

## HEATING WHEN YOU NEED IT COOLING WHEN YOU DON'T

- Optimal annual heating factor thanks to the inverter controlled compressor.
- ACVM 270 can be connected to either AMS 10-8 or AMS 10-12.
- Recommended for buildings with heating output requirement of 3–9 kW (if no external additional heater and no colder than -20 °C).
- Heating output 2.5 – 12 kW A7/W45
- Cooling output 2.5 – 12 kW
- Integrated active cooling function.
- Load monitor fitted at the factory.
- Outdoor unit with inverter controlled compressor with compact dimensions.
- Possible to connect external heat sources, for example gas boiler or solar panels.
- Speed controlled circulation pump that supplies the heat pump with suitable system flow.
- Optimized operating costs. The speed of the compressor is adjusted according to the demand.
- Prepared for control of two climate systems.
- Integrated coil water heater in ACVM 270.
- Integrated clock for scheduling extra hot water and temperature lowering/increasing the flow line temperature.
- Low risk of freezing because no water circulates between outdoor module and indoor module.
- Refrigeration qualification is required for installation.

### NIBE SPLIT

NIBE SPLIT is a complete modern heat pump system that offers effective technical energy saving and reduced carbon dioxide emissions. Climate control is safe and economical with integrated water heater, immersion heater, circulation pump and control system in the indoor module.

The heat is retrieved from the outdoor air through an outdoor module (AMS10), where the refrigerant, which circulates in a closed system, transfers the heat from the heat source (outdoor air) to the indoor module (ACVM 270). This eliminates the need for bore holes and coils in the ground.

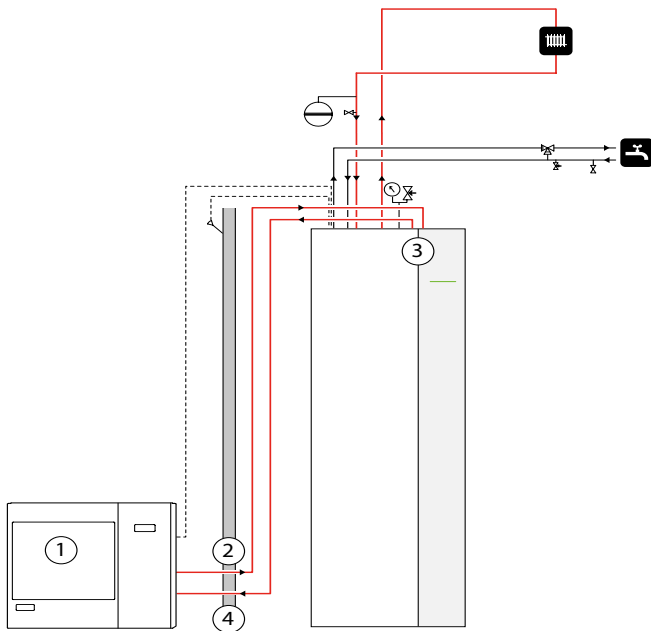
# GOOD TO KNOW ABOUT NIBE™ SPLIT

## Principle of operation

1. The refrigerant in AMS 10 retrieves heat from the outdoor air then compresses it, which increases the temperature further.
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, thereby allowing the refrigerant in to AMS 10 to retrieve the heat from the water and release it into the outdoor air, the heat pump can cool instead, if necessary.

ACVM 270 determines when AMS 10 is to work and not to work, using the collated data from the temperature sensor. In the event of extra heat demands, ACVM 270 can connect additional heat in the form of the internal immersion heater, or any connected external addition.



## Transport and storage

Outdoor module AMS 10 must be transported and stored vertically.

ACVM 270 can be transported horizontally or vertically and must be stored vertically and in dry conditions.

## Maintenance

NIBE SPLIT contains many components and is why monitoring functions are integrated to help you.

If something abnormal occurs, a message appears about malfunctions in the form of different "alarm" texts in display.

NIBE SPLIT requires minimal maintenance after commissioning.

AMS 10 is equipped with control and monitoring equipment, however some exterior maintenance is still necessary.

Make regular checks throughout the year that the inlet grille is not clogged by leaves, snow or anything else. In addition, you should ensure during the colder parts of the year that too much frost or ice does not form under AMS 10. Strong wind in connection with extensive snowfall can cause the inlet and exhaust air grilles to become clogged. Make sure that there is no snow on the grilles.

Also check that the condensation water drain under AMS 10 is not blocked.

If necessary the outer casing can be cleaned using a damp cloth.

Care must be exercised so that the heat pump is not scratched when cleaning. Avoid spraying water into the grilles or the sides so that water penetrates into AMS 10. Prevent AMS 10 coming into contact with alkaline cleaning agents.

## Control

NIBE SPLIT is equipped with an integrated electronic controller that handles all functions necessary for heat pump operations. Accordingly, defrosting, stop at max/min temperature, connection of the compressor heater as well as enabling the heater for the drip pan, monitoring of motor protection and pressure switches are controlled. The number of starts and the operating time can also be read.

NIBE SPLIT has an integrated electronic return line sensor that limits the return temperature.

AMS 10 and ACVM 270 communicate with each other, which means that all the settings and measurement values from AMS 10 can be adjusted and read in ACVM 270.

# GOOD TO KNOW ABOUT NIBE™ SPLIT

## Installation and positioning

### Outdoor module AMS 10

Position AMS 10 outdoors secured to a firm surface, preferably concrete foundation with ground stand or wall mounting. It must be positioned so that the lower edge of the evaporator is at the level of the average local snow depth, although a minimum 200 mm.

AMS 10 should not be positioned next to noise sensitive walls, for example, next to a bedroom. Also ensure that the placement does not inconvenience the neighbours. Care must be exercised so that the heat pump is not scratched during installation.

Large amounts of condensation water as well as melt water from defrosting can be produced. Provide good drainage at the installation area and make sure water cannot run out onto paths or the like during periods that ice can form.

The distance between AMS 10 and the house wall must be at least 150 mm. Ensure that there is at least one metre free space above AMS 10.

AMS 10 must not be placed so that the recirculation of outdoor air can occur. AMS 10 must not be placed in a windy location or where it is exposed to direct strong winds. This causes lower output and impaired efficiency and also negatively affects the defrosting function.

For wall installation, ensure that vibrations do not affect the inside of the house. Also ensure that the wall and mounting can take the weight of the heat pump.

## Noise

The sound pressure levels are further affected by compressor speed, walls, bricks, differences in ground level, etc and should therefore only be seen as guide values.

AMS 10 is usually placed next to a house wall, which gives a directed sound distribution that should be considered. Accordingly, you should always attempt to find a placement on the side that faces the least sound sensitive neighbouring area.

Sound AMS 10-8		Max
Sound power level*	L <sub>w</sub> (A)	64
Sound pressure level at 2 m free standing*	dB(A)	50

Sound AMS 10-12		Max
Sound power level*	L <sub>w</sub> (A)	65,5
Sound pressure level at 2 m free standing*	dB(A)	51,5

\*Variable up to max value depending on the speed of the compressor.

### Indoor module ACVM 270

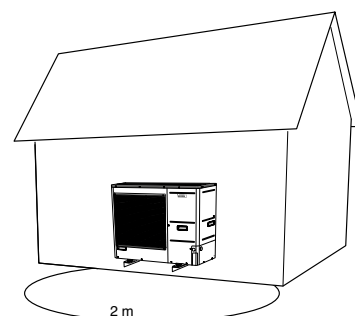
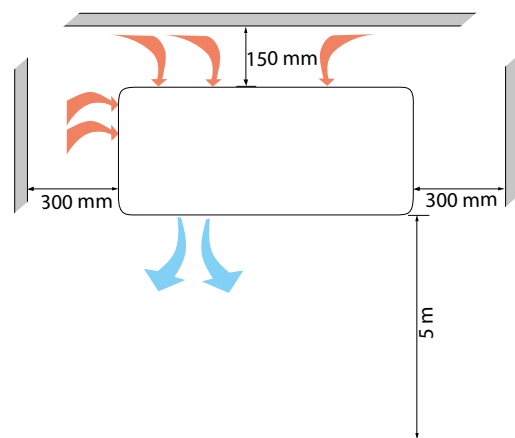
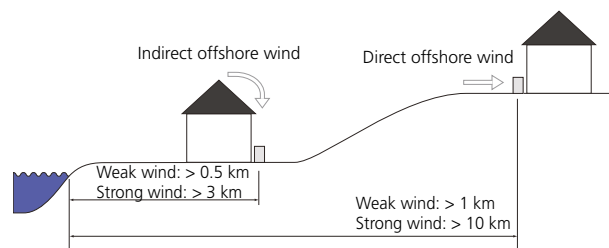
It is recommended that ACVM 270 is installed in a room with existing floor drainage, most suitably in a utility room or boiler room. Position the indoor module on a firm base that can take the weight, preferably on a concrete floor or foundation.

Install ACVM 270 with its back to an outside wall, ideally in a room where noise does not matter. If this is not possible, avoid placing it against a wall behind a bedroom or other room where noise may be a problem.

The unit can be aligned using the adjustable feet.

Route pipes so they are not fixed to an internal wall that backs on to a bedroom or living room.

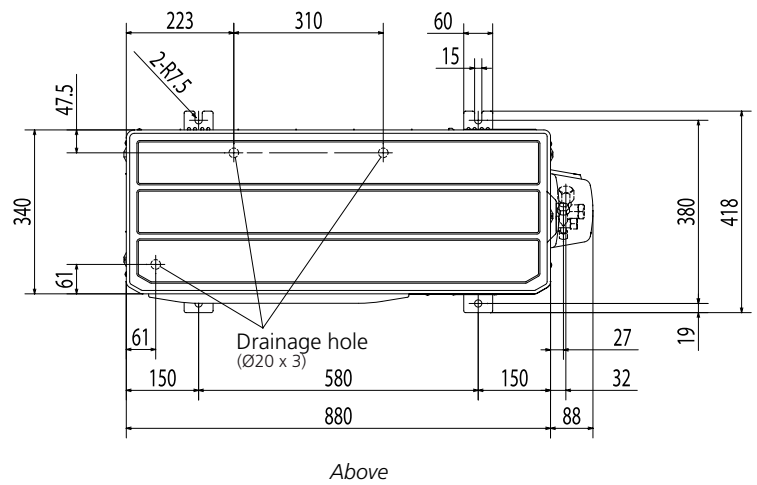
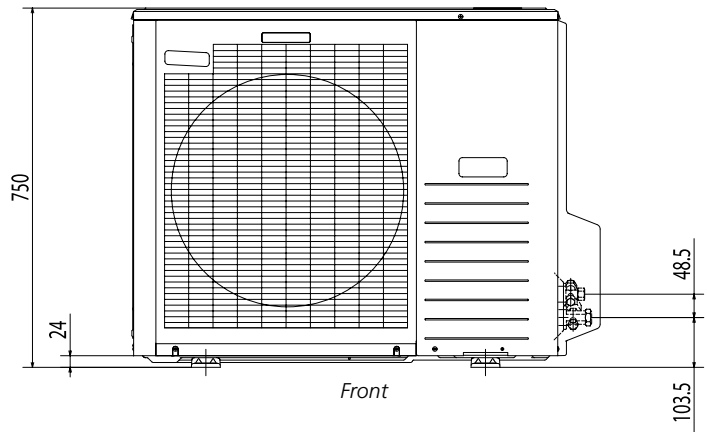
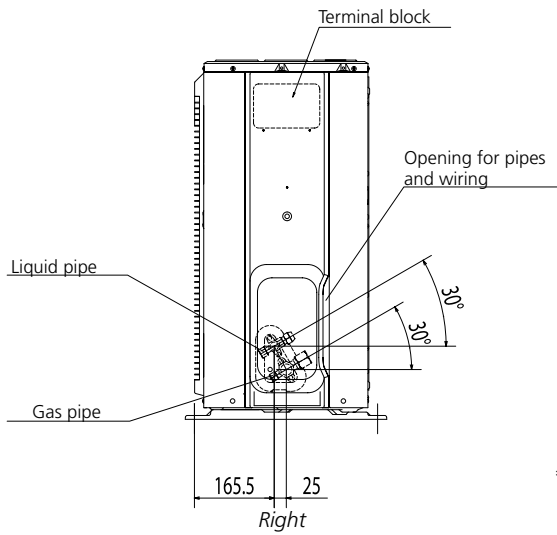
Ensure that there is approx. 500 mm free space in front of and 220 mm above the product for any future service.



# GOOD TO KNOW ABOUT NIBE™ SPLIT

## Dimensions

### Outdoor section AMS 10-8

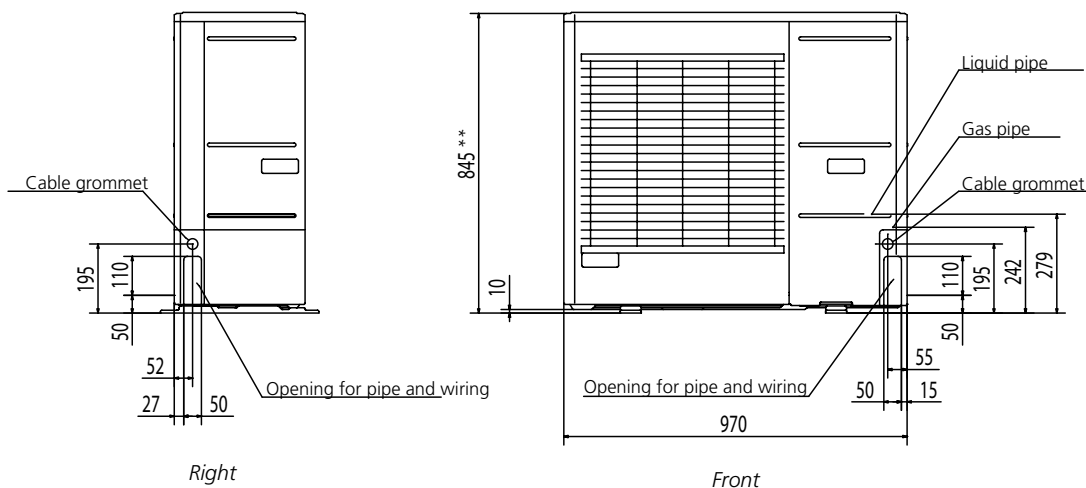
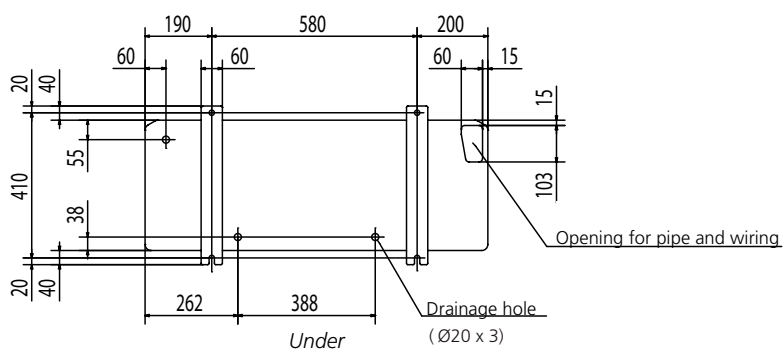


There should be a minimum of 150 mm free space behind, 1000 mm above and 300 mm beside the outdoor unit for service work.

\* Height including stand (excl. feet): 1000 mm.

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## Outdoor section AMS 10-12

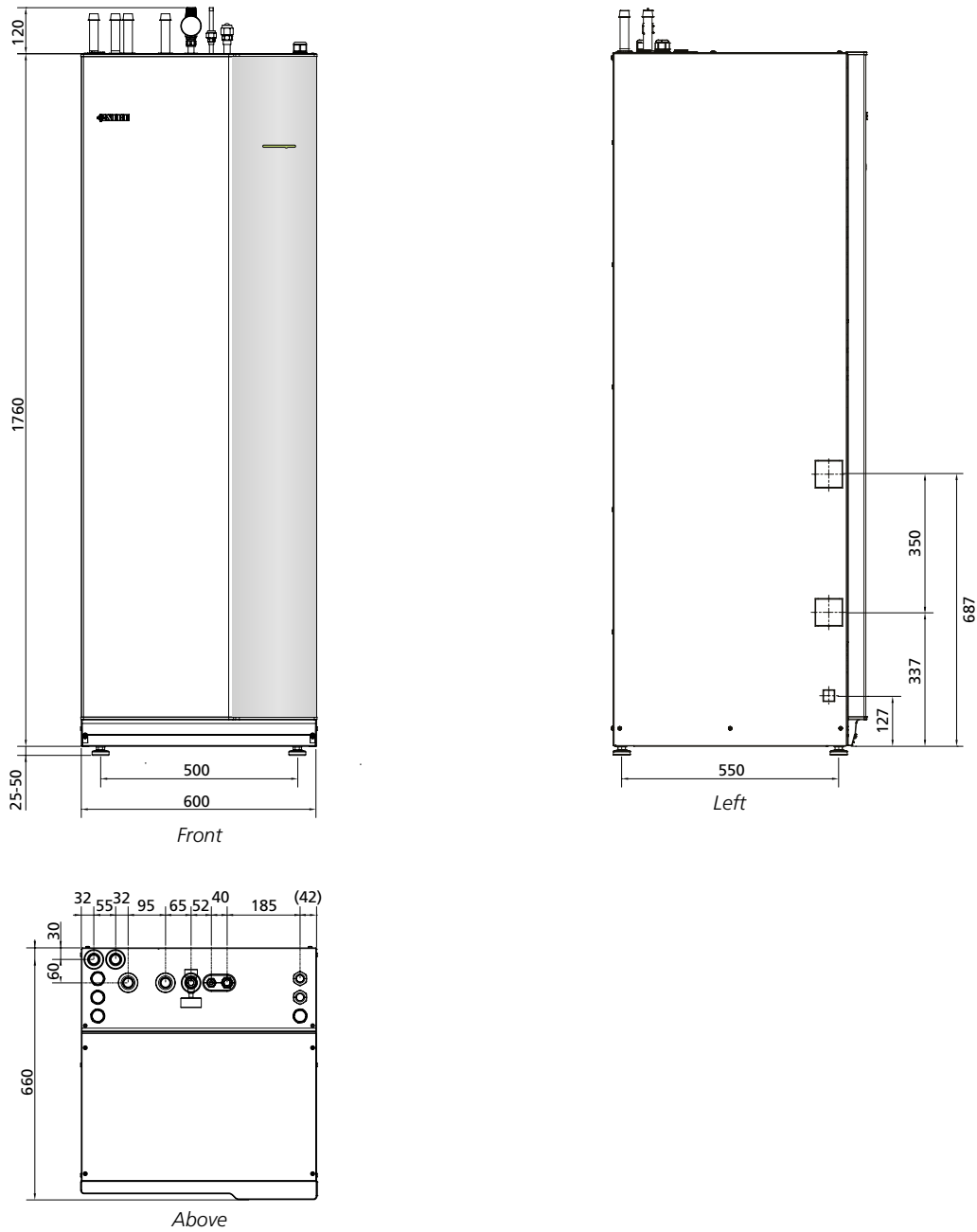


There should be a minimum of 150 mm free space behind, 1000 mm above and 300 mm beside the outdoor unit for service work.

\*\* Height including stand (excl. feet): 1095 mm

# GOOD TO KNOW ABOUT NIBE™ SPLIT

## Indoor unit ACVM 270

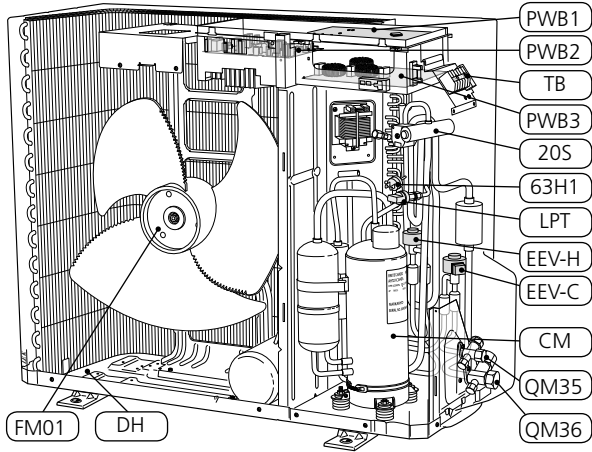


There should be a minimum of 500 mm free space in front of, 220 mm above the indoor unit for service work. Minimum ceiling height 2050 mm.

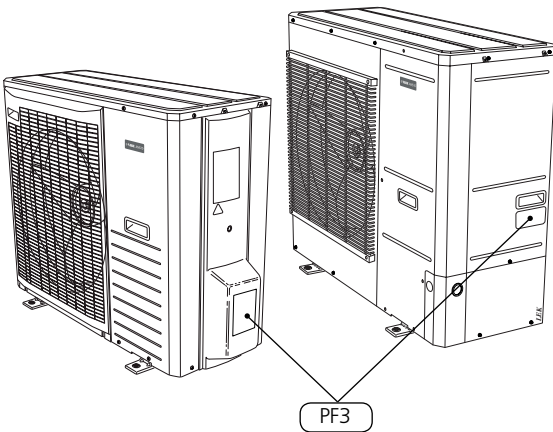
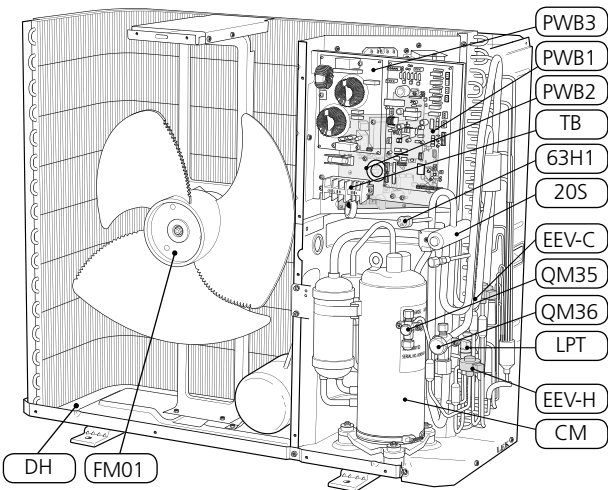
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## List of components

### Outdoor section AMS 10-8



### Outdoor section AMS 10-12



### Outdoor unit AMS

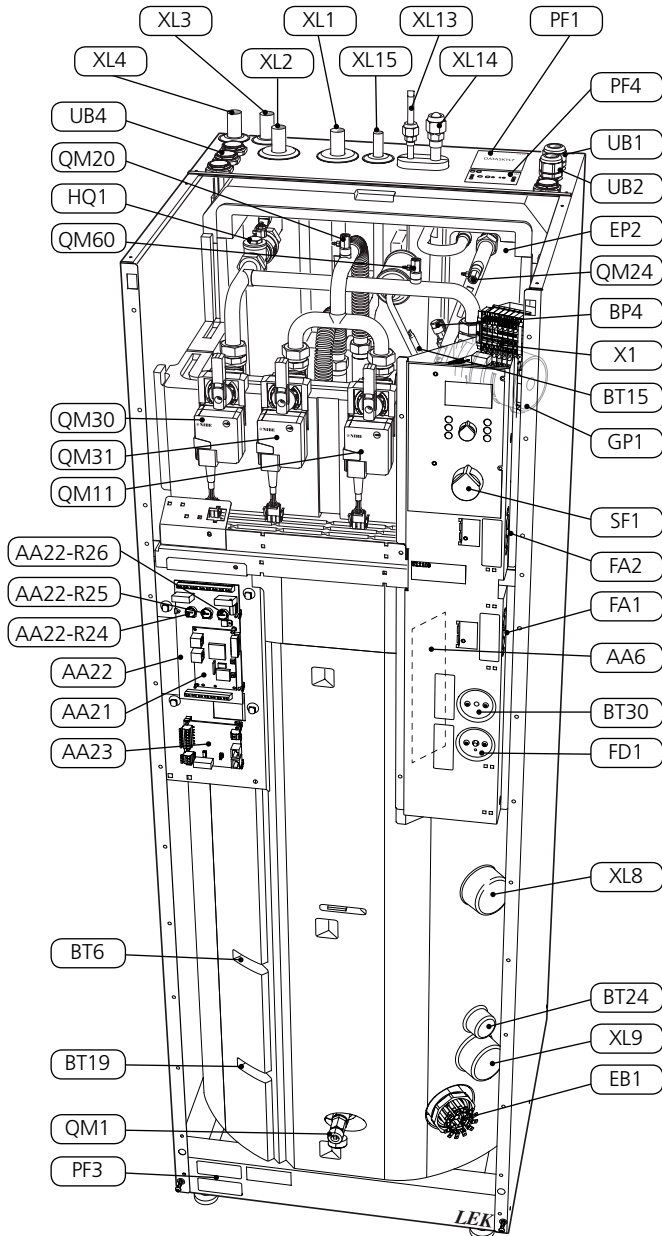
- 63H1 High pressure pressostat
- LPT Low pressure sensor
- FM01 Fan
- 20S 4-way valve
- CM Compressor
- PWB1 Control board
- PWB2 Inverter board
- PWB3 Filter board
- QM35 Service valve, liquid side
- QM36 Service valve, gas side
- EEV-H Expansion valve, heating
- EEV-C Expansion valve, cooling
- TB Terminal block, supply and communication
- PF3 Serial number plate
- DH Tank heater

Designations in component locations according to standard IEC 81346-1 and 81346-2.

# GOOD TO KNOW ABOUT NIBE™ SPLIT

## List of components

### Indoor unit ACVM 270



### Indoor unit ACVM 270

#### Pipe connections

- XL1 Climate system, flow Ø 22 mm
- XL2 Climate system return, Ø 22 mm
- XL3 Cold water, Ø 22 mm
- XL4 Hot water, Ø 22 mm
- XL8 Docking in, G1 int
- XL9 Docking out, G1 int
- XL13 Liquid line refrigerant, Flare 3/8"
- XL14 Gas line refrigerant, Flare 5/8"
- XL15 Connection safety valve, manometer

#### Valves etc.

- EP2 Heat exchanger
- GP1 Circulation pump, climate system
- HQ1 Particle filter
- QM1 Valve, draining/filling climate system
- QM20 Venting valve
- QM24 Venting valve
- QM60 Venting valve
- QM30 Actuator, shuttle valve, hot water
- QM31 Actuator shuttle valve, climate system
- QN11 Actuator, mixing valve

#### Electrical components

- AA6 Relay card
- AA21 CPU card
- AA22 EBV card
  - R24 Setting, fuse size
  - R25 Setting, max power, electrical addition
  - R26 Setting, max boiler temperature
- AA23 Communication board
- EB1 Immersion heater
- FA1 Miniature circuit breaker, control system
- FA2 Miniature circuit breaker, outdoor unit
- SF1 Switch

#### Sensor, thermostats

- BP4 Pressure sensor, high pressure
- BT6 Temperature sensor, HW charging
- BT15 Temperature sensor, fluid pipe
- BT19 Temperature sensor, immersion heater
- BT24 Temperature sensor, docking
- BT30 Thermostat, standby mode
- FD1 Temperature limiter

#### Miscellaneous

- PF1 Rating plate
- PF3 Serial number plate
- PF4 Plate, pipe connection
- UB1 Cable grommet
- UB2 Cable grommet
- UB4 Cable grommet



# INSTALLATION

## Pipe installation

Pipe installation must be carried out in accordance with current norms and directives. ACVM 270 can work at a temperature of up to approx 65 °C. For good savings we recommend that the climate system is dimensioned for max 55 °C.

ACVM 270 is not equipped with shut off valves. These must be installed outside the indoor module to facilitate any future servicing.

ACVM 270 can be connected to the radiator system, underfloor heating system and/or fan convectors.

Safety valves and manometer are supplied.

## Dimensioning expansion vessel

Internal volume in ACVM 270 for calculating expansion vessel is 280 l. The expansion vessel's volume must be at least 5 % of the total volume.

### Example table

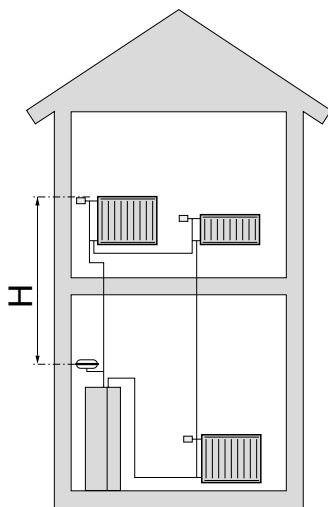
Total volume (l)	Volume Expansion vessel (l)
280	14
320	16
360	18

## Initial pressure and max height difference

The initial pressure of the pressure expansion vessel must be dimensioned according to the maximum height (H) between the vessel and the highest positioned radiator, see figure. An initial pressure of 0.5 bar (5 mvp) means a maximum permitted height difference of 5 m.

If the standard initial pressure in the pressure vessel is not high enough it can be increased by filling via the valve in the expansion vessel.

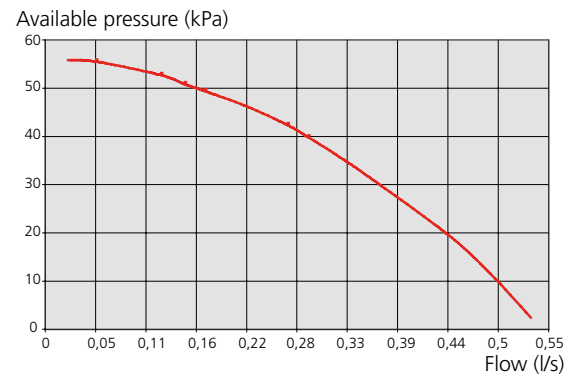
Any change in the initial pressure affects the ability of the expansion vessel to handle the expansion of the water.



## Pipe connections (climate system)

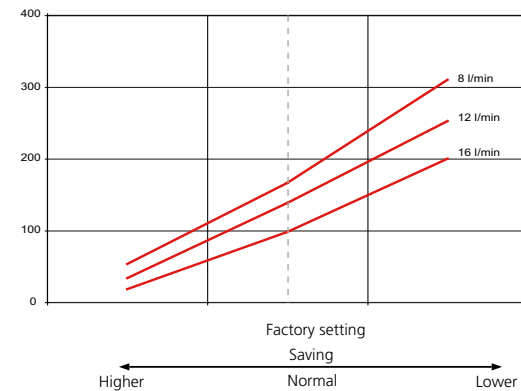
NIBE SPLIT can be connected to existing heating systems, see the section "Docking" or one of the system solutions that can be downloaded from NIBE's website [www.nibe.eu/air-water/docking](http://www.nibe.eu/air-water/docking).

## Pump capacity diagrams (climate system)



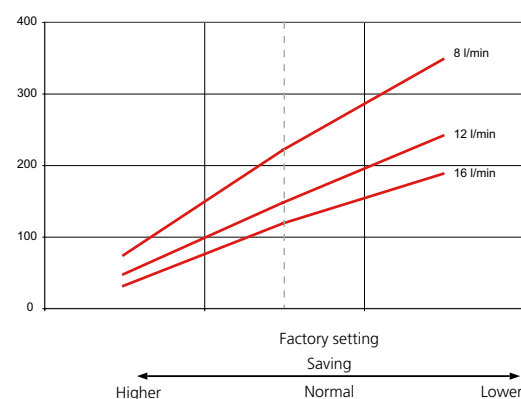
## Available hot water volume (ACVM 270 with AMS 10-8)

Domestic hot water volume at different water flows, 40 °C (litre)



## Available hot water volume (ACVM 270 with AMS 10-12)

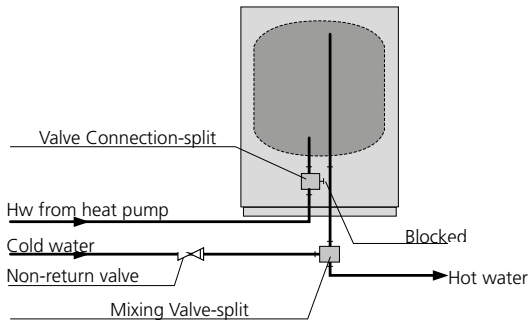
Domestic hot water volume at different water flows, 40 °C (litre)



# INSTALLATION

## Extra electric hot water heater

The heat pump should be supplemented with an electric water heater, if a hot tub or other significant consumer of hot water is installed. The valve coupling part is integrated but must be separated (as illustrated) if the water heater is used as an additional core water heater.



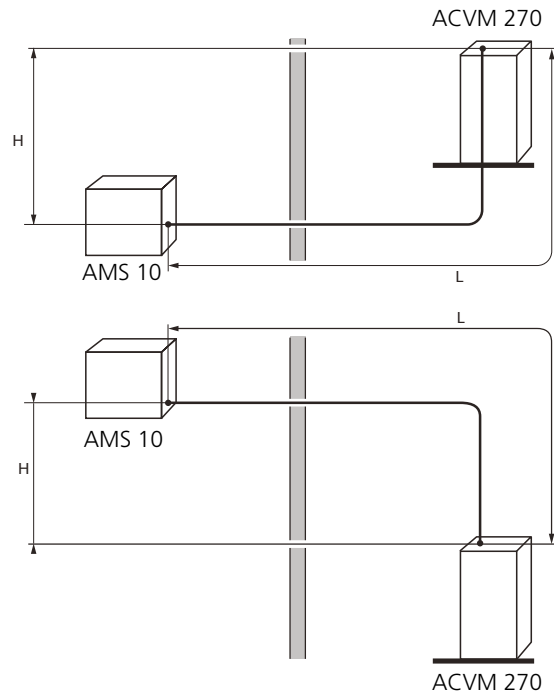
## Connecting refrigerant pipes (accessory)

Installation of the refrigerant pipes between outdoor module AMS 10 and indoor module ACVM 270 must be carried out by an authorized refrigeration technician.

Installation must be carried out in accordance with current norms and directives.

- Maximum pipe length, AMS 10-8 (L): 30 m.
- Maximum pipe length, AMS 10-12 (L):  
12 m for Part no. 064030,  
30 m for Part no. 064034.
- Maximum height difference (H):  $\pm 7$  m.

AMS 10 is delivered complete with the refrigerant required for the installation of refrigerant pipes up to 15 m in length. If the length of the refrigerant pipes exceeds 15 m extra refrigerant must be filled at 0.06 kg/m.



	Gas pipe	Liquid pipe
Pipe dimension	Ø15.88 mm (5/8")	Ø9.52 mm (3/8")
Connection	Flare – (5/8")	Flare – (3/8")
Material	Copper quality SS-EN 12735-1 or C 1220T, JIS H3300	
Minimum material thickness	1.0 mm	0.8 mm

# INSTALLATION

## Electrical installation

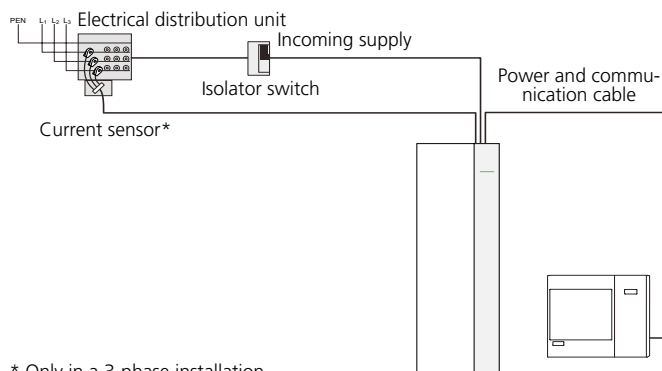
ACVM 270 must be installed via an isolator switch with a minimum breaking gap of 3 mm.

Other electrical equipment, except the outdoor sensors, current sensors and AMS 10 outdoor module is already connected at the factory.

- Disconnect the indoor module ACVM 270 and outdoor module AMS 10 before insulation testing the house wiring.
- For fuse ratings, see technical data, "Fuse protection".
- If the building is equipped with an earth-fault breaker, ACVM 270 should be equipped with a separate one.
- Do not start connecting without the permission of the electricity supplier.
- 5 x 2.5 mm<sup>2</sup> cable (voltage and signal cable) must be used for connection between ACVM 270 and AMS 10.
- AMS 10 is equipped with a single phase compressor. This means that phase L3 is loaded with up to 15 A during compressor operation.

Depending on the house main fuse and to avoid the load monitor slowing down the compressor, other loads in the house should be moved from L3 to L1 and L2.

**NOTE!** Electrical installation and service must be carried out under the supervision of a qualified electrician. Electrical installation and wiring must be carried out in accordance with the stipulations in force.



\* Only in a 3-phase installation

## Fuse table

Example of fuse sizing for ACVM 270 + AMS 10-12 with dimensioning outdoor temperature (DOT) - 21°C.

Only internal electrical addition with step 2, 4, 6, 9 kW. Compressor is blocked due to outdoor temperature lower than - 20°C.

Max heating demand (kW)	Max load (A)					Notes
	3 x 400 V			1 x 230 V		
	L1 (A)	L2 (A)	L3 (A)	L (A)	N (A)	
5	11	9	9	28	28	6 kW immersion heater only
6	11	9	9	28	28	6 kW immersion heater only
7	15	13	13	41	41	9 kW immersion heater only
8	15	13	13	41	41	9 kW immersion heater only
9	15	13	13	41	41	9 kW immersion heater only
10	-	-	-	-	-	External addition needed for example gas boiler
11	-	-	-	-	-	External addition needed for example gas boiler

Example of fuse sizing for ACVM 270 + AMS 10-12 with dimensioning outdoor temperature (DOT) - 19°C.

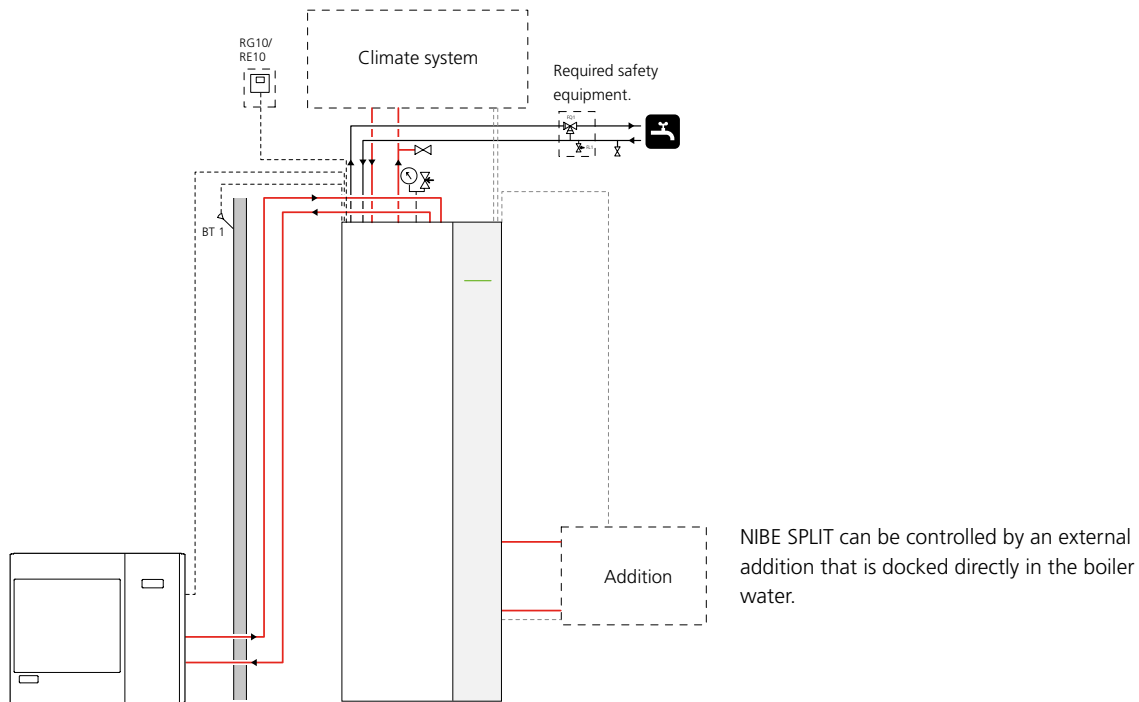
Only internal electrical addition with step 2, 4, 6 kW. Max 6 kW immersion heater together with compressor

Max heating demand (kW)	Max load (A)					Notes
	3 x 400 V			1 x 230 V		
	L1 (A)	L2 (A)	L3 (A)	L (A)	N (A)	
7	7	5	16	30	30	2 kW immersion heater+ compressor at DOT
8	7	5	16	30	40	2 kW immersion heater+ compressor at DOT
9	12	10	16	39	39	4 kW immersion heater+ compressor at DOT
10	17	15	16	48	48	6 kW immersion heater+ compressor at DOT
11	17	15	16	48	48	6 kW immersion heater+ compressor at DOT
12	17	15	16	48	48	Beside internal addition, 1 kW external addition is needed

# INSTALLATION

NIBE SPLIT can be connected in several different ways, some of which are shown on the following pages. For more detailed docking descriptions, see [www.nibe.eu/air-water/docking](http://www.nibe.eu/air-water/docking).

## NIBE SPLIT with climate system



Installation requirements	AMS 10-8	AMS 10-12
Max pressure, climate system	0.25 MPa (2.5 Bar)	
Highest recommended flow/return temperature at dimensioned outdoor temperature	55/45 °C	
Max operating temperature in ACVM 270	+65 °C	
Max flow line temperature with compressor	+58 °C	
Min supply temperature cooling	+7 °C	
Max supply temp. cooling	+25 °C	
Min volume, climate system during heating, cooling*	50 l	80 l <sup>1)</sup> /100 l
Min volume, climate system during underfloor cooling*	80 l	100 l <sup>1)</sup> /150 l
Max flow, climate system	0.38 l/s	0.57 l/s
Min flow, climate system, 100% circulation pump speed (defrosting flow)	0.19 l/s	0.29 l/s
Min flow, heating system	0.12 l/s	0.15 l/s
Min flow, cooling system	0.15 l/s	0.20 l/s

Docking external addition	ACVM 270
Output external addition	9 – 18 kW
Recommended docking flow	0.17 – 0.22 l/s
Max temperature from external heat source	+65 °C

\* Regards circulating volume

External circulation pump must be used when the pressure drop in the system is greater than the available external pressure. In such cases, a bypass line with non-return valve must be installed.

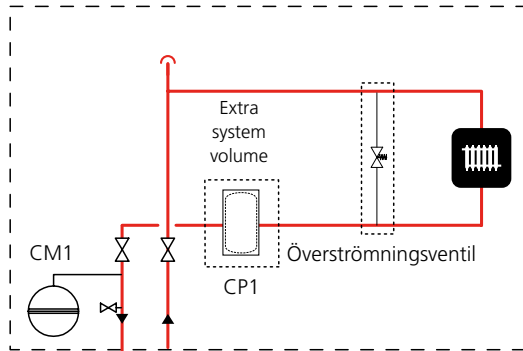
Use an overflow valve if system flow cannot be guaranteed.

<sup>1)</sup> Applies to Part no. 064033, 064034.

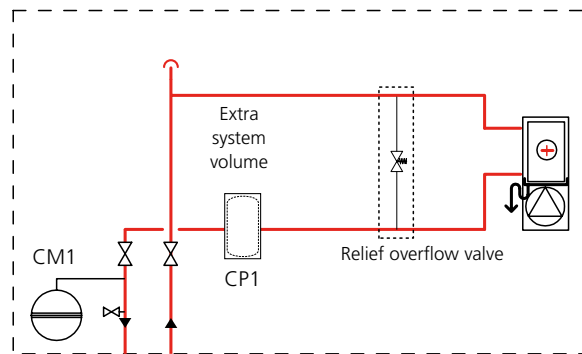
# INSTALLATION

## Climate system

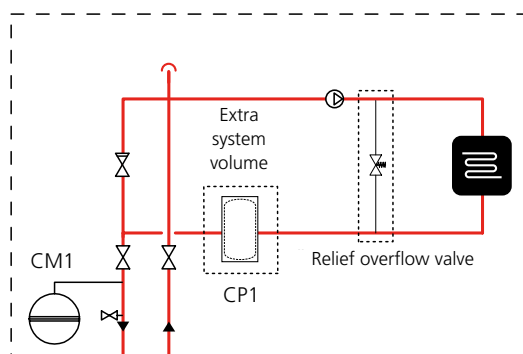
### Radiator system



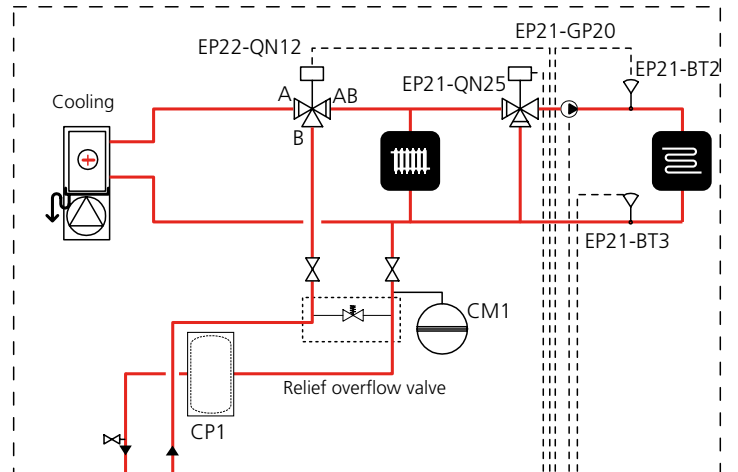
### Fan convector system



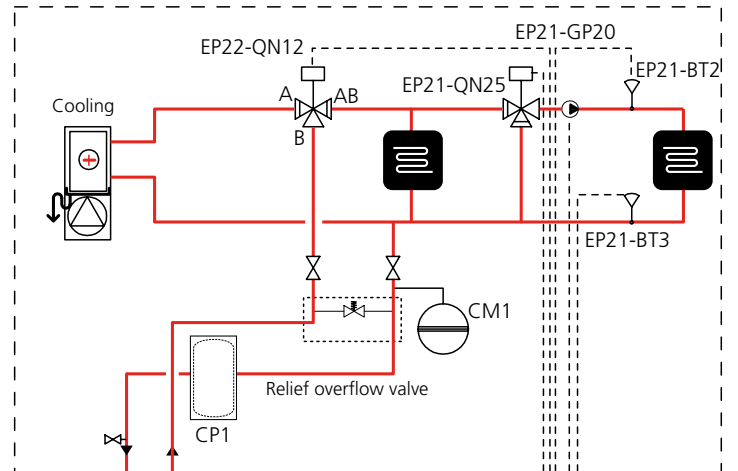
### Floor systems



### Radiator and underfloor heating for heating and fan convector for cooling



### Double underfloor heating for heating and fan convectors for cooling



## Explanation

### EP21 Climate system 2

- BT2 Temperature sensor, supply line
- BT3 Temperature sensor, return
- GP20 Circulation pump
- QN25 Mixing valve

### EP22 Climate system 3

- QN12 Reversing valve, cooling/heating

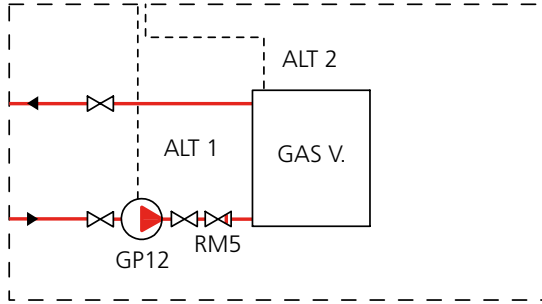
### Miscellaneous

- BT1 Temperature sensor, outdoor
- CM1 Expansion vessel
- CP1 Buffer vessel UKV
- GP12 Charge pump
- RM Non-return valve

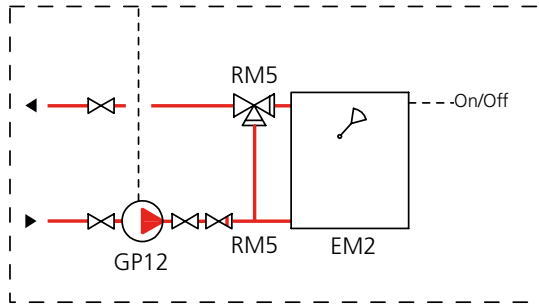
Only used if necessary

## External addition

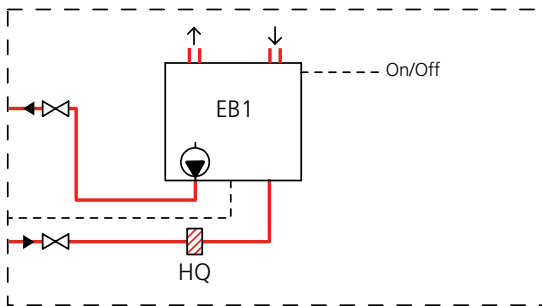
### Gas boiler



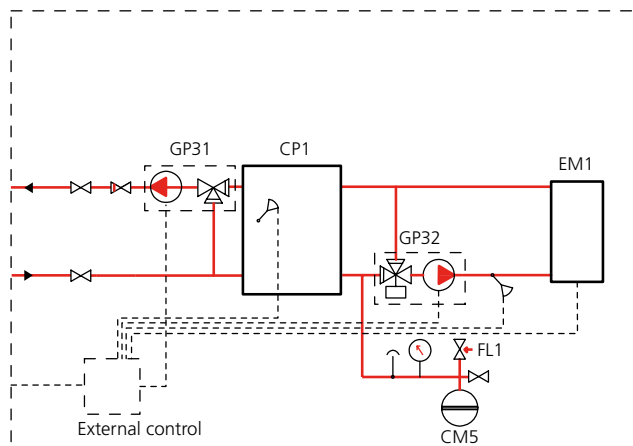
### Oil/Pellet boiler



### Exhaust air heat pump



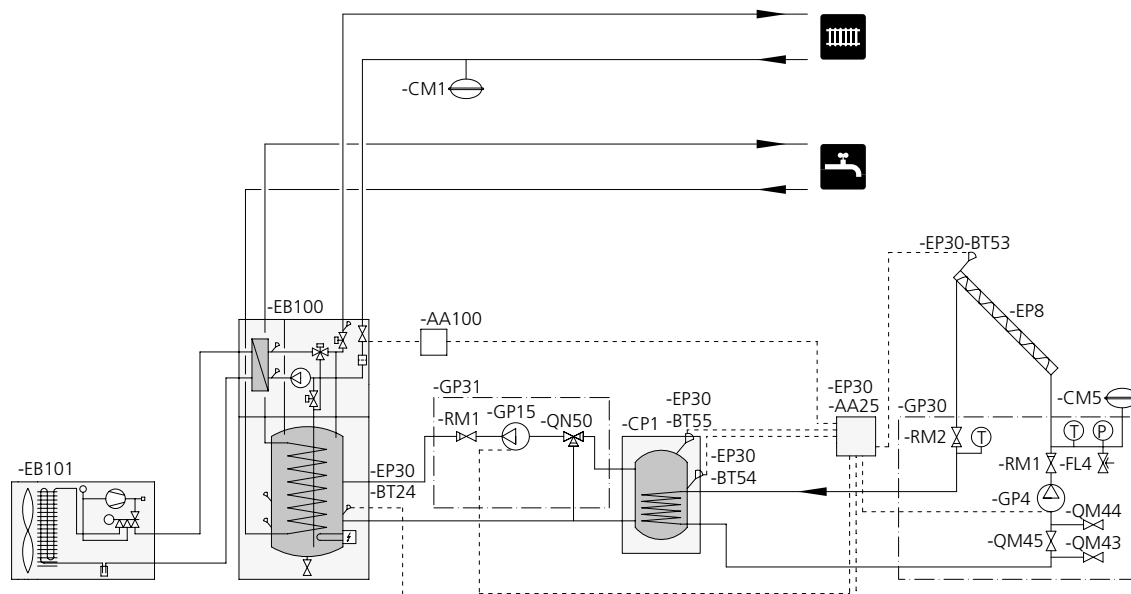
### Wood boiler with accumulator



### Explanation

AA25	Control unit
BT24	Temp.sensor, docking
BT53	Temp.sensor, solar panel
BT54	Temp.sensor, solar coil
BT55	Temp.sensor, solar peak
CM1	Expansion vessel
CM5	Expansion vessel
CP1	Accumulator tank
EB1	Immersion heater
EM1	Wood-fired boiler
EM2	Oil/Pellet boiler
EP8	Solar panel
EP30	Solar kit
FL1	Safety valve
FL4	Safety valve, solar
GP4	Circulation pump, solar
GP12	Charge pump
GP15	Charge pump
GP30	Pump station
GP31	Pump station, limits high temperature
GP32	Pump station, limits low temperature
HQ	Particle filter
QM4X	Shut-off valve
QN50	Control valve
RM3	Non-return valve
RM4	Non-return valve
RM5	Non-return valve

## Hydraulic principles for NIBE Solar Split FP215 P / PL



# TECHNICAL SPECIFICATIONS



<b>NIBE SPLIT</b>		<b>1 x 240 V</b>	<b>3 x 400 V</b>
Working range during heating with compressor (ambient temperature)	°C	-20 – +43	
Working range during cooling (ambient temperature)	°C	+15 – +43	
Max temperature flow line	°C	65	
Max temperature flow line, only compressor	°C	58	
Max temperature return line	°C	65	
Min temperature flow line during heating with compressor and continuous operation	°C	25	
Min temperature flow line during cooling	°C	7	
Maximum temperature supply during cooling and continuous operation	°C	25	
Max. current	A	44	16
Recommended fuse rating	A	50	16
Start current	A	5	5
Incoming supply, deviation		-15 – 10 %	
Max height difference, refrigerant pipe	m	7	
Dimensions, refrigerant pipe (Min. thickness 1.0 mm) Heat tolerance 120 °C		Gas pipe: OD15.88 (5/8") Liquid pipe: OD9.52 (3/8") Insulation	
Pipe connection		Flare	

<b>ACVM 270</b>			
Max immersion heater	kW	9	
Possible electrical step		4 (2, 4, 6, 9 kW)	
Circulation pump, output	W	9 - 80 (variable speed)	
Circulation pump, max available pressure	kPa	57 (external)	
Circulation pump, max flow	l/s	0.54	
Circulation pump, flow at 20 kPa external pressure drop	l/s	0.45	
		<b>AMS 10-8</b>	<b>AMS 10-12</b>
Min/max system flow, heating operation	l/s	0.12 /0.38	0.15/0.57
Min/max system flow, cooling operation	l/s	0.15 /0.38	0.20/0.57
Min flow, climate system, 100 % circulation pump speed (defrosting flow)	l/s	0.19	0.29
Emergency mode thermostat	°C	35 – 45 (factory setting 35)	
Temperature limiter	°C	98 (-8)	
Safety valve, climate system	MPa (Bar)	0.25 (2.5)	
Enclosure class		IP 21	
Volume, total	l	270 ± 5%	
Volume, hot water coil	l	14	
Material, hot water coil		Stainless steel	
Max pressure, vessel	MPa (Bar)	0.25 (2.5)	
Max pressure, hot water coil	MPa (Bar)	1.0 (10)	
Max pressure, cooling system	MPa (Bar)	4.5 (45)	
The water quality, domestic hot water and climate system		≤ EU directive no. 98/83/EF	
Max operating temperature, vessel	°C	65	
Ambient temperature, indoor module	°C	5–35, max relative humidity 95 %	
Connection, clamp, cold water	mm	22	
Connection, clamp, domestic hot water	mm	22	
Connection, clamp, docking		ISO 228/1 G1 internal	

## TECHNICAL SPECIFICATIONS

<b>ACVM 270</b>		
Height	mm	1760 (+25–50 mm adjustable feet)
Required ceiling height <sup>1)</sup>	mm	2000
Required ceiling height	mm	2050
Width	mm	600
Depth	mm	660
Weight	kg	140
Electrical connections		400 V 3NAC 50 Hz
Part no.		069 040

1) With feet dismantled the height is approx. 1970 mm.

<b>AMS 10</b>		<b>8</b>	<b>12</b>
Compressor		Twin Rotary	
Speed, heating	Hz (rps)	20–86	25–85
Speed, cooling	Hz (rps)	20–81	20–80
Fan flow (heating, nominal)	m <sup>3</sup> /h	3000	4380
Fan rating	W	86	
Defrosting		Reversing	
Breaking value high pressure	MPa	4.15	
Cut-out value low pressure (15 s)	MPa	0.079	
Height	mm	750	845
Width	mm	780 (+67 mm valve protection)	970
Depth	mm	340 mm (+ 110 mm with foot rail)	370 (+ 80 mm with foot rail)
Weight	kg	60	74
Colour (two coats powder coating)		Dark grey	
Power and communication cable from indoor module		5 core 2.5 mm <sup>2</sup>	
Refrigerant quantity (R410A)	kg	2.55	2.90
Max. length, refrigerant pipe, one way	m	064 031 - 30 m*	064 033** - 30 m*
		064 030 - 12 m	064 034** - 30 m*
Pipe connection option		Right-hand side	Bottom / right-hand side / rear side
Part No.		064 033	064 034

\*If the length of the refrigerant pipes exceeds 15 m extra refrigerant must be filled at 0.06 kg/m.

\*\*New version with integrated condensation water heater, 30 m cooling pipe and Quiet operation function.

We reserve the right to make changes in design and dimensions without prior notice.



## TECHNICAL SPECIFICATIONS

### Performance, ACVM 270 and AMS 10-8 (Tested according to EHPA and NFPAC.)

Heating	Temp. in/out	Min	Nominal	Max
EN14511 $\Delta T5K$ Specified/supplied power/COP	7/35 °C (floor)	1.75/0.50/3.50	6.19/1.41/4.39	8.12/1.93/4.22
	2/35 °C (floor)	1.49/0.48/3.12	5.20/1.51/3.44	5.68/1.70/3.34
	-7/35 °C (floor)	1.04/0.45/2.31	4.04/1.45/2.79	5.17/1.84/2.81
	-15/35 °C (floor)	1.25/0.59/2.10	2.74/1.18/2.32	3.92/1.69/2.32
	7/45 °C	2.64/0.81/3.27	6.00/1.72/3.49	7.72/2.30/3.35
	2/45 °C	2.14/0.79/2.71	4.80/1.77/2.71	6.64/2.54/2.61
	-7/45 °C	1.46/0.75/1.95	3.74/1.64/2.28	5.17/2.35/2.20
	-15/45 °C	0.92/0.69/1.33	2.67/1.40/1.91	3.83/2.08/1.84
	7/55 °C	3.08/1.26/2.45	6.09/2.22/2.74	7.10/2.73/2.60
-7/55 °C	1.88/1.14/1.65	3.33/2.00/1.67	4.25/2.44/1.74	

Cooling	Temp. in/out	Min	Max
EN14511 $\Delta T5K$ Specified/supplied power/EER	27/7 °C	2.06/0.38/5.38	7.52/2.37/3.17
	27/18 °C	2.71/0.34/7.88	11.20/3.20/3.50
	35/7 °C	2.10/0.55/3.82	7.10/2.65/2.68
	35/18 °C	2.67/0.71/3.76	10.7/3.19/3.35

Hot water performance, ACVM and AMS 10-8	COP
EN255-3	3.21

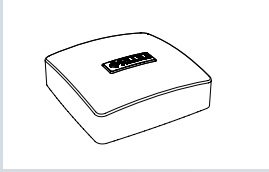
### Performance, ACVM 270 and AMS 10-12 (Tested according to EHPA and NFPAC.)

Heating	Temp. in/out	Min	Nominal	Max
EN14511 $\Delta T5K$ Specified/supplied power/COP	7/35 °C (floor)	3.54/0.86/4.14	9.27/2.12/4.40	11.21/2.80/4.01
	2/35 °C (floor)	3.11/0.82/3.83	7.21/1.99/3.66	8.25/2.47/3.35
	-7/35 °C (floor)	3.29/1.07/3.09	6.24/2.07/3.05	7.46/2.58/2.90
	-15/35 °C (floor)	3.23/1.32/2.47	4.51/1.89/2.42	6.62/2.69/2.46
	7/45 °C	3.45/0.96/3.61	9.08/2.58/3.55	11.13/3.38/3.29
	2/45 °C	3.11/1.03/3.04	7.05/2.43/2.93	8.73/3.20/2.73
	-7/45 °C	3.14/1.40/2.25	5.84/2.42/2.44	7.22/3.26/2.21
	-15/45 °C	3.19/1.72/1.86	4.24/2.19/1.96	5.95/3.35/1.78
	7/55 °C	4.45/1.64/2.72	8.41/3.08/2.75	8.97/3.49/2.57
-7/55 °C	3.50/1.99/1.77	4.93/2.80/1.78	5.64/3.52/1.60	

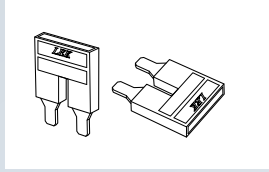
Cooling	Temp. in/out	Min	Nominal	Max
EN14511 $\Delta T5K$ Specified/supplied power/EER	27/7 °C	2.06/0.38/5.38	8.75/1.86/4.72	9.87/3.16/3.13
	27/18 °C	3.41/0.55/6.17	10.82/2.21/4.91	11.7/3.32/3.52
	35/7 °C	1.81/0.70/2.59	6.98/2.54/2.75	9.45/3.41/2.77
	35/18 °C	3.10/0.69/4.48	9.37/2.64/3.56	11.2/3.58/3.12

Hot water performance, ACVM 270 and AMS 10-12	COP
EN255-3	3.25

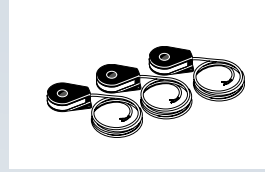
## SUPPLIED COMPONENTS



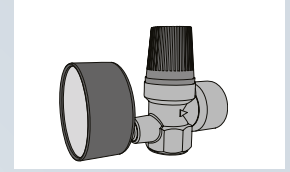
Outdoor sensor



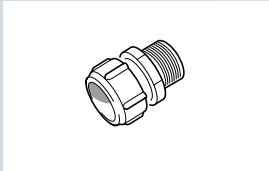
Straps for single phase connection



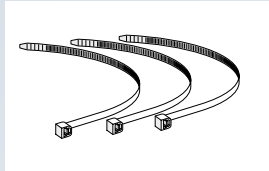
Current sensor, 3-phase for load monitor



Safety valve with manometer



Straight connection to safety valve



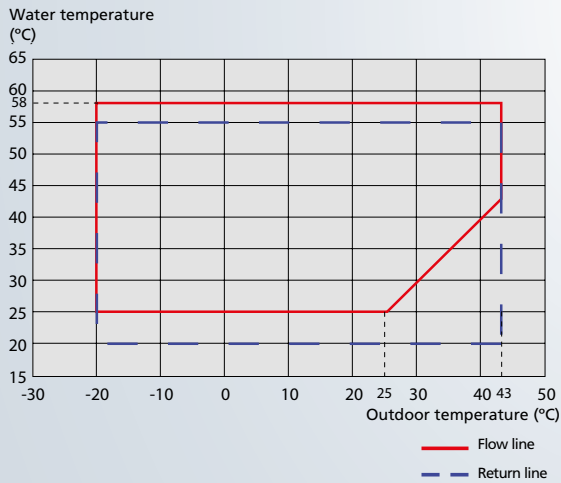
Cable tie



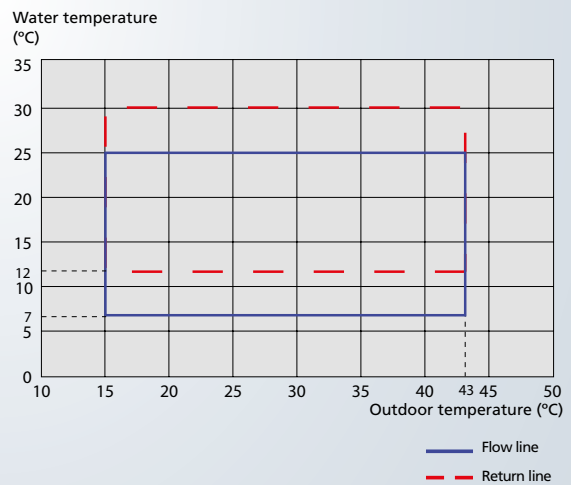
Maintenance and installation manual

The enclosed kit is located on the packaging for the heat pump.

### Working range, compressor operation - heating



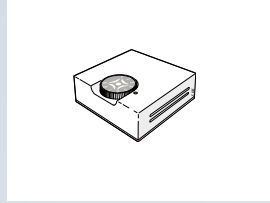
### Working range, compressor operation - cooling



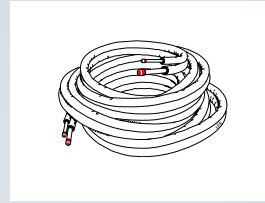
## ACCESSORIES



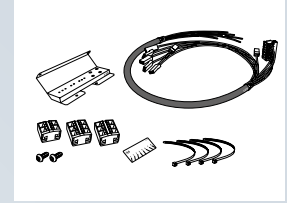
**NIBE RE 10**  
Room unit  
Part no. 067 004



**NIBE RG 10**  
Room sensor  
Part no 018 433



**Refrigerant pipe kit 12 m**  
Insulated  
Part no. 067 032



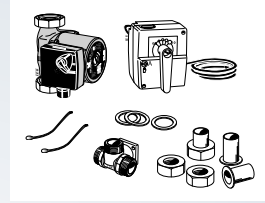
**NIBE ACK 22**  
Cable kit for ESV 22 or VCC 22.  
Part no. 067 049



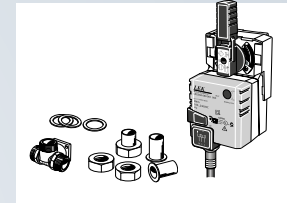
**NIBE UKV**  
Buffer vessel in steel  
UKV 40 Part no. 088 470  
UKV 100 Part no. 088 207



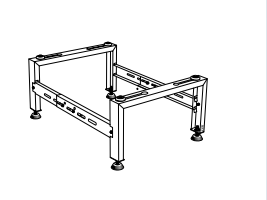
**NIBE HR 10**  
Auxiliary relay for external addition  
Part no. 089 423



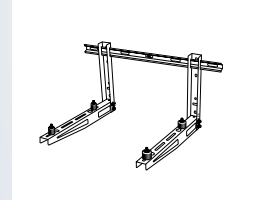
**NIBE ESV 22**  
Extra shunt group  
Connection 22 mm  
Part no. 067 047



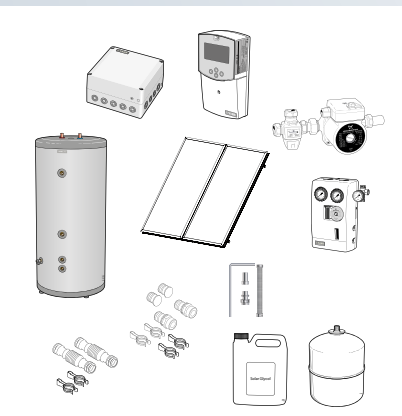
**NIBE VCC 22**  
Reversing valve, cooling  
For separate cooling and heating systems.  
Part no. 067 048



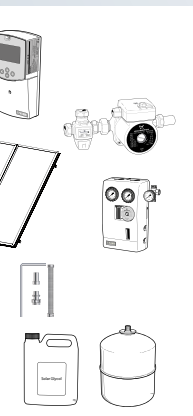
**Ground stand**  
For AMS 10  
Part no. 067 033



**Wall bracket**  
For AMS 10  
Part no. 067 034



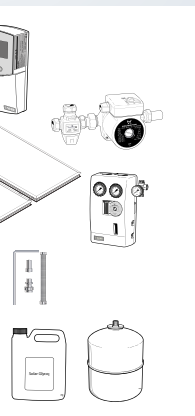
**NIBE Solar Split FP215 P2 package**  
Solar package for ACVM 2 vertical solar panels  
Part no. 069 039



**NIBE Solar Split FP215 P3 package**  
Solar package for ACVM 3 vertical solar panels  
Part no. 069 052



**NIBE Solar Split FP215 PL2 package**  
Solar package for ACVM 2 horizontal solar panels  
Part no. 069 054



**NIBE Solar Split FP215 PL3 package**  
Solar package for ACVM 3 horizontal solar panels  
Part no. 069 055

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