

Installer manual

**AG-AC10**

-42 / -50

Outdoor unit air/air heat pump



# Table of Contents

<b>1</b>	<b>Important information</b>	<b>4</b>
	Safety information	4
	Read before starting the installation	5
	Electrical requirements	5
<b>2</b>	<b>Delivery and handling</b>	<b>6</b>
	Transport	6
	Assembly	6
	Supplied components	6
<b>3</b>	<b>Pipe connections</b>	<b>7</b>
	General	7
	Connecting the cooling circuit	8
	Connections	8
<b>4</b>	<b>Electrical connections</b>	<b>9</b>
	General	9
	Connections	9
	Connecting accessories	9
<b>5</b>	<b>Installation</b>	<b>10</b>
	General	10
	Installation instructions	10
	Pump down	13
	Addressing	15
<b>6</b>	<b>The main functions of the valves</b>	<b>20</b>
<b>7</b>	<b>Disturbances in comfort</b>	<b>21</b>
	Troubleshooting	21
<b>8</b>	<b>Accessories</b>	<b>22</b>
<b>9</b>	<b>Technical data</b>	<b>23</b>
	Dimensions (mm)	23
	Technical specifications	24
	Electrical circuit diagram	25
	<b>Item register</b>	<b>26</b>

# 1 Important information

## Safety information

This manual describes installation and service procedures for implementation by specialists.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Rights to make any design or technical modifications are reserved.

©NIBE 2016.

## Symbols



### NOTE

This symbol indicates danger to machine or person.



### Caution

This symbol indicates important information about what you should observe when maintaining your installation.



### TIP

This symbol indicates tips on how to facilitate using the product.

## Marking

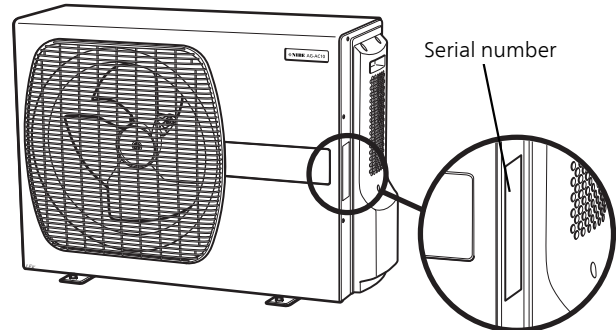
AG-AC10 is CE marked and meets IPX4.

The CE marking means that NIBE ensures that the product meets all regulations that are placed on it based on relevant EU directives. The CE mark is obligatory for most products sold in the EU, regardless where they are made.

IPX4 means that the product is protected against drops of water from all angles.

## Serial number

The serial number can be found in the middle of the right side panel.



### Caution

You need the product's serial number for servicing and support.

## Recovery

### Information regarding the correct recycling of the product in accordance with the EU directive 2012/19/EU



Do not dispose of used units with normal household waste. It must be disposed of at a special waste station or dealer who provides this type of service.

Separate waste sorting of an electrical and electronic device makes it possible to prevent adverse effects on the environment and human health, which may occur from inappropriate waste sorting and this also makes it possible to reuse and recycle the material, which leads to a considerable saving of energy and resources.

To emphasize the need for waste sorting and separate handling of these units, there is a symbol of a crossed-out waste bin on the product.

Improper disposal of the product by the user results in administrative penalties in accordance with current legislation.

## Environmental information

This unit contains a fluorinated greenhouse gas that is covered by the Kyoto agreement.

### F-Gas Regulation (EU) No. 517/2014

The equipment contains R410A, a fluorinated greenhouse gas with a GWP value (Global Warming Potential) of 2,088. Do not release R410A into the atmosphere.

## Safety precautions



### NOTE

- Avoid the use and storage of flammable liquids near the climate unit.
- Never install electric equipment that does not have IPX1 protection (protection against vertical water drops), under the unit.

The manufacturer assumes no liability, if safety the standards or protection preventive measures are not complied with.

### **Special safety measures**

During installation the cooling circuit must be connected first and then the electrical circuit. Perform in reverse order when removing the unit.

### **During repair**

- Disconnect the voltage (via the main switch) before opening the unit to check or repair the electrical parts.
- Keep hands and clothing away from moving parts.
- Clean after completing the work, and check that no metal residue or cable parts have been left inside the unit.
- Vent the premises during the installation and the cooling circuit test. Ensure that no refrigerant gas has leaked out during the installation, as contact with naked flames or heat sources can be toxic or dangerous.

## Read before starting the installation

This heat pump complies with strict safety and function standards.

It is very important that the installer or the service technicians install or repair the system so that it works safely and efficiently.

### **For a safe installation and good function the following is required:**

- Read this instruction manual carefully before starting installation.
- Follow the installation and safety instructions exactly as described and shown.
- Comply with local and national electrical regulations.
- Note all the warning and safety messages indicated in this manual.
- The unit must be connected to a separate supply.

These instructions are sufficient for installation and maintenance. If assistance is required for a particular problem, contact our dealer for further information.

NIBE does not accept any responsibility for damage that occurs in the event of incorrect installation or improper maintenance.

## Electrical requirements



### NOTE

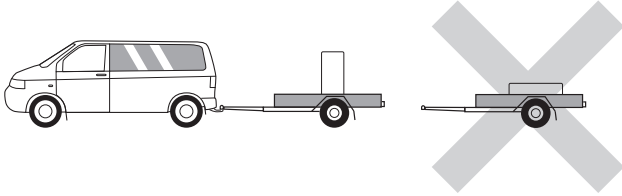
The electrical discharge can cause serious personal injury or death. Only qualified electricians may handle the electrical system.

- Before installation ensure that the mains supply for the power supply is the same as that indicated on the climate unit's rating plate.
- Each unit must be connected with approved grounded cable.
- The electrical connections must be performed by a specially trained and qualified electrician.
- Ensure a ground connection before the unit is powered.
- Hazardous electrical voltage is used in this electrical circuit. See electrical wiring diagram and its instructions below the connection. Incorrect connections or unsuitable ground connection can cause accidents or death.
- The yellow/green cable must not be used for connections other than ground.
- Tighten the cables securely. Incorrect connections can cause overheating and fire.
- Electrical cables must not come into contact with the cooling pipes, the compressor or fan's moving parts.
- Use separate cables for each type of cable.

# 2 Delivery and handling

## Transport

The outdoor unit should be transported and moved vertically.



Take care when lifting and moving the indoor and outdoor units. We recommend that you ask for assistance and bend your knees when you lift to avoid injuring your back.

## Assembly

We recommend that this climate unit be installed by an authorised technician in accordance with the supplied installation instructions.



### NOTE

- Do not install this climate unit where there are flue gases, flammable gases or a lot of moisture, e.g. in a greenhouse.
- Do not install this climate unit where there is equipment that generates too much heat.
- Do not install the unit in premises where it may be subjected to water splashes (e.g. laundry rooms).
- To protect the climate unit from corrosion, the unit must not be installed where it can be directly exposed to seawater splashes or sulphur fumes.

## Selection of installation location for outdoor unit

During installation...

- ...in damp or uneven locations:  
Use a base that is stable and raised above the ground to prevent damage and abnormal vibrations.
- ...in locations exposed to strong winds:  
Secure the unit with bolts and metal frame. Ensure that there is suitable wind protection.
- ...in locations susceptible to snowfall (for climate units with heat pump):  
The concrete foundation or slabs must be positioned so that the lower edge of the evaporator is at the level of the average local snow depth, however a minimum of 300 mm.

Prevent the following:

- proximity to heat sources or to areas where hot air is blown out.
- Installation on wooden wall, because there is a risk of resonance.

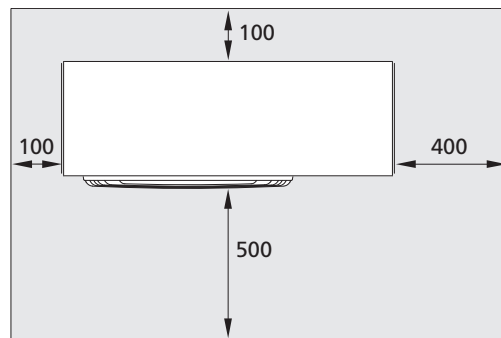
- damp areas or easily flooded areas and uneven surfaces.
- to drill holes in the areas where there are electrical parts or units.

The following is recommended:

- If possible, select well-ventilated, shaded areas.
- Secure the unit securely at the base to prevent vibrations.

## Installation area

Leave a free space of 2,000 mm above and 300 mm below the outdoor unit for work and maintenance.



## Supplied components



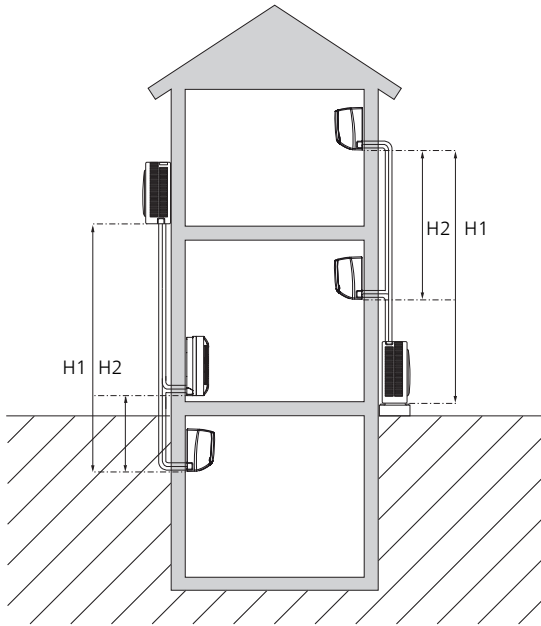
Transition nipple from 3/8" to 1/2"

# 3 Pipe connections

## General

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

Only use refrigerant pipes that are seamless, degreased, deoxidized and suitable for a pressure of at least 42 bar. The pipes must be supplied with at least 8 mm vapour-proof insulation.



H1 = Height max 10 m

H2 = Height max 5 m

Pipe length	AG-AC10-42
	<b>Total length</b>
The refrigerant pipes' minimum length	1.5 m
The refrigerant pipes' maximum total length with standard filling	7.5 m
The refrigerant pipes' maximum total length with additional filling <sup>1</sup>	20 m

Pipe length	AG-AC10-50	
	Total length	Max. pipe length per in-door unit
The refrigerant pipes' minimum length	1.5 m	
The refrigerant pipes' maximum total length with standard filling	15 m	12 m
The refrigerant pipes' maximum total length with additional filling <sup>1</sup>	30 m	25 m

<sup>1</sup> Additional filling of refrigerant can be done when the unit is running in cooling operation: For refrigerant pipe 1/4" - 3/8" = 15 g/m. For refrigerant pipe 1/4" - 1/2" = 20 g/m. For refrigerant pipe 3/8" AG-DW10 15 g/m.

For information about pipe dimensions, see section "Technical Specifications" on page 24.

### Condensation drain

For condensation removal, the AG-CH10 accessory of sufficient length is required to transport the condensation to an external drain. See section "Accessories" on page 22 for further information about AG-CH10.

## Connecting the cooling circuit

- Use the flare method to connect the pipes.
- Keep all pipework as short as possible.

- Lubricate the contact surfaces and hand tighten, then tighten the connections using a torque wrench to obtain a good and secure connection. See the installation instructions on page 11.
- Check carefully that there is no risk of any leakage prior to the function test.

## Connections

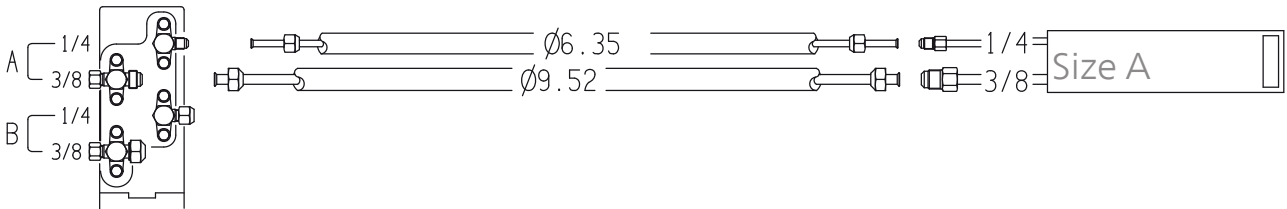


### Caution

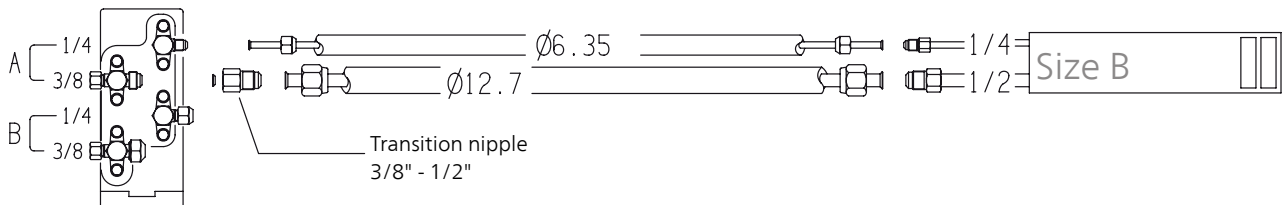
The hot water module is connected AG-DW10 to the marked AG-DW10 port. Connections for AG-DW10 are on the rear of the outdoor unit.

	Indoor unit
Size A	Indoor units with last number -4
Size B	Indoor units with last number -7

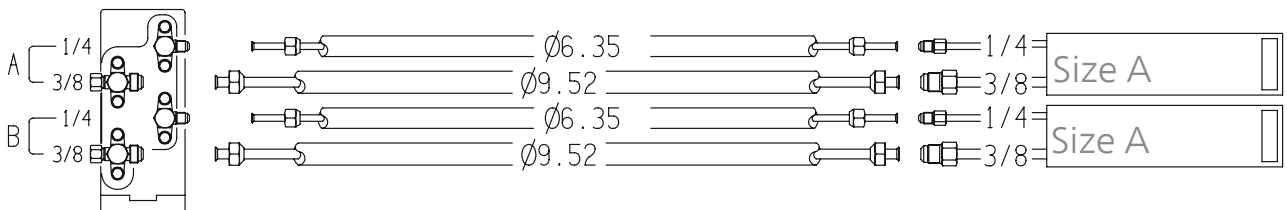
### AG-AC10-42 + one indoor unit



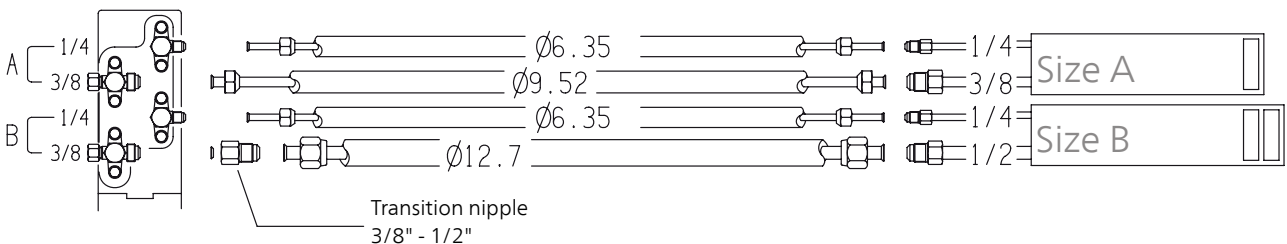
### AG-AC10-42 / AG-AC10-50 + one indoor unit



### AG-AC10-42 / AG-AC10-50 + two indoor units



### AG-AC10-50 + two indoor units





# 4 Electrical connections

## General



### NOTE

Electrical installation and service must be carried out under the supervision of a qualified electrician, and in accordance with applicable electrical safety regulations.

- If a miniature circuit-breaker is used this must have motor characteristic "C" (compressor operation). For other fuse sizes, see section "Technical Specifications" on page 24.
- If an insulation test is to be carried out in the building, disconnect the heat pump.

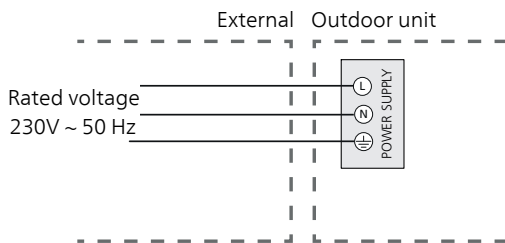
## Connections

### Power connection

AG-AC10 does not include an omnipolar circuit breaker on the incoming power supply. The heat pump supply cable must be connected to a circuit breaker with at least a 3 mm breaker gap. When the building is equipped with an earth-fault breaker, the heat pump should be equipped with a separate one. H07RN-F or similar cable must be used for connecting the supply.

### 1x230V

Incoming supply must be 230 V ~ 50 Hz via electrical distribution unit with fuses.

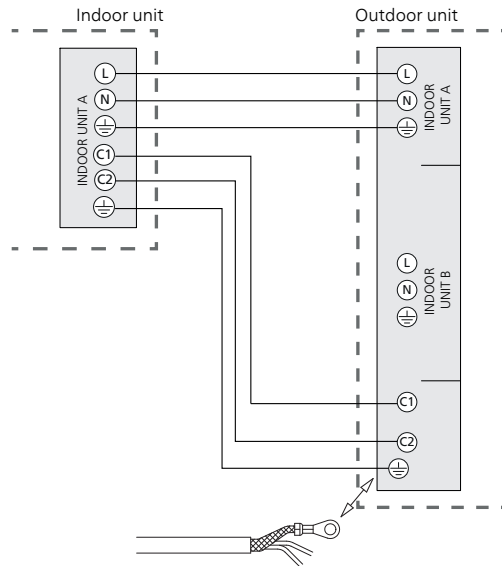


### Connecting to indoor unit

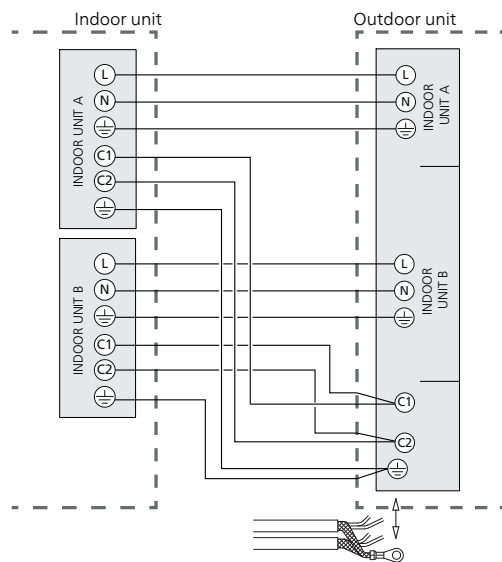
The communication cable must be screened and of the H05VVC4V5-K 2x0.75 type or similar.

The supply cable to the indoor units must be the H07RN-F type.

#### One indoor unit



#### Two indoor units



## Connecting accessories

The outdoor unit is prepared for connection of a condensation water pipe (AG-CH10).



### Caution

Also see the Installer Manual for AG-CH10.

# 5 Installation

## General

Our recommended model combinations are as follows.

	Indoor unit
Size A	Indoor units with last number -4
Size B	Indoor units with last number -7

Number of indoor units	Outdoor unit	Indoor unit (circuit A)	Indoor unit (circuit B)
1	AG-AC10 -42	A	-
	AG-AC10 -50	B	-
2	AG-AC10 -42	A	A
	AG-AC10 -50	A	A
		A	B

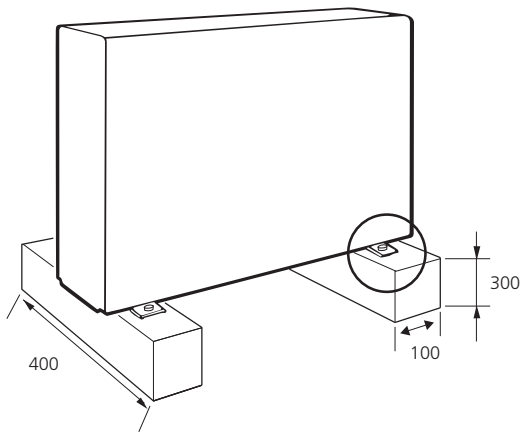
## Installation instructions

- Place the outdoor unit on a stable base raised above the ground and secure it.

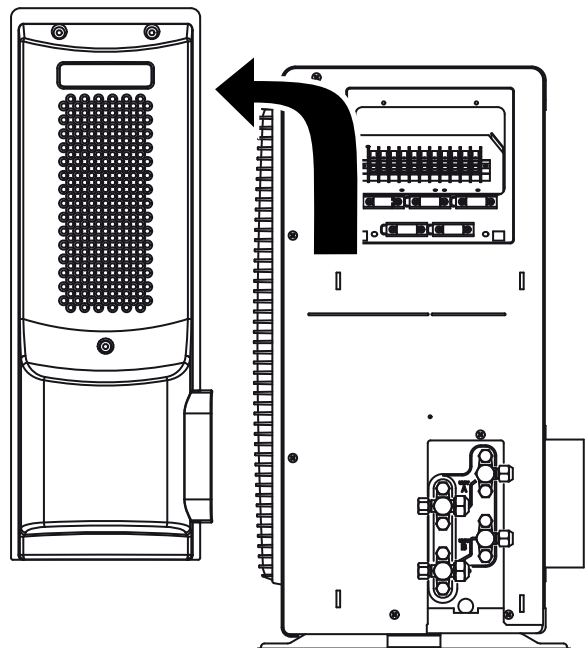


**TIP**

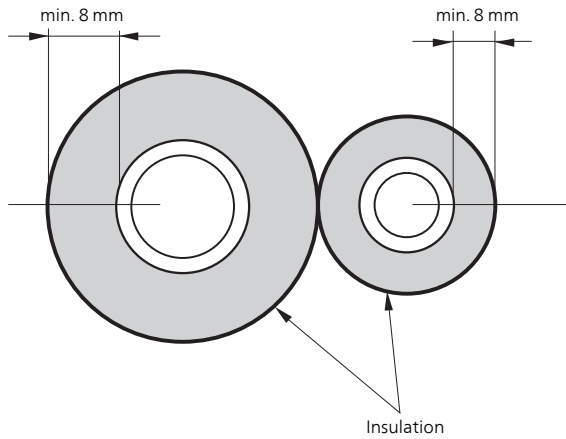
When installing stand, install screws downward to facilitate removal of the front panel.



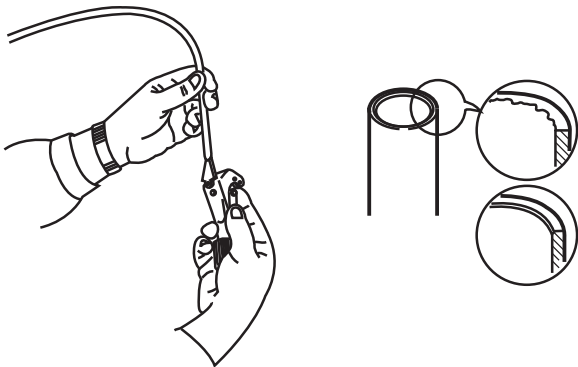
- Remove the side panel, then connect the supply and communication cables to the outdoor unit and secure them with load relief.



- Use insulated copper cooling pipes. Cut a length of 30 – 50 cm in addition to the distance between the units.

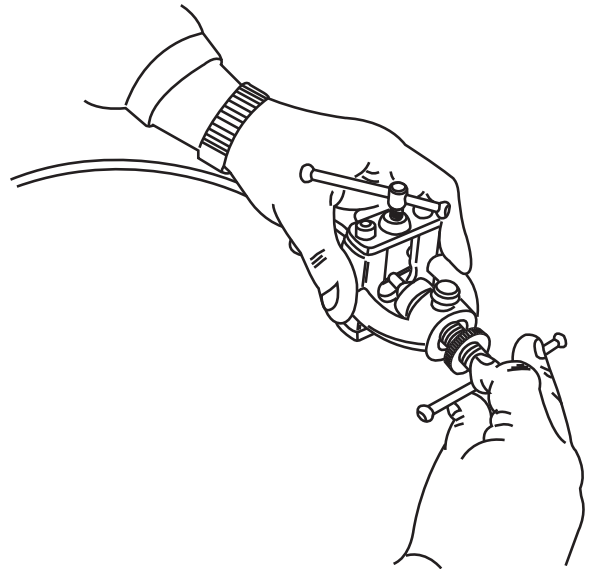


- Remove burrs from the pipe ends. Turn the pipe ends downwards to prevent residue entering the pipe.



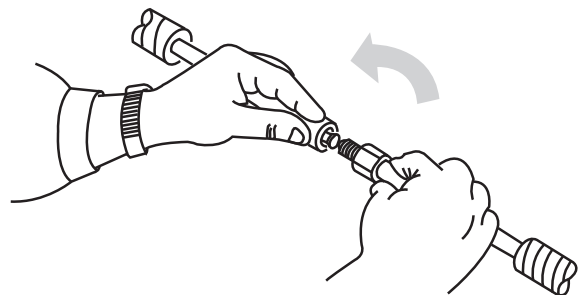
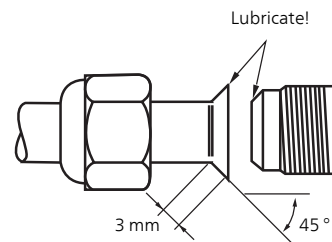
- Thread the flange nuts (that were removed from the outdoor unit) on to the pipes and bend up the ends of the pipes.

**NOTE**  
 Only use tools intended for R410A

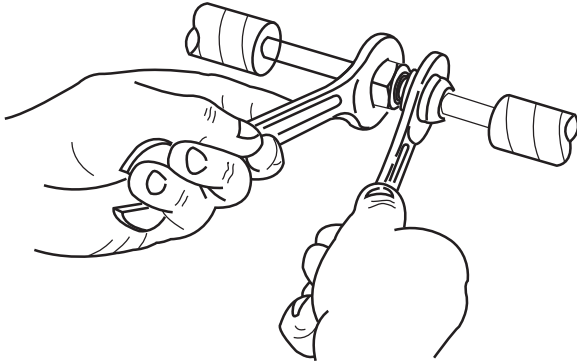


- A good upward bend must have the following properties:
  - a smooth and even inner surface
  - a uniform and even outer edge
  - a conical upward bend of uniform length.

Lubricate the contact surfaces with compressor oil before connecting the pipes.

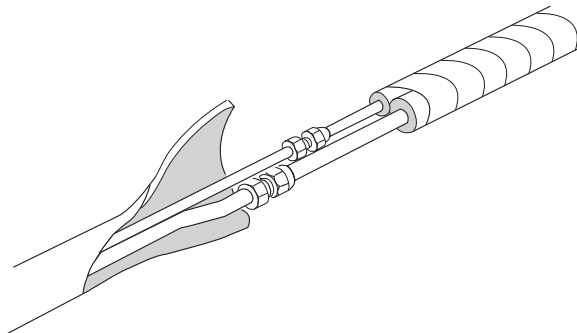


7. Tighten the connections using a wrench and torque wrench according to the tightening torque values in the table.



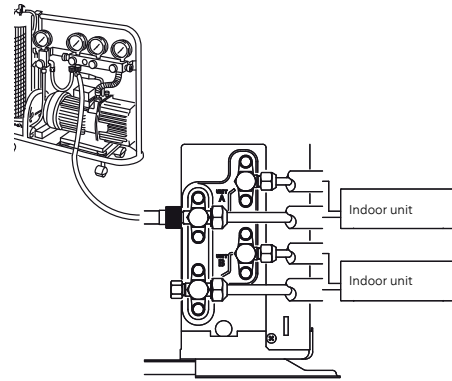
Pipe diameter	Tightening torque
6.35 mm (1/4")	Approx. 15 – 20 Nm
9.52 mm (3/8")	Approx. 30 – 40 Nm
12.7 mm (1/2")	Approx. 50 – 55 Nm

8. Insulate the pipes thoroughly and keep the pipe connections free for leak testing.  
Before vacuuming, leak trace the system. Fill with nitrogen to approx. 3 bar. Leak trace all connections using leak spray (soapy water) to ensure that the system is sealed.

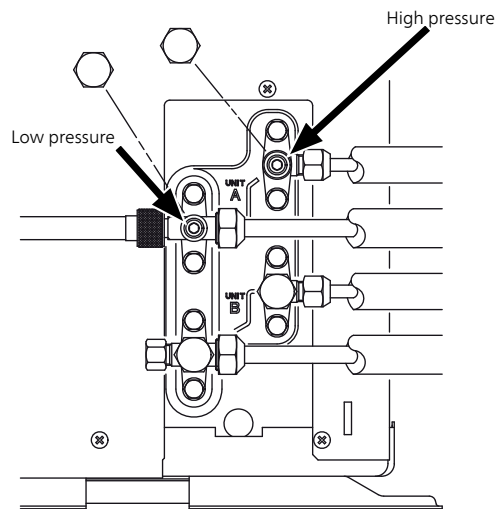


9. For vacuuming of the indoor unit and refrigerant pipe, connect the vacuum pump to the outdoor unit as illustrated.

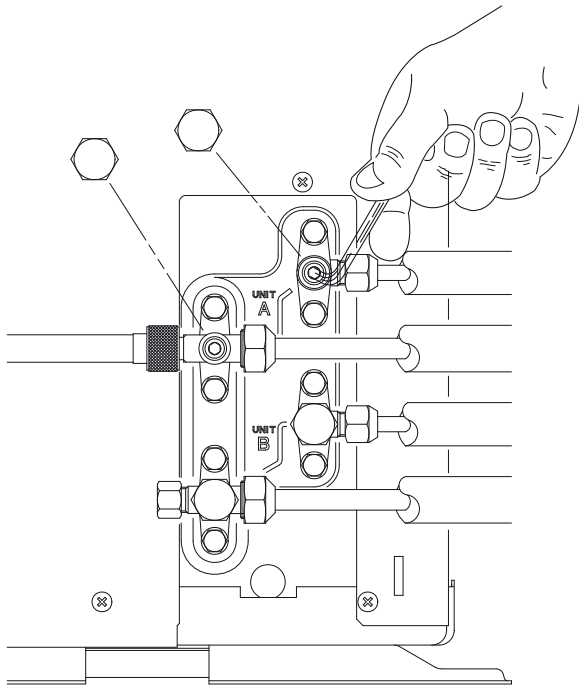
**NOTE**  
Remaining air or damp affects the heat pump's function negatively and can damage the product.



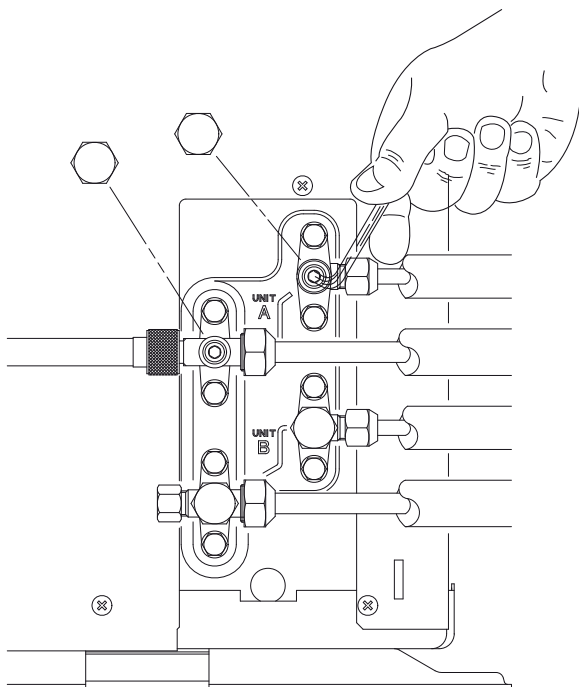
10. Remove the valve caps from both valves. Now start the vacuum pump. If damp air has entered the cooling pipes, flush through with dry nitrogen.



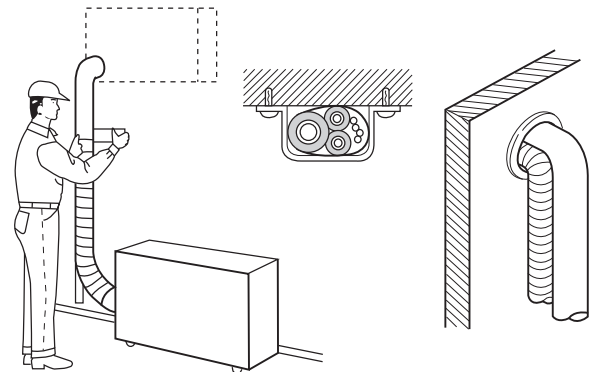
- With the vacuum pump in operation, close the tap on the manometer unit when you have reached a vacuum less than 2 mbar (absolute pressure, standing vacuum min. 30 minutes). Stop the vacuum pump.



- Open the service valves fully (anti-clockwise direction). Disconnect the vacuum pump. Reinstall the caps on the valves, tighten to a torque of 20 Nm. Leak trace caps and connections using a sniffer or leak spray. See page The main functions of the valves for the valves' main functions. Repeat steps 9-13 if you have more indoor units. The indoor units must be marked with "indoor unit A" and "indoor unit B".



- Complete insulation, protect against mechanical impacts, secure and hang up.

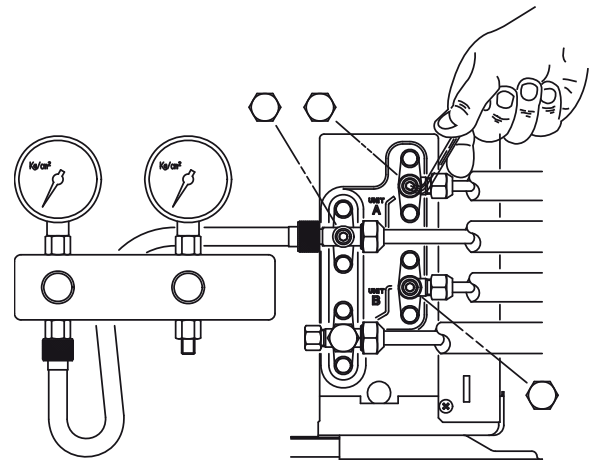


## Pump down

Pump down means retrieving all refrigerant in the outdoor unit without losing the system's filling. This is done when the climate unit is to be moved or during repair of the cooling circuit.

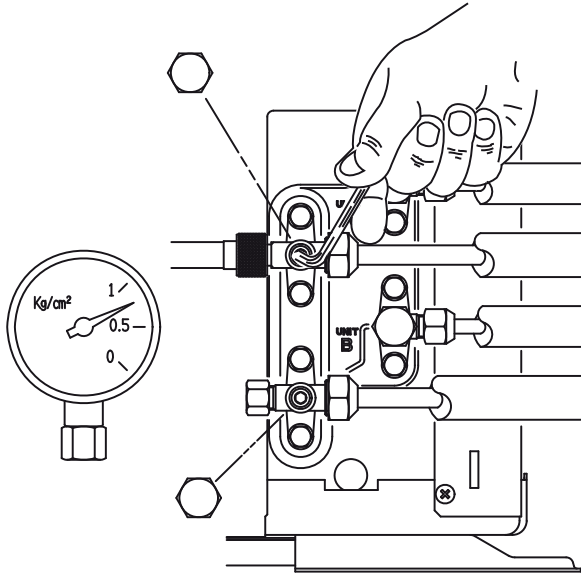
Procedure for "Pump down":

- Connect a manometer assembly to the low pressure valve, open partially (1/4 turns). Extract air from the manometer. Then close the high pressure valve fully.

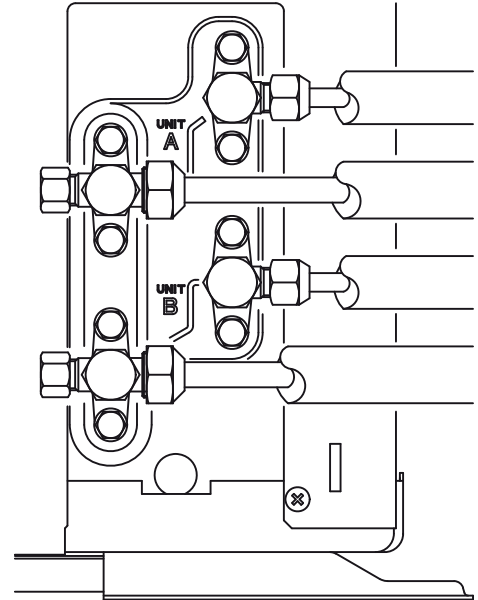


- Start the climate unit in cooling mode. When the pressure that is read off from the manometer has dropped to a value less than 0.6 bar (absolute pres-

sure), the low pressure valve must be closed fully and the climate unit switched off. Repeat for each indoor unit.



3. Remove the manometer assembly. The action "Pump down" is now complete and all refrigerant has been collected in the outdoor unit.

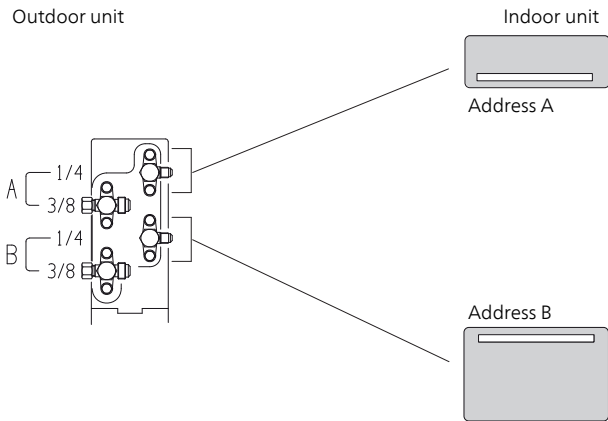


# Addressing



### Caution

The cooling circuit addresses must be set before the system is started. The settings must be made for each of the system's indoor units. See the Installer Manual for the specific indoor unit.



Indoor units included in the multisplit system must be configured correctly to be able to communicate with outdoor units over different channels (indoor unitA, indoor unitB, etc.).

The address for each indoor unit must correspond to the connection between the indoor unit and outdoor unit's cooling circuit; if the indoor unit is connected to the cooling circuitA the address must also be A.

There are three different ways to address the indoor units.

- **Addressing via DIP switch**

The address is assigned via the DIP switches that are on the indoor unit circuit board.

- **Addressing via remote control**

Addressing is via the indoor unit remote control.

- **Automatic addressing**

Each indoor unit is automatically assigned its own address.









If several indoor units are connected to an outdoor unit, the indoor units must be given an address that corresponds to the connection used in the outdoor unit. This is done either using the remote control or by adjusting the indoor unit DIP switches.

## Addressing the indoor unit AG-WL10

### Addressing via remote control

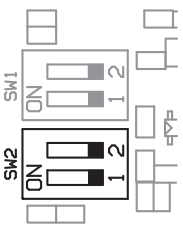
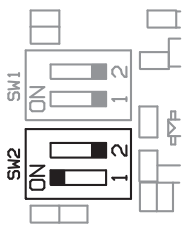
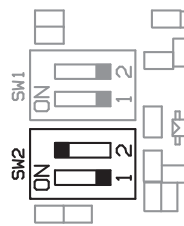
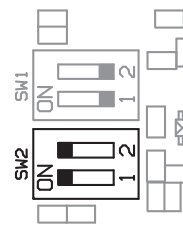
When addressing using remote control it is possible to connect up to eight indoor units to one outdoor unit.

Set the remote control according to the table below, direct it towards the desired indoor unit and keep the buttons "FAN" and "iFEEL" pressed for more than five seconds. If the unit has received the command, four beeps are sounded as confirmation. When you have heard the beeps, the unit starts to work with the new address.

Button	Indoor unit							
	A	B	C	D	E	F	G	H
Operating mode (  or  )	<b>AUTO</b>							
Set point temperature (  /  )	<b>11 °C</b>	<b>12 °C</b>	<b>13 °C</b>	<b>14 °C</b>	<b>15 °C</b>	<b>16 °C</b>	<b>17 °C</b>	<b>18 °C</b>
Air deflector (  )	<b>AUTO</b>							
TiO <sub>2</sub> air cleaner (  )	<b>ON</b>							
Night program (  )	<b>OFF</b>							
High power (  )	<b>OFF</b>							

### Addressing via DIP switches

When addressing using DIP switches it is possible to connect up to four indoor units to one outdoor unit. Set SW2 as indicated in the table.

Indoor unit			
A	B	C	D
			



## Automatic addressing











### Caution

Before activating automatic addressing, check that the indoor unit DIP switch for addressing is factory set, in "OFF" mode.

## Activating automatic addressing

Activate the climate installation and check that only error code E0 (address missing) is visible on the indoor unit. Start one of the indoor unit remote controls and set it according to the table below.

Button	Setting
Operating mode (  or  )	<b>AUTO</b>
Set point temperature (  /  )	<b>24 °C</b>
Air deflector (  )	<b>AUTO</b>
TiO <sub>2</sub> air cleaner (  )	<b>ON</b>
Night program (  )	<b>OFF</b>
High power (  )	<b>OFF</b>

- Hold the "FAN" and "iFEEL" buttons down for longer than seven seconds and release them with the remote control directed at one of the indoor unit receivers. Ensure that the signal is only received by one of the indoor units.
- If the signal is received, the indoor module beeps five times.
- After a few seconds, the LED lamps display the following combination to confirm that automatic addressing is activated:

OPERATION	TIMER	STANDBY
Lit	Flashes	Not lit



### NOTE

During the addressing process the IR receiver is deactivated and the indoor units cannot receive commands from the remote controls.

With automatic addressing activated, each indoor unit is assigned its own address. During the addressing process the system compressor and fans are running. Addressing takes 4-5 minutes per cooling circuit in the outdoor unit.

The outdoor unit stops when all circuits have been checked and the addresses assigned. The indoor units go to standby mode and the IR receivers are activated, regardless of whether the addressing functioned or not. If the indoor units do not display any error codes, the installation is ready for use. If the error code "E0" (address missing) is displayed on any of the indoor units you can either try to address automatically again, or address via the DIP switches or remote control.

## Function check



### NOTE

It is only necessary to carry out a function check in systems with several indoor units.






Run a function check to ensure that the address settings are correct and that the cooling circuits are correctly connected.

The following steps must be taken with the indoor unit "A". See the section "Addressing" on page 15 to see which of the indoor units is unit "A".



### NOTE

The installation's other indoor units must be switched off.

- Activate the climate unit.
- Set the remote control with the following settings:
  - Operating mode (  or  ): COOLING
  - TiO<sub>2</sub> air cleaner (  ): ON
  - Set point temperature (  /  ): 32 °C
- Hold the buttons "FAN" and "iFEEL" pressed for at least five seconds, with the remote control aimed towards the indoor unit IR receiver.

The installation is now running and checks all the installation's address settings and cooling circuits. During the check the "TIMER" lamp flashes and the "OPERATION" lamp goes on and stays on. The checks run for three minutes.

If the units are correctly installed, the unit switches to cooling mode and stops. The installation is now ready for use.









If the units are incorrectly installed, the "STANDBY" lamp flashes. Check the indoor unit address settings and the cooling circuit connections.

## Addressing the indoor unit AG-WT10

### Addressing via remote control


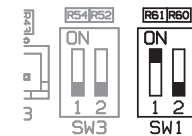
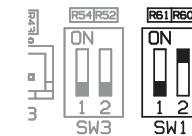
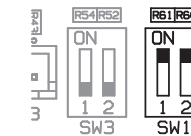
When addressing using remote control it is possible to connect up to eight indoor units to one outdoor unit.

Set the remote control according to the table below, direct it towards the desired indoor unit and keep the buttons "FAN" and "iFEEL" pressed for more than five seconds. If the unit has received the command, four beeps are sounded as confirmation. When you have heard the peeps, the unit starts to work with the new address.

Button	Indoor unit							
	A	B	C	D	E	F	G	H
Operating mode (  or  )	<b>AUTO</b>							
Set point temperature (  /  )	<b>11 °C</b>	<b>12 °C</b>	<b>13 °C</b>	<b>14 °C</b>	<b>15 °C</b>	<b>16 °C</b>	<b>17 °C</b>	<b>18 °C</b>
Air deflector (  )	<b>AUTO</b>							
Air filter (  )	<b>ON</b>							
Night program (  )	<b>OFF</b>							
High power (  )	<b>OFF</b>							

### Addressing via DIP switches

When addressing using DIP switches it is possible to connect up to four indoor units to one outdoor unit. Set SW1 as indicated in the table.

Indoor unit			
A	B	C	D
			

## Automatic addressing











### Caution

Before activating automatic addressing, check that the indoor unit DIP switch for addressing is factory set, in "OFF" mode.

## Activating automatic addressing

Activate the climate installation and check that only error code E0 (address missing) is visible on the indoor unit. Start one of the indoor unit remote controls and set it according to the table below.

Button	Setting
Operating mode (  or  )	<b>AUTO</b>
Set point temperature (  /  )	<b>24 °C</b>
Air deflector (  )	<b>AUTO</b>
Air filter (  )	<b>ON</b>
Night program (  )	<b>OFF</b>
High power (  )	<b>OFF</b>

- Hold the "FAN" and iFEEL" buttons down for longer than seven seconds and release them with the remote control directed at one of the indoor unit receivers. Ensure that the signal is only received by one of the indoor units.
- If the signal is received, the indoor module beeps five times.
- After a few seconds, the display on each indoor unit shows the symbol "[ ]" to confirm that automatic addressing has been activated.



### NOTE

During the addressing process the IR receiver is deactivated and the indoor units cannot receive commands from the remote controls.

With automatic addressing activated, each indoor unit is assigned its own address. During the addressing process the system compressor and fans are running. Addressing takes 4-5 minutes per cooling circuit in the outdoor unit.

The outdoor unit stops when all circuits have been checked and the addresses assigned. The indoor units go to standby mode and the IR receivers are activated, regardless of whether the addressing functioned or not. If the indoor units do not display any error codes, the installation is ready for use. If the error code "E0" (address missing) is displayed on any of the indoor units you can either try to address automatically again, or address via the DIP switches or remote control.

## Function check



### NOTE

It is only necessary to carry out a function check in systems with several indoor units.






Run a function check to ensure that the address settings are correct and that the cooling circuits are correctly connected.

The following steps must be taken with the indoor unit "A". See the section "Addressing" on page 15 to see which of the indoor units is unit "A".



### NOTE

The installation's other indoor units must be switched off.

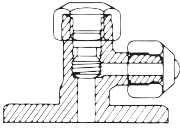
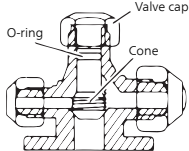
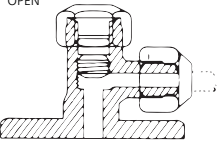
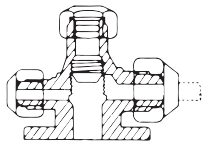
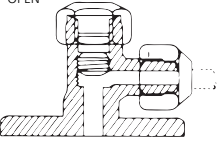
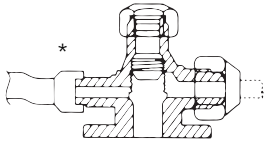
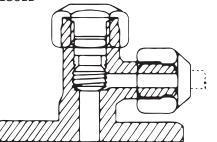
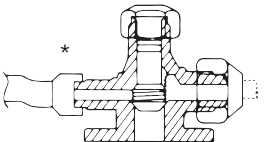
- Activate the climate unit.
- Set the remote control with the following settings:
  - Operating mode (  or  ): COOLING
  - Air filter (  ): ON
  - Set point temperature (  /  ): 32 °C
- Hold the buttons "FAN" and "iFEEL" pressed for at least five seconds, with the remote control aimed towards the indoor unit IR receiver.

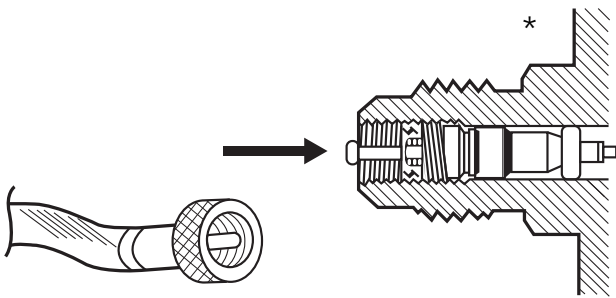
The installation is now running and checks all the installation's address settings and cooling circuits. During the check the "TIMER" lamp flashes and the "OPERATION" lamp goes on and stays on. The checks run for three minutes.

If the units are correctly installed, the unit switches to cooling mode and stops. The installation is now ready for use.

If the units are incorrectly installed, the "STANDBY" lamp flashes. Check the indoor unit address settings and the cooling circuit connections.

# 6 The main functions of the valves

Action	2-way valve (service valve)	3-way valve (service valve)
Delivery	CLOSED 	
Function and test of the climate unit	OPEN 	
Pressure measurement and gas filling	OPEN 	
Vacuuming with vacuum pump	CLOSED 	



The service valve on the outdoor unit that gives access to the refrigerant system is of the "Schrader" type. Use hoses that have a Schrader opener in the connection.

# 7 Disturbances in comfort

## Troubleshooting



### NOTE

Work behind covers secured by screws may only be carried out by, or under the supervision of, a qualified installation engineer.



### NOTE

As AG-AC10 can be connected to several different indoor units, these should also be checked.



### NOTE

In the event of action to rectify malfunctions that require work within screwed hatches, the incoming supply electricity must be isolated at the safety switch.

### Basic actions

Start by checking the following possible fault sources:

- That the climate unit is running or that the supply cable to AG-AC10 is connected.
- Group and main fuses of the accommodation.
- The property's earth circuit breaker.

### Fault codes



#### Caution

Remove the side panel that protects the terminal blocks to read off the LEDs. See page 10.

#### Key to symbols

○	The LED is off.
◐	The LED flashes.

DL3	DL4	DL5	DL6	DL7	Cause
◐	○	◐	○	◐	Mixed up pipes.
○	○	◐	○	◐	Defective or disconnected temp. sensor liquid pipe circuit B.
○	◐	○	◐	○	Defective or disconnected temp. sensor liquid pipe circuit A.
◐	○	◐	○	○	Defective or disconnected temp. sensor gas pipe circuit B.
○	◐	○	○	○	Defective or not connected temp. sensor gas pipe circuit A.
○	○	◐	○	○	Compressor sensor defective or not connected.
○	○	○	◐	○	Outdoor temperature sensor defective or not connected.
○	○	○	○	◐	Evaporator sensor defective or not connected.
◐	◐	○	○	○	Overcurrent compressor.
○	◐	◐	○	○	The compressor's control electronics have overheated.
○	○	◐	◐	○	Overcurrent on fan.
○	○	○	◐	◐	The fan's control electronics have overheated.
◐	◐	◐	○	○	Phase monitor tripped.
○	◐	◐	◐	○	Fault in indoor unit
○	○	◐	◐	◐	Communication error with indoor unit

DL3 is lit with a steady light if all indoor units are functioning correctly, but are switched off. DL3 and DL4 are lit with a steady light if at least one indoor unit is running..

# 8 Accessories

## Condensation water pipe

Route the condensation water pipe to external drain.

### **AG-CH10-10**

Length: 1000 mm  
Part no. 067 466

### **AG-CH10-30**

Length: 3000 mm  
Part no. 067 467

### **AG-CH10-60**

Length: 6000 mm  
Part no. 067 468

## Hot water module

### **AG-DW10**

Hot water module for the multisplit system's outdoor unit AG-AC10.

Part no. 069 148

## Stand and brackets

### **AG-GS10-1**

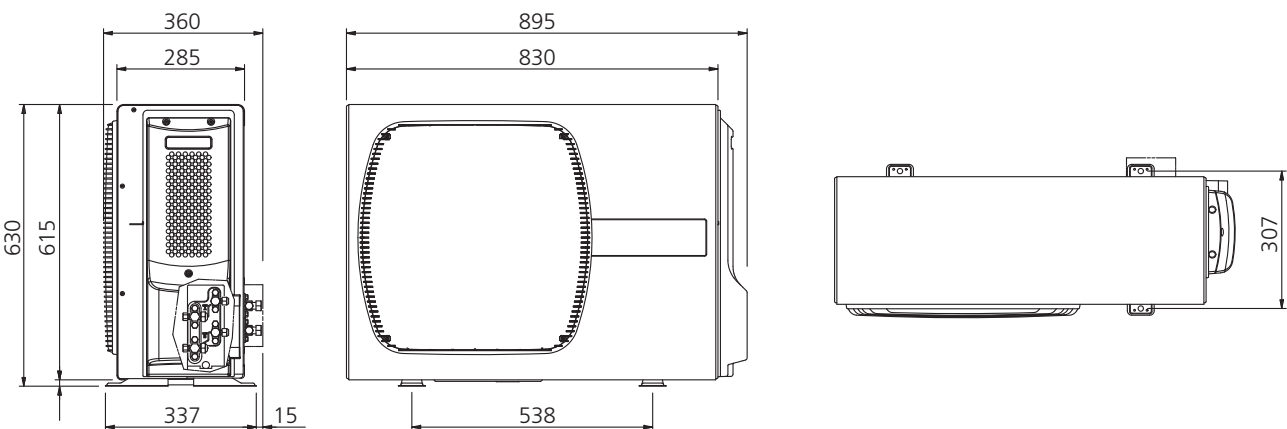
For installation on ground.  
Part no. 067 460

### **AG-WS10-1**

For installation on walls.  
Part no. 067 462

# 9 Technical data

## Dimensions (mm)



## Technical specifications

		AG-AC10-42	AG-AC10-50
<b>Output data</b>			
Cooling capacity 35°C <sup>1)</sup> / 27°C <sup>2)</sup> , min/max	W	1,020/4,310	840/5,900
Heat capacity 7°C <sup>1)</sup> / 20 °C <sup>2)</sup> , min/max	W	940/5,150	950/6,000
Heat capacity -7°C <sup>1)</sup> / 20 °C <sup>2)</sup> , max	W	3,030	3,930
Heat capacity -22°C <sup>1)</sup> / 20 °C <sup>2)</sup> , max	W	2,400	3,270
Pdesignc/SEER/Energy class (cooling +35 °C) <sup>3)</sup>		4,300 W/6.52/A++	5,400 W/6.36/A++
Pdesignh/SCOP/Energy class (heat -10 °C) <sup>3)</sup>		3,420 W/4.09/A+	4,290 W/4.01/A+
<b>Electrical data</b>			
Rated voltage		230V ~ 50 Hz	
Max. specified power/operating current	W/A	1,790/7.80	
Fuse	A	10	
<b>Refrigerant circuit</b>			
Type of refrigerant		R410A	
Type of compressor		Twin rotary	
Volume	kg	1.3	
<b>Pipe connections</b>			
Pipe connection (liquid)	mm (inches)	6.35 (1/4")	
Pipe connection (gas)	mm (inches)	9.52 (3/8")*	
Min. thickness refrigerant pipe	mm	0.8	
<b>Recommended working range <sup>4)</sup></b>			
Min/max outdoor temp. during cooling	°C	-20/50	
Min/max indoor temp. during cooling	°C	10/32	
Min/max outdoor temp. during heating	°C	-32/24	
Min/max indoor temp. during heating	°C	0/27	
<b>Miscellaneous</b>			
Weight	kg	57	
Width	mm	895	
Depth	mm	345	
Height	mm	630	
Max. sound pressure level at 2 m, according to ISO 9614	dB(A)	41	
Enclosure class		IPX4	
Part No.		064 165	064 166

1) Refers to the outdoor temperature.

2) Refers to the indoor temperature.

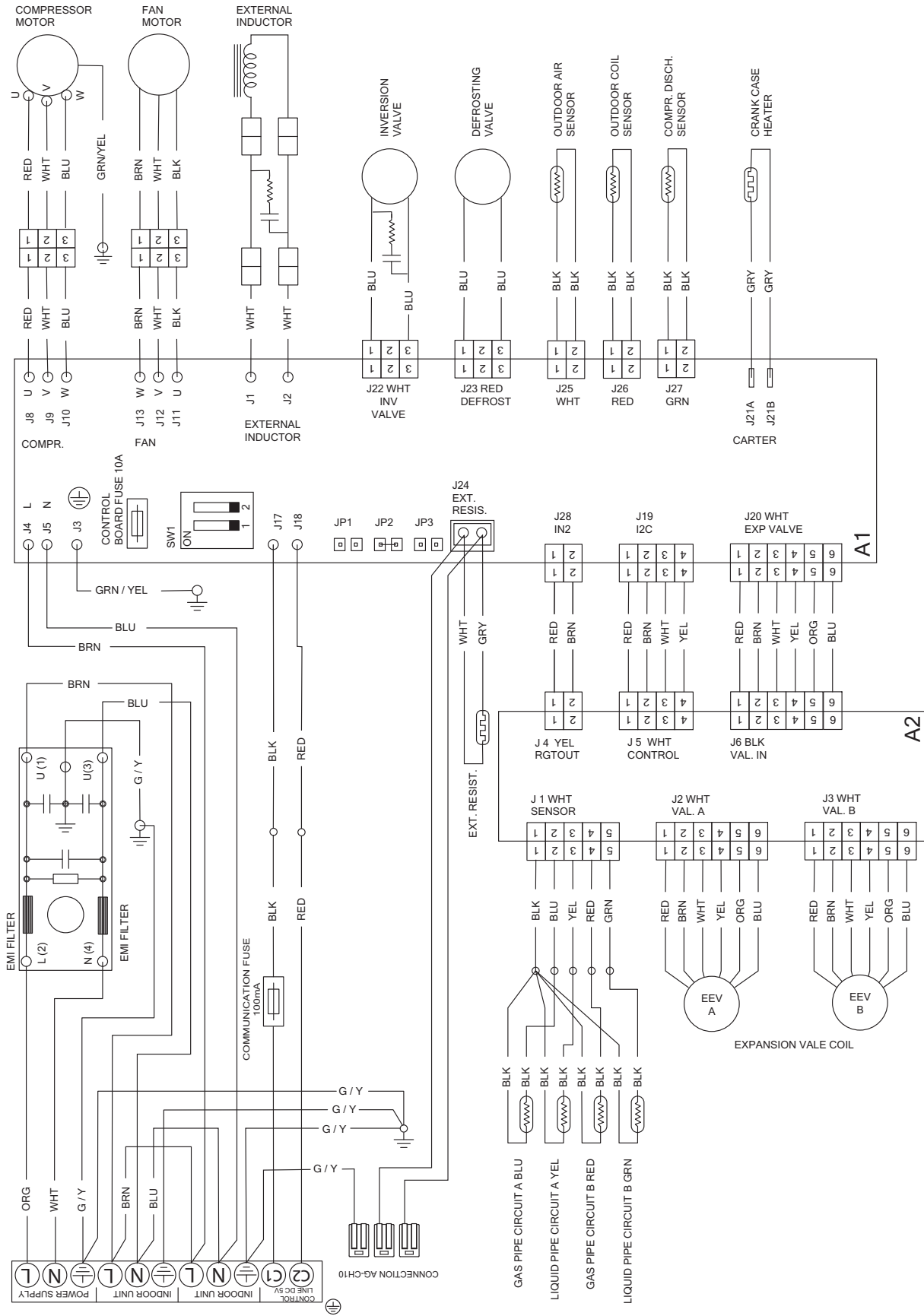
3) According to EN 14825.

4) The performance test is carried out within the specified temperature range, where operation outside the working range is possible with maintained function.

\*Transition nipple 3/8" to 1/2" to fit the indoor units AG-WL10-7 and AG-WT10-7 is included.



# Electrical circuit diagram



# 10 Item register

## Item register

### A

- Accessories, 22
- Addressing, 15
- Addressing the indoor unit AG-WL10
  - Addressing via DIP switches, 16
  - Addressing via remote control, 16
- Addressing the indoor unit AG-WT10
  - Addressing via DIP switches, 18
  - Addressing via remote control, 18
- Adressering af indendørsenhed AG-WL10
  - Automatic addressing, 17
  - Function check, 17
- Adressering af indendørsenhed AG-WT10
  - Automatic addressing, 19
  - Function check, 19

### D

- Delivery and handling, 6
  - Assembly, 6
  - Transport, 6

### E

- Electrical circuit diagram, 25
- Electrical connection, 9

### F

- Function check, 17, 19

### I

- Important information, 4
  - Electrical requirements, 5
  - Safety information, 4
- Installation, 10
  - Installation instructions, 10
  - Pump down, 13

### M

- Marking, 4

### P

- Pipe connections
  - Condensation removal, 7
  - Connecting the cooling circuit, 8

### S

- Safety information
  - Marking, 4
  - Symbols, 4
- Safety precautions, 5
- Supplied components, 6
- Symbols, 4

### T

- Technical data, 23
  - Dimensions, 23
  - Technical specifications, 24
- The main function of the valves, 20



37 4255 150 03

NIBE AB Sweden  
Hannabadsvägen 5  
Box 14  
SE-285 21 Markaryd  
info@nibe.se  
www.nibe.eu



M11862