

Required tools for Installation Works

1 Philips screw driver	4 Spanner	7 Megawork	39.2 N·m (3.9 kgf·m)
2 Level gauge	5 Knife	8 Multimeter	58.8 N·m (5.8 kgf·m)
3 Electric drill	6 Measuring tape	9 Torque wrench	

SAFETY PRECAUTIONS

- Read the following "SAFETY PRECAUTIONS" carefully before installation of Mono bloc unit. Air-to-Water Heatpump system (hereafter referred to as "Mono bloc unit").
 - Electrical works and water installation works must be done by licensed electrician and licensed water system installer respectively. Be sure to use the correct rating and main circuit for the model to be installed.
 - The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below. Incorrect installation due to ignorance or negligence of the instructions will cause harm or damage, and the seriousness is classified by the following indications.
- WARNING** This indication shows the possibility of causing death or serious injury.
- CAUTION** This indication shows the possibility of causing injury or damage to properties only.
- The items to be followed are classified by the symbols:
- Symbol with white background denotes item that is PROHIBITED from doing.
 - Symbol with dark background denotes item that must be carried out.

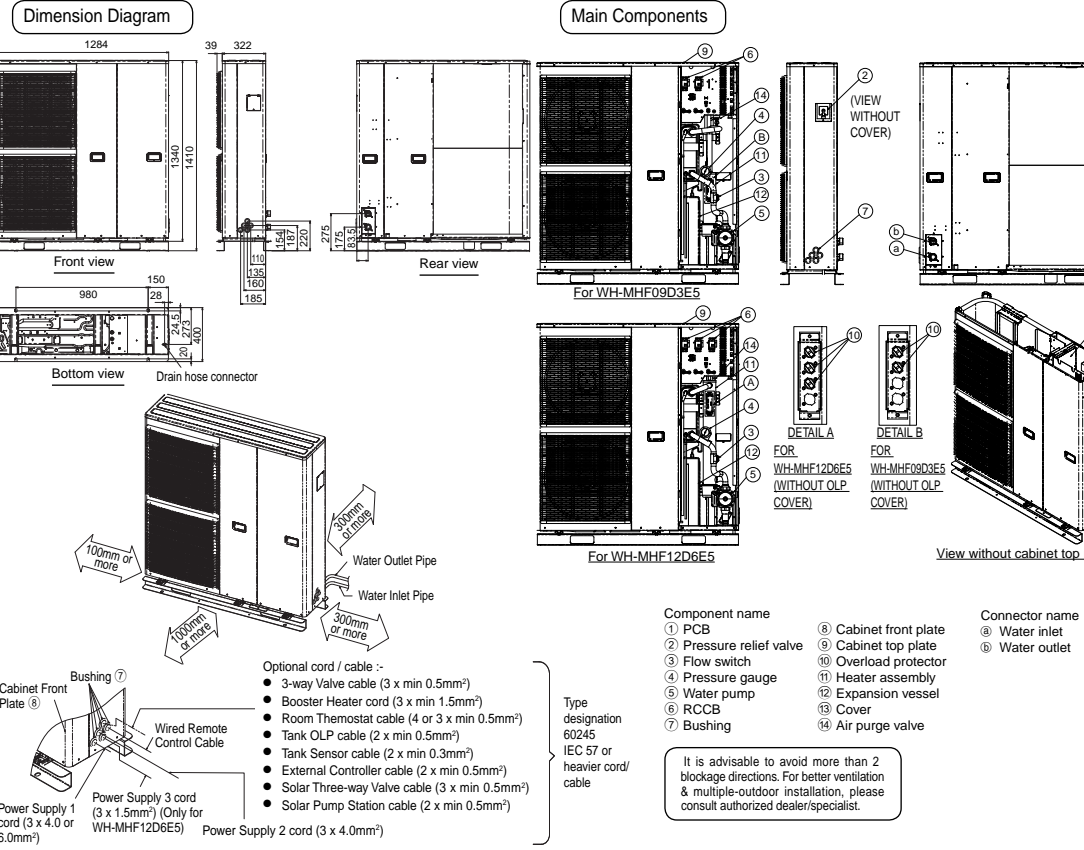
- WARNING**
- Do not install Mono bloc unit near handrail of veranda. When installing Mono bloc unit at veranda of high rise building, child may climb up to Mono bloc unit and cross over the handrail and causing accident.
 - Do not use unspecified cord, modified cord, joint cord or extension cord for power supply cord. Do not share the single outlet with other electrical appliances. Poor contact, poor insulation or over current will cause electrical shock or fire.
 - Do not tie up the power supply cord into a bundle by band. Abnormal temperature rise on power supply cord may happen.
 - Do not insert your fingers or other objects into the unit, high speed rotating fan may cause injury.
 - Do not sit or step on the unit, you may fall down accidentally.
 - Keep plastic bag (packaging material) away from small children, it may cling to nose and mouth thus causing suffocation.
 - Do not use pipe wrench to install refrigerant pipe. Using pipe wrench may deform the pipes and cause unit malfunction.
 - Do not purchase unauthorized electrical parts for installation, service, maintenance and etc. They might cause electrical shock or fire.
 - Do not modify the wiring of Mono bloc unit for installation of other components (i.e. heater, etc). Overloaded wiring or wire connection points may cause electrical shock or fire.
 - For electrical work, follow the local national wiring standard, regulation and this installation instruction. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fire.
 - For water circuit installation work, follow to relevant European and national regulations (including EN1177) and local plumbing and building regulation codes.
 - Must engage an authorized dealer or specialist for installation. If installation is defective, it will cause water leakage, electrical shock or fire.
 - Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electrical shock or fire.
 - Only use the supplied or specified installation parts. Else, it may cause Mono bloc unit to vibrate, fall, water leakage, electrical shock or fire.
 - Install at a flat, strong and firm location which is able to withstand the Mono bloc unit's weight. If the location is slanting, or strength is not enough the set will fall and cause injury.
 - This equipment is strongly recommended to be installed with Residual Current Device (RCD) on-site according to the respective national wiring rules or country-specific safety measures in terms of residual current.
 - The unit is only for use in a closed water system. Utilization in an open water system may lead to excessive corrosion of the water piping and risk of incubating bacteria colonies, particularly Legionella, in water.
 - If there is any doubt about the installation procedure or operation, always contact the authorized dealer for advice and information.
 - Select a location where in case of water leakage, the leakage will not cause damage to other properties.
 - When installing electrical equipment at wooden building of metal lath or wire lath, in accordance with electrical safety standard, no electrical contact between equipment and building is allowed. Insulator must be installed in between.
 - This installation may be subjected to building regulation approval applicable to respective country that may require to notify the local authority before installation.
 - Any work carried out on the Mono bloc unit after removing the front panel which is secured by screws, must be carried out under the supervision of authorized dealer and licensed installation contractor.
 - This unit must be properly earthed. The electrical earth must not be connected to a gas pipe, water pipe, the earth of a lightning rod or a telephone. Otherwise there is a danger of electrical shock in the event of an insulation breakdown or electrical earth fault in the Mono bloc unit.

- CAUTION**
- Do not install the Mono bloc unit in areas where there is a risk of flammable gas leakage. There is a risk of fire if flammable gas accumulates near or around the Mono bloc unit.
 - Do not release refrigerant during piping work for installation, re-installation and during repairing a refrigeration parts. Take care of the liquid refrigerant, it may cause frostbite.
 - Make sure the power supply cord does not contact with hot part (i.e. water piping). High temperature may cause insulator of power supply cord damage hence electrical shock or fire.
 - Do not touch the sharp aluminium fin, sharp parts may cause injury.
 - Do not apply excessive force to water pipes that may damage the pipes. If water leakage occurs, it will cause flooding and damage to other properties.
 - Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water leakage may happen and may cause damage to properties of the user.
 - The piping installation work must be flushed before the Mono bloc unit is connected to remove contaminants. Contaminants may damage the Mono bloc unit components.
 - Select an installation location where it is accessible for maintenance.
 - Power supply connection to Mono bloc unit.
 - Power supply point should be in easily accessible place for power disconnection in case of emergency.
 - Must follow local national wiring standard, regulation and this installation instruction.
 - Strongly recommended to make permanent connection to a circuit breaker. It must be a double pole switch with a minimum 3.0 mm gap.
 - For WH-MHF09D3E5:
 - Use approved 30A circuit breaker for power supply 1
 - Use electrical heater connection to main for power supply 2 (either ① or ②)
 - Use approved 15A/16A circuit breaker (Backup Heater only)
 - Use approved 30A circuit breaker (Backup Heater + Booster Heater)
 - For WH-MHF12D6E5:
 - Use approved 30A circuit breaker for power supply 1
 - Use approved 30A circuit breaker for power supply 2
 - Use approved 15A/16A circuit breaker for power supply 3
 - Ensure the correct polarity is maintained throughout all wiring. Otherwise, it will cause electrical shock or fire.
 - After installation, the installer is obliged to verify correct operation of the Mono bloc unit. Check the connection point for water leakage during test run. If leakage occurs, it will cause damage to other properties.
 - Installation work. Four or more people are required to carry out the installation work. The weight of Mono bloc unit might cause injury if carried by less than four people.

- Attached Accessories**
- | No. | Accessories part | Qty. | No. | Accessories part | Qty. |
|-----|------------------|------|-----|----------------------|------|
| ① | Drain elbow | 1 | ③ | Wired remote control | 1 |
| ② | Rubber cap | 8 | | | |
- Optional Accessory**
- | No. | Accessories part | Qty. |
|-----|--------------------------------|------|
| ⑭ | Solar Connection PCB (CZ-NSZP) | 1 |
| ⑮ | Base Pan Heater (CZ-NE1P) | 1 |
- Field Supply Accessories**
- | No. | Part | Qty. | Model | Specifications | Maker |
|-----|----------------------|------|----------|----------------|---------|
| 1 | 3-way Valve Kit | 2 | SFA21718 | AC230V | Siemens |
| | Room Thermostat | 1 | VX146/25 | -- | Siemens |
| | Room Thermostat Type | 1 | RAA200 | AC230V | Siemens |
| | Programmable Type | 1 | REV200 | AC230V | Siemens |
- It is recommended to purchase the field supply accessories from the specific maker whom listed in above table.

Handling of Mono bloc unit

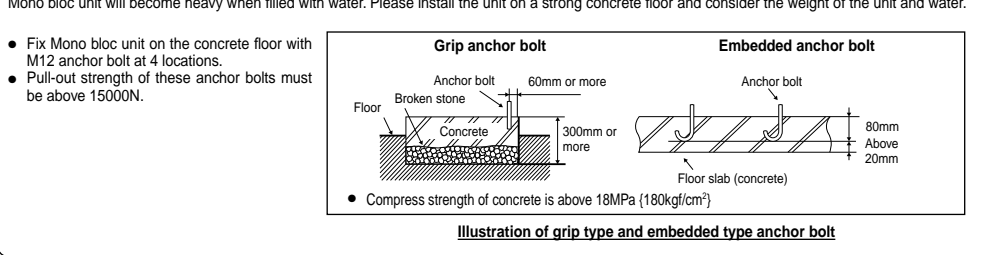
Mono bloc unit is a large and heavy apparatus. The handling of the unit only to be done by lifting tools with slings. These slings can be fitted into sleeves at the unit's base frame.



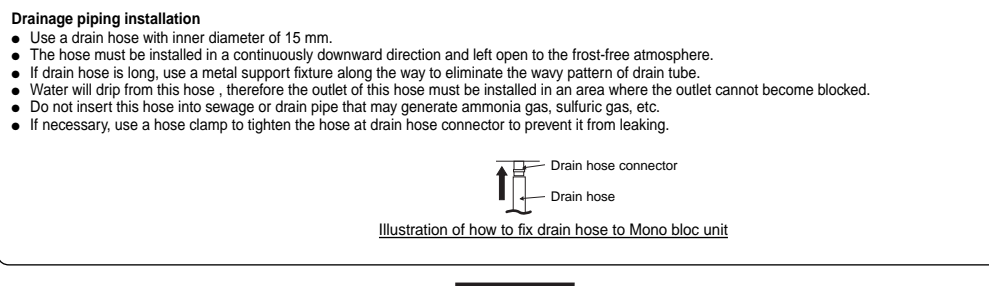
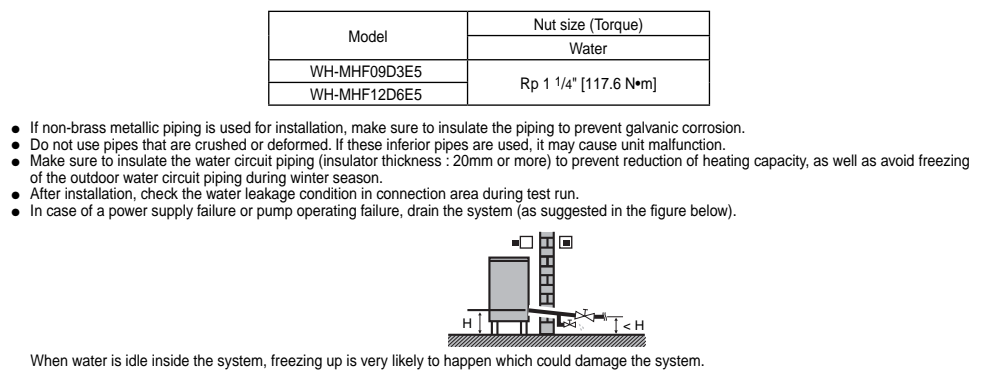
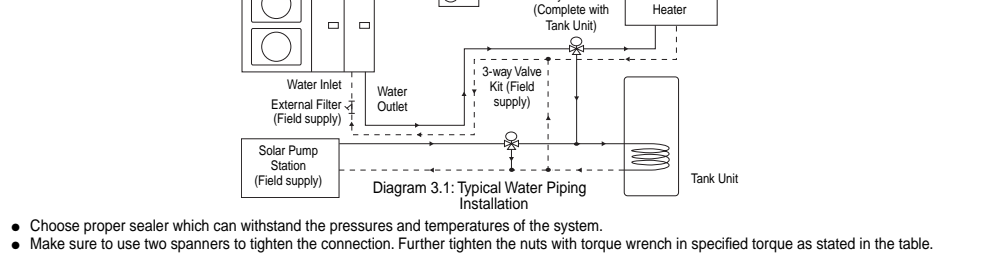
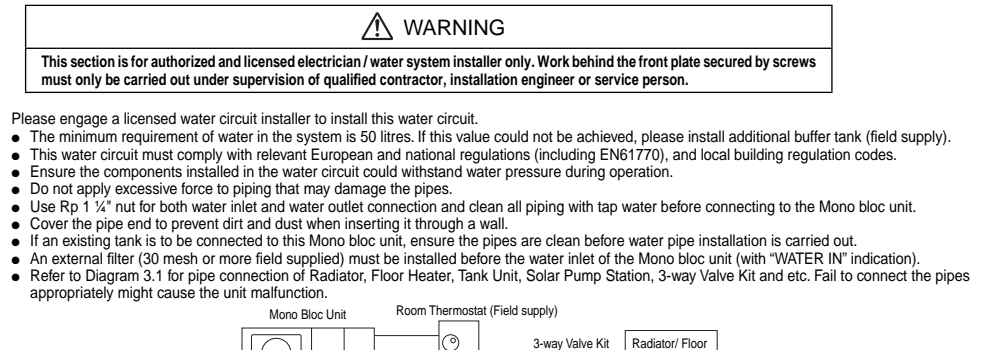
1 SELECT THE BEST LOCATION

- Do not place any obstacles which may cause a short circuit of the discharged air.
- Avoid installing in areas where the ambient temperature may drop below -20°C.
- The Mono bloc unit must be installed on a flat, solid surface.
- A place removed from any heat source or steam which may affect the operation of the mono bloc unit.
- A place where air circulation is good.
- A place where drainage can be easily done.
- A place where Mono bloc unit's operation noise will not cause discomfort to the user.
- A place which is accessible for maintenance.
- Ensure to keep minimum distance of spaces as illustrated below from wall, ceiling, or other obstacles.
- A place where flammable gas leaking might not occur.
- A place where the Mono bloc unit's piping and wiring lengths come within reasonable ranges.
- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.
- Do not place any obstacles which may cause a short circuit of the discharged air.
- Avoid installing the Mono bloc unit at a location where suction side may be exposed directly to wind.
- If Mono bloc unit installed near sea, region with high content of sulphur or oily location (e.g. machinery oil, etc.), it lifespan maybe shorter.
- When installing the product in a place where it will be affected by typhoon or strong wind such as wind blowing between buildings, including the rooftop of a building and a place where there is no building in surroundings, fix the product with an overturn prevention wire, etc. (Overturn prevention fitting model number: KKY2P15C)
- When connecting solar pump station between Mono bloc unit and solar pump station, the distance between both apparatuses shall be 2 ~ 8 meters and the length of the said cable must be shorter than 10 meter.
- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.

2 MONO BLOC UNIT INSTALLATION



3 PIPING INSTALLATION



4 CONNECT THE CORD AND CABLE TO MONO BLOC UNIT

- An isolating device must be connected to the power supply cable (Disconnecting means).
- Isolating device (Disconnecting means) should have minimum 3.0 mm contact gap.
- Connect the approved polychloroprene sheathed power supply 1 cord (3 x 4.0 or 6.0 mm²) and power supply 2 cord (3 x 4.0 mm²) and power supply 3 cord (1 x 1.5 mm²), type designation 60245 IEC 57 or heavier cord to the RCCB, and to the other end of the cord to isolating device (Disconnecting means).
- To avoid the cable and cord being damaged by sharp edges, the cable and cord must be passed through a bushing (located at the right hand side of the mono bloc unit) before being connected to the terminal block. The bushing must be used and must not be removed.
- Secure the cable onto the control board with the holder (clamps).

