

IGLU INUIT MONO INSTALLATION MANUAL VERSION: 2.5.2

UAB IGLU TECH 2026



INSTALLATION MANUAL

AIR-TO-WATER HEAT PUMPS IGLU Inuit Mono



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**Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)**



(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

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1.Important safety instructions



This manual contains critical safety instructions for the installation, operation, and maintenance of the IGLU Inuit Mono Heat Pump. These instructions must be followed exactly to ensure safe and correct operation.

Installation and servicing of the IGLU Inuit Mono must be performed only by IGLU TECH Certified Installers. The unit involves pressurized refrigerants and high-voltage components, requiring qualified technical expertise.

IGLU TECH assumes no liability for injury, equipment damage, or property loss caused by unauthorized servicing or failure to follow the instructions provided. All warnings and cautions included in this manual must be strictly observed.

Product specifications

All specifications and descriptions in this document are accurate as of the time of printing. However, because IGLU TECH is committed to continuous improvement, we may make product modifications at any time.

The images in this document are for demonstration purposes only. Product details may vary slightly depending on the version and region.

Errors or omissions

If you notice any inaccuracies or omissions in this manual, please email us at: info@iglutech.eu

Meaning of warnings and symbols

Symbol / Label	Meaning
	WARNING: indicates a hazardous situation which, if not avoided, could result in injury or death.
	CAUTION: indicates a hazardous situation which, if not avoided, could result in minor injury or damage to the equipment.
	NOTE: indicate an important step or tip that leads to the best results but is not safety or damage related
	REFER TO OPERATING INSTRUCTIONS: indicates that the user should refer to operating or installation instructions before proceeding
	RISK OF ELECTRIC SHOCK: indicates components that present the risk of electrical shock.
	WARNING: FLAMMABLE MATERIAL

2.About this document

2.1 Introduction

This installation manual provides information on the installation of the IGLU heat pump. It is an integral part of the product and must be easily accessible to the installer. The manual must be available throughout the life of the device. In the event of a change in the owners of the device, the manual must be passed on to the new owners or users.

Read the instructions before installing the heat pump. Follow all instructions as specified by the manufacturer. If you have any questions, please contact the company that performs the installation of heat pumps or your local manufacturer's representative.

This installation manual was written for several types of devices; you must always follow the parameters applicable to the respective type of equipment.

2.2 Purpose

The manual is intended only for people who install the devices. Treat all constituents responsibly. The heat pump may only be used for its intended purpose, which means:

- Heating
- Domestic hot water preparation
- Cooling

The device can only be operated according to its technical parameters.

2.3 Liability

The manufacturer shall not be liable for damage caused by improper use or installation of the heat pump. The manufacturer's liability shall also not apply:

- If work has been performed that differs from the specifications in these operating instructions.
- If work has been carried out on the equipment which is not described in this manual, or which has not been approved in writing by the manufacturer.
- If the equipment or its components have been modified, altered, or removed without the written consent of the manufacturer.

If the heat pump does not operate in proper conditions or is not used properly, the present rules and requirements are not followed or the checks are not performed, the manufacturer shall not bear liability for the operation of the product. The heat pump operator must take precautions to prevent accidents and injuries to bystanders. The user is responsible for the safety of the heating system and compliance with environmental protection requirements.

If a fault is detected, it is necessary to react promptly, within a reasonable time and as provided in this user manual, because failure to rectify a fault in a timely manner may result in other faults or damage.

If the fault or other actions were carried out by an unqualified worker and in prejudice to the rules, the manufacturer cannot be held liable for the consequences and the warranty obligations may no longer apply.

The warranty does not apply to normal wear and tear, external damage due to improper maintenance or negligence.

2.4 Warranty

The product is covered by an IGLU TECH manufacturer's warranty.

To maintain warranty coverage, it is essential that the product is installed, operated, and maintained strictly in accordance with the instructions and requirements provided in this manual. Failure to comply with these instructions — including improper installation, unauthorized modifications, use of non-approved components, or lack of maintenance — will void the warranty. Details regarding the warranty and post-warranty periods, including all applicable terms and conditions, are provided in the purchase documents.

2.5 Product packaging and transportation

After purchasing a heat pump:

- Inspect the delivered product for external damage during delivery.
- In the event of delivery defects, submit a claim to the company that sold the device immediately.

The heat pump may only be transported and stored in an upright position. The device can only be temporarily tilted, not laid down. The device can be stored at a temperature no lower than 10 °C.

2.6 Display of energy consumption, energy yields and efficiencies.

The product, the system control and the app show approximate values for energy consumption, energy yields and efficiencies, which are extrapolated based on calculation algorithms. The values that are displayed in the app may differ from the other display options due to staggered transfer intervals. The determined values depend on:

- Installation and system of heating installation
- User behavior
- Seasonal weather effects
- Various tolerances of unit-internal components

The recording of the values only includes the product in the factory-delivered condition. Supplementary accessories, even if they are installed on the product, as well as any other components in the heating system and other external consumers, are not part of data recording. Deviations between the determined values and the actual values may be significant. The determined values are therefore not suitable for creating or comparing energy billing, for example.

2.7 Applicability of the Installation Manual

The Installation Manual is applicable to the following units:

Model	Unit type	Model Code
IGLU Inuit Mono 5	Indoor	MB005INANMISrd
	Outdoor	MB005INANMOSrd
IGLU Inuit Mono 5 WT	Indoor	MB005IWANMISrd
	Outdoor	MB005INANMOSrd
IGLU Inuit Mono 8	Indoor	MB008INANMITrd
	Outdoor	MB008INANMOTrd
IGLU Inuit Mono 8 WT	Indoor	MB008IWANMITrd
	Outdoor	MB008INANMOTrd
IGLU Inuit Mono 12	Indoor	MB012INANMITrd
	Outdoor	MB012INANMOTrd
IGLU Inuit Mono 12 WT	Indoor	MB012IWANMITrd
	Outdoor	MB012INANMOTrd
IGLU Inuit Mono 16	Indoor	MB016INANMITrd
	Outdoor	MB016INANMOTrd
IGLU Inuit Mono 16 WT	Indoor	MB016IWANMITrd
	Outdoor	MB016INANMOTrd

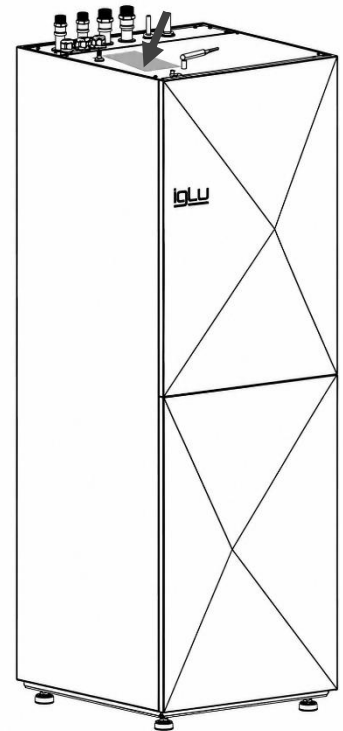
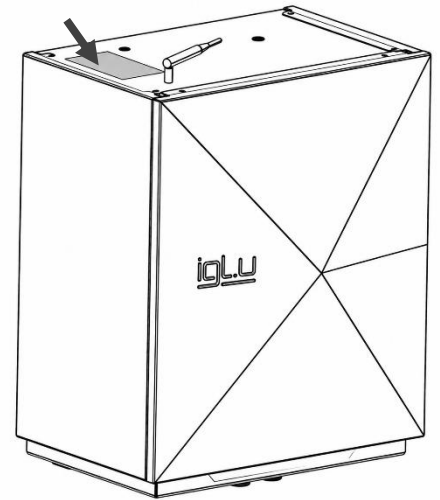


NOTE

- The exact model code can be found on the internal product label attached to the unit itself or on the packing box label.
- The Installation manual applies to the IGLU Inuit Mono air-to-water heat pump indoor and outdoor units

The sequence of IGLU TECH products configuration

- X1 – IGLU Aleut/IGLU Aleut WT/IGLU Aleut I/IGLU Aleut WTI – AL;
- X1 – IGLU ALEUT WTI (1800x600x600) – AS;
- X1 – IGLU Inuit /IGLU Inuit WT – IN;
- X1 – IGLU Inuit WT (1800x600x600)– IS;
- X1 – IGLU Max – MA;
- X1 – IGLU Inuit Mono/IGLU Inuit Mono WT – MB;
- X2 – Capacity of pump – 5/7/9... kW;
- X3 – Kind of compressor (I – inverter/F – fixed speed);
- X4 – Water tank – (W);
- X5 – Active cooling – (A);
- X6 – Passive cooling – (P);
- X7 – Construction – Split (S); Mono (M)
- X8 – Unit location – Inside/Outside, (I/O);
- X9 – Energy supply:
 - Sr - single phase 1P 230 V;
 - Tr - triple phase 3P 400V;
 - Sn – single phase to north 2P 110 V;
 - Tn – triple phase to north 3P 110 V;
- X10 – Agent (R 410A – a; R 407C – b; R32 – c; R 290– d);
- N – not applicable;



Product label with the serial number and QR code

The serial number and QR code of the IGLU Inuit and IGLU Inuit MONO heat pump are located:

- On the top of the unit
- On the packaging box

An example of the full code of a specific heat pump model:

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
MB	008	I	W	A	N	M	I	Tr	d

3. Safety precautions



Carefully follow the precautions listed below because they are essential to guarantee the safety of IGLU TECH products

3.1 General Safety Information

- All instructions and installation suggestions in this manual are intended for safe installation of the equipment. Installers and service shall establish appropriate safety and health practices and determine the applicability of regulatory limitations based on the following descriptions before use.
- The outdoor unit contains a high flammable refrigerant, R-290. There is a high risk of fires and explosions in case refrigerant leaks. Be sure to follow the storage, installation, maintenance instructions.
- Always disconnect the air to water heat pump from the power supply before servicing it or accessing its internal components.
- Verify that installation and testing operations are performed by qualified personnel.
- Verify that the air to water heat pump is not installed in an easily accessible area (vandalism/ sabotage/ other harmful activities).
- Carefully read the content of this manual before installing the air to water heat pump and store the manual in a safe place in order to be able to use it as a reference after the installation.
- For maximum safety, installers shall always carefully read the following warnings.
- Store the user and installation manual in a safe location and remember to hand it over to the new owner if the air to water heat pump is sold or transferred of ownership.
- This manual explains how to install an outdoor unit and indoor unit. Use of other types of devices with the system may damage the device and void the warranty.
- The manufacturer shall not be responsible for damages arising from noncompliant units or parts.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and hydraulic lines. Failure to comply with the instructions provided in the manual shall immediately invalidate the warranty.
- To prevent serious system damage and user injuries, precautions and other notices shall be observed.
- Failure to comply with these instructions or to comply with the requirement on the Operating Range (Heat: -25~35 °C/ DHW: -25~43 °C/ Cool: 10~46 °C) outlined in the Product Specification shall immediately invalidate the warranty.
- Do not use the units if you see some damages on the units and recognize something problematic such as loud noise or smell of burning.
- To prevent electric shocks, fires or injuries, always stop the unit, ultimately rendering the product powerless. Contact to technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- Always remember to inspect the unit, electric connections, refrigerant pipework and protections regularly. These operations shall be performed by qualified personnel only.
- The unit contains moving and electrical parts, which should always be kept out of the reach of children.
- Do not attempt to repair, move, alter or reinstall the unit by unauthorized personnel. These operations may cause product damage, electric shocks, and fires.
- Do not place containers with liquids or other objects on the unit. Never sit or stand on the product.
- All the materials used for the manufacturing and packaging of the air to water heat pump are recyclable.
- The packing material and must be disposed of in accordance with local regulations.
- Always make sure that the power supply is compliant with local safety standards.
- For use in Europe: This appliance can be used by children aged 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 the 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 done by children without supervision.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision

or instruction concerning the appliance use by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

- Be sure not to perform power cable modification, extension wiring, and multiple wire connection. It may cause electric shock or fire due to poor connection, poor insulation, or current limit exceedance.
- Do not use means to accelerate the defrosting operation or to clean, other than those recommended.
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odour.
- Determine the installation location regarding the conditions cited in this reference guide and obtain the user's approval.
- The outdoor unit must not be placed on its side or upside down, as the compressor lubrication oil will run into the cooling circuit and seriously damage the unit.
- Make sure to safely dispose of packing materials. Packing materials, such as nails and other metal or wooden pallets may cause injuries to humans and animals by unsafe disposal.
- The outdoor unit contains the combustible refrigerant R-290. In the event of a leak, escaping refrigerant may mix with air to form a flammable atmosphere. There is a risk of fire and explosion.
- The exhaust air from the outdoor unit must be able to vent freely and cannot be used for other purposes.
- Ensure that there are no ignition sources, such as plug sockets, light switches, lamps, electrical switches or other permanent ignitions sources, in the protective zone.
- Do not use any sprays or other combustible gases in the protective zone.
- Never remove, bridge or block the safety devices.
- Do not tamper with any of the safety devices.
- Do not damage or remove any tamper-proof seals on components
- Do not make any changes: the product itself, to the supply lines, on the drain pipework.
- A safety zone is defined for the area close to the outdoor unit, where special restrictions apply when working. Leaked R-290 refrigerant can form a flammable or explosive atmosphere in the surrounding air.
 - Refrigerant must not flow into the building through building openings.
 - Before starting work, make sure not to generate static electricity through grounding.
- Only a qualified technician may work on the refrigerant circuit. Before starting work on the refrigerant circuit, perform the following actions:
 - Check the refrigerant circuit for leaks.
 - Ensure that the floor space is well ventilated and maintain this condition while working.
 - Inform the next persons of the work to be performed in advance: Everyone around the system, all maintenance personnel.
 - Check if there are any inflammable materials and sources of ignition around the outdoor unit, and remove all inflammable materials and sources of ignition.
 - Before, during, and after work, use the R-290 refrigerant detector to check for refrigerant leaks around.
 - The refrigerant detector must not generate sparks and must be properly sealed

3.2 Installing the unit



NOTE

- When installing the unit, remember to firstly connect the water pipework, then the electrical lines. Always disassemble the electric lines before the water pipework.
 - For safety zone details of R-290 refrigerant, see section: **“5. Outdoor Unit installation”**
- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, do not install it, as the refrigerant may leak from outdoor unit. A leaking product should be moved to a safe outdoor place. There should be no ignition source within 6 meters. Outdoor unit should be located where the refrigerant can be safely removed or

professionally removed and discarded by service technicians. Immediately report the damage to the supplier of the products (distributor/retailer/local manufacturer's branch office).

- After completing the installation, always carry out a functional test (commissioning, including reporting) and provide instructions on how to operate the air to water heat pump to the user.
- Do not use the air to water heat pump in environments with hazardous substances or close to equipment that releases open flames to avoid the occurrence of fires, explosions or injuries.
- While in installation or relocation of the product, do not mix the refrigerant with other gases including air or unspecified refrigerant. Failure to do so may cause pressure increase resulting in an explosion, rupture or injury.
- Do not cut or burn the refrigerant container or pipings.
- Use only suitable and clean service equipment such as the manifold gauge, vacuum pump, and charging hose of the R-290 refrigerant. Make sure that any pump and leakage detection device must be suitable for safely working with R-290 refrigerant.



WARNING Failing to do so, may result in fire, explosion, property damage, personal injury or death.

- Installation must be carried out by qualified persons to handle the refrigerant. Additionally, refer to the regulations and laws.
- Be careful not to let foreign substances (lubricating oil, refrigerant other than R-290, water, etc.) enter the refrigerant circuit.
- Outdoor unit should be installed outdoors with natural ventilation.
- For disposal of the product, follow the local laws and regulations. (Please refer to the service manual for details.)
- Do not work in a confined or unvented place.
- The work area must be surveyed and inspected prior to any service work, correctly vented and treated always as if the equipment is leaking. The area around the working space must be sectioned off properly.
- The product and the hydraulic system shall be installed in the position where there are no substances that may result in corrosion.
- The following checks shall be performed for installation:
 - There must be a suitable gas detector to look for refrigerant leaks.
 - Notify all workers of work contents.
 - Install “No smoking” and “Do not enter the area” signs.
 - Receive a work permit from manager and work.
 - Do not store flammable materials in the workplace.
 - There should be no sources of ignition anywhere in the workplace.
 - Appropriate fire extinguishing equipment (CO2 or dry-powder type) should be located nearby and conveniently located.
 - The refrigerant discharged must be sufficiently dispersed and ventilated.
 - The work area should be appropriately ventilated before working on the refrigerant circuit, brazing, or handling electrics.
- To purge air in the refrigerant piping, be sure to use a vacuum pump suitable for handling R-290.
- Note that the refrigerant has no odour.
- The units are not explosion proof so they must be installed with no risk of explosion.
- For installation with handling the refrigerant (R-290), use dedicated tools and piping materials.
- Servicing and installation shall be performed as recommended by the manufacturer. In case other skilled persons are joined for servicing, it shall be carried out under supervision of the person who is competent in handling flammable refrigerants.
- Safety checks are required to minimize the ignition risk for servicing the units containing flammable refrigerants.
- Servicing shall be performed following the controlled procedure to minimize the risk of flammable

refrigerant or gases.

- Do not install the unit where there is a risk of combustible gas leakage.
- Do not place the unit near heat sources.
- Be cautious not to generate a spark as follows:
 - Do not remove the fuses with power on.
- After installation, check for leakage. Toxic gas may be generated if it comes into contact with an ignition source such as the fan heater, stove, and cooker.
- In order to service the product, collect the refrigerant in vacuumed recovery cylinders.
- Never directly touch any accidental leaking refrigerant. This could result in severe wounds caused by frostbite.

3.3 Caution of Ignition sources



- Appropriate fire extinguishing equipment should always be available during any type of hot work.
- A dry powder or CO₂ fire extinguisher must be available near the charging area. Please comply with local rules and regulations regarding working with open flames. Always respect waiting times and requirements regarding the type and quantity of the extinguishing equipment.
- Make sure to store the units in a place without continuously operating ignition sources (for example, open flames, an operating gas appliance or an operating electric heater).
- The service engineers shall not use any ignition sources with the risk of fire or explosion.
- Potential ignition sources shall be kept away from the work area where the flammable refrigerant can possibly be released to the surrounding.
- The work area should be checked to ensure that there are no flammable hazards or ignition risks. The "No smoking" sign shall be attached.
- Under no circumstances shall potential sources of ignition be used while in the detection of leakage.
- Make sure that the seals or sealing materials have not degraded.
- Safe parts are the ones with which the worker can work in a flammable atmosphere. Other parts may result in ignition due to leakage.
- Replace components only with parts specified by manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak. In the case of electric components replacement, care should be taken to ensure that electrical terminals, including capacitor terminals, are adequately tightened and secured against loosening and that adequate insulation is provided to avoid live parts shorting together.
- Make sure that the work area is well ventilated before performing a hot work.
- Ventilation of the installation areas must be maintained during the work.
- The ventilation should safely disperse any released gases and preferably expel them into the atmosphere.

3.4 Leakage detection and refrigerant recovery

- The leakage detector shall be calibrated in a refrigerant-free area.
- Make sure that the detector is not a potential source of ignition.
- Leak detector shall be set at percentage of LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of the of gas (25% maximum) is confirmed.
- The use of detergents containing chlorine shall be avoided for cleaning because the chlorine may react with the refrigerant and corrode the pipings.
- If leakage is suspected, open flames must be extinguished immediately.
- If a leakage is found while in brazing, the entire refrigerant shall be recovered from the product or isolated (e.g. using shut-off valves). It shall not be directly released to the environment. Oxygen free nitrogen (OFN) shall be used for purging the system before and during the brazing process.
- The work area shall be checked with an appropriate refrigerant detector before and during work.
- Ensure that the leakage detector is appropriate for use with flammable refrigerants.

Labelling

- The parts shall be labeled to ensure that they have been decommissioned and emptied of refrigerant.
- The labels shall be dated.
- Make sure that the labels are affixed on the system to notify it contains flammable refrigerant.

Refrigerant recovery

- Empty recovery cylinders shall be evacuated and cooled before recovery.
- When removing refrigerant from the system for servicing or decommissioning, it is recommended to remove the entire refrigerant.
- When transferring refrigerant into cylinders, make sure that only the refrigerant recovery cylinders are used.
- All cylinders used for the recovered refrigerant shall be labelled.
- Cylinders shall be equipped with pressure relief valves and shut-off valves in a proper order.
- The recovery system shall operate normally according to the specified instructions and shall be suitable for refrigerant recovery.
- In addition, the calibration scales shall operate normally.
- Hoses shall be equipped with leak-free disconnect couplings.
- Before starting the recovery, check for the status of the recovery system and sealing state. Consult with the manufacturer if suspected.
- The recovered refrigerant shall be returned to the supplier in the correct recovery cylinders with the Waste transfer note attached.
- Do not mix refrigerants in the recovery units or cylinders.
- If compressors or compressor oils are to be removed, make sure that they have been evacuated to the acceptable level to ensure that flammable refrigerant does not remain in the lubricant.
- The evacuation process shall be performed before sending the compressor to the suppliers.
- Only the electrical heating to the compressor body is allowed to accelerate the process.
- Oil shall be drained safely from the system.

3.5 Installation location requirement

Installation location requirement of outdoor unit

- The product must be installed outdoors.
- Be sure to observe the suggested Safety Zone by this manual.
- Wear protective gloves to unpack, move, install, and service the unit to avoid your hands being injured by the edge of the parts.
- Do not touch the internal parts (water pipes, refrigerant pipes, heat exchangers, etc.) while running the units. And if you need to adjust and touch the units, please observe enough time for the unit to cool down and wear protective gloves.
- Our units shall be installed in compliance with the spaces described in the installation manual, to ensure accessibility from both sides and allow repairs or maintenance operations to be carried out. If the units are installed without complying with procedures described in the manual, additional expenses can be asked because special harnesses, ladders, scaffolding, or any other elevation system for repair service will not be considered part of the warranty and will be charged to the end customer.
- Make sure that (thaw) water runs correctly and unhindered out of the unit at low ambient temperature. If the drainage is exposed to subzero temperatures, additional protection must be taken by the installer, such as installing heater cables in the drain piping. Failing to do so, may cause severe damage to the product and potential leakages of refrigerant into the environment.
- Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from other electric appliances.

- Protect the unit from rats or small animals. If an animal makes contact with the electric parts, it can cause malfunctions, smoke or fire. Please instruct the customer to keep the area around the unit clean.
- Do not disassemble and alter the heater at your own discretion.
- Wear protective equipment (such as safety gloves, goggles, and headgear) during installation and maintenance works.
- If the installation/repair technicians not be equipped with protective equipment may get injured or threat may happen.
- To prevent ignition, never install motor-driven equipment close to the unit.
- The applicable local, National, and European regulations shall be observed.

Installation location requirement of indoor unit

- Install the indoor unit of the IGLU Inuit Mono heat pump in a dry, frost-protected, and well-ventilated indoor location that can safely support the weight of the unit.
The unit must be positioned on a flat, level, non-combustible surface that is structurally sound and capable of supporting:
-The static load of the indoor unit with integrated water tank or without.
-The dynamic load during operation (vibrations, thermal expansion)

Ensure the location:

- Provides sufficient clearance for piping, electrical connections, and maintenance (refer to „Installation dimensions and clearances“ section)
- Has ambient temperatures between +5 °C and +35 °C
- Is free from condensation, water splashes, flammable gases, or corrosive vapors
- Is not directly adjacent to quiet living spaces such as bedrooms (to minimize perceived noise)
- Allows proper routing of hydraulic and electrical connections to the heating system, outdoor unit, DHW tank (if external), and safety group components



CAUTION

Do not install the indoor unit in bathrooms, laundry rooms, greenhouses, garages, or similar spaces where temperature or humidity control cannot be guaranteed.

4. Handling the box

This chapter describes what needs to be done after the boxes with the outdoor and indoor units are delivered on-site.



NOTE (Transportation)

- Directly after delivery, the unit must be checked for (transport) damage. Any damage must be reported immediately to the applicable distributor of the products. After inspection, the protective wrapping and box must be put back correctly in order to protect the product.
- It is important to protect the product, therefore transport the product in the protective packaging and keep covered until final installation.
- The position of products : it is crucial to transport it upright. It must stand on dry and horizontal surface. It is especially important when you transport used equipment. Different approach may cause a permanent damage of the product.
- Assure adequate ventilation during transportation.
- Transportation is only permitted in unblemished packaging.
- Store heat pumps above ground level with a natural ventilation exit to the ambient.
- Avoid ignition sources such as sparks, smoking, etc.
- A powder fire extinguisher (>2 kg) must be carried on board.
- A gas detector is recommended to be included in each transport unit in case of consistent transporting of large volumes of heat pumps containing flammable refrigerants.



NOTE (Storage)

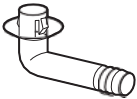
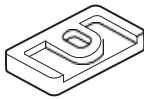
- The Storage area must have no sources of ignition
- Store on the ground with natural ventilation
- Sufficient air must be supplied during storage.
- Store the outdoor unit only in its factory packaging.
- The maximum number of products that can be stored together in one location is subject to local regulations



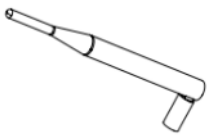
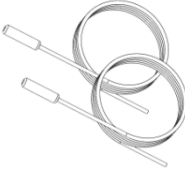
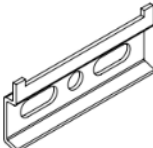
WARNING

- If damage occurs during transportation, the dangerous goods must be taken immediately to a safe outdoor location. There must be no ignition sources within a distance of 6 meters. The outdoor unit must be located where the refrigerant can escape safely or be professionally emptied and disposed of by a service technician.

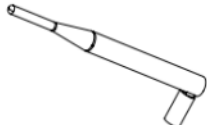
4.1 Accessories of outdoor unit

Drain plug (1)	Drain cap (1)	Rubber leg (4)
		

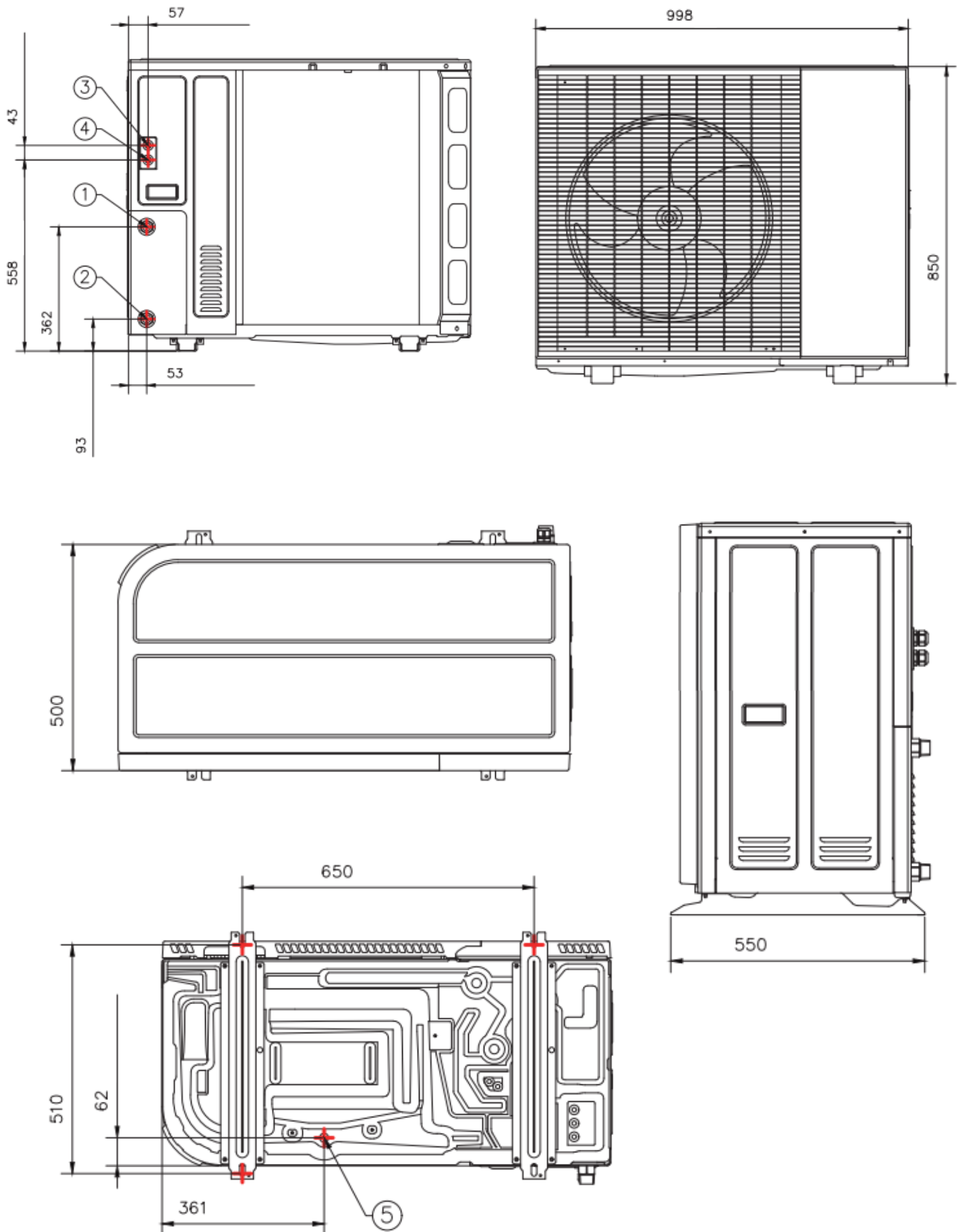
4.2 Accessories of indoor unit IGLU Inuit Mono

Installation manual (1)	User manual (1)	Technical Data sheet (1)
		
Wi-Fi Antenna (1)	Temperature sensor (3)	Internal Temperature sensor box (1)
		
Mounting bracket T1 (2)	Pan head screw (4)	Wall plugs (4)
		

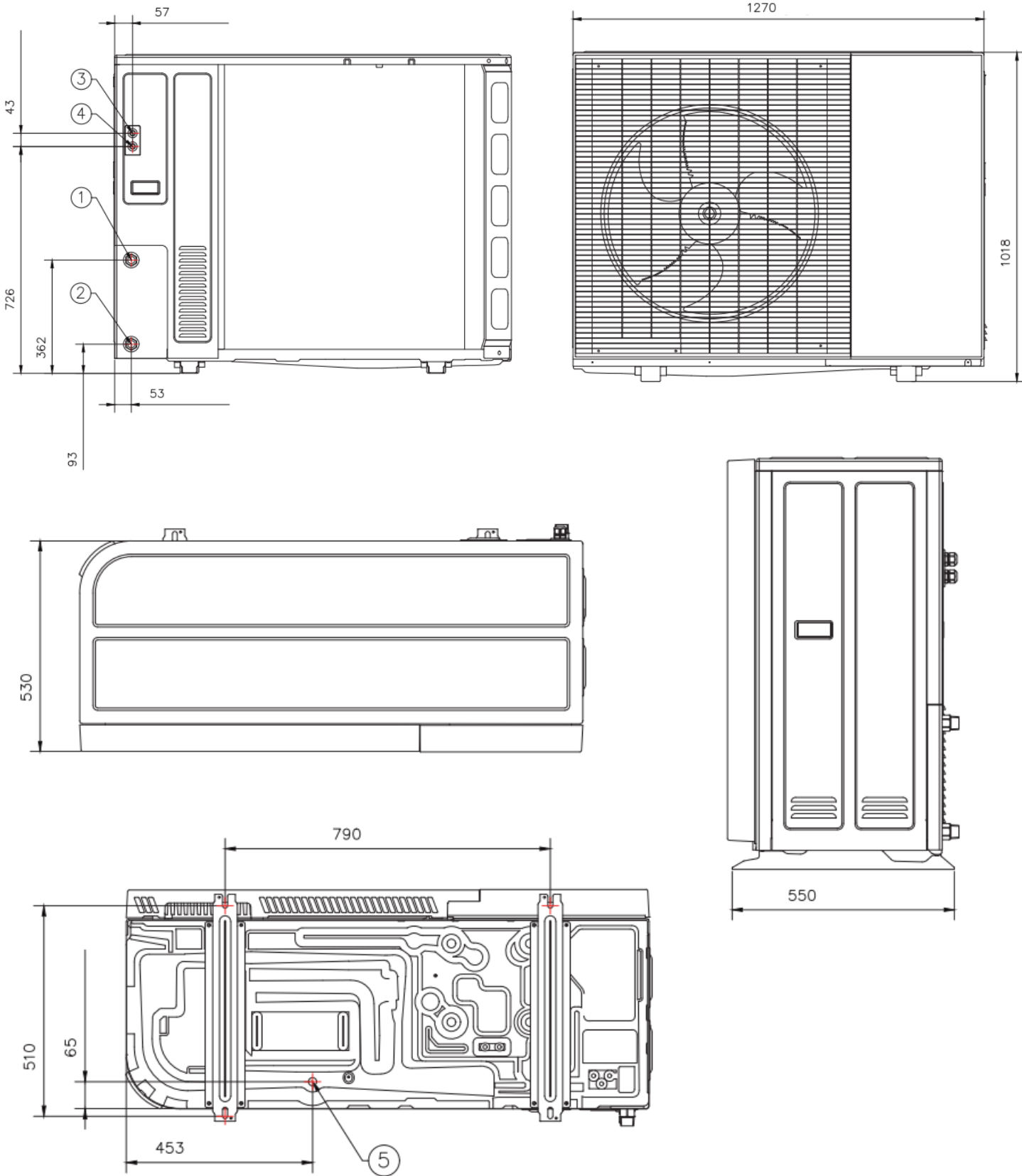
4.3 Accessories of indoor unit IGLU Inuit Mono WT

Installation manual (1)	User manual (1)	Technical Data sheet (1)
		
Wi-Fi Antenna (1)	Temperature sensor (2)	Internal Temperature sensor box (1)
		
Anti-vibration mount (4)		
		

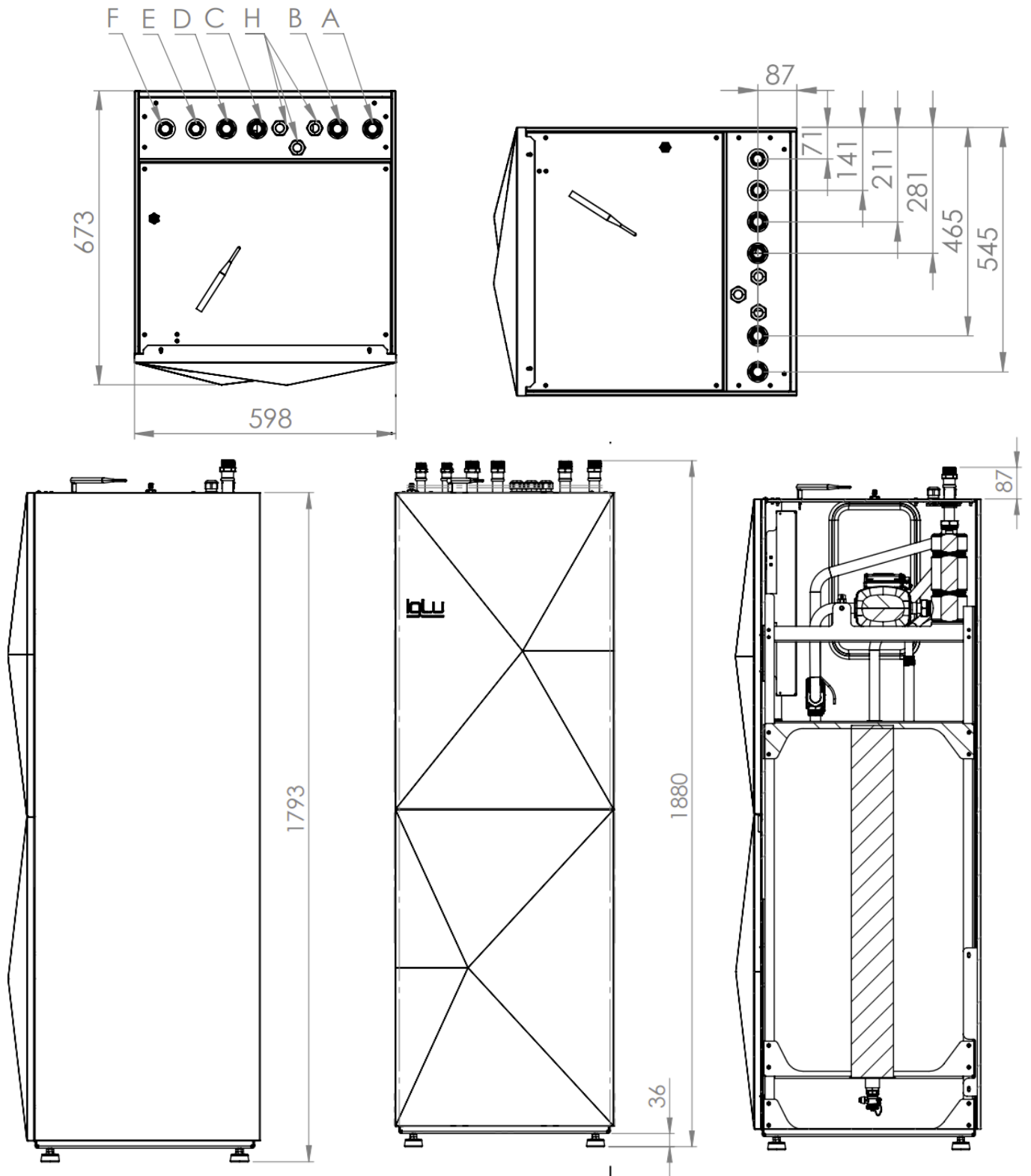
4.4 Outdoor Unit Dimensions – Inuit Mono 5 / 5WT & Mono 8 / 8WT



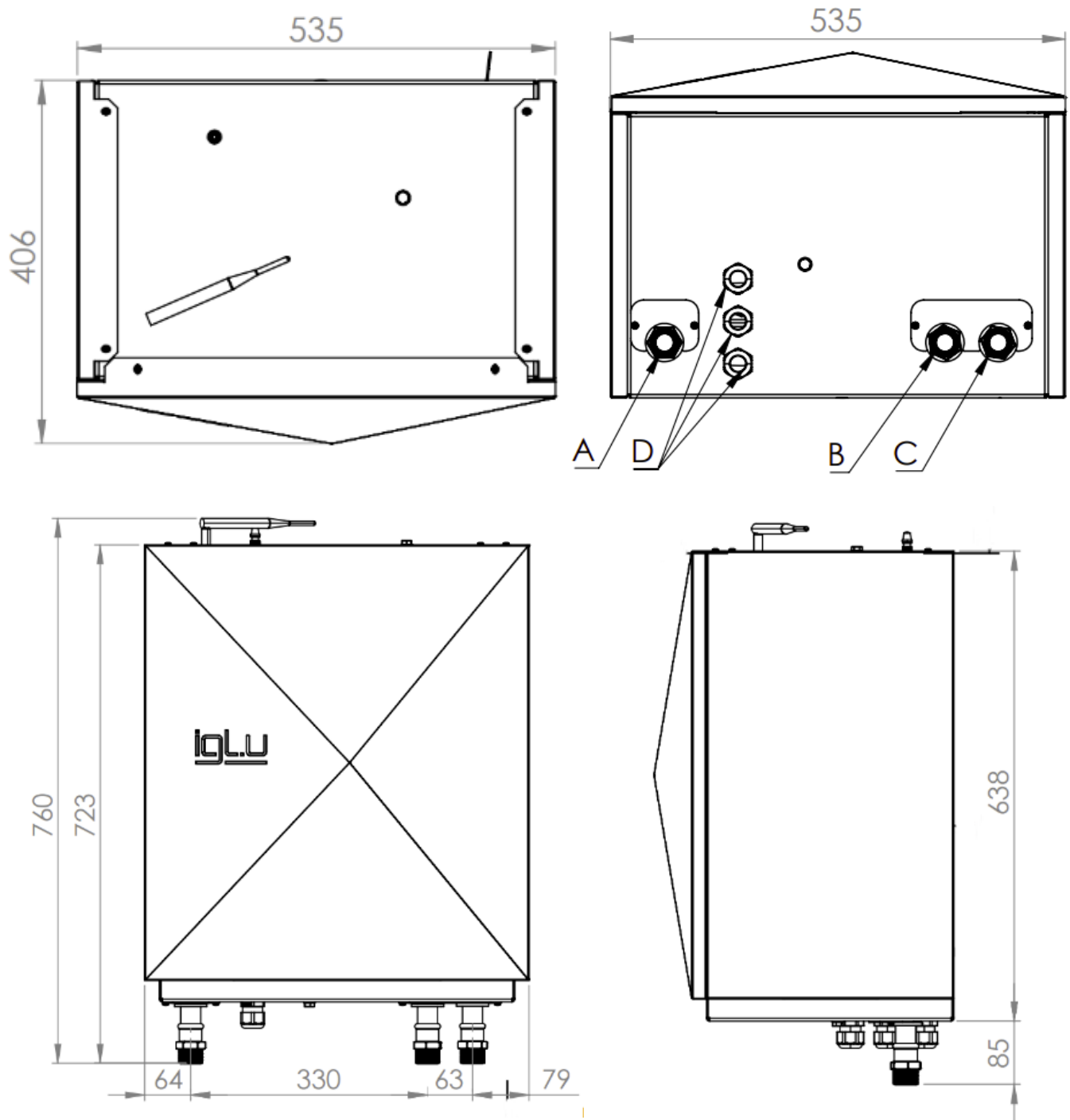
4.5 Outdoor Unit Dimensions – Inuit Mono 12 / 12 WT & Mono 16 / 16 WT



4.6 Indoor Unit Dimensions- Mono 5/ 8/ 12/ 16 WT



4.7 Indoor Unit Dimensions – Mono 5/ 8/ 12/ 16



5. Outdoor Unit installation

5.1 Preparing the installation of the outdoor unit

Choose a sufficient space for carrying the unit to the installation location in advance.

Do not choose a location where a lot of dust is created such as a construction work site.



WARNING

- The outdoor unit contains refrigerant R-290, which is classified as A3 (highly flammable).
- Do not install the unit in locations where there is a risk of combustible gas leakage, exposure to heat sources, or open flame.
- To handle, purge, and dispose the refrigerant, or break into the refrigerant circuit, the worker should have a certificate from an industry-accredited authority in order to be compliant with regulations.
- Verify that the air to water heat pump is not installed in an easily accessible area (vandalism/ sabotage/ other harmful activities).
- Be aware that refrigerants might not contain an odor.
- Before, during, and after work, use the R-290 refrigerant detector to check for refrigerant leaks around. This refrigerant detector must not generate sparks and must be properly sealed

5.2 Choosing the installation location



NOTE

- Read the precautions and requirements in the part "General safety information".
- The outdoor unit is designed for outdoor installation only, and for the following ambient temperatures:
 - Space heating mode -25~35 °C
 - Domestic hot water mode -25~43 °C
 - Space cooling mode 10~46 °C

Decide the installation location regarding the following condition and obtain the user's approval

- Choose a location that is dry and sunny, but not exposed to direct sunlight or strong winds.
- Do not block any passageways or thoroughfares.
- Choose a location where the noise of the air to water heat pump when running and the discharged air does not disturb any neighbours.
- Choose a position that enables the pipes and cables to be easily connected to the other hydraulic system.
- Install the outdoor unit on a flat, stable surface that can support its weight and does not generate any unnecessary noise and vibration.
- Position the outdoor unit so that the air flows directly towards the open area.
- Place the outdoor unit where there are no plants and animals because they may cause malfunction of outdoor unit.
- Maintain sufficient clearance around the outdoor unit, especially from a radio, computer, and stereo system.
- The outdoor unit shall be installed in an open space that is always ventilated.
- Observe the suggested safety zone.

Do not install the air to water Heat Pump in the following locations:

- A location where there are any potential dangerous substances like: combustible gas, carbon

fiber, mineral oil, arsenic acid, flammable dust, thinner or gasoline, etc.

- A location where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet. The copper pipe or connection pipe may corrode and refrigerant may leak.
- A location where the outdoor unit can easily overheat by solar radiation or if the ambient temperature exceeds 35°C during cooling mode. A larger installation space is required for protection against direct solar radiation.
- A location where strong winds may affect the unit. Please also consider enough clearance to avoid issues with the exhaust air from the unit if directed at people.
- A location where air is trapped and may short circuit over the unit. Or where not enough service space is available.
- A too narrow location, as it can lead to problems and potential damage to the product. Also it can lead to the injuries during installation or service work.
- A location where not enough ventilation space exists, especially when installing multiple outdoor units. Obstacles may disturb the airflow over the unit and can potentially cause short circuiting between exhaust air and inlet air and may lead to malfunction.

Safety Zone



WARNING

- In case of a leakage the refrigerant must not be able to enter the indoor under any circumstances. The Safety Zone shall not have any building openings such as: Windows, Doors, Light wells, Flat roof windows, Air Inlet / Outlet of ventilation systems, etc.
- R-290 refrigerant is heavier than air and can be collected on the ground. There should be no sinking or deepening of the ground in the safety zone.
- The safety zone should not extend to intact buildings or public spaces.
- The safety zone cannot be modified later to violate the protection rules.

5.3 Installation dimensions and clearances of outdoor unit

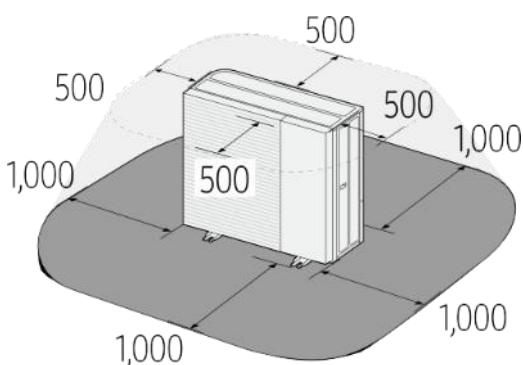
When installing 1 outdoor unit



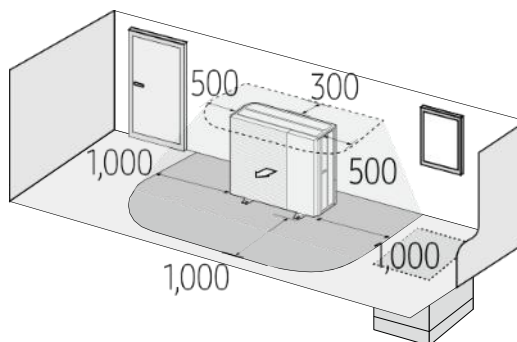
CAUTION

The units must be installed according to distances declared, in order to permit accessibility from each side, to guarantee correct operation of maintenance or repairing of the products. The unit's parts must be accessible and serviceable under safe working conditions (for people or things).

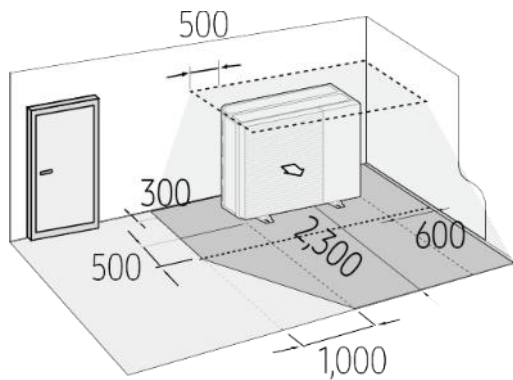
(Unit) :mm



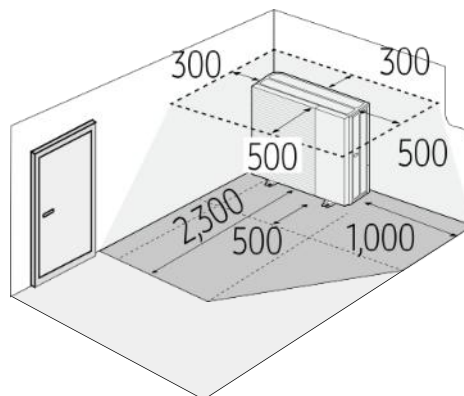
- When installed on the ground
- When installed in a place with a flat roof



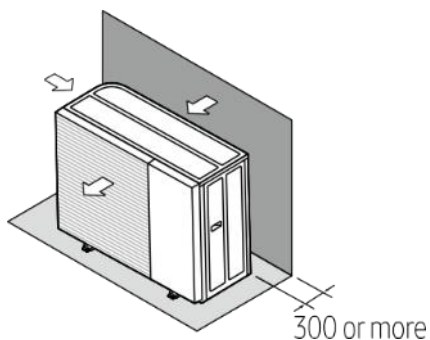
- When installed on the ground in front of a building wall



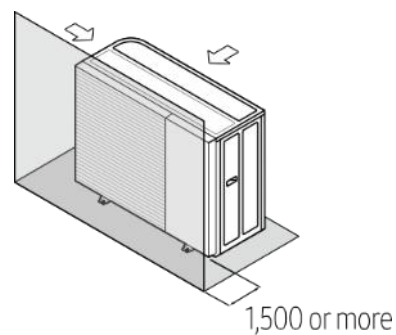
- When installed at the right corner of a building



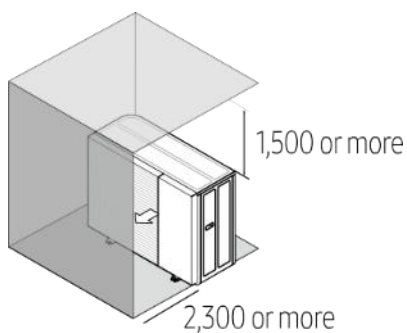
- When installed at the Left corner of a building



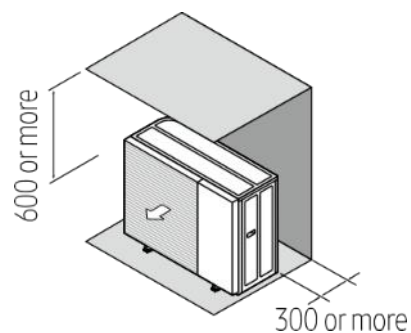
- Wall on suction-side



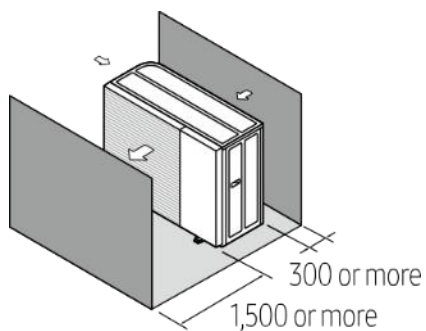
- When the air outlet is towards the wall



- Top-side obstacle
- Discharge-side obstacle
- Wall on discharge-side



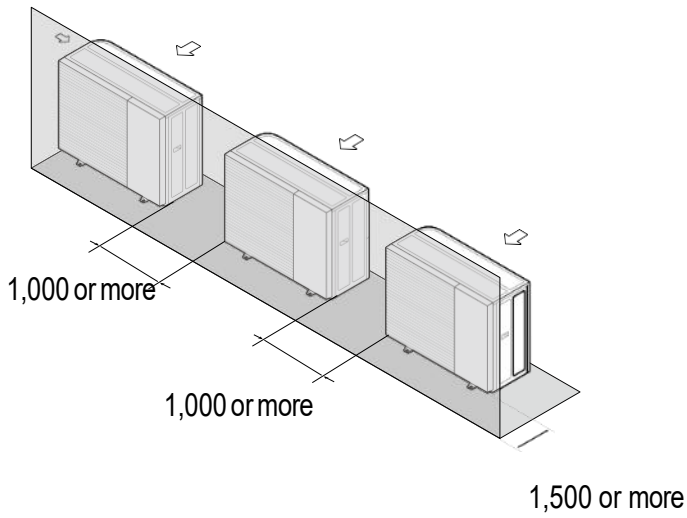
- Top-side obstacle
- Wall on suction-side



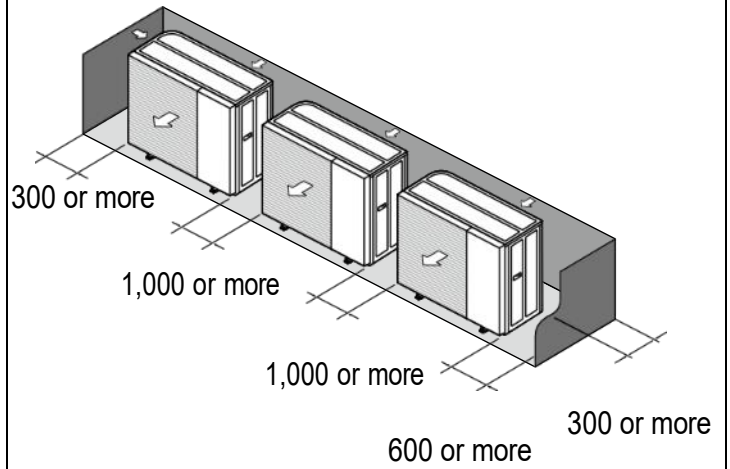
- Suction-side obstacle
- Wall on discharge-side

When installing more than 1 outdoor unit

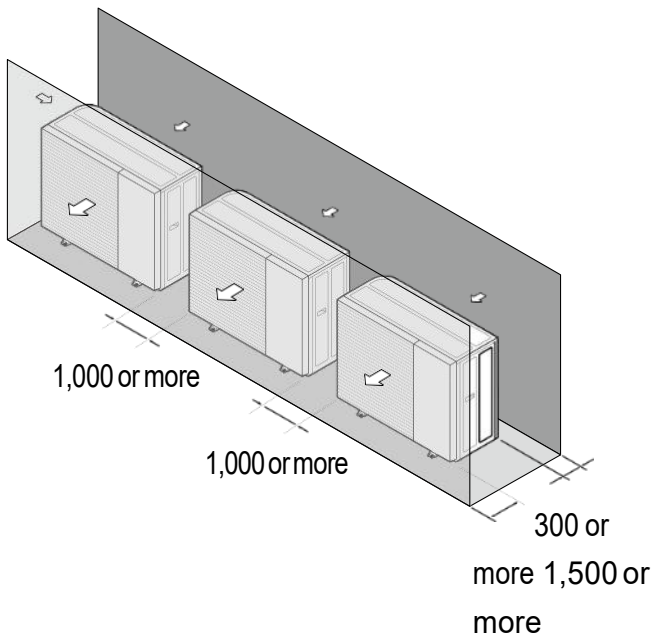
(Unit) :mm



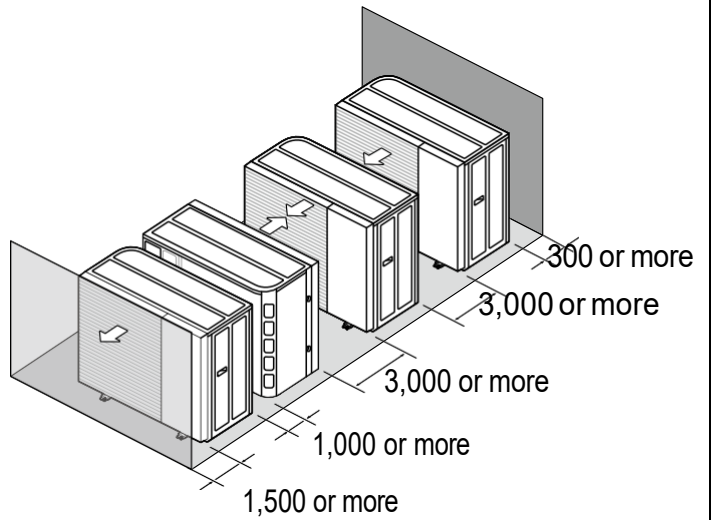
- Wall on discharge-side



- Suction-side obstacle (3 sides)
- No top-side obstacle



- Wall on suction-side
- Wall on discharge-side

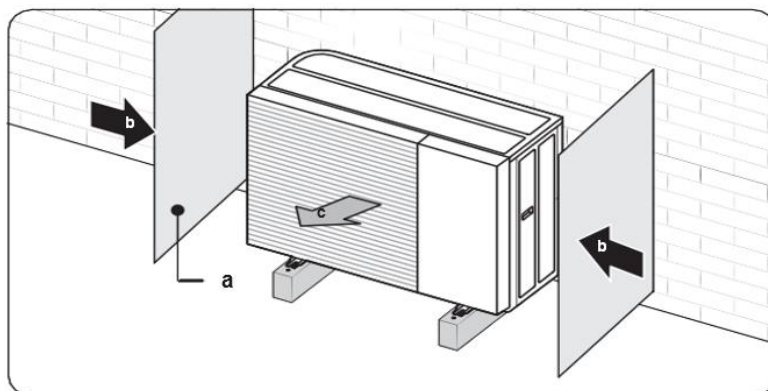


- Wall on suction-side
- Wall on discharge-side

5.4 Guidelines for installation in harsh environments

Installing the unit at a location with strong winds:

- Outdoor unit must be fixed firmly so that it can withstand the wind speed of the strong wind. If you cannot fix the outdoor unit on the base ground, fixate it sideways or use an extra support structure.
- To prevent exposure to (strong) wind, install a baffle plate on the air discharge side of the unit. (If there is a strong wind facing the outdoor air outlet, it causes a short circuit. This can lead to performance degradation, broken fan (motor), and acceleration of frost.)
- Install a wind protection shielding with anticipation of the dominant wind direction. If the direction of the air discharge part is pointing to the dominant direction of the wind, it could cause performance decrease and potential damage to the product.

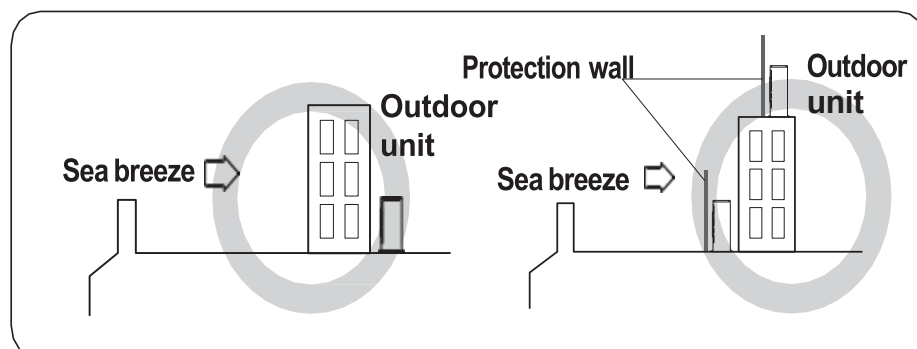
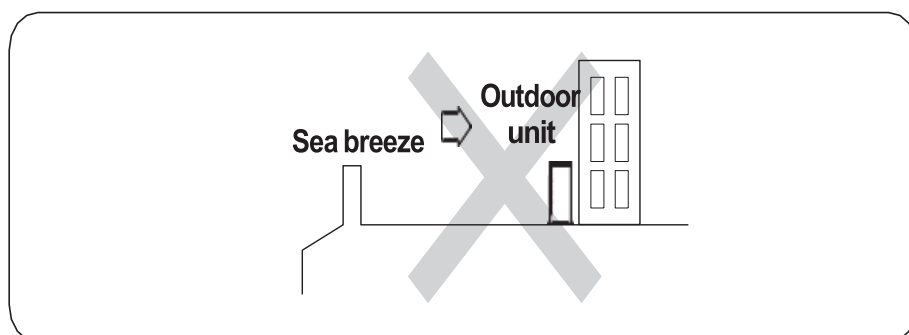


- a. Baffle plate
- b. Prevailing wind direction
- c. Air outlet

Installation guide at the seashore

Make sure to follow the below guides when installing at the seashore:

- Do not install the product in a place where it is directly exposed to sea water and sea breeze.
- Make sure to install the product behind a structure (such as a building) that can block sea breeze.



- A protection wall should be constructed with a solid material that can block the sea breeze and the height and width of the wall should be 1.5 times larger than the size of the outdoor unit. (Please secure more than 700 mm of space between the protection wall and the outdoor unit for air circulation.)
- Consider that the salt particles clinging to the external panels should be sufficiently washed off
- -When a product is installed at the seashore, periodically clean it with fresh water to remove attached salt deposits.
- Make sure that the base of the unit is installed at water level and therefore has optimum drainage. Because trapped water at the bottom of the outdoor unit significantly promotes corrosion.
- -Prevent blockage of the drain hole by foreign substances, by cleaning adequately.
- -Make sure to clean the base plate adequately and regularly as dirt, sand and other substances stay moist and promote corrosion.
- If the product is installed within 500 m of a seashore, special anticorrosion treatment (like special coating) is required.
- -Please contact your local IGLU TECH representative for further details.
- When the product is installed at a seashore, periodically clean it with water to remove attached salinity.
- If the (protective) coating or galvanised steel of the product is damaged during the installation or maintenance, make sure to repair it.
- Check the condition of the product periodically.
- -Check the installation site every 3 months and perform anticorrosion treatment.

Selecting a location in cold climates

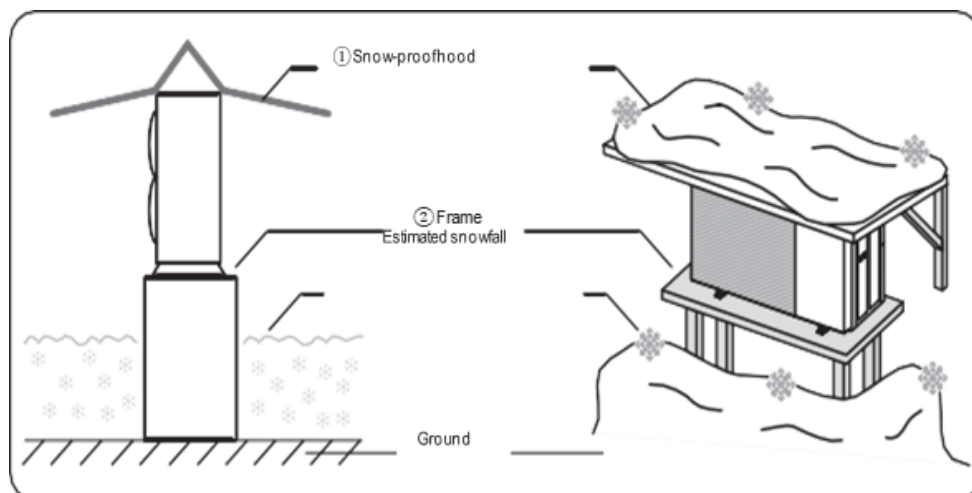


NOTE

When operating the unit in a low outdoor ambient temperature, be sure to follow the instructions described below.

In heavy snowfall areas it is very important to select an installation location where the snow will not affect the unit. If lateral snowfall is possible, make sure that the heat exchanger coil is not affected by the snow. (If necessary construct a lateral canopy)

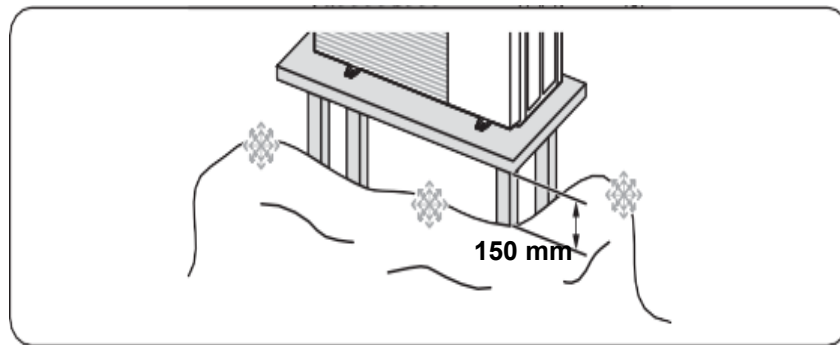
- Construct a large canopy.
- Construct a pedestal.
- Install the unit high enough off the ground to prevent it from being buried under snow.



Heavy snow fall area

If the product is installed in a region of heavy snow, allow enough distance between the product and the ground (or piled up snow):

- In areas with heavy snow fall, piled snow could block the air intake. To avoid this, install a frame that is higher than estimated snow fall. In addition, install a snow-proof hood to avoid snow from piling on the outdoor unit.
- If ice accumulates on the base, it may cause critical damage to the product. (e.g., a lakeside in a cold area, the seashore, an alpine region, etc.)
- In a heavy snowfall area, do not install the drain plug and drain cap in the outdoor unit. And, it may cause frozen ground. Therefore, take appropriate measures to prevent it.
- Make a space more than 150 mm between the bottom of the outdoor unit and the ground for installation.
- Make sure that the product is located at least 150 mm above the maximum expected level of snow.

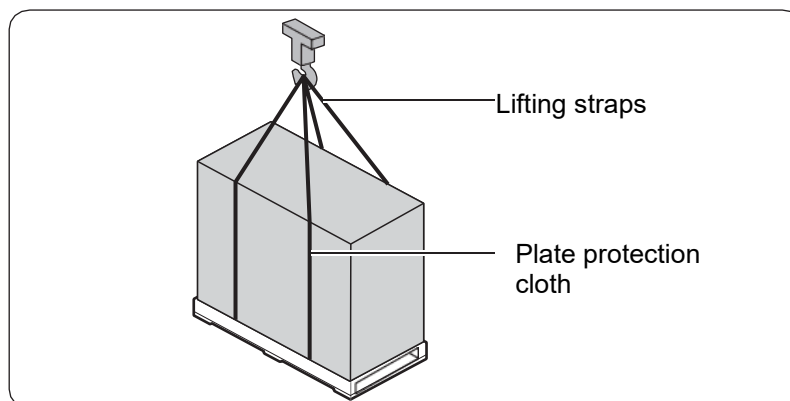


5.3 Moving the outdoor unit

- Be sure that the moving route is safe by anticipating the weight of the outdoor unit in advance.
- Do not slant the product more than 30° when carrying it. (always keeping the unit upright)
- The surface of the heat exchanger is sharp. Be careful not to be injured while moving and installing by wearing your personal protective equipment (gloves, etc.).

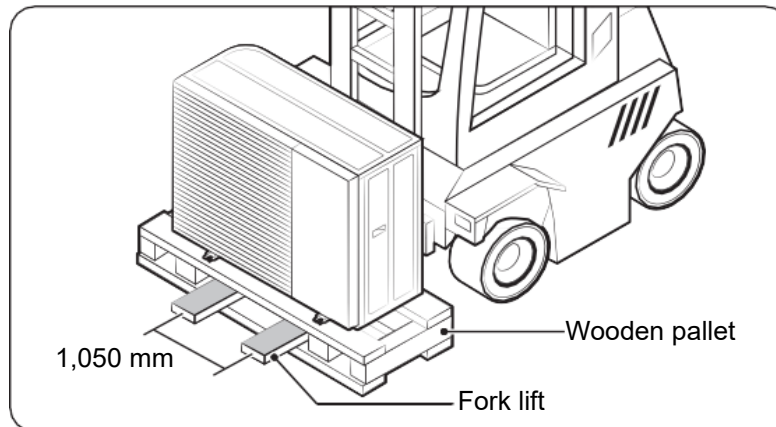
Moving the outdoor unit by hoisting

- Only hoist the product with using approved lifting straps (according to local regulations). Keep long straps to avoid damage to the panels. Always wear personal protective equipment (safety helmet) when hoisting.



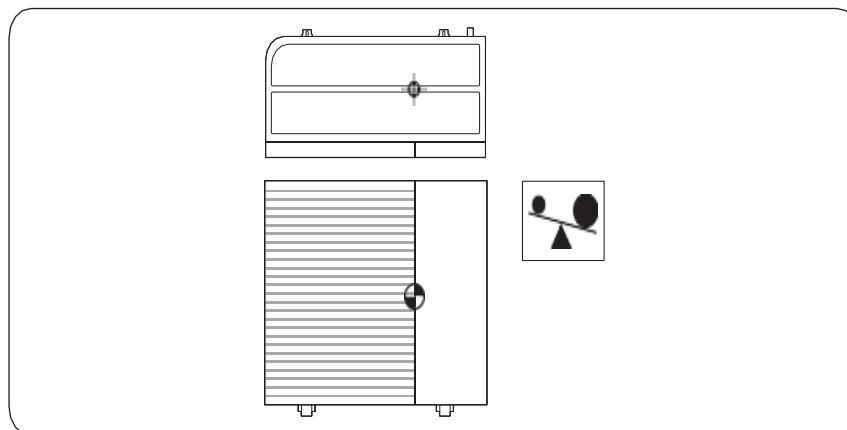
Moving the outdoor unit with a forklift

Insert the fork into the wooden pallet at the bottom of the outdoor unit carefully. Be careful that the fork does not damage the outdoor unit. Operating a forklift may require special certification or training according to local regulations.



NOTE

When looking at the product from the front, there is a center of gravity right from the middle of the product. Refer to the center of gravity mark attached to the product.



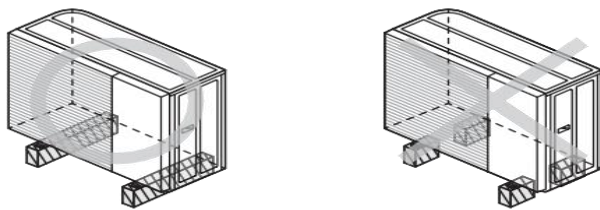
5.4 Mounting the outdoor unit

The outdoor unit must be installed on a rigid and stable base to avoid any increase in the noise level and vibration, particularly if the outdoor unit is to be installed in a location exposed to strong winds or at a height, the unit must be fixed to an appropriate support (wall or ground).



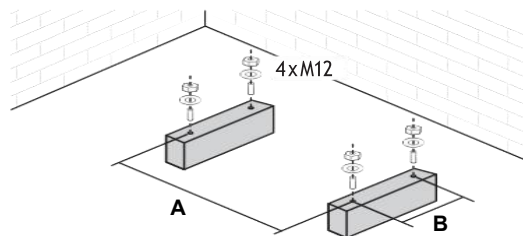
WARNING

- When tightening the anchor bolt, tighten the rubber washer to prevent the outdoor unit bolt connection part from corroding.
- Make a drain outlet around the base for outdoor unit drainage.
- If the outdoor unit is installed on the roof, you have to check the ceiling strength and waterproof the unit.
- The anchor bolt must be 20 mm or higher from the base surface.
- In order to prevent freezing of water drains, additional protection such as application of a heating cable may be required.



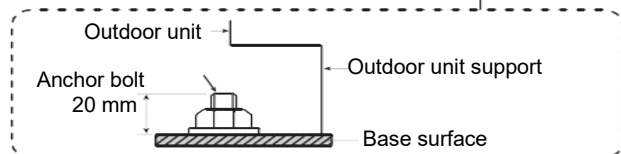
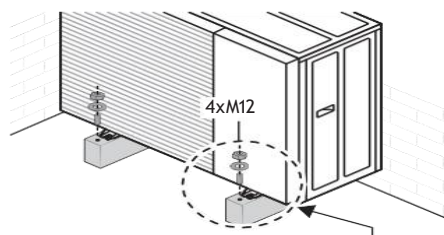
Inuit Mono 5 / 5 WT
Inuit Mono 8 / 8 WT

A:650mm
B:500mm

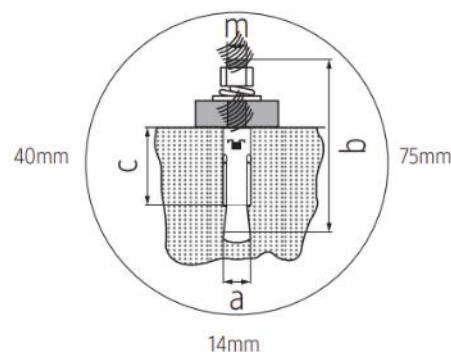
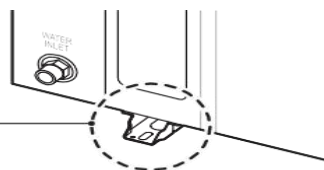


Inuit Mono 12 / 12 WT
Inuit Mono 16 / 16 WT

A:790mm
B:530mm



Designed to cut off residual vibration from outdoor unit to rack. (not supplied with product)



Size	Diameter of drill bit (a)	Anchor length (b)	Sleeve length (c)	Insert depth	Fastening torque
Ø 10	14 mm	75 mm	40 mm	50 mm	30 N·m

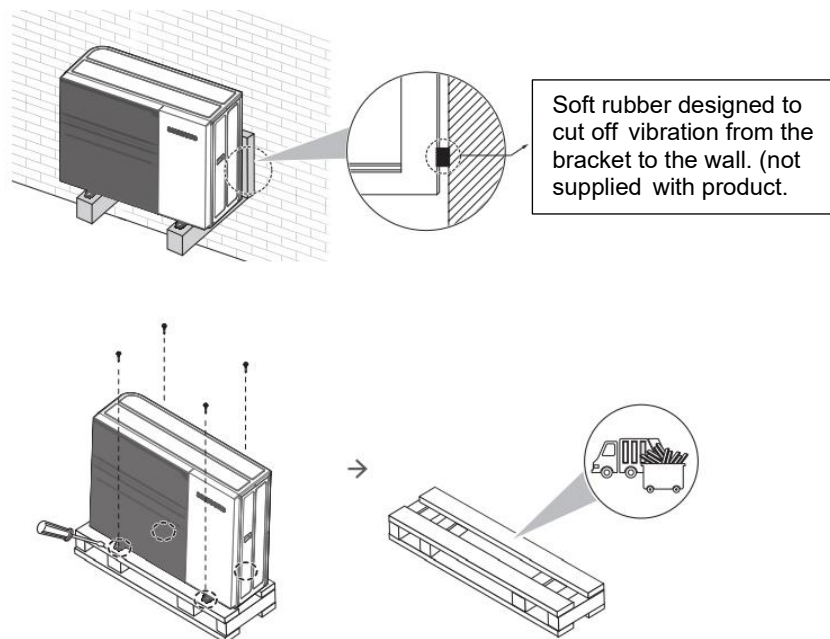
Note: Use the anchor bolts and nuts that is zinc plated or made of STS material. Regular anchor bolts or nuts may get damaged by corrosion

Outdoor unit installatin on a bracket suspended from a wall



WARNING

- With an outdoor unit having a net weight upper than 60 kg, we suggest not installing it suspended on the wall, but considering a floor-standing one.
- Ensure the wall will be able to support the suspended weight of both rack and outdoor unit.
- Install the bracket close to a constructional column as much as possible.
- Install the proper grommet in order to reduce noise and residual vibration transferred by the outdoor unit towards the wall.



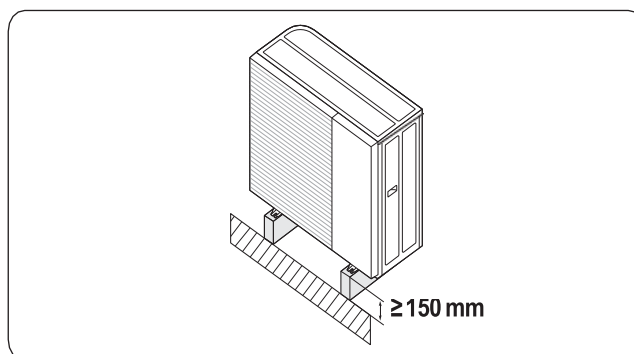
! WARNING

- Be sure to remove the transport pallet below the bottom side of the unit base panel before fixing the bolt. Its sole purpose is to carry the product during transport, it has no installation value. Please discard the pallet in accordance to local waste regulations once the unit is correctly installed.

5.5 Outdoor unit drain work (general area)

While the air to water heat pump is operating in heating mode, ice can accumulate on the surface of the condenser. To prevent ice from growing, the system occasionally enters a defrost mode and the ice on the surface thaws off. Water dripping from the condenser is guided through the drain holes to prevent ice formation inside the base plate at subzero temperatures.

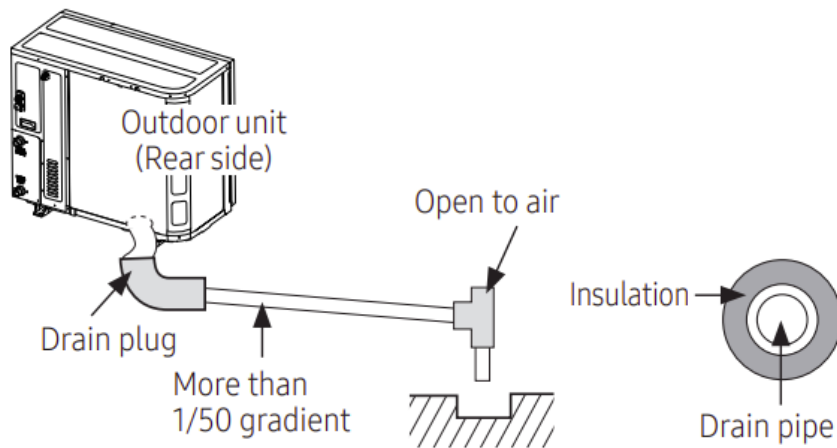
- In case there is not enough space for natural drainage from the outdoor unit, additional drain work is required. Follow the description as per below:
 - Provide a minimum of 150 mm of free space to the floor.
 - Insert the drain plug into the hole at the bottom of the outdoor unit.
 - Connect the drain hose to the drain plug.
 - Make sure dirt and debris cannot block the drain (hose). Clean the base plate whenever needed.
 - For the remaining holes (that do not have the drain plug), insert the drain cap
 - Make sure that the water dripping from the drain hose runs away correctly and safely.



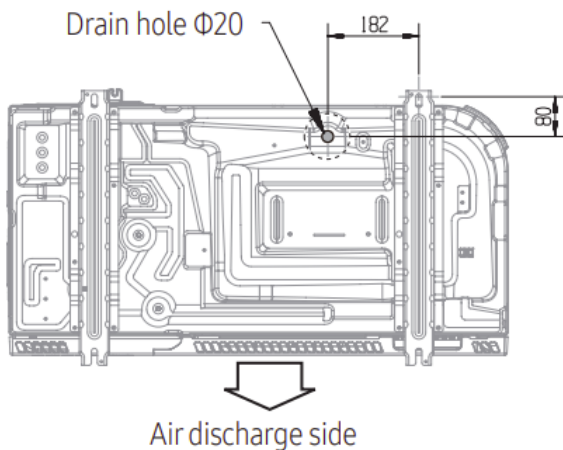
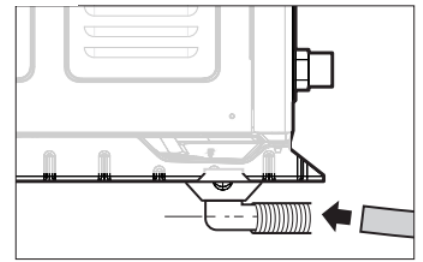
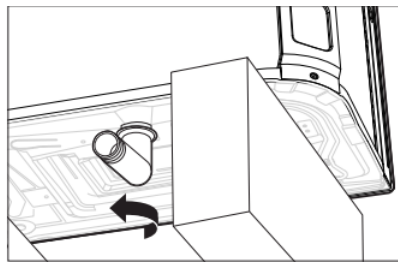
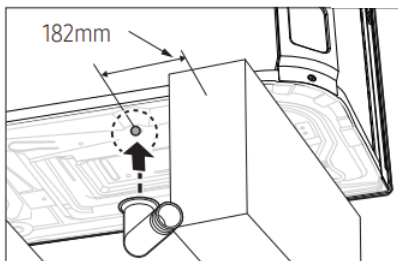
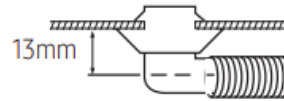
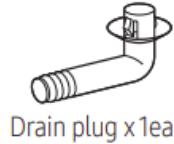
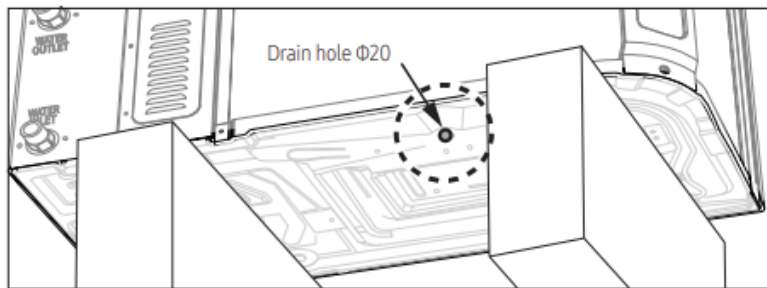
! WARNING

- If the drainage is not adequate, it can lead to stagnant water and ice build-up, causing system performance issues and possible damages.

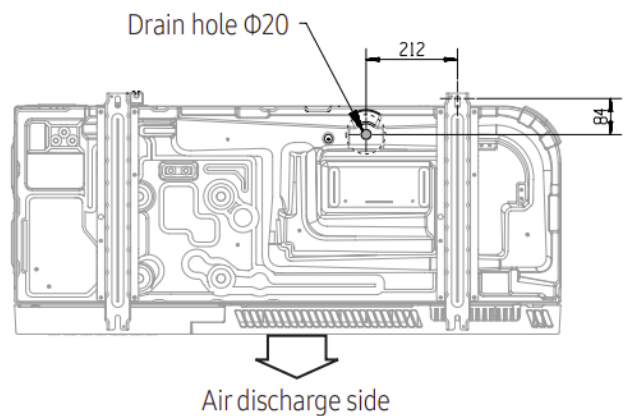
Installing the drain pipe



1. Open the upside of connected parts of outdoor units to prevent inner pressure.
2. Do not install a trap in the drain pipe work and install with a 1/50 gradient or more.
3. Insulate the drain pipe and drain plug by using the insulation over 10mm.
4. Install a self-regulation heat cable to prevent the drain pipe from freezing

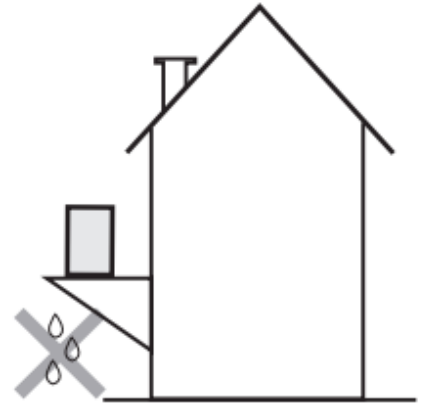


Mono 5 / 5WT; Mono 8 / 8WT



Mono 12 / 12WT; Mono 16 / 16 WT

- Prepare a water drainage channel around the foundation, to drain waste water from around the unit.
- If the water drainage from the unit is inadequate, please raise the unit on construction concrete blocks, etc. (the height of the construction should be at least 150 mm).
- If you install the unit on a frame, please install a slanted waterproof plate within 150 mm of the underside of the unit to prevent water from plashing against the bottom plate from below.
- When installing the unit in a place frequently exposed to snow, pay special attention to elevating the foundation as high as the average snow height plus the additional required 150 mm.
- If you install the unit on a wall support bracket, please install drainage pipework. In order to avoid the drain water from dripping on the floor potentially creating a slippery surface or an ice layer under freezing conditions.



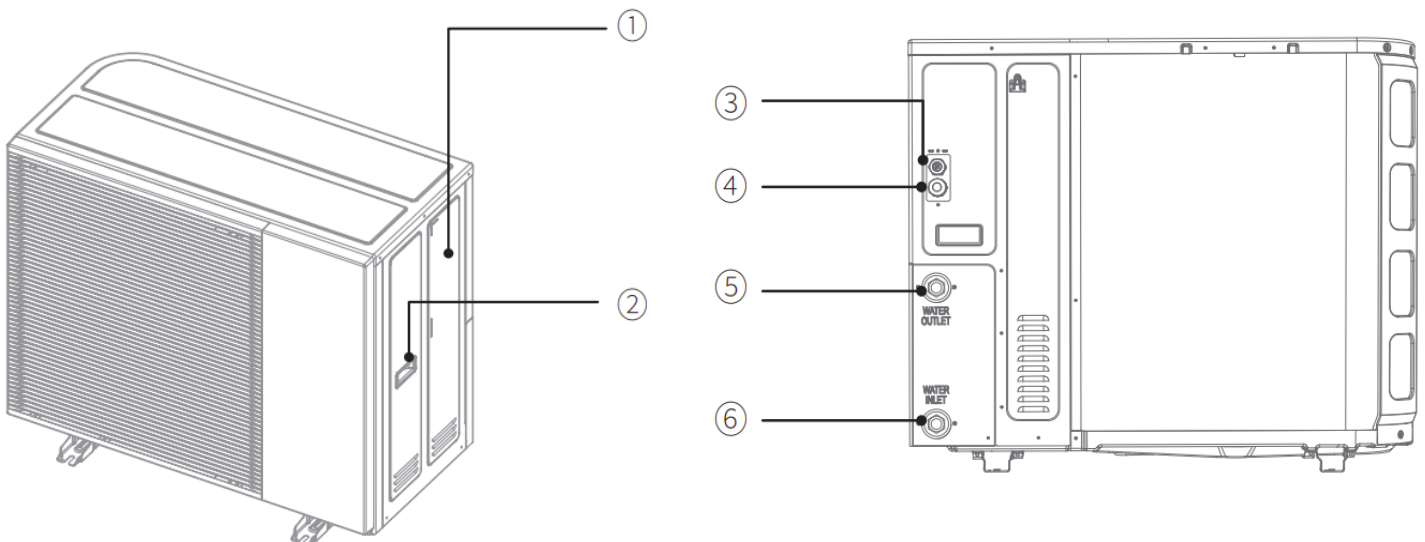
Note: Please securely mount the outdoor unit before connecting the water piping.

5.6 Opening the outdoor unit



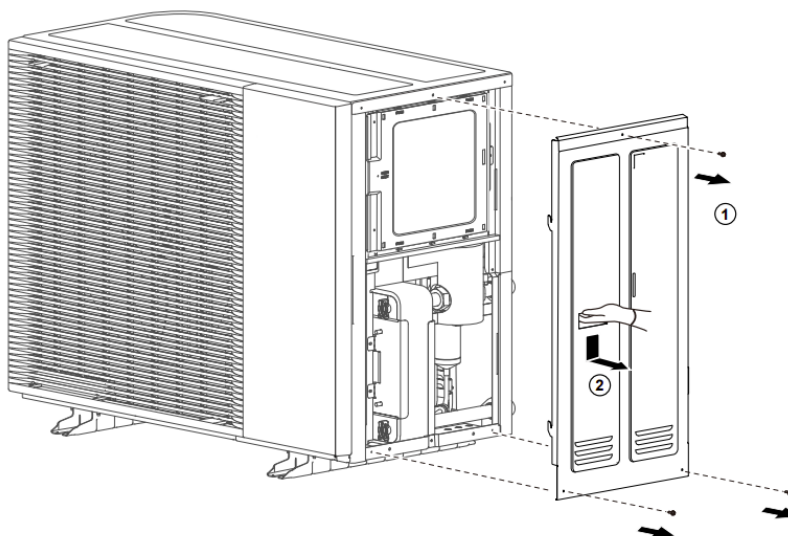
WARNING

Do not leave the unit unattended when the service cover is removed. Installation and servicing must be performed only by Qualified Installers.

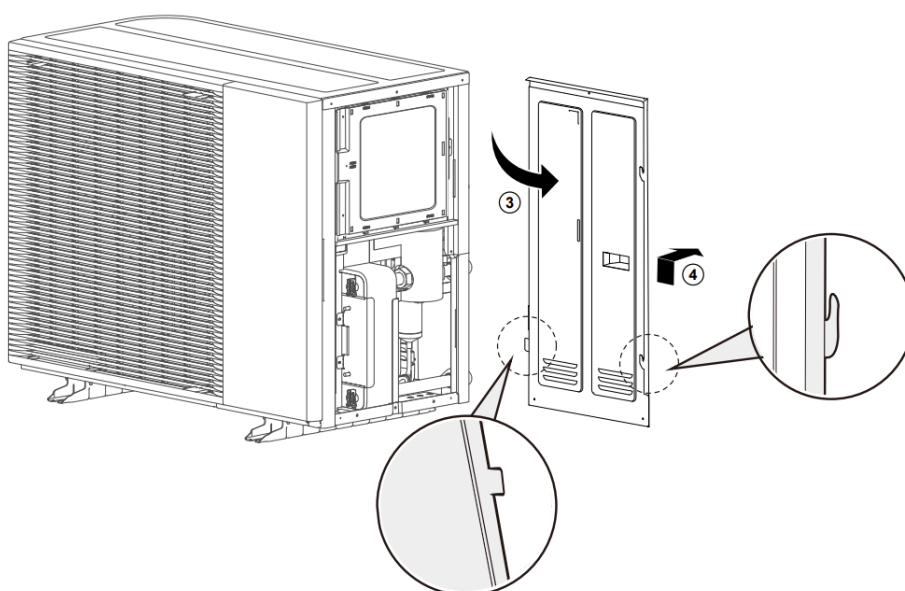


1. Side panel
2. Handle
3. Communication wiring conduit hole
4. Power wiring conduit hole
5. Water pipe (OUT)
6. Water pipe (IN)

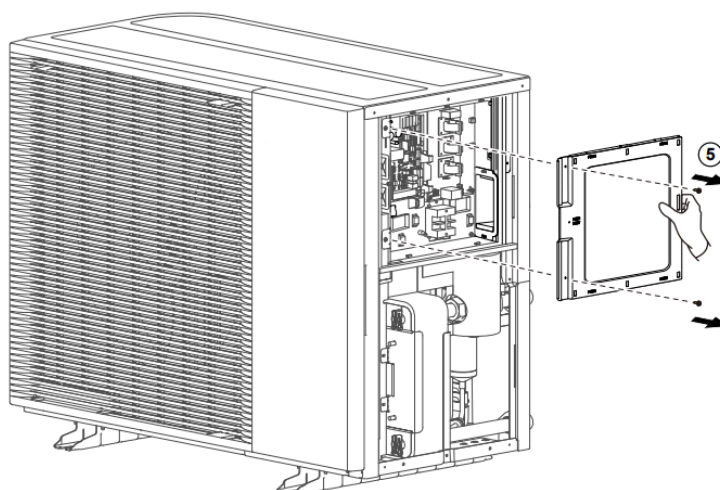
1. Remove the 3 screws of the side panel.
2. To remove the side panel, slide it down and pull it out.



3. Check that the panel is not caught in the groove on the right.
4. Pull it forward.



5. Remove the 2 screws and remove the control box cover. Remove and install only the side cover during installation.



6. Indoor unit installation

6.1 Preparing the installation location of the indoor unit

The indoor unit is designed for indoor installation only and for the following room temperatures:

- 5~35°C (heating)

- 5~40°C (cooling)

Avoid installing against outer walls with a risk of freezing

Choosing the installation site

The indoor unit should be installed indoors and meet the following conditions:

- In area with suitable space for servicing.
- A place with adequate ventilation.
- The construction for installation is a flat, capable of supporting the operational weight of the unit
- Do not install the indoor unit in the following areas:
 - Area filled with minerals, splashed oil, or steam. It will deteriorate plastic parts, causing failure or leakage.
 - Area that is close to heat sources.
 - Area that produces substances such as sulfuric gas, chlorine gas, acid, and alkali. It may cause corrosion of the pipings and brazed joints.
 - Area that can cause leakage of combustible gas and suspension of carbon fibers, flammable dust, or volatile flammables.
 - Area where animals may urinate on the product. Ammonia may be generated.
 - Do not use the indoor unit for preservation of food items, plants, equipment, and art works. This may cause deterioration of their quality.
 - Do not install the indoor unit if it has any drainage problems.

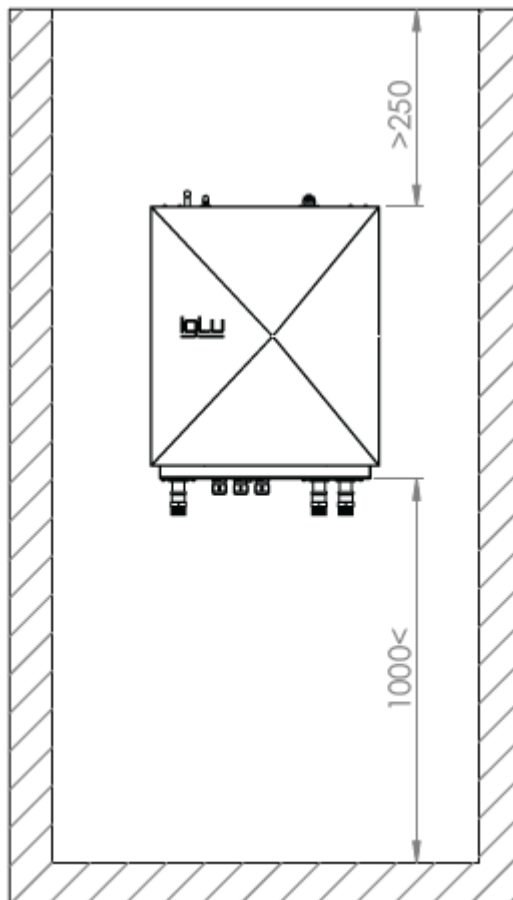
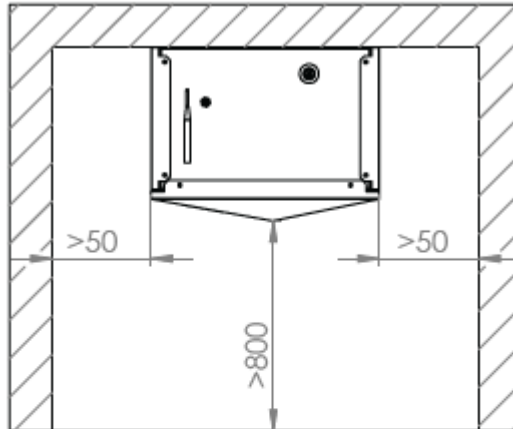
6.2 Installation dimensions and clearances of IGLU Inuit Mono

When installing one indoor unit

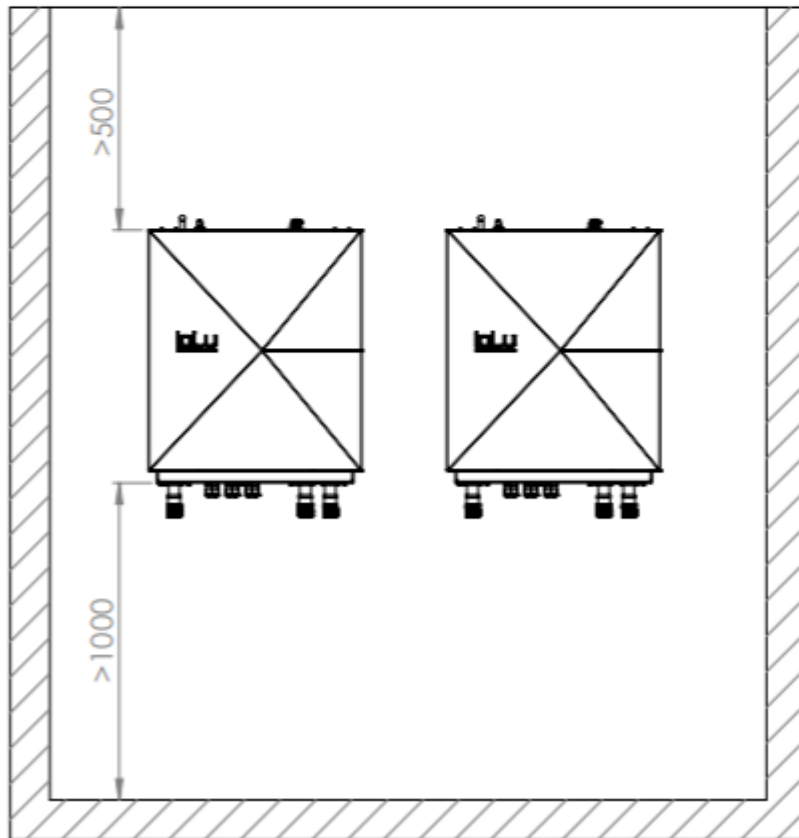
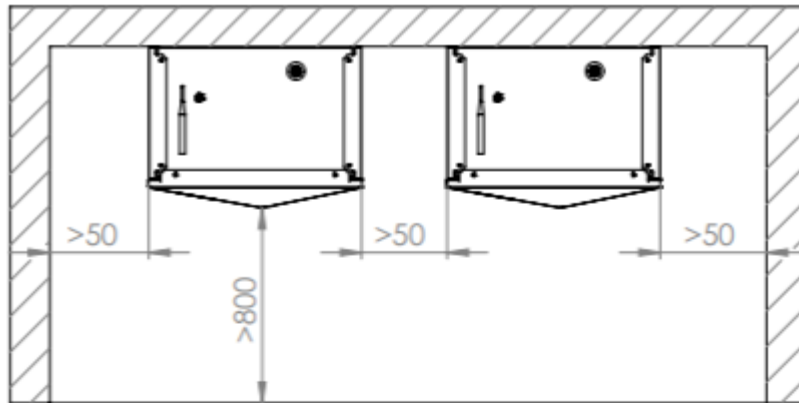


CAUTION

The units must be installed according to distances declared, in order to permit accessibility from each side, to guarantee correct operation of maintenance or repairing of the products. The unit's parts must be accessible and serviceable under safe working conditions (for people or things).



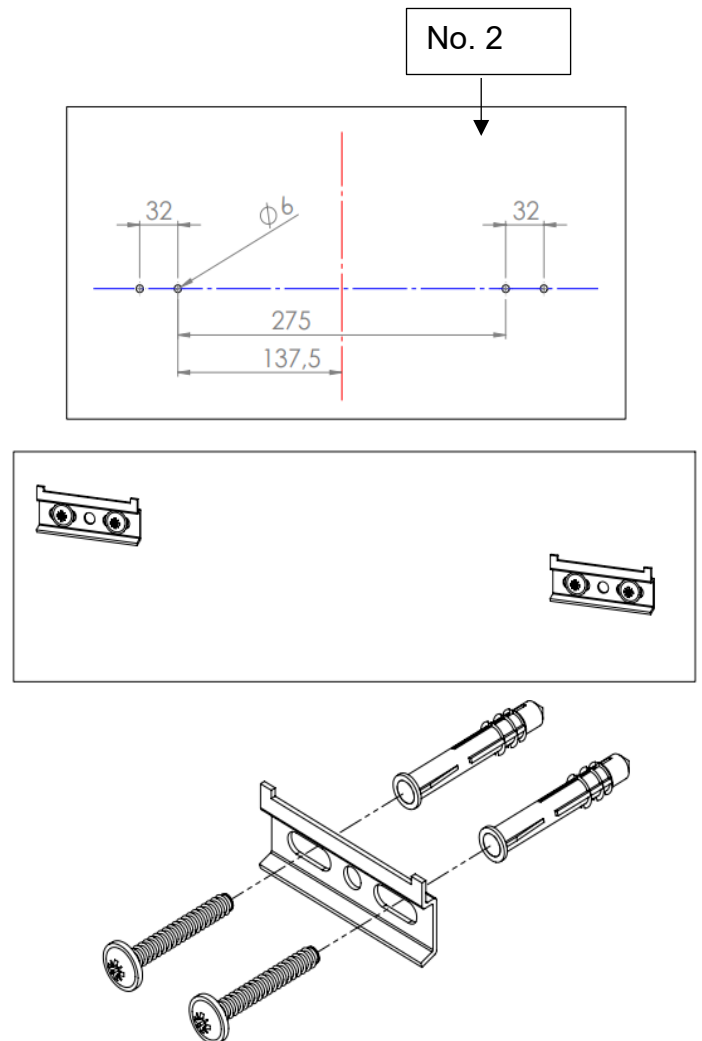
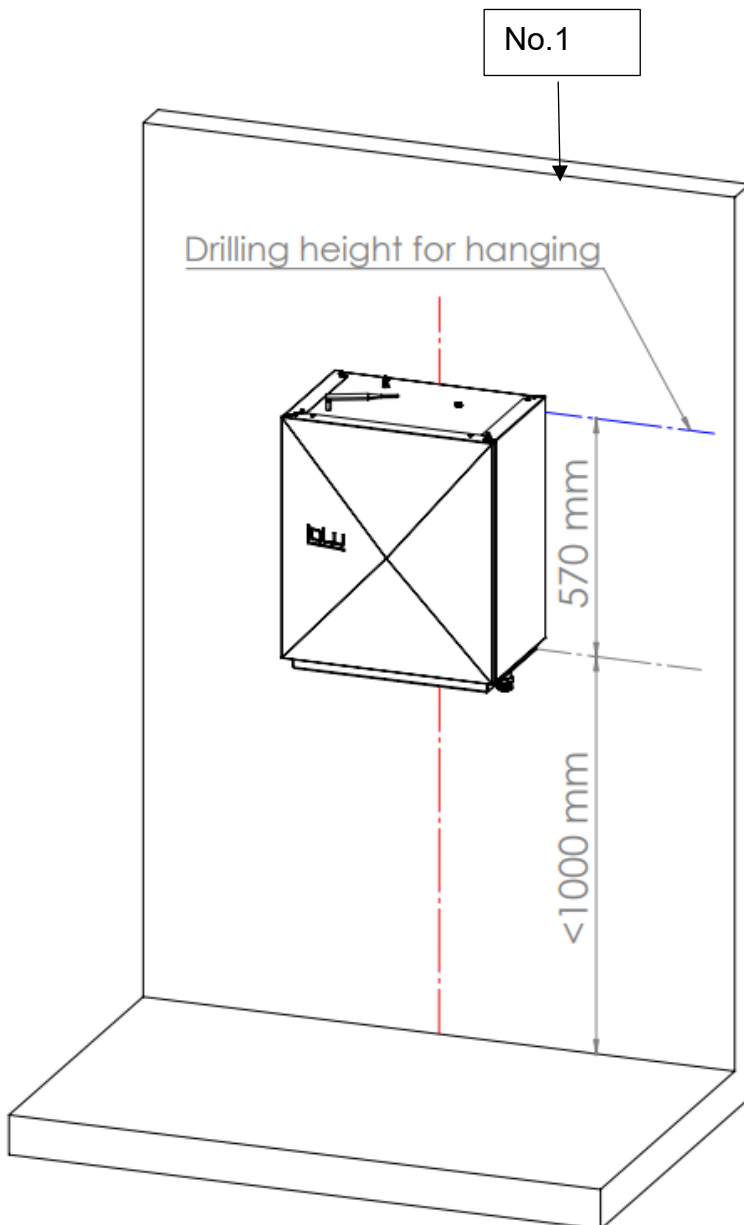
When installing more than one indoor unit



6.3 Wall Mounting Instructions of indoor unit IGLU Inuit Mono

Below you will find the illustrations and guidelines for mounting the IGLU Inuit Mono heat pump without the integrated water tank on the wall.

- The red line shown in the schematic represent the centerline, which serves as a positioning reference.
- When mounting the unit, the bottom of the unit should be at least 1 meter above the ground.
- The blue line indicates the location where the mounting brackets should be installed — 570 mm from the bottom of the unit.
- The schematic (**No. 2**) illustrates the guidelines for the screw hole positions required to mount the unit on the wall.
- All accessories required for mounting are included in the packaging: mounting brackets, pan head screws, and wall plugs.



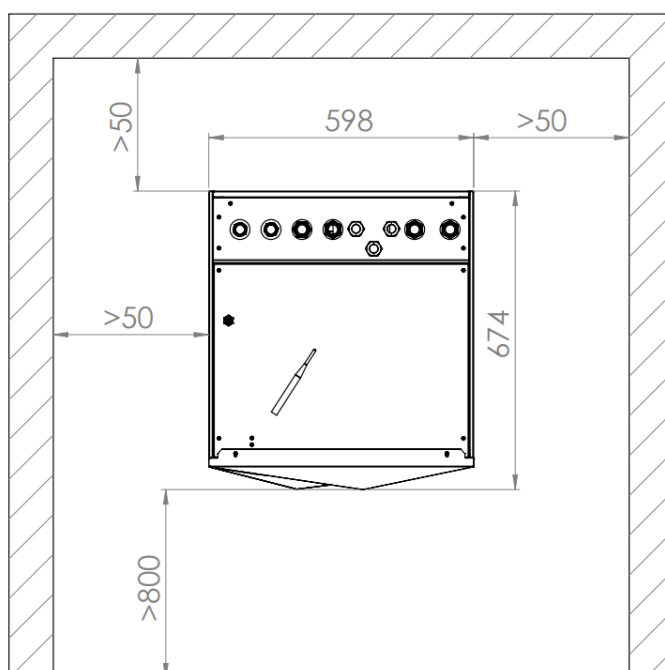
6.4 Installation dimensions and clearances of IGLU Inuit Mono WT



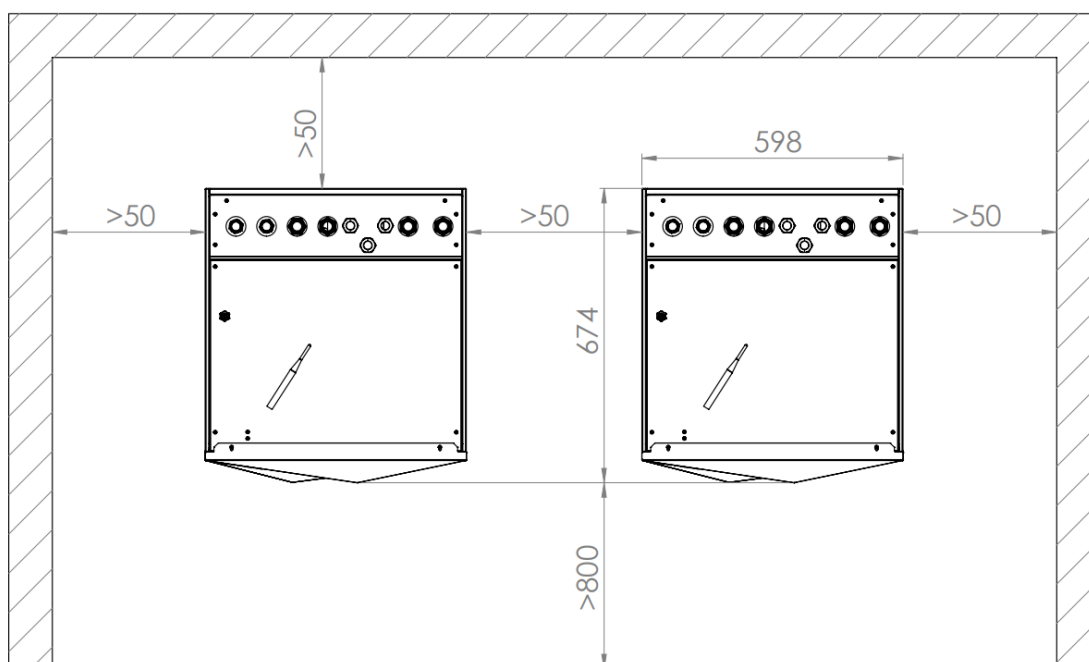
CAUTION

The units must be installed according to distances declared, in order to permit accessibility from each side, to guarantee correct operation of maintenance or repairing of the products. The unit's parts must be accessible and serviceable under safe working conditions (for people or things).

When installing one indoor unit



When installing more than one indoor unit



6.5 Opening the indoor unit IGLU Inuit Mono

Normally the unit should remain closed, except for:

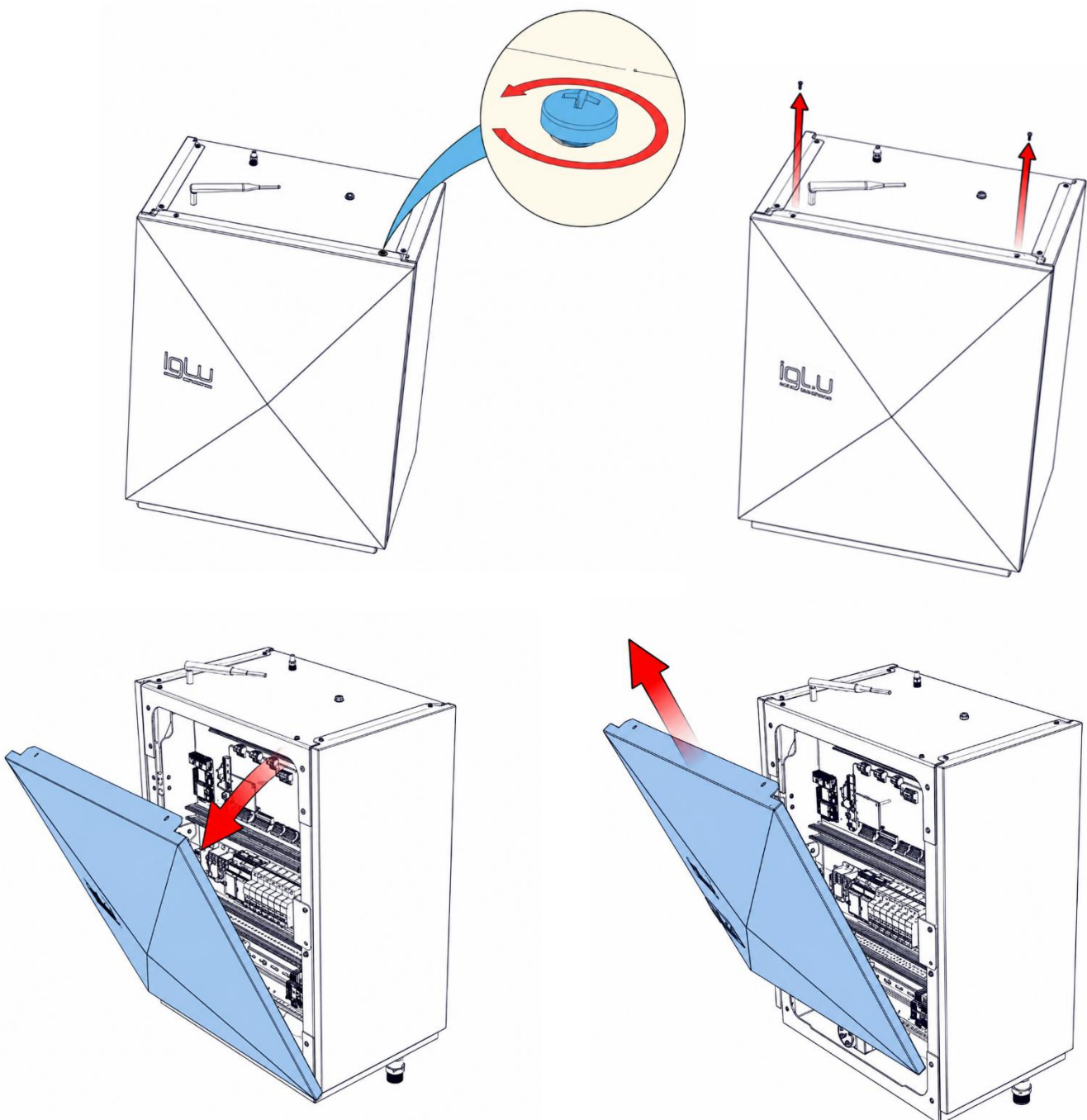
- When connecting the electrical wiring
- When maintaining or servicing the unit



WARNING

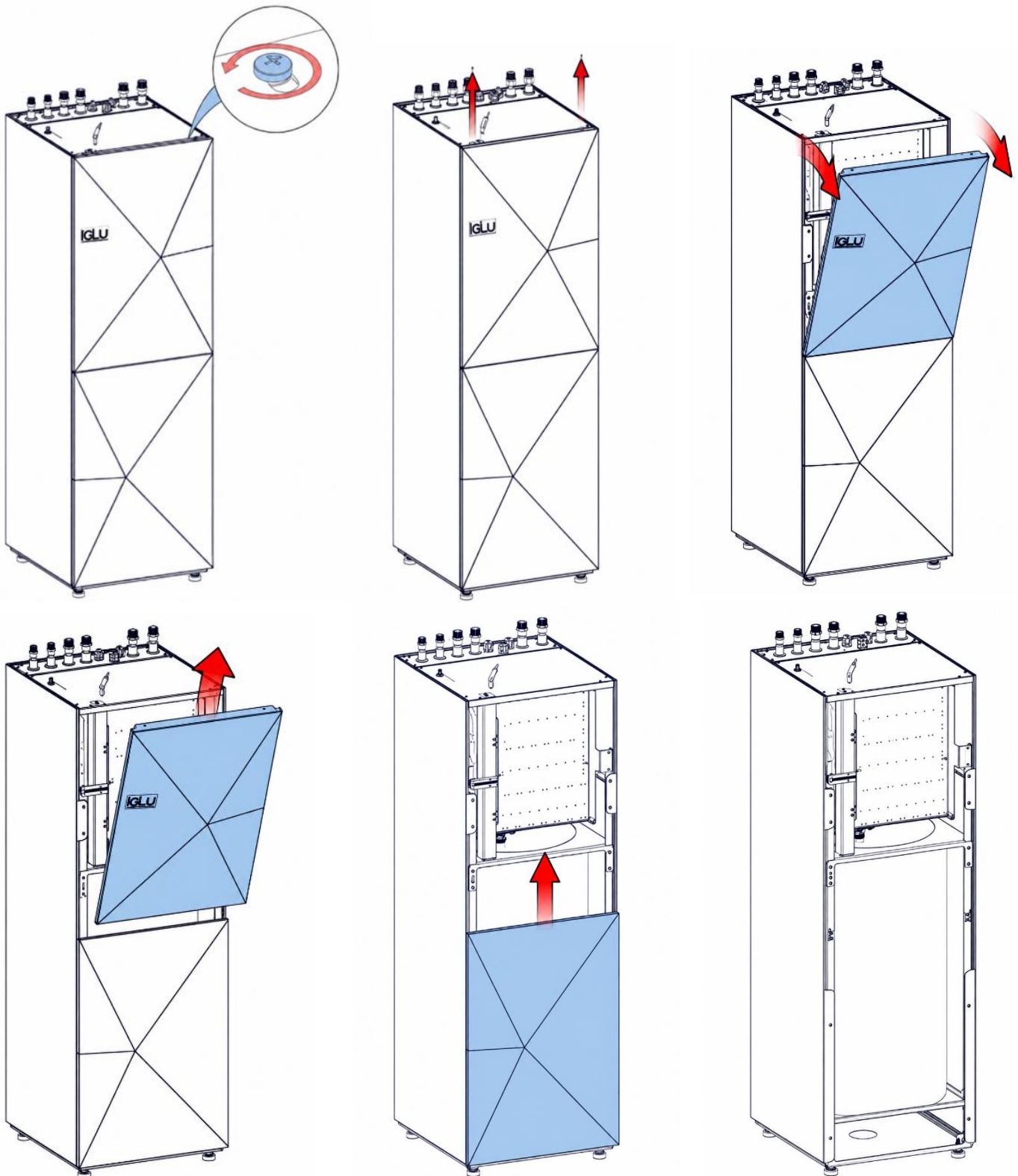
Do not leave the unit unattended when the service cover is removed. Installation and servicing must be performed only by Qualified Installers.

1. Locate the two screws on the top of the front panel
2. Unscrew them and place the screws in a safe location.
3. Tilt the front panel towards you.
4. Carefully remove the panel by lifting it from the locking tabs.



6.6 Opening the indoor unit IGLU Inuit Mono WT

1. Locate the two screws on the top of the front panel.
2. Unscrew them and place the screws in a safe location.
3. Tilt the front panel towards you.
4. Carefully remove the panel by lifting it from the locking tabs.
5. Carefully lift the bottom front panel from the locking tabs.
6. The unit is open, and now you can service it.



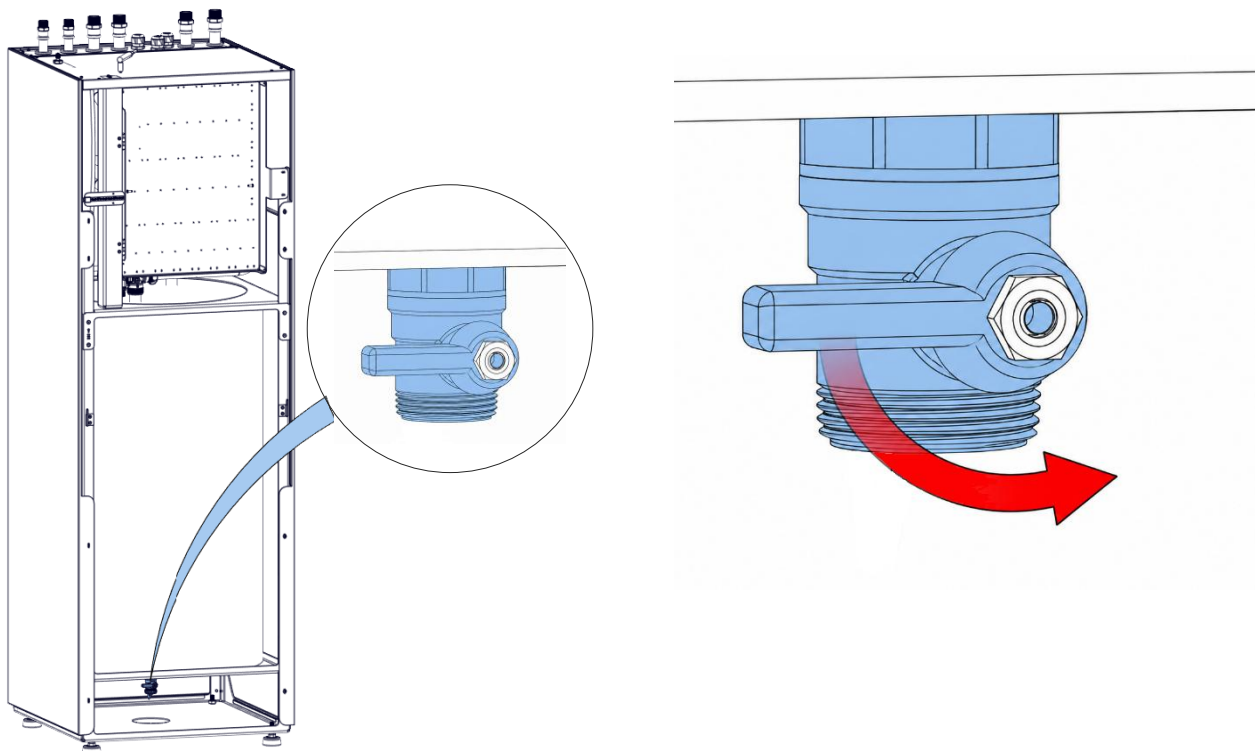
6.7 Drain work of indoor unit IGLU Inuit Mono WT



WARNING

- Servicing must be carried out only by a qualified installer.
- Before draining the DHW tank, ensure that the water has cooled sufficiently to prevent the risk of scalding

1. Open the heat pump by removing the covers. (refer to the section “Opening the indoor unit IGLU Inuit Mono WT”).
2. Connect a drainage hose to the valve outlet.
3. Open the valve to begin draining the water from the tank.



7. Preparing water piping

7.1 Water circuit requirements

Before installing the unit, ensure the following requirements are met. These apply to both indoor unit types — with and without the integrated water tank —

- The maximum water pressure of the unit is 3.0 bar static pressure.
- The operating range of leaving water temperature is 15~75°C at heating conditions and 5~25°C at cooling conditions.
- The minimum required waterflow rate for operation is 7 liters/min. Otherwise, the unit can stop due to a lack of water. The design of the installation should meet with the nominal flow for the corresponding heat pump model in order to achieve the efficiencies as declared by our TDS.
- When circulation in each space heating/cooling circuit is controlled by thermostatic valves or zone actuators, or when the system operates in active cooling mode, a buffer tank shall be installed to ensure sufficient system water volume and maintain the minimum required flow through the heat pump. In all other cases, the installation of a buffer tank is recommended.
- Domestic hot water tank. The operating pressure of the domestic hot water tank is 10 bar. Provide adequate safeguards in the water circuit to ensure that the maximum pressure is NOT exceeded.
- Potable water quality must comply with Directive (EU) 2020/2184 on the quality of water intended

for human consumption.

- Heating water quality must comply with the requirements of VDI 2035.
- If the unit and the pipes are exposed to freezing temperature, it can cause damage to the hydraulic system. Special care must be taken to prevent freezing of the total water system.
- The unit is designed to be used in a closed-loop system. Do not use any other components which are designed only for an open-loop system.
- Never use uncoated parts in the water circuit. Because it can cause excessive corrosion
- All hydraulic parts including field piping must be insulated to reduce heat loss and condensation.
- Drain taps must be provided at all low points of the system to permit complete drainage of the circuit for maintenance use.
- Make sure that the check valves are correctly installed in the system.
- Flush pipes out with clean water to remove contaminants in pipes during installation.
- The strainer (water filter) must be cleaned after flushing the pipes, and it should be cleaned periodically. Replace the strainer when necessary.
- Fill the heating circuit to a pressure of approximately ~1.5 bar using the make-up water assembly. Since the unit is not equipped with an integrated pressure gauge (manometer), an external pressure gauge must be installed to monitor the system pressure. NOTE: The system pressure will vary depending on the water temperature. The required filling pressure shall be determined according to the system design, static height, and expansion vessel pre-charge. The system pressure must not exceed the maximum allowable static pressure of 3.0 bar.
- Make sure that air should be vented from the system at start-up or after installing/servicing. The air vent valve must be opened during charging the water (at least 2 turns) in order to remove all air in the circuit.
- Provide air vents at all high points of the system, which must also be easily accessible for servicing.
- Always use materials which are compatible with water used in the system and with the materials used on the indoor unit.
- Select piping diameter in relation to required waterflow and available ESP of the pump.
- Do not operate the system with closed valves because it results in damaging the heat pump.
- It is recommended to avoid long runs of piping between the DHW tank and the hot water end point (shower, bath,...) and to avoid dead ends
- When using non-brass metallic piping, insulate the brass and non-brass properly so that they do NOT make contact with each other. This is to prevent galvanic corrosion.
- To avoid stagnation of water, it is important that the storage capacity of the DHW tank meets the daily consumption of DHW. Immediately after installation, the DHW tank must be flushed with fresh water.
- If the DHW system has not been used for an extended period, flush the tank and DHW pipework with fresh potable water before use. Where required, activate the DHW disinfection function in accordance with applicable local regulations.
- In accordance with the applicable legislation, it may be necessary to install thermostatic mixing valves.
- The installation must be in compliance with the applicable legislation and may require additional hygienic installation measures.

7.2 Circulation pump performance curves of IGLU Inuit Mono 5/8 - Mono 5/8 WT

The performance curves of circulation pumps are illustrated in the graph. The upper diagram shows the pump head (H) in meters [m] or pressure (p) in kilopascals [kPa] plotted against the flow rate (Q) in cubic meters per hour [m³/h] or liters per second [l/s].

The lower diagram displays the corresponding absorbed power (P₁) in watts [W] as a function of the same flow rate.

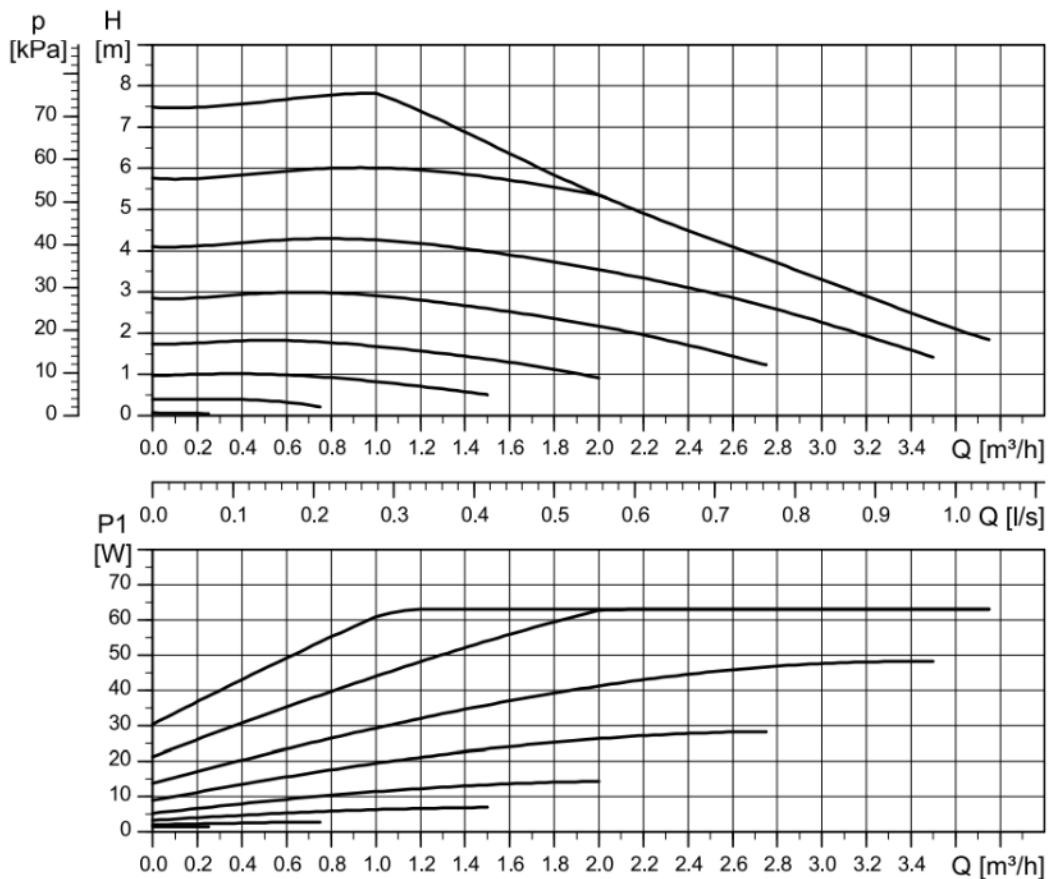
Both curves use a common horizontal axis for flow rate, allowing for a direct comparison between hydraulic performance and power consumption.

The power curve demonstrates that the pump consumes minimal power at low flow rates. As the flow rate increases, the absorbed power rises significantly.

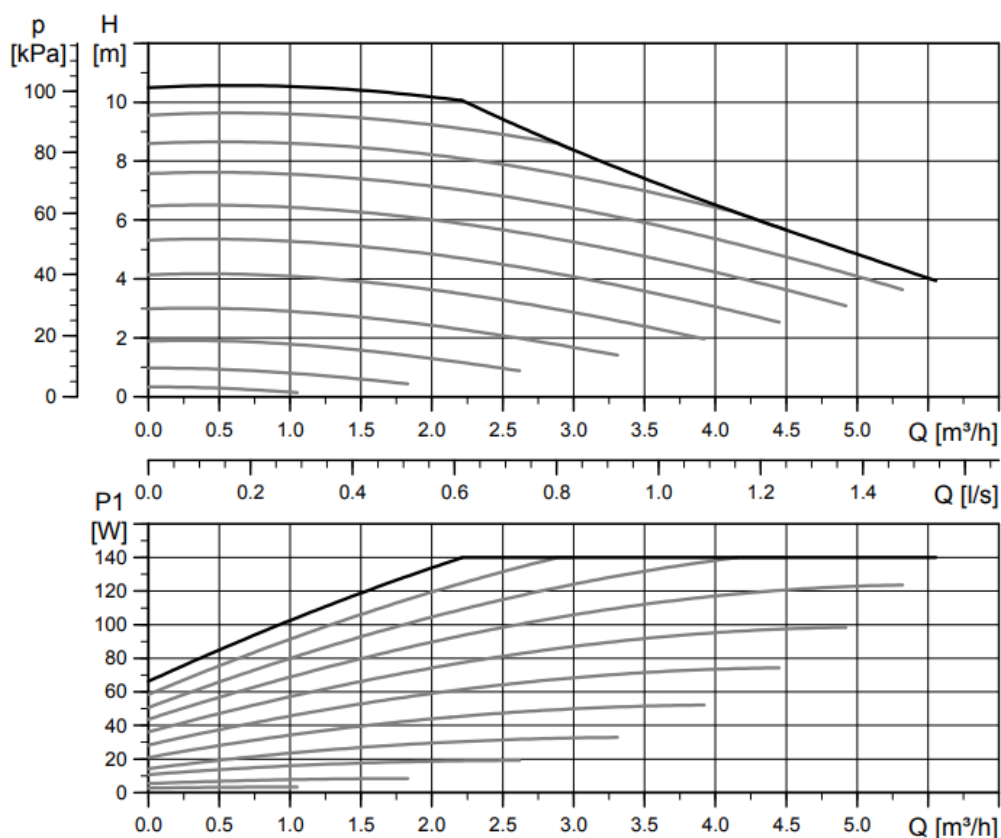


CAUTION

These curves are for reference only and should not be used as guaranteed performance values. If minimum performance is required, individual measurements must be made.



7.3 Circulation pump performance curve of IGLU Inuit Mono 12/16 - Mono 12/16 WT



Reference table – Available heat pump head (kPA) – Heating side

Model Name	Pump Head (kPA)
Inuit Mono 5	69,05
Inuit Mono 8	60,79
Inuit Mono 12	96,76
Inuit Mono 16	91,08

Model Name	Pump Head (kPA)
Inuit Mono 5 WT	67,29
Inuit Mono 8 WT	56,78
Inuit Mono 12 WT	88,57
Inuit Mono 16 WT	77,56



CAUTION

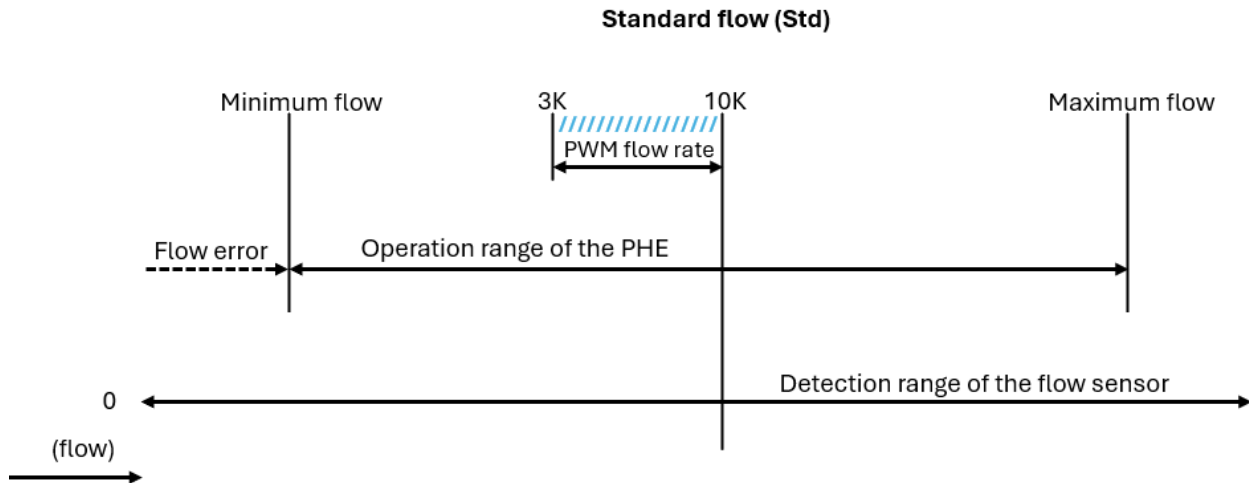
The available pump head values shown in the table above represent the external available pressure provided by the internal circulating pump after deducting the pressure loss of the heat pump's internal components. The external system must be designed so that its total pressure drop at design flow does not exceed these values. If the total pressure drop is higher, an additional circulation pump must be installed in the external circuit.

7.4 Flow rate

The heat pump delivers its rated capacity at exactly the designed flow rate (also standard or nominal flow). Therefore, it is required to always meet with the designed flow rate as indicated in our technical data sheet.

The installer is responsible to meet with the exact designed flow rate (Water Flow Rate (Std))[H/C], as stated in the applicable TDS).

- In case the flow is too high, it should be balanced out by increasing the pressure drop of a balancing (or flow regulator) valve.
- If the flow is too low, an additional pump must be installed to assist the built-in pump. The control logic for the PWM pump can adjust the flow based on desired dT setpoint between 3K and 10K, depending on installation.



CAUTION

- If the flow rate is too low, the generated heat might not meet with the designed capacity.
- If the flow rate is too high, it may cause noise, cavitation and erosion and impact on the efficiency of the product.

7.5 Minimum active water volume

The minimum active water volume of the system is the amount of water which is always pumped around, even when all valves in the system are closed. The use of a buffer tank can increase the active volume and therefore the operation time between compressor start and stop.

Ideally, systems should be designed for around 12 to 15 minutes of operation, in order to meet with our declared efficiencies. This time frame is based on a maximum of 4 On/Off cycles per hour.

The required minimum active water volume can be calculated via the below stated formula:

$$V_{\min} = \frac{t_{\min} \times \Phi_{\min}}{C_{\text{water}} \times \Delta T}$$

$V_{\min}$: Minimum active volume [dm³, l]

$t_{\min}$: Minimum allowed operation time is 12 min or 720 sec per cycle [s, sec]

$\Phi_{\min}$: Minimum compressor output [kW = kJ/s]

C_{water} : Specific heat of water (4,2) [kJ/kg*K]

ΔT : Temperature increase (5 - 10 K) [K]

Reference table (Design $\Delta T = 5 \text{ K}$, $t_{\min} = 15 \text{ min}$)

Model	Vmin (L)
Inuit Mono 5 / Inuit Mono 5 WT	67
Inuit Mono 8 / Inuit Mono 8 WT	96
Inuit Mono 12 / Inuit Mono 12 WT	163
Inuit Mono 16 / Inuit Mono 16 WT	163



CAUTION

- High number of compressor cycles per hour increases electricity consumption and may significantly reduce the service life of the compressor.



CAUTION

- Water volume of total system (except tank integrated unit) for reliable defrost cycles is minimum 30 Liter (IGLU Inuit Mono 5/8), 50 Liter (Iglu Inuit Mono 12/16).
- This volume is not to be mistaken for the minimum active water volume, as that serves a different purpose against short cycling of the compressor



NOTE

- When circulation in each space heating/cooling circuit is controlled by thermostatic valves or zone actuators, or when the system operates in active cooling mode, a buffer tank shall be installed to ensure sufficient system water volume and maintain the minimum required flow through the heat pump. In all other cases, the installation of a buffer tank is recommended.

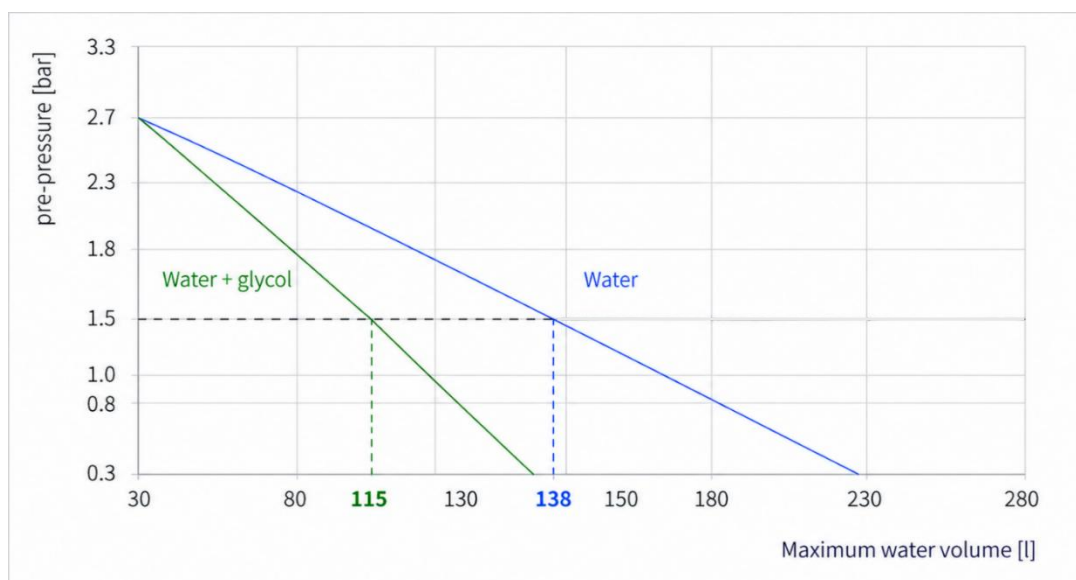
7.6 Setting capacity and pre-pressure of the expansion vessel



NOTE

The maximum water volume depends on whether glycol is added to the water circuit. For more information on the addition of glycol.

Use the following graph to determine the maximum allowable water volume based on the calculated pre-pressure. Indoor heat pump has a built-in expansion vessel with a capacity of 10 liters and a pre-charge of 1.5 bar



Installation height difference(a)	Water volume	
	< 138 Litres	> 138 Litres
<7m	No pre-pressure adjustment required.	Actions required: • Pre-pressure must be decreased, calculate according to “Calculating the pre-pressure of the expansion vessel”. • Check if the water volume is lower than maximum allowed water volume.
>7m	Actions required: • Pre-pressure must be increased, calculate the appropriate value following by “Calculating the pre-pressure of the expansion vessel”. • Check if the water volume is lower than maximum allowed water volume.	Expansion vessel of the unit too small for the installation.

(a) Installation height difference: height difference (m) between the highest point of the water circuit and the indoor unit. If the unit is located at the highest point of the installation, the installation height is considered 0 m.

Calculating the pre-pressure of the expansion vessel

Calculating the pre-pressure of the expansion vessel :

- The pre-pressure(P_g) to be set depends on the maximum installation height difference(H) and is calculated as below : $P_g = (H/10 + 0.3)$ bar

Example: Let's say the highest point in the system is 6 meters above the indoor unit (so $H=6$), to calculate the required pre-pressure:

$$P_g = \left(\frac{6}{10} + 0.3 \right) = (0.6 + 0.3) = \boxed{0.9 \text{ bar}}$$

When is it required to change the default pre-pressure of the expansion vessel built-in in an indoor heat pump with a capacity of **10 liters** and a pre-charge of **1.5 bar**

***NOTE:** If the required pre-pressure exceeds the allowable limit of the built-in expansion vessel (**maximum 3.0 bar**), the built-in vessel is not sufficient for the system. In such cases, an additional external expansion vessel must be installed on the heating circuit.

Furthermore, if the total system water volume exceeds the capacity of the built-in expansion vessel, an additional expansion vessel must be installed to ensure proper pressure control during operation.

Keep in mind the following guidelines:

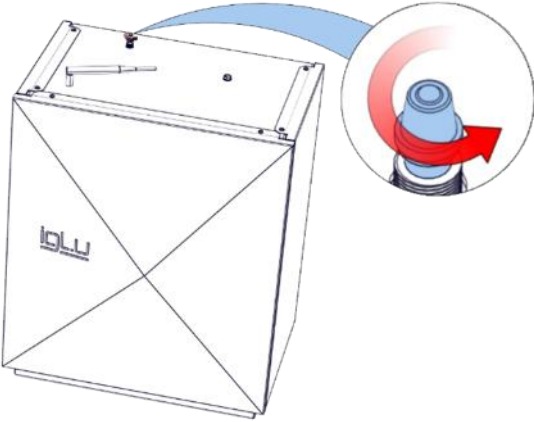
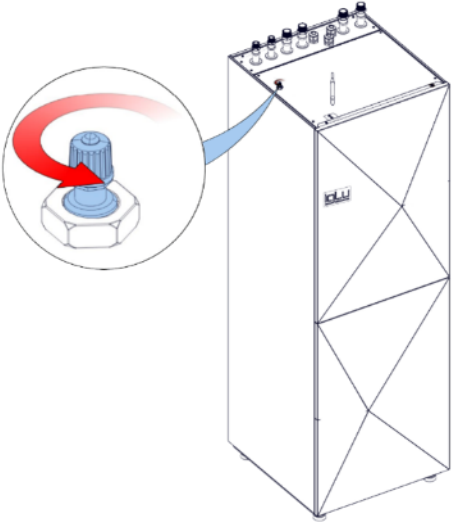
- Use only dry nitrogen to set the expansion vessel pre-pressure.
- Inappropriate setting of the expansion vessel pre-pressure will lead to malfunction of the system. Therefore, the pre-pressure should only be adjusted by an authorised installer.

Changing the pre-pressure of the expansion vessel should be done by releasing or increasing nitrogen pressure through the expansion vessel's service valve, the location of which is illustrated below:



CAUTION

Only a qualified installer can change the pre-pressure of the expansion vessel

Expansion vessel service valve of indoor unit IGLU Inuit Mono	Expansion vessel service valve of indoor unit IGLU Inuit Mono WT
	

8 .Piping installation

8.1 About the piping work

Water connections must be made in accordance with the Water Piping and Wiring diagram delivered with the unit, respecting the water inlet and outlet. If air, moisture or dust gets in the water circuit, problems may occur. Therefore, always take into account the following when connecting the water circuit:

- Use clean pipes only.
- Hold the pipe end downwards when removing burrs.
- Cover the pipe end when inserting it through a wall so that no dust and dirt enter.
- Use a good thread sealant for the sealing of the connections.
- The sealing must be able to withstand the pressures and temperatures of the system. When using non-brass metallic piping, make sure to insulate both materials from each other to prevent galvanic corrosion.
- Because brass is a soft material, use appropriate tooling for connecting the water circuit. Inappropriate tooling will cause damage to the pipes.



CAUTION

- Be careful not to deform the unit piping by using excessive force when connecting the piping. Deformation of the piping can cause the unit to malfunction.
- Always use two wrenches (spanners) for tightening or loosening the water connections, and tighten connections with a torque wrench as specified in the below table. If not, connections and parts can be damaged and leak.
- The unit is only to be used in a closed water system. If applications are in open water circuit, it will generate heat exchangers fouling, corrosion, and leak.

Name	Tightening torque
BSPP1	34~37 N•m

8.2 Connecting the water pipes

Connecting the water piping typically follows the below procedure:

1. Connect the water piping to the outdoor unit.
2. Connect the water piping to the indoor unit.
3. Connect the drain hose to the drain.
4. Flush, fill and vent the heating circuit
5. Fill the DHW tank.
6. Insulate the water piping.

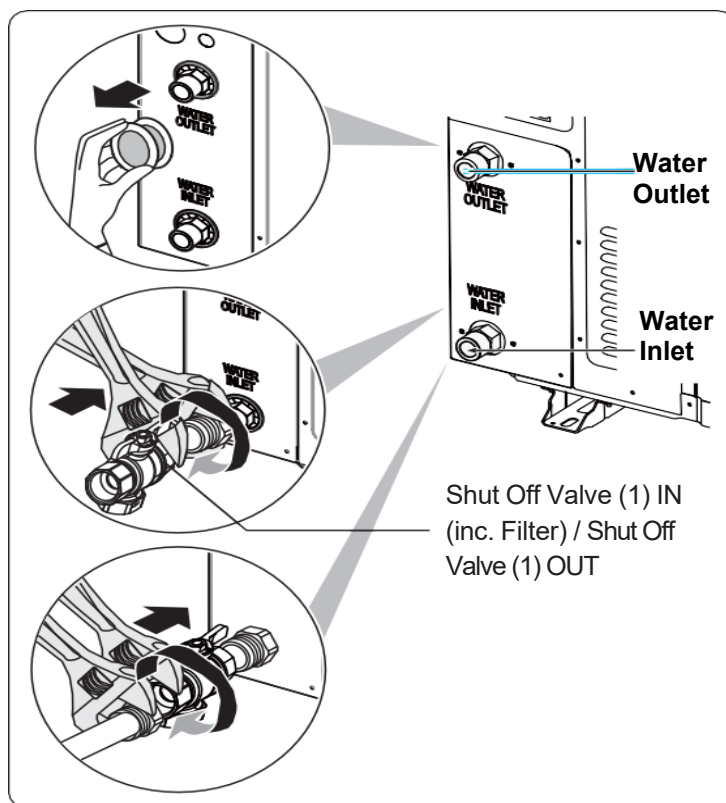


NOTE

Do not use excessive force when connecting the piping. Deformation of the piping can cause malfunctioning of the unit.

Outdoor Unit

- Connect the shut-off valve (with integrated filter) to the outdoor unit water inlet, using the thread sealant. At this time, the filter should be directed downward so that impurities can be collected.
- Connect the field piping to the shut-off valve.
- Connect the shut-off valve to the outdoor unit water outlet, using the thread sealant.



NOTE

About the shut-off valve with integrated filter:

- The installation of the shut-off valve at the water inlet is mandatory.
- Mind the flow direction of the valve.

8.3 Indoor Unit Components and Piping Connections



CAUTION

All piping and installation work must be carried out by a qualified technician and must comply with all relevant European and national regulations.

The IGLU Inuit Mono heat pump, both with and without the integrated water tank, is equipped with the components listed in the table below, along with a schematic description for each unit. All connection points are clearly marked on the unit for easy identification.

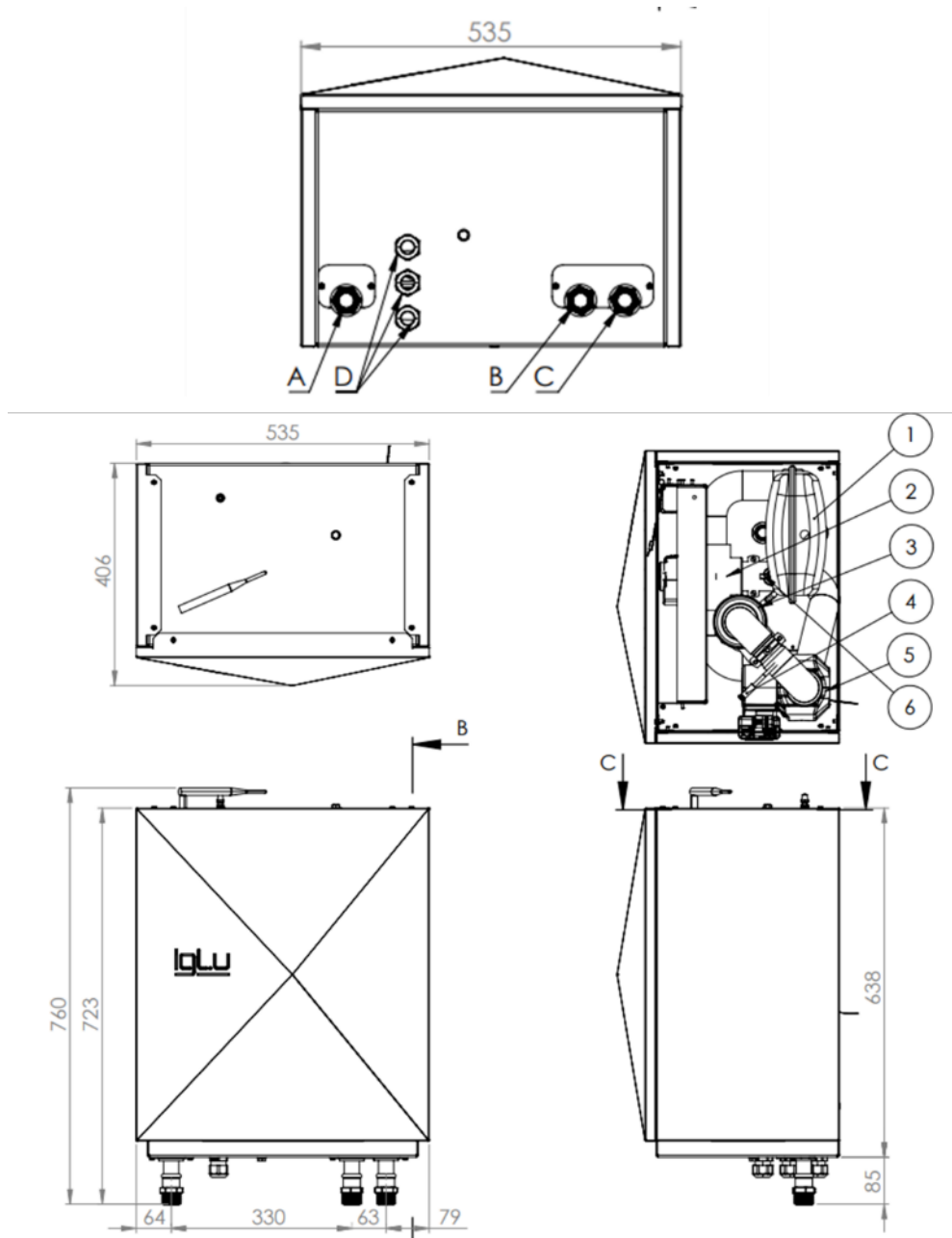
For the IGLU Inuit Mono heat pump piping follow the instructions:

- The maximum allowable water pressure is 3.0 bar.
- A mechanical air relief valve is integrated into the unit. To release trapped air during system filling or maintenance, manually open the valve. (Refer to the section “**Air Purging**” for detailed instructions.)
- Connect the shut-off valves to the water inlet from the outdoor unit (connection C).
- Connect the field piping from the outdoor unit to the shut-off valves.
- Connect the shut-off valves to the heating system supply lines (B)
- Connect the space heating supply field piping to the shut-off valves.
- Connect the external water tank heating loop to the unit at outlet A.
- Ensure the electrical connections are made at point D. (See section “**electrical wiring**” for details.)

For the IGLU Inuit Mono WT heat pump piping follow the instructions:

- The maximum allowable water pressure is 3.0 bar.
- The IGLU Inuit Mono WT, which includes an integrated water tank, does not have an **air relief valve**; therefore, one must be installed on the outdoor piping at the highest point of the system by the installer. (*Refer to the section “Hydraulic Scheme of IGLU Inuit Mono WT” for details.*)
- Connect the shut-off valves to the water connection pipes from the outdoor unit (A, B).
- Connect the field piping from the outdoor unit to these shut-off valves.
- Connect the shut-off valves to the heating supply and return water pipes of the indoor unit (C, D)
- Connect the space heating supply and return field piping to the shut-off valves.
- Connect the domestic cold water inlet to points E and the hot water outlet to point F to the indoor unit.
- Complete electrical wiring at point G (see section “electrical wiring” for details.)

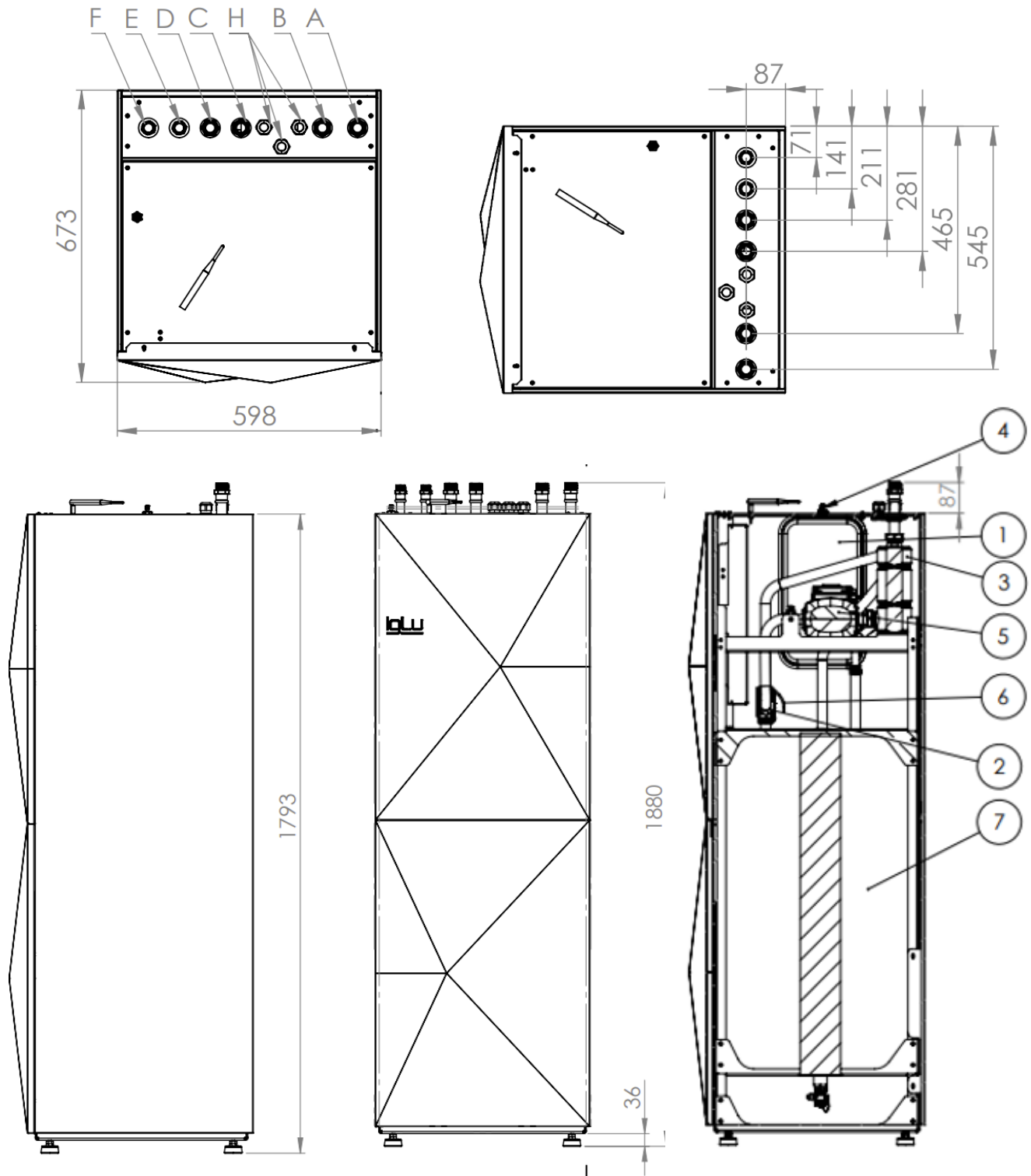
8.4 Indoor Unit Components and Piping Connections of IGLU Inuit Mono



No	Description
1	Expansion tank
2	Three-way valve
3	Backup heater element
4	Air relief mechanical valve
5	Water pump
6	Flow relay

No	Description	Pipe connection
A	Supply to DHW tank (OUT)	1"
B	Supply to system (OUT)	1"
C	Inlet from outdoor unit (IN)	1"
D	Electrical input/output	PG21

8.5 Indoor Unit Components and Piping Connections of IGLU Inuit Mono WT



No	Description
1	Expansion tank
2	Three-way valve
3	Backup heater element
4	Expansion vessel service valve
5	Water pump
6	Flow relay
7	DHW tank

No	Description	Pipe connection
A	Inlet from outdoor unit (IN)	1"
B	Outlet to outdoor unit (OUT)	1"
C	Return from system (IN)	1"
D	Supply to system (OUT)	1"
E	Cold water DHW (IN)	3/4"
F	Hot water DHW (OUT)	3/4"
G	Electrical input/output	PG21

8.6 Hydraulic System Components and Flow Management

Flow through the heating system

When thermostatic valves or zone actuators may close all heating circuits, a differential pressure bypass valve shall be installed. The bypass valve is not supplied with the heat pump.

A buffer tank must be installed to ensure a sufficient water volume when all thermostatic valves are closed, and the flow circulates only through the bypass valve.



CAUTION

The buffer tank is required when individual heating zones are controlled by thermostatic valves or zone actuators.

Differential bypass valve

Differential pressure bypass valve shall be installed between the supply and return pipes, downstream of the circulation pump and upstream of the zone control valves, in accordance with the flow direction indicated on the valve body. The valve shall be adjusted to maintain the minimum required flow rate through the heat pump.

- Mind the minimum water volume when choosing the installation location of the differential bypass valve (at the indoor unit, or at the collector).
- Mind the minimum flow rate when adjusting the differential bypass valve setting

Pressure relief valve

The heat pump itself is not equipped with a pressure relief valve. To protect the heating circuit against excessive pressure, an external pressure relief valve with a set pressure not exceeding 3.0 bar must be installed by the installer on the heating circuit (supply pipe of the heat transfer fluid) in accordance with applicable regulations.



CAUTION

Ensure that the discharge from the pressure relief valve is safely managed:

- The discharge pipe must be installed in a continuously downward direction.
- It must terminate in a frost-free environment, and prevent any risk of water backflow or freezing.
- Do not allow discharged water to come into contact with any electrical components or wiring.

Safety valve for Domestic Hot Water tank (DHW)

Domestic hot water tank. The operating pressure of the domestic hot water tank is 10 bar. Provide adequate safeguards in the water circuit to ensure that the maximum pressure is NOT exceeded.

A safety valve must be installed on the domestic hot water (DHW). The safety valve shall be installed on the cold-water inlet to the tank. The selection of the safety valve must be based on the characteristics of the potable water supply system. The set pressure of the safety valve shall be chosen to ensure safe operation of the system but must not exceed 8 bar.

The filter/strainer must also be installed on the cold-water inlet to the DHW tank to prevent contaminants and debris from entering the tank and associated components.

Filter/Strainer

The heat pump does not include a filter or a strainer. The installation of a filter or strainer is mandatory in the water circuit of the system. It must be installed on the inlet pipe to the heat pump (refer to section 8.5, connection point "C").

During system operation, dust and foreign particles may circulate within the water loop. Without proper filtration, these contaminants can block the heat exchangers and cause corrosion or damage to internal components, leading to reduced system performance or failure.

Internal circuit circulation pump

The heat pump is equipped with an internal circulation pump, which is factory-installed within the unit. The circulation pump is controlled by the central processor to maintain optimal flow conditions. The control system continuously monitors the operation of the circulation pump and issues a warning in the event of a deviation.

For the available external static pressure of the integrated circulation pump in the indoor unit, refer to Section "**7.2 Circulation Pump Performance Curves of IGLU Inuit Mono 5/8 – Mono 5/8 WT**" or Section "**7.3 Circulation Pump Performance Curves of IGLU Inuit Mono 12/16 – Mono 12/16 WT**".

8.7 The heating system rising and filling

The heat pump is an integral part of the heating system. Heat pump failures are usually caused by poor water quality in the heating system, or by the presence of air in the system. The presence of air in the system produces corrosive products such as magnetite or sediment. Magnetite has an abrasive effect that is especially enhanced in pumps, valves, or eddy-flow components, such as a condenser. Before installing a heat pump in a heating system that needs to be filled or uses water that is not pure, auxiliary measures such as the installation of filters and automatic outlets must be taken. Filling with untreated drinking water will inevitably result in the formation of sediment. Effect: formation of limescale deposits on the heat transfer surfaces. Decreased efficiency and energy consumption increases. 1 millimeter of lime deposits cause an energy loss of 10%.

Do not use water treatment additives in the heating system. Additives can be used to adjust the pH of the water; the recommended pH of the water is 7.5-9. The safest and most efficient operation of the system is achieved by using low-salt water.

When combining a heat pump with a boiler, it may be necessary to fill the system with desalinated water to protect the boiler from corrosion. This reduces electrical conductivity and the risk of corrosion.



WARNING

Sediment in the piping can damage the heat pump. To prevent this, make sure to flush the pipes. Damage to sediment and corrosion heating systems is low if:

- Planning and start-up are carried out properly.
- The system is closed in terms of corrosion.
- The pressure in the heating system is adequate.
- Regular maintenance and prevention.

DHW Water quality

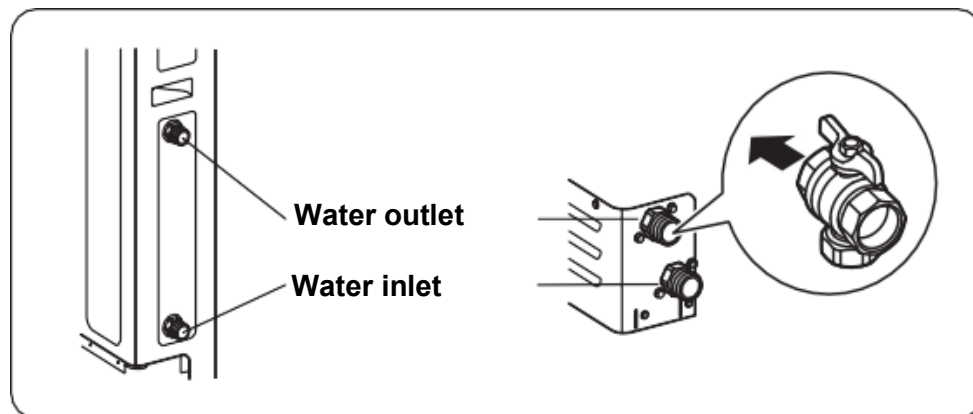
Only potable water that complies with the applicable national drinking water quality requirements and the requirements of Directive (EU) 2020/2184 on the quality of water intended for human consumption shall be supplied to the domestic hot water (DHW) tank.

8.8 Flushing the heating circuit

Before filling water, the following procedure should be followed:

- Before connecting the heating circuit to the heat pump, flush the system thoroughly using a suitable flushing unit or clean water.
- Ensure that all pipework and system components are properly installed and check the system for leaks.
- Ensure that the strainers/filters is correctly installed. Inspect and clean the strainers after flushing and periodically during system operation. Replace it if necessary.
- Install air vents at appropriate high points of the system to allow trapped air to escape.

8.9 Filling and venting the heating circuit



After the heating circuit has been flushed and all hydraulic connections have been completed, fill and vent the system as follows:

- Ensure that all heating circuit connections are correctly installed and secured.
- Check and adjust the expansion vessel pre-charge according to the system design and static height before filling the heating circuit.
- Open the required shut-off valves.
- Open the air vent valve by at least two turns and ensure that any additional air vents installed in the system are open.
- Fill the heating circuit using a suitable make-up water assembly until a filling pressure of approximately 1.5 bar is reached. The required filling pressure shall be determined according to the system design, static height and expansion vessel pre-charge.

NOTE: The heating circuit may be permanently connected to a make-up water supply that automatically replenishes the system when required. However, if the heating circuit is filled with a glycol mixture, automatic replenishment with fresh water must not be used, as this would dilute the glycol concentration and reduce the level of freeze protection.

The heating circuit must be filled with the appropriate system fluid (water or glycol mixture) according to the selected freeze protection method. For further information, refer to Section “Heating system freeze protection.”

- Vent the heating circuit thoroughly to remove trapped air.
- After venting, check the system pressure again and add the appropriate system fluid if necessary
- Check all connections for leaks.



CAUTION

- Do not switch on the heat pump until the heating circuit has been completely filled and properly vented.
- Heating water quality must comply with the requirements of **VDI 2035**.
- A suitable backflow prevention device shall be provided in the make-up water connection to prevent heating circuit water from flowing back into the potable water supply, in accordance with applicable local regulations.

8.10 Air purging of indoor unit IGLU Inuit Mono



NOTE

- Only the IGLU Inuit Mono indoor unit is equipped with a mechanical air relief valve.
- The IGLU Inuit Mono WT, which includes an integrated water tank, does not have an air relief valve; therefore, one must be installed on the outdoor piping by the installer. (Refer to the section “Hydraulic Scheme of IGLU Inuit Mono WT” for details.)

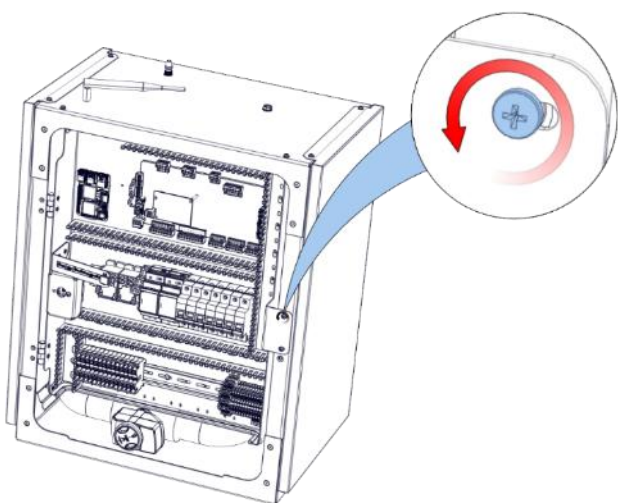
During system filling, maintenance, or startup, the mechanical air relief valve should be opened to allow trapped air to escape from the system. Once a steady stream of water flows from the valve without any air bubbles, it indicates that the air has been successfully purged. At this point, the valve should be closed tightly to ensure a proper seal and prevent any water leakage.



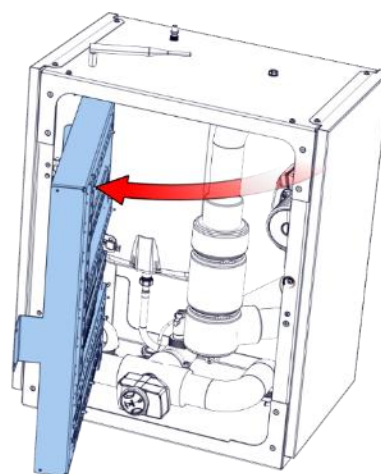
CAUTION

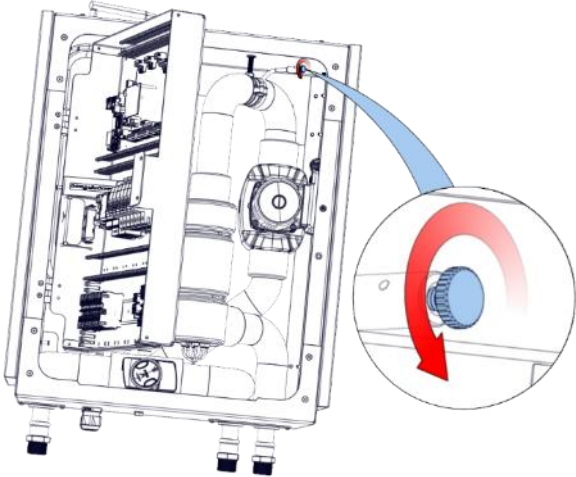
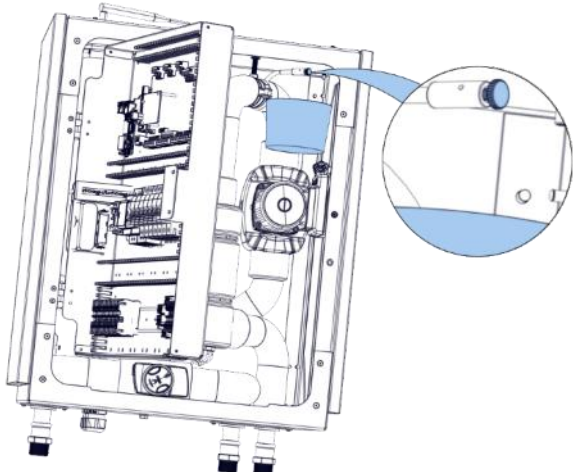
- Do not overtighten the valve when closing it, as this can damage the sealing mechanism or make future use difficult.
- Do not allow discharged water to come into contact with any electrical components or wiring.

1. When the indoor unit is open (refer to the section „opening the unit”), locate the screw on the indicated handle, unscrew it, and place it in a safe location.



2. Open the electrical panel to access the air relief mechanical valve



3.The location of the air relief mechanical valve	4.When draining the system, place a container beneath the pipe, as some water may discharge.
	

8.11 Heating system freeze protection

To ensure safe and reliable operation during cold conditions, the heating circuit must be protected from freezing. To prevent the hydraulic components from freezing, the unit has a freezing protection function that includes activation of the pump at low temperatures. However, in case of a power failure, these functions cannot guarantee protection. To protect the water circuit from freezing, any one of the following acts shall be performed:

Freeze protection measures

- A) Antifreeze valves (for both outdoor pipes) – *for systems using water*
- B) 25%–35% glycol in the system fluid – *for systems using glycol*
- C) Heated cables (for both outdoor pipes) – *for systems using water*



NOTE

When using glycol, the efficiency of the heat pump may decrease depending on the concentration.

Freeze protection by glycol

Freeze protection solutions must use propylene glycol with a toxicity rating of Class 1 as listed in Clinical Toxicology of Commercial Products, 5th Edition.



WARNING

- Ethylene glycol is toxic and must not be used in the primary water circuit in case of any cross-contamination of the portable circuit.
- If you add glycol to the water, do NOT install anti-freeze valve, to avoid Glycol leaking out of the anti-freeze valves into the environment.
- If an anti-freeze protection is used, it will result in increased pressure drop and it may also cause a slight capacity reduction.



CAUTION

- Due to the presence of glycol, corrosion of the system is possible. Uninhibited glycol will turn acidic under the influence of oxygen. The acidic uninhibited glycol attacks metal surfaces and forms galvanic corrosion cells that cause severe damage to the system.
- A glycol with corrosion inhibitors is selected to counteract acids formed by the oxidation of glycols.
- No automotive glycol is used because their corrosion inhibitors have a limited lifetime and contain silicates which can foul or plug the system.
- Galvanized pipes are NOT used in glycol systems since the presence may lead to the precipitation of certain components in the glycol's corrosion inhibitor.

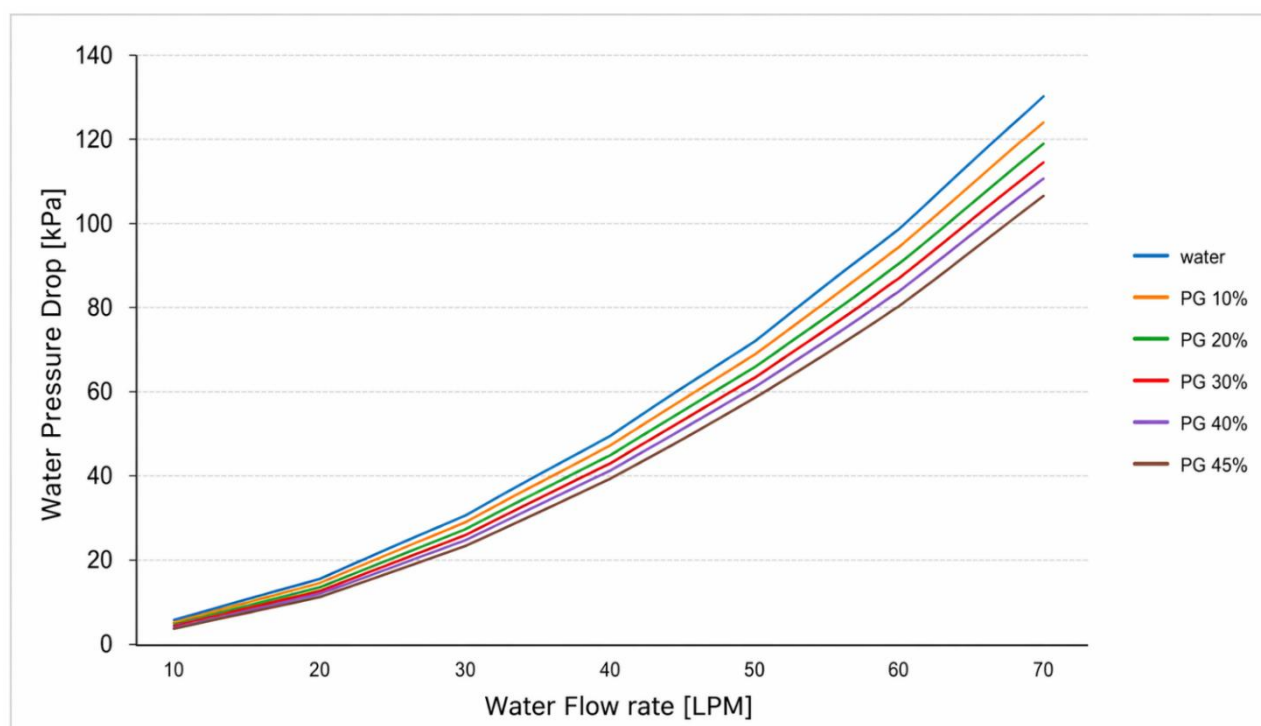
Unit resistance and PHE resistance by glycol concentrate

The unit is composed of water pipes and PHE basically.

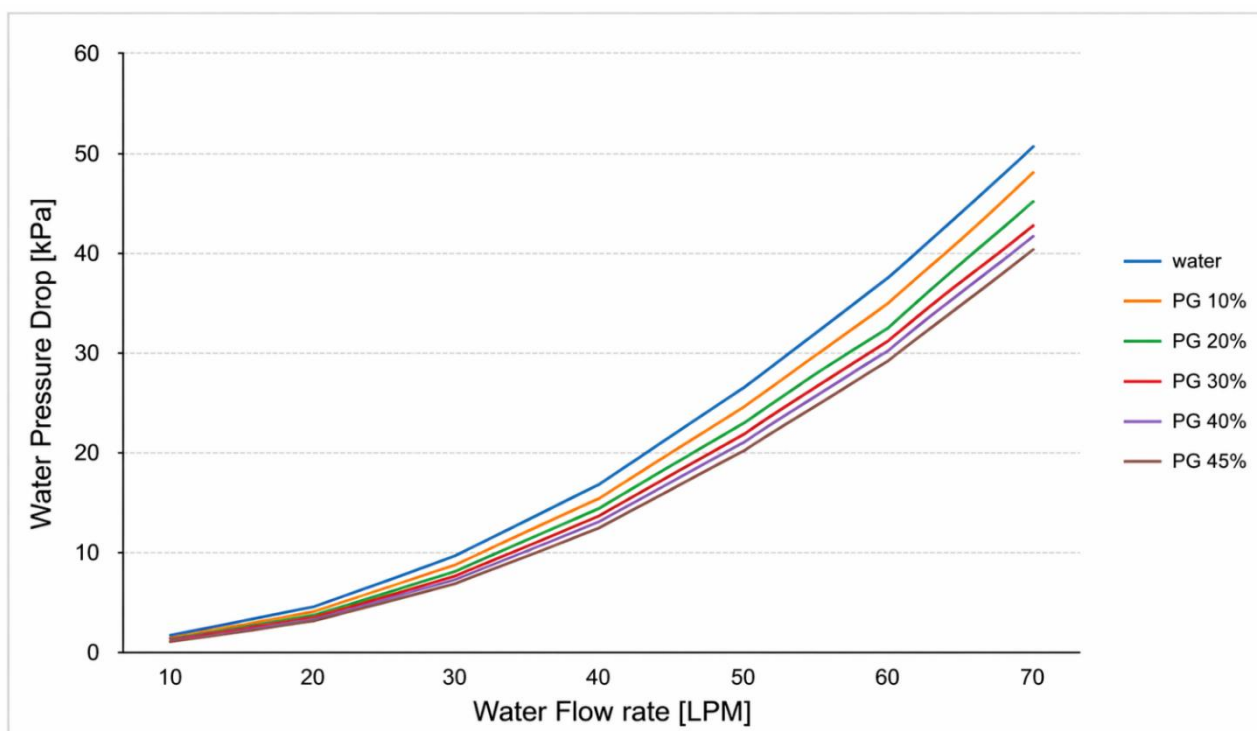
To ensure correct operation and predict the expected performance, Flow and Resistance table can be used and Flow and resistance characteristic is dependent on Glycol concentration.

IGLU Inuit MONO 5 / 5 WT

IGLU Inuit MONO 8 / 8WT



IGLU Inuit MONO 12 / 12 WT
IGLU Inuit MONO 16 / 16 WT



Changing Glycol concentration can cause the pressure drop of the system and it can lead to make flow rate slow. Just in case of performance degradation, installer shall be careful of flow rate changes.

The required concentration of glycol depends on the lowest expected outdoor temperature, and on whether you want to protect the system from bursting or from freezing. To prevent the system from freezing, more glycol is required.

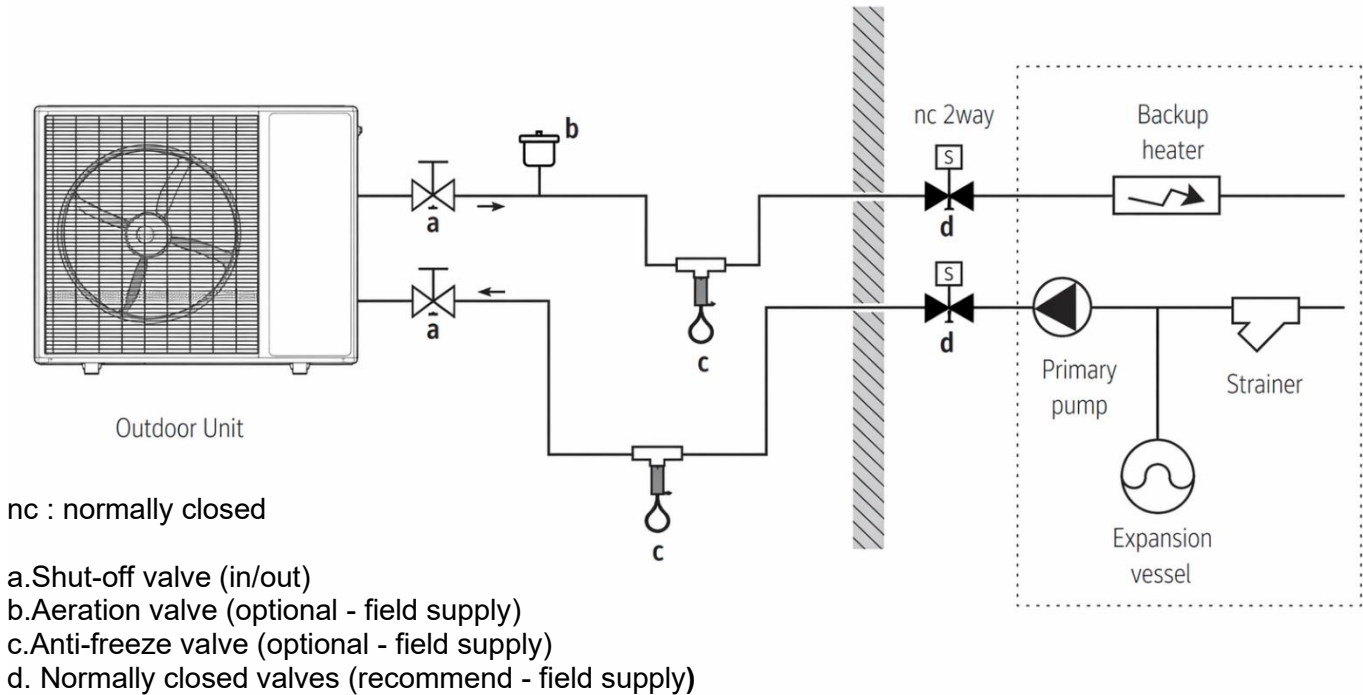
Add glycol according to the table below:

Freezing Points of Propylene Glycol - Water Mixtures		
Percent Propylene Glycol [wt.%]	Freezing Point [°F]	Freezing Point [°C]
0	32	0
10	26	-3
20	20	-7
30	10	-12
36	0	-18
40	-5	-20
43	-10	-23
48	-20	-29

Freezing protection: Anti-freeze valves

In order to prevent system water from freezing inside the pipework during subzero ambient conditions after a sudden power outage, anti-freeze valves are advised if glycol is not a suitable solution. An anti-freeze valve opens when the medium (water) is below a certain low temperature value. When using the EHS for cooling in the summertime, an anti-freeze valve with ambient sensor is required to avoid unwanted opening due to low water temperatures.

To protect the field piping against freezing, install the following parts:



CAUTION

If the system is utilized for both cooling operations (summer), please install anti-freeze valves with an ambient air sensor in order to avoid valve opening due to low water temperatures.

Part	Description
	If necessary, you can close the valve to isolate the water in the outdoor unit.
	Aeration valve (to clear the water from the system).
	Protection for the field piping. The anti-freeze valve must be installed (field supply) - Vertically to allow water to flow out properly and free from obstructions. - At the lowest point in all field piping. - In the coldest part and away from heat sources.



Water isolation inside the house in case of a power outage. Normally closed valves (located indoors near the inlet/outlet pipes) can prevent all water in the indoor plumbing from draining when the anti-freeze valve is opened. (fired supply)

- Power outage: The normally closed valves close to shut off the water in the house. When the anti-freeze valve is open, only water outside the house is drained.
- Other situations (eg pump failure): When the anti-freeze valves open when the power is still applied to the normally closed valves, the system will drain completely.

8.12 Thermal insulation Requirements

All heat- and cold-conductive components of the piping system — including heating circuits, domestic hot water lines, and tank connections — must be insulated using appropriate thermal insulation materials.

Thermal insulation must comply with the following standard:

„**EN 12828 – Heating systems in buildings** – Design for water-based heating systems: This standard defines insulation requirements for heating circuits, including the use of suitable materials, full coverage across fittings and joints, and protection against condensation.“



NOTE

Proper insulation ensures energy efficiency, user safety, and reliable system operation.

Outdoor water piping insulation

The complete water circuit, inclusive all the piping, must be insulated to prevent condensation during cooling operation and reduction of the heating and cooling capacity as well as prevention of freezing of the outside water piping during winter time. The thickness of the sealing materials must be at least 9 mm with $\lambda=0.035$ W/mK in order to prevent freezing on the outside water piping.

If the temperature is higher than 30°C and the humidity is higher than RH 80%, then the thickness of the sealing materials should be at least 20 mm in order to avoid condensation on the surface of the sealing.

For piping in free air, it is recommended to use the insulation thickness as shown in the below table as a minimum (with $\lambda=0.035$ W/mK).

Piping length (m)	Minimum insulation thickness (mm)
< 20	19
20 ~ 30	32
30 ~ 40	40
40 ~ 50	50



NOTE

This recommendation ensures good operation of the unit, however, local regulations may differ and shall be followed.

8.13 Indoor Unit Installation and Application Examples

The hydraulic application examples given below are for illustration purposes only. When the IGLU Inuit Mono heat pump without the water tank system is used in series with another heat source (e.g., gas boiler), ensure that the return water temperature does not exceed 55 °C.

The unit is only to be used in a closed-water system. Application in an open water circuit can lead to excessive corrosion of the water piping.

IGLU TECH cannot be responsible for incorrect or unsafe situations in the water system. Make sure that the boiler, radiators, convectors, solar collectors, UFHs, FCUs, additional pumps, piping, and controls in the water system are in accordance with relevant local laws and regulations under the installer's responsibility.

IGLU TECH shall not be held liable for any damage resulting from not observing this rule.

Please note that IGLU TECH does not provide specific water system components such as pressure relief valves, expansion vessels, drain valve, expansion relief valve, air vent valve, buffer tank, etc. Installers and end-users shall consider how to install the below-designated components in the overall water system depending on the installation conditions for reliable performance and durability. If the components are not installed in an appropriate location, the water system cannot be operated as designed. All components should be installed according to national or regional standards.



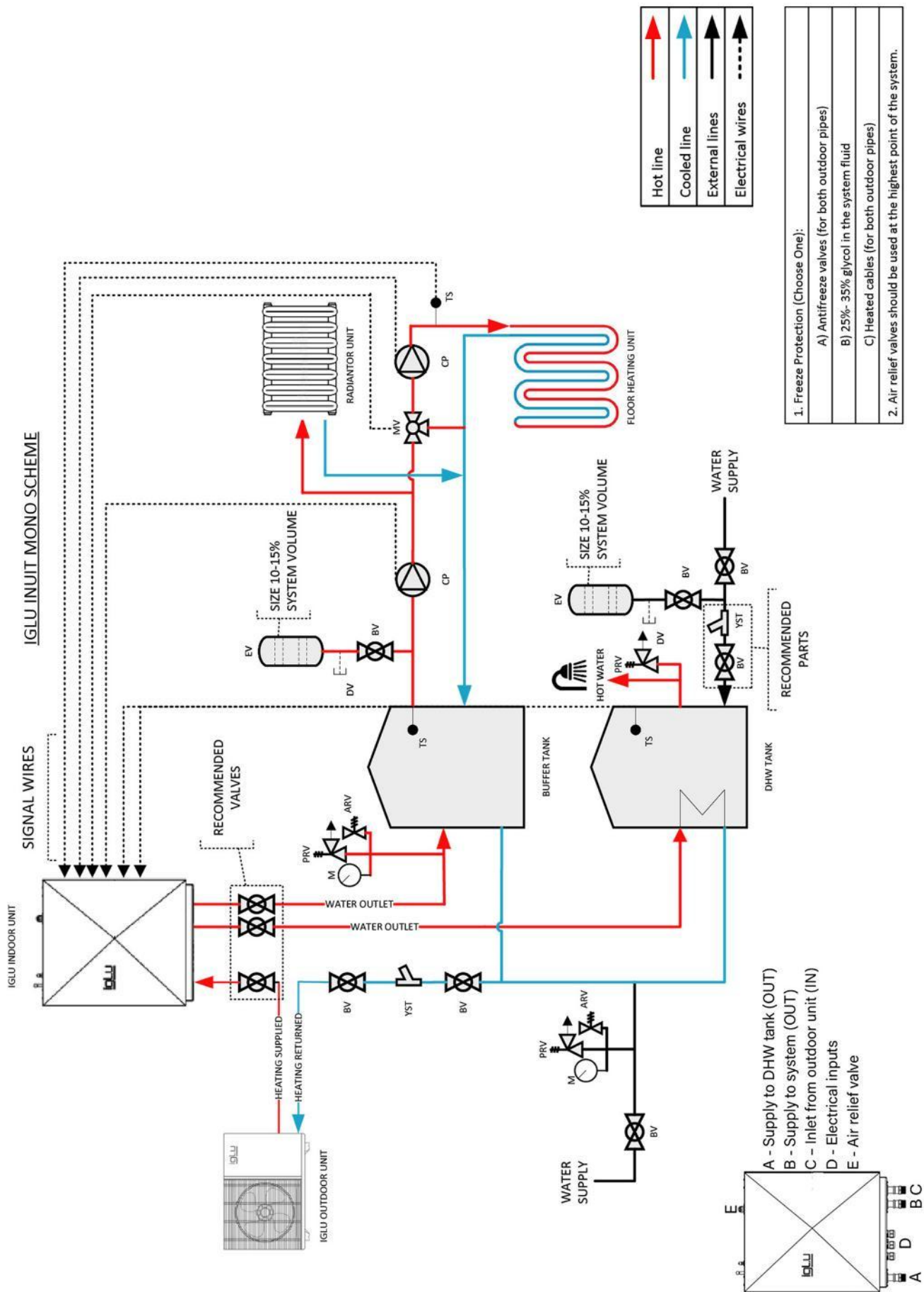
CAUTION

When circulation in each space heating/cooling circuit is controlled by thermostatic valves or zone actuators, or when the system operates in active cooling mode, a buffer tank shall be installed to ensure sufficient system water volume and maintain the minimum required flow through the heat pump. In all other cases, the installation of a buffer tank is recommended.

8.14 Indoor Unit Hydraulic scheme abbreviations and legends

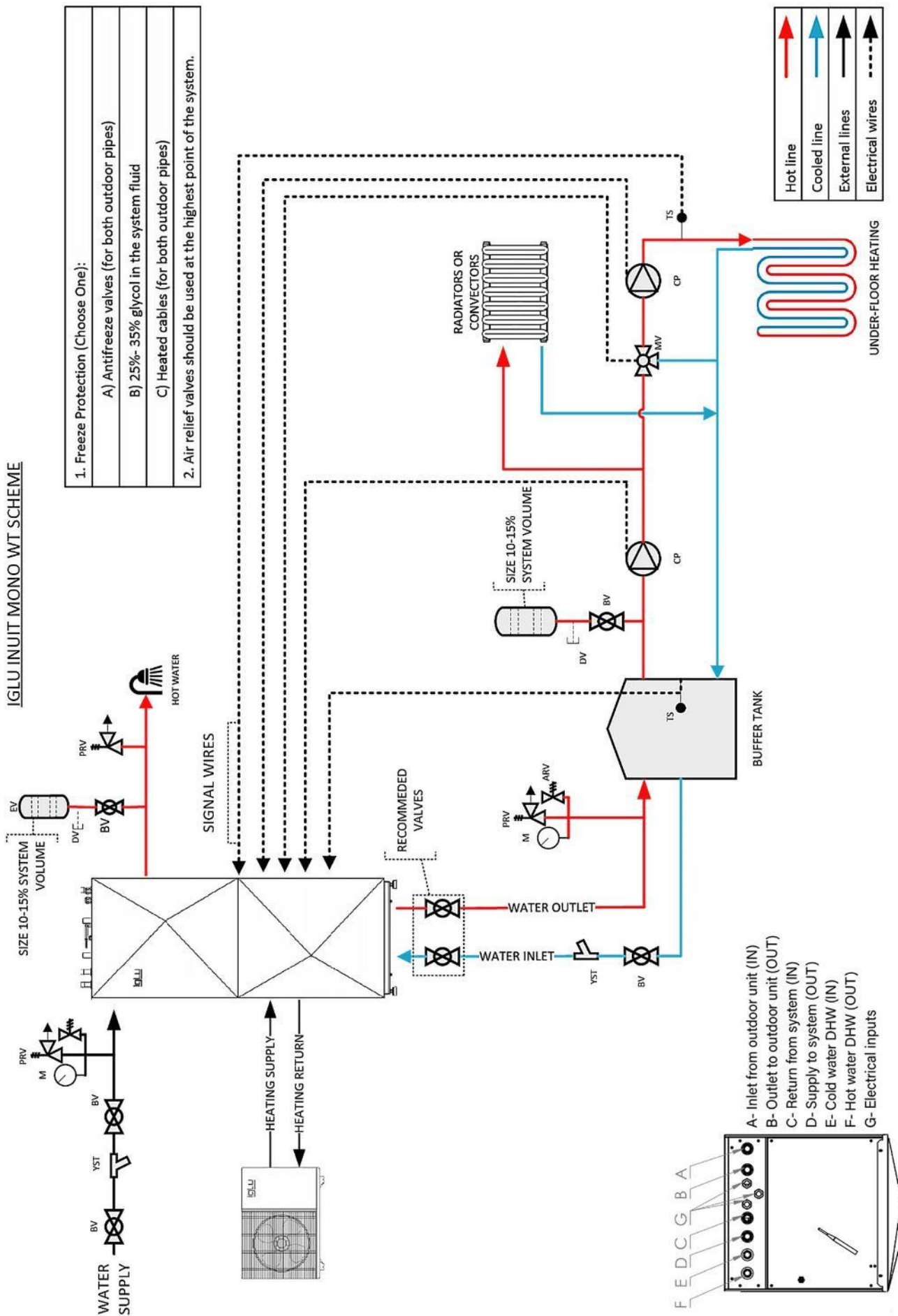
ABBREVIATIONS			
Ball valve (BV)		Mixing valve (MV)	
Check valve (CV)		Drain valve (DV)	
Y Strainer (YST)		Circulating pump (CP)	
Monometer (M)		Temperature sensor (TS)	
Pressure relief valve (PRV)		Expansion vessel (EV)	 SIZE 10-15% SYSTEM VOLUME
Air relief valve (ARV)		Hot water	 HOT WATER

8.15 Hydraulic Scheme – IGLU Inuit Mono (without integrated water tank)



8.16 Hydraulic Scheme – IGLU Inuit Mono WT (with integrated water tank)

IGLU INUIT MONO WT SCHEME



9. Electrical installation

9.1 Precautions when connecting the electrical wiring



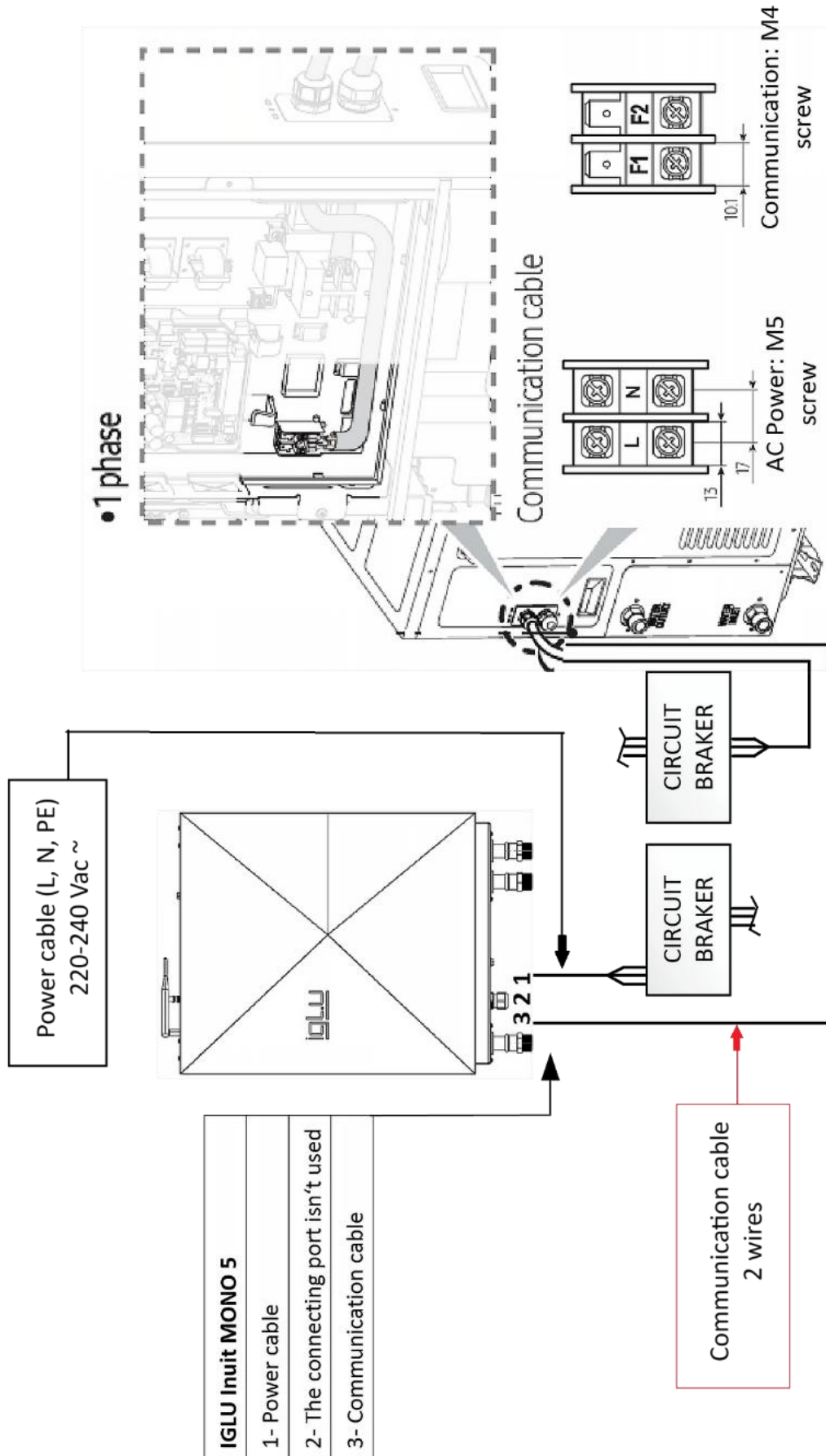
WARNING

- Make sure first the water piping is connected before the electrical wiring work.
 - When removing or relocating the equipment, power off first and then disconnect the electrical wiring.
 - Connect the air to water heat pump to a protected earth (PE) before connecting the phase and neutral to the product.
 - Follow the local installation standards and regulations when installing electrical wiring. Electrical wiring should be installed by a certified electrician or certified installer. Failing to comply, might lead to damaging the product, starting a fire and personal injury, electrocution or death.
-
- Make sure that wiring work must be done by an authorized electrician. The wiring materials and wiring work must comply with the applicable legislation.
 - Always verify that a suitable grounding connection is available.
 - Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
 - Always verify that the cut-off and protection switches are suitably dimensioned.
 - Verify that the air to water heat pump is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
 - Always verify that electric connections (cable entry, the section of leads, protections...) comply with the electric specifications, local regulations and installation standards and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air to water heat pumps.
 - Depending on the condition of power supply, unstable power or voltage may cause malfunction of the parts or control system. (Avoid using power supply from an electric generator, like on a ship etc).



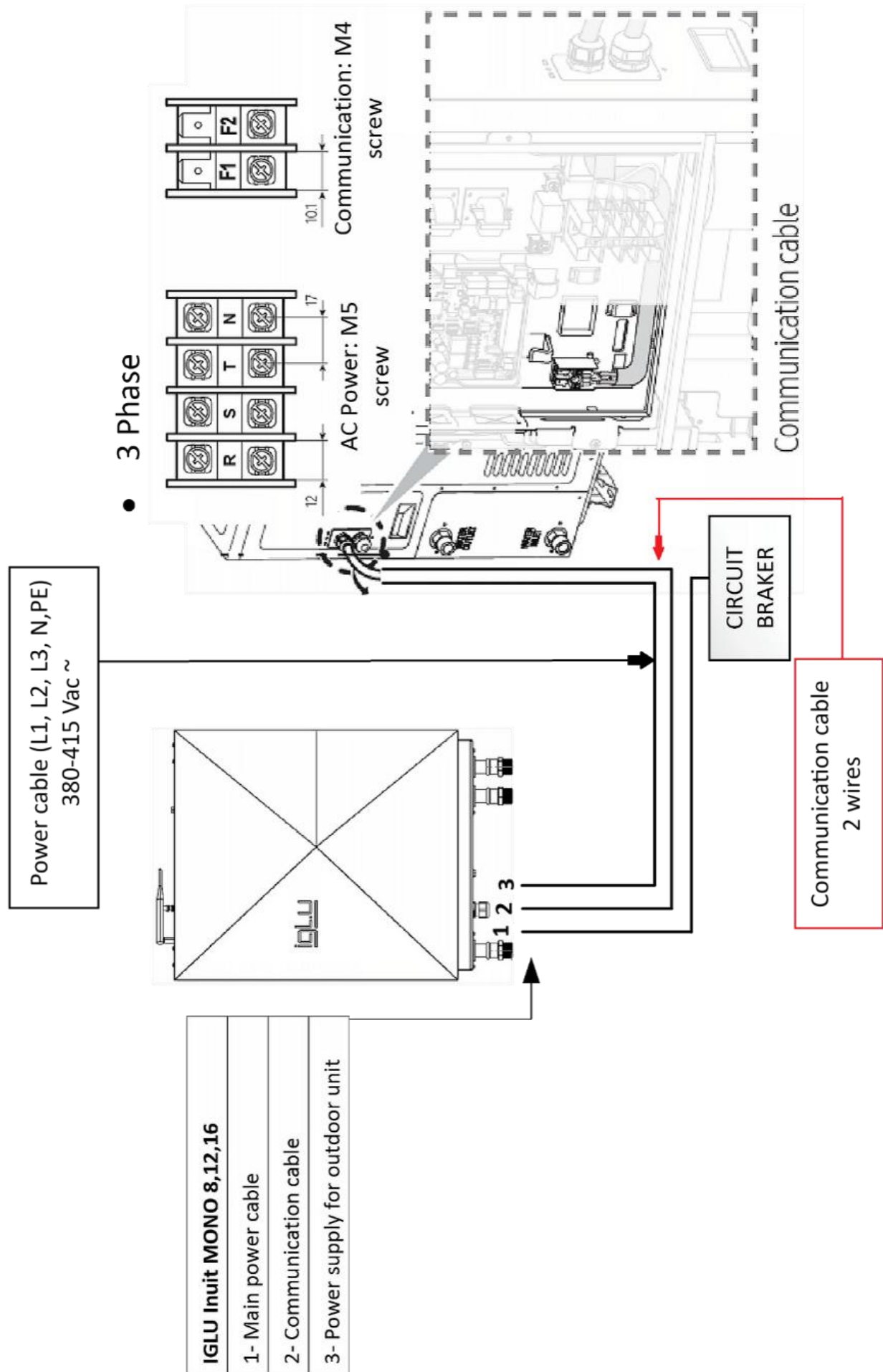
- Make sure that you earth the cables.
- Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.
- Install the circuit breaker.
- Failing to install a circuit breaking device may result in electric shock and fire occurrence.
- Install the power cable and communication cable of the indoor and outdoor unit according to IEC 60364-1 (Electrical installations and protection against electric shock).
 - Be sure to install both an earth leakage detector and circuit breaker with specified capacity in accordance with relevant local and national regulations.
- If it is not installed properly, it may cause electric shocks and fire.

9.2 Electrical wiring diagram of IGLU Inuit Mono 5



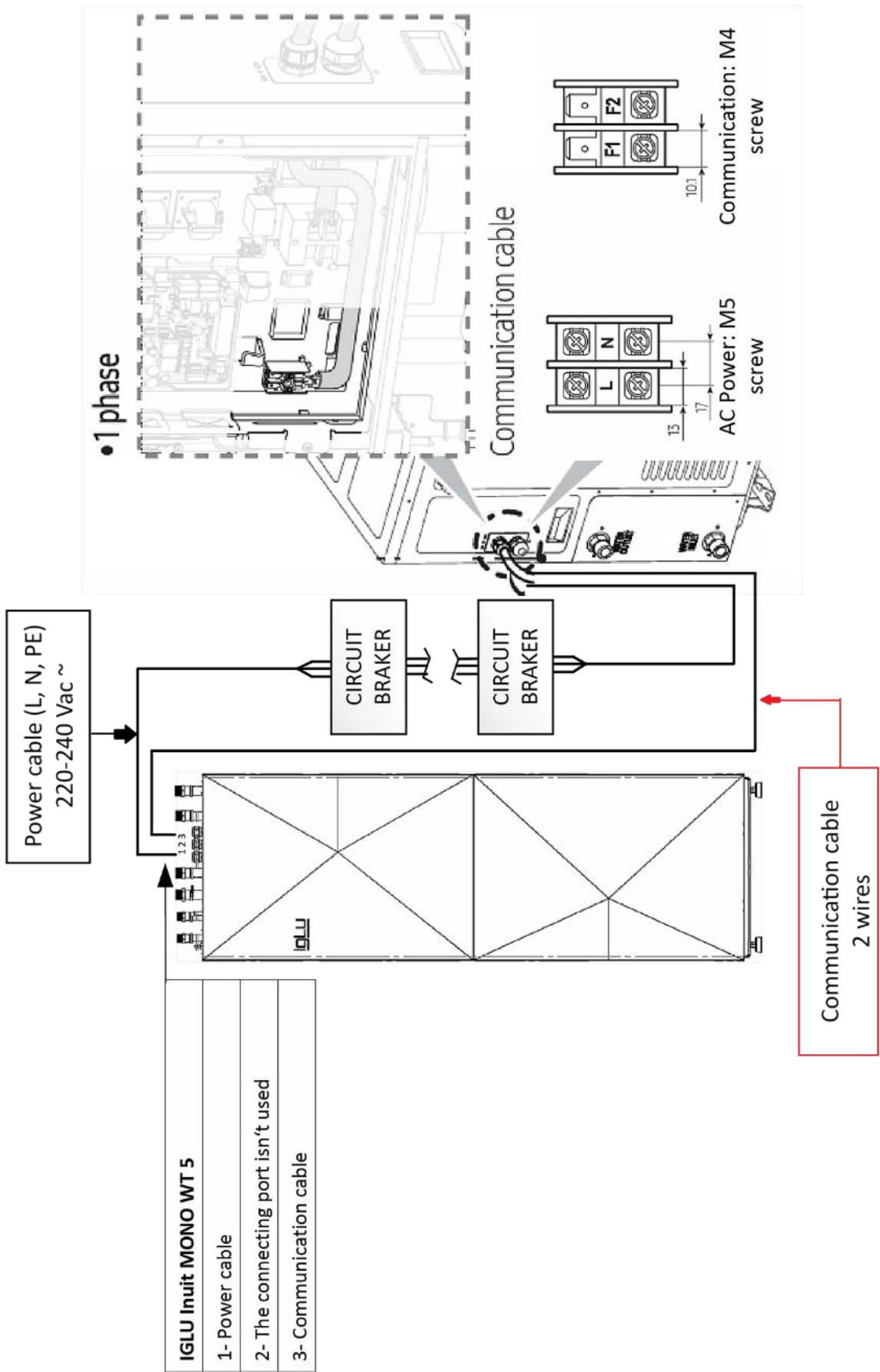
Terminal block specification units are in mm

9. Electrical wiring diagram of IGLU Inuit Mono 8/12/16



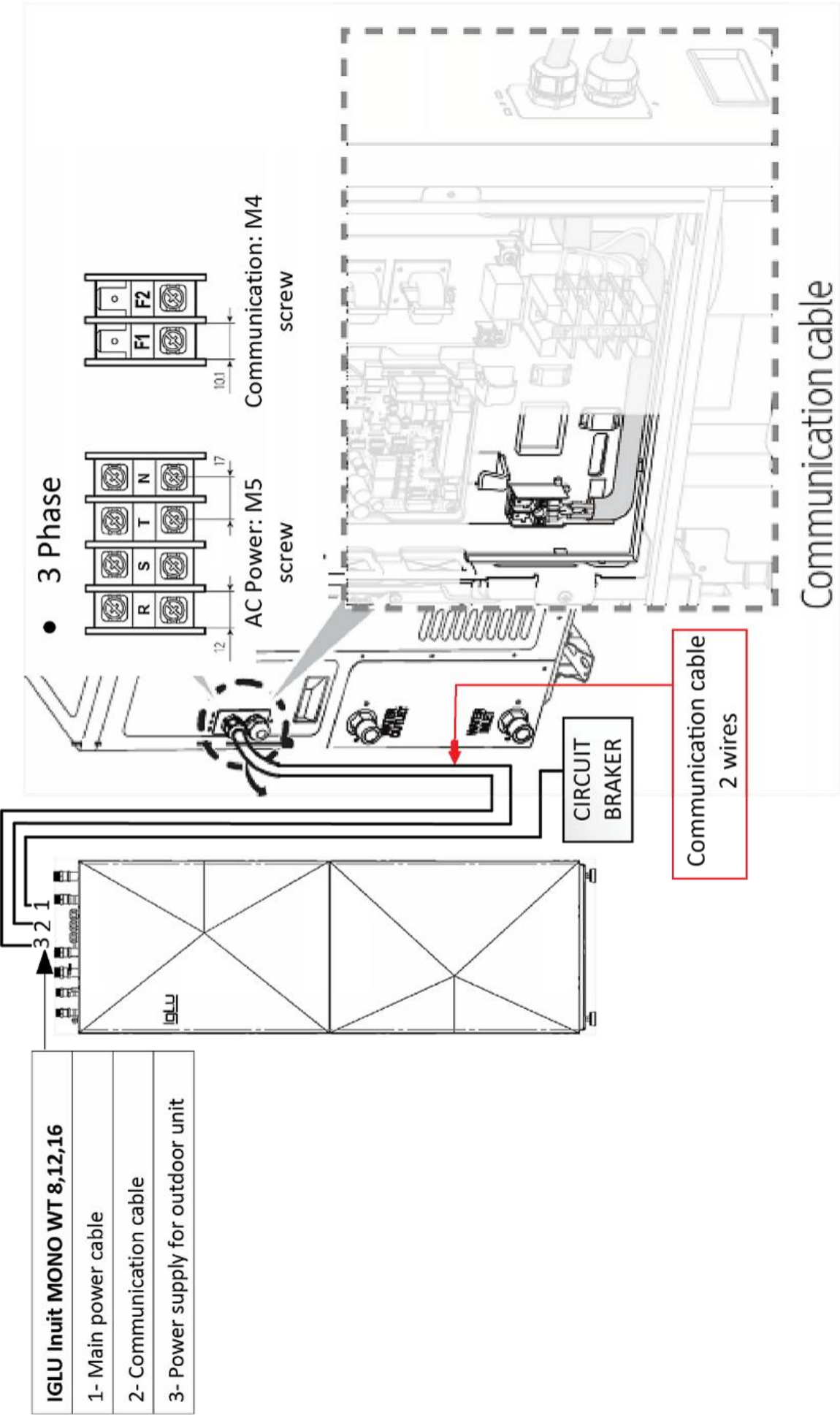
Terminal block specification units are in mm

9.4 Electrical wiring diagram of IGLU Inuit Mono 5 WT



Terminal block specification units are in mm

9.5 Electrical wiring diagram of IGLU Inuit Mono 8/12/16 WT



Terminal block specification units are in mm

Grounding the power cable



- The standard of grounding may vary according to the rated voltage and installation place of the heat pump.
- Grounding must be done by an authorized electrician (sometimes appointed by the electricity company), according to local regulation.
- Do not earth the installation via connecting to water or gas piping, telephone earth or surge absorber.
- Earthing wiring must have the same diameter of the phase and neutral lines.
- Earthing cables are recognizable by their green/yellow colour labeling.

9.6 Specification of power cable

1 Phase

- The power cables are not supplied with the air to water heat pump.
- Power supply cords of parts of appliances use shall not be thinner than polychloroprene sheathed flexible cord (Code designation IEC:60245 IEC 57 / CENELEC:H05RN-F)
- This equipment complies with IEC 61000-3-12.

	Rated		MCA (outdoor unit)	MCA (indoor unit)	MFA (outdoor unit)	MFA (indoor unit)
	Hz	Volts	Min Circuit Amps.	Min Circuit Amps.	Max Fuse Amps.	Max Fuse Amps.
IGLU Inuit Mono 5/ Mono 5 WT	50	220-240	16.1	28.26	20	32

3 Phase

- The power cables are not supplied with the air to water heat pump.
- Power supply cords of parts of appliances use shall not be lighter than polychloroprene sheathed flexible cord (Code designation IEC:60245 IEC 66 / CENELEC:H07RN-F)
- This equipment complies with IEC 61000-3-12 provided that the short-circuit power (SSC) is greater than or equal to 3.3[MVA] at the interface point between the user's supply and the public system. It is the responsibility of the installer to ensure, by consultation with the energy company if necessary, that the equipment is connected only to a supply with a short-circuit power (SSC) greater than or equal to 3.3[MVA].

	Rated		MCA (outdoor unit)	MCA (indoor unit)	MCA (indoor + outdoor)	MFA (indoor + outdoor)
	Hz	Volts	Min Circuit Amps.	Min Circuit Amps.	Min Circuit Amps.	Max Fuse Amps.
IGLU Inuit Mono 8/ Mono WT 8	50	380-415	16.1	15.12	31.3	40
IGLU Inuit Mono 12/ Mono WT 12	50	380-415	16.1	15.12	31.3	40
IGLU Inuit Mono 16/ Mono WT 16	50	380-415	16.1	15.12	31.3	40



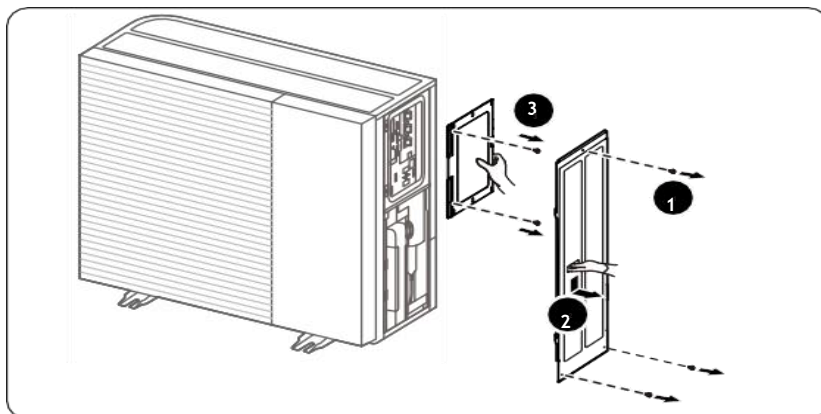
CAUTION

The user's electrical panel must be equipped with properly dimensioned circuit breakers providing over-current and electric leakage protection as specified in the table.

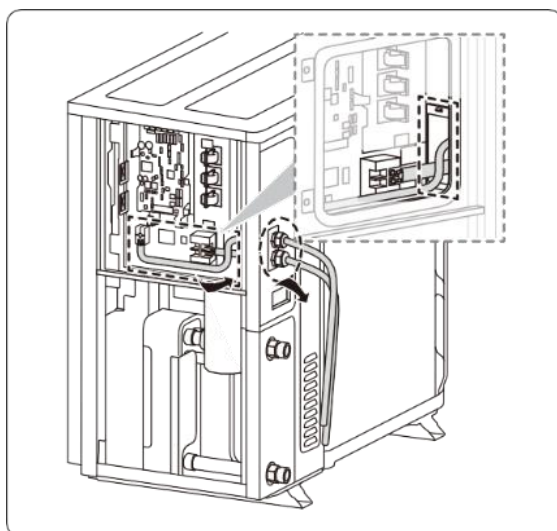
Model	Circuit brakers	Power cable to indoor	Power cable from indoor to outdoor
IGLU Inuit Mono 5/ Mono 5 WT	Indoor unit C32 + Outdoor unit C20	Separate power cable to indoor unit 3x6mm ²	Separate power cable to outdoor unit 3x2,5mm ²
IGLU Inuit Mono 8/ Mono 8 WT	C40	5x4mm ²	5x2,5mm ²
IGLU Inuit Mono 12 / Mono 12 WT	C40	5x4mm ²	5x2,5mm ²
IGLU Inuit Mono 16 / Mono 16 WT	C40	5x6mm ²	5x2,5mm ²
Communication cable: 2 core shielded cable 0.75mm ² -1.5mm ²			
For cascade communication use 2 core shielded cable 0.75mm ² -1.5mm ²			

9.7 Outdoor unit's wiring

1. Open the switch side cover.



2. Insert the cables at the rear of the unit, and route them through the factory mounted cable sleeves into the switch box.



Power and communication cable configuration

- Power supply cable must be guided through the knock-out hole on the bottom-right or right side of the cabinet.
- Guide the communication cable through the designated knockout hole on the bottom-right side of the front part.
- Install the power and communication cable using a separate cable protection tubing.
- Fix the conduit to the knock-out hole on the outdoor unit by using a conduit bushing and nut.

Route the cable through the frame

- Connect the power cable wires to the outdoor's unit terminal block and fix the cable with the cable tie.
- When installing electrical wiring: tension on the cable(s) must be avoided.
- For the power cable, use the grade H07RN-F or H05RN-F materials.
- Power supply cords of parts of appliances for outdoor unit use shall not be thinner than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC 66 / CENELEC: H07RN-F)

9.8 To connect the power supply

- Cables must be connected
 - The communication cable between the indoor and outdoor unit.
 - The power supply cable for outdoor unit between indoor unit.
- The main power supply cable between the indoor unit and the auxiliary breaker.
- Especially for the European market, before installation, the supply authority should be consulted to determine the supply system impedance to ensure compliance.



CAUTION

- You should connect the power cable into the power cable terminal and fasten it with a clamp.
- The unbalanced power must be maintained within 2% of the supply rating.
 - If the power is unbalanced greatly, it may shorten the life of the electrical components. If the unbalanced power is exceeding 4% of the supply rating, the control kit is protected, stopped and an error code is displayed.
- To protect the product from water and possible shock, keep the power cable and the connection cord of the control kit and outdoor units within ducts (with appropriate IP rating and material selection for your application).
- Ensure that the main supply connection is made through a disconnection switch within your arm's reach, that disconnects all poles, with contact gap of a least 3 mm.

9.9 To connect the communication cable

- The communication cable between the indoor and outdoor unit.
- Route the cable through the frame.
- Connect the wires to the terminal block and the earth screw (single side, the other end of the protective shield is not again connected to earth).
- Fix the cable with a cable tie.
- Specification of communication cable:

Communication cable	Specifications
0.75 mm ² , 2 wires shielded	LiYCY

9.10 Sensors and auxiliary components

Temperature sensors

The temperature sensors for the outdoor and water heater are connected to the terminal blocks. The two-core 0.5 ÷ 1mm² cable must be routed from the heat pump to the outdoor temperature installation location. It is recommended that the outdoor sensor be installed on the north side or in a place that is not exposed to direct sunlight. In models without integrated water heater, a two-core 0.5 ÷ 1.0 mm² cable must be routed from the heat pump to the hot water tank.

NTC 10K temperature sensor characteristics

T [°C]	R [Ω]	T [°C]	R [Ω]	T [°C]	R [Ω]
-30.0	175203	50.0	3605	130.0	298
-25.0	129289	55.0	2989	135.0	262
-20.0	96360	60.0	2490	140.0	232
-15.0	72502	65.0	2084	145.0	206
-10.0	55047	70.0	1753	150.0	183
-5.0	42158	75.0	1481	155.0	163
0.0	32555	80.0	1256	160.0	145
5.0	25339	85.0	1070	165.0	130
10.0	19873	90.0	915	170.0	117
15.0	15699	95.0	786	175.0	105
20.0	12488	100.0	677	180.0	95
25.0	10000	105.0	586	185.0	85
30.0	8059	110.0	508	190.0	77
35.0	6535	115.0	443	195.0	70
40.0	5330	120.0	387	200.0	64
45.0	4372	125.0	339		

Backup Heater

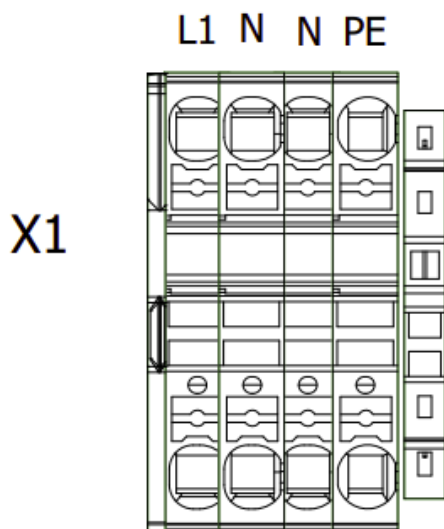
The unit has built-in backup heater. It is an electric element that activates only to reach the higher temperature needed for hot water preparation or to provide emergency heating if the compressor cannot operate.



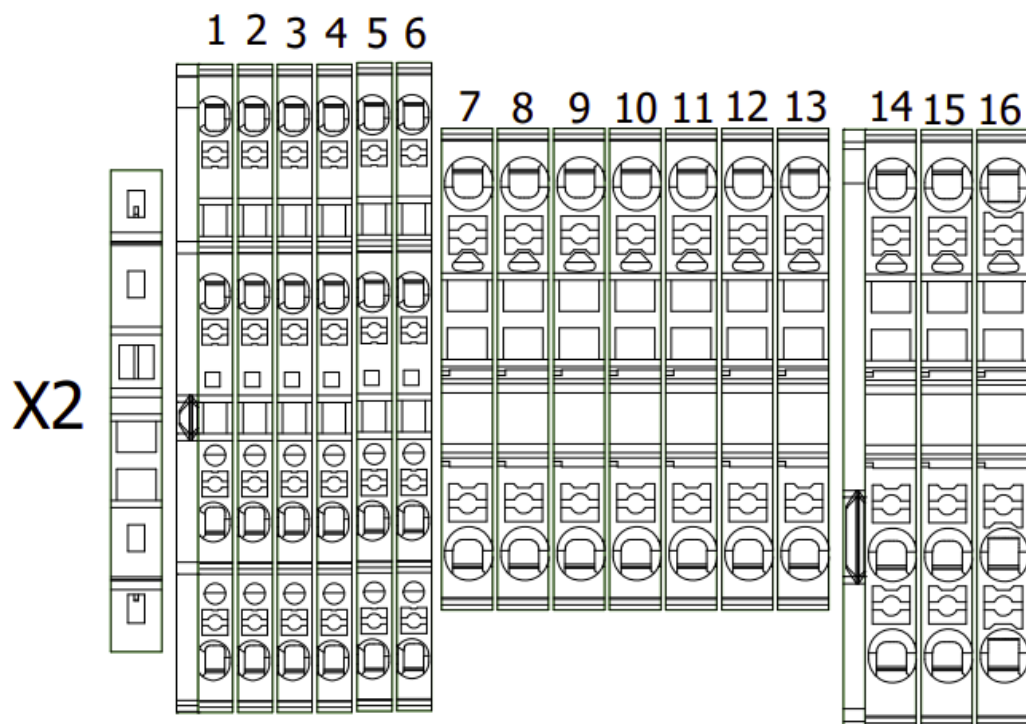
CAUTION

The backup heater is an integral part of the heat pump. We recommend not disconnecting, modify, or disable the backup heater or its wiring. Doing so may result in loss of domestic hot water, insufficient heating capacity, or failure of emergency heating functions.

9.11 Electrical connection scheme of IGLU Inuit Mono 5 / Mono 5 WT (1 P, 230 V ~50Hz)



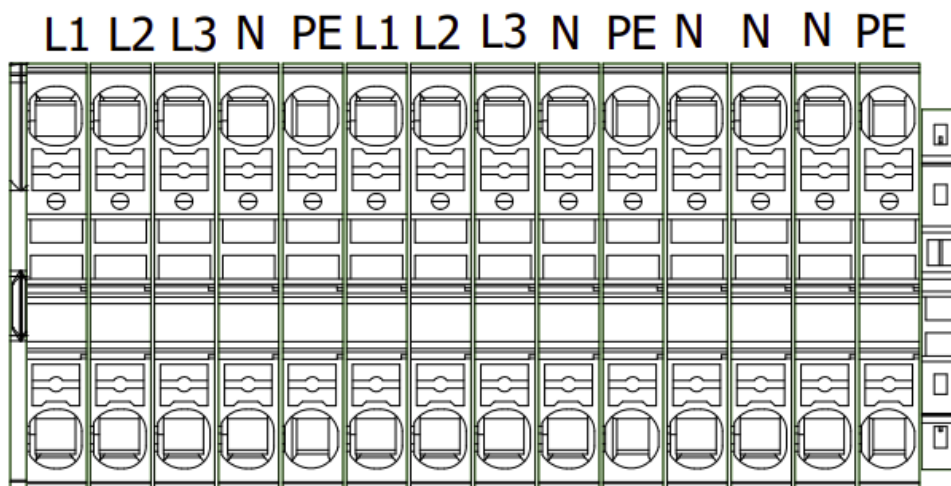
Nr.	Component	Connection	Purpose	Bridge
1	EL000424	L1	Main Input	
2	EL000425	N	Main Input	X
3	EL000425	EH1:N	Heating element N	X
4	EL000426	PE	Main Input	



Nr.	Component	Connection	Purpose	Bridge	
1.1	EL000419	B1	Boiler T	X	
1.2		COM	COM		
2.1	EL000419	B2	Buffer tank T		
2.2		COM	COM		
3.1	EL000419	B4	Floor heating T		
3.2		COM	COM		
4.1	EL000419	B5	Indoor T		
4.2		COM	COM		
5.1	EL000419	B9	Heating Return T	X	
5.2		COM	COM		
6.1	EL000419	ID6	Cooling requirement	X	X
6.2		COM	COM		X
7	EL000420	Fieldbus1	RS485 + / F1		
8	EL000420		RS485 - / F2		
9	EL000420		RS485 GND		
10	EL000420	NO8	Internal heating loop pump ON/OFF		
11	EL000420	Unit:230V	Three-way valve (L3)		
12	EL000420	NO7	Three-way valve ON/OFF		
13	EL000420	NO6	Buffer tank pump ON/OFF	X	
14	EL000422	N	Three-way valve (N)		
15	EL000422	N	Buffer tank pump (N)		
		N	Internal heating loop pump N		
16	EL000423	PE	Internal heating loop pump PE		
		PE	Buffer tank pump (PE)		

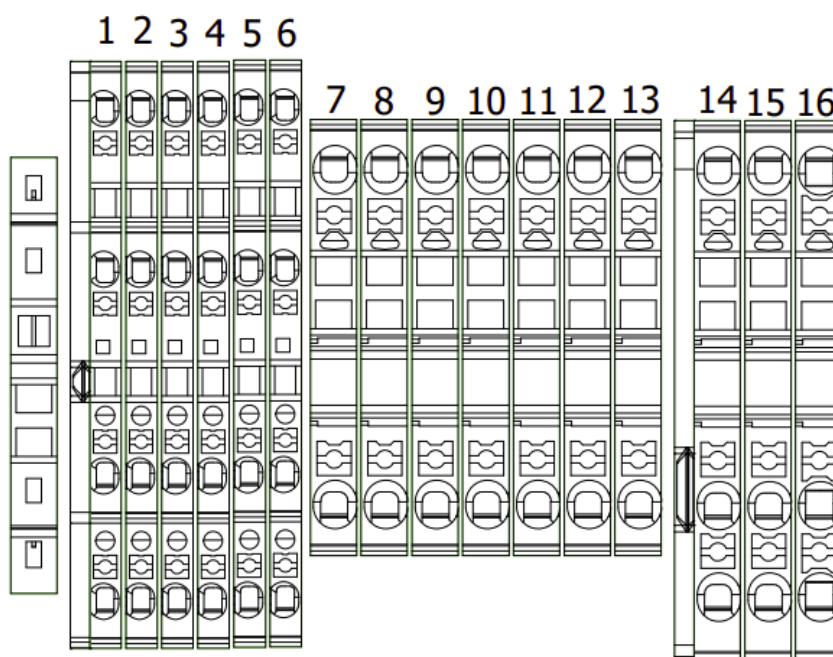
**9.12 Electrical connection scheme of
IGLU Inuit Mono 8/12/16 and Mono 8/12/16 WT (3 P, 400 V ~50Hz)**

X1



Nr.	Component	Connection	Purpose	Bridge
1	EL000424	L1	Main Input	
2	EL000424	L2	Main Input	
3	EL000424	L3	Main Input	
4	EL000425	N	Main Input	
5	EL000426	PE	Main Input	
6	EL000424	L1	Outdoor Unit	
7	EL000424	L2	Outdoor Unit	
8	EL000424	L3	Outdoor Unit	
9	EL000425	N	Outdoor Unit	
10	EL000426	PE	Outdoor Unit	
11	EL000425	EH1:N	Heating element N	X
12	EL000425	EH1:N	Heating element N	X
13	EL000425	EH1:N	Heating element N	X
14	EL000426	EH1:PE	Heating element PE	

X2

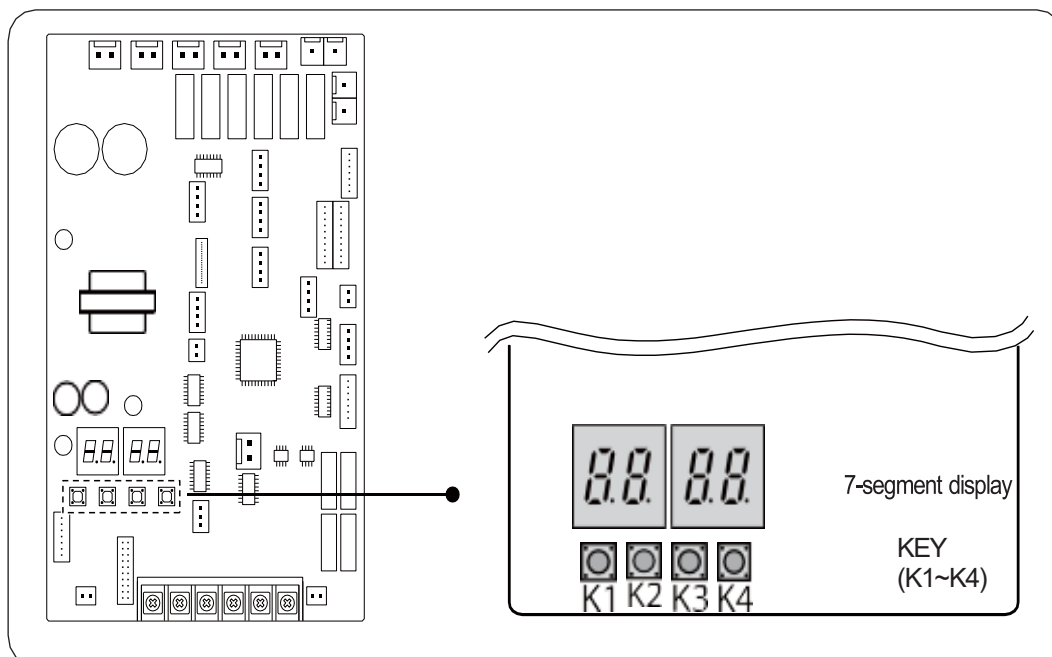


Nr.	Component	Connection	Purpose	Bridge	
1.1	EL000419	B1	Boiler T	X	
1.2		COM	COM		
2.1	EL000419	B2	Buffer tank T		
2.2		COM	COM		
3.1	EL000419	B4	Floor heating T		
3.2		COM	COM		
4.1	EL000419	B5	Indoor T		
4.2		COM	COM		
5.1	EL000419	B9	Heating Return T	X	
5.2		COM	COM		
6.1	EL000419	ID6	Cooling requirement	X	X
6.2		COM	COM		X
7	EL000420	Fieldbus1	RS485 + / F1		
8	EL000420		RS485 - / F2		
9	EL000420		RS485 GND		
10	EL000420	NO8	Internal heating loop pump ON/OFF		
11	EL000420	Unit:230V	Three-way valve (L3)		
12	EL000420	NO7	Three-way valve ON/OFF		
13	EL000420	NO6	Buffer tank pump ON/OFF	X	
14	EL000422	N	Three-way valve (N)		
15	EL000422	N	Buffer tank pump (N)		X
		N	Internal heating loop pump N		
16	EL000423	PE	Internal heating loop pump PE		
		PE	Buffer tank pump (PE)		

10. System configuration

10.1 Setting the outdoor options via K-button tactile switches

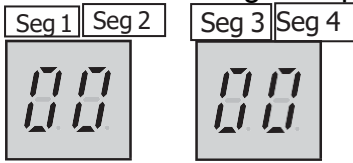
Setting the correct options for the outdoor unit for site specific conditions via K-button tactile switches and explanation of their functions.



Setting the option

1. Press and hold K2 to enter the option setting. (Only available when the operation is stopped)

- When entering the option setting, the display will show the following:



- Seg 1 and Seg 2 will display the number for the selected option.
- Seg 3 and Seg 4 will display the number for the set value of the selected option.

2. After entering the option setting mode, shortly press the K1 switch to go to the desired option to change, indicated by Seg 1, Seg 2 and select the desired option. Example)



3. After selecting the desired option, you can shortly press the K2 switch to adjust the value of the option, as indicated by Seg 3 and Seg 4, and change the function setting for the selected option.



4 After selecting the function setting for the selected options, press and hold the K2 switch for 2 seconds to store the value. The changed value of the option will be saved when the entire segment display blinks and tracking mode begins.



CAUTION

If the above instruction is not exactly followed, there is a risk that changed option settings are not saved.

- To restore the previous setting, press and hold the K1 button.
- To call for the factory default setting, press and hold K4 during the option setting mode.
- After the factory default value is displayed, it needs to be saved. Press and hold the K2 button. When the segments show that tracking mode is in progress, the setting is saved.

10.2 Key Option

Option	SEG 1	SEG 2	SEG3	SEG4	Function of the option
Current restriction rate	0	0	0	0	100% (Factory default)
			0	1	95%
			0	2	90%
			0	3	85%
			0	4	80%
			0	5	75%
			0	6	70%
			0	7	65%
			0	8	60%
			0	9	55%
			1	0	50%
			1	1	No restriction

Defrost operation	0	1	0	0	Basic
			0	1	Option
Fan speed correction for outdoor unit	0	2	0	0	Basic
			0	1	Option
Quiet mode	0	3	0	0	Low noise (Basic)
			0	1	Level1
			0	2	Level2
			0	3	Level3
Channel address	0	4	A	U	Automatic setting (Factory default)
			0~15	Manual setting for channel 0~15	
Snow accumulation prevention control	0	5	0	0	Enabled (Factory default)
			0	1	Disabled
Base Heater	0	6	0	0	Disabled
			0	1	Enabled (Factory default)
Operation mode	0	7	0	0	Heat pump (Factory default)
			0	1	Cooling only (Disabled)
			0	2	Heating only
Energy saving mode	0	8	0	0	Disabled (Factory default)
			0	1	Enabled



WARNING

Incorrect handling of the thermostat, safety valve or other valves may lead to tank rupture or plate heat exchanger damage. When servicing the unit follow the instructions carefully:

- Always turn off the main power supply when the water supply is being shut off.
- Test the free operation of the safety valve regularly by opening the valve ensuring the water flows freely.
- Electrical connection and all servicing of the electrical components should only be carried out by an authorized electrician.
- Fitting and all servicing of plumbing fixtures should only be carried out by an authorized installer.
- When replacing the thermostat, safety valve, or any other valve or part supplied with this unit, use only approved parts of the same specification.

10.3 Testing operations

1. Check the power supply between the outdoor unit and the auxiliary circuit breaker.
 - 1 phase power supply: L, N
 - phases power supply: R, S, T, N
2. Check the control panel.
 - Check that you have connected the power and communication cables correctly. (If the power cable and communication cables one mixed up or connected incorrectly, the PCB will be damaged.)
 - Check the temp. sensor, drain pump/hose, and display are connected correctly.
3. Press K1 or K2 on the outdoor unit PCB to run the test mode and stop.

K1 (Number of Press)	KEY operation	7-segment display
1 time	Trial operation in Heating mode	"K" "1" "BLANK" "BLANK"
2 times	Vacuuming (Outdoor unit address 1)	"K" "2" "BLANK" "1"
3 times	Inverter Fault Detection (Comp #1)	"K" "3" "1" "1"
4 times	End Key operation	-

K2 (Number of Press)	KEY operation	7-segment display
1 time	Trial operation in Cooling mode	"K" "4" "BLANK" "BLANK"
2 times	Discharge mode of DC link voltage	"K" "5" "o" "k"
3 times	Forced defrost operation	"K" "6" "BLANK" "BLANK"
4 times	Inverter compressor 1 check	"K" "7" "BLANK" "BLANK"
5 times	End Key operation	-

K3 (Number of Press)	KEY operation	7-segment display
1 time	Intialize (Reset) setting	Same as initial state

4. View Mode: When the K4 switch is pressed, you can see information about our system state as below.

K4 (Number of press)	KEY operation	Display on segment	
		SEG 1	SEG 2,3,4
1 time	Capacity of outdoor unit	1	16 HP → 0,1,6
2 times	Order frequency of the compressor	2	120 Hz → 1,2,0
3 times	High pressrue (kg/cm2)	3	15.2 K → 152
4 times	Low pressrue (kg/cm2)	4	4.3 K → 043
5 times	Discharge temperature Compressor	5	87 °C → 087
6 times	IPM temperature	6	87 °C → 087
7 times	CT sensor value	7	2 A → 020
8 times	Suction temperature	8	-42 °C → -42
9 times	COND OUT temperature	9	-42 °C → -42
10 times	EVA in temperature	A	87 °C → 087
11 times	Compressor top temperature	B	87 °C → 087
12 times	Outdoor temperature	C	-42 °C → -42
13 times	EVI inlet temperature	D	-42 °C → -42
14 times	EVI outlet temperature	E	-42 °C → -42
15 times	Main EEV step	F	2000 → 200
16 times	EVI EEV step	G	300 → 300
17 times	Fan step (ssr or bldc)	H	13 Step → 0, 1, 3
18 times	Current frequency Compressor	I	120 Hz → 1, 2, 0
19 times	EVI SOL EEV step	J	300 → 300
20 times	Inverter pump output	K	100 % → 100

K4 (Number of press) Press and hold the K4 to enter the setting	Displayed content	Display on segment	
		Page 1	Page 2
1 time	Main version	MAIN	Version (ex. 1412)
2 times	Inverter version	INV	Version (ex. 1412)
3 times	EEP version	EEP	Version (ex. 1412)
4 times	Automatically assigned address of the units	AUTO	SEG1,2 Indoor unit: "A", "0" MCU: "C", "1"
			SEG3,4 Address (ex:07)
5 times	Manually assigned address of the units	MANU	SEG1,2 Indoor unit: "A", "0"
			SEG3,4 Address (ex:15)

11. Pre-Startup Checklist

Before requesting the startup by qualified installers who are authorized to perform the startup of IGLU heat pumps, the installer must verify that the following conditions are met.

General Installation

- ☐ Installation space of outdoor unit is according to the manual (above average snow height /enough clearances).
- ☐ Outdoor unit is protected against direct wind on fan/snow ingress
- ☐ Outdoor unit is correctly secured to base
- ☐ For outdoor unit provisions for condensate/drainage are made without any risk of freezing
- ☐ Outdoor unit installation complies with minimum clearances for flammable refrigerant (R-290)
- ☐ Installation space of indoor unit is according to the manual (installation room is clean, dry, ventilated, clearances for service access have been respected)

Hydraulic Circuits

- ☐ The heating circuit has been flushed, filled, and properly vented.
- ☐ Glycol/brine or other freeze protection added (if required)
- ☐ Water quality checked (pH, hardness, mg/L)
- ☐ The pressures in outdoor and indoor circuits meet the requirements.
- ☐ Expansion vessels are installed, correctly sized, and pre-charged to the proper pressure.
- ☐ Safety valves are installed, and discharge pipes are safely routed to a drain.
- ☐ Dirt strainers and magnetic/cyclone filters are installed and accessible
- ☐ Piping is leak-tight and properly insulated.
- ☐ Drain taps are installed at low points for future maintenance.
- ☐ System fully air purged.

Electrical Installation

- ☐ The electrical installation has been completed in accordance with local legislation and the wiring diagram
- ☐ The cables have been laid in accordance with the requirements between the indoor unit to and outdoor unit
- ☐ A dedicated power supply, and circuit breakers are installed.
- ☐ Protective earth (PE) is properly connected.
- ☐ Communication cable correctly connected (shielded and grounded)
- ☐ Supply voltage verified and within specified limits
- ☐ All cables are securely connected, protected from mechanical stress, and correctly routed.

Domestic Hot Water

- ☐ The DHW tank has been flushed with fresh water immediately after installation, and hygienic measures have been followed.
- ☐ The DHW safety valve installed
- ☐ Pipe runs are as short as possible to avoid stagnation.



NOTE

The startup may only be carried out by qualified installers authorized by the manufacturer. For the detailed startup procedure, refer to the “**IGLU Heat Pump Startup Manual for Installers.**” Upon completion of commissioning, the responsible service technician must complete and sign the official start-up report.



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