIT	10-8	10-12
Operating voltage	1 x 230 V, 3 x 400 V	
Max current	44A, 16A	
Refrigerant quantity (R410A) included in outdoor unit	2.55 kg	2.9 kg
Max length, refrigerant pipe, one way	30 m	12 m
Max height difference, refrigerant pipe	7m	7 m
Delivered compressor output, heating (A7/W45 EN14511)	3.0-8.0 kW	3.5-12.0 kW
Delivered compressor output, cooling (A35/W18 EN14511)	2.7-10.7 kW	3.3 - 12.0 kW
COP, heating (A2/W35 EN14511)*	3.44	3.66
COP, heating (A7/W35 EN14511)*	4.69	4.40
COP, heating (A7/W45 EN14511)*	3.49	3.55
Delivered compressor output, cooling (A35/W18 EN14511)	2.7-10.7 kW	3.3 - 12.0 kW
EER, cooling (A35/W18 EN14511)*	3.42	3.56
Working range during heating with compressor (ambient temperature)	-20 – +43 °C	
Working range during cooling (ambient temperature)	+15 – +43 °C	
Max temperature flow line	65 °C	
Max temperature flow line, compressor only (-20 to +43 °C)	58°C	

Indoor unit NIBE ACVM 270

Immersion heater	Max 9 kW
Circulation pump flow at 20kPa pressure drop	0.45 l/s
Volume, total	270 l
Volume, hot water coil	14 l
Height	1760 mm
Min required ceiling height	2050 mm
Width	600 mm
Depth	660 mm
Weight	140 kg

Outdoor unit NIBE AMS 10

	10-8	10-12
Compressor	Twin Rotary	Twin Rotary
Speed, heating	20 – 86 Hz (rps)	25 – 85 Hz (rps)
Speed, cooling	20 – 81 Hz (rps)	20 – 80 Hz (rps)
Fan flow (heating, nominal)	3000 m³/h	4380 m³/h
Height	750 mm	845 mm
Width	780 mm	970 mm
Depth	340 mm	370 mm
Weight	60 kg	74 kg

* A2/W35 = 7,2 kW, A7/W35 = 9,2 kW, A7/W45 = 9,1 kW, A35/W18 = 12 kW

Docking capabilities

NIBE SPLIT connects easily with other energy sources such as solar panels or an existing boiler – so you can access additional energy when needed.



System description

NIBE SPLIT is a system for heating, hot water and cooling. The heating principle can be explained as follows:

1. The refrigerant in AMS 10 retrieves heat from the outdoor air then compresses it, which increases its temperature.
2. The hot refrigerant (now in gas state) is routed into ACVM 270.
3. The refrigerant releases the heat for further distribution in the system.
4. The refrigerant (now in liquid state) is routed back to AMS 10 and the process is repeated.

By reversing the process, and allowing the refrigerant in the AMS 10 to retrieve the heat from the water and release it into the outdoor air instead, the heat pump can also provide cooling.

The ACVM 270 determines when the AMS 10 needs to work and when it does not, using the collated data from the temperature sensor.

When extra heat is needed, the ACVM 270 can connect to an additional heat source such as an internal immersion heater or similar.

