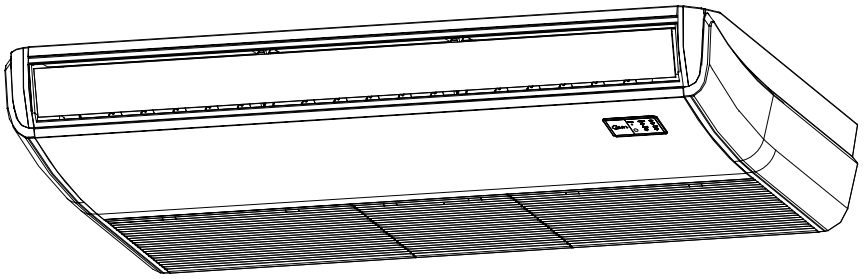
SM_FC(GA)_R32_3D INV_EU_NA_2312

# FLOOR CEILING INVERTER SERIES

SERVICE MANUAL



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## §. Troubleshooting



## Appendix



**Caution: Risk of fire (Required for R32/R290 units only)**

# Safety Precautions

## Contents

# 1. Precautions

To prevent personal injury, or property or unit damage, adhere to all precautionary measures and instructions outlined in this manual. Before servicing a unit, refer to this service manual and its relevant sections.

Failure to adhere to all precautionary measures listed in this section may result in personal injury, damage to the unit or to property, or in extreme cases, death.

**WARNING** indicates a potentially hazardous situation which if not avoided could result in serious personal injury, or death.

**CAUTION** indicates a potentially hazardous situation which if not avoided could result in minor or moderate personal injury, or unit damage.

## 1.1 In case of Accidents or Emergency

**WARNING**

- If a gas leak is suspected, immediately turn off the gas and ventilate the area if a gas leak is suspected before turning the unit on.
- If strange sounds or smoke is detected from the unit, turn the breaker off and disconnect the power supply cable.
- If the unit comes into contact with liquid, contact an authorized service center.
- If liquid from the batteries makes contact with skin or clothing, immediately rinse or wash the area well with clean water.
- Do not insert hands or other objects into the air inlet or outlet while the unit is plugged in.
- Do not operate the unit with wet hands.
- Do not use a remote controller that has previously been exposed to battery damage or battery leakage.

**CAUTION**

- Clean and ventilate the unit at regular intervals when operating it near a stove or near similar devices.
- Do not use the unit during severe weather conditions. If possible, remove the product from the window before such occurrences.

## 1.2 Pre-Installation and Installation

**WARNING**

- Use this unit only on a dedicated circuit.
- Damage to the installation area could cause the unit to fall, potentially resulting in personal injury, property damage, or product failure.
- Only qualified personnel should disassemble, install, remove, or repair the unit.
- Only a qualified electrician should perform electrical work. For more information, contact your dealer, seller, or an authorized service center.

**CAUTION**

- While unpacking be careful of sharp edges around the unit as well as the edges of the fins on the condenser and evaporator.

## 1.3 Operation and Maintenance

**WARNING**

- Do not use defective or under-rated circuit breakers.
- Ensure the unit is properly grounded and that a dedicated circuit and breaker are installed.
- Do not modify or extend the power cable. Ensure the power cable is secure and not damaged during operation.
- Do not unplug the power supply plug during operation.
- Do not store or use flammable materials near the unit.
- Do not open the inlet grill of the unit during operation.
- Do not touch the electrostatic filter if the unit is equipped with one.
- Do not block the inlet or outlet of air flow to the unit.
- Do not use harsh detergents, solvents, or similar items to clean the unit. Use a soft cloth for cleaning.
- Do not touch the metal parts of the unit when removing the air filter as they are very sharp.
- Do not step on or place anything on the unit or outdoor units.
- Do not drink water drained from the unit
- Avoid direct skin contact with water drained from the unit.
- Use a firm stool or step ladder according to manufacturer procedures when cleaning or maintaining the unit.

**CAUTION**

- Do not install or operate the unit for an extended period of time in areas of high humidity or in an environment directly exposing it to sea wind or salt spray.
- Do not install the unit on a defective or damaged installation stand, or in an unsecure location.
- Ensure the unit is installed at a level position
- Do not install the unit where noise or air discharge created by the outdoor unit will negatively impact the environment or nearby residences.
- Do not expose skin directly to the air discharged by the unit for prolonged periods of time.
- Ensure the unit do not operate in areas water or other liquids.
- Ensure the drain hose is installed correctly to ensure proper water drainage.
- When lifting or transporting the unit, it is recommended that two or more people are used for this task.
- When the unit is not to be used for an extended time, disconnect the power supply or turn off the breaker.

# 2. Information servicing(For flammable materials)

## 2.1 Checks to the area

- Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the refrigerating system, the following precautions shall be complied with prior to conducting work on the system.

## 2.2 Work procedure

- Works shall be undertaken under a controlled procedure so as to minimise the risk of a flammable gas or vapour being present while the work is being performed. Technical personnel in charge of operation, supervision, maintenance of air-conditioning systems shall be adequately instructed and competent with respect to their tasks.Works shall be undertaken with appropriate tools only (In case of uncertainty, please consult the manufacturer of the tools for use with flammable refrigerants)

## 2.3 General work area

- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. work in confined sapces shall be avoided. The area around the work space shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

## 2.4 Checking for presence of refrigerant

- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with flammable refrigerants, i.e. no sparking, adequately sealed or intrinsically safe.

## 2.5 Presence of fire extinguisher

- If any hot work is to be conducted on the refrigeration equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

## 2.6 No ignition sources

- No person carrying out work in relation to a refrigeration system which involves exposing any pipe work that contains or has contained flammable refrigerant shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which flammable refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. NO SMOKING signs shall be displayed.

## 2.7 Ventilated area

- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

## 2.8 Checks to the refrigeration equipment

- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt consult the manufacturer's technical department for assistance. The following checks shall be applied to installations using flammable refrigerants:
  - the charge size is in accordance with the room size within which the refrigerant containing parts are installed;
  - the ventilation machinery and outlets are operating adequately and are not obstructed;
  - if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant; marking to the equipment continues to be visible and legible.
  - markings and signs that are illegible shall be corrected;
  - refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

## 2.9 Checks to electrical devices

- Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, and adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

**Initial safety checks shall include:**

- that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking
- that there no live electrical components and wiring are exposed while charging, recovering or purging the system;
- that there is continuity of earth bonding.

## 2.10 Repairs to sealed components

- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
  - Ensure that apparatus is mounted securely.
  - Ensure that seals or sealing materials have not degraded such that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

NOTE: The use of silicon sealant may inhibit the effectiveness of some types of leak detection equipment. Intrinsically safe components do not have to be isolated prior to working on them.

## 2.11 Repair to intrinsically safe components

- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use. Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere. The test apparatus shall be at the correct rating.
- Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

## 2.12 Cabling

- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

## 2.13 Detection of flammable refrigerants

- Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

**Leak detection methods**

- The following leak detection methods are deemed acceptable for systems containing flammable refrigerants. Electronic leak detectors shall be used to detect flammable refrigerants, but the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed and the appropriate percentage of gas (25 % maximum) is confirmed. Leak detection fluids are suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
  - If a leak is suspected, all naked flames shall be removed or extinguished.
  - If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the systemremote from the leak. Oxygen free nitrogen (OFN) shall then be purged through the system both before and during the brazing process.

## 2.14 Removal and evacuation

- When breaking into the refrigerant circuit to make repairs or for any other purpose, conventional procedures shall be used. However, it is important that best practice is followed since flammability is a consideration.
- The following procedure shall be adhered to:
  - remove refrigerant;
  - purge the circuit with inert gas;
  - evacuate;
  - purge again with inert gas;
  - open the circuit by cutting or brazing.
- The refrigerant charge shall be recovered into the

correct recovery cylinders. The system shall be flushed with OFN to render the unit safe. This process may need to be repeated several times. Compressed air or oxygen shall not be used for this task. Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place. This operation is absolutely vital if brazing operations on the pipe-work are to take place.

- Ensure that the outlet for the vacuum pump is not close to any ignition sources and there is ventilation available.

## 2.15 Charging procedures

- In addition to conventional charging procedures, the following requirements shall be followed:
  - Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
  - Cylinders shall be kept upright.
  - Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
  - Label the system when charging is complete (if not already).
  - Extreme care shall be taken not to overfill the refrigeration system.
  - Prior to recharging the system it shall be pressure tested with OFN. The system shall be leak tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

## 2.16 Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken.

In case analysis is required prior to re-use of reclaimed refrigerant. It is essential that electrical power is available before the task is commenced.

- Become familiar with the equipment and its operation.
- Isolate system electrically.
- Before attempting the procedure ensure that:
  - mechanical handling equipment is available, if required, for handling refrigerant cylinders;
  - all personal protective equipment is available and being used correctly;
  - the recovery process is supervised at all times by a competent person;
  - recovery equipment and cylinders conform to the appropriate standards.
- Pump down refrigerant system, if possible.
- If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- Make sure that cylinder is situated on the scales before recovery takes place.
- Start the recovery machine and operate in accordance with manufacturer's instructions.
- Do not overfill cylinders. (No more than 80 % volume liquid charge).
- Do not exceed the maximum working pressure of the cylinder, even temporarily.
- When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

## 2.17 Labelling

- Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

## 2.18 Recovery

- When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct numbers of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure relief valve and associated shut-off valves in good working order.Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
- The recovery equipment shall be in good working

order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order.

- Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.
- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant Waste Transfer Note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.
- If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When oil is drained from a system, it shall be carried out safely.

## 2.19 Venting of HC Refrigerant (R290)

Venting may be carried out as an alternative to recovering the refrigerant. Because HC refrigerants have no ODP and negligible GWP, under certain circumstances it may be considered acceptable to vent the refrigerant. However, if this is to be considered, it should be done in accordance with the relevant national rules or regulations, if they permit.

In particular, before venting a system, it would be necessary to:

- Ensure that legislation relating to waste material has been considered
- Ensure that environmental legislation has been considered
- Ensure that legislation addressing safety of hazardous substances is satisfied
- Venting is only carried out with systems that contain a small quantity of refrigerant, typically less than 500 g.
- Venting to inside a building is not permissible under any circumstances
- Venting must not be to a public area, or where people are unaware of the procedure taking place
- The hose must be of sufficient length and diameter such that it will extend to at least 3 m beyond the outside of the building
- The venting should only take place on the certainty that the refrigerant will not get blown back into any adjacent buildings, and that it will not migrate to a location below ground level
- The hose is made of material that is compatible for use with HC refrigerants and oil
- A device is used to raise the hose discharge at least 1 m above ground level and so that the discharge is pointed in an upwards direction (to assist with dilution)
- The end of the hose can now discharge and disperse the flammable fumes into the ambient air.
- There should not be any restriction or sharp bends within the vent-line which will hinder the ease of flow.
- There must be no sources of ignition near the hose discharge
- The hose should be regularly checked to ensure that there are no holes or kinks in it, that could lead to leakage or blocking of the passage of flow

When carrying out the venting, the flow of refrigerant should be metered using manifold gauges to a low flow rate, so as to ensure the refrigerant is well diluted. Once the refrigerant has ceased flowing, if possible, the system should be flushed out with OFN; if not, then the system should be pressurised with OFN and the venting procedure carried out two or more times, to ensure that there is minimal HC refrigerant remaining inside the system.

## 2.20 Transportation, marking and storage for units

1. Transport of equipment containing flammable refrigerants

   Compliance with the transport regulations

2. Marking of equipment using signs

   Compliance with local regulations

3. Disposal of equipment using flammable refrigerants

   Compliance with national regulations

4. Storage of equipment/appliances

   The storage of the appliance should be in accordance with the applicable regulations or instructions, whichever is more stringent.

5. Storage of packed (unsold) equipment

   Storage package protection should be constructed such that mechanical damage to the equipment inside the package will not cause a leak of the refrigerant charge.

   The maximum number of pieces of equipment permitted to be stored together will be determined by local regulations.

# Model Reference

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## 1. Model Reference

Refer to the following table to determine the specific indoor and outdoor unit model number of your purchased equipment.

**Note: There are two versions of the 36k&48k. Check you are using the right power supply for your model. Power Supply Intake : Outdoor Units**

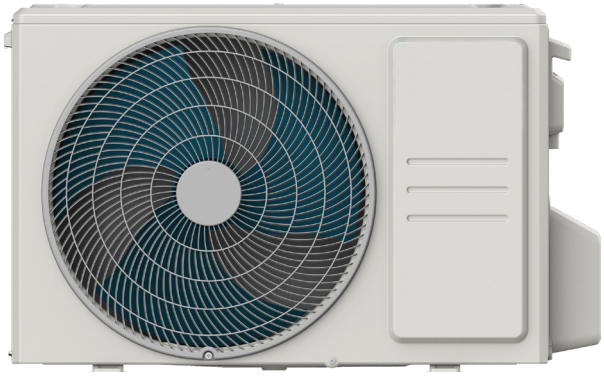
| Indoor Unit Model | | Universal Outdoor Unit Model | Capacity (Btu/h) | Power Supply |
|---|---|---|---|---|
| Floor Ceiling | MUEU-18HRFNX-QRD0W(GA) | MOX330U-18HFN8-QRD0W(GA) | 18k | 1Ph, 220-240V~, 50Hz |
| | MUE-24HRFNX-QRD0W(GA) | MOX430U-24HFN8-QRD0W(GA) | 24k | |
| | | MOX430U-24HFN8-QRD1W(GA) | | |
| | MUE-36HRFNX-QRD0W(GA) | MOD30U-36HFN8-QRD0W(GA) | 36k | |
| | MUE-48HRFNX-QRD0W(GA) | MOX630U-48HFN8-QRD0W(GA) | 48k | |
| | MUE-36HRFNX-QRD0W(GA) | MOD30U-36HFN8-RRD0W(GA) | 36k | 3Ph, 380-415V~, 50Hz |
| | MUE-48HRFNX-QRD0W(GA) | MOE30U-48HFN8-RRD0W(GA) | 48k | |
| | | MOX630U-48HFN8-RRD0W(GA) | | |
| | MUE-55HRFNX-QRD0W(GA) | MOE30U-55HFN8-RRD0W(GA) | 55k | |
| | | MOX630U-55HFN8-RRD0W(GA) | | |

## 2. External Appearance

### 2.1 Indoor Unit

| Ceiling &floor(Floor installation) | Ceiling &floor(Ceiling installation) |
| --- | --- |
|  |  |

### 2.2 Outdoor Unit

| Single Fan Outdoor Unit | Double Fan Outdoor Unit |
| --- | --- |
|  |  |

# Indoor Unit-Floor Ceiling

## Contents

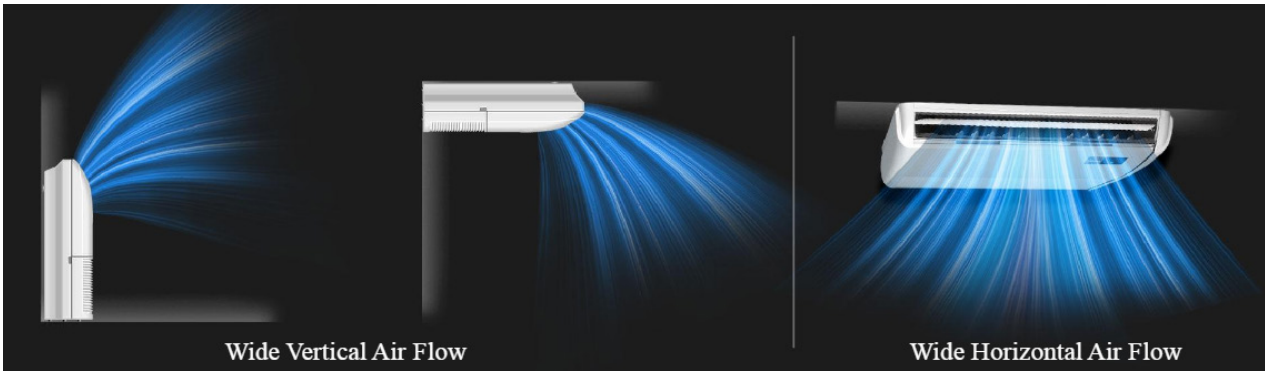
# 1. Feature

## 1.1 Easy installation-2 Style Installation

- Fashionable design and streamline appearance, suitable for different room style.

## 1.2 3D Airflow

- Vertical air flow and horizontal airflow can be adjusted by remote controller to direct air flow to every corner of the room.




## 1.3 Easy Maintenance-Universal Spare Parts

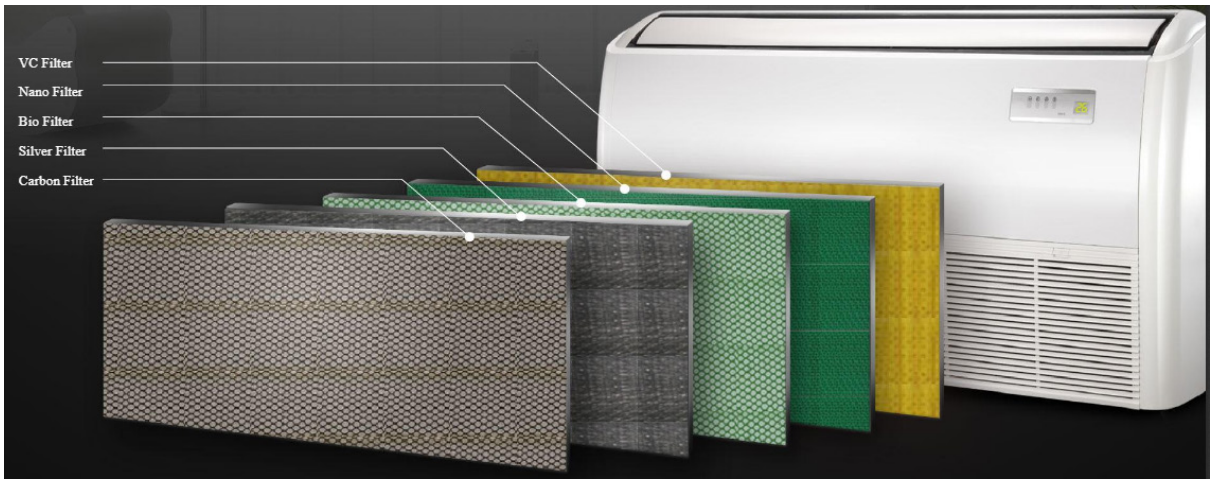
- More than 60% parts and assemblies (such as fan wheel,plastic cases, metal parts  etc.) are universal for 3 different bodies, which makes maintenance much easier.

## 1.4 Fresh Air

- Fresh air intake function brings you fresh and comfortable air feeling.

## 1.5 Healthy Filters(Optional)

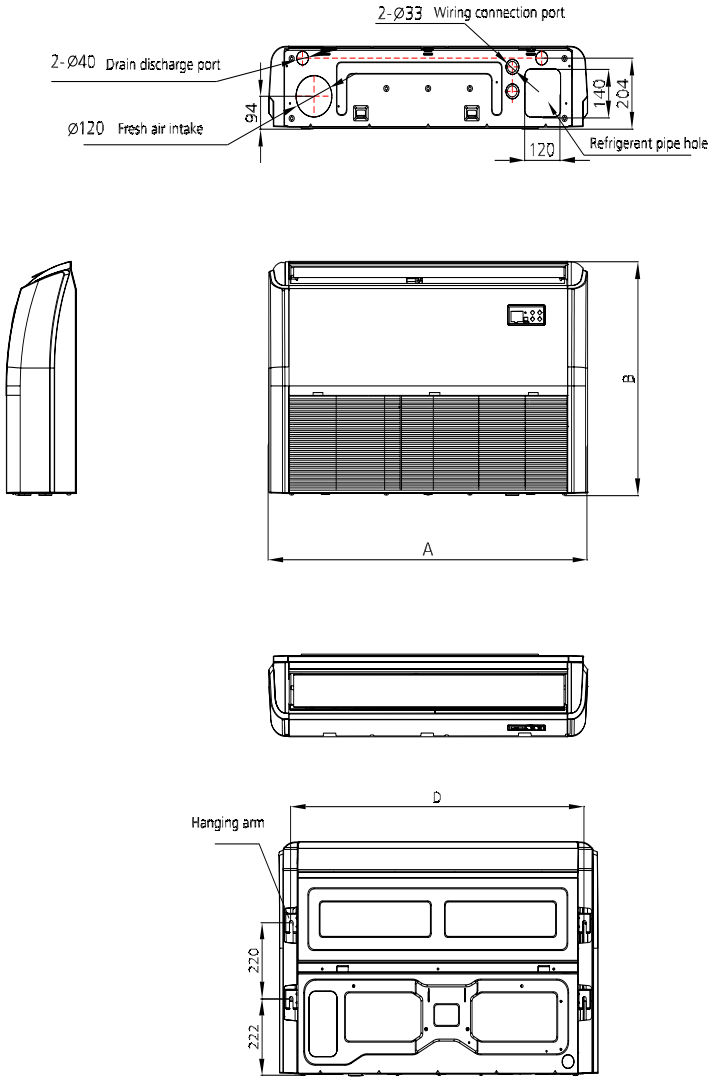
- Varies of healthy filters can be chosen to fix on the machine.




## 1.6 Twins Combination(18k-30k)

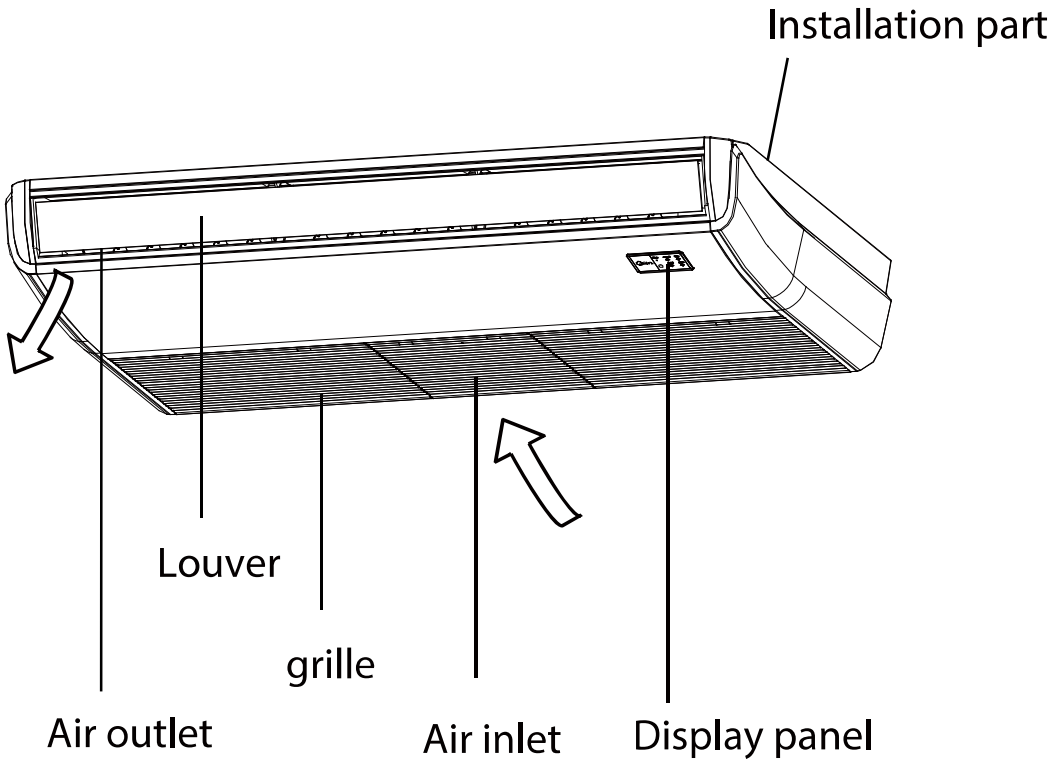
- The units can be installed as Twin systems: one outdoor unit can connect with two indoor units. The indoor units can be combined in any of the different available ratings.
- When a twin system is working, the controller can control only the main unit. The slave unit works in the same state as the main unit.

## 2. Dimensional Drawings

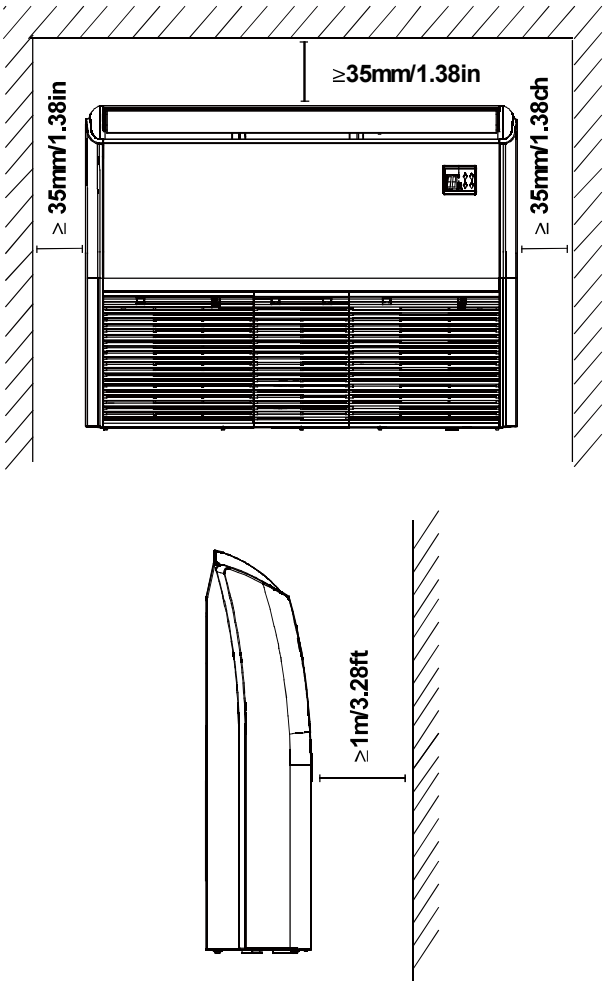



| Model (KBtu/h) | Unit | A | B | C | D |
|---|---|---|---|---|---|
| 18-24 | mm | 1068 | 675 | 235 | 983 |
| | inch | 42.05 | 26.57 | 9.25 | 38.7 |
| 36-60 | mm | 1650 | 675 | 235 | 1565 |
| | inch | 64.96 | 26.57 | 9.25 | 61.61 |

## 3. Part names

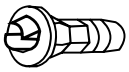
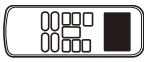

Installation part
Louver
grille
Air outlet
Air inlet
Display panel

## 4. Service Place



## 5. Accessories

The air conditioning system comes with the following accessories. Use all of the installation parts and accessories to install the air conditioner. Improper installation may result in water leakage, electrical shock and fire, or equipment failure.

| | Name | Shape | Quantity |
|---|---|---|---|
| Refrigeration Fittings | Soundproof/insulation sheath (some models) |  | 1 |
| Drainpipe Fittings | Outlet pipe sheath(some models) |  | 1 |
| | Outlet pipe clasp(some models) |  | 1 |
| | Drain joint (some models) |  | 1 |
| | Seal ring (some models) |  | 1 |
| Remote controller & Its Frame (some models) | Remote controller |  | 1 |
| | Fixing screw for remote controller holder ST2.9 x 10 |  | 2 |
| | Remote controller holder |  | 1 |
| | Dry battery AAA |  | 2 |
| | Remote controller illustration | | 1 |
| EMC Magnetic Ring (some models) | Magnetic ring (wrap the electric wires S1 & S2 ( P & Q & E ) around the magnetic ring twice) |  S1&S2(P&Q&E ) | 1 |
| | Magnetic ring (Hitch it on the connective cable between indoor unit and outdoor unit after installation.) |  | 1 |
| | Owner's manual&Installation manual | | 1 |

Optional accessories:

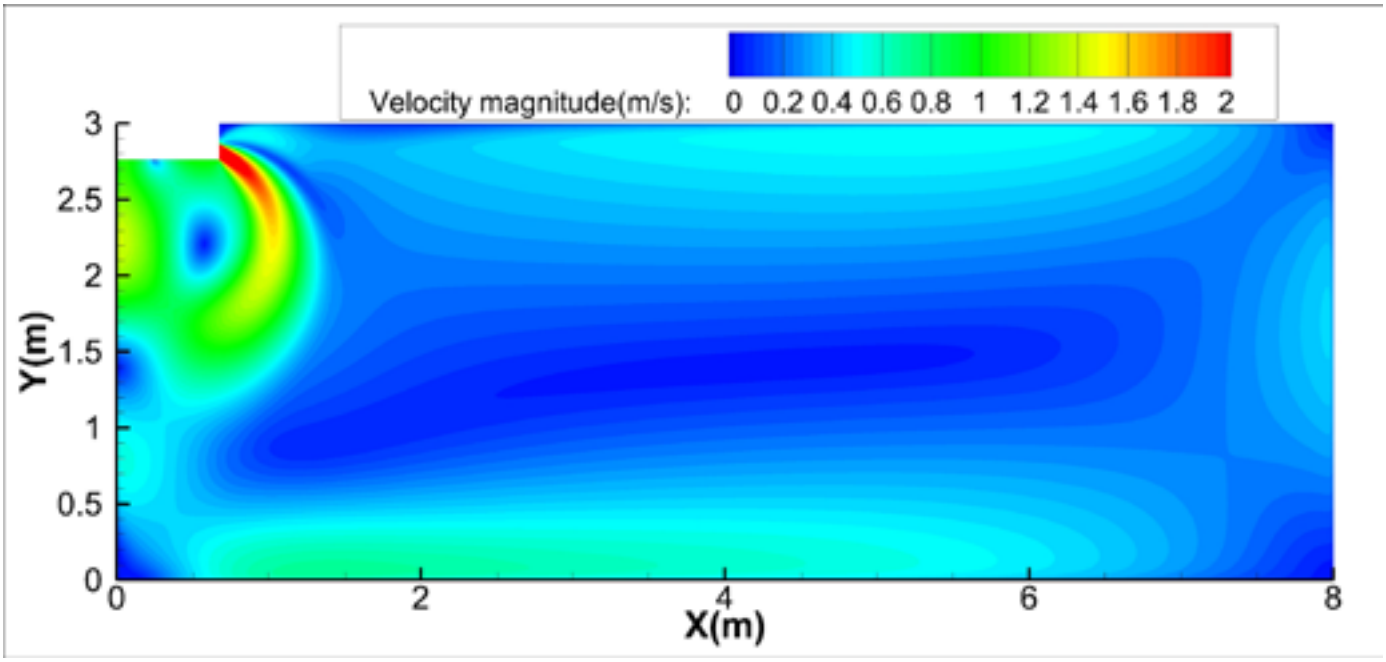
- There are two types of remote controls: wired and wireless.
- Select a remote controller based on customer preferences and requirements and install in an appropriate place.
- Refer to catalogues and technical literature for guidance on selecting a suitable remote controller.

## 6. Air Velocity and Temperature Distributions

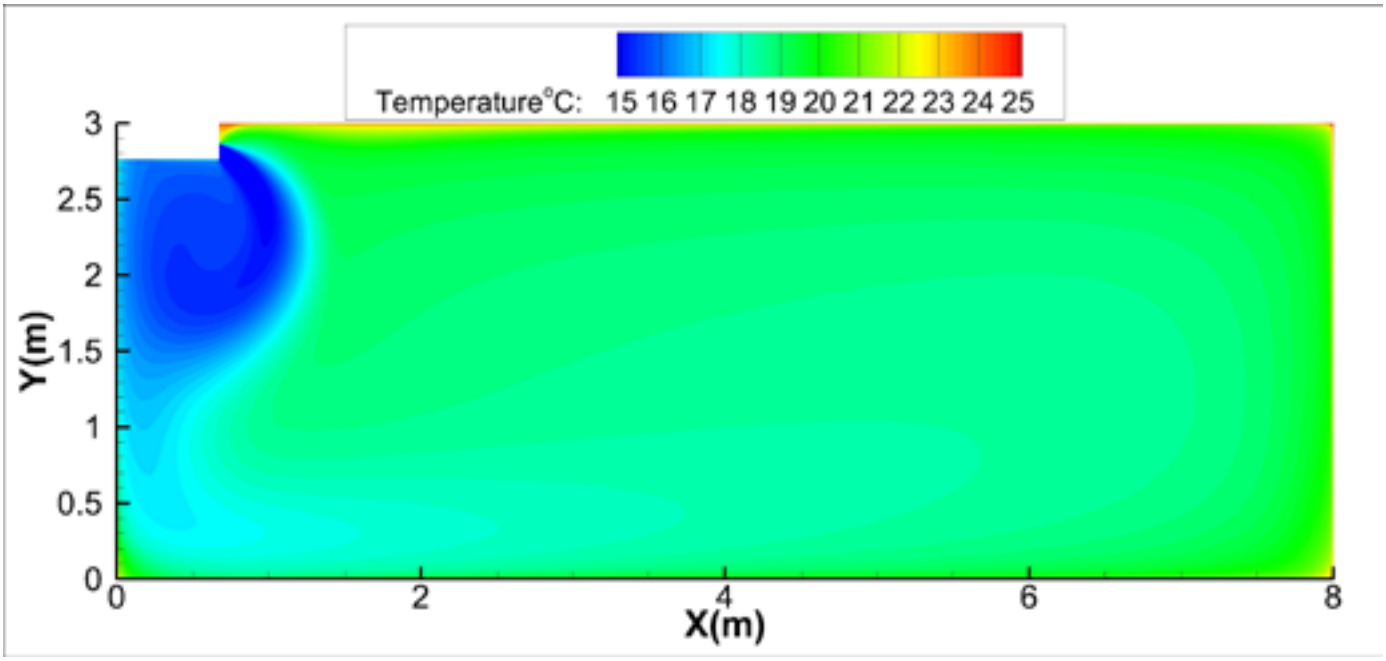
18K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



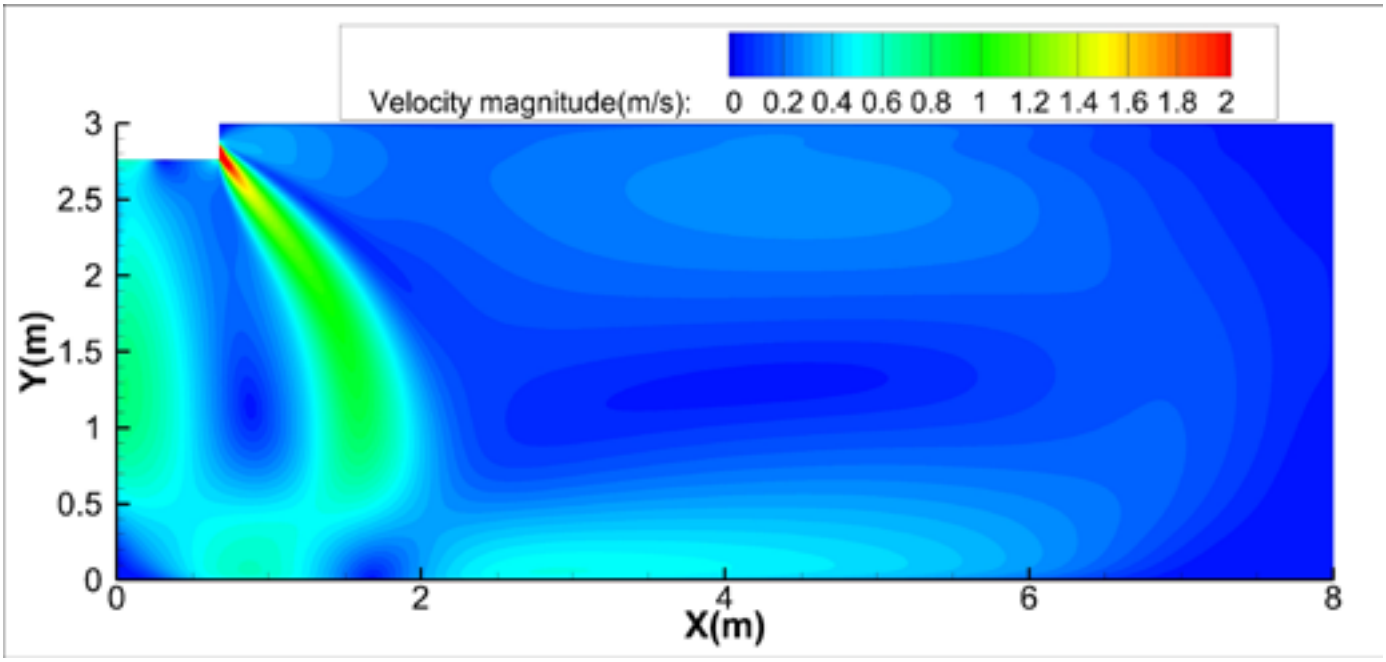

Cooling temperature distributions



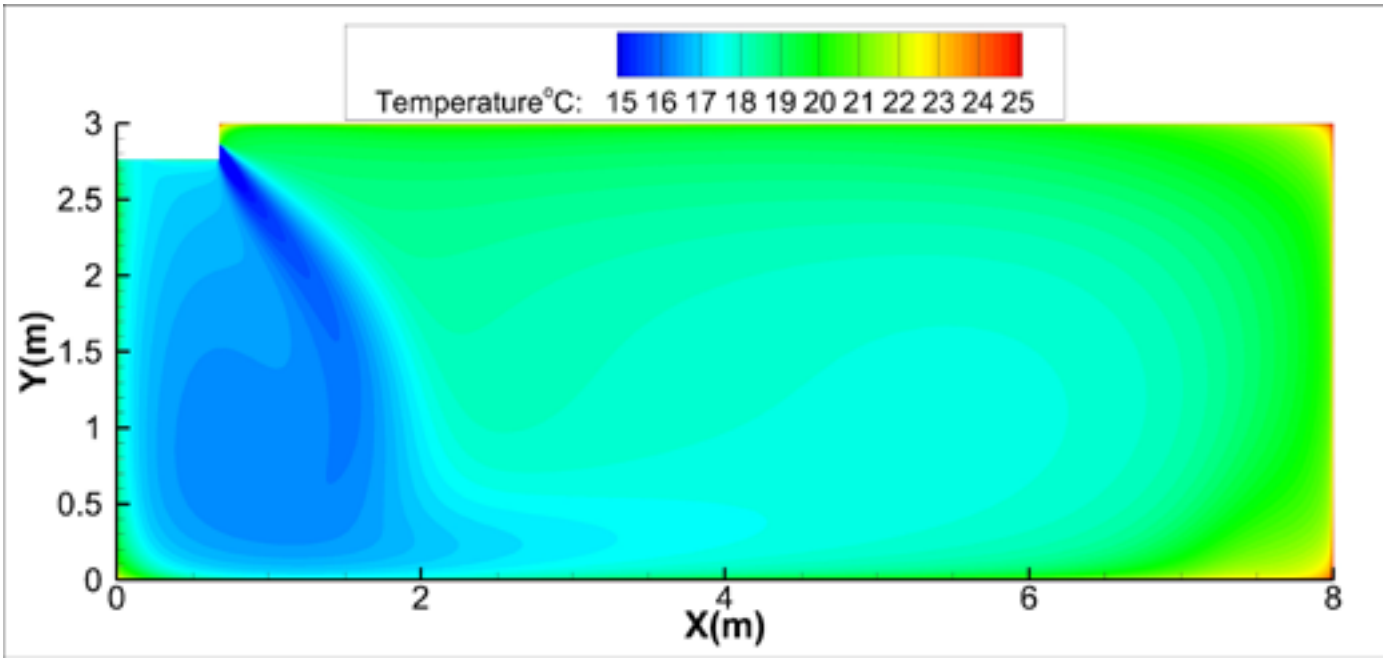
18K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



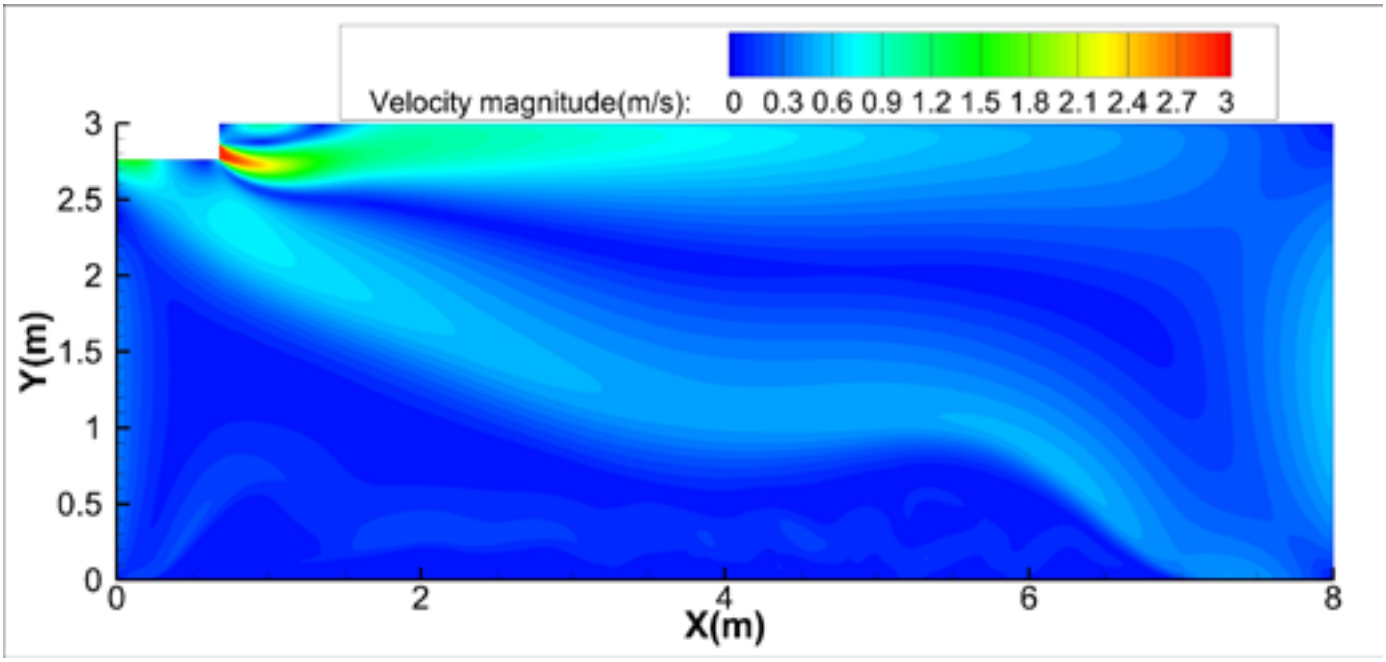

Cooling temperature distributions



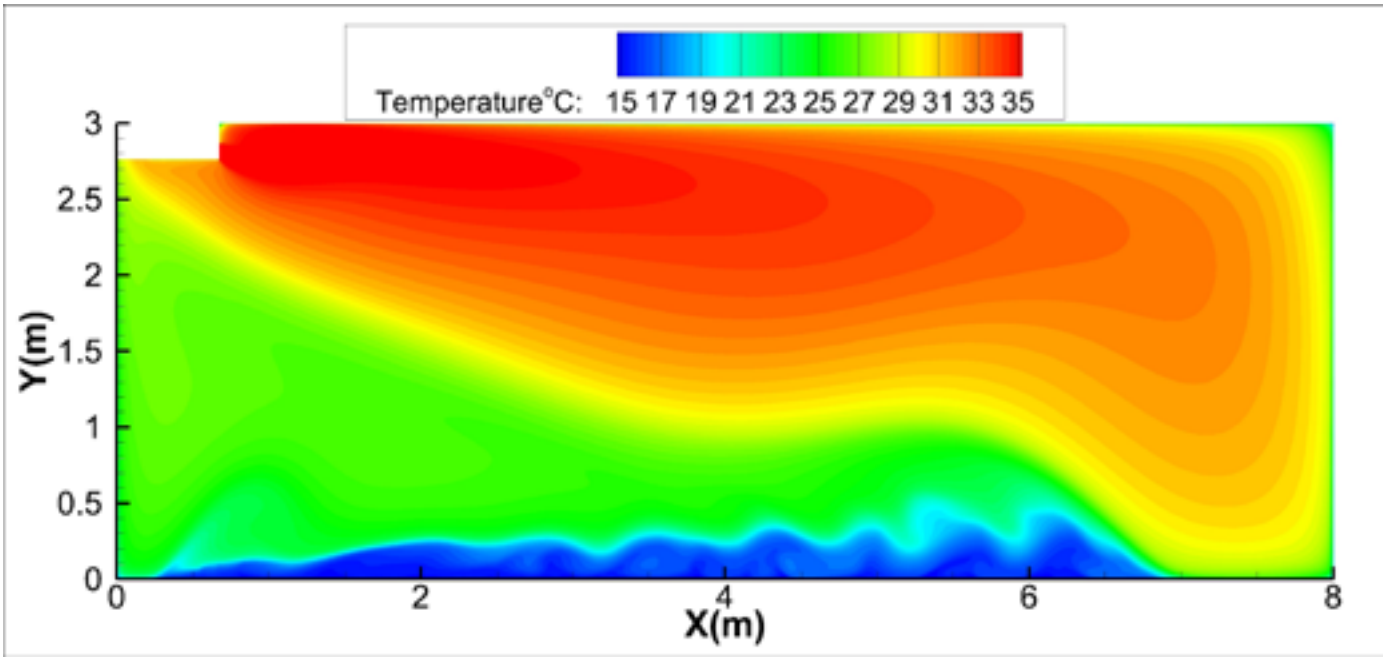
18K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



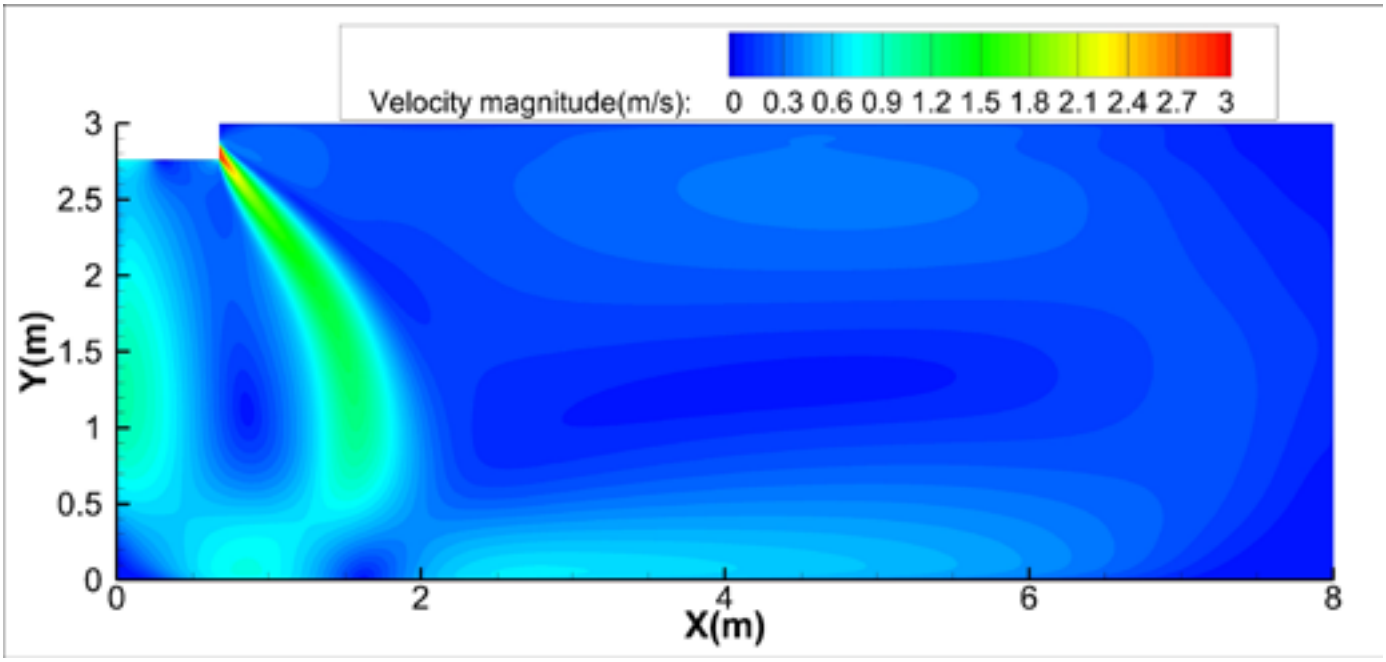

Heating temperature distributions



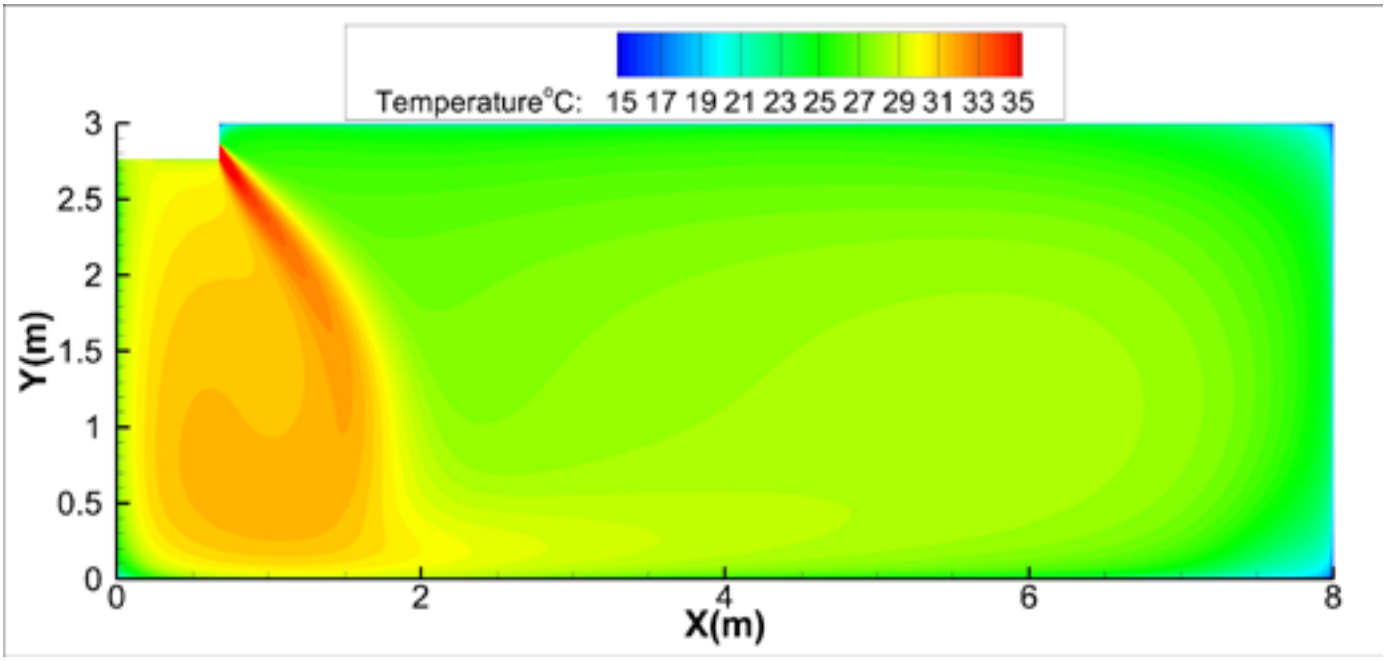
18K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



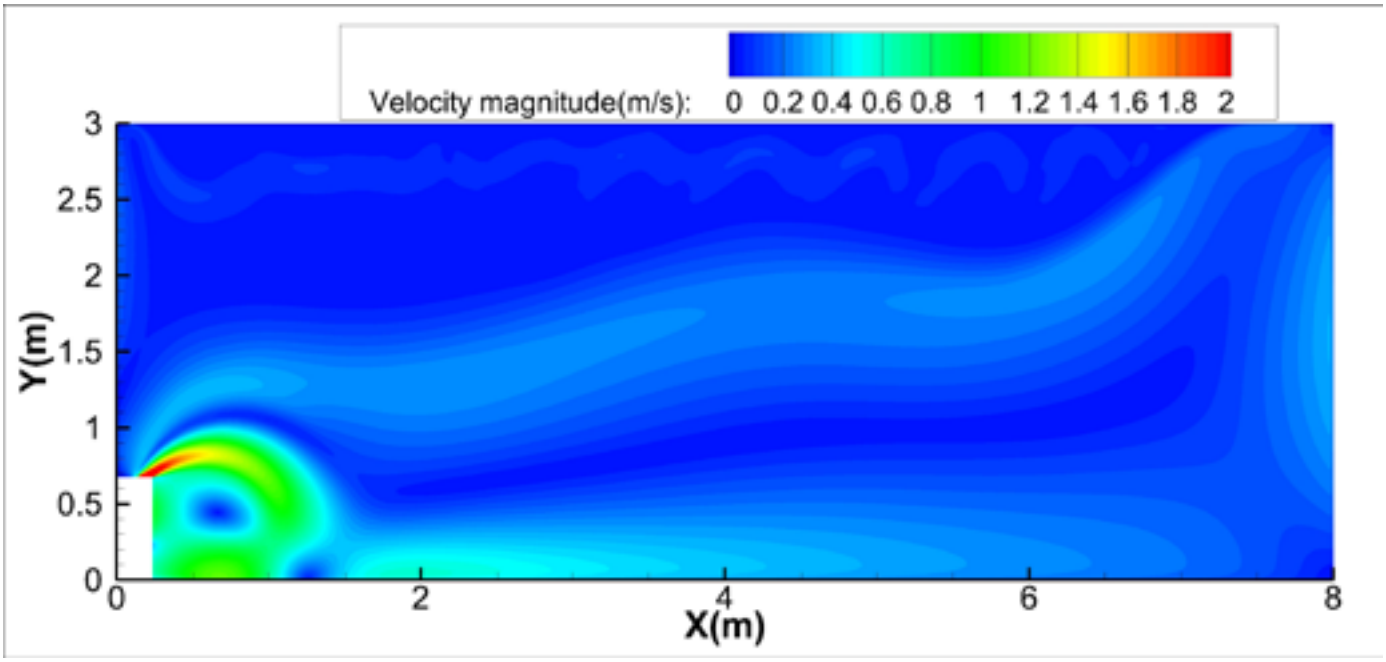

Heating temperature distributions



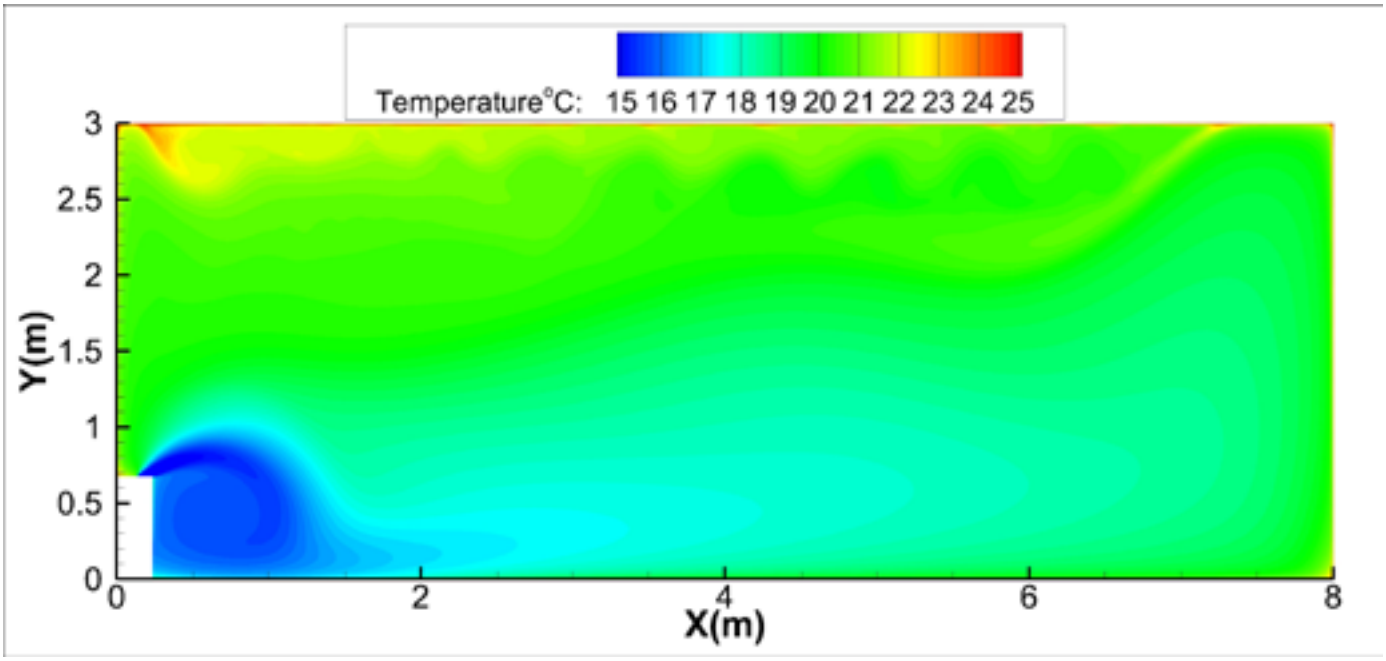
18K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



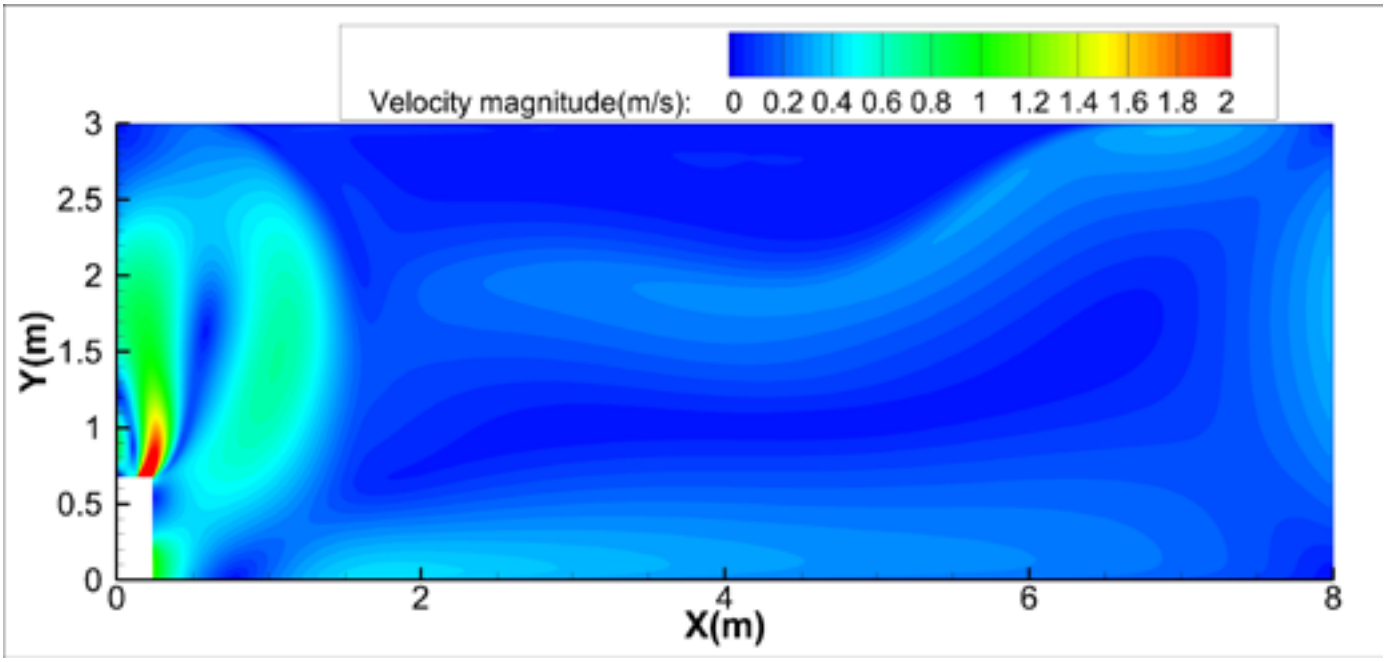

Cooling temperature distributions



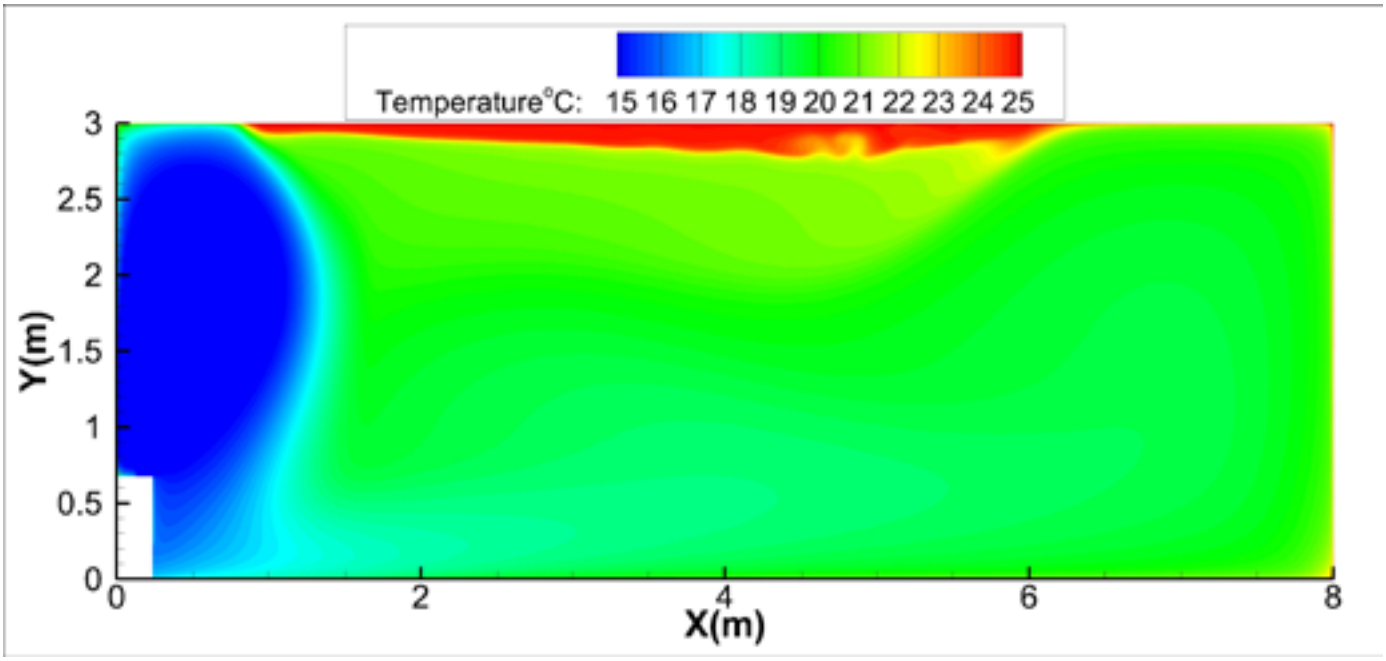
18K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



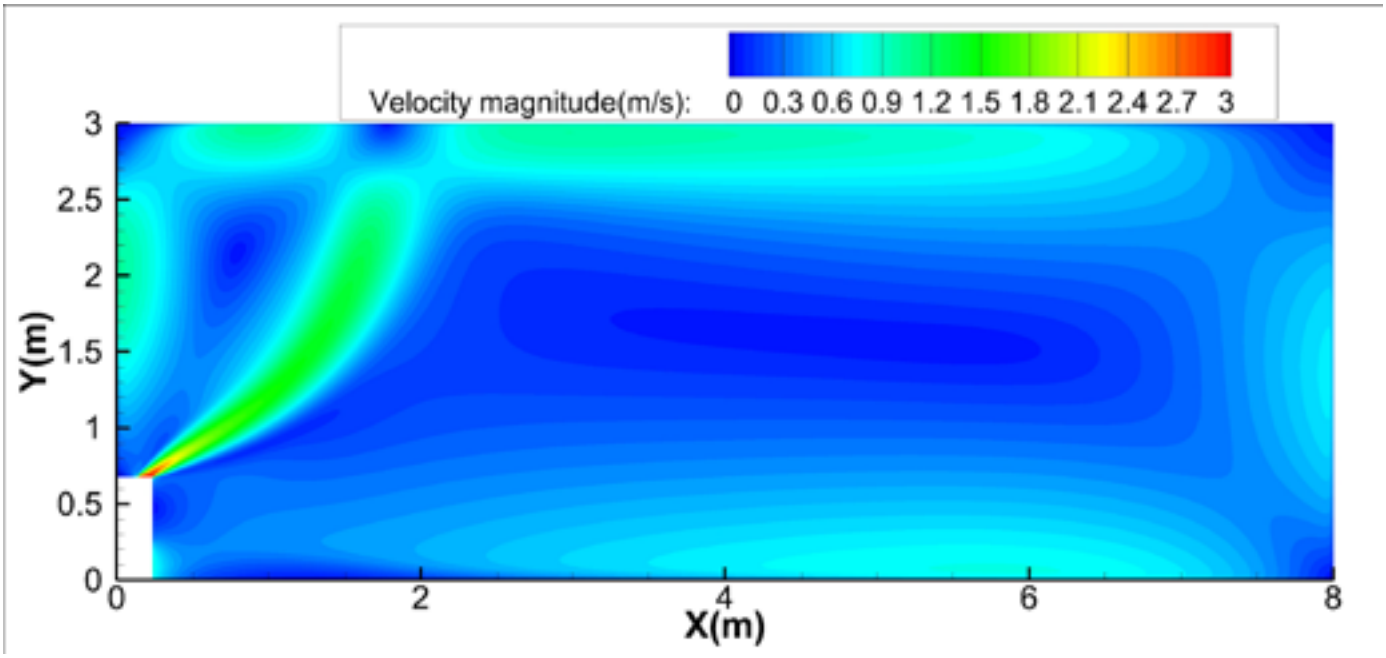

Cooling temperature distributions



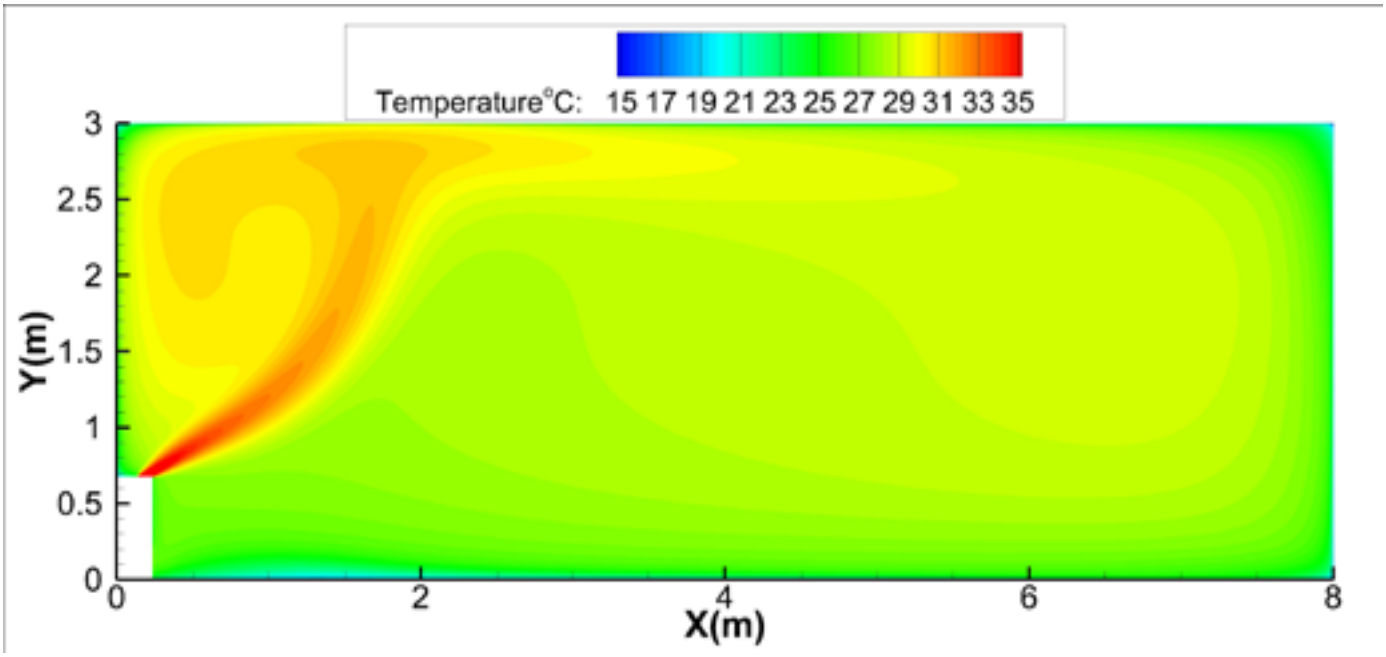
18K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



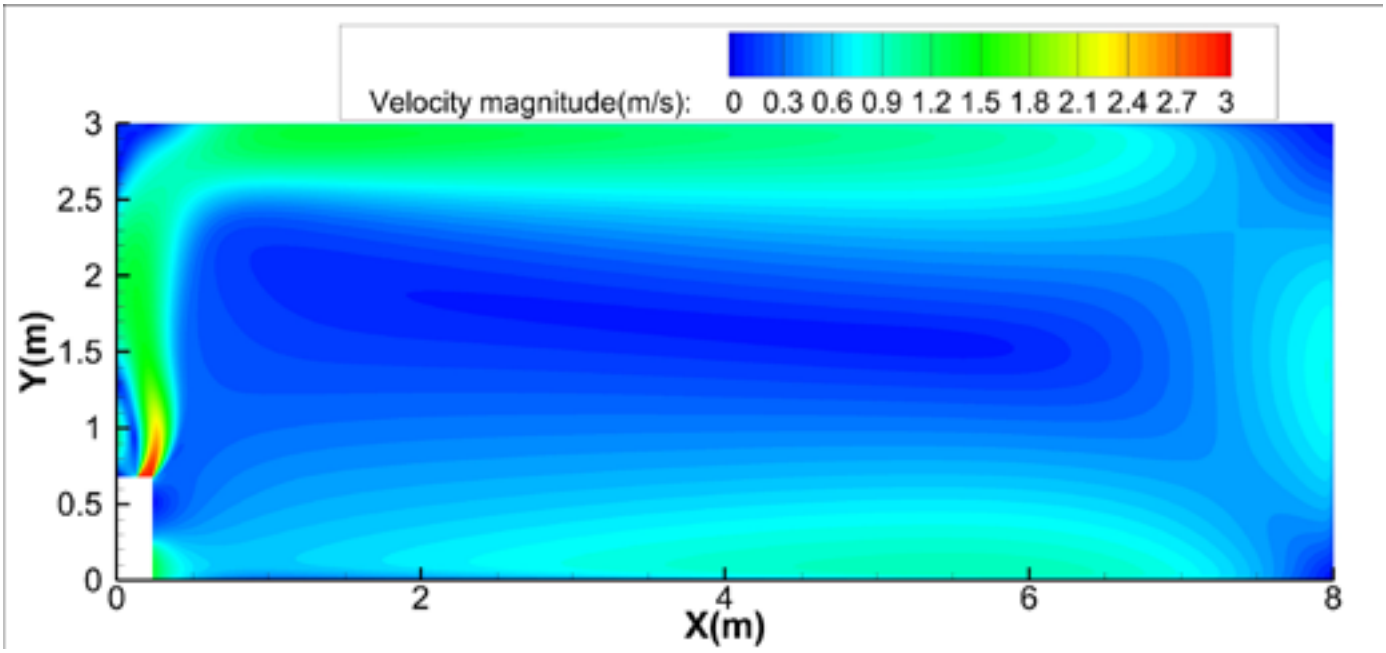

Heating temperature distributions



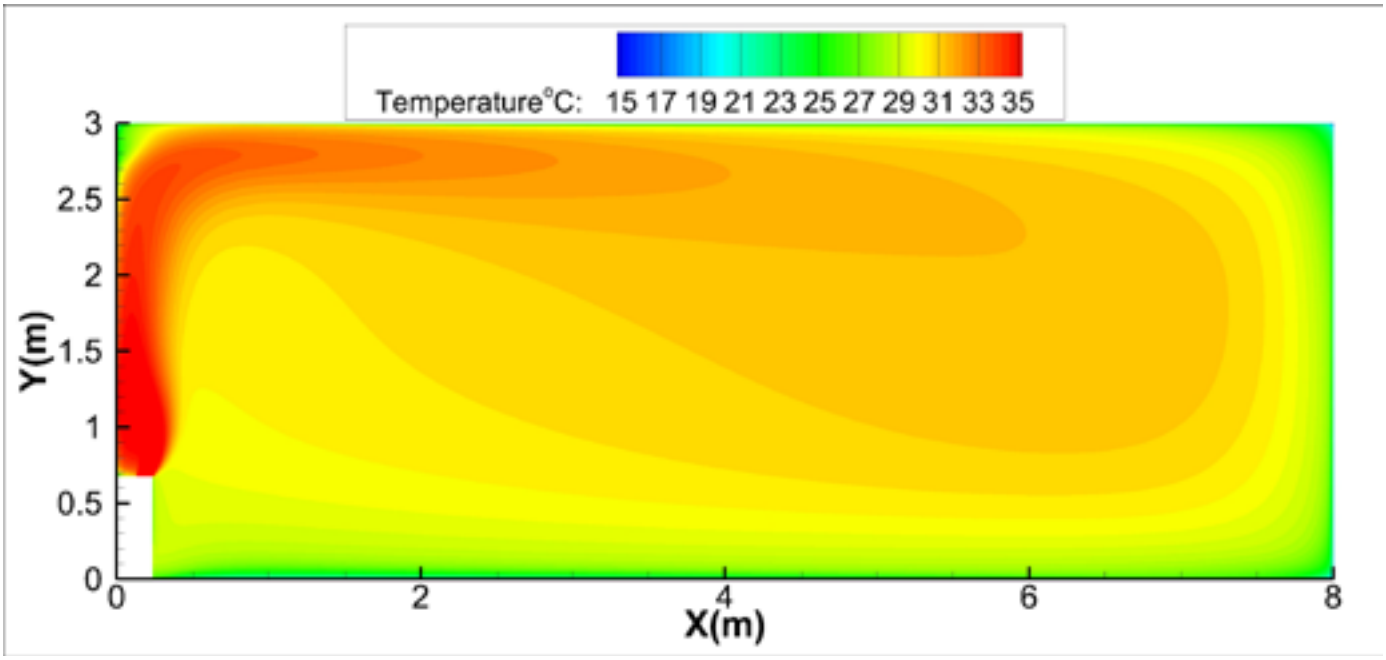
18K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions



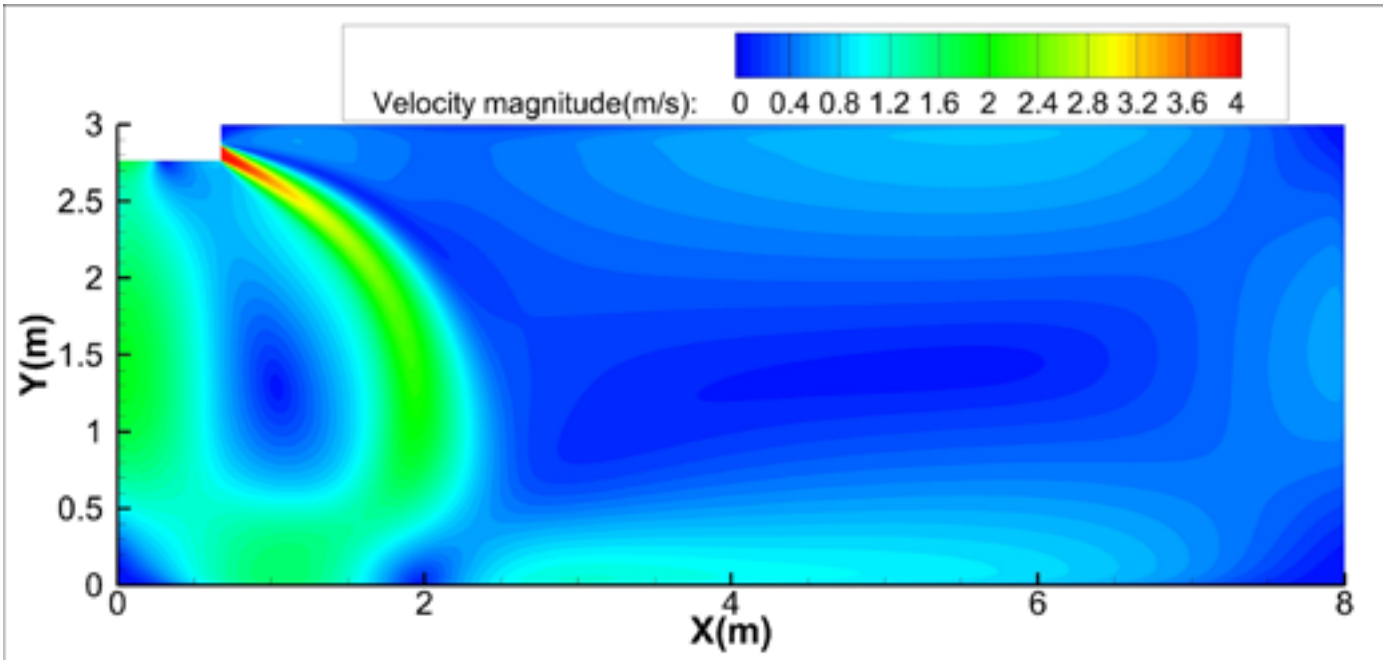

Heating temperature distributions



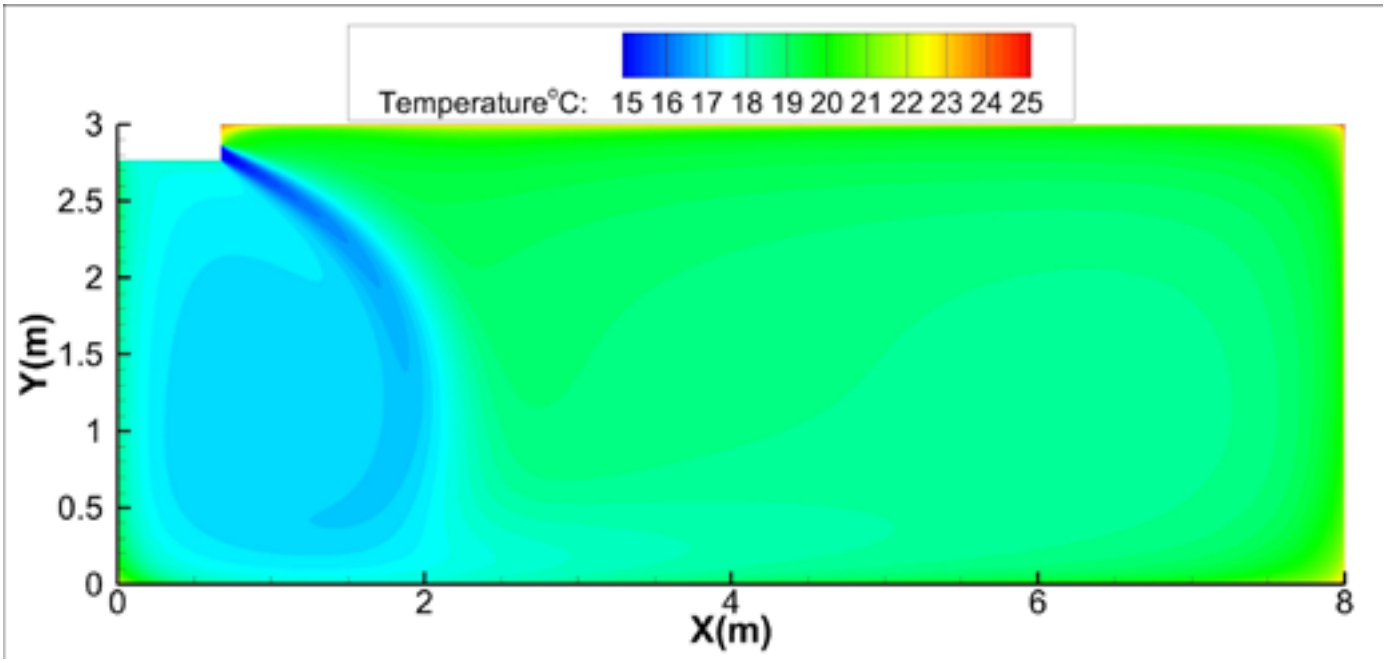
24K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



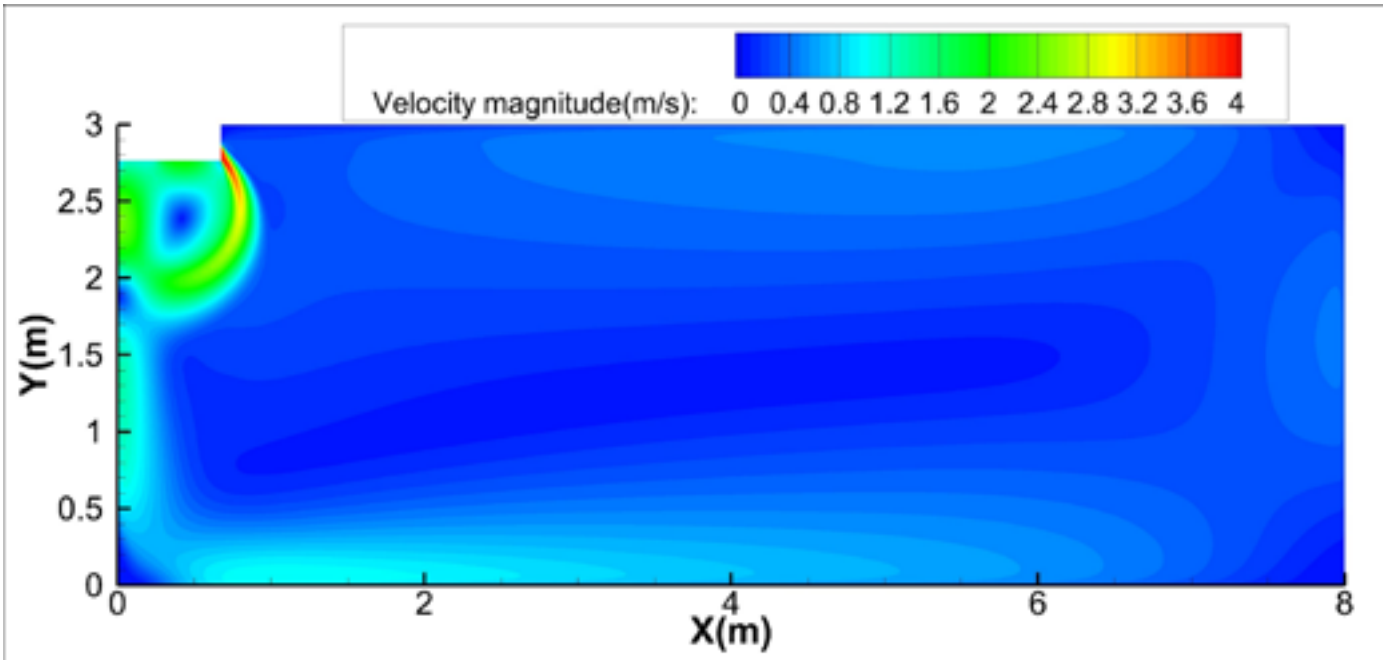

Cooling temperature distributions



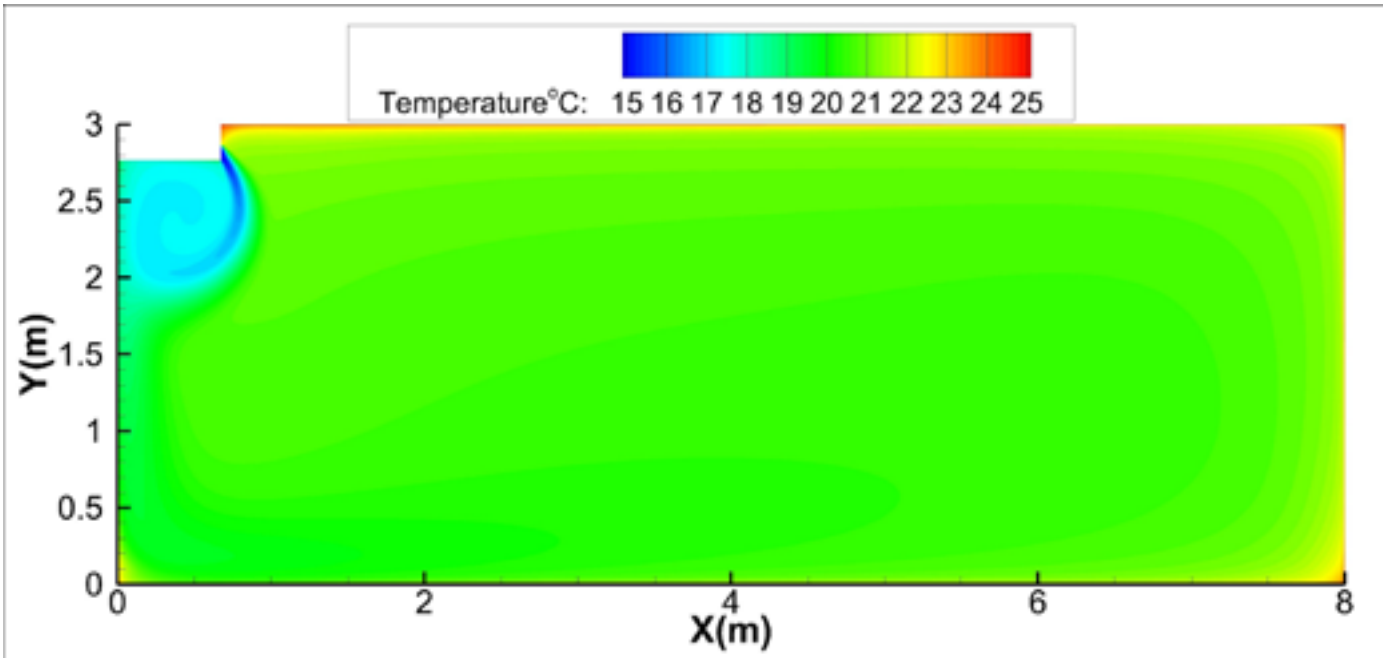
24K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



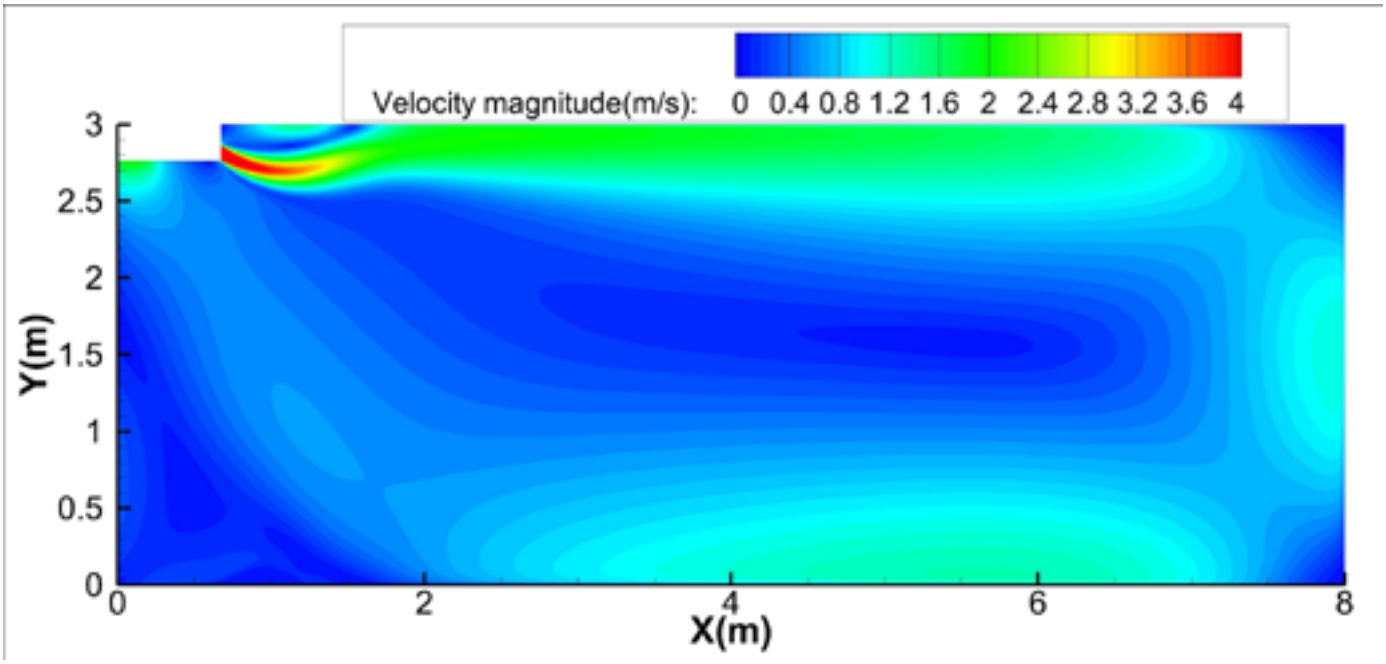

Cooling temperature distributions



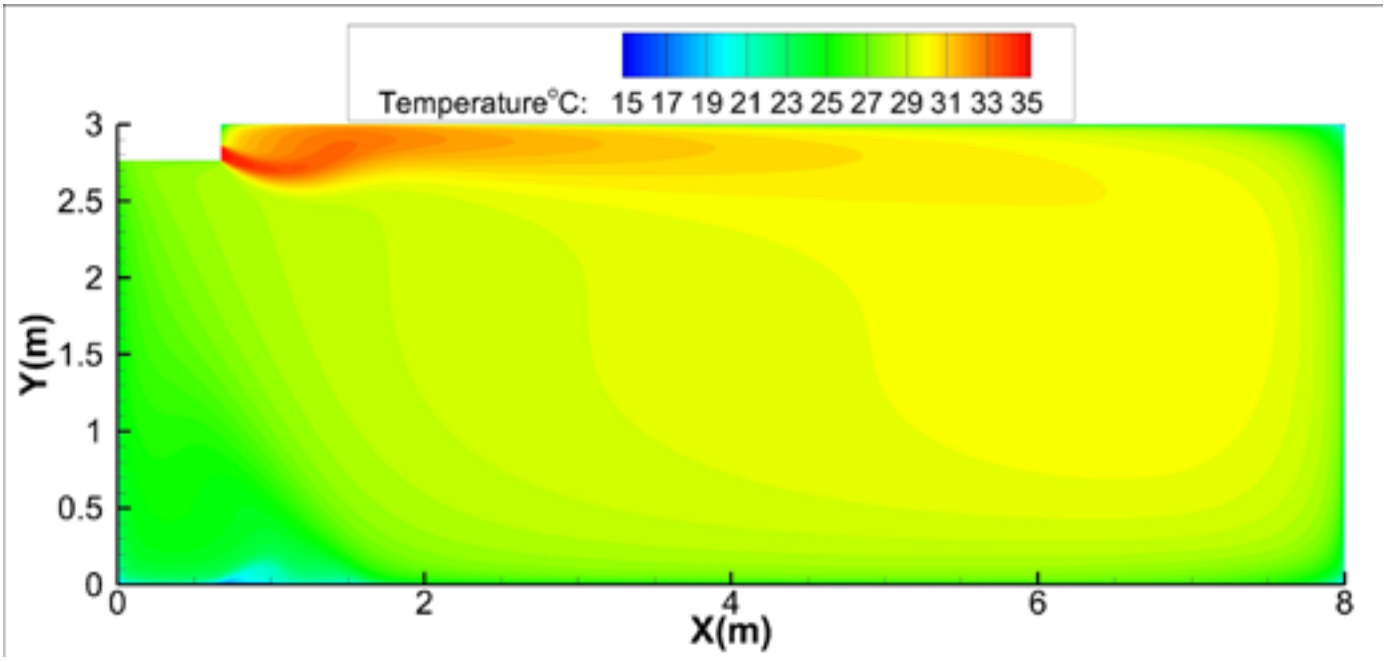
24K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



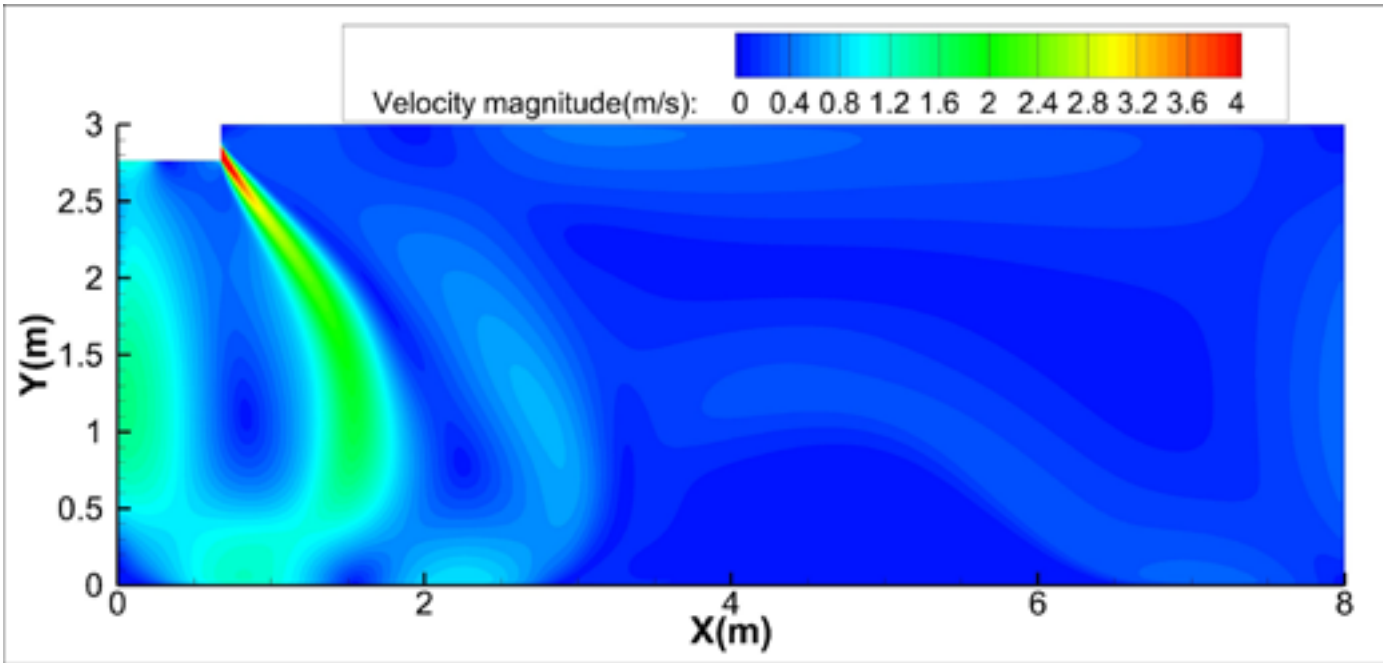

Heating temperature distributions



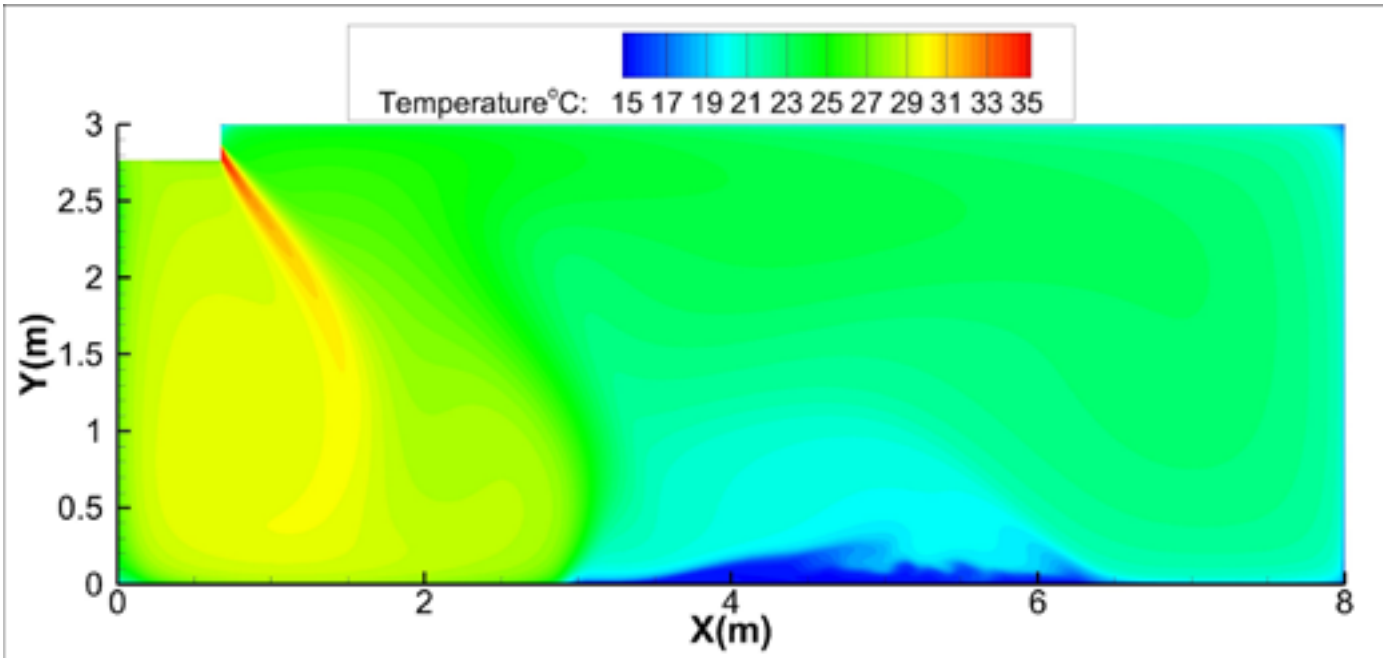
24K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



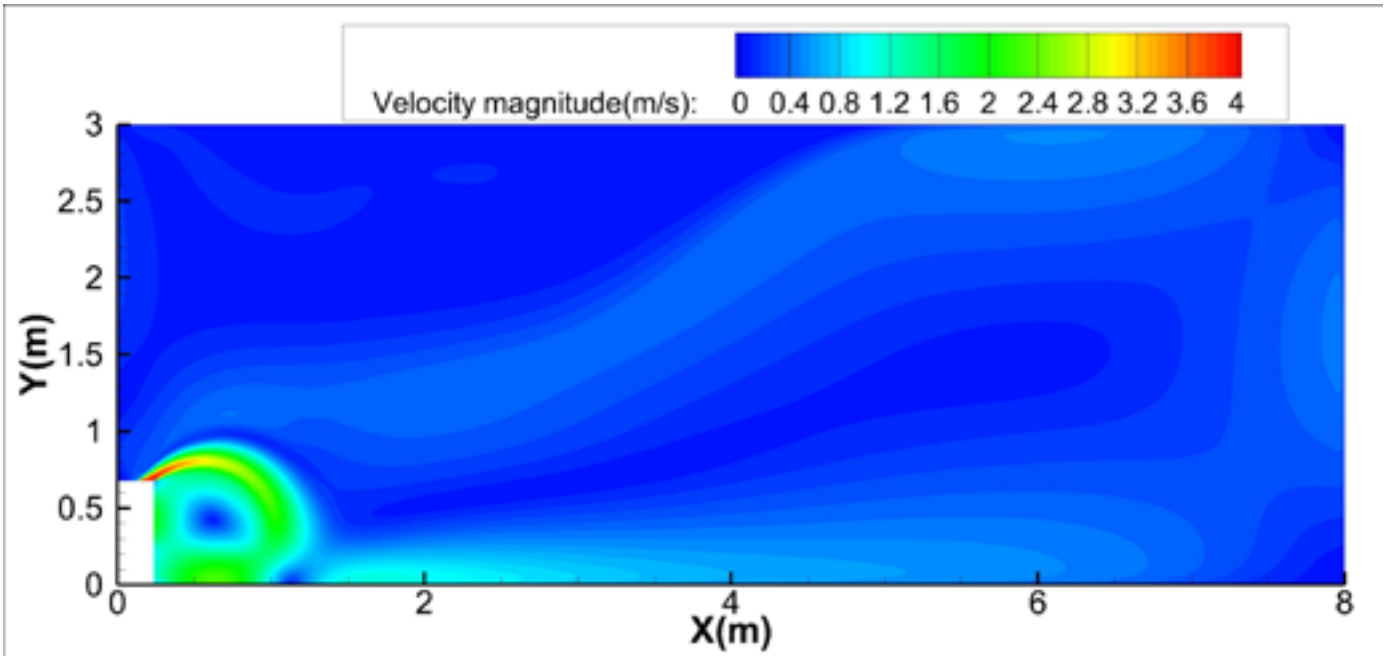

Heating temperature distributions



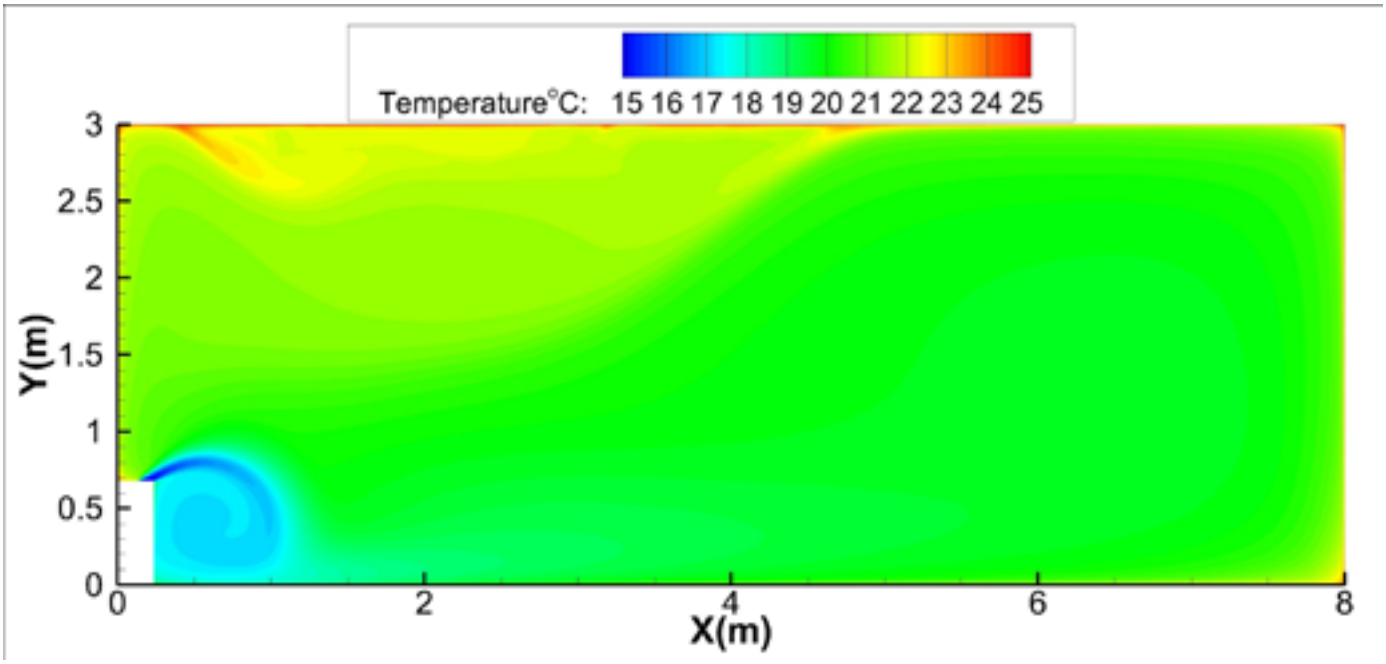
24K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



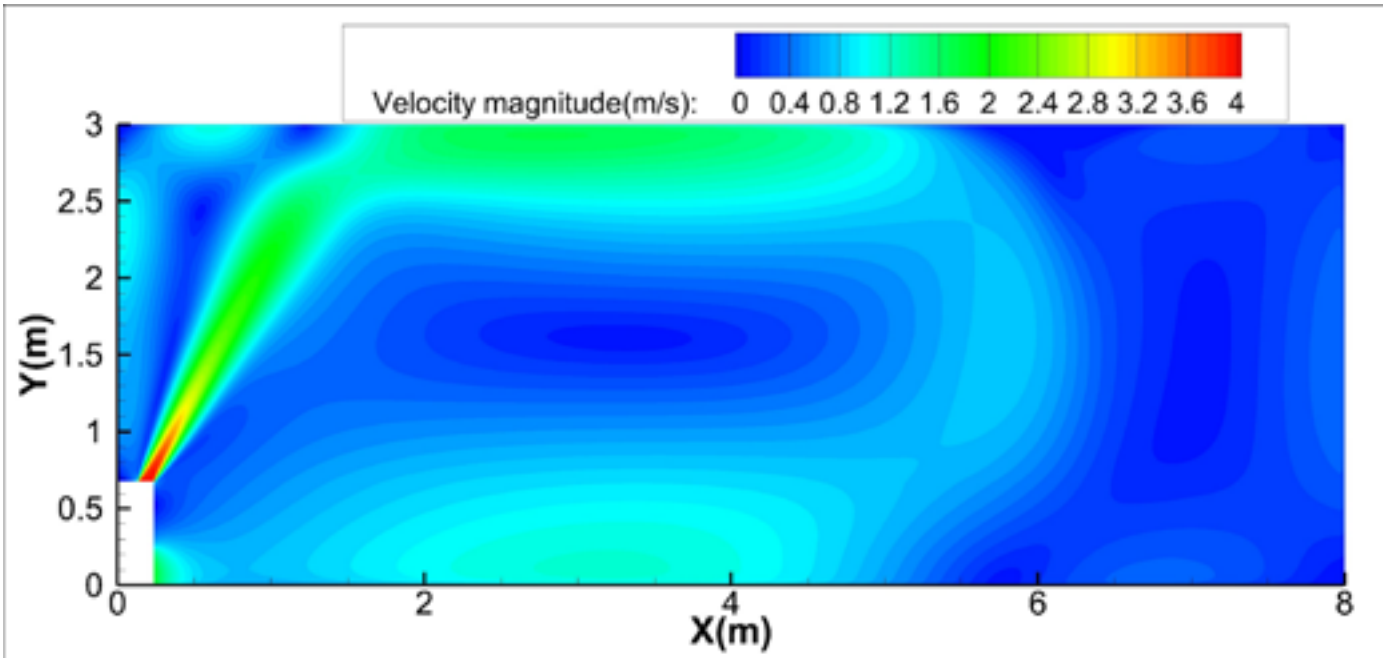

Cooling temperature distributions



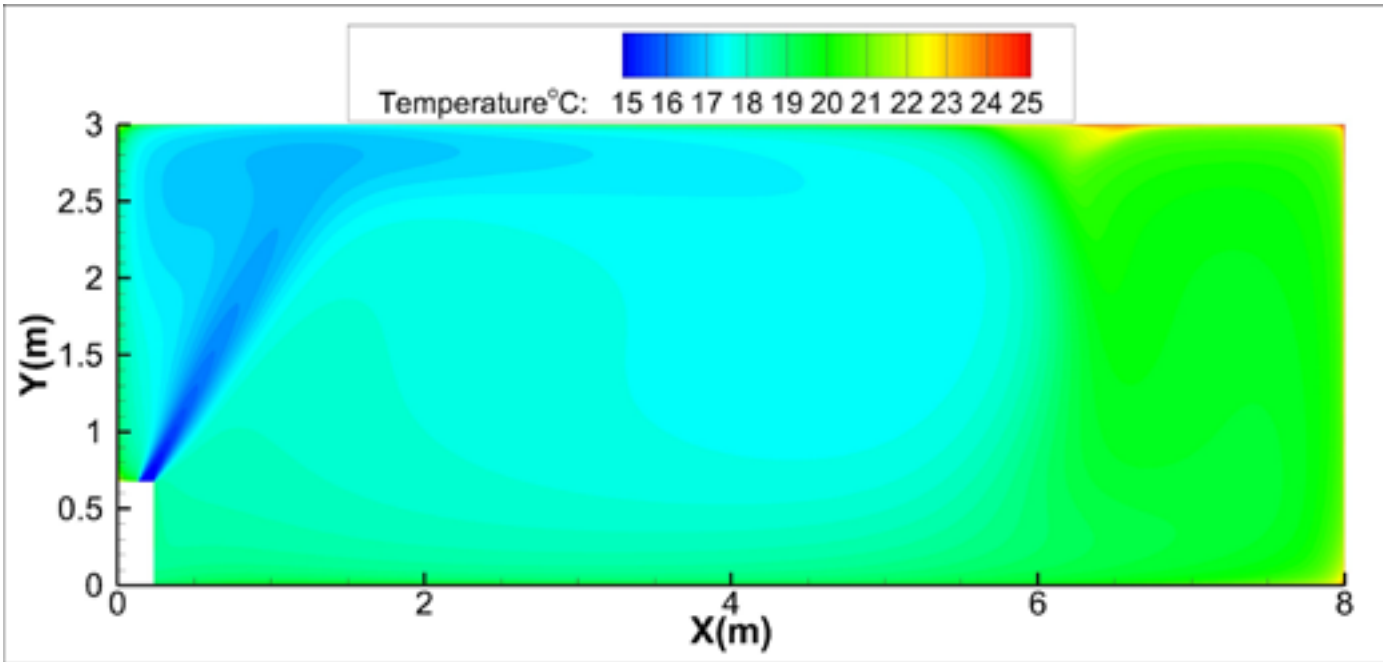
24K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



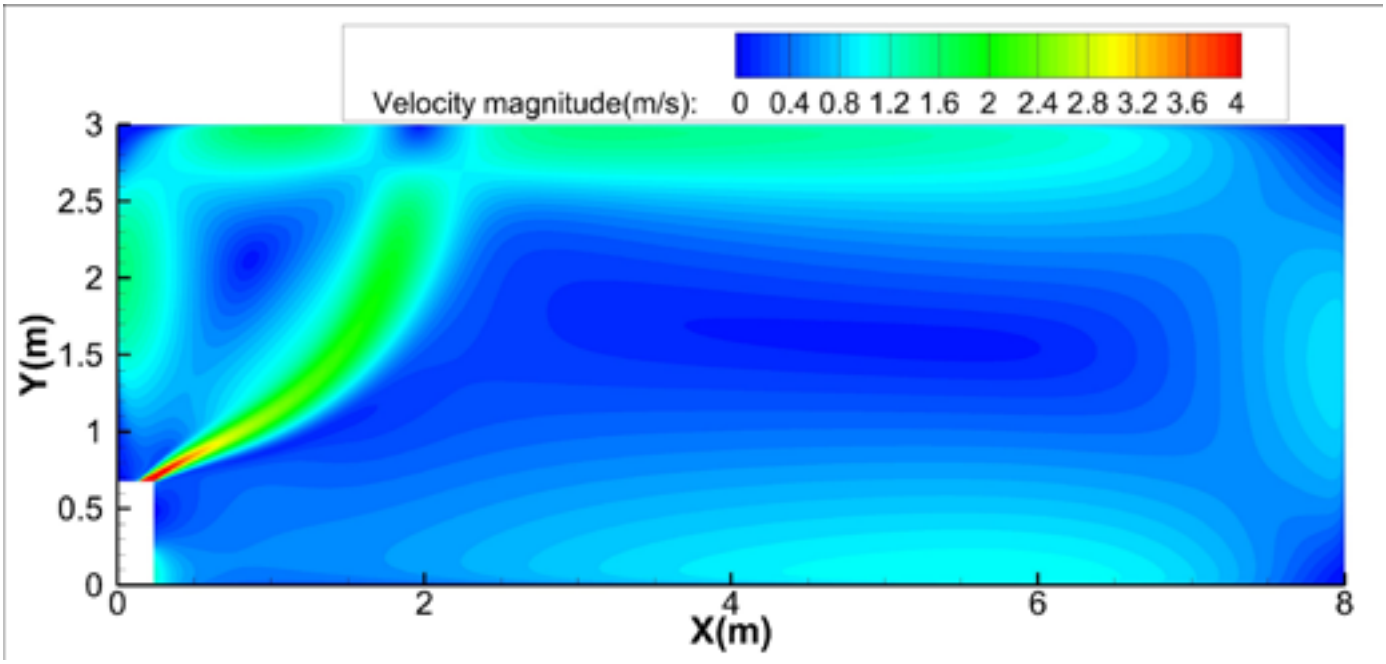

Cooling temperature distributions



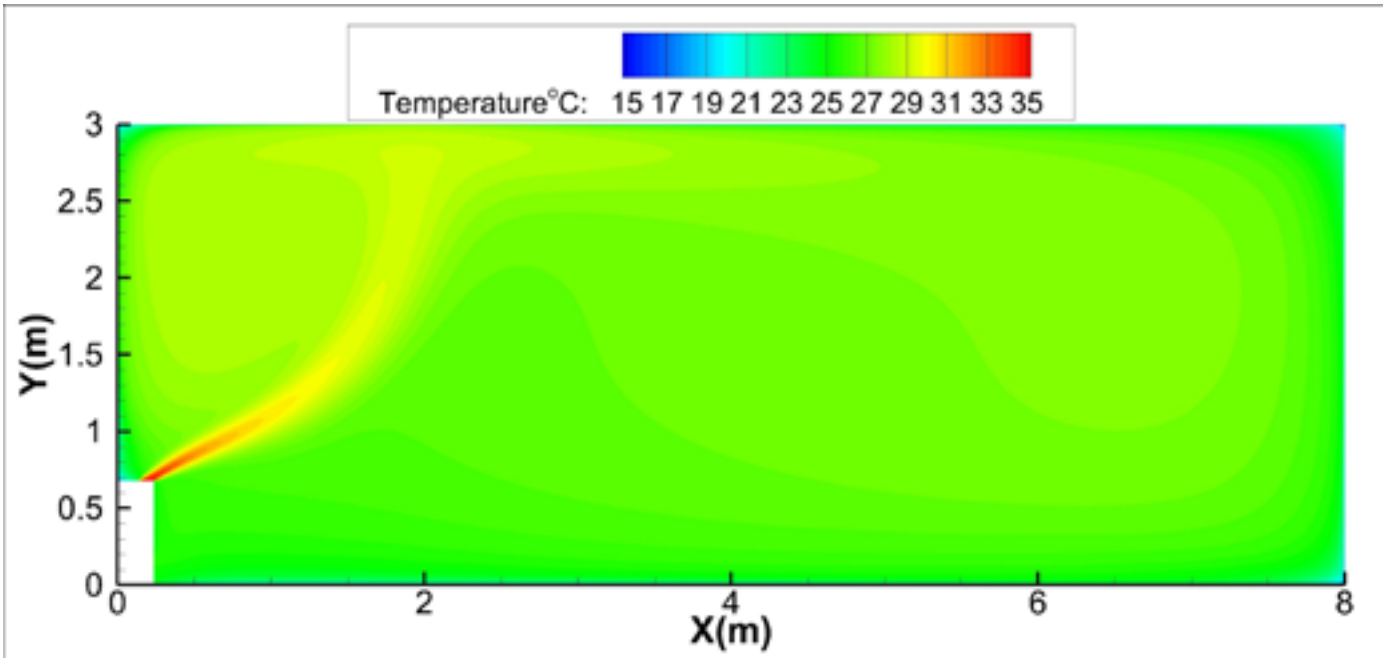
24K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



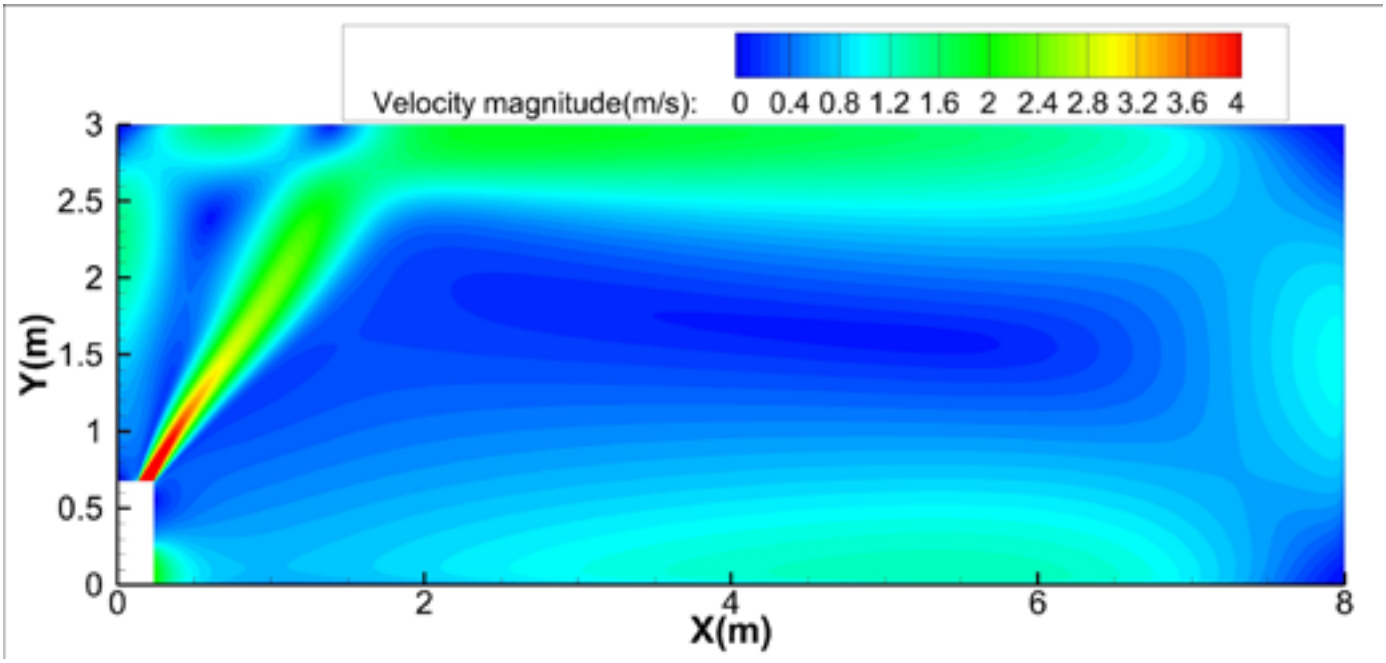

Heating temperature distributions



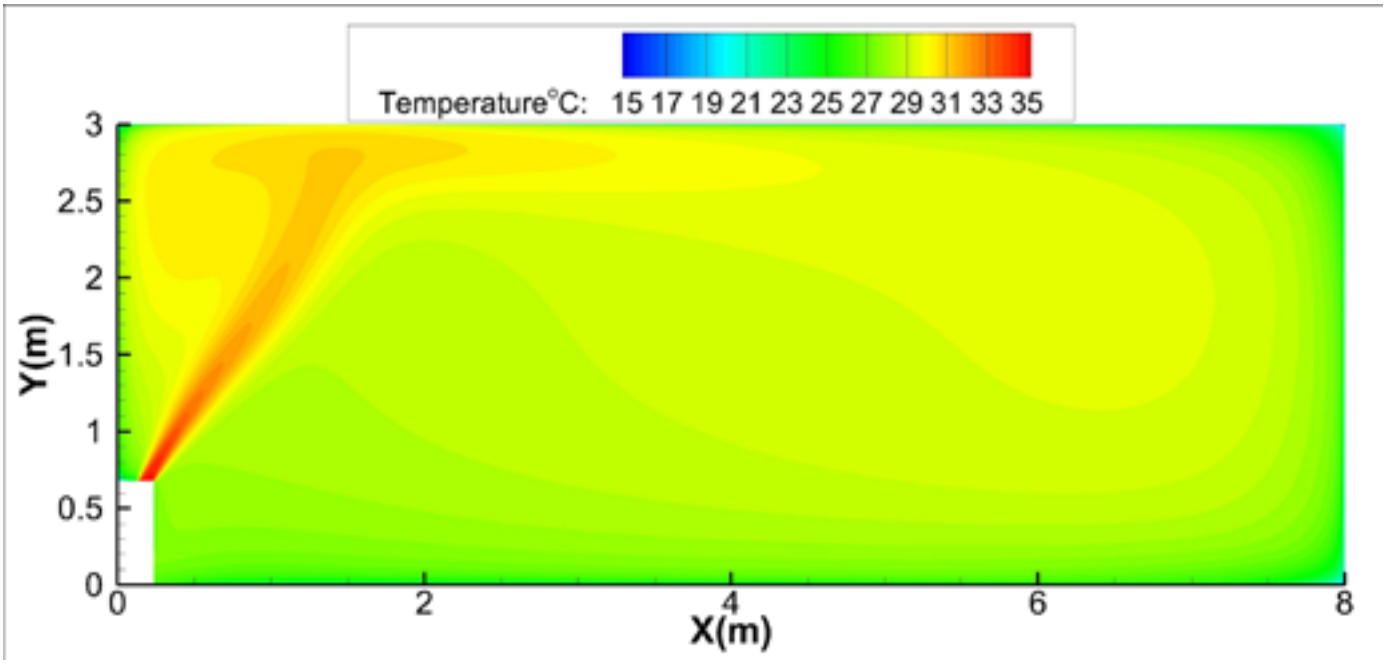
24K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions



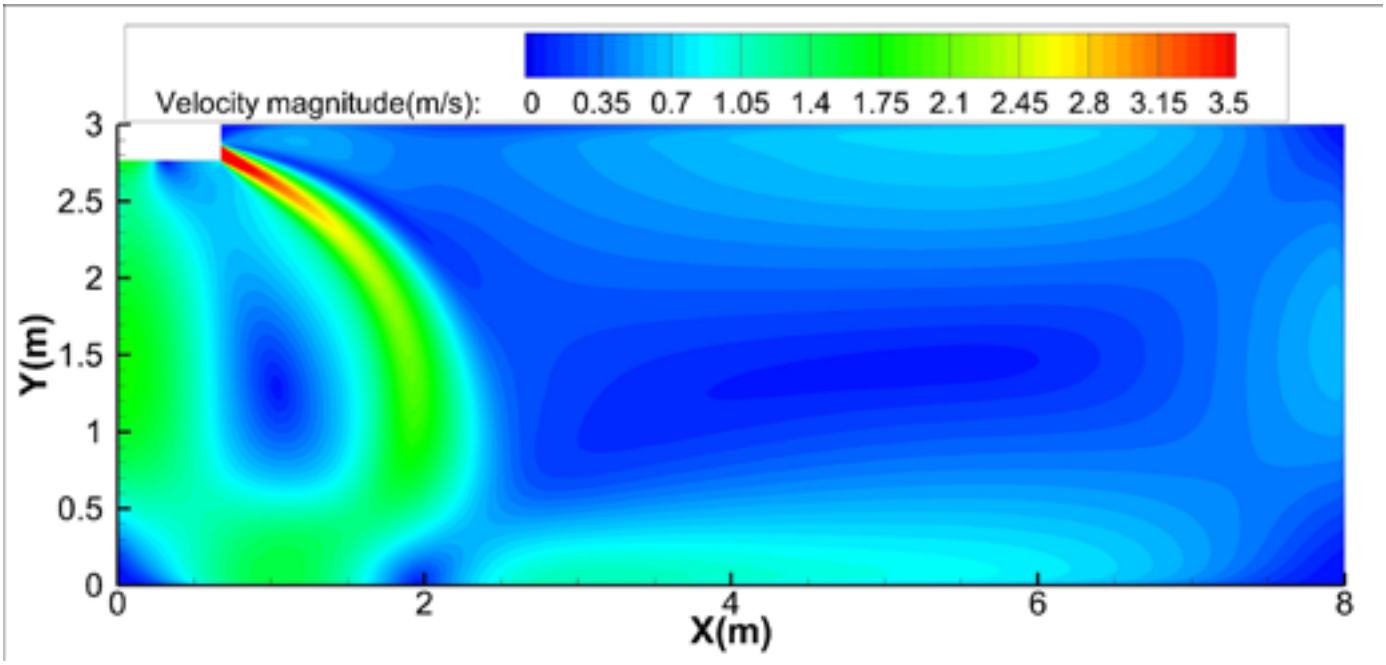

Heating temperature distributions



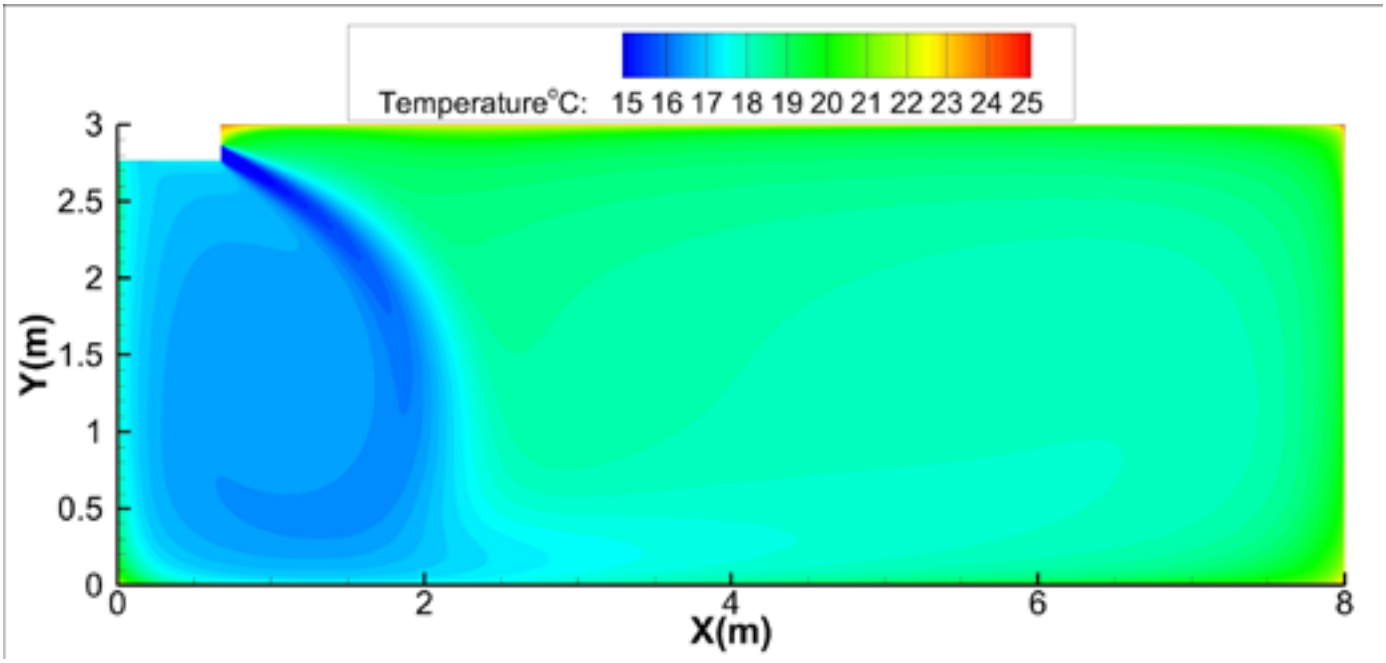
30K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



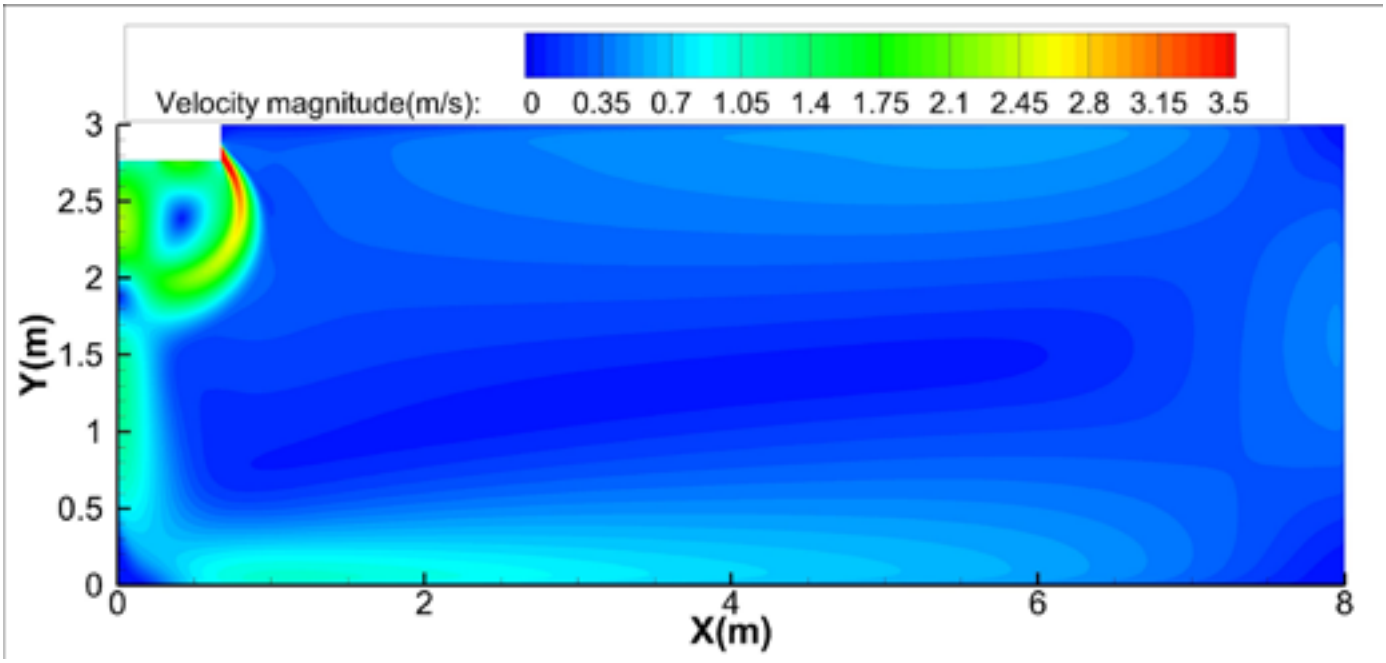

Cooling temperature distributions



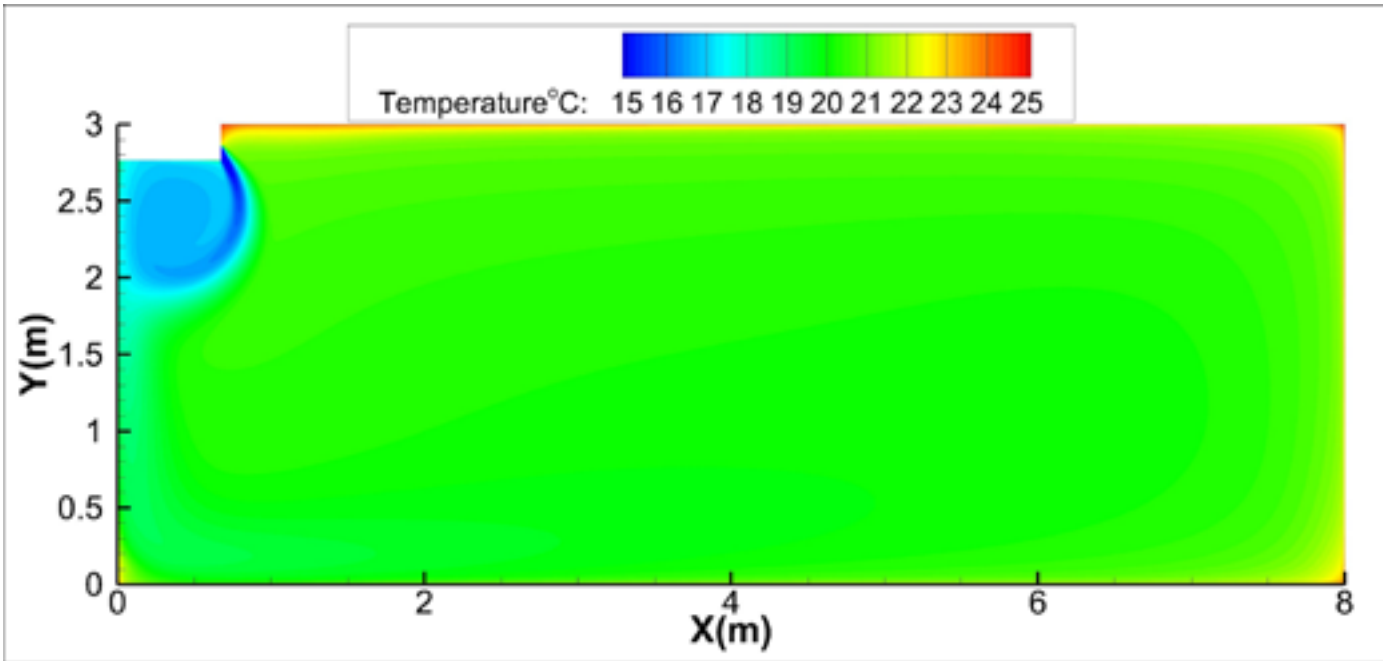
30K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



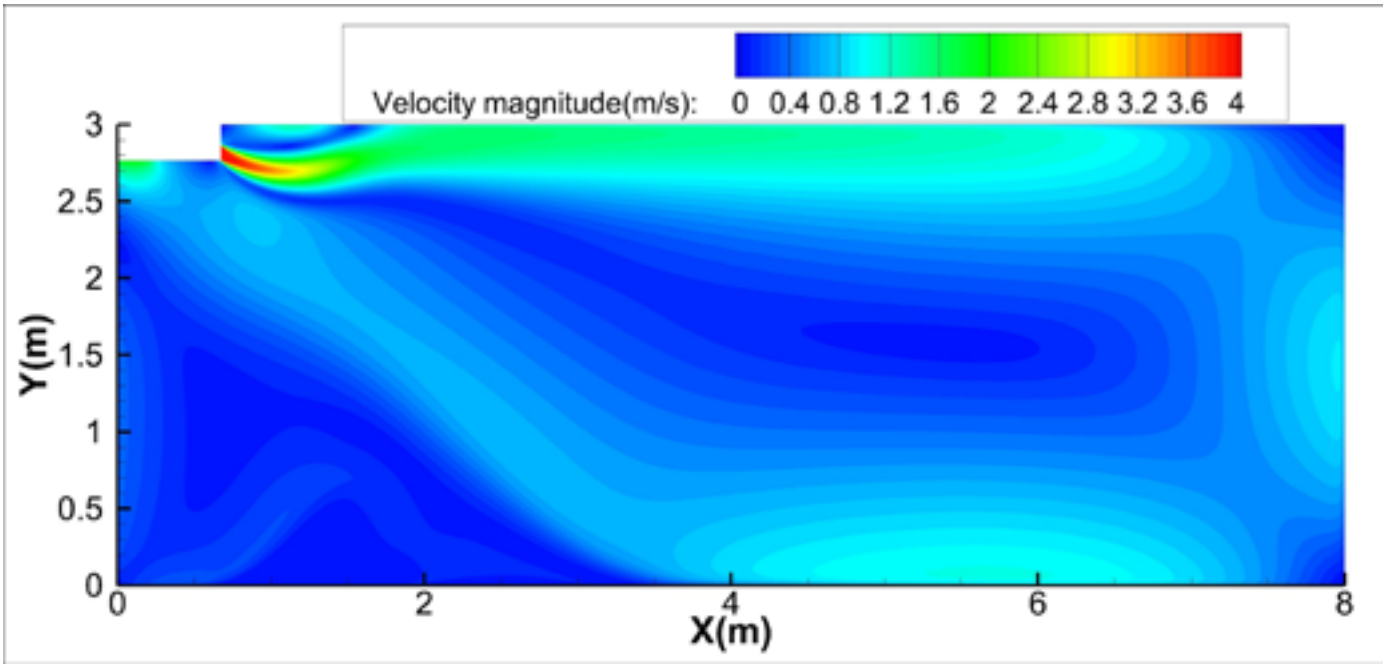

Cooling temperature distributions



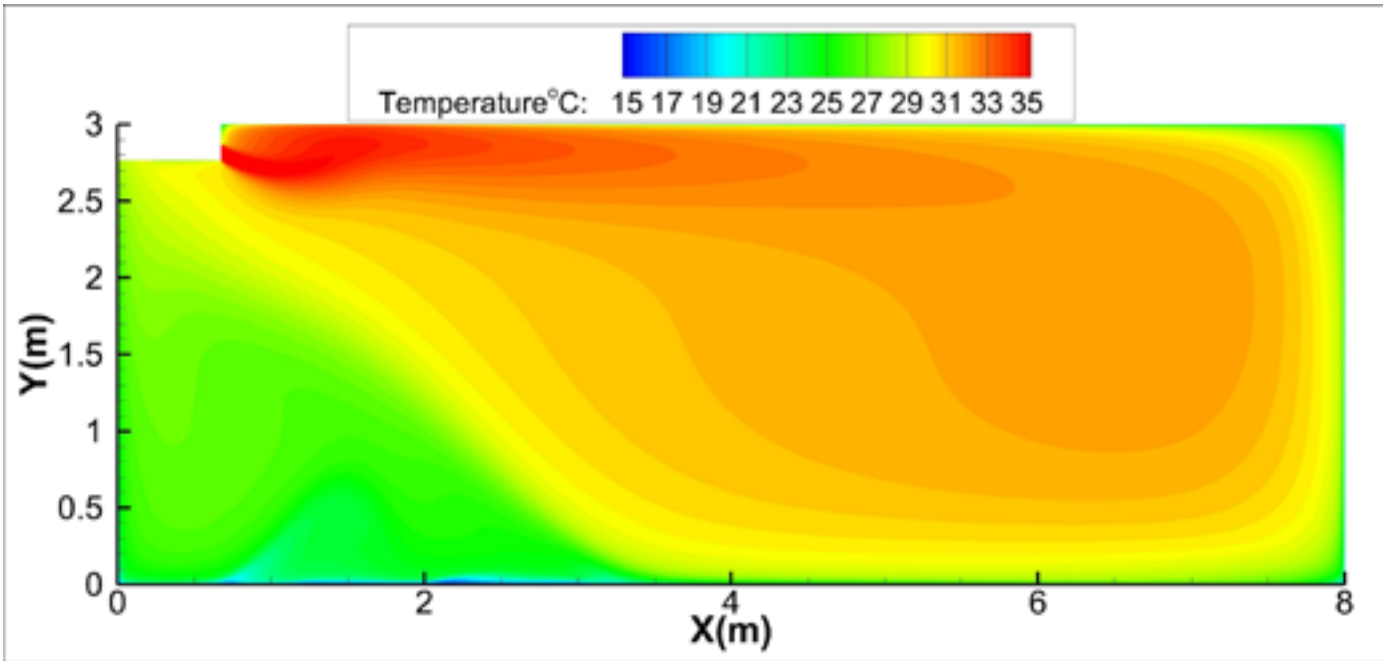
30K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



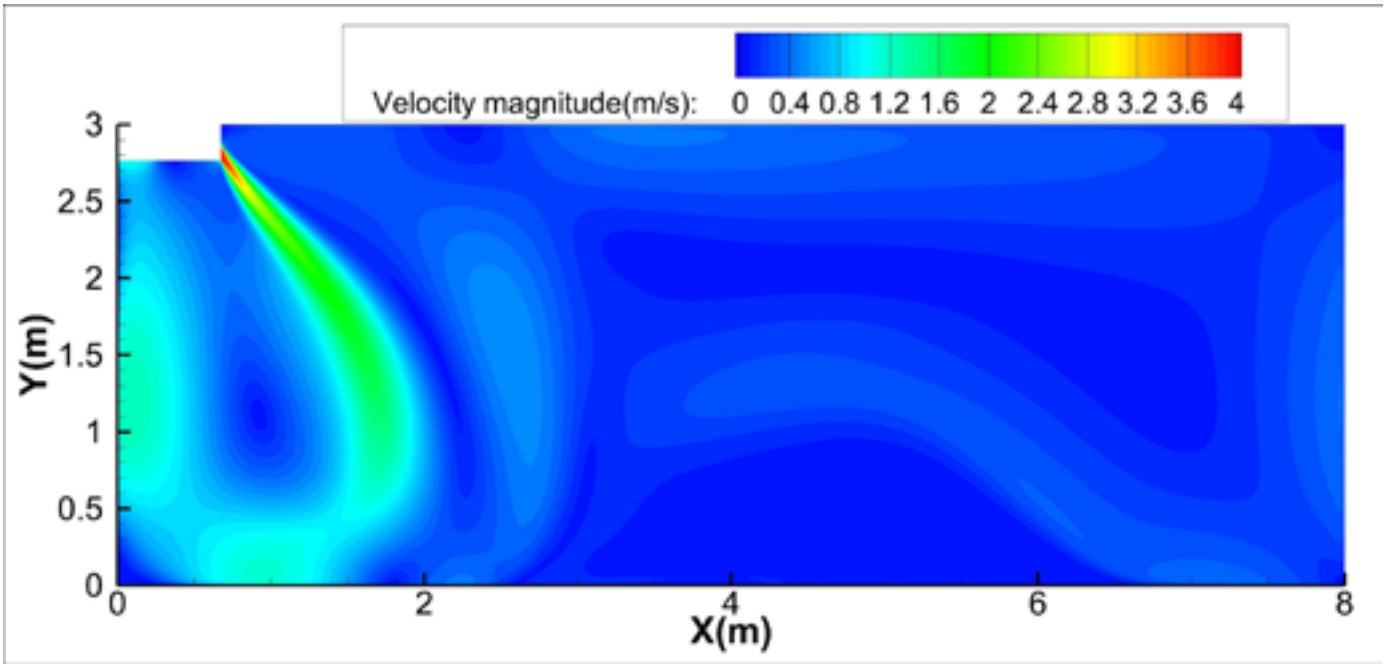

Heating temperature distributions



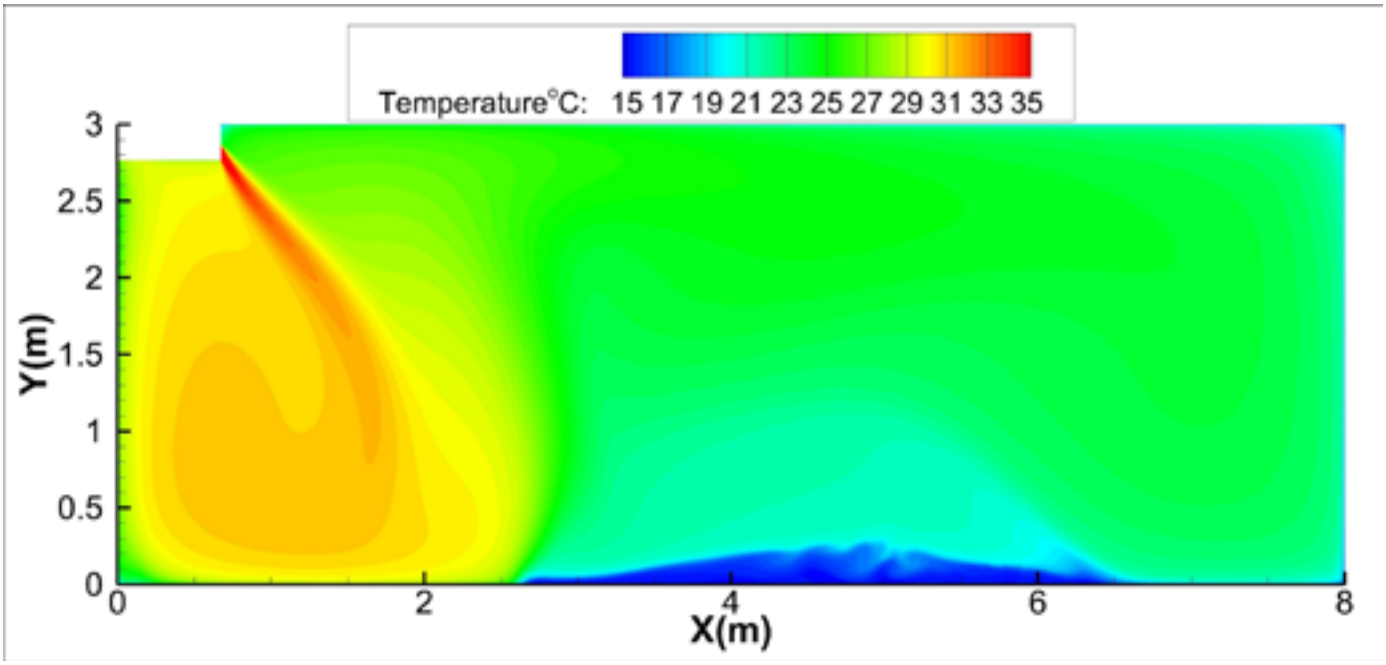
30K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



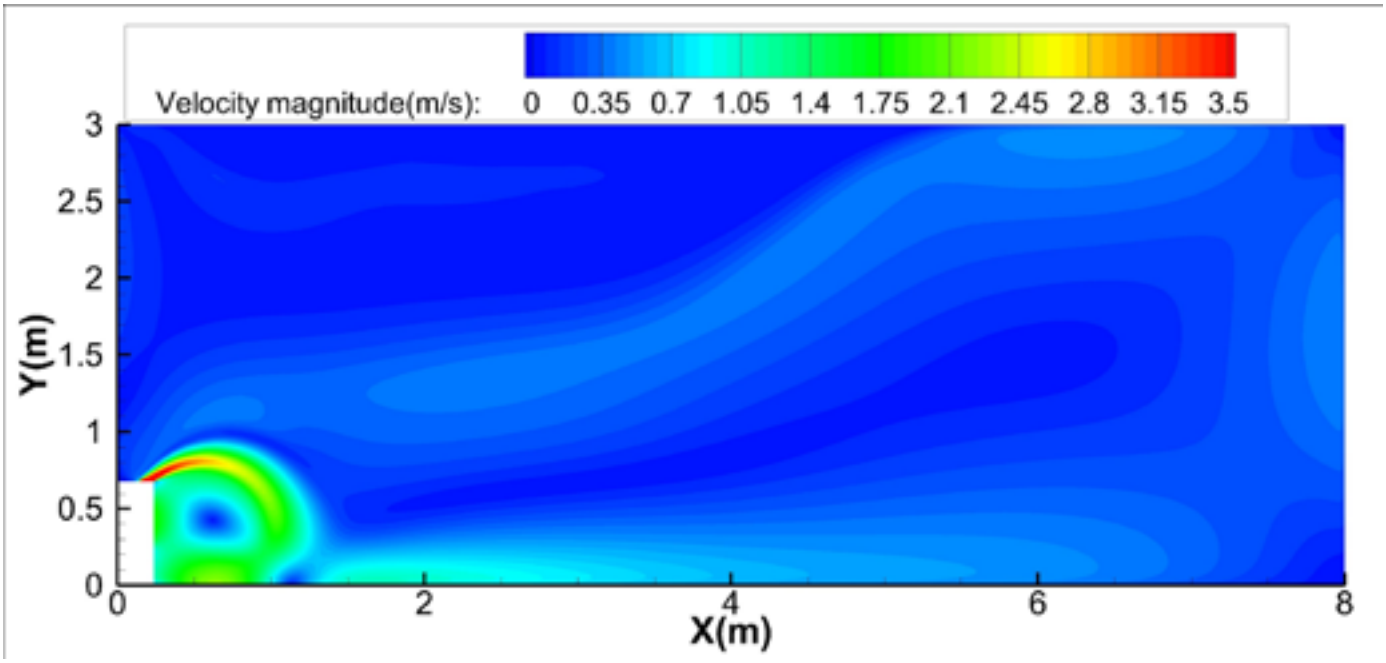

Heating temperature distributions



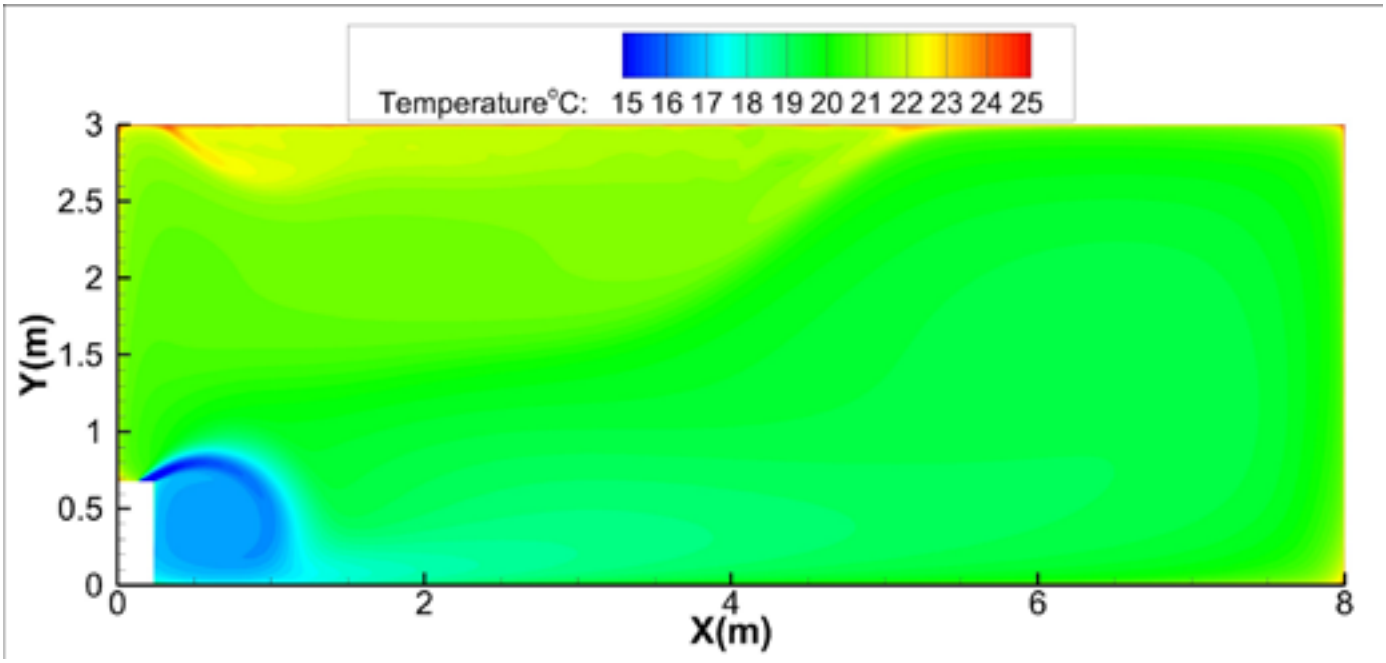
30K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



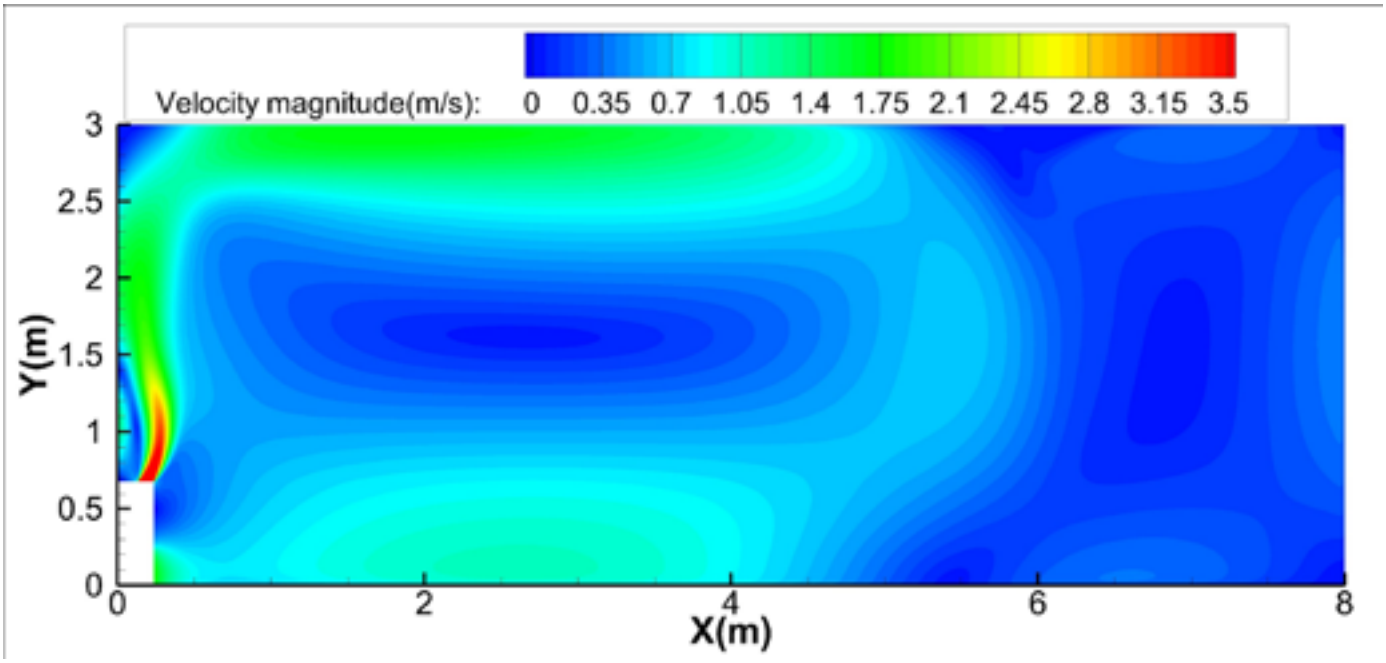

Cooling temperature distributions



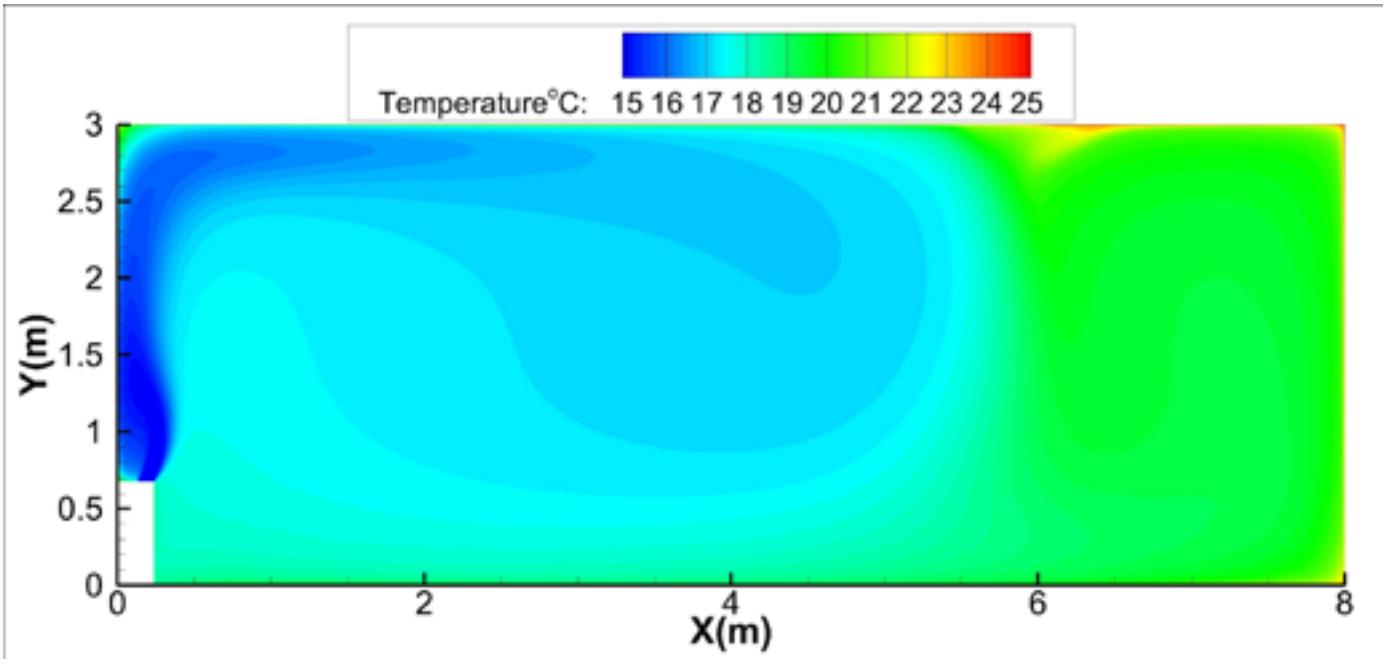
30K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



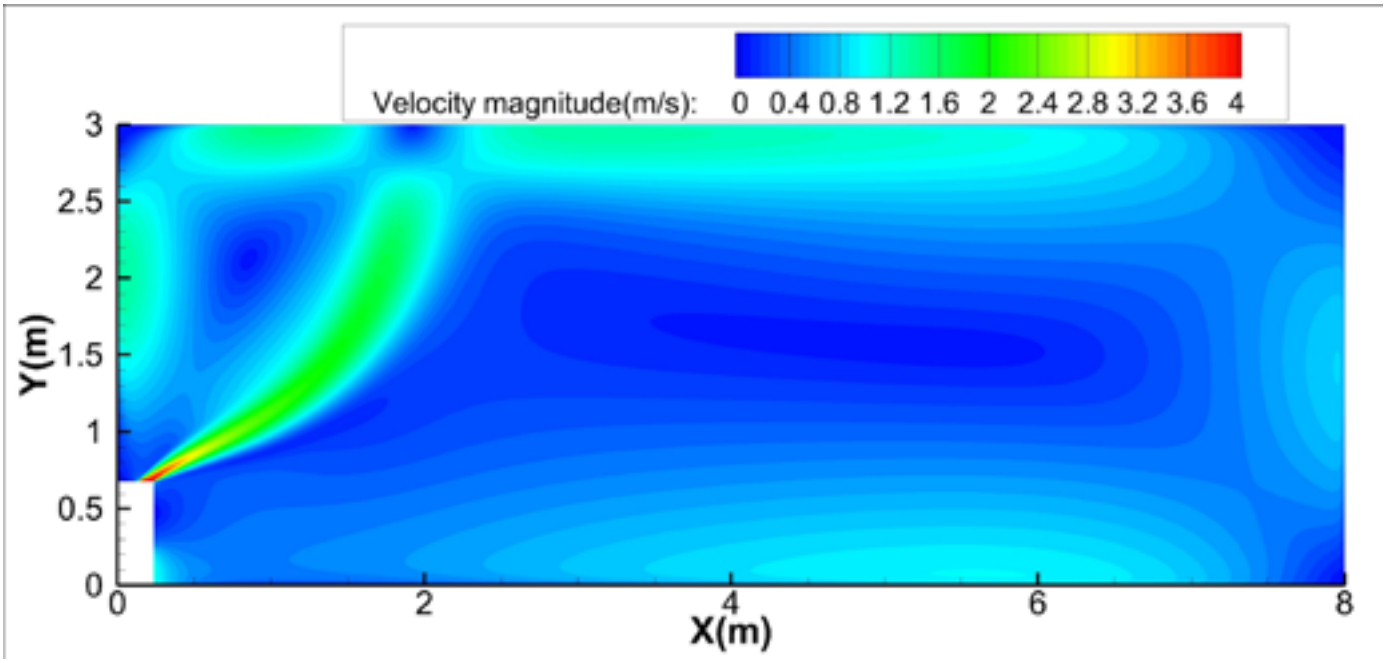

Cooling temperature distributions



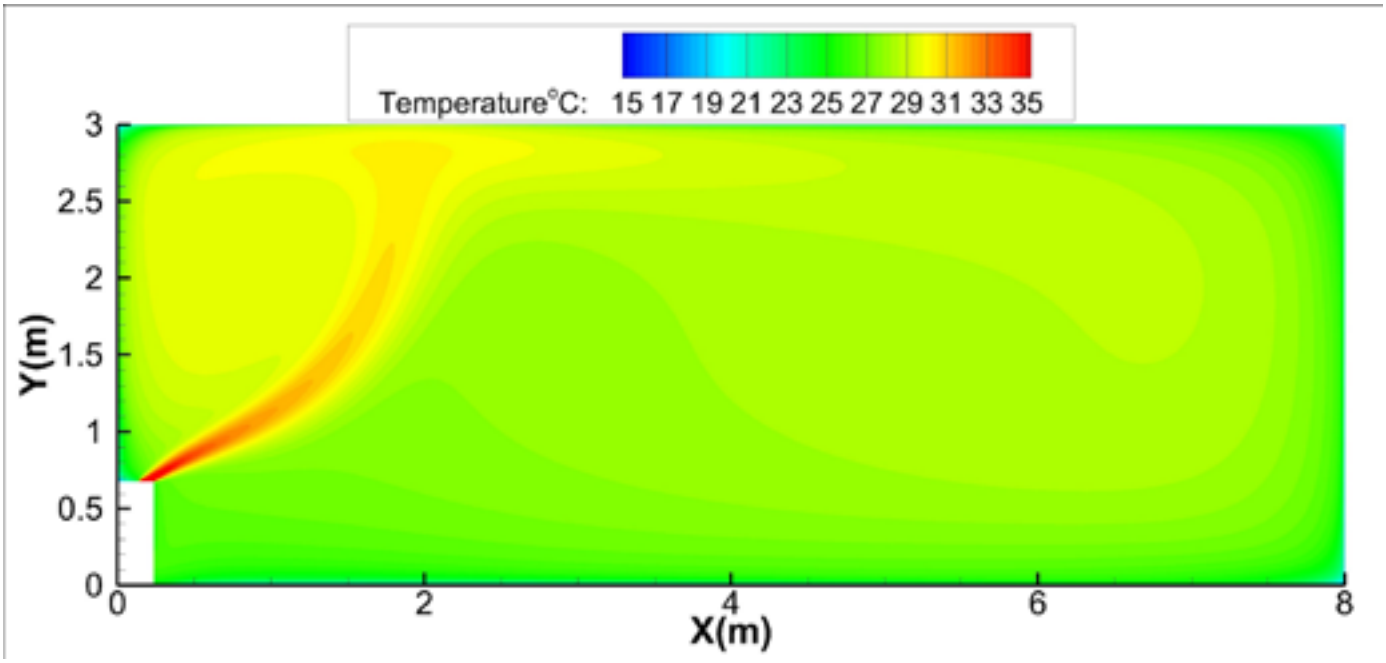
30K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



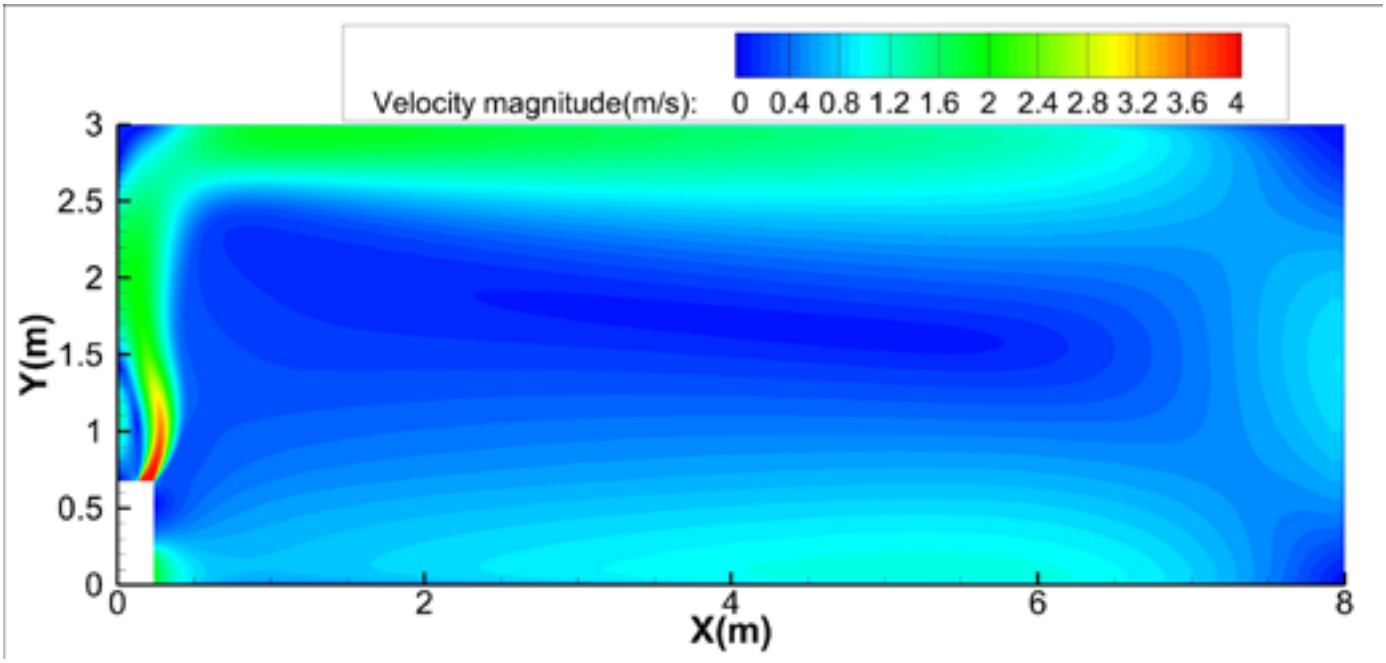

Heating temperature distributions



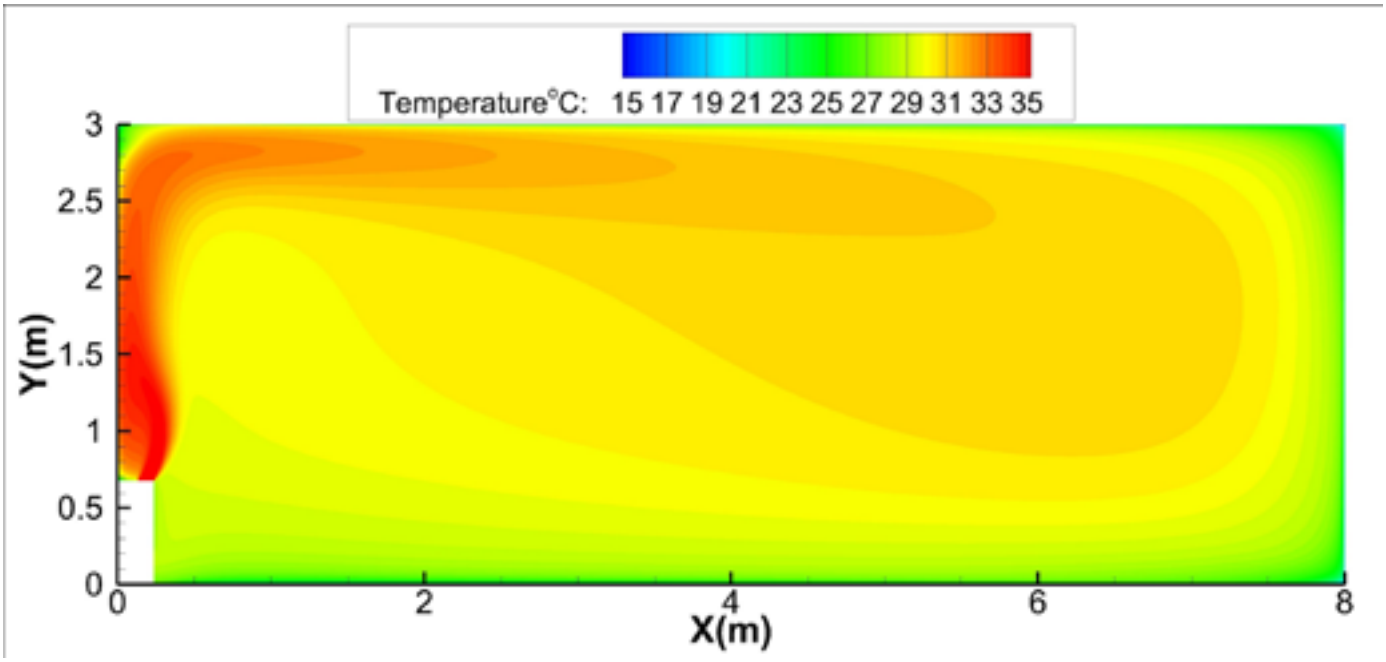
30K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions



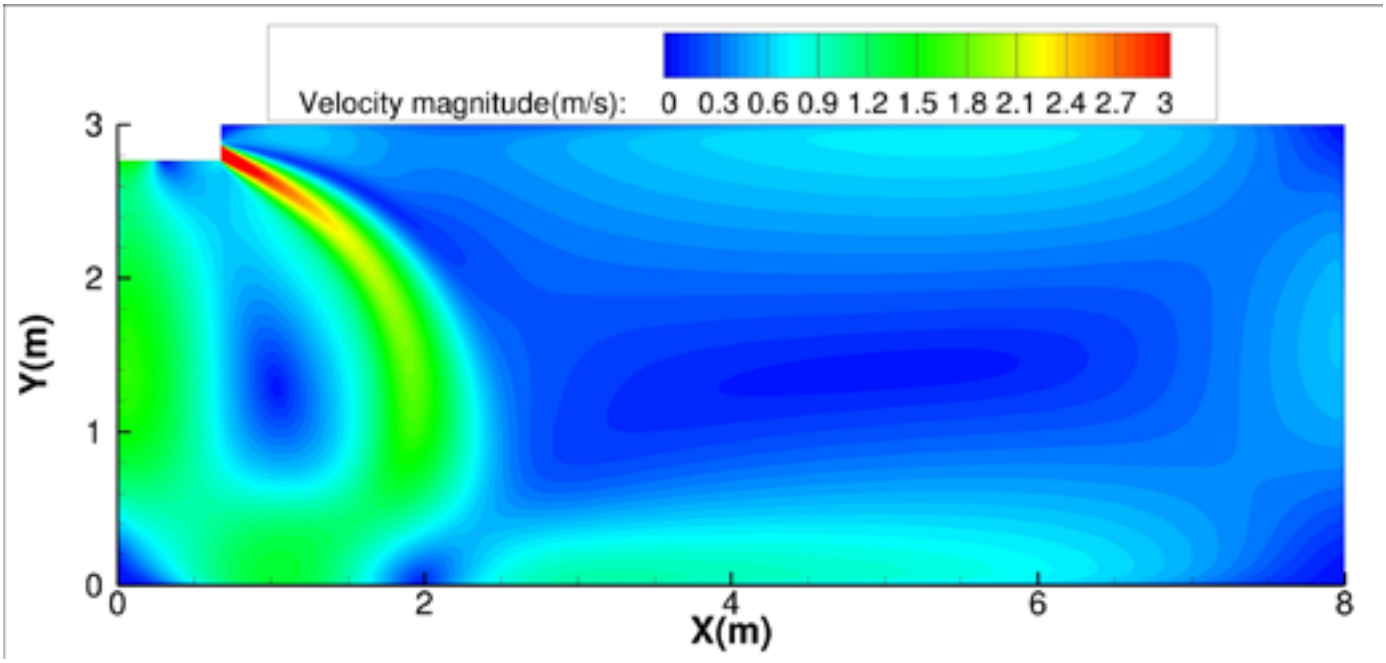

Heating temperature distributions



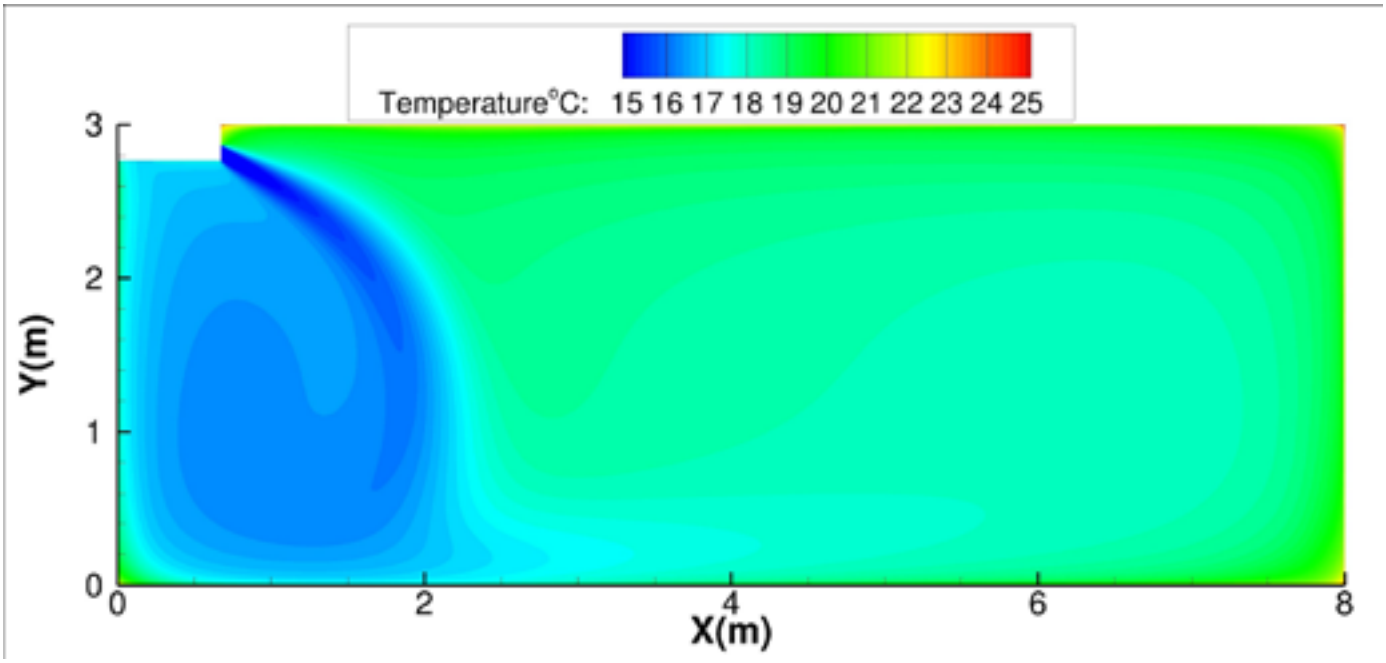
36K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



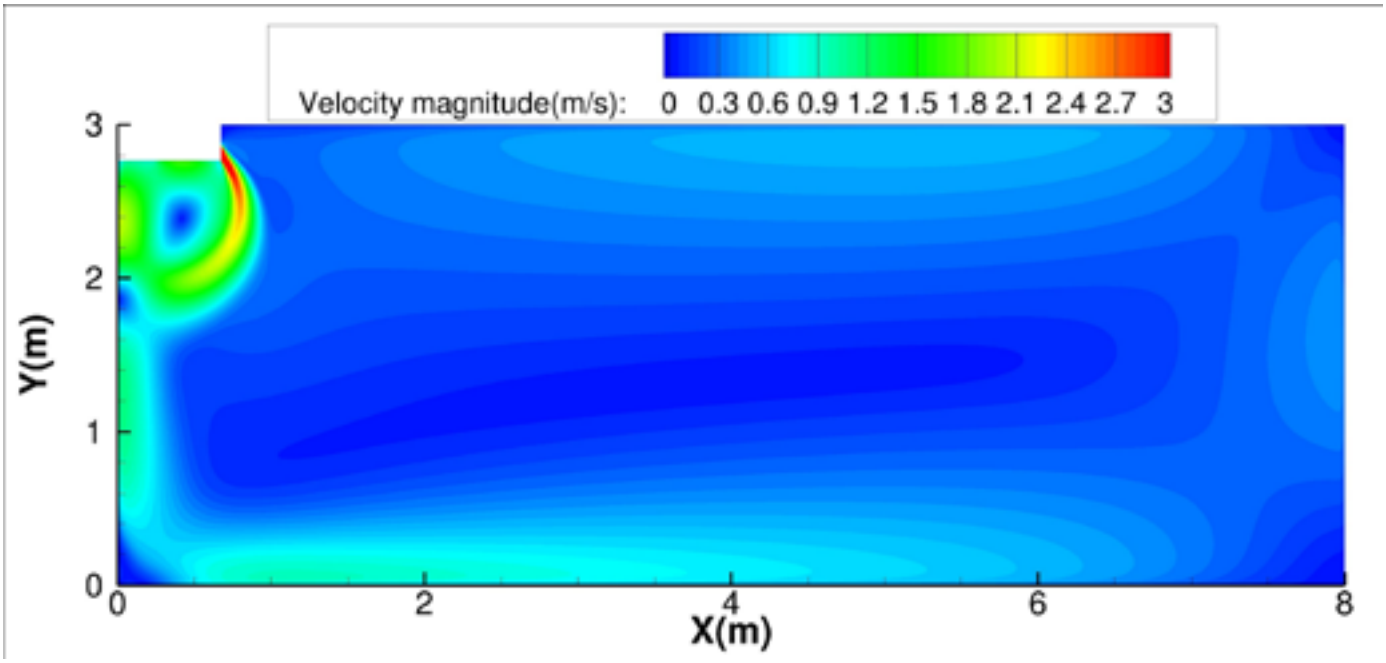

Cooling temperature distributions



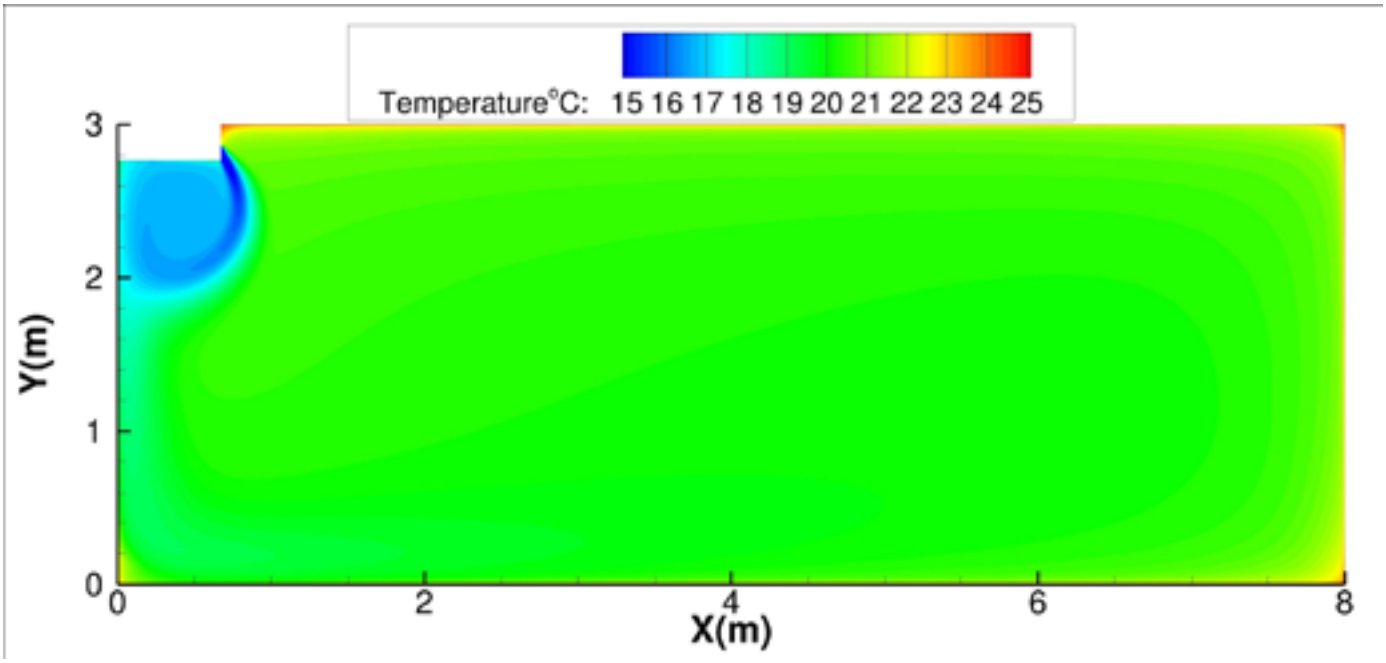
36K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



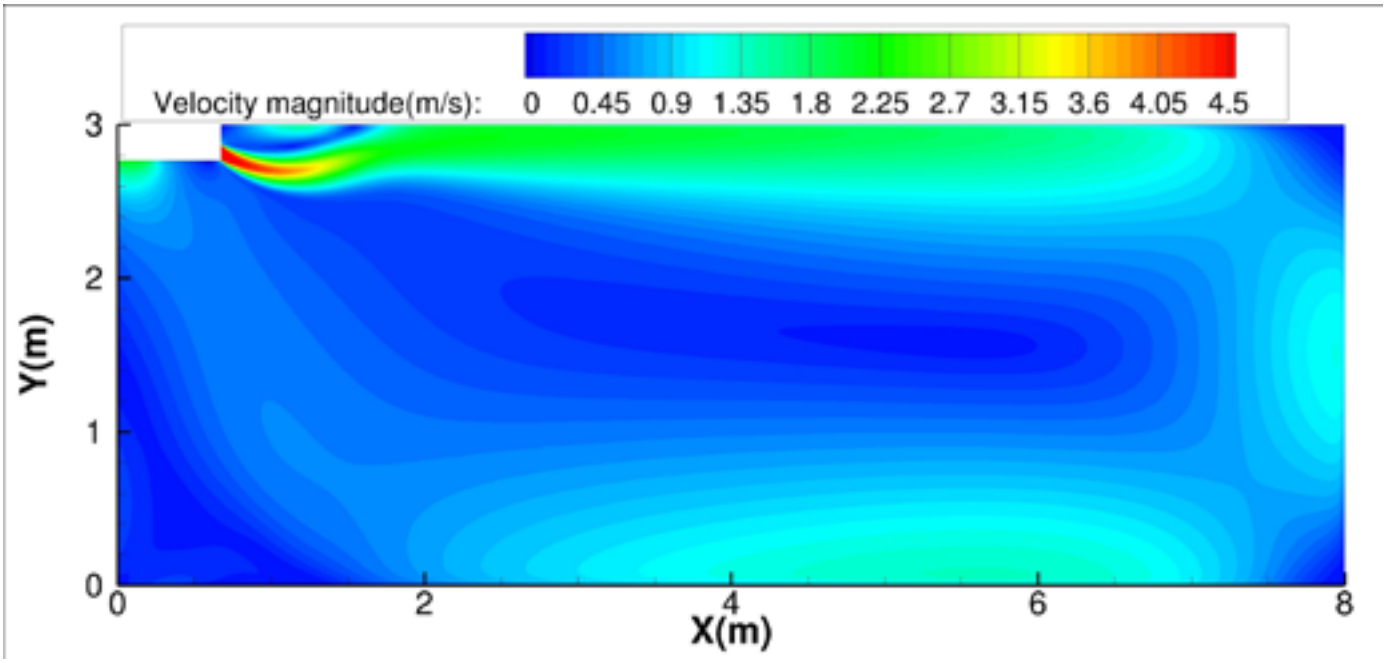

Cooling temperature distributions



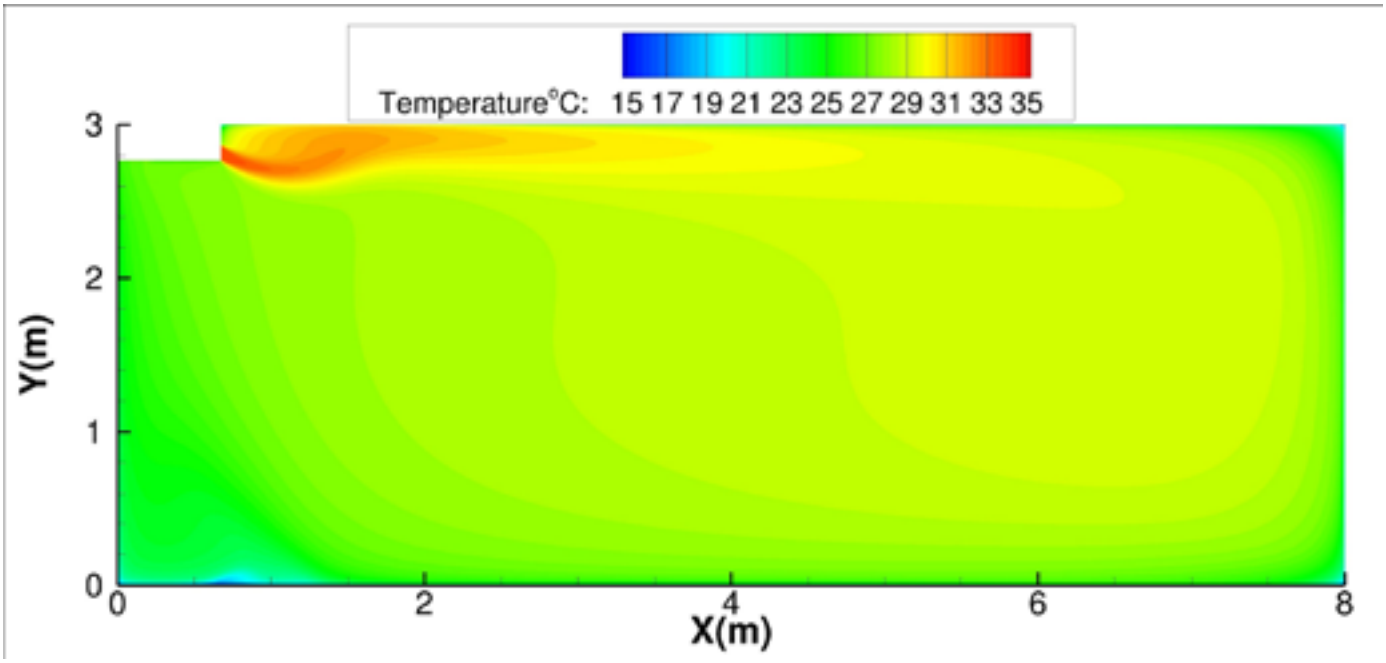
36K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



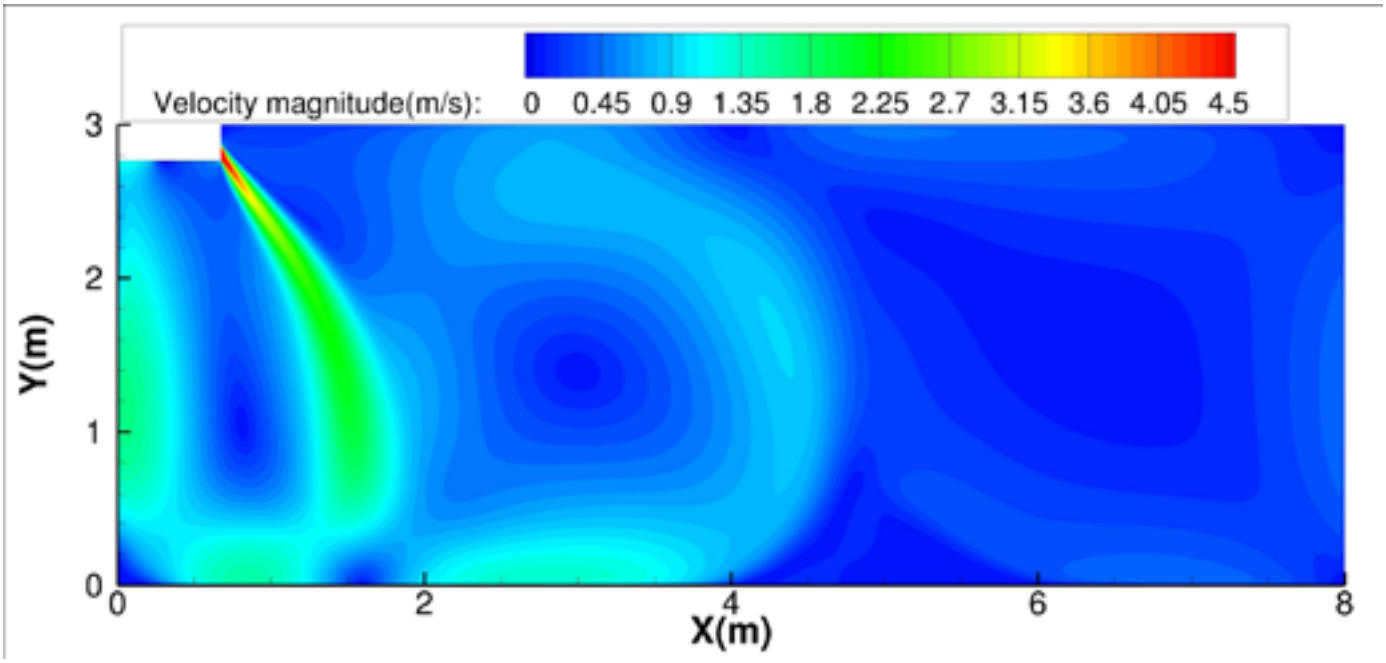

Heating temperature distributions



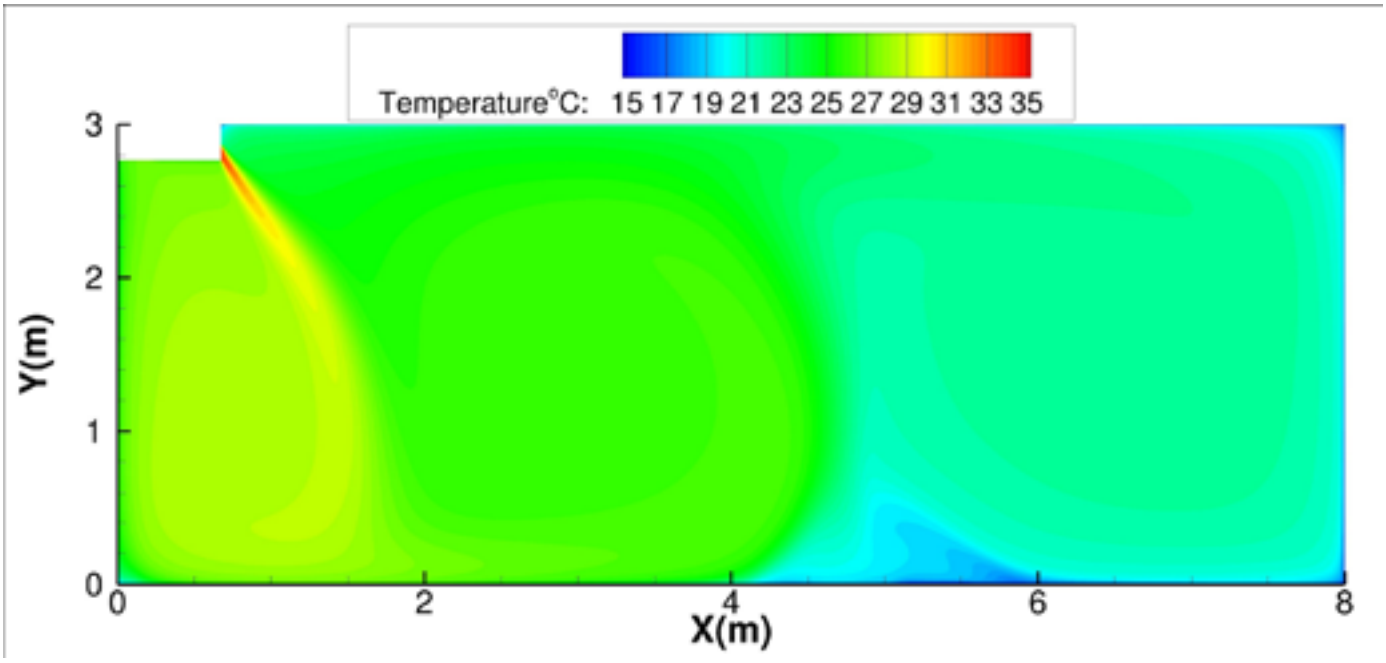
36K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



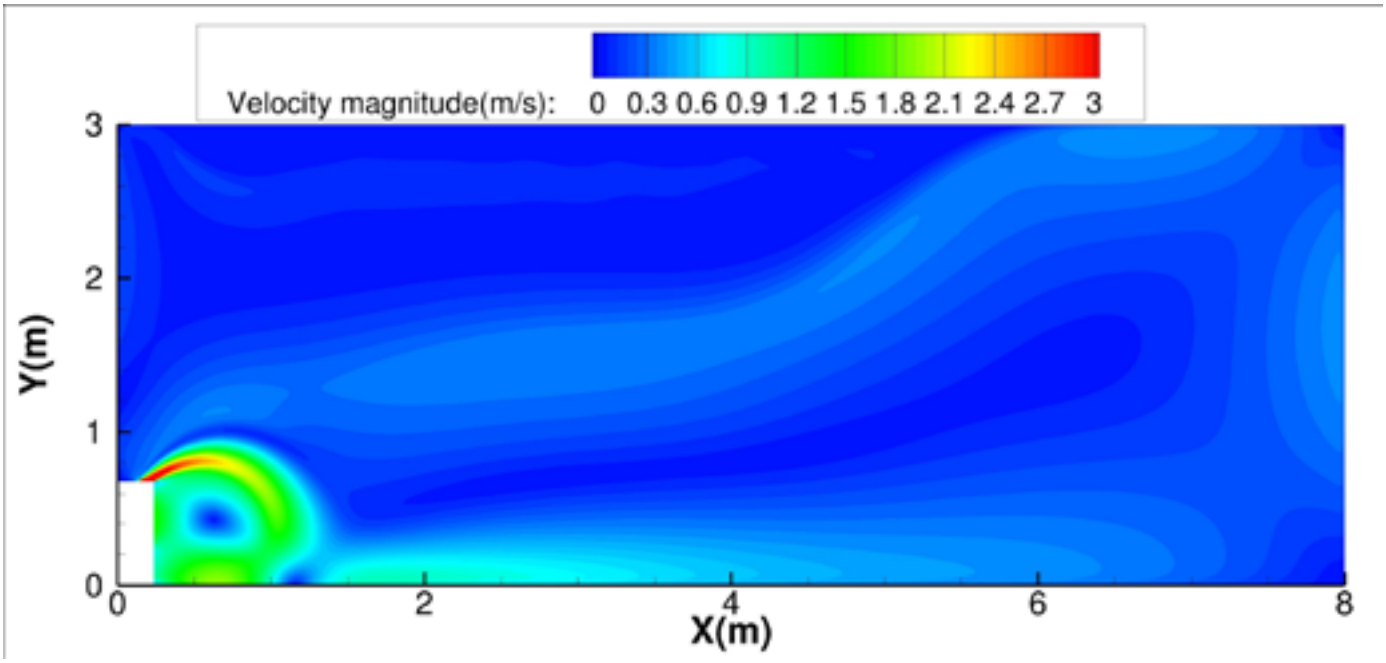

Heating temperature distributions



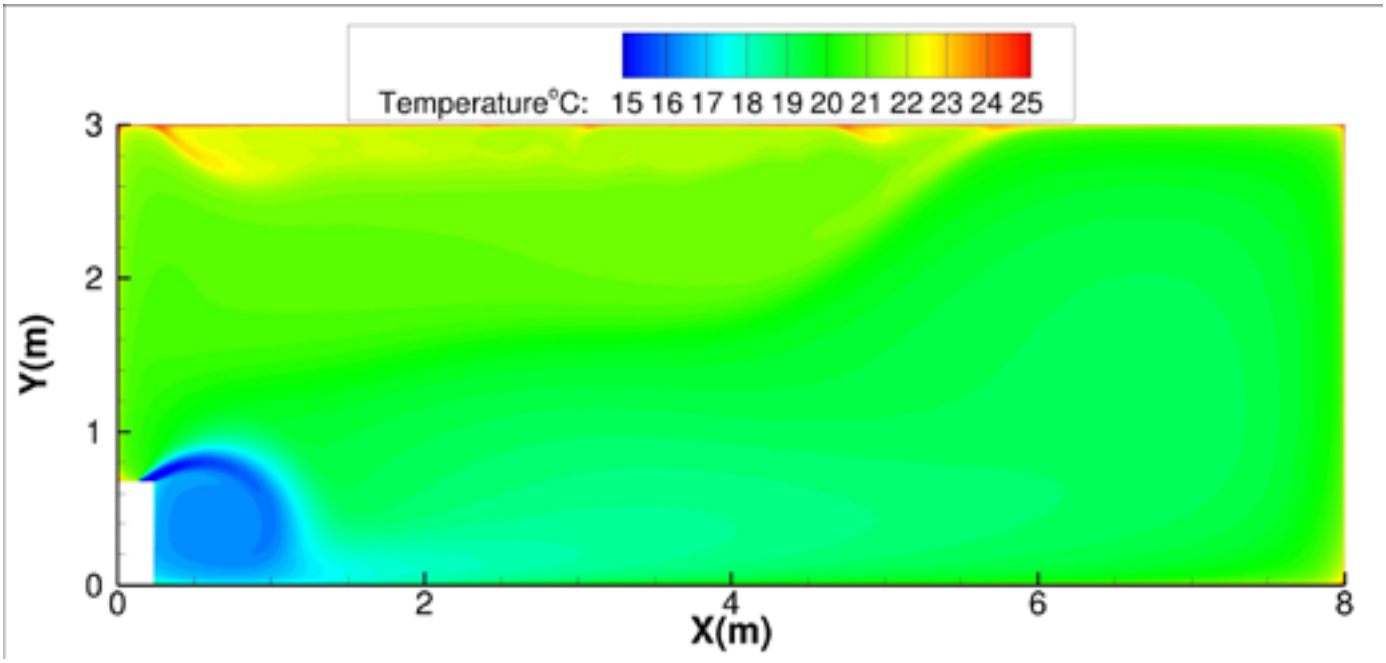
36K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



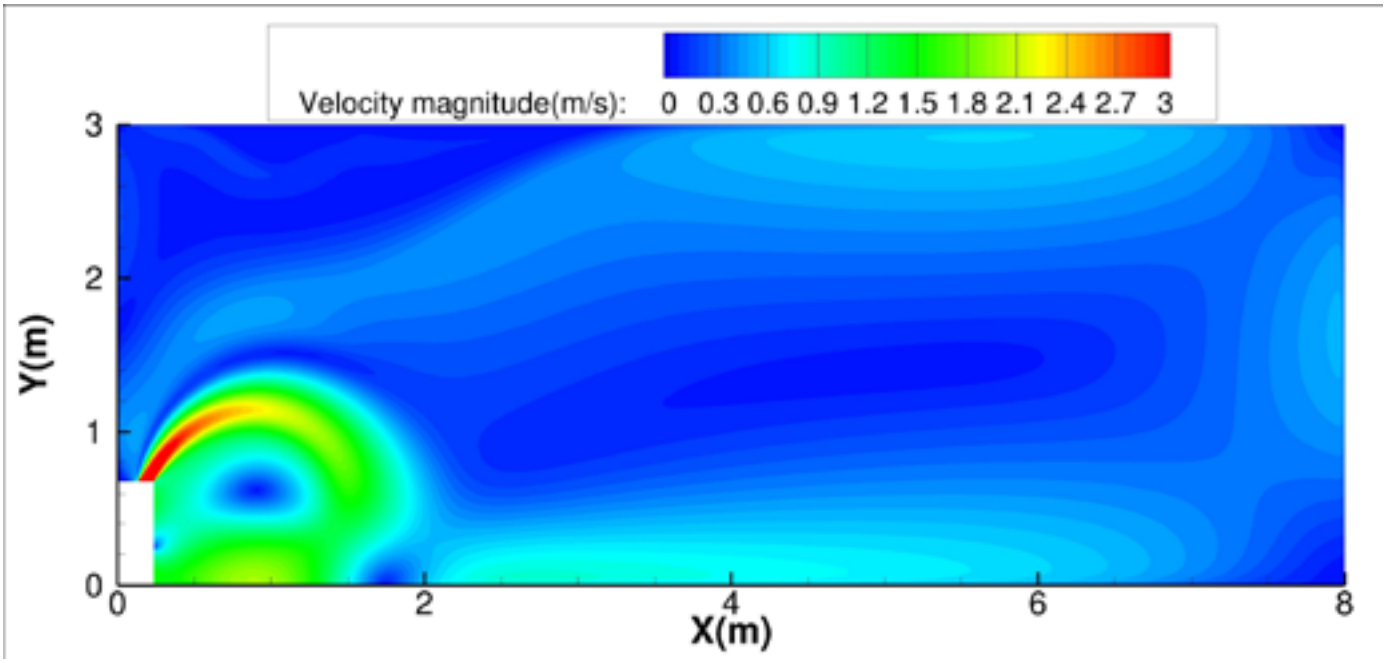

Cooling temperature distributions



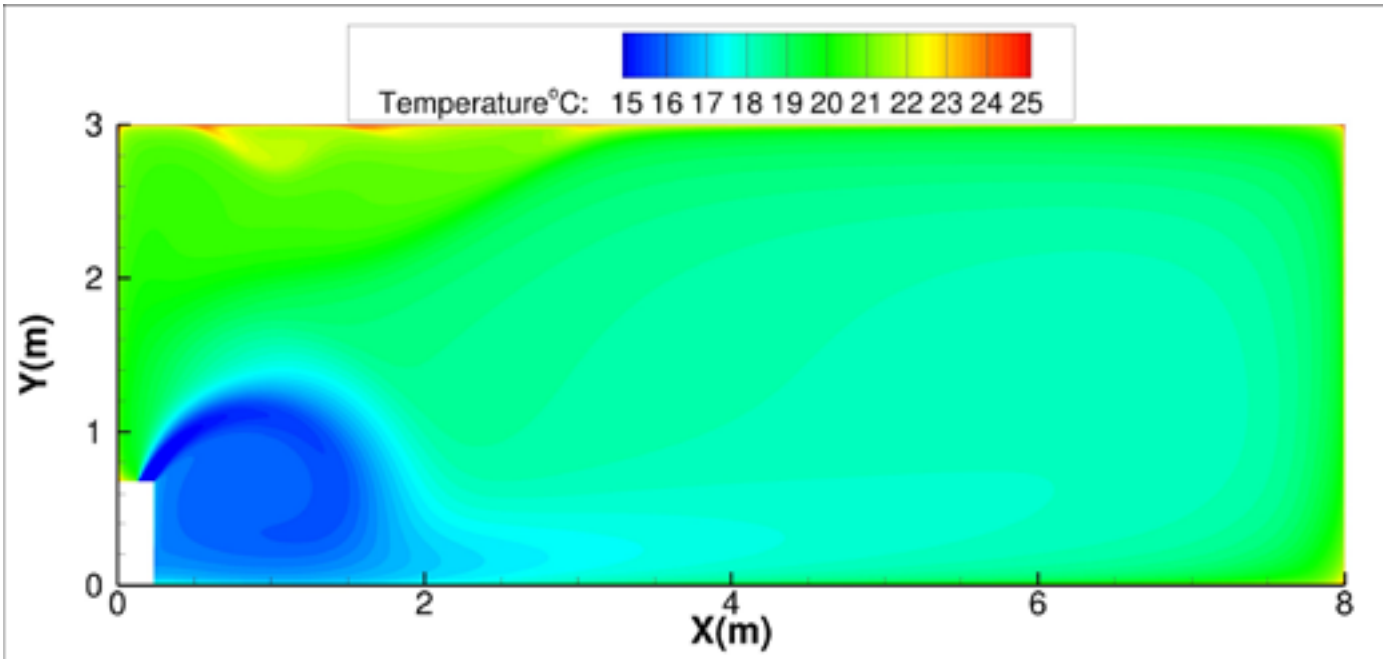
36K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



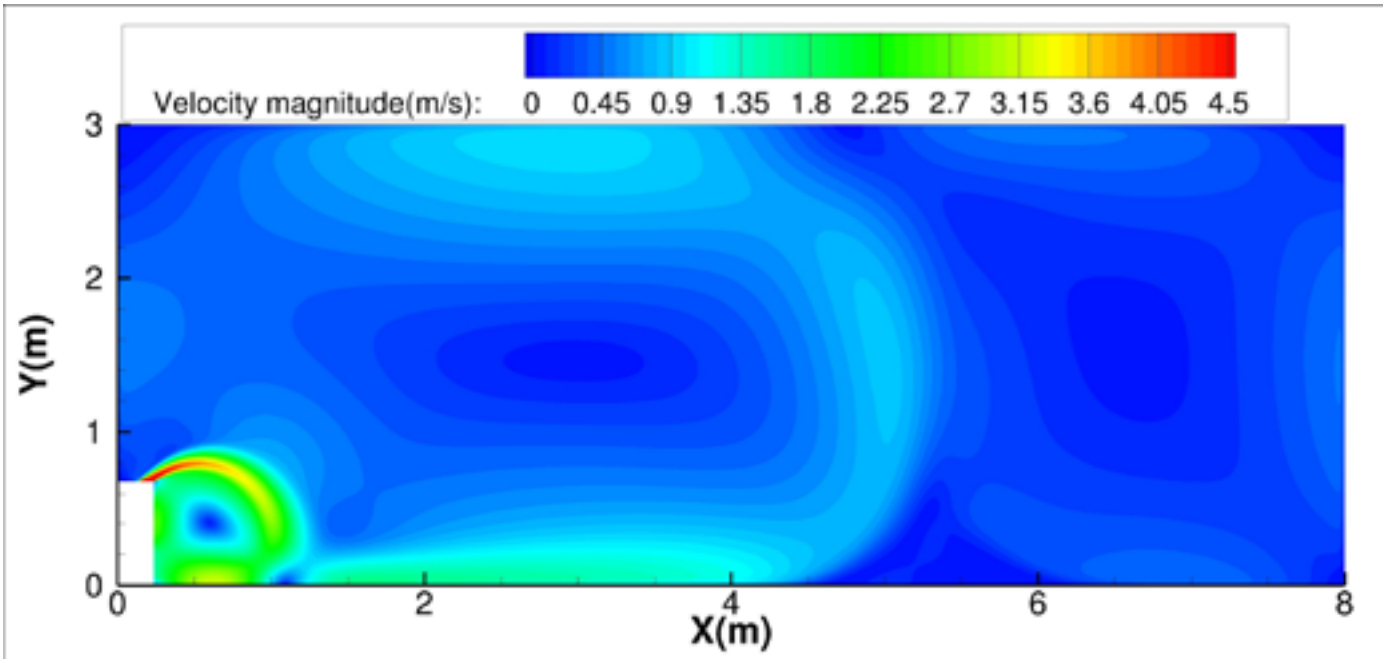

Cooling temperature distributions



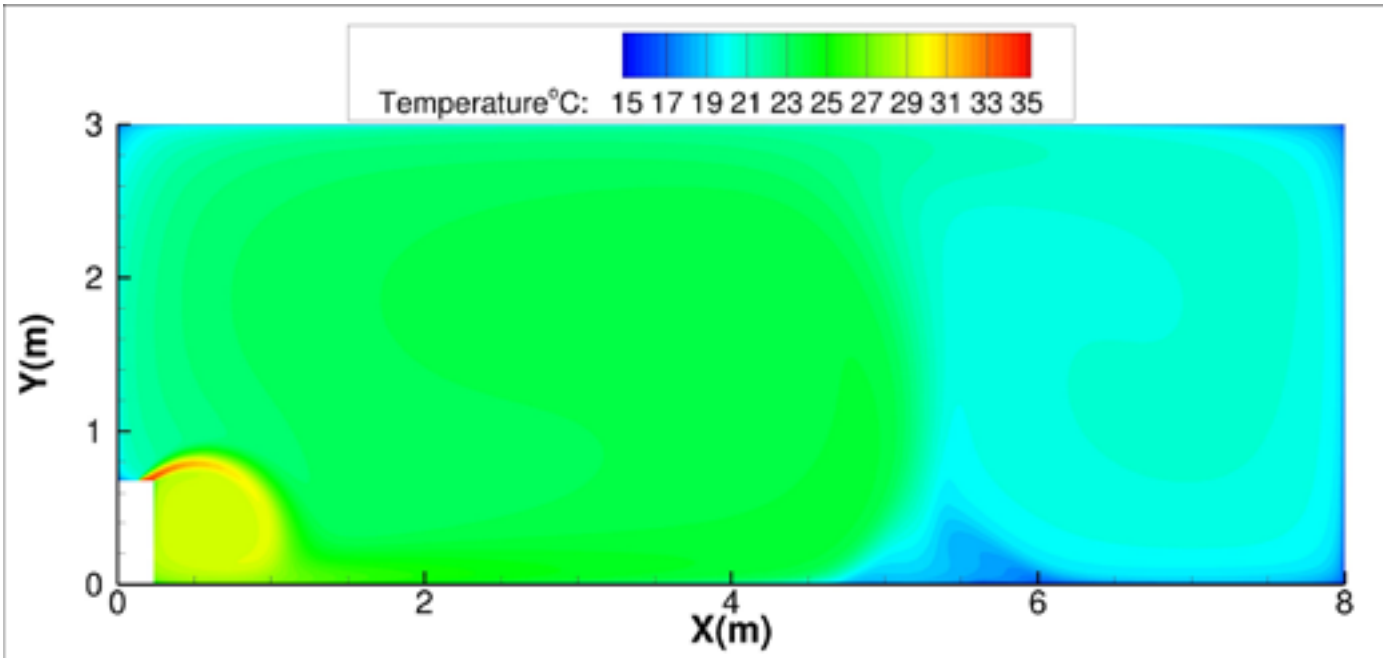
36K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



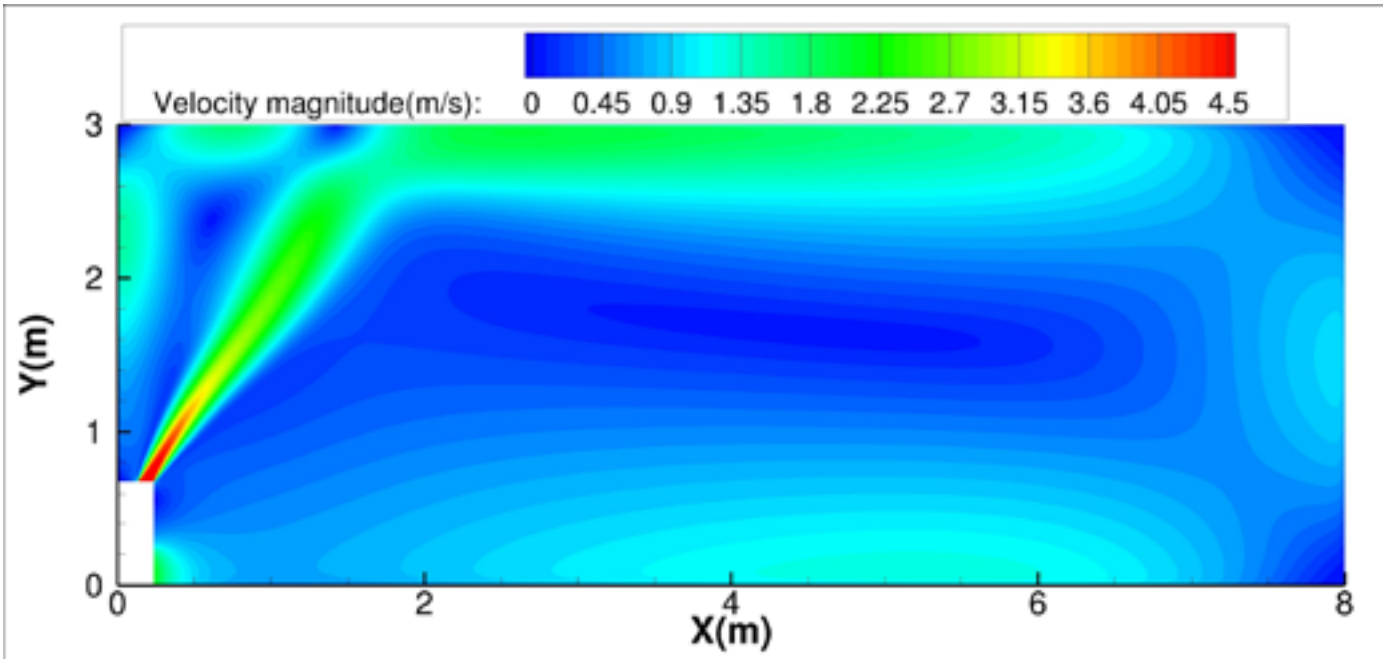

Heating temperature distributions



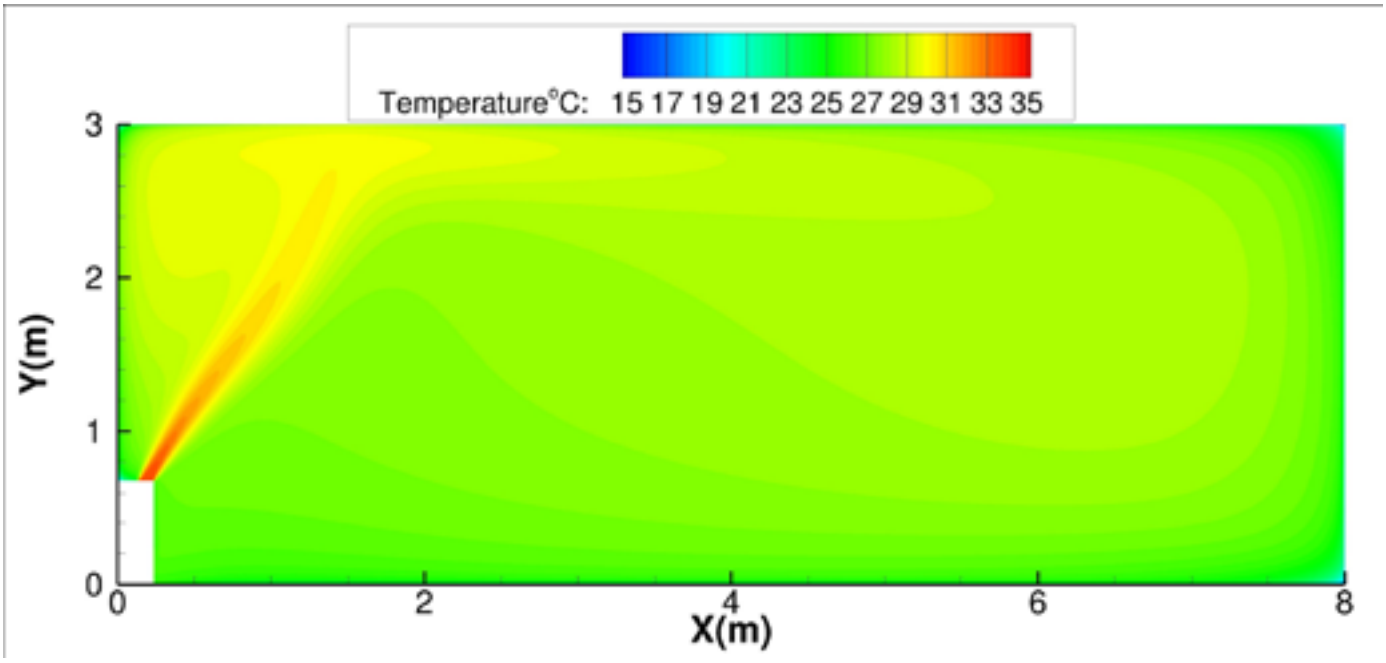
36K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions



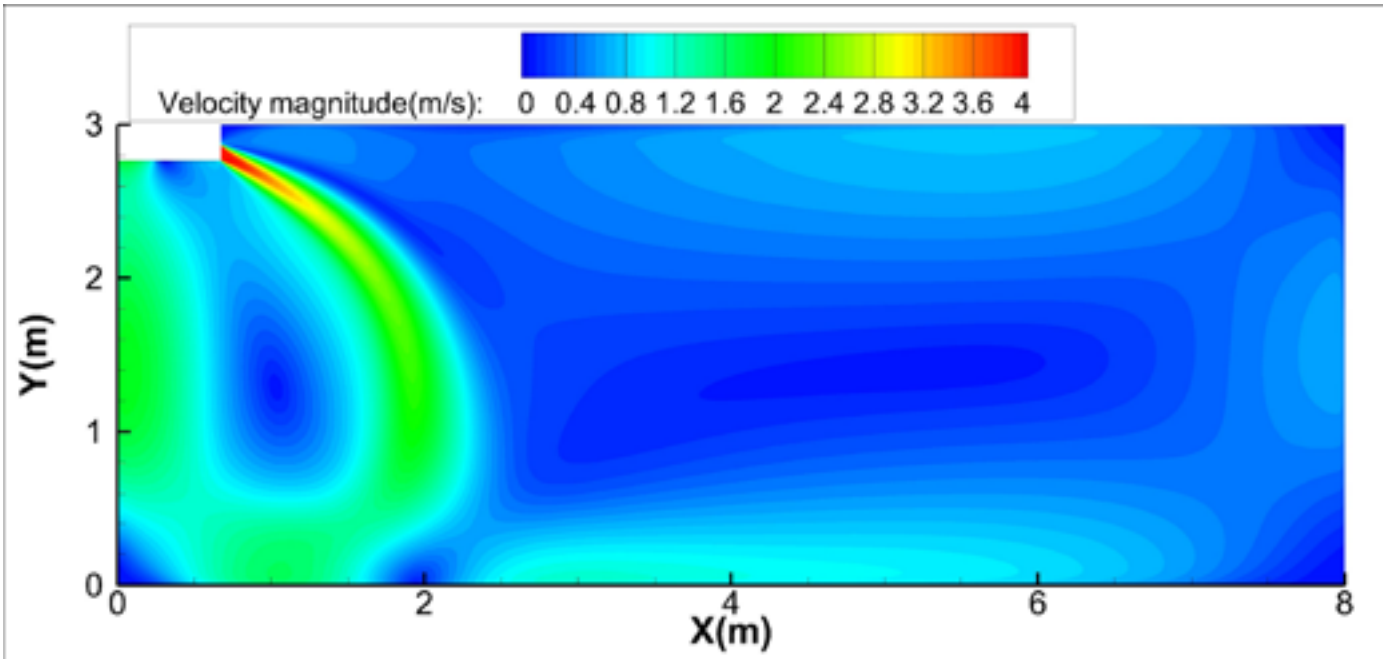

Heating temperature distributions



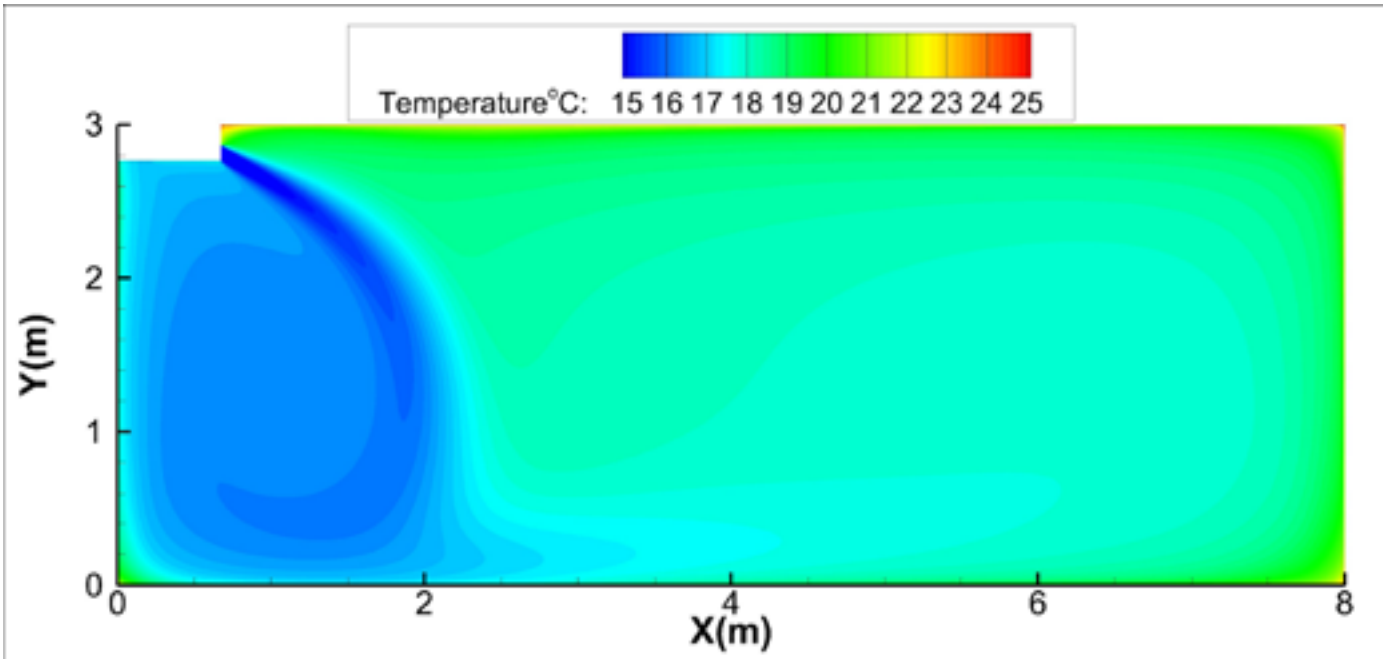
42K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



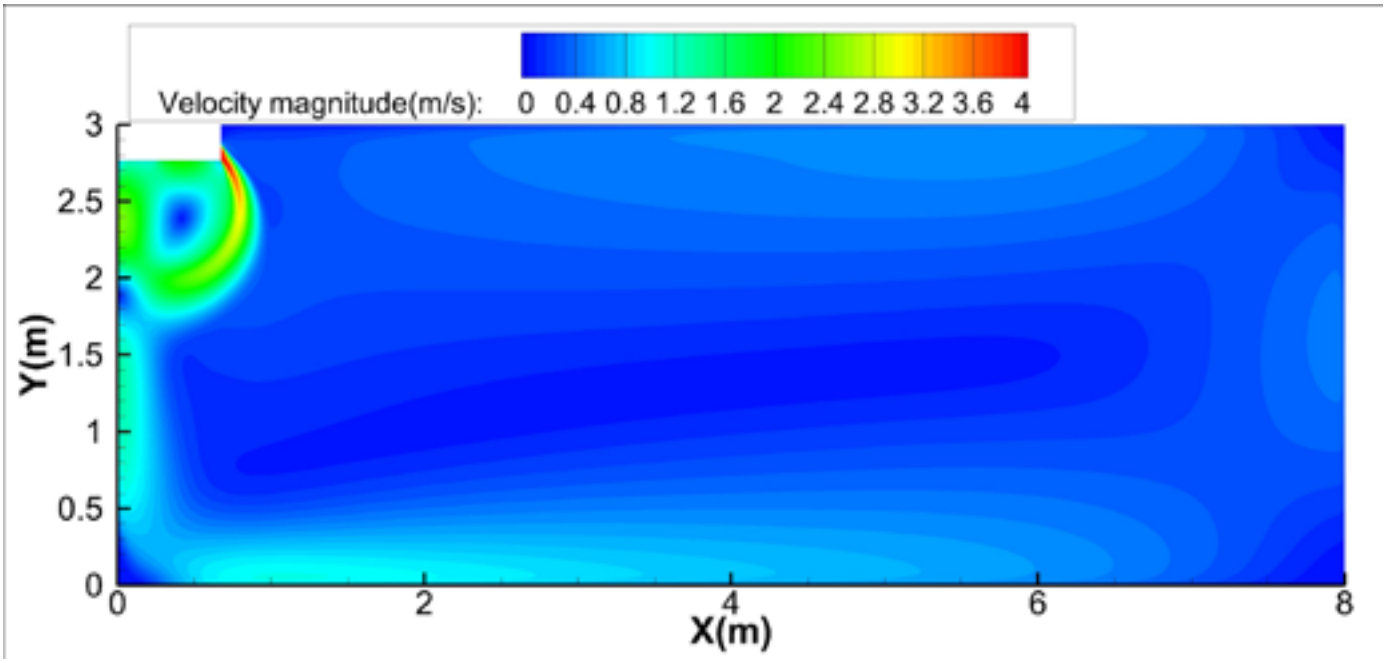

Cooling temperature distributions



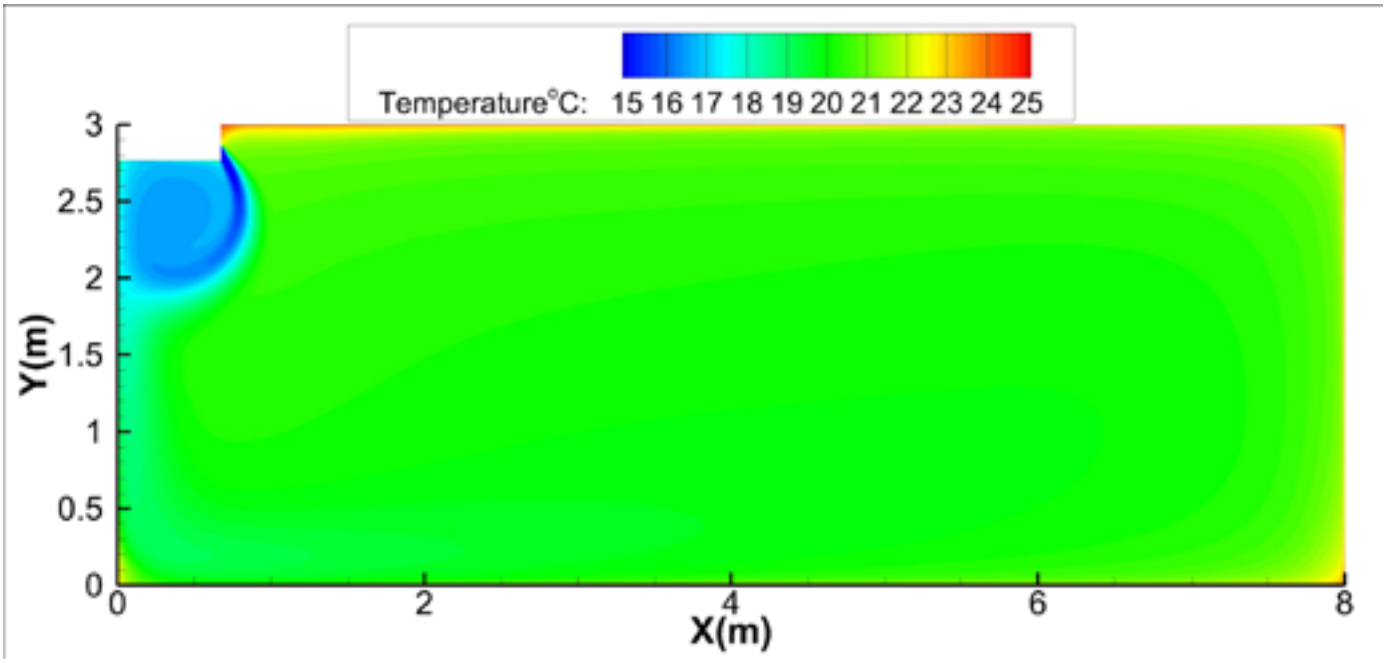
42K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



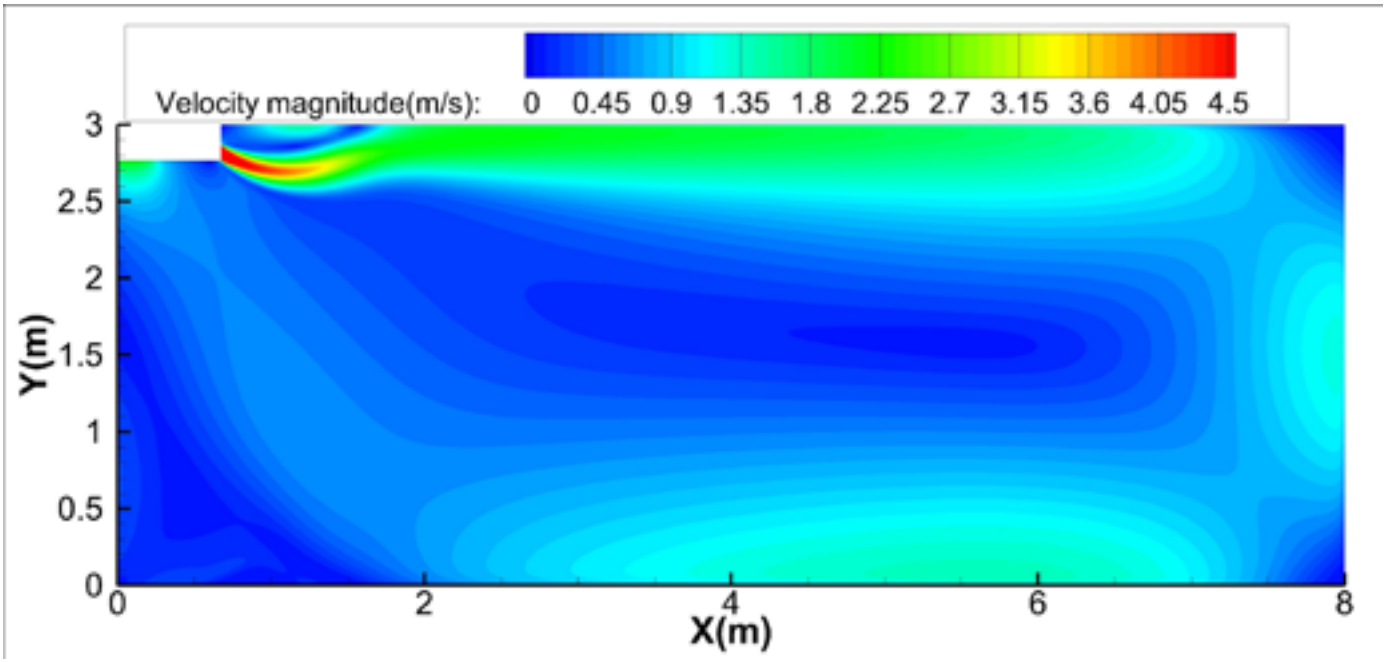

Cooling temperature distributions



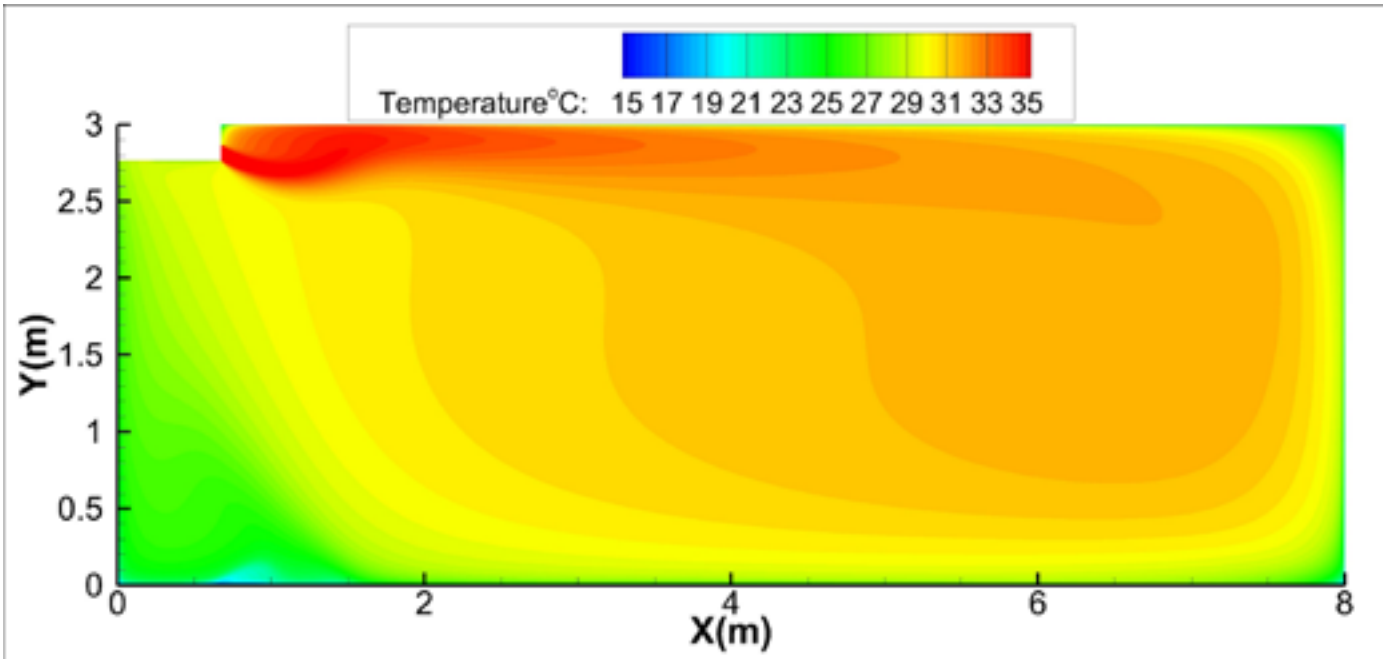
42K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



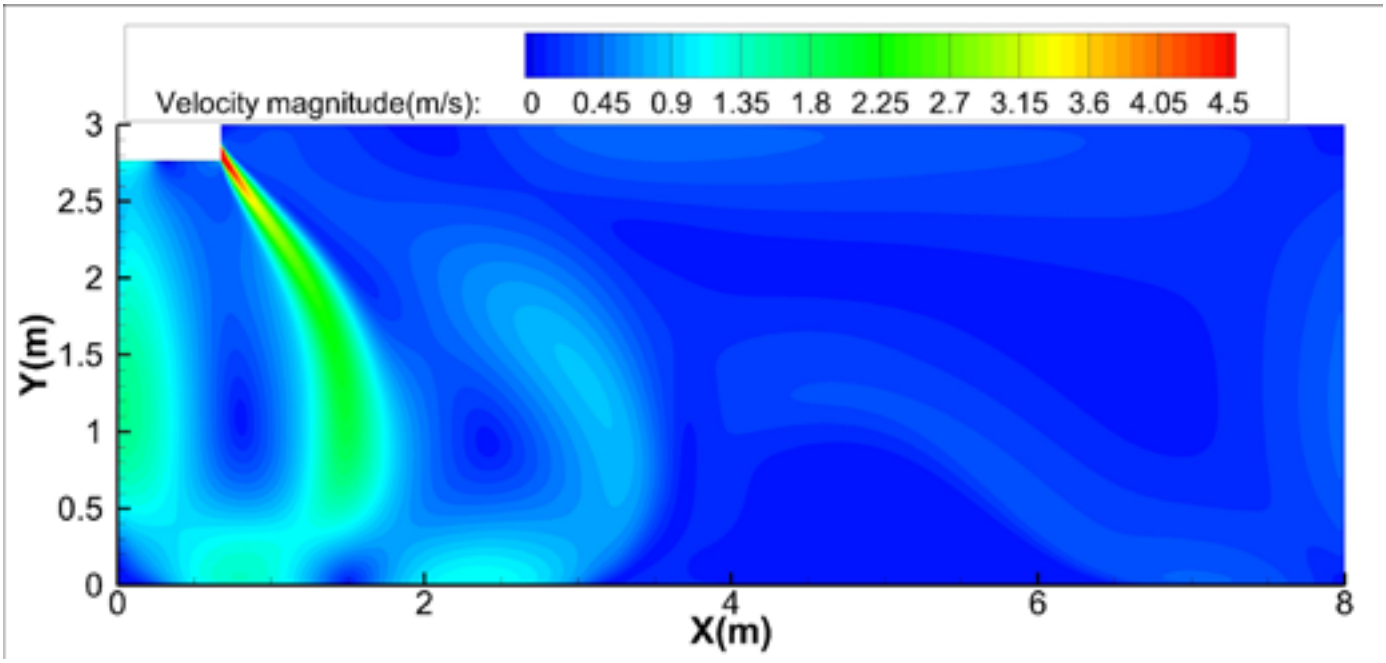

Heating temperature distributions



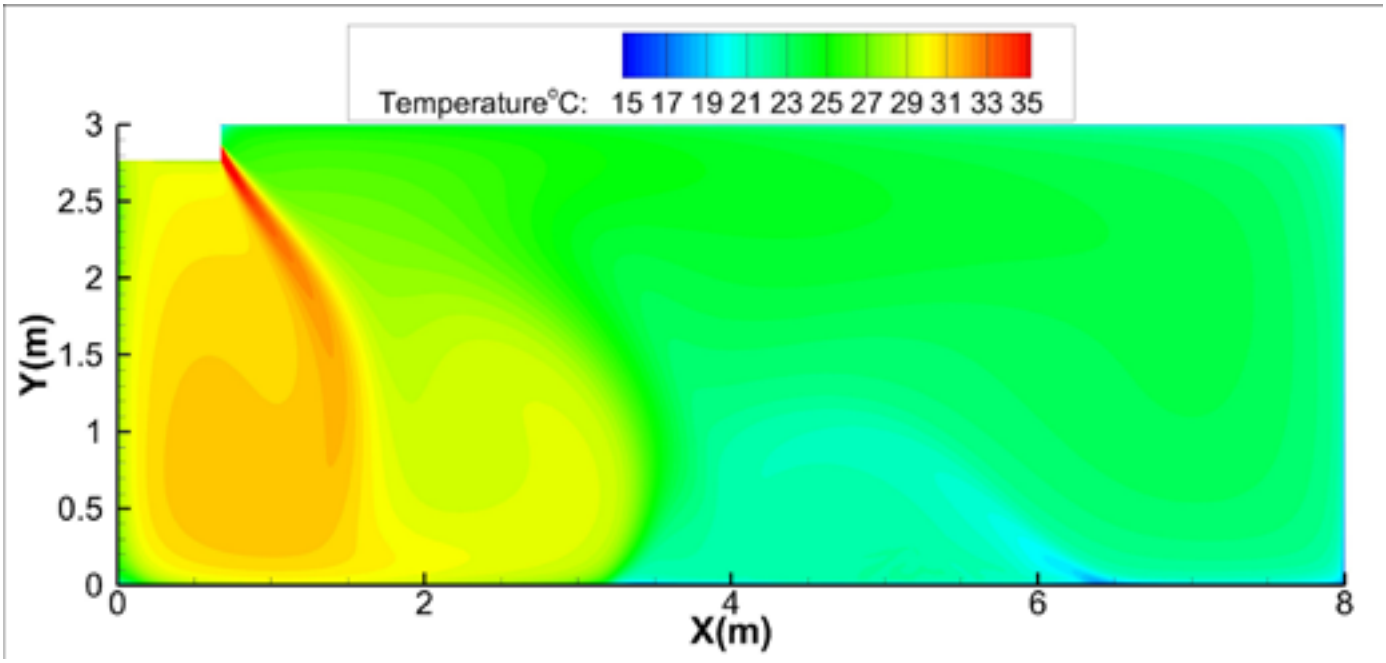
42K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



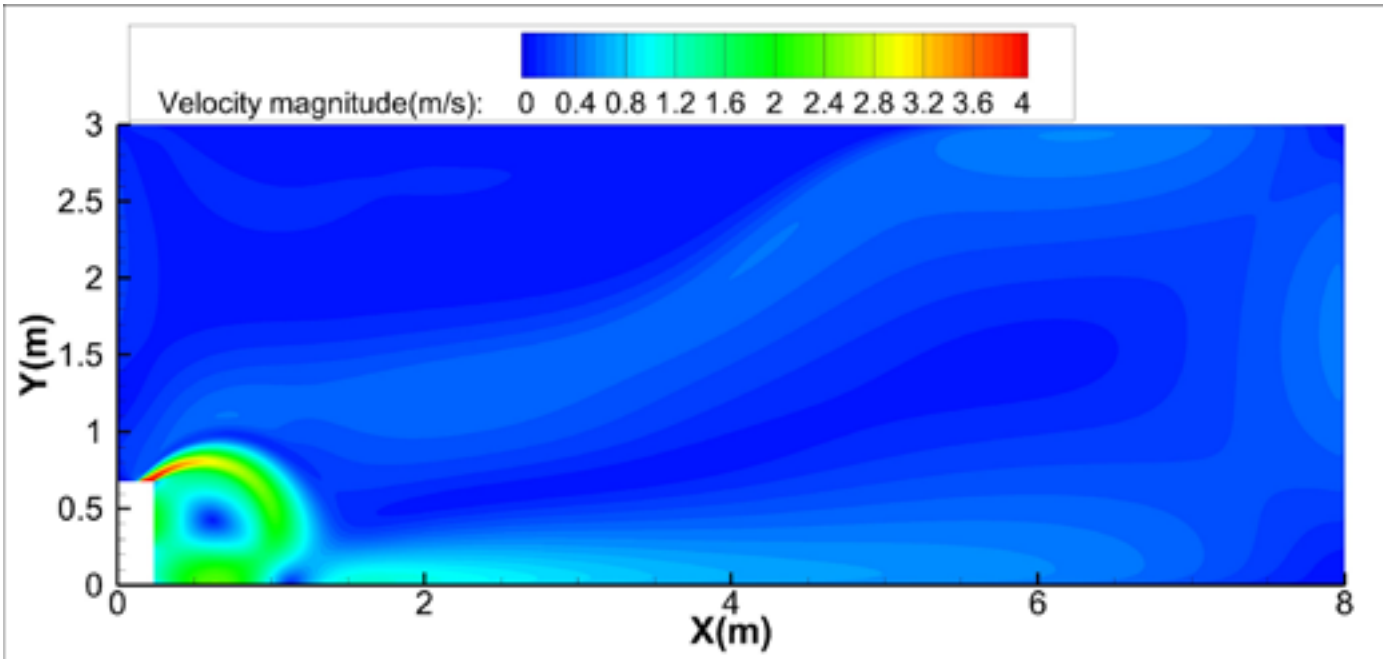

Heating temperature distributions



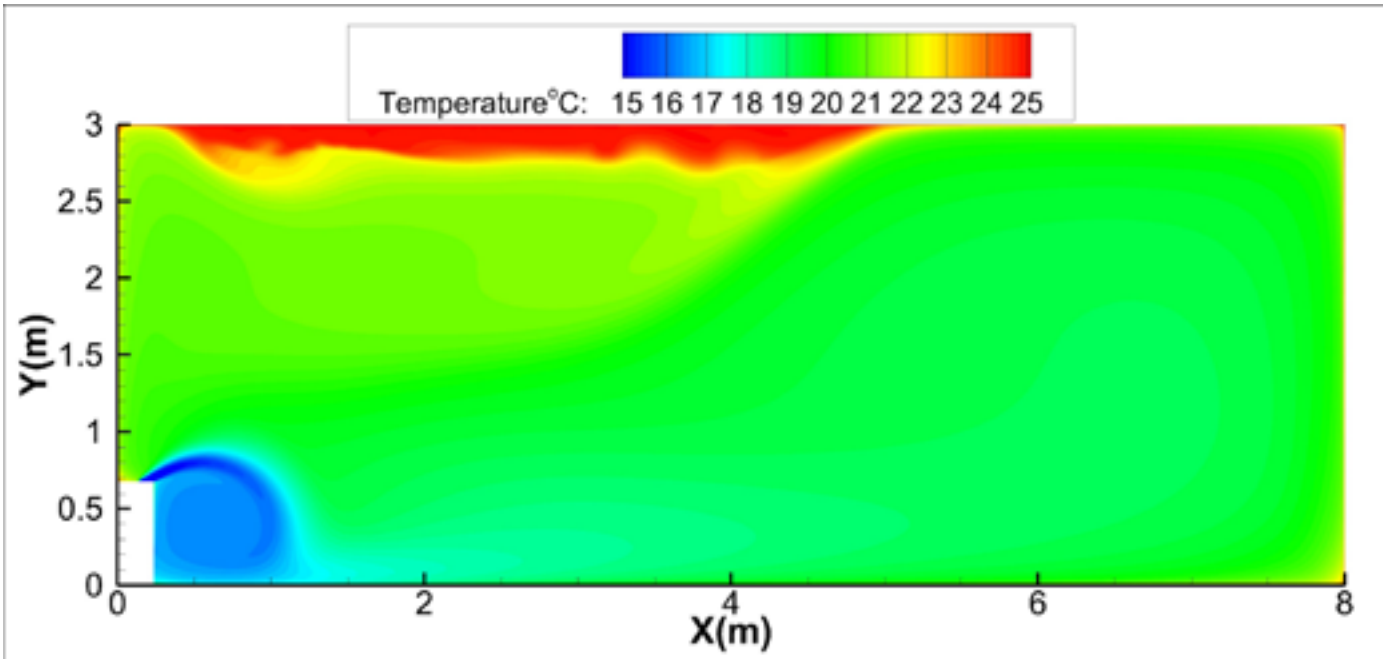
42K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



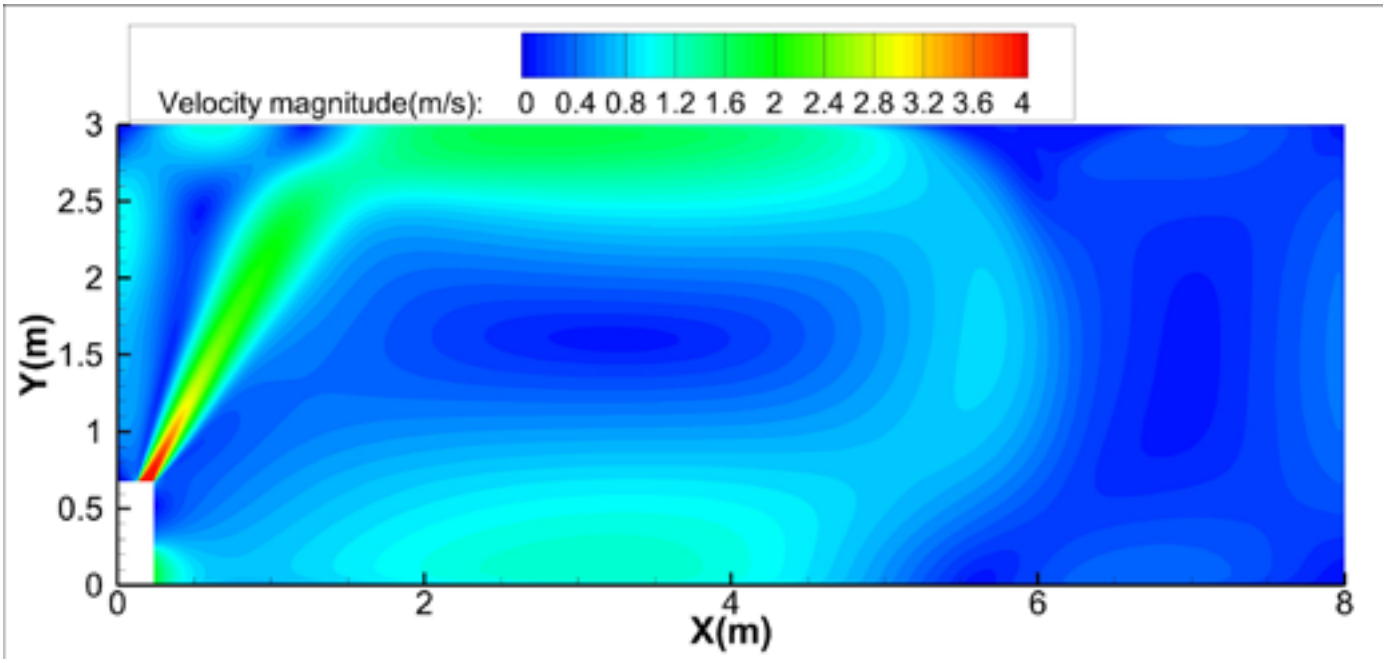

Cooling temperature distributions



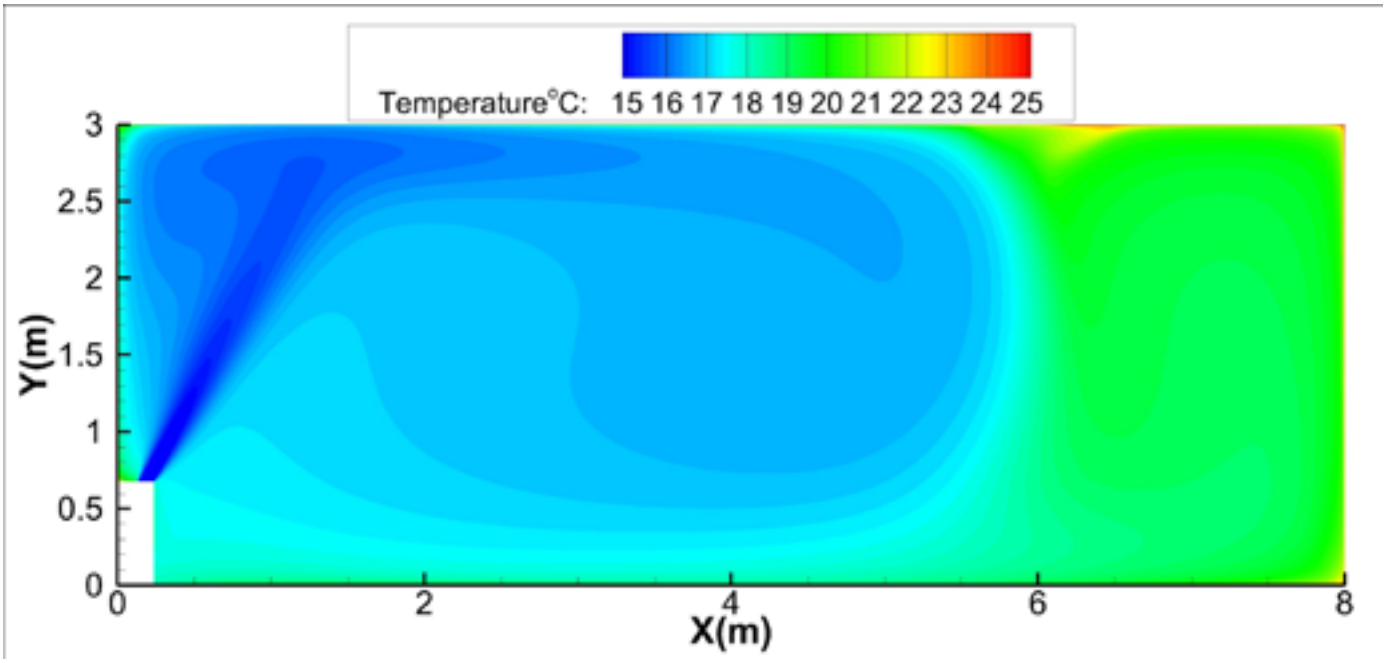
42K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



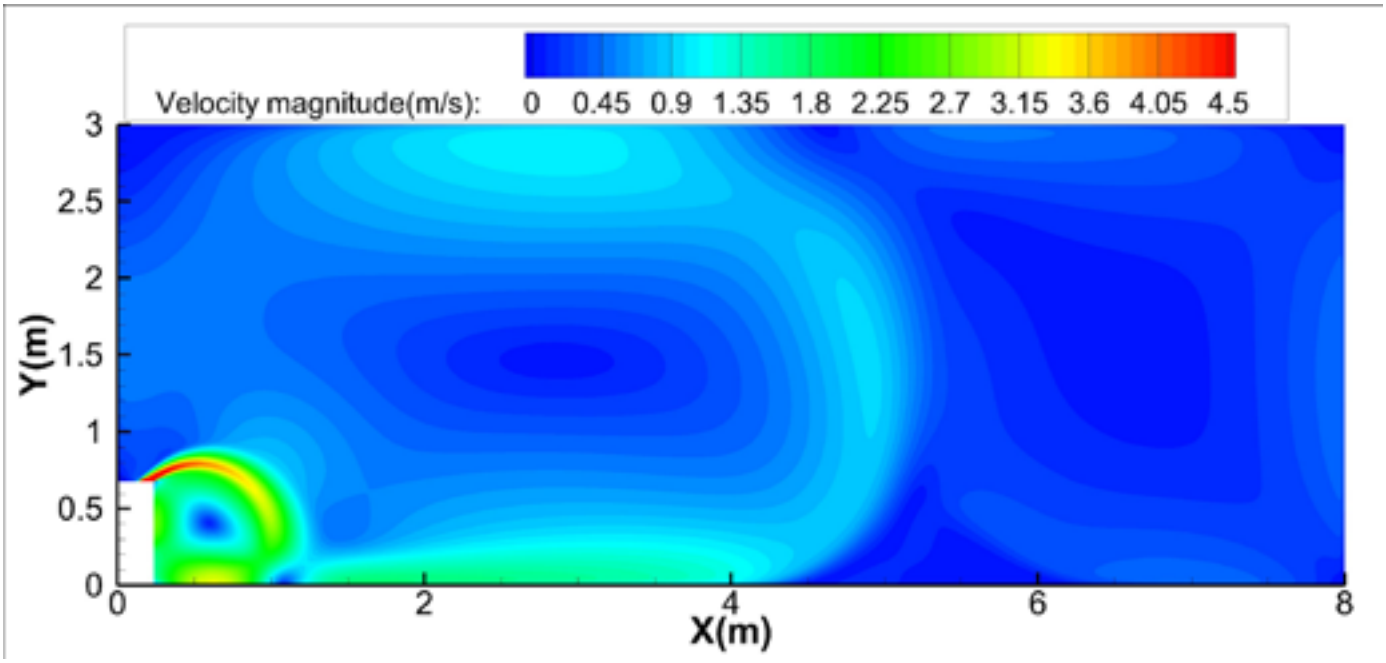

Cooling temperature distributions



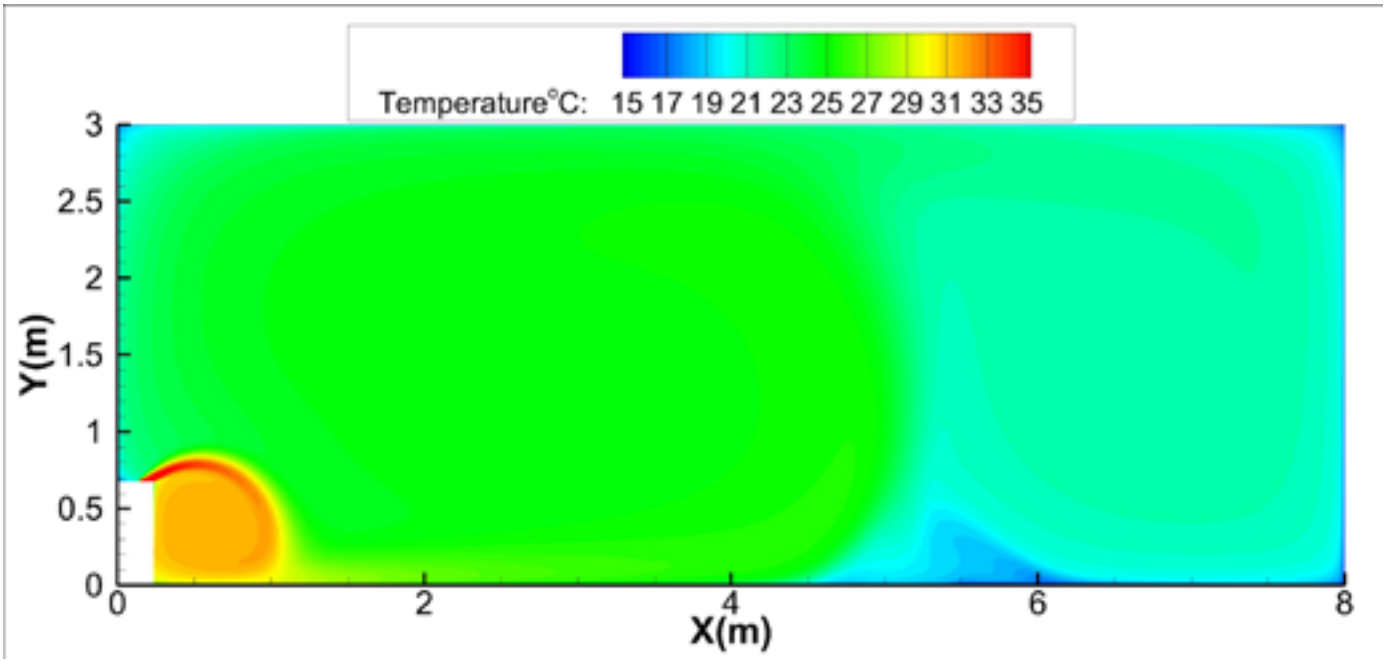
42K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



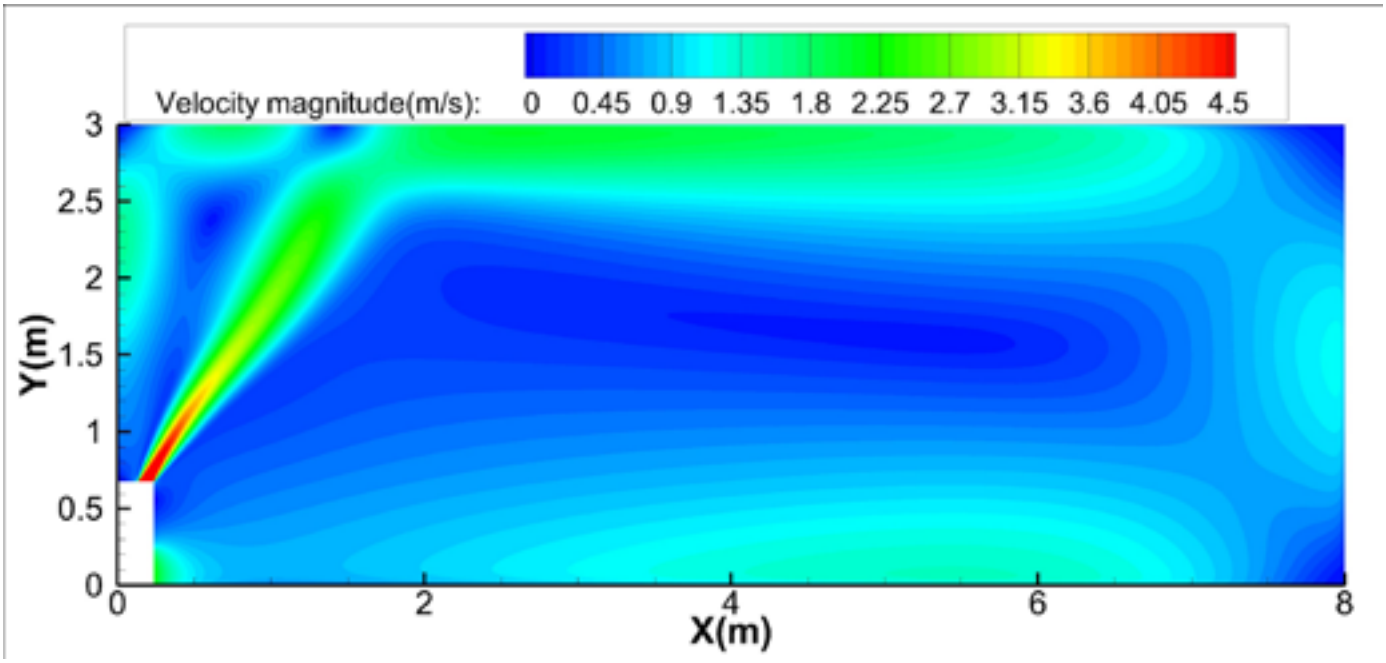

Heating temperature distributions



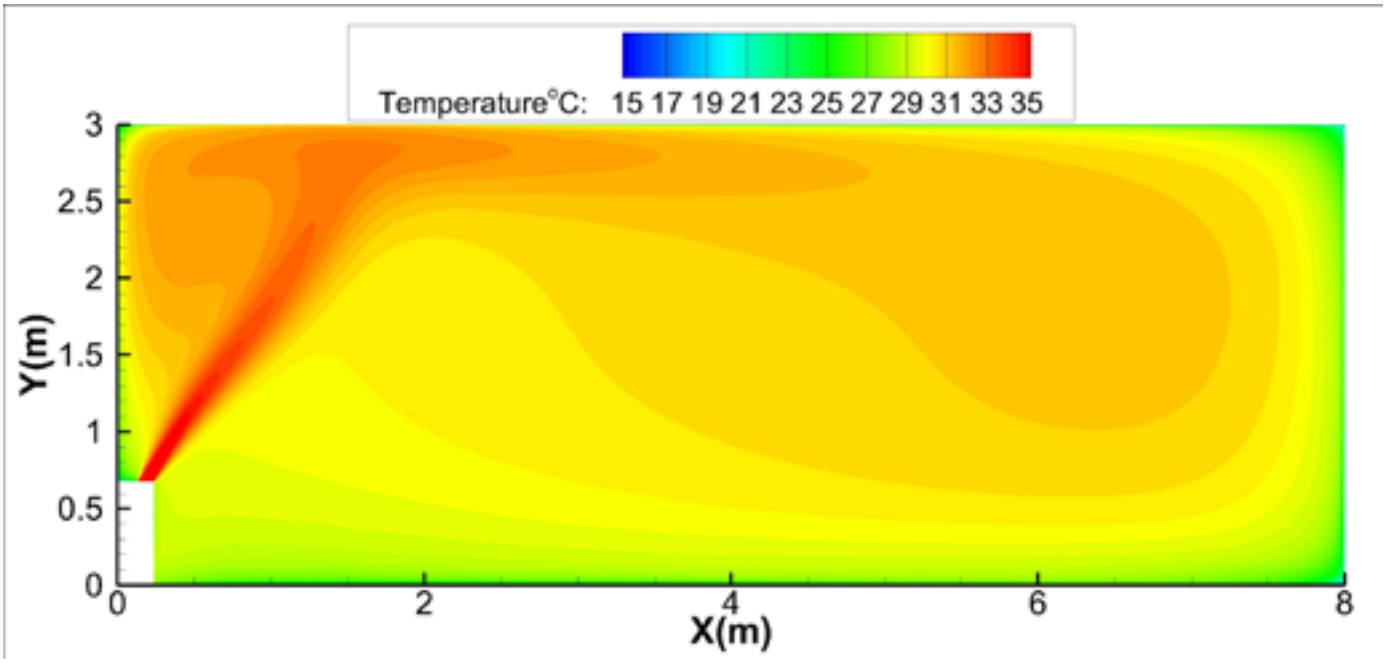
42K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions



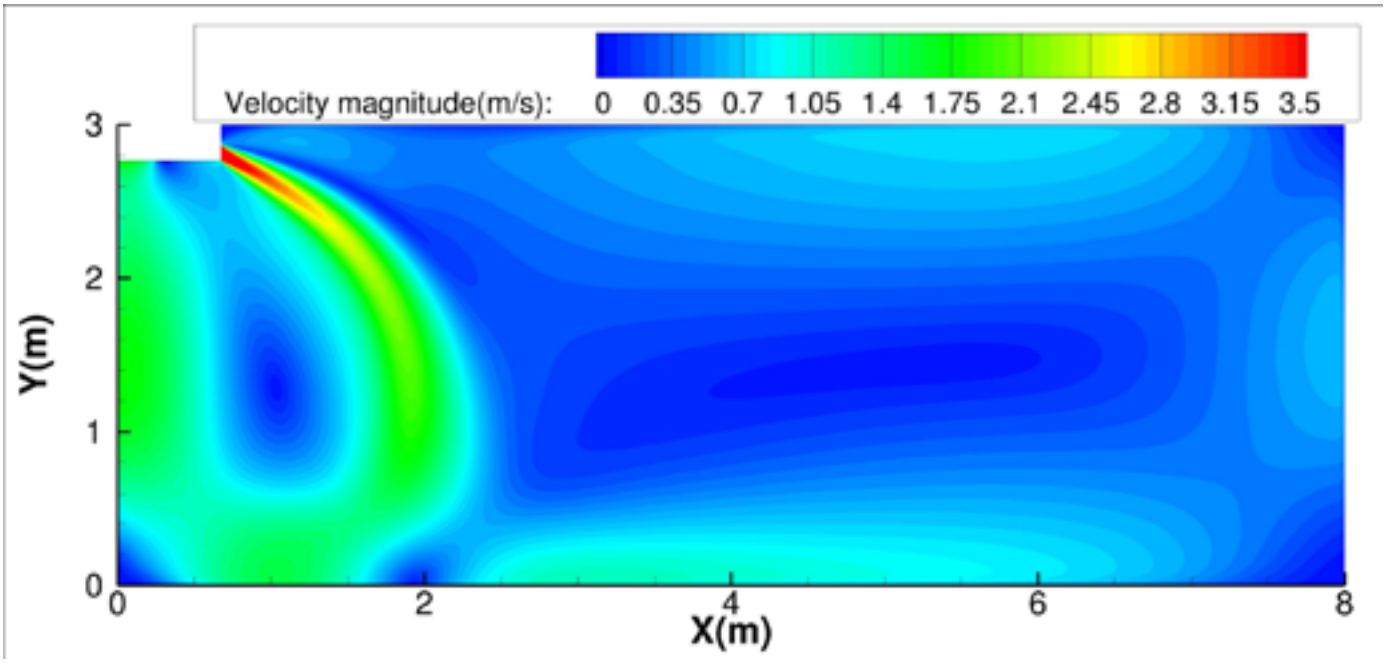

Heating temperature distributions



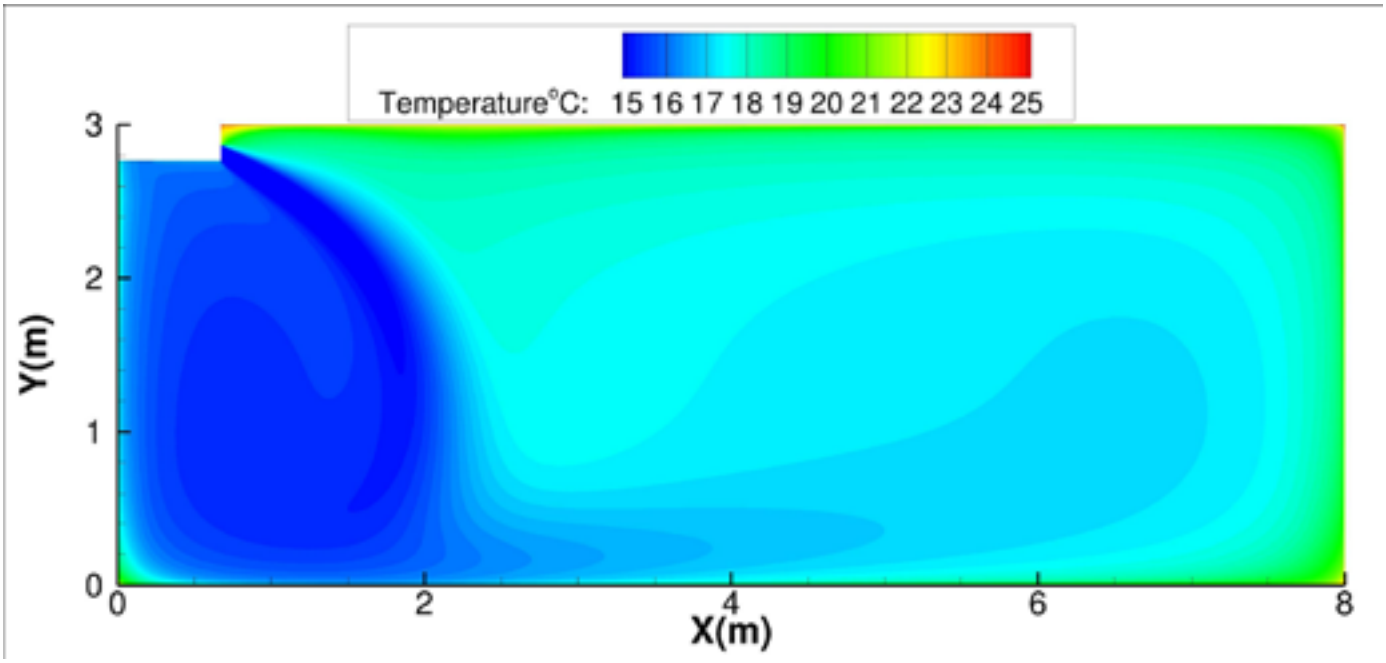
48K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



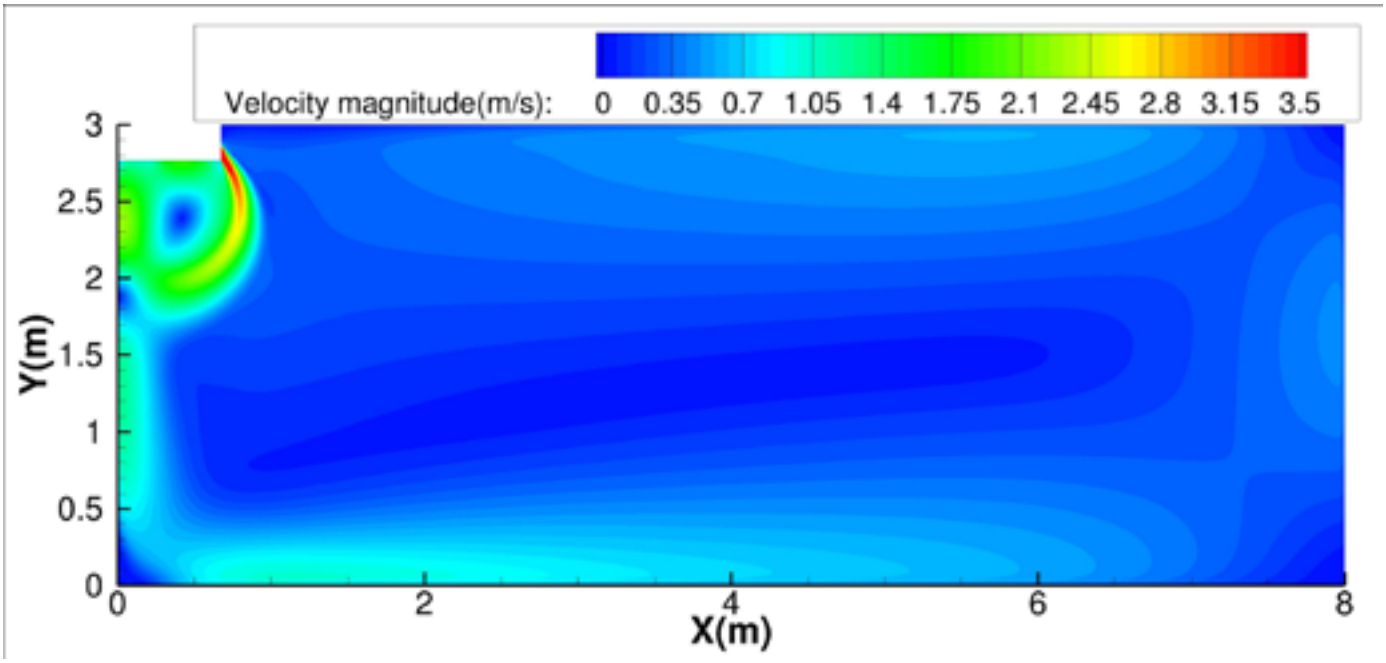

Cooling temperature distributions



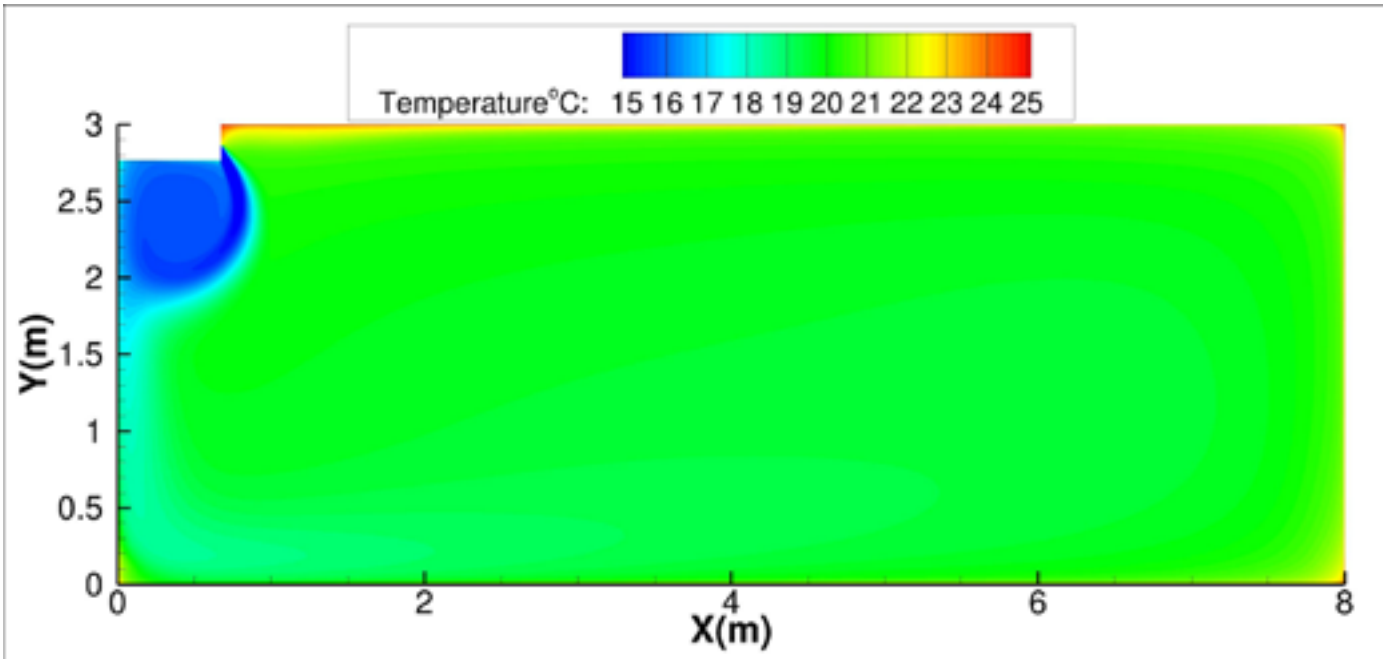
48K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



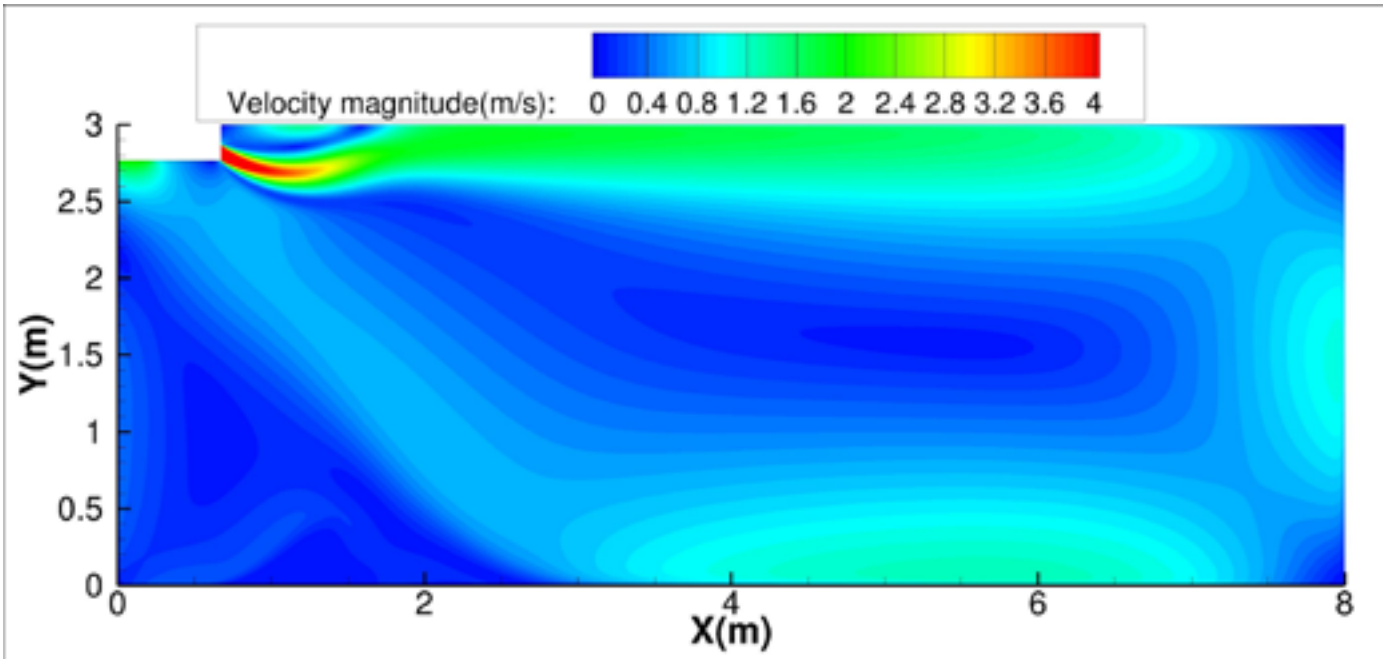

Cooling temperature distributions



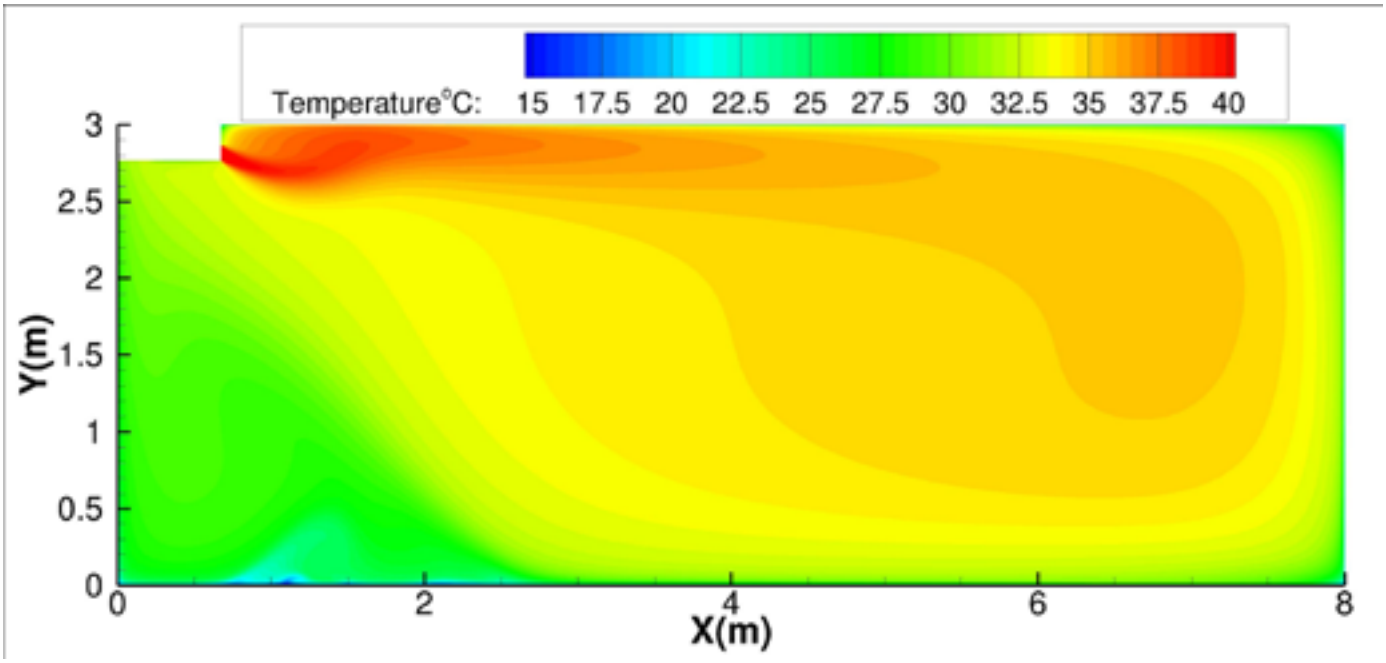
48K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



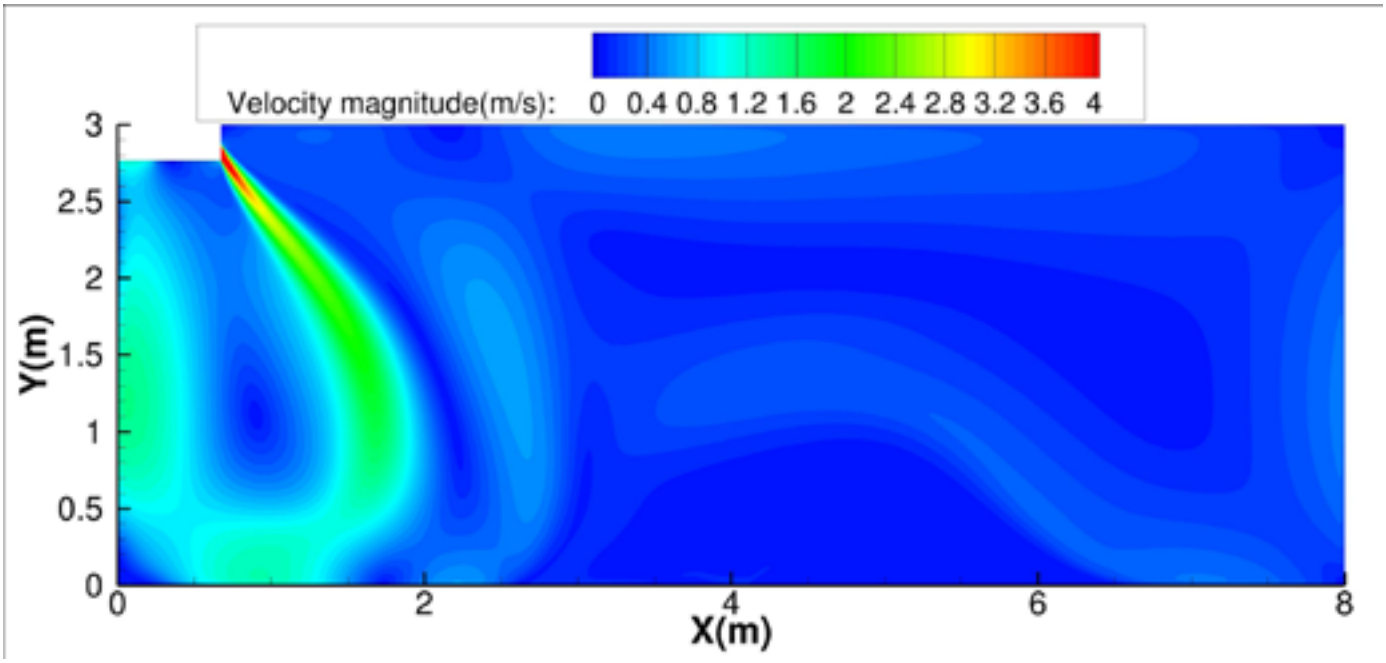

Heating temperature distributions



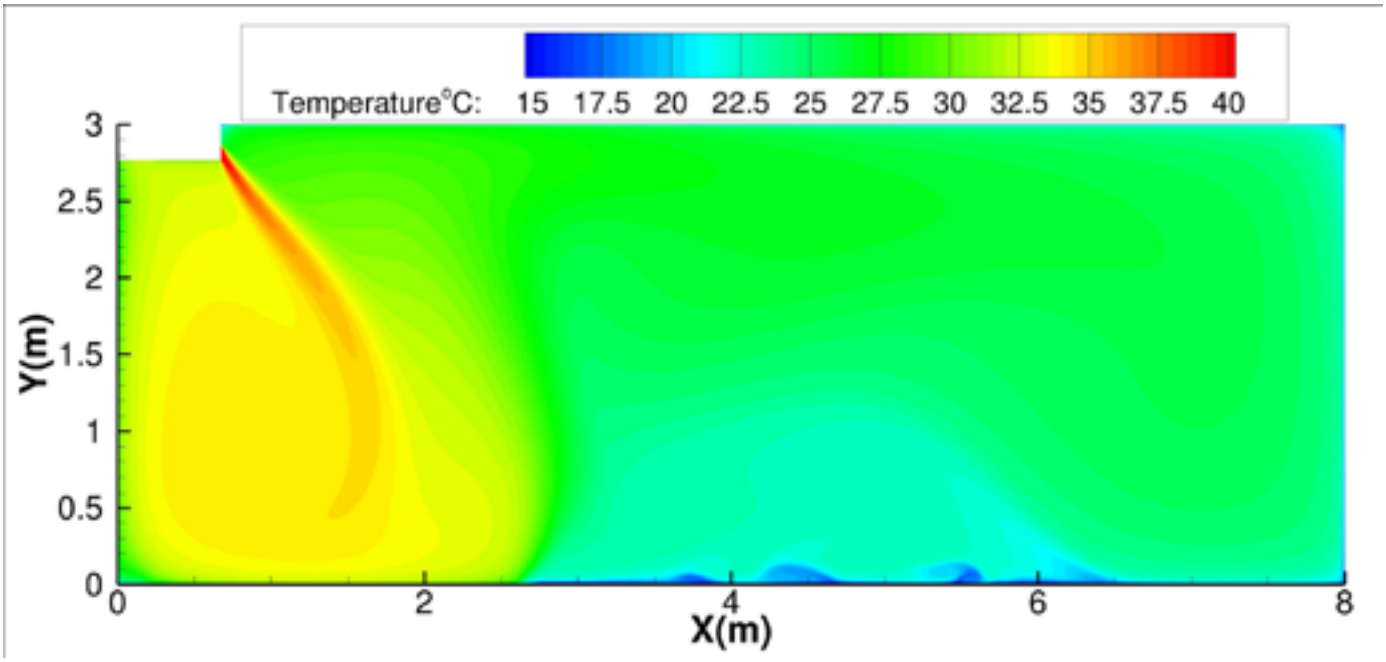
48K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



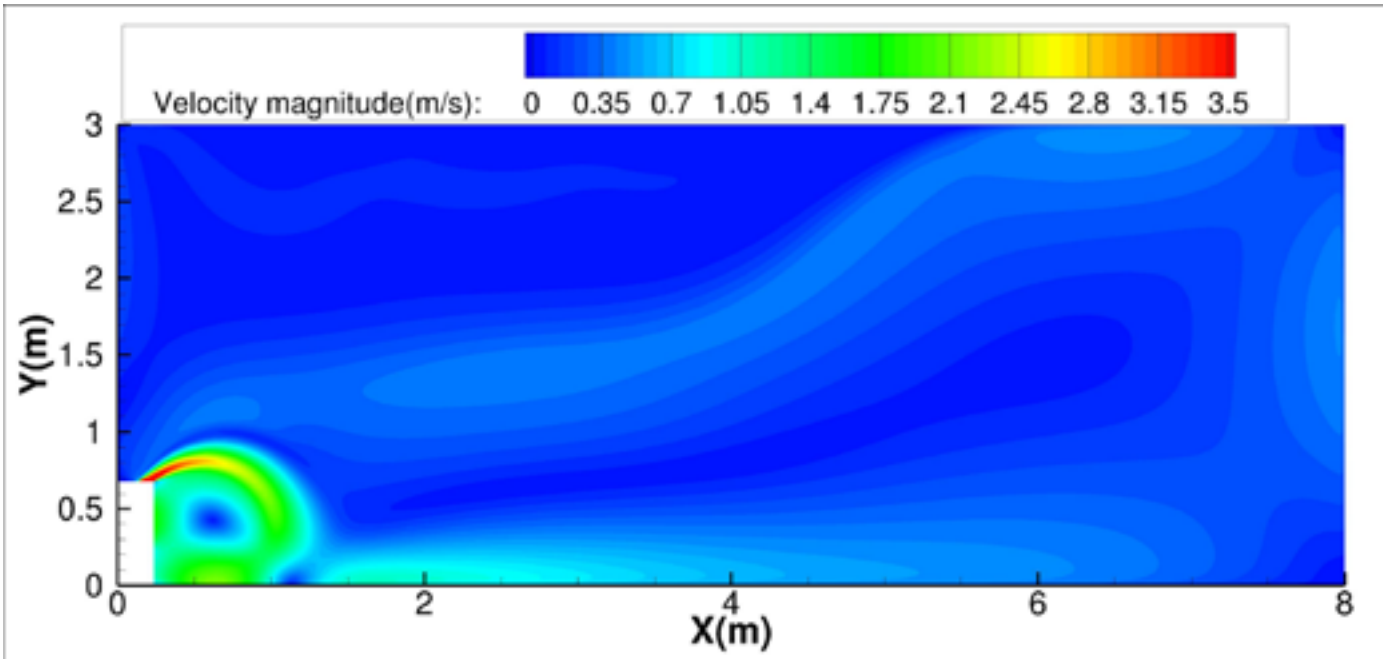

Heating temperature distributions



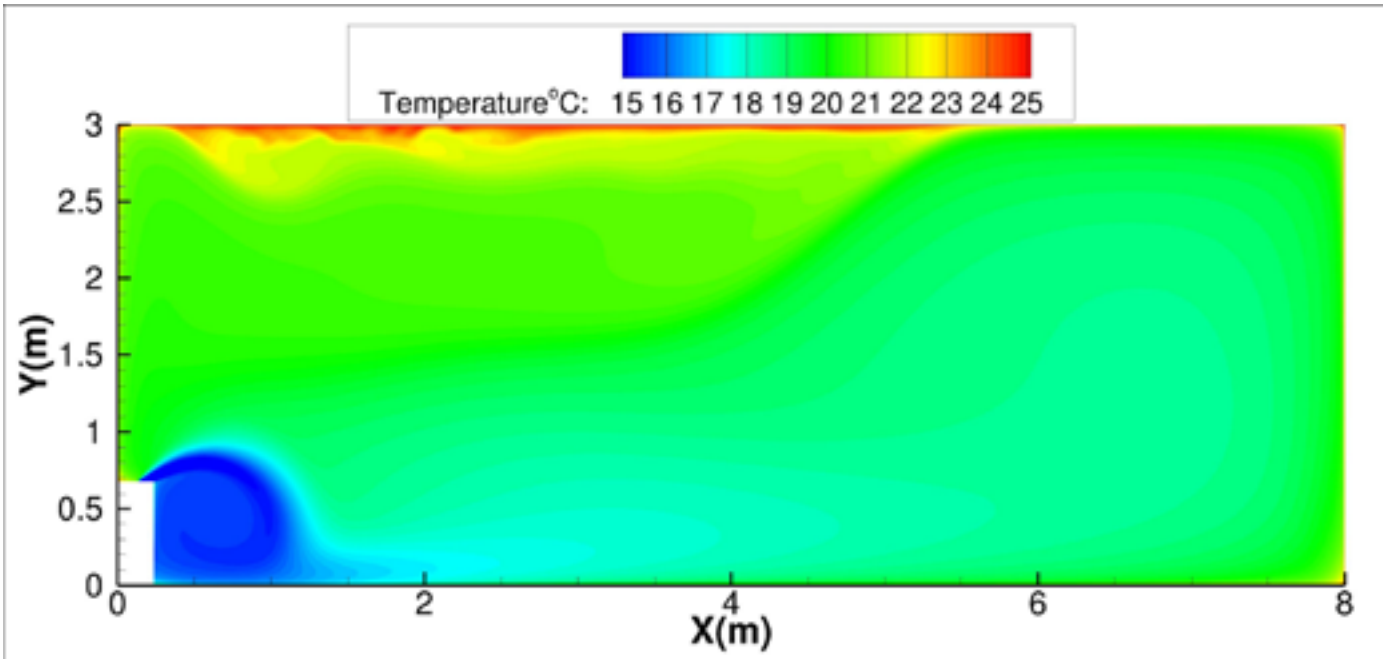
48K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



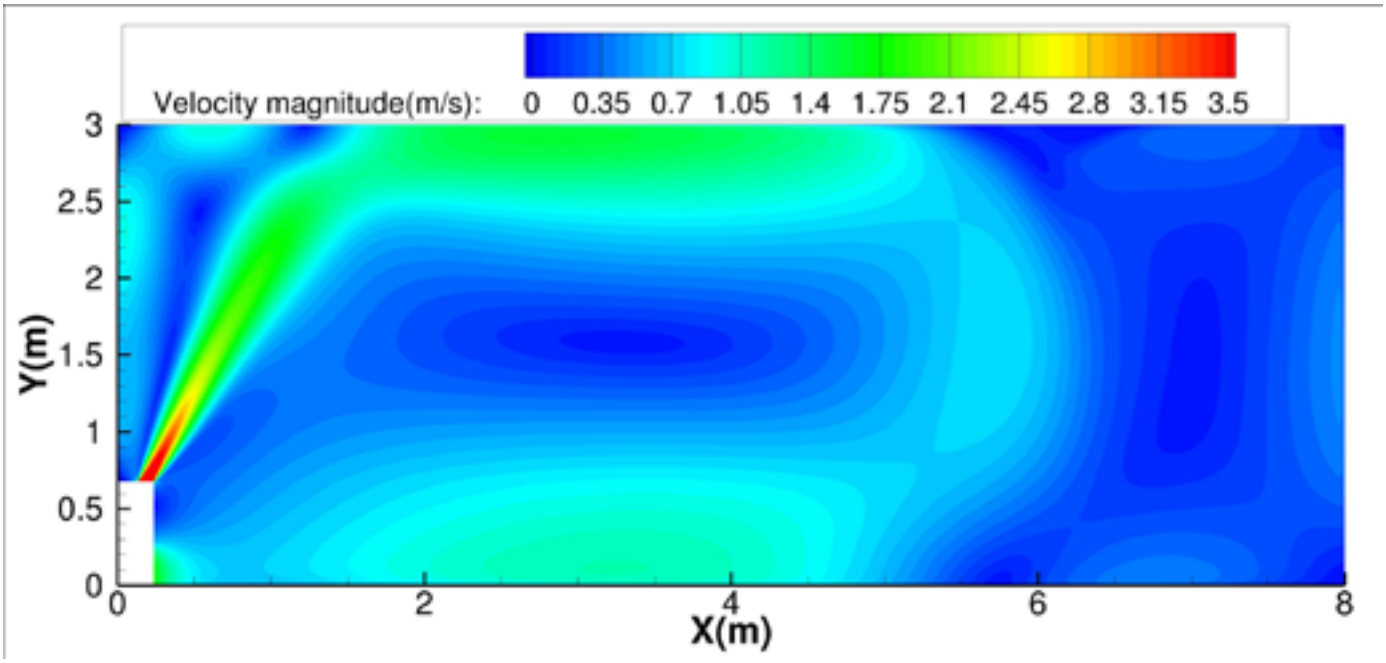

Cooling temperature distributions



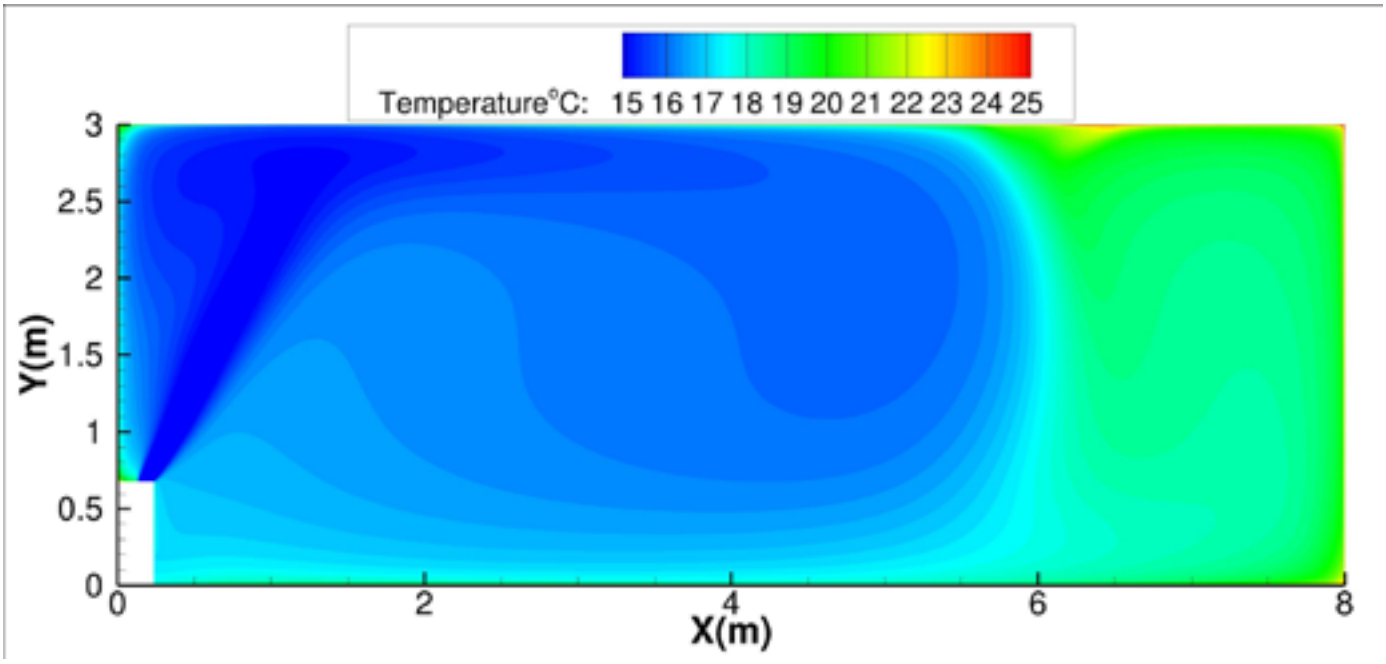
48K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



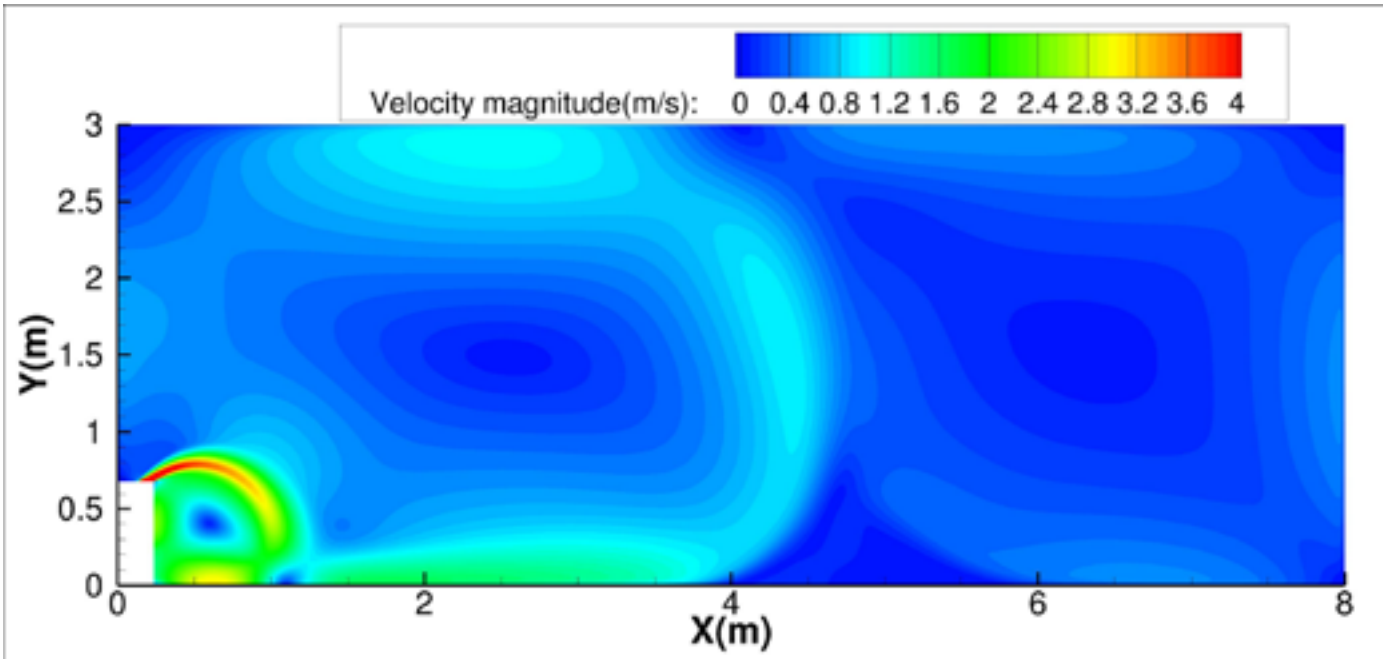

Cooling temperature distributions



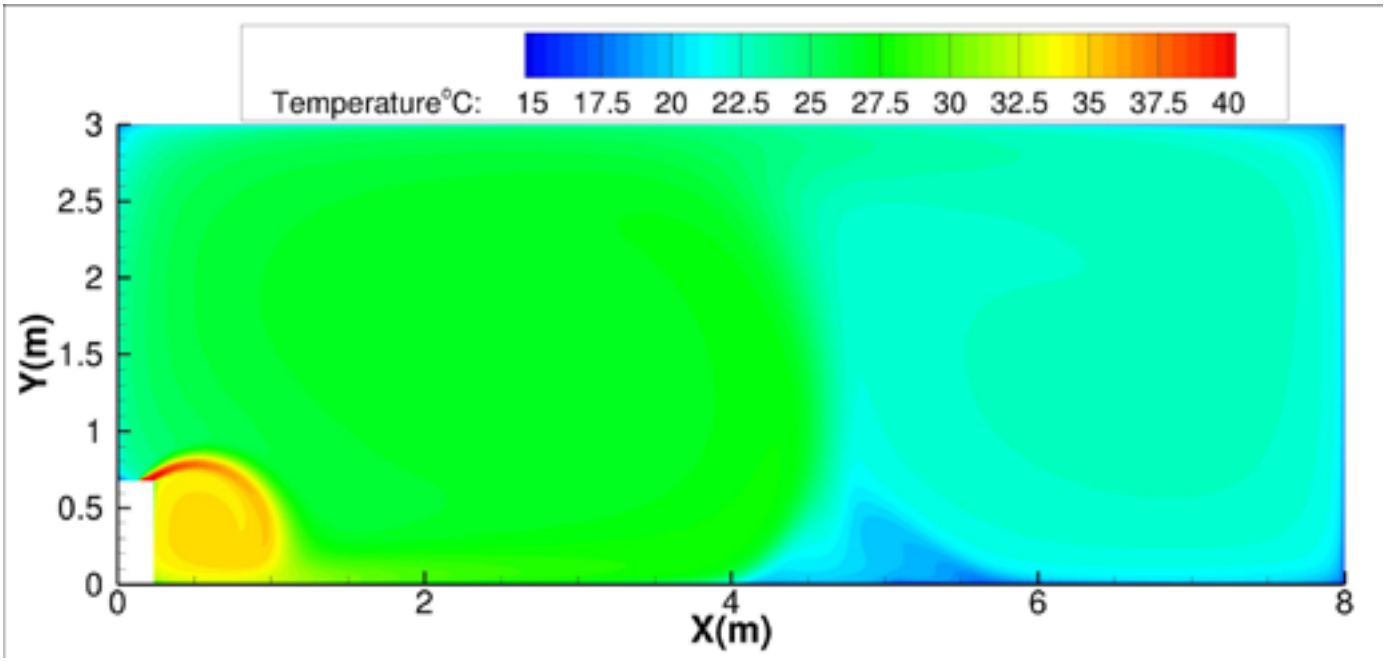
48K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



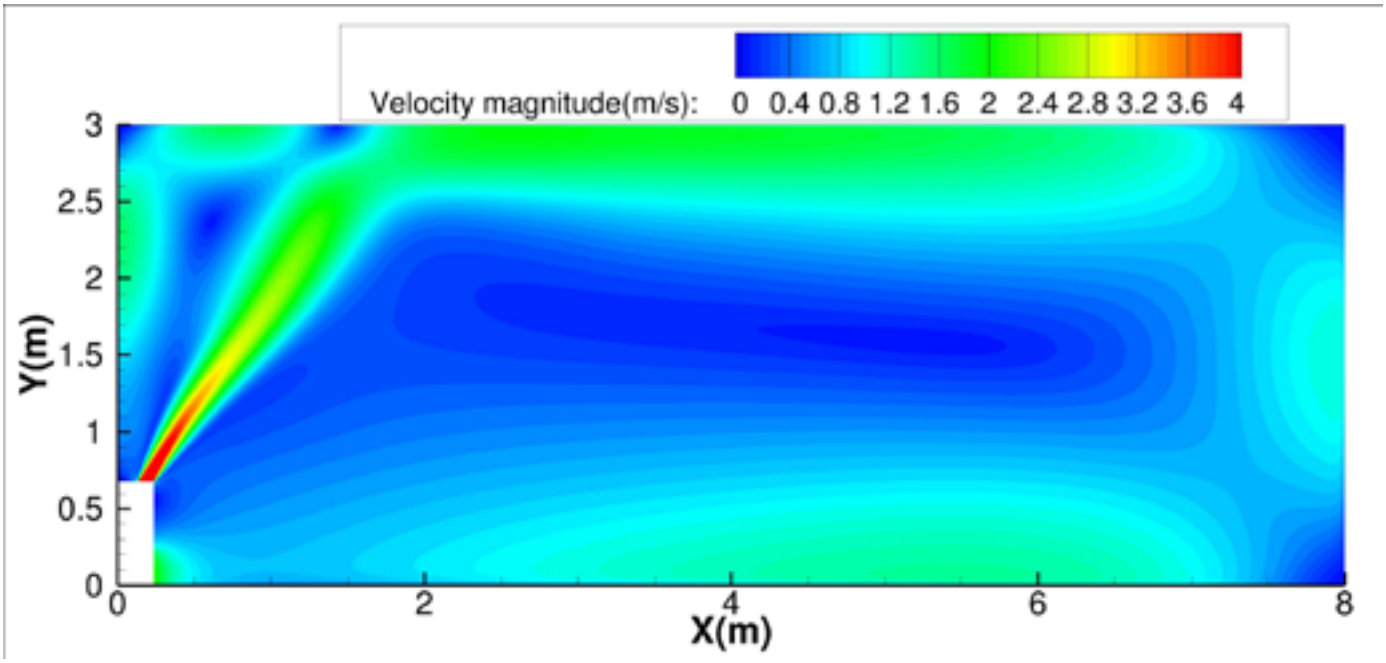

Heating temperature distributions



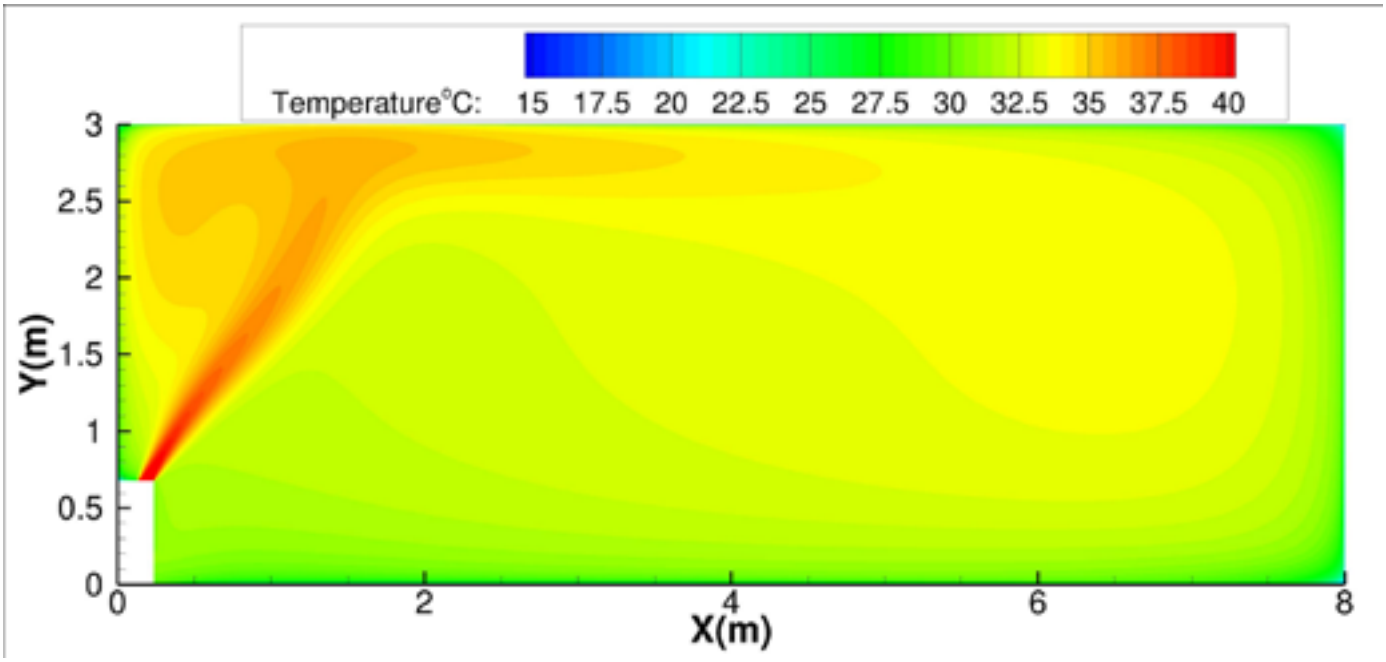
48K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions



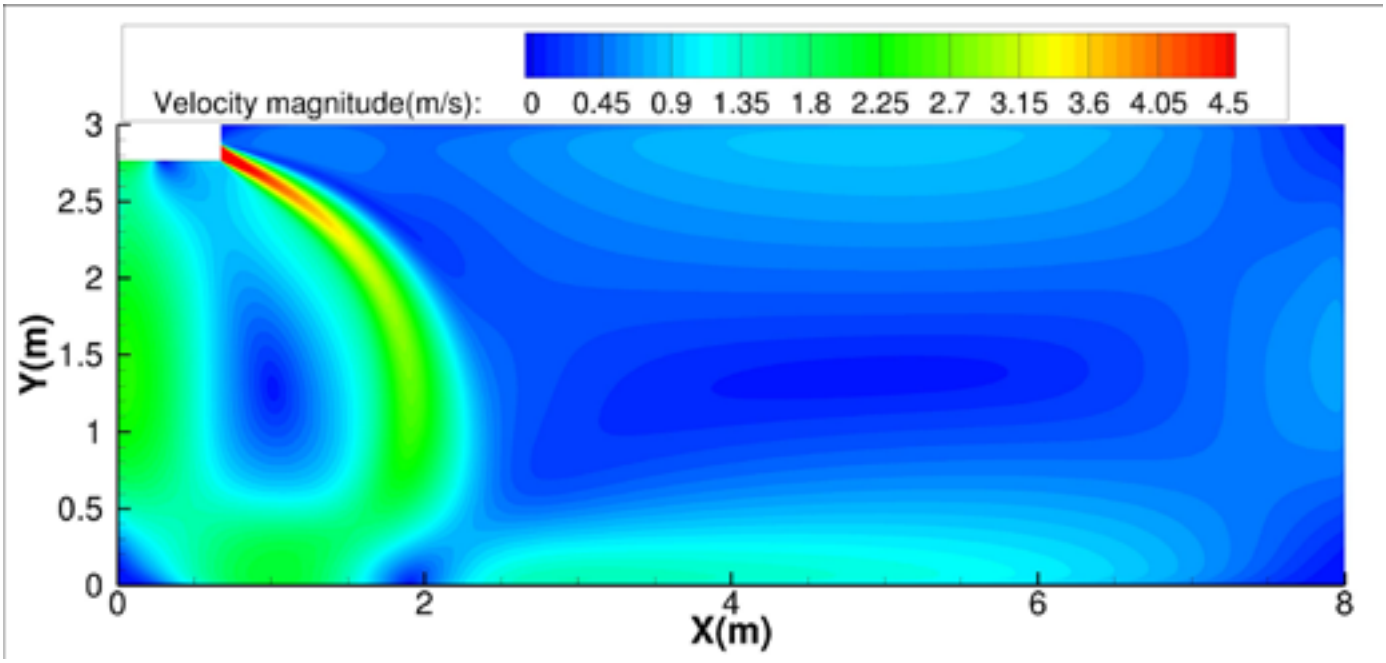

Heating temperature distributions



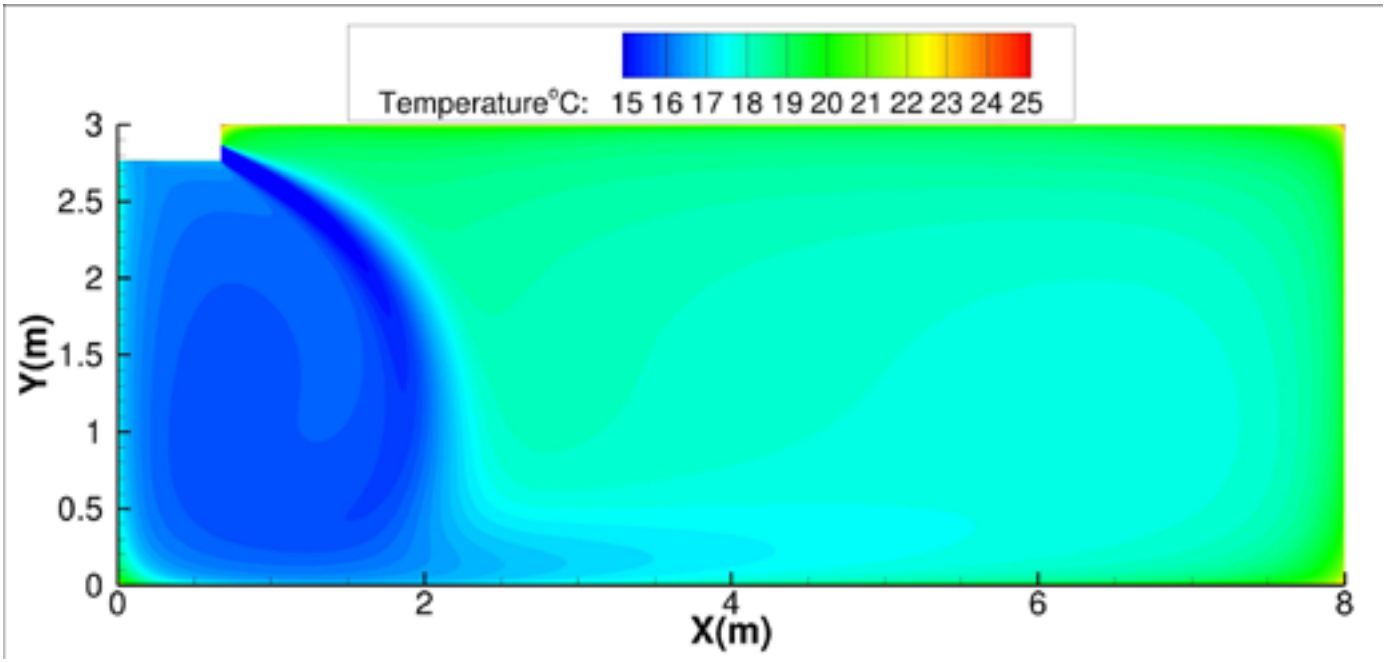
60K-Ceiling installation:

Discharge Angle 30°

Cooling airflow velocity distributions



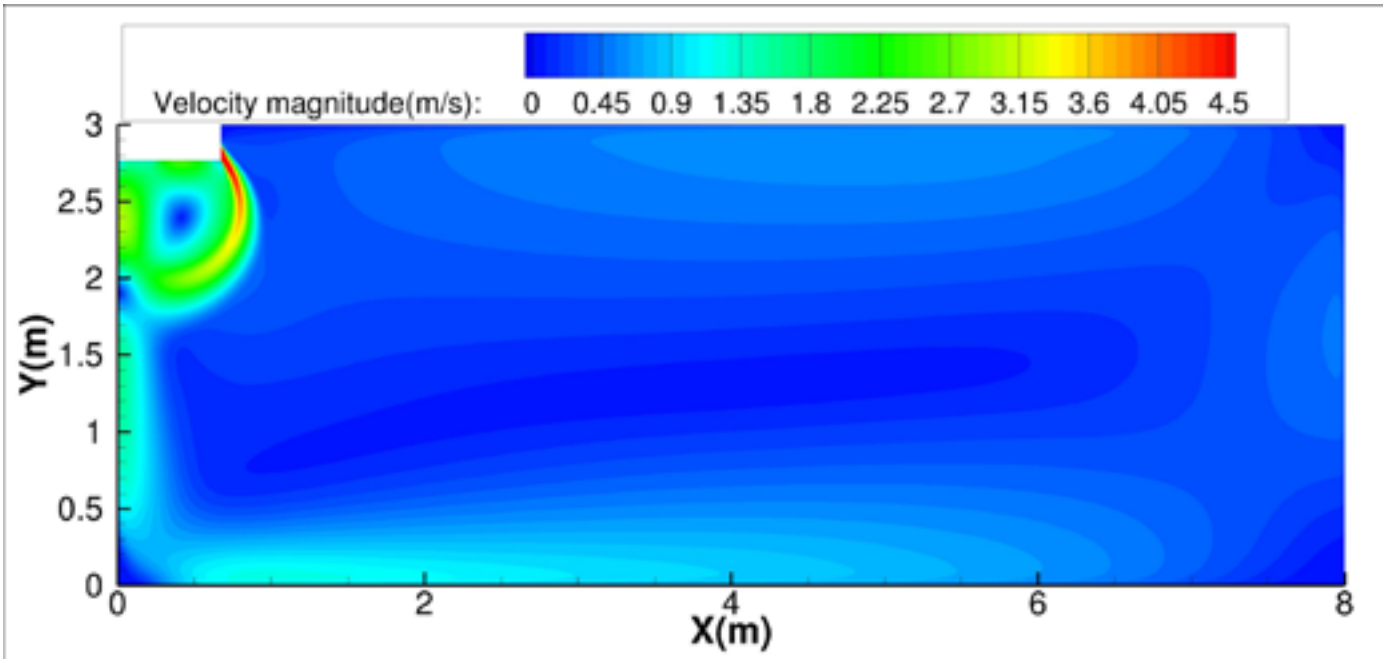

Cooling temperature distributions



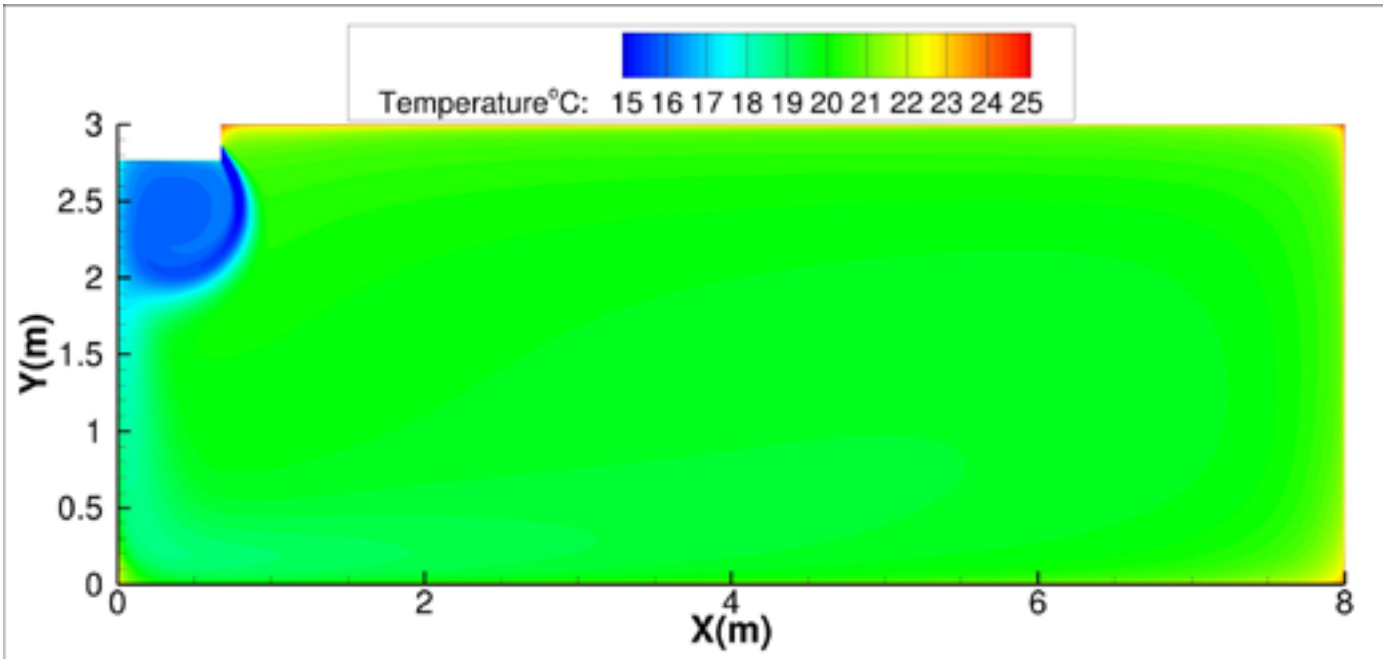
60K-Ceiling installation:

Discharge Angle 60°

Cooling airflow velocity distributions



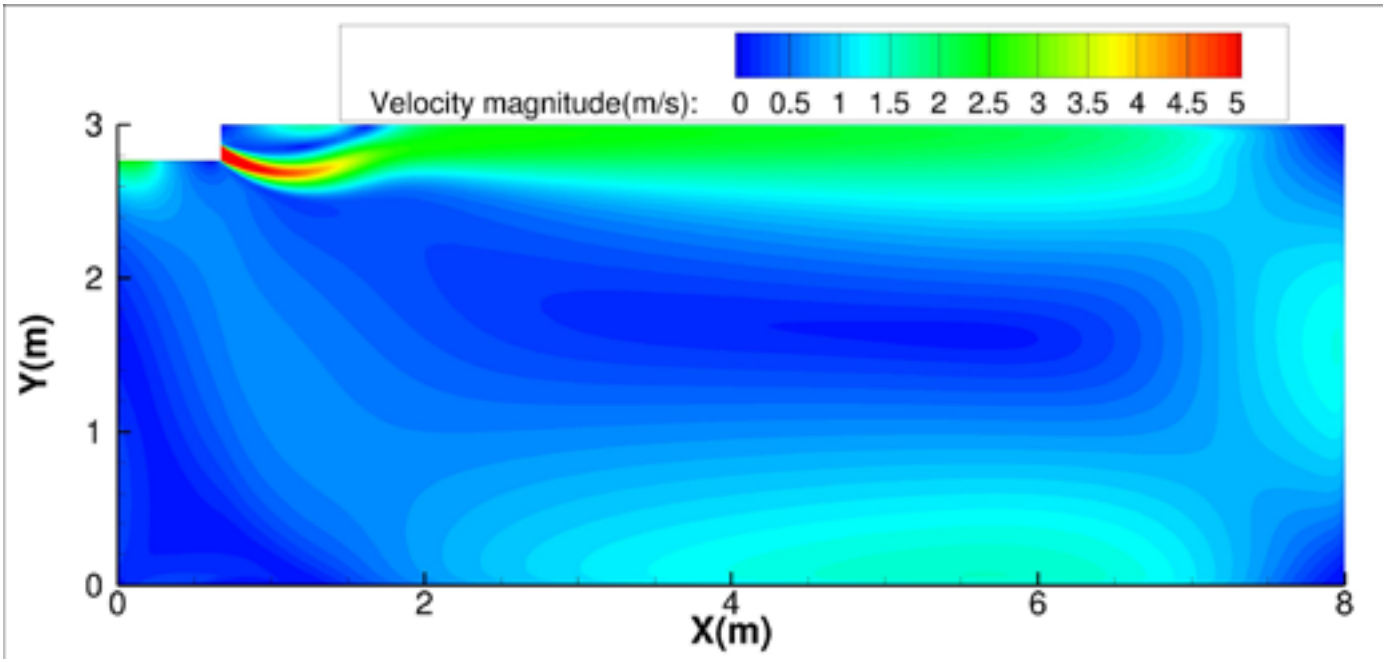

Cooling temperature distributions



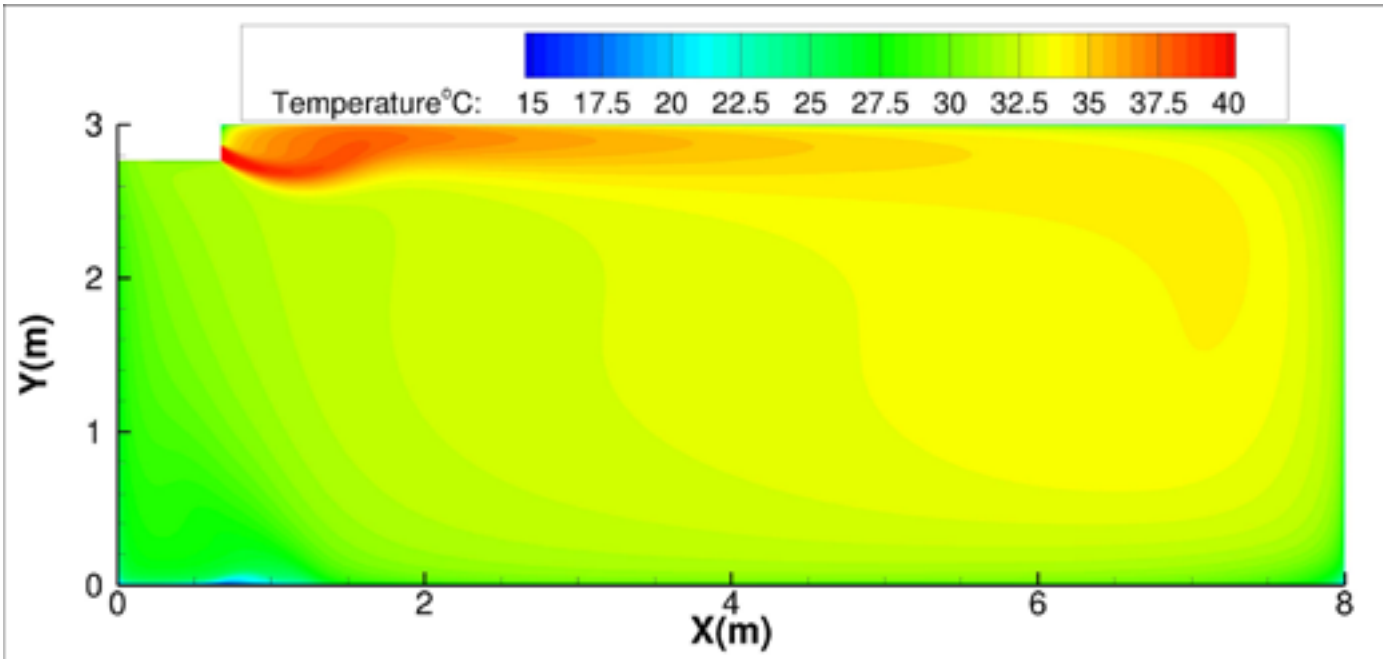
60K-Ceiling installation:

Discharge Angle 30°

Heating airflow velocity distributions



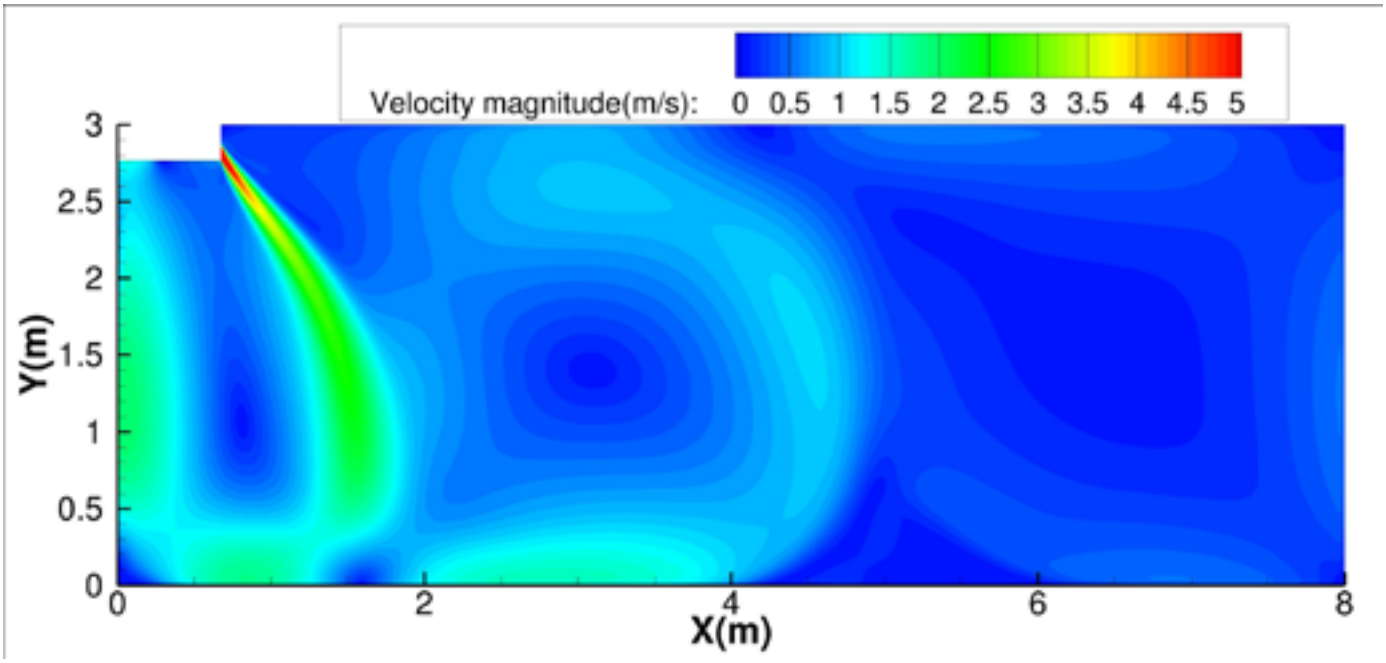

Heating temperature distributions



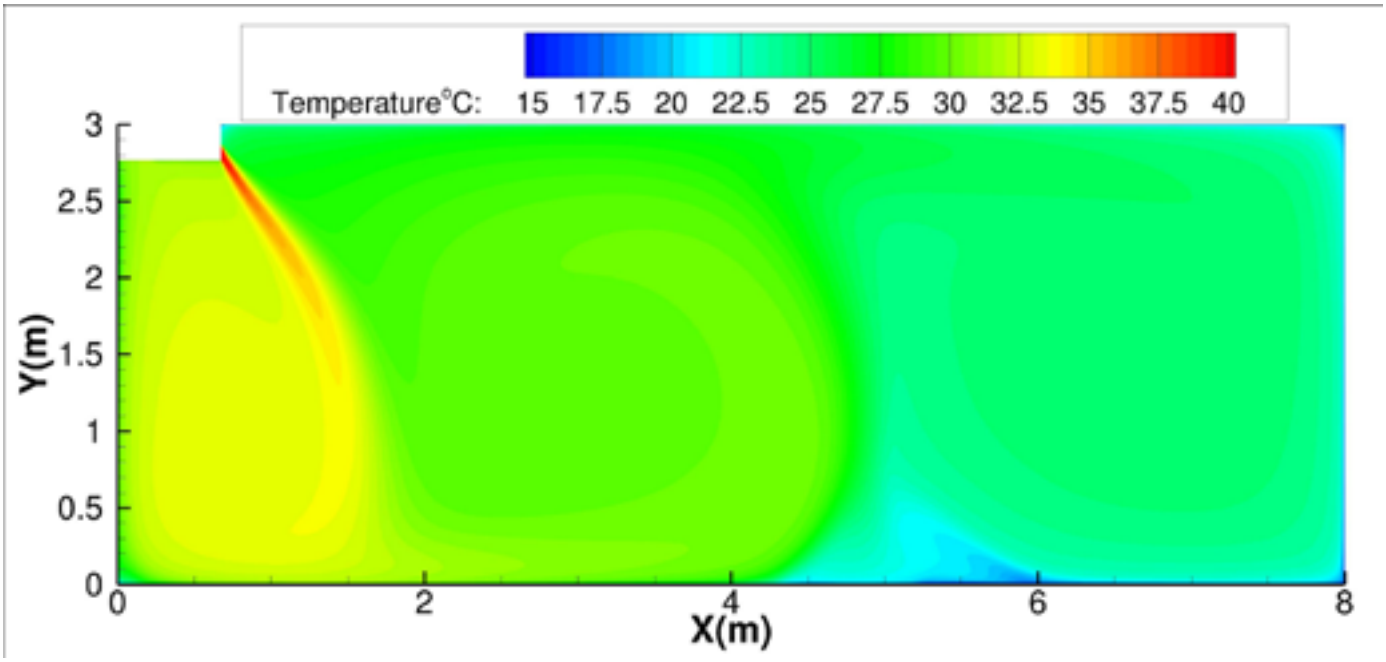
60K-Ceiling installation:

Discharge Angle 60°

Heating airflow velocity distributions



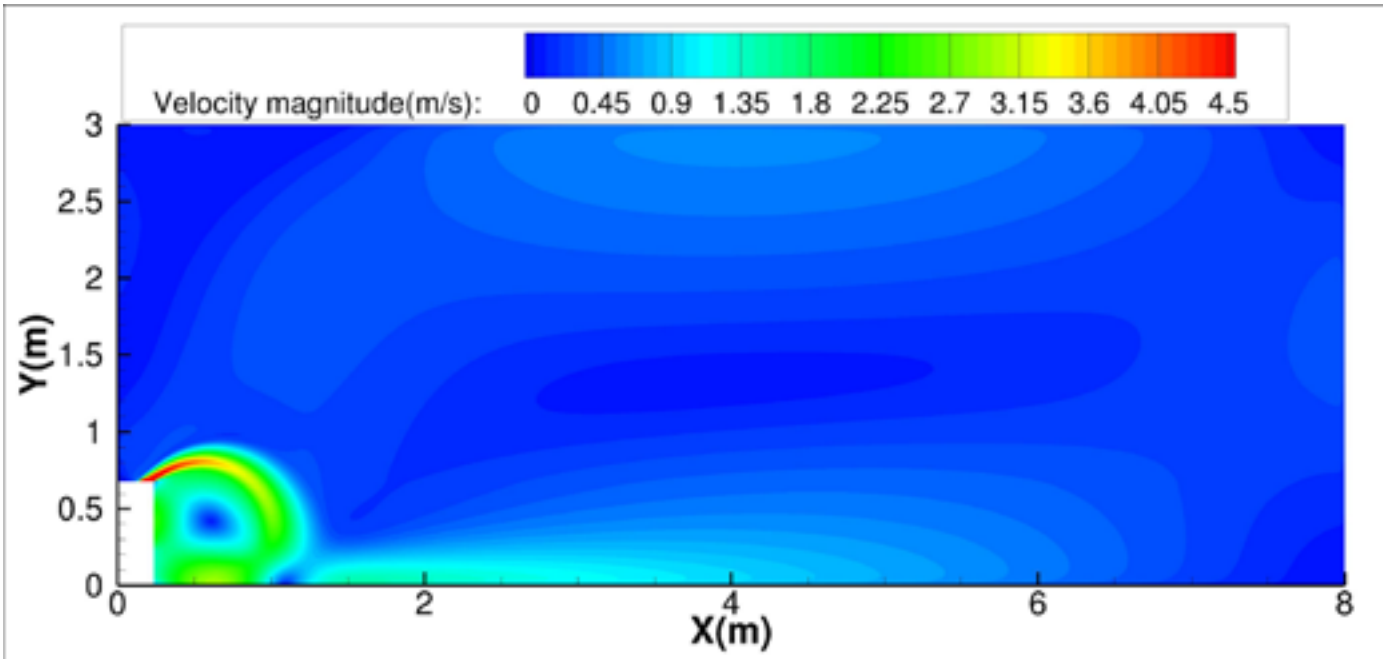

Heating temperature distributions



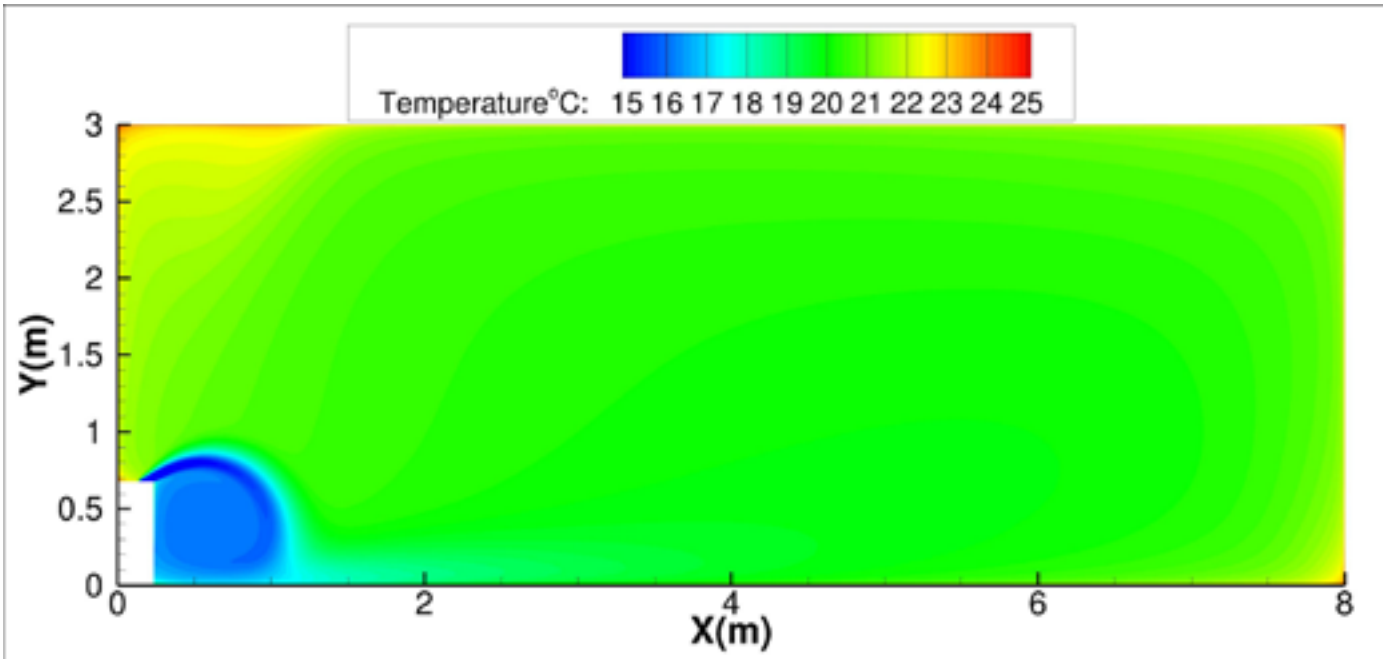
60K-Floor installation:

Discharge Angle 30°

Cooling airflow velocity distributions



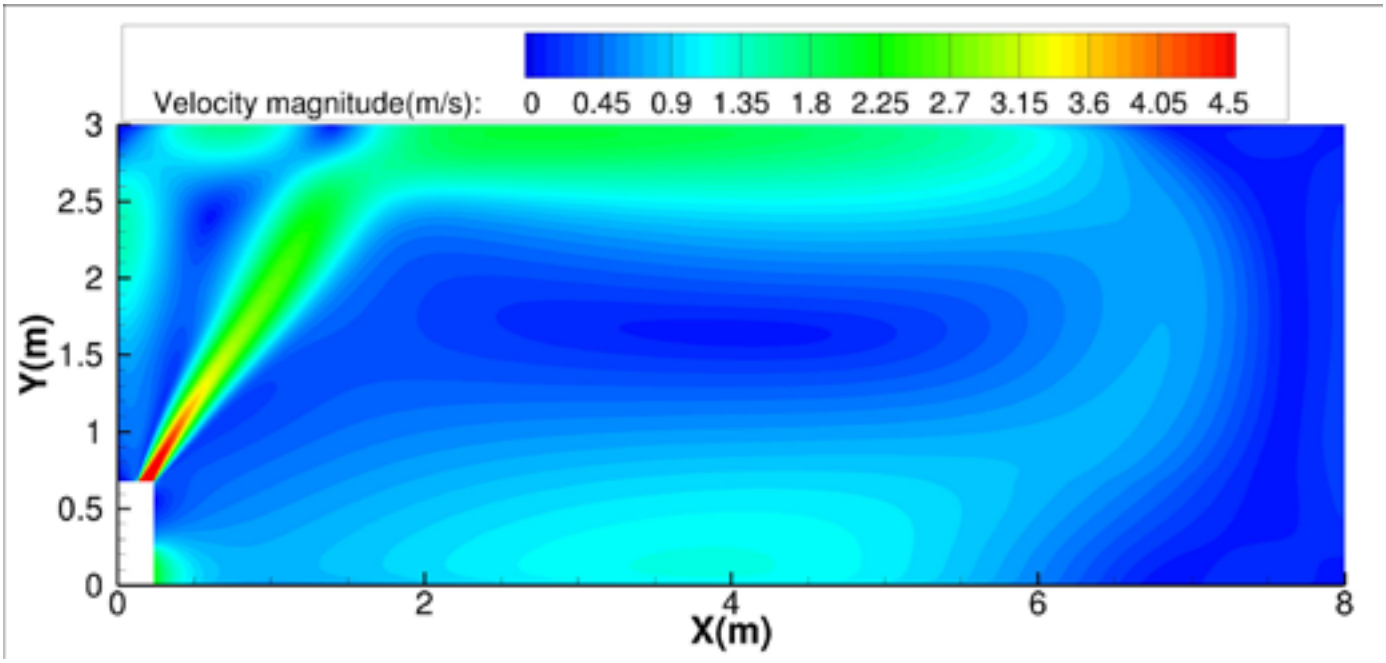

Cooling temperature distributions



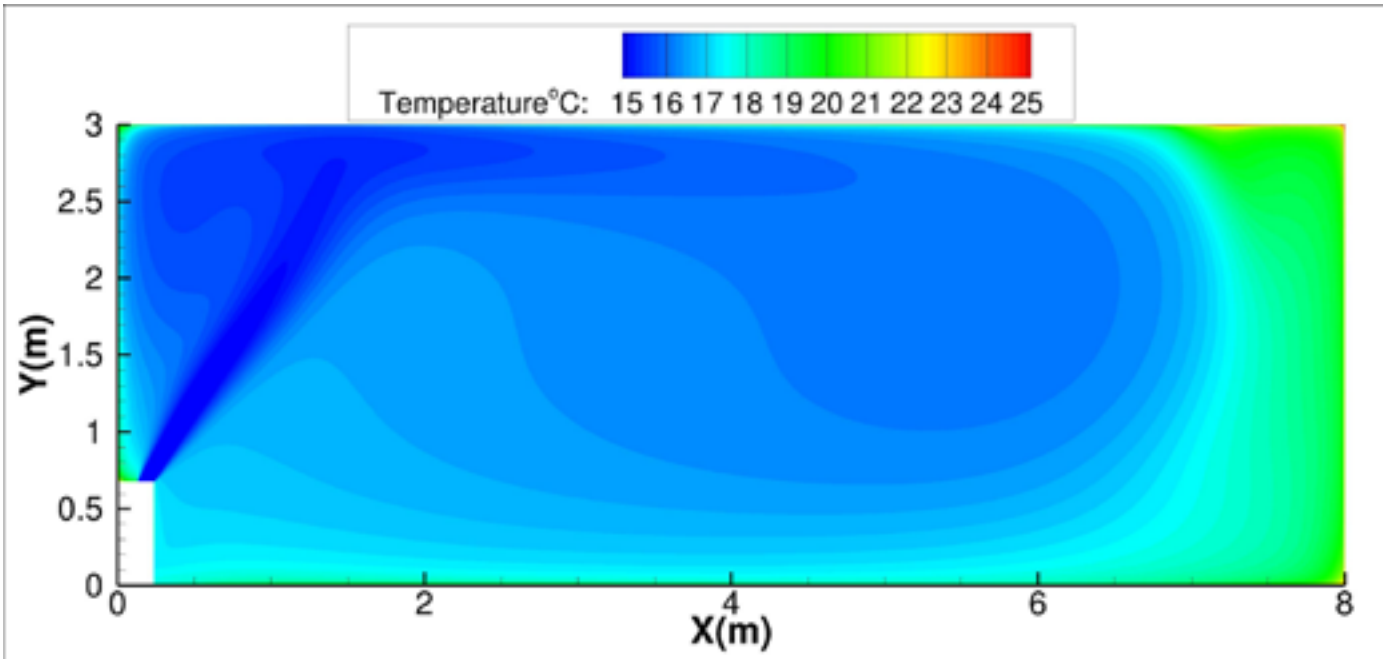
60K-Floor installation:

Discharge Angle 60°

Cooling airflow velocity distributions



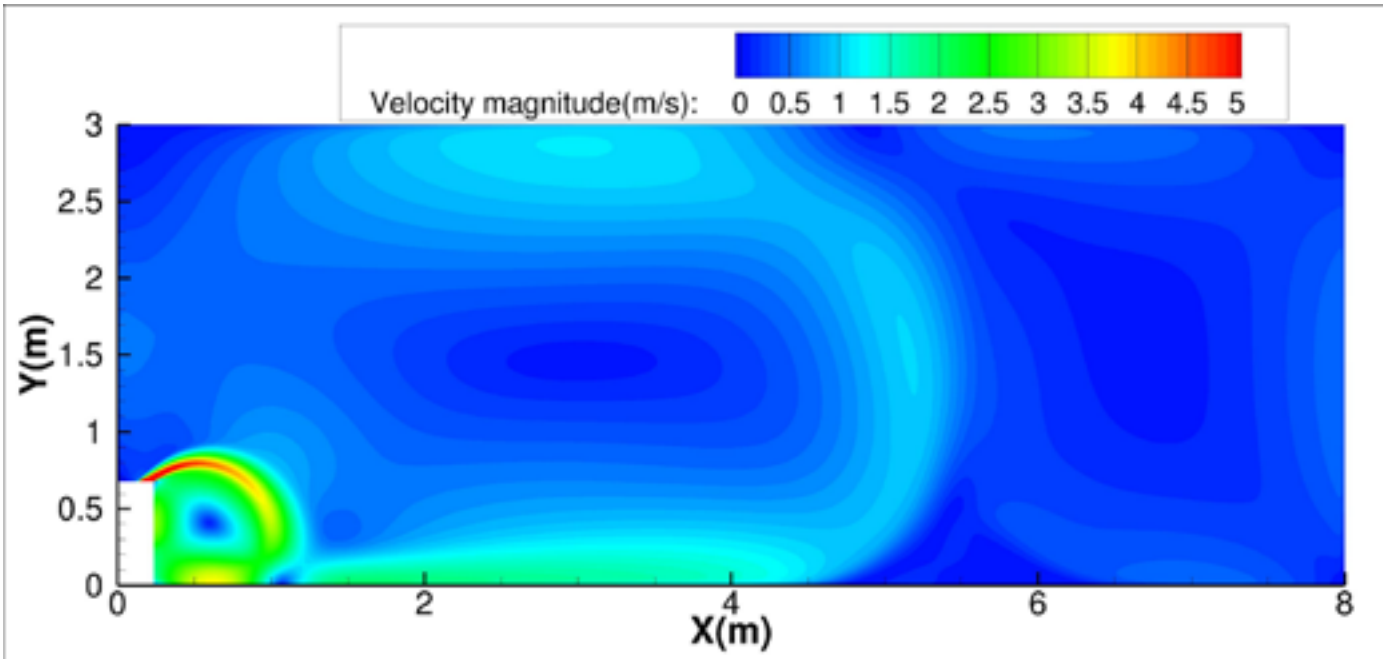

Cooling temperature distributions



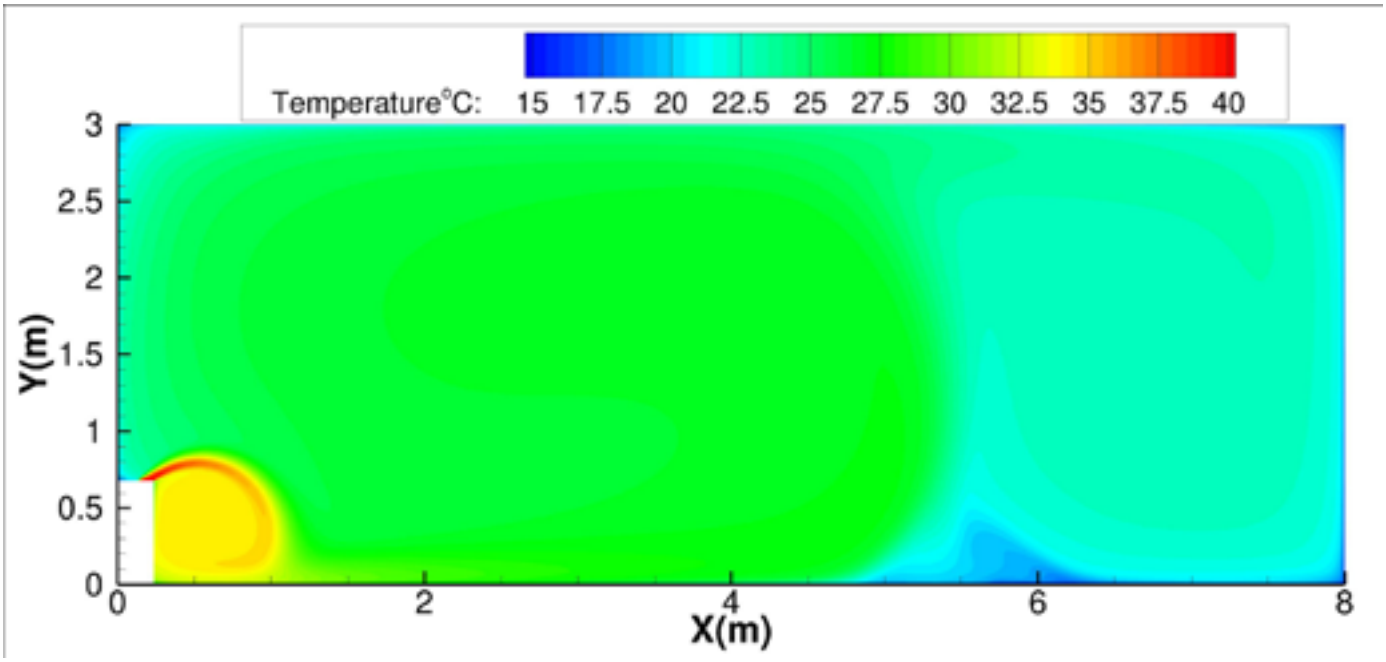
60K-Floor installation:

Discharge Angle 30°

Heating airflow velocity distributions



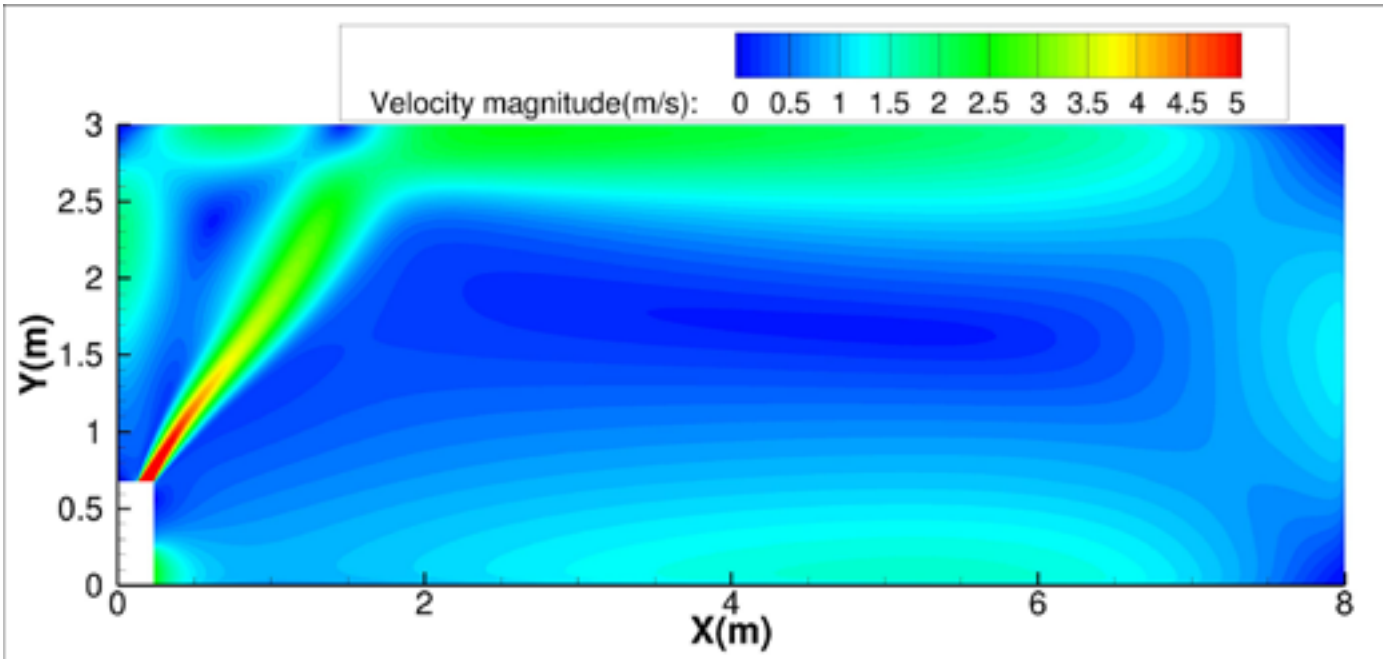

Heating temperature distributions



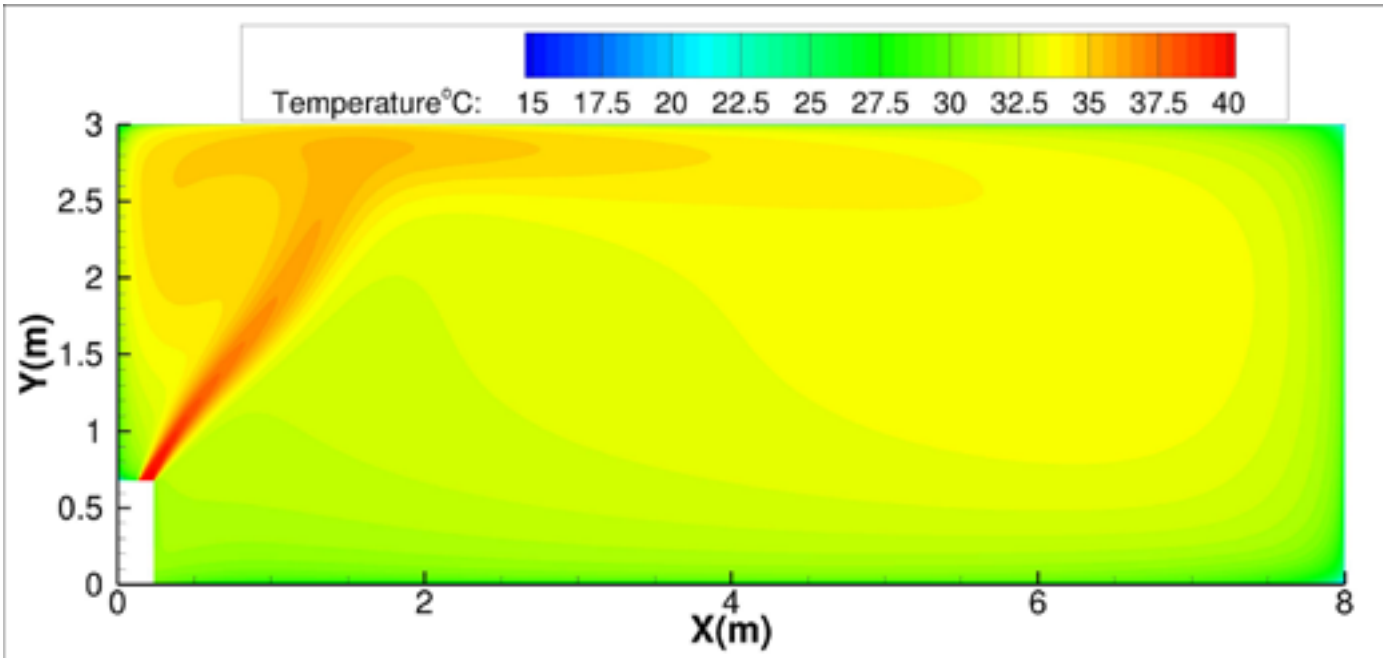
60K-Floor installation:

Discharge Angle 60°

Heating airflow velocity distributions




Heating temperature distributions



# 7. Capacity Tables

## 7.1 Cooling

| 18k | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 723 | -15 | TC | 5.50 | 5.50 | 5.56 | 5.62 | 5.78 | 5.90 | 5.90 | 5.96 | 5.93 | 5.93 | 5.93 | 5.93 | 6.28 | 6.28 | 6.28 | 6.28 |
| | | S/T | 0.70 | 0.79 | 0.88 | 0.97 | 0.57 | 0.65 | 0.73 | 0.82 | 0.50 | 0.58 | 0.66 | 0.74 | 0.35 | 0.42 | 0.49 | 0.57 |
| | | PI | 0.96 | 0.97 | 0.97 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| | -10 | TC | 5.46 | 5.47 | 5.53 | 5.59 | 5.75 | 5.87 | 5.87 | 5.93 | 5.90 | 5.90 | 5.90 | 5.90 | 6.25 | 6.25 | 6.25 | 6.25 |
| | | S/T | 0.71 | 0.80 | 0.88 | 0.97 | 0.57 | 0.65 | 0.74 | 0.82 | 0.50 | 0.58 | 0.66 | 0.75 | 0.35 | 0.43 | 0.49 | 0.57 |
| | | PI | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| | -5 | TC | 5.43 | 5.43 | 5.49 | 5.55 | 5.73 | 5.85 | 5.85 | 5.91 | 5.88 | 5.88 | 5.88 | 5.88 | 6.24 | 6.24 | 6.24 | 6.24 |
| | | S/T | 0.71 | 0.80 | 0.89 | 0.98 | 0.58 | 0.66 | 0.74 | 0.83 | 0.51 | 0.59 | 0.66 | 0.75 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 0.96 | 0.96 | 0.96 | 0.96 | 0.95 | 0.95 | 0.95 | 0.95 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| | 0 | TC | 5.40 | 5.41 | 5.47 | 5.53 | 5.71 | 5.83 | 5.83 | 5.88 | 5.87 | 5.87 | 5.87 | 5.87 | 6.23 | 6.23 | 6.23 | 6.23 |
| | | S/T | 0.72 | 0.80 | 0.89 | 0.98 | 0.58 | 0.66 | 0.74 | 0.83 | 0.51 | 0.59 | 0.67 | 0.75 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.97 | 0.97 | 0.97 | 0.97 |
| | 5 | TC | 5.38 | 5.38 | 5.44 | 5.50 | 5.68 | 5.80 | 5.80 | 5.86 | 5.85 | 5.85 | 5.85 | 5.85 | 6.23 | 6.23 | 6.23 | 6.23 |
| | | S/T | 0.72 | 0.81 | 0.90 | 0.99 | 0.58 | 0.66 | 0.75 | 0.84 | 0.51 | 0.59 | 0.67 | 0.76 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| | 10 | TC | 5.34 | 5.35 | 5.41 | 5.46 | 5.66 | 5.78 | 5.78 | 5.83 | 5.82 | 5.82 | 5.82 | 5.82 | 6.21 | 6.21 | 6.21 | 6.21 |
| | | S/T | 0.72 | 0.81 | 0.90 | 0.99 | 0.58 | 0.67 | 0.75 | 0.84 | 0.51 | 0.59 | 0.67 | 0.76 | 0.36 | 0.44 | 0.50 | 0.58 |
| | | PI | 0.99 | 0.99 | 0.99 | 0.99 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.99 | 0.99 | 0.99 | 0.99 |
| | 15 | TC | 5.30 | 5.30 | 5.36 | 5.42 | 5.62 | 5.74 | 5.74 | 5.80 | 5.79 | 5.79 | 5.79 | 5.79 | 6.19 | 6.19 | 6.19 | 6.19 |
| | | S/T | 0.73 | 0.82 | 0.91 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.68 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 1.01 | 1.01 | 1.01 | 1.01 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 | 1.01 |
| | 20 | TC | 5.24 | 5.24 | 5.30 | 5.36 | 5.56 | 5.56 | 5.56 | 5.56 | 5.73 | 5.73 | 5.73 | 5.73 | 6.13 | 6.13 | 6.13 | 6.13 |
| | | S/T | 0.73 | 0.82 | 0.91 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.68 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 1.05 | 1.05 | 1.05 | 1.05 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| | 25 | TC | 4.99 | 4.99 | 5.04 | 5.10 | 5.30 | 5.30 | 5.30 | 5.30 | 5.47 | 5.47 | 5.47 | 5.47 | 5.87 | 5.87 | 5.87 | 5.87 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 | 1.16 |
| | 30 | TC | 4.76 | 4.76 | 4.81 | 4.87 | 5.07 | 5.07 | 5.07 | 5.07 | 5.22 | 5.22 | 5.22 | 5.22 | 5.62 | 5.62 | 5.62 | 5.62 |
| | | S/T | 0.75 | 0.86 | 0.95 | 1.00 | 0.59 | 0.69 | 0.79 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.26 | 1.27 | 1.27 | 1.27 | 1.27 |
| | 35 | TC | 4.53 | 4.53 | 4.59 | 4.64 | 4.81 | 4.81 | 4.81 | 4.87 | 4.96 | 4.96 | 5.04 | 4.96 | 5.36 | 5.36 | 5.36 | 5.36 |
| | | S/T | 0.77 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.90 | 0.52 | 0.62 | 0.71 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 1.38 | 1.38 | 1.38 | 1.38 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.39 | 1.40 | 1.40 | 1.40 | 1.40 |
| | 40 | TC | 4.23 | 4.24 | 4.28 | 4.33 | 4.50 | 4.50 | 4.50 | 4.54 | 4.64 | 4.64 | 4.68 | 4.64 | 5.01 | 5.01 | 5.01 | 5.01 |
| | | S/T | 0.79 | 0.91 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.94 | 0.53 | 0.64 | 0.74 | 0.85 | 0.34 | 0.44 | 0.54 | 0.64 |
| | | PI | 1.52 | 1.52 | 1.52 | 1.52 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.54 | 1.54 | 1.54 | 1.54 |
| | 46 | TC | 3.92 | 3.94 | 3.97 | 4.00 | 4.17 | 4.17 | 4.17 | 4.20 | 4.31 | 4.31 | 4.31 | 4.31 | 4.65 | 4.65 | 4.65 | 4.65 |
| | | S/T | 0.81 | 0.92 | 1.00 | 1.00 | 0.62 | 0.74 | 0.85 | 0.96 | 0.53 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.55 | 0.65 |
| | | PI | 1.69 | 1.69 | 1.69 | 1.69 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.70 | 1.72 | 1.72 | 1.72 | 1.72 |
| | 50 | TC | 3.66 | 3.69 | 3.72 | 3.75 | 3.92 | 3.92 | 3.92 | 3.94 | 4.06 | 4.06 | 4.06 | 4.09 | 4.40 | 4.40 | 4.40 | 4.40 |
| | | S/T | 0.83 | 0.95 | 1.00 | 1.00 | 0.63 | 0.75 | 0.88 | 0.99 | 0.54 | 0.66 | 0.78 | 0.89 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 1.83 | 1.83 | 1.83 | 1.83 | 1.84 | 1.84 | 1.84 | 1.84 | 1.85 | 1.85 | 1.85 | 1.85 | 1.86 | 1.86 | 1.86 | 1.86 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 839 | -15 | TC | 5.62 | 5.62 | 5.68 | 5.74 | 5.90 | 5.90 | 5.90 | 5.96 | 6.06 | 6.06 | 6.06 | 6.06 | 6.43 | 6.43 | 6.43 | 6.43 |
| | | S/T | 0.73 | 0.84 | 0.98 | 1.00 | 0.58 | 0.68 | 0.77 | 0.86 | 0.50 | 0.60 | 0.70 | 0.78 | 0.34 | 0.42 | 0.51 | 0.60 |
| | | PI | 0.98 | 0.98 | 0.98 | 0.98 | 0.99 | 0.99 | 0.99 | 0.99 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| | -10 | TC | 5.59 | 5.59 | 5.65 | 5.71 | 5.87 | 5.87 | 5.87 | 5.93 | 6.03 | 6.03 | 6.03 | 6.03 | 6.40 | 6.40 | 6.40 | 6.40 |
| | | S/T | 0.74 | 0.84 | 0.99 | 1.00 | 0.58 | 0.68 | 0.78 | 0.86 | 0.50 | 0.60 | 0.70 | 0.79 | 0.34 | 0.43 | 0.51 | 0.60 |
| | | PI | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| | -5 | TC | 5.56 | 5.56 | 5.62 | 5.67 | 5.85 | 5.85 | 5.85 | 5.91 | 6.00 | 6.00 | 6.00 | 6.00 | 6.39 | 6.39 | 6.39 | 6.39 |
| | | S/T | 0.74 | 0.85 | 0.99 | 1.00 | 0.59 | 0.68 | 0.78 | 0.87 | 0.51 | 0.60 | 0.70 | 0.79 | 0.34 | 0.43 | 0.52 | 0.60 |
| | | PI | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| | 0 | TC | 5.53 | 5.53 | 5.59 | 5.65 | 5.83 | 5.83 | 5.83 | 5.88 | 5.99 | 5.99 | 5.99 | 5.99 | 6.38 | 6.38 | 6.38 | 6.38 |
| | | S/T | 0.74 | 0.85 | 1.00 | 1.00 | 0.59 | 0.69 | 0.78 | 0.87 | 0.51 | 0.61 | 0.71 | 0.79 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 0.98 | 0.98 | 0.98 | 0.98 | 0.99 | 0.99 | 0.99 | 0.99 | 0.98 | 0.98 | 0.98 | 0.98 | 0.99 | 0.99 | 0.99 | 0.99 |
| | 5 | TC | 5.50 | 5.50 | 5.56 | 5.62 | 5.80 | 5.80 | 5.80 | 5.86 | 5.97 | 5.97 | 5.97 | 5.97 | 6.38 | 6.38 | 6.38 | 6.38 |
| | | S/T | 0.75 | 0.86 | 1.00 | 1.00 | 0.59 | 0.69 | 0.79 | 0.88 | 0.51 | 0.61 | 0.71 | 0.80 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 |
| | 10 | TC | 5.47 | 5.47 | 5.53 | 5.58 | 5.78 | 5.78 | 5.78 | 5.83 | 5.94 | 5.94 | 5.94 | 5.94 | 6.36 | 6.36 | 6.36 | 6.36 |
| | | S/T | 0.75 | 0.86 | 1.00 | 1.00 | 0.59 | 0.69 | 0.79 | 0.88 | 0.51 | 0.61 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 | 1.01 |
| | 15 | TC | 5.42 | 5.42 | 5.48 | 5.54 | 5.74 | 5.74 | 5.74 | 5.80 | 5.91 | 5.91 | 5.91 | 5.91 | 6.33 | 6.33 | 6.33 | 6.33 |
| | | S/T | 0.76 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.89 | 0.52 | 0.62 | 0.72 | 0.81 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.02 | 1.02 | 1.02 | 1.02 | 1.03 | 1.03 | 1.03 | 1.03 |
| | 20 | TC | 5.36 | 5.36 | 5.42 | 5.48 | 5.68 | 5.68 | 5.68 | 5.73 | 5.85 | 5.85 | 5.85 | 5.85 | 6.28 | 6.28 | 6.28 | 6.28 |
| | | S/T | 0.76 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.89 | 0.52 | 0.62 | 0.72 | 0.81 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.07 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| | 25 | TC | 5.10 | 5.10 | 5.16 | 5.22 | 5.42 | 5.42 | 5.42 | 5.48 | 5.59 | 5.59 | 5.59 | 5.59 | 6.02 | 6.02 | 6.02 | 6.02 |
| | | S/T | 0.77 | 0.88 | 0.99 | 1.00 | 0.61 | 0.71 | 0.81 | 0.91 | 0.53 | 0.63 | 0.73 | 0.83 | 0.35 | 0.44 | 0.53 | 0.63 |
| | | PI | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 |
| | 30 | TC | 4.87 | 4.93 | 4.99 | 5.05 | 5.19 | 5.19 | 5.19 | 5.25 | 5.33 | 5.33 | 5.33 | 5.33 | 5.76 | 5.76 | 5.76 | 5.76 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.93 | 0.53 | 0.64 | 0.74 | 0.85 | 0.34 | 0.44 | 0.54 | 0.64 |
| | | PI | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.29 | 1.30 | 1.30 | 1.30 | 1.30 |
| | 35 | TC | 4.62 | 4.67 | 4.73 | 4.79 | 4.93 | 4.93 | 4.93 | 4.99 | 5.07 | 5.07 | 5.16 | 5.07 | 5.48 | 5.48 | 5.48 | 5.48 |
| | | S/T | 0.80 | 0.92 | 1.00 | 1.00 | 0.62 | 0.73 | 0.85 | 0.96 | 0.53 | 0.64 | 0.75 | 0.87 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | 1.42 | 1.42 | 1.42 | 1.42 | 1.42 | 1.42 | 1.42 | 1.42 |
| | 40 | TC | 4.34 | 4.39 | 4.43 | 4.47 | 4.63 | 4.63 | 4.66 | 4.71 | 4.77 | 4.77 | 4.82 | 4.80 | 5.16 | 5.16 | 5.16 | 5.16 |
| | | S/T | 0.83 | 0.96 | 1.00 | 1.00 | 0.63 | 0.76 | 0.88 | 1.00 | 0.54 | 0.66 | 0.79 | 0.90 | 0.33 | 0.45 | 0.56 | 0.67 |
| | | PI | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.57 | 1.57 | 1.57 | 1.57 |
| | 46 | TC | 4.03 | 4.06 | 4.09 | 4.12 | 4.29 | 4.29 | 4.34 | 4.40 | 4.43 | 4.43 | 4.43 | 4.49 | 4.80 | 4.80 | 4.80 | 4.80 |
| | | S/T | 0.85 | 0.98 | 1.00 | 1.00 | 0.64 | 0.77 | 0.90 | 1.00 | 0.55 | 0.67 | 0.80 | 0.92 | 0.33 | 0.45 | 0.57 | 0.68 |
| | | PI | 1.73 | 1.73 | 1.73 | 1.73 | 1.74 | 1.74 | 1.74 | 1.74 | 1.74 | 1.74 | 1.74 | 1.74 | 1.75 | 1.75 | 1.75 | 1.75 |
| | 50 | TC | 3.77 | 3.80 | 3.83 | 3.86 | 4.03 | 4.03 | 4.06 | 4.09 | 4.17 | 4.17 | 4.17 | 4.20 | 4.52 | 4.52 | 4.52 | 4.52 |
| | | S/T | 0.87 | 1.00 | 1.00 | 1.00 | 0.66 | 0.80 | 0.93 | 1.00 | 0.56 | 0.69 | 0.82 | 0.96 | 0.33 | 0.45 | 0.58 | 0.91 |
| | | PI | 1.87 | 1.87 | 1.87 | 1.87 | 1.88 | 1.88 | 1.88 | 1.88 | 1.89 | 1.89 | 1.89 | 1.89 | 1.90 | 1.90 | 1.90 | 1.90 |
| 958 | -15 | TC | 5.74 | 5.80 | 5.86 | 5.92 | 6.05 | 6.05 | 6.05 | 6.11 | 6.20 | 6.20 | 6.20 | 6.20 | 6.57 | 6.57 | 6.57 | 6.57 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.70 | 0.80 | 0.98 | 0.51 | 0.62 | 0.72 | 0.82 | 0.33 | 0.42 | 0.52 | 0.62 |
| | | PI | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | -10 | TC | 5.71 | 5.77 | 5.83 | 5.89 | 6.02 | 6.02 | 6.02 | 6.08 | 6.17 | 6.17 | 6.17 | 6.17 | 6.55 | 6.55 | 6.55 | 6.55 |
| | | S/T | 0.77 | 0.87 | 1.00 | 1.00 | 0.59 | 0.70 | 0.81 | 0.98 | 0.51 | 0.62 | 0.73 | 0.82 | 0.33 | 0.43 | 0.52 | 0.62 |
| | | PI | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | -5 | TC | 5.67 | 5.73 | 5.79 | 5.85 | 6.00 | 6.00 | 6.00 | 6.06 | 6.15 | 6.15 | 6.15 | 6.15 | 6.53 | 6.53 | 6.53 | 6.53 |
| | | S/T | 0.77 | 0.88 | 1.00 | 1.00 | 0.59 | 0.70 | 0.81 | 0.99 | 0.52 | 0.62 | 0.73 | 0.83 | 0.33 | 0.43 | 0.53 | 0.62 |
| | | PI | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | 0 | TC | 5.65 | 5.71 | 5.76 | 5.82 | 5.97 | 5.97 | 5.97 | 6.03 | 6.13 | 6.13 | 6.13 | 6.13 | 6.53 | 6.53 | 6.53 | 6.53 |
| | | S/T | 0.77 | 0.88 | 1.00 | 1.00 | 0.60 | 0.71 | 0.81 | 0.99 | 0.52 | 0.63 | 0.74 | 0.83 | 0.33 | 0.43 | 0.53 | 0.63 |
| | | PI | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.01 | 1.01 | 1.01 | 1.01 | 1.00 | 1.00 | 1.00 | 1.00 |
| | 5 | TC | 5.62 | 5.68 | 5.74 | 5.79 | 5.95 | 5.95 | 5.95 | 6.01 | 6.11 | 6.11 | 6.11 | 6.11 | 6.52 | 6.52 | 6.52 | 6.52 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.60 | 0.71 | 0.82 | 1.00 | 0.52 | 0.63 | 0.74 | 0.84 | 0.33 | 0.43 | 0.53 | 0.63 |
| | | PI | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 |
| | 10 | TC | 5.58 | 5.64 | 5.70 | 5.76 | 5.92 | 5.92 | 5.92 | 5.98 | 6.09 | 6.09 | 6.09 | 6.09 | 6.51 | 6.51 | 6.51 | 6.51 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.60 | 0.71 | 0.82 | 1.00 | 0.52 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.53 | 0.63 |
| | | PI | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.02 | 1.02 | 1.02 | 1.02 |
| | 15 | TC | 5.54 | 5.60 | 5.65 | 5.71 | 5.88 | 5.88 | 5.88 | 5.94 | 6.05 | 6.05 | 6.05 | 6.05 | 6.48 | 6.48 | 6.48 | 6.48 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.94 | 0.53 | 0.64 | 0.75 | 0.85 | 0.34 | 0.44 | 0.54 | 0.64 |
| | | PI | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 | 1.05 |
| | 20 | TC | 5.48 | 5.53 | 5.59 | 5.65 | 5.82 | 5.82 | 5.82 | 5.88 | 5.99 | 5.99 | 5.99 | 5.99 | 6.42 | 6.42 | 6.42 | 6.42 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.94 | 0.53 | 0.64 | 0.75 | 0.85 | 0.34 | 0.44 | 0.54 | 0.64 |
| | | PI | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 | 1.08 | 1.08 | 1.08 | 1.08 |
| | 25 | TC | 5.22 | 5.28 | 5.33 | 5.39 | 5.56 | 5.56 | 5.56 | 5.62 | 5.73 | 5.73 | 5.73 | 5.73 | 6.16 | 6.16 | 6.16 | 6.16 |
| | | S/T | 0.81 | 0.92 | 1.00 | 1.00 | 0.62 | 0.74 | 0.85 | 0.96 | 0.54 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.55 | 0.65 |
| | | PI | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 | 1.21 |
| | 30 | TC | 4.99 | 5.05 | 5.10 | 5.16 | 5.30 | 5.30 | 5.30 | 5.36 | 5.45 | 5.45 | 5.45 | 5.50 | 5.88 | 5.88 | 5.88 | 5.88 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.87 | 0.99 | 0.54 | 0.66 | 0.78 | 0.89 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 1.31 | 1.31 | 1.31 | 1.31 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 | 1.32 |
| | 35 | TC | 4.73 | 4.79 | 4.85 | 4.90 | 5.05 | 5.05 | 5.10 | 5.16 | 5.19 | 5.19 | **5.28** | 5.33 | 5.59 | 5.59 | 5.59 | 5.59 |
| | | S/T | 0.84 | 0.97 | 1.00 | 1.00 | 0.64 | 0.77 | 0.89 | 1.00 | 0.55 | 0.67 | **0.79** | 0.90 | 0.33 | 0.45 | 0.56 | 0.68 |
| | | PI | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.45 | 1.45 | **1.45** | 1.45 | 1.46 | 1.46 | 1.46 | 1.46 |
| | 40 | TC | 4.44 | 4.49 | 4.53 | 4.58 | 4.74 | 4.74 | 4.80 | 4.86 | 4.89 | 4.89 | 4.93 | 4.99 | 5.27 | 5.27 | 5.27 | 5.27 |
| | | S/T | 0.88 | 1.00 | 1.00 | 1.00 | 0.66 | 0.80 | 0.93 | 1.00 | 0.56 | 0.69 | 0.83 | 0.96 | 0.33 | 0.45 | 0.58 | 0.90 |
| | | PI | 1.58 | 1.58 | 1.58 | 1.58 | 1.59 | 1.59 | 1.59 | 1.59 | 1.60 | 1.60 | 1.60 | 1.60 | 1.61 | 1.61 | 1.61 | 1.61 |
| | 46 | TC | 4.12 | 4.14 | 4.17 | 4.20 | 4.40 | 4.40 | 4.46 | 4.52 | 4.54 | 4.54 | 4.54 | 4.60 | 4.92 | 4.92 | 4.92 | 4.92 |
| | | S/T | 0.89 | 1.00 | 1.00 | 1.00 | 0.67 | 0.81 | 0.95 | 1.00 | 0.56 | 0.70 | 0.84 | 0.98 | 0.33 | 0.46 | 0.59 | 0.92 |
| | | PI | 1.76 | 1.76 | 1.76 | 1.76 | 1.77 | 1.77 | 1.77 | 1.77 | 1.78 | 1.78 | 1.78 | 1.78 | 1.79 | 1.79 | 1.79 | 1.79 |
| | 50 | TC | 3.86 | 3.89 | 3.92 | 3.94 | 4.12 | 4.12 | 4.14 | 4.17 | 4.26 | 4.26 | 4.26 | 4.29 | 4.63 | 4.63 | 4.63 | 4.63 |
| | | S/T | 0.92 | 1.00 | 1.00 | 1.00 | 0.68 | 0.84 | 0.99 | 1.00 | 0.57 | 0.72 | 0.87 | 1.00 | 0.32 | 0.46 | 0.60 | 0.97 |
| | | PI | 1.91 | 1.91 | 1.91 | 1.91 | 1.92 | 1.92 | 1.92 | 1.92 | 1.93 | 1.93 | 1.93 | 1.93 | 1.94 | 1.94 | 1.94 | 1.94 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 24k | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 853 | -15 | TC | 7.35 | 7.34 | 7.34 | 7.40 | 7.73 | 7.88 | 7.88 | 7.88 | 7.93 | 7.93 | 7.93 | 7.93 | 8.40 | 8.40 | 8.40 | 8.40 |
| | | S/T | 0.69 | 0.76 | 0.84 | 0.92 | 0.56 | 0.63 | 0.70 | 0.78 | 0.49 | 0.57 | 0.64 | 0.71 | 0.36 | 0.42 | 0.49 | 0.56 |
| | | PI | 1.53 | 1.52 | 1.52 | 1.53 | 1.53 | 1.53 | 1.53 | 1.53 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 |
| | -10 | TC | 7.31 | 7.30 | 7.30 | 7.36 | 7.69 | 7.84 | 7.84 | 7.84 | 7.89 | 7.89 | 7.89 | 7.89 | 8.37 | 8.37 | 8.37 | 8.37 |
| | | S/T | 0.69 | 0.77 | 0.84 | 0.92 | 0.56 | 0.63 | 0.71 | 0.79 | 0.49 | 0.57 | 0.64 | 0.72 | 0.36 | 0.43 | 0.49 | 0.56 |
| | | PI | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.51 | 1.51 | 1.51 | 1.51 | 1.52 | 1.52 | 1.52 | 1.52 |
| | -5 | TC | 7.26 | 7.26 | 7.26 | 7.32 | 7.66 | 7.81 | 7.81 | 7.81 | 7.86 | 7.86 | 7.86 | 7.86 | 8.35 | 8.35 | 8.35 | 8.35 |
| | | S/T | 0.69 | 0.77 | 0.85 | 0.93 | 0.57 | 0.64 | 0.71 | 0.79 | 0.50 | 0.58 | 0.64 | 0.72 | 0.36 | 0.43 | 0.50 | 0.57 |
| | | PI | 1.52 | 1.51 | 1.51 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.51 | 1.51 | 1.51 | 1.51 | 1.53 | 1.53 | 1.53 | 1.53 |
| | 0 | TC | 7.23 | 7.22 | 7.22 | 7.28 | 7.63 | 7.78 | 7.78 | 7.78 | 7.84 | 7.84 | 7.84 | 7.84 | 8.34 | 8.34 | 8.34 | 8.34 |
| | | S/T | 0.70 | 0.77 | 0.85 | 0.93 | 0.57 | 0.64 | 0.72 | 0.79 | 0.50 | 0.58 | 0.65 | 0.73 | 0.36 | 0.43 | 0.50 | 0.57 |
| | | PI | 1.52 | 1.52 | 1.52 | 1.52 | 1.53 | 1.53 | 1.53 | 1.53 | 1.52 | 1.52 | 1.52 | 1.52 | 1.53 | 1.53 | 1.53 | 1.53 |
| | 5 | TC | 7.19 | 7.18 | 7.18 | 7.24 | 7.60 | 7.75 | 7.75 | 7.75 | 7.82 | 7.82 | 7.82 | 7.82 | 8.34 | 8.34 | 8.34 | 8.34 |
| | | S/T | 0.70 | 0.78 | 0.86 | 0.94 | 0.57 | 0.64 | 0.72 | 0.80 | 0.50 | 0.58 | 0.65 | 0.73 | 0.36 | 0.43 | 0.50 | 0.57 |
| | | PI | 1.54 | 1.53 | 1.53 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.53 | 1.53 | 1.53 | 1.53 | 1.54 | 1.54 | 1.54 | 1.54 |
| | 10 | TC | 7.15 | 7.14 | 7.14 | 7.20 | 7.56 | 7.71 | 7.71 | 7.71 | 7.79 | 7.79 | 7.79 | 7.79 | 8.31 | 8.31 | 8.31 | 8.31 |
| | | S/T | 0.70 | 0.78 | 0.86 | 0.94 | 0.57 | 0.65 | 0.72 | 0.80 | 0.50 | 0.58 | 0.65 | 0.73 | 0.37 | 0.44 | 0.50 | 0.57 |
| | | PI | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 |
| | 15 | TC | 7.09 | 7.08 | 7.08 | 7.14 | 7.51 | 7.66 | 7.66 | 7.66 | 7.74 | 7.74 | 7.74 | 7.74 | 8.28 | 8.28 | 8.28 | 8.28 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.95 | 0.58 | 0.65 | 0.73 | 0.81 | 0.51 | 0.59 | 0.66 | 0.74 | 0.37 | 0.44 | 0.51 | 0.58 |
| | | PI | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.59 | 1.59 | 1.59 | 1.59 | 1.60 | 1.60 | 1.60 | 1.60 |
| | 20 | TC | 7.01 | 7.00 | 7.00 | 7.06 | 7.43 | 7.43 | 7.43 | 7.43 | 7.66 | 7.66 | 7.66 | 7.66 | 8.21 | 8.21 | 8.21 | 8.21 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.95 | 0.58 | 0.65 | 0.73 | 0.81 | 0.51 | 0.59 | 0.66 | 0.74 | 0.37 | 0.44 | 0.51 | 0.58 |
| | | PI | 1.66 | 1.65 | 1.65 | 1.66 | 1.65 | 1.65 | 1.65 | 1.65 | 1.64 | 1.64 | 1.64 | 1.64 | 1.64 | 1.64 | 1.64 | 1.64 |
| | 25 | TC | 6.69 | 6.69 | 6.74 | 6.80 | 7.09 | 7.09 | 7.09 | 7.09 | 7.32 | 7.32 | 7.32 | 7.32 | 7.86 | 7.86 | 7.86 | 7.86 |
| | | S/T | 0.72 | 0.80 | 0.89 | 0.97 | 0.58 | 0.66 | 0.74 | 0.82 | 0.51 | 0.59 | 0.67 | 0.75 | 0.36 | 0.44 | 0.51 | 0.58 |
| | | PI | 1.83 | 1.83 | 1.83 | 1.83 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.82 | 1.83 | 1.83 | 1.83 | 1.83 |
| | 30 | TC | 6.37 | 6.37 | 6.43 | 6.49 | 6.77 | 6.77 | 6.77 | 6.77 | 6.97 | 6.97 | 6.97 | 6.97 | 7.52 | 7.52 | 7.52 | 7.52 |
| | | S/T | 0.73 | 0.82 | 0.90 | 0.99 | 0.58 | 0.67 | 0.75 | 0.84 | 0.52 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 2.00 | 2.00 | 2.00 | 2.00 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.01 | 2.02 | 2.02 | 2.02 | 2.02 |
| | 35 | TC | 6.06 | 6.06 | 6.11 | 6.17 | 6.43 | 6.43 | 6.43 | 6.43 | 6.63 | 6.63 | 6.74 | 6.63 | 7.17 | 7.17 | 7.17 | 7.17 |
| | | S/T | 0.74 | 0.83 | 0.92 | 1.00 | 0.59 | 0.68 | 0.76 | 0.85 | 0.52 | 0.60 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 2.18 | 2.18 | 2.18 | 2.18 | 2.19 | 2.19 | 2.19 | 2.19 | 2.20 | 2.20 | 2.20 | 2.20 | 2.21 | 2.21 | 2.21 | 2.21 |
| | 40 | TC | 5.71 | 5.71 | 5.77 | 5.83 | 6.07 | 6.07 | 6.07 | 6.10 | 6.27 | 6.27 | 6.34 | 6.27 | 6.78 | 6.78 | 6.78 | 6.78 |
| | | S/T | 0.76 | 0.86 | 0.96 | 1.00 | 0.60 | 0.69 | 0.79 | 0.89 | 0.52 | 0.62 | 0.71 | 0.81 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 2.41 | 2.41 | 2.41 | 2.41 | 2.42 | 2.42 | 2.42 | 2.42 | 2.43 | 2.43 | 2.43 | 2.43 | 2.44 | 2.44 | 2.44 | 2.44 |
| | 46 | TC | 5.29 | 5.29 | 5.35 | 5.40 | 5.63 | 5.63 | 5.63 | 5.69 | 5.83 | 5.83 | 5.83 | 5.83 | 6.29 | 6.29 | 6.29 | 6.29 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.81 | 0.90 | 0.52 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 2.68 | 2.68 | 2.68 | 2.68 | 2.69 | 2.69 | 2.69 | 2.69 | 2.70 | 2.70 | 2.70 | 2.70 | 2.72 | 2.72 | 2.72 | 2.72 |
| | 50 | TC | 4.94 | 5.00 | 5.06 | 5.12 | 5.29 | 5.29 | 5.29 | 5.35 | 5.49 | 5.49 | 5.49 | 5.49 | 5.95 | 5.95 | 5.95 | 5.95 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.93 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.63 |
| | | PI | 2.91 | 2.91 | 2.91 | 2.91 | 2.92 | 2.92 | 2.92 | 2.92 | 2.93 | 2.93 | 2.93 | 2.93 | 2.95 | 2.95 | 2.95 | 2.95 |
| 1023 | -15 | TC | 7.50 | 7.50 | 7.56 | 7.65 | 7.88 | 7.88 | 7.88 | 7.88 | 8.09 | 8.09 | 8.09 | 8.09 | 8.58 | 8.58 | 8.58 | 8.58 |
| | | S/T | 0.71 | 0.81 | 0.98 | 1.00 | 0.57 | 0.66 | 0.74 | 0.83 | 0.50 | 0.59 | 0.67 | 0.75 | 0.34 | 0.42 | 0.50 | 0.58 |
| | | PI | 1.56 | 1.56 | 1.56 | 1.56 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| | -10 | TC | 7.45 | 7.45 | 7.51 | 7.60 | 7.84 | 7.84 | 7.84 | 7.84 | 8.05 | 8.05 | 8.05 | 8.05 | 8.55 | 8.55 | 8.55 | 8.55 |
| | | S/T | 0.72 | 0.82 | 0.99 | 1.00 | 0.57 | 0.66 | 0.75 | 0.83 | 0.50 | 0.59 | 0.67 | 0.76 | 0.34 | 0.43 | 0.50 | 0.58 |
| | | PI | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| | -5 | TC | 7.41 | 7.41 | 7.47 | 7.56 | 7.81 | 7.81 | 7.81 | 7.81 | 8.02 | 8.02 | 8.02 | 8.02 | 8.53 | 8.53 | 8.53 | 8.53 |
| | | S/T | 0.72 | 0.82 | 0.99 | 1.00 | 0.58 | 0.66 | 0.75 | 0.84 | 0.51 | 0.59 | 0.67 | 0.76 | 0.34 | 0.43 | 0.51 | 0.59 |
| | | PI | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| | 0 | TC | 7.37 | 7.37 | 7.43 | 7.52 | 7.78 | 7.78 | 7.78 | 7.78 | 7.99 | 7.99 | 7.99 | 7.99 | 8.52 | 8.52 | 8.52 | 8.52 |
| | | S/T | 0.73 | 0.82 | 1.00 | 1.00 | 0.58 | 0.67 | 0.75 | 0.84 | 0.51 | 0.60 | 0.68 | 0.76 | 0.34 | 0.43 | 0.51 | 0.59 |
| | | PI | 1.56 | 1.56 | 1.56 | 1.56 | 1.55 | 1.55 | 1.55 | 1.55 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 |
| | 5 | TC | 7.33 | 7.33 | 7.39 | 7.48 | 7.75 | 7.75 | 7.75 | 7.75 | 7.97 | 7.97 | 7.97 | 7.97 | 8.51 | 8.51 | 8.51 | 8.51 |
| | | S/T | 0.73 | 0.83 | 1.00 | 1.00 | 0.58 | 0.67 | 0.76 | 0.85 | 0.51 | 0.60 | 0.68 | 0.77 | 0.34 | 0.43 | 0.51 | 0.59 |
| | | PI | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 | 1.57 |
| | 10 | TC | 7.29 | 7.29 | 7.35 | 7.44 | 7.71 | 7.71 | 7.71 | 7.71 | 7.93 | 7.93 | 7.93 | 7.93 | 8.49 | 8.49 | 8.49 | 8.49 |
| | | S/T | 0.73 | 0.83 | 1.00 | 1.00 | 0.58 | 0.67 | 0.76 | 0.85 | 0.51 | 0.60 | 0.68 | 0.77 | 0.35 | 0.44 | 0.51 | 0.59 |
| | | PI | 1.60 | 1.60 | 1.60 | 1.60 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 |
| | 15 | TC | 7.23 | 7.23 | 7.29 | 7.38 | 7.66 | 7.66 | 7.66 | 7.66 | 7.89 | 7.89 | 7.89 | 7.89 | 8.46 | 8.46 | 8.46 | 8.46 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 1.64 | 1.64 | 1.64 | 1.64 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.62 | 1.62 | 1.62 | 1.62 |
| | 20 | TC | 7.15 | 7.15 | 7.21 | 7.29 | 7.58 | 7.58 | 7.58 | 7.58 | 7.81 | 7.81 | 7.81 | 7.81 | 8.38 | 8.38 | 8.38 | 8.38 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 1.69 | 1.69 | 1.69 | 1.69 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.68 | 1.67 | 1.67 | 1.67 | 1.67 |
| | 25 | TC | 6.83 | 6.83 | 6.89 | 6.95 | 7.26 | 7.26 | 7.26 | 7.26 | 7.46 | 7.46 | 7.46 | 7.46 | 8.04 | 8.04 | 8.04 | 8.04 |
| | | S/T | 0.75 | 0.85 | 0.95 | 1.00 | 0.59 | 0.69 | 0.78 | 0.88 | 0.52 | 0.61 | 0.70 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| | 30 | TC | 6.52 | 6.52 | 6.57 | 6.63 | 6.92 | 6.92 | 6.92 | 6.98 | 7.12 | 7.12 | 7.12 | 7.12 | 7.69 | 7.69 | 7.69 | 7.69 |
| | | S/T | 0.76 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.89 | 0.52 | 0.62 | 0.72 | 0.81 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 2.05 | 2.05 | 2.05 | 2.05 | 2.05 | 2.05 | 2.05 | 2.05 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 |
| | 35 | TC | 6.17 | 6.23 | 6.29 | 6.34 | 6.57 | 6.57 | 6.57 | 6.63 | 6.78 | 6.78 | 6.89 | 6.78 | 7.32 | 7.32 | 7.32 | 7.32 |
| | | S/T | 0.78 | 0.88 | 0.99 | 1.00 | 0.61 | 0.71 | 0.81 | 0.92 | 0.53 | 0.63 | 0.72 | 0.83 | 0.35 | 0.44 | 0.53 | 0.63 |
| | | PI | 2.23 | 2.23 | 2.23 | 2.23 | 2.24 | 2.24 | 2.24 | 2.24 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 |
| | 40 | TC | 5.77 | 5.83 | 5.89 | 5.95 | 6.15 | 6.15 | 6.15 | 6.20 | 6.35 | 6.35 | 6.41 | 6.35 | 6.86 | 6.86 | 6.86 | 6.86 |
| | | S/T | 0.80 | 0.92 | 1.00 | 1.00 | 0.62 | 0.73 | 0.85 | 0.96 | 0.53 | 0.64 | 0.76 | 0.87 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 2.46 | 2.46 | 2.46 | 2.46 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 | 2.50 | 2.50 | 2.50 | 2.50 |
| | 46 | TC | 5.35 | 5.41 | 5.47 | 5.53 | 5.70 | 5.70 | 5.70 | 5.75 | 5.90 | 5.90 | 5.90 | 5.90 | 6.38 | 6.38 | 6.38 | 6.38 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.87 | 0.98 | 0.54 | 0.65 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 2.74 | 2.74 | 2.74 | 2.74 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.79 | 2.79 | 2.79 | 2.79 |
| | 50 | TC | 5.01 | 5.07 | 5.13 | 5.18 | 5.35 | 5.35 | 5.41 | 5.47 | 5.55 | 5.55 | 5.55 | 5.61 | 6.01 | 6.01 | 6.01 | 6.01 |
| | | S/T | 0.84 | 0.97 | 1.00 | 1.00 | 0.64 | 0.77 | 0.89 | 1.00 | 0.54 | 0.67 | 0.79 | 0.91 | 0.33 | 0.45 | 0.56 | 0.91 |
| | | PI | 2.98 | 2.98 | 2.98 | 2.98 | 2.99 | 2.99 | 2.99 | 2.99 | 3.00 | 3.00 | 3.00 | 3.00 | 3.02 | 3.02 | 3.02 | 3.02 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1192 | -15 | TC | 7.68 | 7.68 | 7.77 | 7.86 | 8.06 | 8.06 | 8.06 | 8.15 | 8.26 | 8.26 | 8.26 | 8.26 | 8.79 | 8.79 | 8.79 | 8.79 |
| | | S/T | 0.74 | 0.85 | 1.00 | 1.00 | 0.58 | 0.69 | 0.78 | 0.98 | 0.51 | 0.61 | 0.70 | 0.80 | 0.34 | 0.42 | 0.51 | 0.60 |
| | | PI | 1.60 | 1.60 | 1.60 | 1.60 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 |
| | -10 | TC | 7.63 | 7.63 | 7.72 | 7.81 | 8.02 | 8.02 | 8.02 | 8.10 | 8.22 | 8.22 | 8.22 | 8.22 | 8.76 | 8.76 | 8.76 | 8.76 |
| | | S/T | 0.75 | 0.85 | 1.00 | 1.00 | 0.58 | 0.69 | 0.79 | 0.98 | 0.51 | 0.61 | 0.71 | 0.81 | 0.34 | 0.43 | 0.51 | 0.60 |
| | | PI | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 |
| | -5 | TC | 7.59 | 7.59 | 7.68 | 7.77 | 7.99 | 7.99 | 7.99 | 8.07 | 8.19 | 8.19 | 8.19 | 8.19 | 8.73 | 8.73 | 8.73 | 8.73 |
| | | S/T | 0.75 | 0.86 | 1.00 | 1.00 | 0.59 | 0.69 | 0.79 | 0.99 | 0.52 | 0.61 | 0.71 | 0.81 | 0.34 | 0.43 | 0.52 | 0.60 |
| | | PI | 1.59 | 1.59 | 1.59 | 1.59 | 1.58 | 1.58 | 1.58 | 1.58 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 |
| | 0 | TC | 7.55 | 7.55 | 7.64 | 7.73 | 7.96 | 7.96 | 7.96 | 8.04 | 8.17 | 8.17 | 8.17 | 8.17 | 8.73 | 8.73 | 8.73 | 8.73 |
| | | S/T | 0.75 | 0.86 | 1.00 | 1.00 | 0.59 | 0.70 | 0.79 | 0.99 | 0.52 | 0.62 | 0.72 | 0.81 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.59 | 1.60 | 1.60 | 1.60 | 1.60 |
| | 5 | TC | 7.51 | 7.51 | 7.60 | 7.69 | 7.93 | 7.93 | 7.93 | 8.01 | 8.14 | 8.14 | 8.14 | 8.14 | 8.72 | 8.72 | 8.72 | 8.72 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.70 | 0.80 | 1.00 | 0.52 | 0.62 | 0.72 | 0.82 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 1.61 | 1.61 | 1.61 | 1.61 | 1.60 | 1.60 | 1.60 | 1.60 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 |
| | 10 | TC | 7.47 | 7.47 | 7.55 | 7.64 | 7.89 | 7.89 | 7.89 | 7.98 | 8.11 | 8.11 | 8.11 | 8.11 | 8.70 | 8.70 | 8.70 | 8.70 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.70 | 0.80 | 1.00 | 0.52 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 | 1.63 |
| | 15 | TC | 7.40 | 7.40 | 7.49 | 7.58 | 7.83 | 7.83 | 7.83 | 7.92 | 8.06 | 8.06 | 8.06 | 8.06 | 8.66 | 8.66 | 8.66 | 8.66 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.71 | 0.81 | 0.91 | 0.53 | 0.63 | 0.73 | 0.83 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.67 | 1.66 | 1.66 | 1.66 | 1.66 |
| | 20 | TC | 7.32 | 7.32 | 7.41 | 7.49 | 7.75 | 7.75 | 7.75 | 7.84 | 7.98 | 7.98 | 7.98 | 7.98 | 8.58 | 8.58 | 8.58 | 8.58 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.71 | 0.81 | 0.91 | 0.53 | 0.63 | 0.73 | 0.83 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 1.73 | 1.73 | 1.73 | 1.73 | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 | 1.72 | 1.71 | 1.71 | 1.71 | 1.71 |
| | 25 | TC | 6.98 | 7.03 | 7.09 | 7.15 | 7.41 | 7.41 | 7.41 | 7.49 | 7.64 | 7.64 | 7.64 | 7.64 | 8.21 | 8.21 | 8.21 | 8.21 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.93 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.63 |
| | | PI | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| | 30 | TC | 6.63 | 6.69 | 6.75 | 6.80 | 7.06 | 7.06 | 7.06 | 7.12 | 7.29 | 7.29 | 7.29 | 7.29 | 7.84 | 7.84 | 7.84 | 7.84 |
| | | S/T | 0.80 | 0.92 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 2.08 | 2.08 | 2.08 | 2.08 | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 | 2.10 | 2.10 | 2.10 | 2.10 |
| | 35 | TC | 6.32 | 6.37 | 6.43 | 6.49 | 6.72 | 6.72 | 6.72 | 6.78 | 6.92 | 6.92 | **7.03** | 7.09 | 7.46 | 7.46 | 7.46 | 7.46 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.86 | 0.98 | 0.54 | 0.65 | **0.76** | 0.87 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 2.28 | 2.28 | 2.28 | 2.28 | 2.29 | 2.29 | 2.29 | 2.29 | 2.30 | 2.30 | **2.30** | 2.30 | 2.31 | 2.31 | 2.31 | 2.31 |
| | 40 | TC | 5.90 | 5.96 | 6.02 | 6.07 | 6.29 | 6.29 | 6.32 | 6.37 | 6.48 | 6.48 | 6.54 | 6.60 | 7.00 | 7.00 | 7.00 | 7.00 |
| | | S/T | 0.85 | 0.98 | 1.00 | 1.00 | 0.64 | 0.77 | 0.90 | 1.00 | 0.55 | 0.67 | 0.80 | 0.92 | 0.33 | 0.45 | 0.57 | 0.90 |
| | | PI | 2.52 | 2.52 | 2.52 | 2.52 | 2.53 | 2.53 | 2.53 | 2.53 | 2.54 | 2.54 | 2.54 | 2.54 | 2.56 | 2.56 | 2.56 | 2.56 |
| | 46 | TC | 5.47 | 5.53 | 5.58 | 5.64 | 5.84 | 5.84 | 5.90 | 5.95 | 6.01 | 6.01 | 6.01 | 6.07 | 6.52 | 6.52 | 6.52 | 6.52 |
| | | S/T | 0.86 | 1.00 | 1.00 | 1.00 | 0.65 | 0.79 | 0.92 | 1.00 | 0.55 | 0.69 | 0.82 | 0.95 | 0.33 | 0.45 | 0.57 | 0.92 |
| | | PI | 2.80 | 2.80 | 2.80 | 2.80 | 2.82 | 2.82 | 2.82 | 2.82 | 2.82 | 2.82 | 2.82 | 2.82 | 2.85 | 2.85 | 2.85 | 2.85 |
| | 50 | TC | 5.13 | 5.18 | 5.24 | 5.30 | 5.47 | 5.47 | 5.53 | 5.58 | 5.67 | 5.67 | 5.67 | 5.73 | 6.12 | 6.12 | 6.12 | 6.12 |
| | | S/T | 0.89 | 1.00 | 1.00 | 1.00 | 0.67 | 0.81 | 0.95 | 1.00 | 0.56 | 0.70 | 0.84 | 0.98 | 0.33 | 0.45 | 0.58 | 0.97 |
| | | PI | 3.04 | 3.04 | 3.04 | 3.04 | 3.05 | 3.05 | 3.05 | 3.05 | 3.06 | 3.06 | 3.06 | 3.06 | 3.08 | 3.08 | 3.08 | 3.08 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 36k+MOD30U-36HFN8-QRD0W(GA) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 1504 | -15 | TC | 11.05 | 11.06 | 11.18 | 11.30 | 11.63 | 11.87 | 11.87 | 11.99 | 11.90 | 11.90 | 11.90 | 11.90 | 12.65 | 12.65 | 12.65 | 12.65 |
| | | S/T | 0.71 | 0.81 | 0.90 | 0.97 | 0.57 | 0.66 | 0.74 | 0.83 | 0.50 | 0.59 | 0.67 | 0.75 | 0.35 | 0.42 | 0.50 | 0.58 |
| | | PI | 2.60 | 2.59 | 2.59 | 2.60 | 2.58 | 2.58 | 2.58 | 2.58 | 2.59 | 2.59 | 2.59 | 2.59 | 2.58 | 2.58 | 2.58 | 2.58 |
| | -10 | TC | 10.99 | 11.00 | 11.11 | 11.23 | 11.56 | 11.80 | 11.80 | 11.92 | 11.84 | 11.84 | 11.84 | 11.84 | 12.60 | 12.60 | 12.60 | 12.60 |
| | | S/T | 0.72 | 0.82 | 0.90 | 0.97 | 0.57 | 0.66 | 0.75 | 0.83 | 0.50 | 0.59 | 0.67 | 0.76 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 |
| | -5 | TC | 10.92 | 10.93 | 11.05 | 11.17 | 11.52 | 11.76 | 11.76 | 11.88 | 11.80 | 11.80 | 11.80 | 11.80 | 12.57 | 12.57 | 12.57 | 12.57 |
| | | S/T | 0.72 | 0.82 | 0.91 | 0.98 | 0.58 | 0.66 | 0.75 | 0.84 | 0.51 | 0.59 | 0.67 | 0.76 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 2.58 | 2.57 | 2.57 | 2.58 | 2.57 | 2.57 | 2.57 | 2.57 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 | 2.58 |
| | 0 | TC | 10.87 | 10.87 | 10.99 | 11.11 | 11.47 | 11.71 | 11.71 | 11.83 | 11.77 | 11.77 | 11.77 | 11.77 | 12.56 | 12.56 | 12.56 | 12.56 |
| | | S/T | 0.73 | 0.82 | 0.91 | 0.98 | 0.58 | 0.67 | 0.75 | 0.84 | 0.51 | 0.60 | 0.68 | 0.76 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 2.59 | 2.58 | 2.58 | 2.59 | 2.58 | 2.58 | 2.58 | 2.58 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 | 2.59 |
| | 5 | TC | 10.81 | 10.82 | 10.94 | 11.06 | 11.43 | 11.67 | 11.67 | 11.79 | 11.73 | 11.73 | 11.73 | 11.73 | 12.55 | 12.55 | 12.55 | 12.55 |
| | | S/T | 0.73 | 0.83 | 0.92 | 0.99 | 0.58 | 0.67 | 0.76 | 0.85 | 0.51 | 0.60 | 0.68 | 0.77 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 | 2.61 |
| | 10 | TC | 10.75 | 10.75 | 10.87 | 10.99 | 11.38 | 11.61 | 11.61 | 11.73 | 11.68 | 11.68 | 11.68 | 11.68 | 12.52 | 12.52 | 12.52 | 12.52 |
| | | S/T | 0.73 | 0.83 | 0.92 | 0.99 | 0.58 | 0.67 | 0.76 | 0.85 | 0.51 | 0.60 | 0.68 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 2.66 | 2.65 | 2.65 | 2.66 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.64 | 2.64 | 2.64 | 2.64 |
| | 15 | TC | 10.66 | 10.67 | 10.78 | 10.90 | 11.30 | 11.54 | 11.54 | 11.65 | 11.61 | 11.61 | 11.61 | 11.61 | 12.46 | 12.46 | 12.46 | 12.46 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 2.72 | 2.72 | 2.72 | 2.72 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.70 | 2.70 | 2.70 | 2.70 |
| | 20 | TC | 10.54 | 10.55 | 10.66 | 10.78 | 11.18 | 11.18 | 11.18 | 11.18 | 11.50 | 11.50 | 11.50 | 11.50 | 12.36 | 12.36 | 12.36 | 12.36 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 2.82 | 2.81 | 2.81 | 2.82 | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 2.78 | 2.78 | 2.78 | 2.78 |
| | 25 | TC | 10.06 | 10.06 | 10.17 | 10.29 | 10.69 | 10.69 | 10.69 | 10.69 | 11.01 | 11.01 | 11.01 | 11.01 | 11.84 | 11.84 | 11.84 | 11.84 |
| | | S/T | 0.75 | 0.85 | 0.95 | 1.00 | 0.59 | 0.69 | 0.78 | 0.88 | 0.52 | 0.61 | 0.70 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 | 3.10 |
| | 30 | TC | 9.57 | 9.57 | 9.66 | 9.74 | 10.20 | 10.20 | 10.20 | 10.32 | 10.49 | 10.49 | 10.49 | 10.49 | 11.32 | 11.32 | 11.32 | 11.32 |
| | | S/T | 0.76 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.89 | 0.52 | 0.62 | 0.72 | 0.81 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 3.40 | 3.40 | 3.40 | 3.40 | 3.41 | 3.41 | 3.41 | 3.41 | 3.41 | 3.41 | 3.41 | 3.41 | 3.42 | 3.42 | 3.42 | 3.42 |
| | 35 | TC | 9.11 | 9.20 | 9.28 | 9.37 | 9.68 | 9.68 | 9.68 | 9.77 | 10.00 | 10.00 | 10.14 | 10.00 | 10.78 | 10.78 | 10.78 | 10.78 |
| | | S/T | 0.78 | 0.88 | 0.99 | 1.00 | 0.61 | 0.71 | 0.81 | 0.91 | 0.53 | 0.63 | 0.72 | 0.83 | 0.35 | 0.44 | 0.53 | 0.63 |
| | | PI | 3.71 | 3.71 | 3.71 | 3.71 | 3.73 | 3.73 | 3.73 | 3.73 | 3.73 | 3.73 | 3.74 | 3.73 | 3.76 | 3.76 | 3.76 | 3.76 |
| | 40 | TC | 8.58 | 8.66 | 8.75 | 8.84 | 9.14 | 9.14 | 9.14 | 9.23 | 9.43 | 9.43 | 9.51 | 9.47 | 10.18 | 10.18 | 10.18 | 10.18 |
| | | S/T | 0.80 | 0.92 | 1.00 | 1.00 | 0.62 | 0.73 | 0.85 | 0.96 | 0.53 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 4.10 | 4.10 | 4.10 | 4.10 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.12 | 4.13 | 4.12 | 4.16 | 4.16 | 4.16 | 4.16 |
| | 46 | TC | 7.93 | 8.02 | 8.11 | 8.19 | 8.48 | 8.48 | 8.48 | 8.57 | 8.74 | 8.74 | 8.74 | 8.83 | 9.46 | 9.46 | 9.46 | 9.46 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.86 | 0.98 | 0.54 | 0.65 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 4.56 | 4.56 | 4.56 | 4.56 | 4.58 | 4.58 | 4.58 | 4.58 | 4.59 | 4.59 | 4.59 | 4.59 | 4.63 | 4.63 | 4.63 | 4.63 |
| | 50 | TC | 7.45 | 7.53 | 7.62 | 7.70 | 7.96 | 7.96 | 8.05 | 8.14 | 8.22 | 8.22 | 8.22 | 8.31 | 8.91 | 8.91 | 8.91 | 8.91 |
| | | S/T | 0.84 | 0.97 | 1.00 | 1.00 | 0.64 | 0.76 | 0.89 | 1.00 | 0.55 | 0.67 | 0.79 | 0.91 | 0.33 | 0.45 | 0.56 | 0.67 |
| | | PI | 4.93 | 4.93 | 4.93 | 4.93 | 4.95 | 4.95 | 4.95 | 4.95 | 4.97 | 4.97 | 4.97 | 4.97 | 5.01 | 5.01 | 5.01 | 5.01 |
| 1728 | -15 | TC | 11.28 | 11.28 | 11.40 | 11.52 | 11.87 | 11.87 | 11.87 | 11.99 | 12.15 | 12.15 | 12.15 | 12.15 | 12.92 | 12.92 | 12.92 | 12.92 |
| | | S/T | 0.74 | 0.85 | 0.98 | 1.00 | 0.58 | 0.68 | 0.78 | 0.87 | 0.51 | 0.60 | 0.70 | 0.79 | 0.34 | 0.42 | 0.51 | 0.60 |
| | | PI | 2.66 | 2.66 | 2.66 | 2.66 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.63 | 2.63 | 2.63 | 2.63 |
| | -10 | TC | 11.21 | 11.21 | 11.33 | 11.45 | 11.80 | 11.80 | 11.80 | 11.92 | 12.08 | 12.08 | 12.08 | 12.08 | 12.87 | 12.87 | 12.87 | 12.87 |
| | | S/T | 0.75 | 0.85 | 0.99 | 1.00 | 0.58 | 0.68 | 0.79 | 0.87 | 0.51 | 0.60 | 0.70 | 0.80 | 0.34 | 0.43 | 0.51 | 0.60 |
| | | PI | 2.64 | 2.64 | 2.64 | 2.64 | 2.63 | 2.63 | 2.63 | 2.63 | 2.64 | 2.64 | 2.64 | 2.64 | 2.63 | 2.63 | 2.63 | 2.63 |
| | -5 | TC | 11.14 | 11.14 | 11.26 | 11.38 | 11.76 | 11.76 | 11.76 | 11.88 | 12.04 | 12.04 | 12.04 | 12.04 | 12.84 | 12.84 | 12.84 | 12.84 |
| | | S/T | 0.75 | 0.86 | 0.99 | 1.00 | 0.59 | 0.68 | 0.79 | 0.88 | 0.52 | 0.60 | 0.70 | 0.80 | 0.34 | 0.43 | 0.52 | 0.60 |
| | | PI | 2.64 | 2.64 | 2.64 | 2.64 | 2.63 | 2.63 | 2.63 | 2.63 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 |
| | 0 | TC | 11.09 | 11.09 | 11.21 | 11.32 | 11.71 | 11.71 | 11.71 | 11.83 | 12.01 | 12.01 | 12.01 | 12.01 | 12.83 | 12.83 | 12.83 | 12.83 |
| | | S/T | 0.75 | 0.86 | 1.00 | 1.00 | 0.59 | 0.69 | 0.79 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 2.65 | 2.65 | 2.65 | 2.65 | 2.64 | 2.64 | 2.64 | 2.64 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| | 5 | TC | 11.03 | 11.03 | 11.15 | 11.27 | 11.67 | 11.67 | 11.67 | 11.79 | 11.97 | 11.97 | 11.97 | 11.97 | 12.82 | 12.82 | 12.82 | 12.82 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.69 | 0.80 | 0.89 | 0.52 | 0.61 | 0.71 | 0.81 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 2.67 | 2.67 | 2.67 | 2.67 | 2.66 | 2.66 | 2.66 | 2.66 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| | 10 | TC | 10.96 | 10.96 | 11.08 | 11.20 | 11.61 | 11.61 | 11.61 | 11.73 | 11.92 | 11.92 | 11.92 | 11.92 | 12.78 | 12.78 | 12.78 | 12.78 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.69 | 0.80 | 0.89 | 0.52 | 0.61 | 0.71 | 0.81 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 2.72 | 2.72 | 2.72 | 2.72 | 2.70 | 2.70 | 2.70 | 2.70 | 2.71 | 2.71 | 2.71 | 2.71 | 2.70 | 2.70 | 2.70 | 2.70 |
| | 15 | TC | 10.87 | 10.87 | 10.99 | 11.11 | 11.54 | 11.54 | 11.54 | 11.65 | 11.85 | 11.85 | 11.85 | 11.85 | 12.73 | 12.73 | 12.73 | 12.73 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.81 | 0.90 | 0.53 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 2.78 | 2.78 | 2.78 | 2.78 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.76 | 2.76 | 2.76 | 2.76 |
| | 20 | TC | 10.75 | 10.75 | 10.87 | 10.98 | 11.41 | 11.41 | 11.41 | 11.53 | 11.73 | 11.73 | 11.73 | 11.73 | 12.62 | 12.62 | 12.62 | 12.62 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.81 | 0.90 | 0.53 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 2.88 | 2.88 | 2.88 | 2.88 | 2.86 | 2.86 | 2.86 | 2.86 | 2.86 | 2.86 | 2.86 | 2.86 | 2.84 | 2.84 | 2.84 | 2.84 |
| | 25 | TC | 10.26 | 10.38 | 10.49 | 10.61 | 10.90 | 10.90 | 10.90 | 11.01 | 11.21 | 11.21 | 11.21 | 11.21 | 12.07 | 12.07 | 12.07 | 12.07 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.61 | 0.72 | 0.82 | 0.92 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.63 |
| | | PI | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 | 3.17 |
| | 30 | TC | 9.77 | 9.86 | 9.95 | 10.03 | 10.41 | 10.41 | 10.41 | 10.52 | 10.72 | 10.72 | 10.72 | 10.72 | 11.53 | 11.53 | 11.53 | 11.53 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.64 |
| | | PI | 3.47 | 3.47 | 3.47 | 3.47 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.50 | 3.50 | 3.50 | 3.50 |
| | 35 | TC | 9.29 | 9.37 | 9.46 | 9.54 | 9.89 | 9.89 | 9.89 | 9.98 | 10.18 | 10.18 | 10.35 | 10.18 | 10.98 | 10.98 | 10.98 | 10.98 |
| | | S/T | 0.81 | 0.93 | 1.00 | 1.00 | 0.62 | 0.74 | 0.86 | 0.97 | 0.54 | 0.65 | 0.76 | 0.88 | 0.34 | 0.44 | 0.55 | 0.65 |
| | | PI | 3.79 | 3.79 | 3.79 | 3.79 | 3.81 | 3.81 | 3.81 | 3.81 | 3.81 | 3.81 | 3.82 | 3.81 | 3.81 | 3.81 | 3.81 | 3.81 |
| | 40 | TC | 8.75 | 8.84 | 8.93 | 9.01 | 9.33 | 9.33 | 9.37 | 9.46 | 9.60 | 9.60 | 9.70 | 9.64 | 10.38 | 10.38 | 10.38 | 10.38 |
| | | S/T | 0.84 | 0.98 | 1.00 | 1.00 | 0.64 | 0.77 | 0.89 | 1.00 | 0.55 | 0.67 | 0.80 | 0.92 | 0.33 | 0.45 | 0.56 | 0.68 |
| | | PI | 4.18 | 4.18 | 4.18 | 4.18 | 4.20 | 4.20 | 4.20 | 4.20 | 4.21 | 4.21 | 4.22 | 4.21 | 4.23 | 4.23 | 4.23 | 4.23 |
| | 46 | TC | 8.11 | 8.20 | 8.28 | 8.37 | 8.66 | 8.66 | 8.74 | 8.83 | 8.91 | 8.91 | 8.91 | 9.00 | 9.66 | 9.66 | 9.66 | 9.66 |
| | | S/T | 0.86 | 1.00 | 1.00 | 1.00 | 0.65 | 0.78 | 0.91 | 1.00 | 0.55 | 0.68 | 0.81 | 0.94 | 0.33 | 0.45 | 0.57 | 0.69 |
| | | PI | 4.65 | 4.65 | 4.65 | 4.65 | 4.67 | 4.67 | 4.67 | 4.67 | 4.69 | 4.69 | 4.69 | 4.69 | 4.73 | 4.73 | 4.73 | 4.73 |
| | 50 | TC | 7.59 | 7.68 | 7.76 | 7.85 | 8.14 | 8.14 | 8.22 | 8.31 | 8.40 | 8.40 | 8.40 | 8.48 | 9.12 | 9.12 | 9.12 | 9.12 |
| | | S/T | 0.89 | 1.00 | 1.00 | 1.00 | 0.66 | 0.80 | 0.94 | 1.00 | 0.56 | 0.70 | 0.84 | 0.97 | 0.33 | 0.45 | 0.58 | 0.91 |
| | | PI | 5.04 | 5.04 | 5.04 | 5.04 | 5.06 | 5.06 | 5.06 | 5.06 | 5.07 | 5.07 | 5.07 | 5.07 | 5.11 | 5.11 | 5.11 | 5.11 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1955 | -15 | TC | 11.49 | 11.61 | 11.73 | 11.85 | 12.08 | 12.08 | 12.08 | 12.20 | 12.38 | 12.38 | 12.38 | 12.38 | 13.15 | 13.15 | 13.15 | 13.15 |
| | | S/T | 0.77 | 0.88 | 1.00 | 1.00 | 0.60 | 0.70 | 0.81 | 0.98 | 0.51 | 0.62 | 0.72 | 0.83 | 0.33 | 0.42 | 0.52 | 0.63 |
| | | PI | 2.71 | 2.71 | 2.71 | 2.71 | 2.69 | 2.69 | 2.69 | 2.69 | 2.70 | 2.70 | 2.70 | 2.70 | 2.69 | 2.69 | 2.69 | 2.69 |
| | -10 | TC | 11.42 | 11.54 | 11.66 | 11.78 | 12.01 | 12.01 | 12.01 | 12.13 | 12.32 | 12.32 | 12.32 | 12.32 | 13.11 | 13.11 | 13.11 | 13.11 |
| | | S/T | 0.78 | 0.88 | 1.00 | 1.00 | 0.60 | 0.71 | 0.82 | 0.98 | 0.51 | 0.62 | 0.73 | 0.83 | 0.33 | 0.43 | 0.52 | 0.63 |
| | | PI | 2.70 | 2.70 | 2.70 | 2.70 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| | -5 | TC | 11.35 | 11.47 | 11.59 | 11.71 | 11.97 | 11.97 | 11.97 | 12.08 | 12.28 | 12.28 | 12.28 | 12.28 | 13.07 | 13.07 | 13.07 | 13.07 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.60 | 0.71 | 0.82 | 0.99 | 0.52 | 0.62 | 0.73 | 0.84 | 0.33 | 0.43 | 0.53 | 0.63 |
| | | PI | 2.69 | 2.69 | 2.69 | 2.69 | 2.68 | 2.68 | 2.68 | 2.68 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| | 0 | TC | 11.29 | 11.41 | 11.53 | 11.65 | 11.92 | 11.92 | 11.92 | 12.04 | 12.24 | 12.24 | 12.24 | 12.24 | 13.06 | 13.06 | 13.06 | 13.06 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.61 | 0.72 | 0.82 | 0.99 | 0.52 | 0.63 | 0.74 | 0.84 | 0.33 | 0.43 | 0.53 | 0.64 |
| | | PI | 2.70 | 2.70 | 2.70 | 2.70 | 2.69 | 2.69 | 2.69 | 2.69 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 |
| | 5 | TC | 11.24 | 11.36 | 11.47 | 11.59 | 11.87 | 11.87 | 11.87 | 11.99 | 12.20 | 12.20 | 12.20 | 12.20 | 13.05 | 13.05 | 13.05 | 13.05 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 1.00 | 0.52 | 0.63 | 0.74 | 0.85 | 0.33 | 0.43 | 0.53 | 0.64 |
| | | PI | 2.73 | 2.73 | 2.73 | 2.73 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 |
| | 10 | TC | 11.17 | 11.29 | 11.40 | 11.52 | 11.82 | 11.82 | 11.82 | 11.94 | 12.15 | 12.15 | 12.15 | 12.15 | 13.02 | 13.02 | 13.02 | 13.02 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 1.00 | 0.52 | 0.63 | 0.74 | 0.85 | 0.34 | 0.44 | 0.53 | 0.64 |
| | | PI | 2.77 | 2.77 | 2.77 | 2.77 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 |
| | 15 | TC | 11.08 | 11.19 | 11.31 | 11.43 | 11.74 | 11.74 | 11.74 | 11.86 | 12.08 | 12.08 | 12.08 | 12.08 | 12.96 | 12.96 | 12.96 | 12.96 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 2.84 | 2.84 | 2.84 | 2.84 | 2.82 | 2.82 | 2.82 | 2.82 | 2.83 | 2.83 | 2.83 | 2.83 | 2.82 | 2.82 | 2.82 | 2.82 |
| | 20 | TC | 10.95 | 11.07 | 11.18 | 11.30 | 11.61 | 11.61 | 11.61 | 11.73 | 11.96 | 11.96 | 11.96 | 11.96 | 12.85 | 12.85 | 12.85 | 12.85 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 2.94 | 2.94 | 2.94 | 2.94 | 2.92 | 2.92 | 2.92 | 2.92 | 2.92 | 2.92 | 2.92 | 2.92 | 2.90 | 2.90 | 2.90 | 2.90 |
| | 25 | TC | 10.46 | 10.58 | 10.69 | 10.81 | 11.10 | 11.10 | 11.10 | 11.21 | 11.44 | 11.44 | 11.44 | 11.44 | 12.30 | 12.30 | 12.30 | 12.30 |
| | | S/T | 0.81 | 0.93 | 1.00 | 1.00 | 0.63 | 0.74 | 0.86 | 0.98 | 0.54 | 0.65 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 | 3.23 |
| | 30 | TC | 9.98 | 10.06 | 10.18 | 10.29 | 10.61 | 10.61 | 10.61 | 10.72 | 10.92 | 10.92 | 10.92 | 11.04 | 11.76 | 11.76 | 11.76 | 11.76 |
| | | S/T | 0.83 | 0.96 | 1.00 | 1.00 | 0.63 | 0.76 | 0.88 | 1.00 | 0.54 | 0.66 | 0.78 | 0.90 | 0.33 | 0.45 | 0.56 | 0.67 |
| | | PI | 3.54 | 3.54 | 3.54 | 3.54 | 3.55 | 3.55 | 3.55 | 3.55 | 3.56 | 3.56 | 3.56 | 3.56 | 3.57 | 3.57 | 3.57 | 3.57 |
| | 35 | TC | 9.46 | 9.54 | 9.63 | 9.72 | 10.06 | 10.06 | 10.18 | 10.29 | 10.38 | 10.38 | **10.55** | 10.67 | 11.21 | 11.21 | 11.21 | 11.21 |
| | | S/T | 0.85 | 0.98 | 1.00 | 1.00 | 0.64 | 0.77 | 0.90 | 1.00 | 0.55 | 0.67 | **0.80** | 0.91 | 0.33 | 0.45 | 0.57 | 0.68 |
| | | PI | 3.87 | 3.87 | 3.87 | 3.87 | 3.89 | 3.89 | 3.89 | 3.89 | 3.89 | 3.89 | **3.90** | 3.89 | 3.92 | 3.92 | 3.92 | 3.92 |
| | 40 | TC | 8.91 | 9.00 | 9.08 | 9.17 | 9.49 | 9.49 | 9.59 | 9.69 | 9.79 | 9.79 | 9.89 | 9.99 | 10.60 | 10.60 | 10.60 | 10.60 |
| | | S/T | 0.89 | 1.00 | 1.00 | 1.00 | 0.66 | 0.81 | 0.94 | 1.00 | 0.56 | 0.70 | 0.84 | 0.97 | 0.33 | 0.45 | 0.58 | 0.90 |
| | | PI | 4.27 | 4.27 | 4.27 | 4.27 | 4.29 | 4.29 | 4.29 | 4.29 | 4.30 | 4.30 | 4.30 | 4.30 | 4.33 | 4.33 | 4.33 | 4.33 |
| | 46 | TC | 8.25 | 8.34 | 8.43 | 8.51 | 8.80 | 8.80 | 8.89 | 8.97 | 9.09 | 9.09 | 9.09 | 9.17 | 9.86 | 9.86 | 9.86 | 9.86 |
| | | S/T | 0.90 | 1.00 | 1.00 | 1.00 | 0.67 | 0.82 | 0.97 | 1.00 | 0.57 | 0.71 | 0.85 | 0.99 | 0.32 | 0.46 | 0.59 | 0.92 |
| | | PI | 4.75 | 4.75 | 4.75 | 4.75 | 4.77 | 4.77 | 4.77 | 4.77 | 4.79 | 4.79 | 4.79 | 4.79 | 4.83 | 4.83 | 4.83 | 4.83 |
| | 50 | TC | 7.74 | 7.82 | 7.91 | 7.99 | 8.28 | 8.28 | 8.37 | 8.45 | 8.57 | 8.57 | 8.57 | 8.66 | 9.29 | 9.29 | 9.29 | 9.29 |
| | | S/T | 0.93 | 1.00 | 1.00 | 1.00 | 0.69 | 0.85 | 1.00 | 1.00 | 0.57 | 0.73 | 0.88 | 1.00 | 0.32 | 0.46 | 0.60 | 0.97 |
| | | PI | 5.14 | 5.14 | 5.14 | 5.14 | 5.17 | 5.17 | 5.17 | 5.17 | 5.18 | 5.18 | 5.18 | 5.18 | 5.22 | 5.22 | 5.22 | 5.22 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 36k+MOD30U-36HFN8-RRD0W(GA) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 1504 | -15 | TC | 11.05 | 11.06 | 11.18 | 11.30 | 11.63 | 11.87 | 11.87 | 11.99 | 11.90 | 11.90 | 11.90 | 11.90 | 12.65 | 12.65 | 12.65 | 12.65 |
| | | S/T | 0.71 | 0.81 | 0.90 | 0.97 | 0.57 | 0.66 | 0.74 | 0.83 | 0.50 | 0.59 | 0.67 | 0.75 | 0.35 | 0.42 | 0.50 | 0.58 |
| | | PI | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| | -10 | TC | 10.99 | 11.00 | 11.11 | 11.23 | 11.56 | 11.80 | 11.80 | 11.92 | 11.84 | 11.84 | 11.84 | 11.84 | 12.60 | 12.60 | 12.60 | 12.60 |
| | | S/T | 0.72 | 0.82 | 0.90 | 0.97 | 0.57 | 0.66 | 0.75 | 0.83 | 0.50 | 0.59 | 0.67 | 0.76 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| | -5 | TC | 10.92 | 10.93 | 11.05 | 11.17 | 11.52 | 11.76 | 11.76 | 11.88 | 11.80 | 11.80 | 11.80 | 11.80 | 12.57 | 12.57 | 12.57 | 12.57 |
| | | S/T | 0.72 | 0.82 | 0.91 | 0.98 | 0.58 | 0.66 | 0.75 | 0.84 | 0.51 | 0.59 | 0.67 | 0.76 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 | 2.66 | 2.66 | 2.66 | 2.66 |
| | 0 | TC | 10.87 | 10.87 | 10.99 | 11.11 | 11.47 | 11.71 | 11.71 | 11.83 | 11.77 | 11.77 | 11.77 | 11.77 | 12.56 | 12.56 | 12.56 | 12.56 |
| | | S/T | 0.73 | 0.82 | 0.91 | 0.98 | 0.58 | 0.67 | 0.75 | 0.84 | 0.51 | 0.60 | 0.68 | 0.76 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.67 | 2.67 | 2.67 | 2.67 |
| | 5 | TC | 10.81 | 10.82 | 10.94 | 11.06 | 11.43 | 11.67 | 11.67 | 11.79 | 11.73 | 11.73 | 11.73 | 11.73 | 12.55 | 12.55 | 12.55 | 12.55 |
| | | S/T | 0.73 | 0.83 | 0.92 | 0.99 | 0.58 | 0.67 | 0.76 | 0.85 | 0.51 | 0.60 | 0.68 | 0.77 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.68 | 2.69 | 2.69 | 2.69 | 2.69 |
| | 10 | TC | 10.75 | 10.75 | 10.87 | 10.99 | 11.38 | 11.61 | 11.61 | 11.73 | 11.68 | 11.68 | 11.68 | 11.68 | 12.52 | 12.52 | 12.52 | 12.52 |
| | | S/T | 0.73 | 0.83 | 0.92 | 0.99 | 0.58 | 0.67 | 0.76 | 0.85 | 0.51 | 0.60 | 0.68 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 2.73 | 2.73 | 2.73 | 2.73 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 | 2.72 |
| | 15 | TC | 10.66 | 10.67 | 10.78 | 10.90 | 11.30 | 11.54 | 11.54 | 11.65 | 11.61 | 11.61 | 11.61 | 11.61 | 12.46 | 12.46 | 12.46 | 12.46 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| | 20 | TC | 10.54 | 10.55 | 10.66 | 10.78 | 11.18 | 11.18 | 11.18 | 11.18 | 11.50 | 11.50 | 11.50 | 11.50 | 12.36 | 12.36 | 12.36 | 12.36 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 2.89 | 2.89 | 2.89 | 2.89 | 2.88 | 2.88 | 2.88 | 2.88 | 2.87 | 2.87 | 2.87 | 2.87 | 2.86 | 2.86 | 2.86 | 2.86 |
| | 25 | TC | 10.06 | 10.06 | 10.17 | 10.29 | 10.69 | 10.69 | 10.69 | 10.69 | 11.01 | 11.01 | 11.01 | 11.01 | 11.84 | 11.84 | 11.84 | 11.84 |
| | | S/T | 0.75 | 0.85 | 0.95 | 1.00 | 0.59 | 0.69 | 0.78 | 0.88 | 0.52 | 0.61 | 0.70 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 | 3.19 |
| | 30 | TC | 9.57 | 9.57 | 9.66 | 9.74 | 10.20 | 10.20 | 10.20 | 10.32 | 10.49 | 10.49 | 10.49 | 10.49 | 11.32 | 11.32 | 11.32 | 11.32 |
| | | S/T | 0.76 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.89 | 0.52 | 0.62 | 0.72 | 0.81 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 3.49 | 3.49 | 3.49 | 3.49 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.50 | 3.52 | 3.52 | 3.52 | 3.52 |
| | 35 | TC | 9.11 | 9.20 | 9.28 | 9.37 | 9.68 | 9.68 | 9.68 | 9.77 | 10.00 | 10.00 | 10.14 | 10.00 | 10.78 | 10.78 | 10.78 | 10.78 |
| | | S/T | 0.78 | 0.88 | 0.99 | 1.00 | 0.61 | 0.71 | 0.81 | 0.91 | 0.53 | 0.63 | 0.72 | 0.83 | 0.35 | 0.44 | 0.53 | 0.63 |
| | | PI | 3.81 | 3.81 | 3.81 | 3.81 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.84 | 3.83 | 3.86 | 3.86 | 3.86 | 3.86 |
| | 40 | TC | 8.58 | 8.66 | 8.75 | 8.84 | 9.14 | 9.14 | 9.14 | 9.23 | 9.43 | 9.43 | 9.51 | 9.47 | 10.18 | 10.18 | 10.18 | 10.18 |
| | | S/T | 0.80 | 0.92 | 1.00 | 1.00 | 0.62 | 0.73 | 0.85 | 0.96 | 0.53 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 4.21 | 4.21 | 4.21 | 4.21 | 4.23 | 4.23 | 4.23 | 4.23 | 4.23 | 4.23 | 4.24 | 4.23 | 4.26 | 4.26 | 4.26 | 4.26 |
| | 46 | TC | 7.93 | 8.02 | 8.11 | 8.19 | 8.48 | 8.48 | 8.48 | 8.57 | 8.74 | 8.74 | 8.74 | 8.83 | 9.46 | 9.46 | 9.46 | 9.46 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.86 | 0.98 | 0.54 | 0.65 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 4.68 | 4.68 | 4.68 | 4.68 | 4.70 | 4.70 | 4.70 | 4.70 | 4.71 | 4.71 | 4.71 | 4.71 | 4.75 | 4.75 | 4.75 | 4.75 |
| | 50 | TC | 7.45 | 7.53 | 7.62 | 7.70 | 7.96 | 7.96 | 8.05 | 8.14 | 8.22 | 8.22 | 8.22 | 8.31 | 8.91 | 8.91 | 8.91 | 8.91 |
| | | S/T | 0.84 | 0.97 | 1.00 | 1.00 | 0.64 | 0.76 | 0.89 | 1.00 | 0.55 | 0.67 | 0.79 | 0.91 | 0.33 | 0.45 | 0.56 | 0.67 |
| | | PI | 5.06 | 5.06 | 5.06 | 5.06 | 5.09 | 5.09 | 5.09 | 5.09 | 5.10 | 5.10 | 5.10 | 5.10 | 5.14 | 5.14 | 5.14 | 5.14 |
| 1728 | -15 | TC | 11.28 | 11.28 | 11.40 | 11.52 | 11.87 | 11.87 | 11.87 | 11.99 | 12.15 | 12.15 | 12.15 | 12.15 | 12.92 | 12.92 | 12.92 | 12.92 |
| | | S/T | 0.74 | 0.85 | 0.98 | 1.00 | 0.58 | 0.68 | 0.78 | 0.87 | 0.51 | 0.60 | 0.70 | 0.79 | 0.34 | 0.42 | 0.51 | 0.60 |
| | | PI | 2.72 | 2.72 | 2.72 | 2.72 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| | -10 | TC | 11.21 | 11.21 | 11.33 | 11.45 | 11.80 | 11.80 | 11.80 | 11.92 | 12.08 | 12.08 | 12.08 | 12.08 | 12.87 | 12.87 | 12.87 | 12.87 |
| | | S/T | 0.75 | 0.85 | 0.99 | 1.00 | 0.58 | 0.68 | 0.79 | 0.87 | 0.51 | 0.60 | 0.70 | 0.80 | 0.34 | 0.43 | 0.51 | 0.60 |
| | | PI | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.70 | 2.70 | 2.70 | 2.70 | 2.71 | 2.71 | 2.71 | 2.71 |
| | -5 | TC | 11.14 | 11.14 | 11.26 | 11.38 | 11.76 | 11.76 | 11.76 | 11.88 | 12.04 | 12.04 | 12.04 | 12.04 | 12.84 | 12.84 | 12.84 | 12.84 |
| | | S/T | 0.75 | 0.86 | 0.99 | 1.00 | 0.59 | 0.68 | 0.79 | 0.88 | 0.52 | 0.60 | 0.70 | 0.80 | 0.34 | 0.43 | 0.52 | 0.60 |
| | | PI | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.70 | 2.71 | 2.71 | 2.71 | 2.71 |
| | 0 | TC | 11.09 | 11.09 | 11.21 | 11.32 | 11.71 | 11.71 | 11.71 | 11.83 | 12.01 | 12.01 | 12.01 | 12.01 | 12.83 | 12.83 | 12.83 | 12.83 |
| | | S/T | 0.75 | 0.86 | 1.00 | 1.00 | 0.59 | 0.69 | 0.79 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 | 2.72 | 2.72 | 2.72 | 2.72 |
| | 5 | TC | 11.03 | 11.03 | 11.15 | 11.27 | 11.67 | 11.67 | 11.67 | 11.79 | 11.97 | 11.97 | 11.97 | 11.97 | 12.82 | 12.82 | 12.82 | 12.82 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.69 | 0.80 | 0.89 | 0.52 | 0.61 | 0.71 | 0.81 | 0.34 | 0.43 | 0.52 | 0.61 |
| | | PI | 2.74 | 2.74 | 2.74 | 2.74 | 2.74 | 2.74 | 2.74 | 2.74 | 2.73 | 2.73 | 2.73 | 2.73 | 2.74 | 2.74 | 2.74 | 2.74 |
| | 10 | TC | 10.96 | 10.96 | 11.08 | 11.20 | 11.61 | 11.61 | 11.61 | 11.73 | 11.92 | 11.92 | 11.92 | 11.92 | 12.78 | 12.78 | 12.78 | 12.78 |
| | | S/T | 0.76 | 0.87 | 1.00 | 1.00 | 0.59 | 0.69 | 0.80 | 0.89 | 0.52 | 0.61 | 0.71 | 0.81 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 | 2.77 | 2.77 | 2.77 | 2.77 | 2.78 | 2.78 | 2.78 | 2.78 |
| | 15 | TC | 10.87 | 10.87 | 10.99 | 11.11 | 11.54 | 11.54 | 11.54 | 11.65 | 11.85 | 11.85 | 11.85 | 11.85 | 12.73 | 12.73 | 12.73 | 12.73 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.81 | 0.90 | 0.53 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 2.85 | 2.85 | 2.85 | 2.85 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 | 2.84 |
| | 20 | TC | 10.75 | 10.75 | 10.87 | 10.98 | 11.41 | 11.41 | 11.41 | 11.53 | 11.73 | 11.73 | 11.73 | 11.73 | 12.62 | 12.62 | 12.62 | 12.62 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.81 | 0.90 | 0.53 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 2.95 | 2.95 | 2.95 | 2.95 | 2.94 | 2.94 | 2.94 | 2.94 | 2.93 | 2.93 | 2.93 | 2.93 | 2.92 | 2.92 | 2.92 | 2.92 |
| | 25 | TC | 10.26 | 10.38 | 10.49 | 10.61 | 10.90 | 10.90 | 10.90 | 11.01 | 11.21 | 11.21 | 11.21 | 11.21 | 12.07 | 12.07 | 12.07 | 12.07 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.61 | 0.72 | 0.82 | 0.92 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.63 |
| | | PI | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 |
| | 30 | TC | 9.77 | 9.86 | 9.95 | 10.03 | 10.41 | 10.41 | 10.41 | 10.52 | 10.72 | 10.72 | 10.72 | 10.72 | 11.53 | 11.53 | 11.53 | 11.53 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.64 |
| | | PI | 3.56 | 3.56 | 3.56 | 3.56 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.57 | 3.59 | 3.59 | 3.59 | 3.59 |
| | 35 | TC | 9.29 | 9.37 | 9.46 | 9.54 | 9.89 | 9.89 | 9.89 | 9.98 | 10.18 | 10.18 | 10.35 | 10.18 | 10.98 | 10.98 | 10.98 | 10.98 |
| | | S/T | 0.81 | 0.93 | 1.00 | 1.00 | 0.62 | 0.74 | 0.86 | 0.97 | 0.54 | 0.65 | 0.76 | 0.88 | 0.34 | 0.44 | 0.55 | 0.65 |
| | | PI | 3.89 | 3.89 | 3.89 | 3.89 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.92 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 |
| | 40 | TC | 8.75 | 8.84 | 8.93 | 9.01 | 9.33 | 9.33 | 9.37 | 9.46 | 9.60 | 9.60 | 9.70 | 9.64 | 10.38 | 10.38 | 10.38 | 10.38 |
| | | S/T | 0.84 | 0.98 | 1.00 | 1.00 | 0.64 | 0.77 | 0.89 | 1.00 | 0.55 | 0.67 | 0.80 | 0.92 | 0.33 | 0.45 | 0.56 | 0.68 |
| | | PI | 4.29 | 4.29 | 4.29 | 4.29 | 4.32 | 4.32 | 4.32 | 4.32 | 4.32 | 4.32 | 4.33 | 4.32 | 4.34 | 4.34 | 4.34 | 4.34 |
| | 46 | TC | 8.11 | 8.20 | 8.28 | 8.37 | 8.66 | 8.66 | 8.74 | 8.83 | 8.91 | 8.91 | 8.91 | 9.00 | 9.66 | 9.66 | 9.66 | 9.66 |
| | | S/T | 0.86 | 1.00 | 1.00 | 1.00 | 0.65 | 0.78 | 0.91 | 1.00 | 0.55 | 0.68 | 0.81 | 0.94 | 0.33 | 0.45 | 0.57 | 0.69 |
| | | PI | 4.77 | 4.77 | 4.77 | 4.77 | 4.80 | 4.80 | 4.80 | 4.80 | 4.81 | 4.81 | 4.81 | 4.81 | 4.85 | 4.85 | 4.85 | 4.85 |
| | 50 | TC | 7.59 | 7.68 | 7.76 | 7.85 | 8.14 | 8.14 | 8.22 | 8.31 | 8.40 | 8.40 | 8.40 | 8.48 | 9.12 | 9.12 | 9.12 | 9.12 |
| | | S/T | 0.89 | 1.00 | 1.00 | 1.00 | 0.66 | 0.80 | 0.94 | 1.00 | 0.56 | 0.70 | 0.84 | 0.97 | 0.33 | 0.45 | 0.58 | 0.91 |
| | | PI | 5.17 | 5.17 | 5.17 | 5.17 | 5.19 | 5.19 | 5.19 | 5.19 | 5.21 | 5.21 | 5.21 | 5.21 | 5.25 | 5.25 | 5.25 | 5.25 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1955 | -15 | TC | 11.49 | 11.61 | 11.73 | 11.85 | 12.08 | 12.08 | 12.08 | 12.20 | 12.38 | 12.38 | 12.38 | 12.38 | 13.15 | 13.15 | 13.15 | 13.15 |
| | | S/T | 0.77 | 0.88 | 1.00 | 1.00 | 0.60 | 0.70 | 0.81 | 0.98 | 0.51 | 0.62 | 0.72 | 0.83 | 0.33 | 0.42 | 0.52 | 0.63 |
| | | PI | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 |
| | -10 | TC | 11.42 | 11.54 | 11.66 | 11.78 | 12.01 | 12.01 | 12.01 | 12.13 | 12.32 | 12.32 | 12.32 | 12.32 | 13.11 | 13.11 | 13.11 | 13.11 |
| | | S/T | 0.78 | 0.88 | 1.00 | 1.00 | 0.60 | 0.71 | 0.82 | 0.98 | 0.51 | 0.62 | 0.73 | 0.83 | 0.33 | 0.43 | 0.52 | 0.63 |
| | | PI | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 |
| | -5 | TC | 11.35 | 11.47 | 11.59 | 11.71 | 11.97 | 11.97 | 11.97 | 12.08 | 12.28 | 12.28 | 12.28 | 12.28 | 13.07 | 13.07 | 13.07 | 13.07 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.60 | 0.71 | 0.82 | 0.99 | 0.52 | 0.62 | 0.73 | 0.84 | 0.33 | 0.43 | 0.53 | 0.63 |
| | | PI | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.77 | 2.77 | 2.77 | 2.77 |
| | 0 | TC | 11.29 | 11.41 | 11.53 | 11.65 | 11.92 | 11.92 | 11.92 | 12.04 | 12.24 | 12.24 | 12.24 | 12.24 | 13.06 | 13.06 | 13.06 | 13.06 |
| | | S/T | 0.78 | 0.89 | 1.00 | 1.00 | 0.61 | 0.72 | 0.82 | 0.99 | 0.52 | 0.63 | 0.74 | 0.84 | 0.33 | 0.43 | 0.53 | 0.64 |
| | | PI | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.77 | 2.78 | 2.78 | 2.78 | 2.78 |
| | 5 | TC | 11.24 | 11.36 | 11.47 | 11.59 | 11.87 | 11.87 | 11.87 | 11.99 | 12.20 | 12.20 | 12.20 | 12.20 | 13.05 | 13.05 | 13.05 | 13.05 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 1.00 | 0.52 | 0.63 | 0.74 | 0.85 | 0.33 | 0.43 | 0.53 | 0.64 |
| | | PI | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.80 | 2.80 | 2.80 | 2.80 |
| | 10 | TC | 11.17 | 11.29 | 11.40 | 11.52 | 11.82 | 11.82 | 11.82 | 11.94 | 12.15 | 12.15 | 12.15 | 12.15 | 13.02 | 13.02 | 13.02 | 13.02 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 1.00 | 0.52 | 0.63 | 0.74 | 0.85 | 0.34 | 0.44 | 0.53 | 0.64 |
| | | PI | 2.84 | 2.84 | 2.84 | 2.84 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 |
| | 15 | TC | 11.08 | 11.19 | 11.31 | 11.43 | 11.74 | 11.74 | 11.74 | 11.86 | 12.08 | 12.08 | 12.08 | 12.08 | 12.96 | 12.96 | 12.96 | 12.96 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 2.91 | 2.91 | 2.91 | 2.91 | 2.90 | 2.90 | 2.90 | 2.90 | 2.89 | 2.89 | 2.89 | 2.89 | 2.89 | 2.89 | 2.89 | 2.89 |
| | 20 | TC | 10.95 | 11.07 | 11.18 | 11.30 | 11.61 | 11.61 | 11.61 | 11.73 | 11.96 | 11.96 | 11.96 | 11.96 | 12.85 | 12.85 | 12.85 | 12.85 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.65 |
| | | PI | 3.01 | 3.01 | 3.01 | 3.01 | 3.00 | 3.00 | 3.00 | 3.00 | 2.99 | 2.99 | 2.99 | 2.99 | 2.98 | 2.98 | 2.98 | 2.98 |
| | 25 | TC | 10.46 | 10.58 | 10.69 | 10.81 | 11.10 | 11.10 | 11.10 | 11.21 | 11.44 | 11.44 | 11.44 | 11.44 | 12.30 | 12.30 | 12.30 | 12.30 |
| | | S/T | 0.81 | 0.93 | 1.00 | 1.00 | 0.63 | 0.74 | 0.86 | 0.98 | 0.54 | 0.65 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.66 |
| | | PI | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 |
| | 30 | TC | 9.98 | 10.06 | 10.18 | 10.29 | 10.61 | 10.61 | 10.61 | 10.72 | 10.92 | 10.92 | 10.92 | 11.04 | 11.76 | 11.76 | 11.76 | 11.76 |
| | | S/T | 0.83 | 0.96 | 1.00 | 1.00 | 0.63 | 0.76 | 0.88 | 1.00 | 0.54 | 0.66 | 0.78 | 0.90 | 0.33 | 0.45 | 0.56 | 0.67 |
| | | PI | 3.63 | 3.63 | 3.63 | 3.63 | 3.64 | 3.64 | 3.64 | 3.64 | 3.65 | 3.65 | 3.65 | 3.65 | 3.66 | 3.66 | 3.66 | 3.66 |
| | 35 | TC | 9.46 | 9.54 | 9.63 | 9.72 | 10.06 | 10.06 | 10.18 | 10.29 | 10.38 | 10.38 | **10.55** | 10.67 | 11.21 | 11.21 | 11.21 | 11.21 |
| | | S/T | 0.85 | 0.98 | 1.00 | 1.00 | 0.64 | 0.77 | 0.90 | 1.00 | 0.55 | 0.67 | **0.80** | 0.91 | 0.33 | 0.45 | 0.57 | 0.68 |
| | | PI | 3.97 | 3.97 | 3.97 | 3.97 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | **4.00** | 3.99 | 4.02 | 4.02 | 4.02 | 4.02 |
| | 40 | TC | 8.91 | 9.00 | 9.08 | 9.17 | 9.49 | 9.49 | 9.59 | 9.69 | 9.79 | 9.79 | 9.89 | 9.99 | 10.60 | 10.60 | 10.60 | 10.60 |
| | | S/T | 0.89 | 1.00 | 1.00 | 1.00 | 0.66 | 0.81 | 0.94 | 1.00 | 0.56 | 0.70 | 0.84 | 0.97 | 0.33 | 0.45 | 0.58 | 0.90 |
| | | PI | 4.38 | 4.38 | 4.38 | 4.38 | 4.40 | 4.40 | 4.40 | 4.40 | 4.41 | 4.41 | 4.41 | 4.41 | 4.44 | 4.44 | 4.44 | 4.44 |
| | 46 | TC | 8.25 | 8.34 | 8.43 | 8.51 | 8.80 | 8.80 | 8.89 | 8.97 | 9.09 | 9.09 | 9.09 | 9.17 | 9.86 | 9.86 | 9.86 | 9.86 |
| | | S/T | 0.90 | 1.00 | 1.00 | 1.00 | 0.67 | 0.82 | 0.97 | 1.00 | 0.57 | 0.71 | 0.85 | 0.99 | 0.32 | 0.46 | 0.59 | 0.92 |
| | | PI | 4.87 | 4.87 | 4.87 | 4.87 | 4.89 | 4.89 | 4.89 | 4.89 | 4.91 | 4.91 | 4.91 | 4.91 | 4.95 | 4.95 | 4.95 | 4.95 |
| | 50 | TC | 7.74 | 7.82 | 7.91 | 7.99 | 8.28 | 8.28 | 8.37 | 8.45 | 8.57 | 8.57 | 8.57 | 8.66 | 9.29 | 9.29 | 9.29 | 9.29 |
| | | S/T | 0.93 | 1.00 | 1.00 | 1.00 | 0.69 | 0.85 | 1.00 | 1.00 | 0.57 | 0.73 | 0.88 | 1.00 | 0.32 | 0.46 | 0.60 | 0.97 |
| | | PI | 5.27 | 5.27 | 5.27 | 5.27 | 5.30 | 5.30 | 5.30 | 5.30 | 5.31 | 5.31 | 5.31 | 5.31 | 5.35 | 5.35 | 5.35 | 5.35 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 48k+MOE30U-48HFN8-RRD0W(GA)/MOX630U-48HFN8-RRD0W(GA)/MOX630U-48HFN8-QRD0W(GA) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 1600 | -15 | TC | 14.70 | 14.69 | 14.69 | 14.84 | 15.46 | 15.79 | 15.79 | 15.79 | 15.84 | 15.84 | 15.84 | 15.84 | 16.83 | 16.83 | 16.83 | 16.83 |
| | | S/T | 0.68 | 0.75 | 0.82 | 0.90 | 0.55 | 0.62 | 0.70 | 0.76 | 0.49 | 0.56 | 0.63 | 0.70 | 0.36 | 0.42 | 0.48 | 0.55 |
| | | PI | 3.33 | 3.33 | 3.33 | 3.33 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.31 | 3.31 | 3.31 | 3.31 |
| | -10 | TC | 14.61 | 14.60 | 14.60 | 14.75 | 15.37 | 15.71 | 15.71 | 15.71 | 15.76 | 15.76 | 15.76 | 15.76 | 16.77 | 16.77 | 16.77 | 16.77 |
| | | S/T | 0.68 | 0.76 | 0.82 | 0.90 | 0.55 | 0.62 | 0.70 | 0.77 | 0.49 | 0.56 | 0.63 | 0.70 | 0.36 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.31 | 3.32 | 3.32 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.32 | 3.32 | 3.32 | 3.32 |
| | -5 | TC | 14.52 | 14.51 | 14.51 | 14.66 | 15.31 | 15.65 | 15.65 | 15.65 | 15.70 | 15.70 | 15.70 | 15.70 | 16.73 | 16.73 | 16.73 | 16.73 |
| | | S/T | 0.68 | 0.76 | 0.83 | 0.91 | 0.56 | 0.63 | 0.70 | 0.77 | 0.50 | 0.57 | 0.63 | 0.70 | 0.36 | 0.43 | 0.49 | 0.56 |
| | | PI | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.31 | 3.32 | 3.32 | 3.32 | 3.32 |
| | 0 | TC | 14.45 | 14.44 | 14.44 | 14.59 | 15.26 | 15.59 | 15.59 | 15.59 | 15.66 | 15.66 | 15.66 | 15.66 | 16.71 | 16.71 | 16.71 | 16.71 |
| | | S/T | 0.69 | 0.76 | 0.83 | 0.91 | 0.56 | 0.63 | 0.71 | 0.77 | 0.50 | 0.57 | 0.64 | 0.71 | 0.36 | 0.43 | 0.49 | 0.56 |
| | | PI | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.32 | 3.33 | 3.33 | 3.33 | 3.33 | 3.33 | 3.33 | 3.33 | 3.33 |
| | 5 | TC | 14.38 | 14.37 | 14.37 | 14.51 | 15.20 | 15.53 | 15.53 | 15.53 | 15.61 | 15.61 | 15.61 | 15.61 | 16.70 | 16.70 | 16.70 | 16.70 |
| | | S/T | 0.69 | 0.77 | 0.84 | 0.92 | 0.56 | 0.63 | 0.71 | 0.78 | 0.50 | 0.57 | 0.64 | 0.71 | 0.36 | 0.43 | 0.49 | 0.56 |
| | | PI | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.35 | 3.36 | 3.36 | 3.36 | 3.36 |
| | 10 | TC | 14.29 | 14.28 | 14.28 | 14.43 | 15.13 | 15.45 | 15.45 | 15.45 | 15.54 | 15.54 | 15.54 | 15.54 | 16.66 | 16.66 | 16.66 | 16.66 |
| | | S/T | 0.69 | 0.77 | 0.84 | 0.92 | 0.56 | 0.64 | 0.71 | 0.78 | 0.50 | 0.57 | 0.64 | 0.71 | 0.37 | 0.44 | 0.50 | 0.56 |
| | | PI | 3.41 | 3.41 | 3.41 | 3.41 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 | 3.40 |
| | 15 | TC | 14.18 | 14.16 | 14.16 | 14.31 | 15.02 | 15.35 | 15.35 | 15.35 | 15.45 | 15.45 | 15.45 | 15.45 | 16.59 | 16.59 | 16.59 | 16.59 |
| | | S/T | 0.70 | 0.78 | 0.85 | 0.93 | 0.57 | 0.64 | 0.72 | 0.79 | 0.51 | 0.58 | 0.65 | 0.72 | 0.37 | 0.44 | 0.50 | 0.57 |
| | | PI | 3.49 | 3.49 | 3.49 | 3.49 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 | 3.47 | 3.47 | 3.47 | 3.47 |
| | 20 | TC | 14.02 | 14.00 | 14.00 | 14.15 | 14.87 | 14.87 | 14.87 | 14.87 | 15.30 | 15.30 | 15.30 | 15.30 | 16.44 | 16.44 | 16.44 | 16.44 |
| | | S/T | 0.70 | 0.78 | 0.85 | 0.93 | 0.57 | 0.64 | 0.72 | 0.79 | 0.51 | 0.58 | 0.65 | 0.72 | 0.37 | 0.44 | 0.50 | 0.57 |
| | | PI | 3.61 | 3.62 | 3.62 | 3.61 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 | 3.58 | 3.58 | 3.58 | 3.58 |
| | 25 | TC | 13.37 | 13.37 | 13.37 | 13.52 | 14.21 | 14.21 | 14.21 | 14.21 | 14.64 | 14.64 | 14.64 | 14.64 | 15.73 | 15.73 | 15.73 | 15.73 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.94 | 0.57 | 0.65 | 0.73 | 0.80 | 0.51 | 0.59 | 0.66 | 0.73 | 0.37 | 0.44 | 0.51 | 0.57 |
| | | PI | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 |
| | 30 | TC | 12.74 | 12.74 | 12.74 | 12.86 | 13.55 | 13.55 | 13.55 | 13.55 | 13.95 | 13.95 | 13.95 | 13.95 | 15.04 | 15.04 | 15.04 | 15.04 |
| | | S/T | 0.72 | 0.80 | 0.88 | 0.96 | 0.58 | 0.66 | 0.74 | 0.81 | 0.51 | 0.59 | 0.67 | 0.74 | 0.37 | 0.44 | 0.51 | 0.58 |
| | | PI | 4.36 | 4.36 | 4.36 | 4.36 | 4.37 | 4.37 | 4.37 | 4.37 | 4.37 | 4.37 | 4.37 | 4.37 | 4.39 | 4.39 | 4.39 | 4.39 |
| | 35 | TC | 12.11 | 12.11 | 12.23 | 12.34 | 12.89 | 12.89 | 12.89 | 12.89 | 13.29 | 13.29 | 13.49 | 13.29 | 14.32 | 14.32 | 14.32 | 14.32 |
| | | S/T | 0.72 | 0.81 | 0.90 | 0.98 | 0.58 | 0.66 | 0.75 | 0.83 | 0.51 | 0.60 | 0.67 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 4.77 | 4.77 | 4.77 | 4.77 | 4.78 | 4.78 | 4.78 | 4.78 | 4.79 | 4.79 | 4.80 | 4.79 | 4.82 | 4.82 | 4.82 | 4.82 |
| | 40 | TC | 11.40 | 11.40 | 11.51 | 11.62 | 12.13 | 12.13 | 12.13 | 12.13 | 12.52 | 12.52 | 12.63 | 12.52 | 13.52 | 13.52 | 13.52 | 13.52 |
| | | S/T | 0.74 | 0.84 | 0.94 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.70 | 0.78 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 5.26 | 5.26 | 5.26 | 5.26 | 5.27 | 5.27 | 5.27 | 5.27 | 5.28 | 5.28 | 5.29 | 5.28 | 5.32 | 5.32 | 5.32 | 5.32 |
| | 46 | TC | 10.55 | 10.55 | 10.67 | 10.78 | 11.24 | 11.24 | 11.24 | 11.24 | 11.61 | 11.61 | 11.61 | 11.61 | 12.59 | 12.59 | 12.59 | 12.59 |
| | | S/T | 0.75 | 0.86 | 0.95 | 1.00 | 0.59 | 0.69 | 0.79 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 5.84 | 5.84 | 5.84 | 5.84 | 5.87 | 5.87 | 5.87 | 5.87 | 5.88 | 5.88 | 5.88 | 5.88 | 5.93 | 5.93 | 5.93 | 5.93 |
| | 50 | TC | 9.89 | 9.89 | 9.98 | 10.06 | 10.58 | 10.58 | 10.58 | 10.69 | 10.92 | 10.92 | 10.92 | 10.92 | 11.84 | 11.84 | 11.84 | 11.84 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.80 | 0.90 | 0.52 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 6.33 | 6.33 | 6.33 | 6.33 | 6.35 | 6.35 | 6.35 | 6.35 | 6.37 | 6.37 | 6.37 | 6.37 | 6.42 | 6.42 | 6.42 | 6.42 |
| 1850 | -15 | TC | 15.02 | 15.02 | 15.17 | 15.33 | 15.79 | 15.79 | 15.79 | 15.79 | 16.17 | 16.17 | 16.17 | 16.17 | 17.19 | 17.19 | 17.19 | 17.19 |
| | | S/T | 0.70 | 0.78 | 0.98 | 1.00 | 0.56 | 0.64 | 0.71 | 0.79 | 0.49 | 0.57 | 0.65 | 0.72 | 0.35 | 0.42 | 0.49 | 0.56 |
| | | PI | 3.40 | 3.40 | 3.40 | 3.40 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.38 | 3.38 | 3.38 | 3.38 |
| | -10 | TC | 14.94 | 14.94 | 15.08 | 15.23 | 15.71 | 15.71 | 15.71 | 15.71 | 16.09 | 16.09 | 16.09 | 16.09 | 17.13 | 17.13 | 17.13 | 17.13 |
| | | S/T | 0.70 | 0.79 | 0.99 | 1.00 | 0.56 | 0.64 | 0.72 | 0.80 | 0.49 | 0.57 | 0.65 | 0.73 | 0.35 | 0.43 | 0.49 | 0.56 |
| | | PI | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 |
| | -5 | TC | 14.85 | 14.85 | 14.99 | 15.14 | 15.65 | 15.65 | 15.65 | 15.65 | 16.03 | 16.03 | 16.03 | 16.03 | 17.09 | 17.09 | 17.09 | 17.09 |
| | | S/T | 0.70 | 0.79 | 0.99 | 1.00 | 0.57 | 0.64 | 0.72 | 0.80 | 0.50 | 0.58 | 0.65 | 0.73 | 0.35 | 0.43 | 0.50 | 0.57 |
| | | PI | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.38 | 3.39 | 3.39 | 3.39 | 3.39 |
| | 0 | TC | 14.77 | 14.77 | 14.92 | 15.07 | 15.59 | 15.59 | 15.59 | 15.59 | 15.99 | 15.99 | 15.99 | 15.99 | 17.07 | 17.07 | 17.07 | 17.07 |
| | | S/T | 0.71 | 0.79 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.80 | 0.50 | 0.58 | 0.66 | 0.74 | 0.35 | 0.43 | 0.50 | 0.57 |
| | | PI | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.39 | 3.40 | 3.40 | 3.40 | 3.40 |
| | 5 | TC | 14.70 | 14.70 | 14.84 | 14.99 | 15.53 | 15.53 | 15.53 | 15.53 | 15.94 | 15.94 | 15.94 | 15.94 | 17.06 | 17.06 | 17.06 | 17.06 |
| | | S/T | 0.71 | 0.80 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.81 | 0.50 | 0.58 | 0.66 | 0.74 | 0.35 | 0.43 | 0.50 | 0.57 |
| | | PI | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 | 3.42 |
| | 10 | TC | 14.61 | 14.61 | 14.75 | 14.90 | 15.45 | 15.45 | 15.45 | 15.45 | 15.87 | 15.87 | 15.87 | 15.87 | 17.01 | 17.01 | 17.01 | 17.01 |
| | | S/T | 0.71 | 0.80 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.81 | 0.50 | 0.58 | 0.66 | 0.74 | 0.36 | 0.44 | 0.50 | 0.57 |
| | | PI | 3.48 | 3.48 | 3.48 | 3.48 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 |
| | 15 | TC | 14.49 | 14.49 | 14.63 | 14.78 | 15.35 | 15.35 | 15.35 | 15.35 | 15.77 | 15.77 | 15.77 | 15.77 | 16.94 | 16.94 | 16.94 | 16.94 |
| | | S/T | 0.72 | 0.81 | 0.89 | 0.97 | 0.58 | 0.66 | 0.74 | 0.82 | 0.51 | 0.59 | 0.67 | 0.75 | 0.36 | 0.44 | 0.51 | 0.58 |
| | | PI | 3.56 | 3.56 | 3.56 | 3.56 | 3.56 | 3.56 | 3.56 | 3.56 | 3.55 | 3.55 | 3.55 | 3.55 | 3.54 | 3.54 | 3.54 | 3.54 |
| | 20 | TC | 14.33 | 14.33 | 14.47 | 14.61 | 15.19 | 15.19 | 15.19 | 15.19 | 15.62 | 15.62 | 15.62 | 15.62 | 16.80 | 16.80 | 16.80 | 16.80 |
| | | S/T | 0.72 | 0.81 | 0.89 | 0.97 | 0.58 | 0.66 | 0.74 | 0.82 | 0.51 | 0.59 | 0.67 | 0.75 | 0.36 | 0.44 | 0.51 | 0.58 |
| | | PI | 3.69 | 3.69 | 3.69 | 3.69 | 3.68 | 3.68 | 3.68 | 3.68 | 3.67 | 3.67 | 3.67 | 3.67 | 3.65 | 3.65 | 3.65 | 3.65 |
| | 25 | TC | 13.67 | 13.67 | 13.81 | 13.95 | 14.50 | 14.50 | 14.50 | 14.50 | 14.93 | 14.93 | 14.93 | 14.93 | 16.08 | 16.08 | 16.08 | 16.08 |
| | | S/T | 0.73 | 0.82 | 0.91 | 0.99 | 0.58 | 0.67 | 0.75 | 0.84 | 0.52 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 4.07 | 4.07 | 4.07 | 4.07 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.07 | 4.07 | 4.07 | 4.07 |
| | 30 | TC | 13.01 | 13.01 | 13.15 | 13.29 | 13.84 | 13.84 | 13.84 | 13.84 | 14.27 | 14.27 | 14.27 | 14.27 | 15.36 | 15.36 | 15.36 | 15.36 |
| | | S/T | 0.74 | 0.83 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.60 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 4.45 | 4.45 | 4.45 | 4.45 | 4.46 | 4.46 | 4.46 | 4.46 | 4.47 | 4.47 | 4.47 | 4.47 | 4.48 | 4.48 | 4.48 | 4.48 |
| | 35 | TC | 12.37 | 12.37 | 12.49 | 12.60 | 13.15 | 13.15 | 13.15 | 13.15 | 13.58 | 13.58 | 13.78 | 13.58 | 14.64 | 14.64 | 14.64 | 14.64 |
| | | S/T | 0.75 | 0.85 | 0.95 | 1.00 | 0.59 | 0.69 | 0.78 | 0.88 | 0.52 | 0.61 | 0.70 | 0.79 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 4.86 | 4.86 | 4.86 | 4.86 | 4.88 | 4.88 | 4.88 | 4.88 | 4.89 | 4.89 | 4.90 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| | 40 | TC | 11.55 | 11.60 | 11.72 | 11.83 | 12.31 | 12.31 | 12.31 | 12.36 | 12.71 | 12.71 | 12.82 | 12.71 | 13.72 | 13.72 | 13.72 | 13.72 |
| | | S/T | 0.77 | 0.88 | 0.99 | 1.00 | 0.60 | 0.71 | 0.81 | 0.91 | 0.53 | 0.63 | 0.73 | 0.83 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 5.37 | 5.37 | 5.37 | 5.37 | 5.39 | 5.39 | 5.39 | 5.39 | 5.41 | 5.41 | 5.41 | 5.41 | 5.43 | 5.43 | 5.43 | 5.43 |
| | 46 | TC | 10.68 | 10.79 | 10.91 | 11.02 | 11.42 | 11.42 | 11.42 | 11.54 | 11.79 | 11.79 | 11.79 | 11.79 | 12.76 | 12.76 | 12.76 | 12.76 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.83 | 0.93 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.63 |
| | | PI | 5.97 | 5.97 | 5.97 | 5.97 | 6.00 | 6.00 | 6.00 | 6.00 | 6.02 | 6.02 | 6.02 | 6.02 | 6.07 | 6.07 | 6.07 | 6.07 |
| | 50 | TC | 10.03 | 10.14 | 10.25 | 10.37 | 10.74 | 10.74 | 10.74 | 10.85 | 11.08 | 11.08 | 11.08 | 11.08 | 12.02 | 12.02 | 12.02 | 12.02 |
| | | S/T | 0.81 | 0.92 | 1.00 | 1.00 | 0.62 | 0.73 | 0.85 | 0.96 | 0.53 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.54 | 0.91 |
| | | PI | 6.47 | 6.47 | 6.47 | 6.47 | 6.50 | 6.50 | 6.50 | 6.50 | 6.51 | 6.51 | 6.51 | 6.51 | 6.57 | 6.57 | 6.57 | 6.57 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2100 | -15 | TC | 15.33 | 15.33 | 15.48 | 15.63 | 16.12 | 16.12 | 16.12 | 16.12 | 16.53 | 16.53 | 16.53 | 16.53 | 17.54 | 17.54 | 17.54 | 17.54 |
| | | S/T | 0.71 | 0.81 | 1.00 | 1.00 | 0.57 | 0.66 | 0.74 | 0.98 | 0.50 | 0.59 | 0.67 | 0.75 | 0.34 | 0.42 | 0.50 | 0.58 |
| | | PI | 3.47 | 3.47 | 3.47 | 3.47 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 |
| | -10 | TC | 15.23 | 15.23 | 15.38 | 15.53 | 16.03 | 16.03 | 16.03 | 16.03 | 16.45 | 16.45 | 16.45 | 16.45 | 17.48 | 17.48 | 17.48 | 17.48 |
| | | S/T | 0.72 | 0.82 | 1.00 | 1.00 | 0.57 | 0.66 | 0.75 | 0.98 | 0.50 | 0.59 | 0.67 | 0.76 | 0.34 | 0.43 | 0.50 | 0.58 |
| | | PI | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.45 | 3.44 | 3.44 | 3.44 | 3.44 | 3.45 | 3.45 | 3.45 | 3.45 |
| | -5 | TC | 15.14 | 15.14 | 15.29 | 15.44 | 15.97 | 15.97 | 15.97 | 15.97 | 16.38 | 16.38 | 16.38 | 16.38 | 17.44 | 17.44 | 17.44 | 17.44 |
| | | S/T | 0.72 | 0.82 | 1.00 | 1.00 | 0.58 | 0.66 | 0.75 | 0.99 | 0.51 | 0.59 | 0.67 | 0.76 | 0.34 | 0.43 | 0.51 | 0.59 |
| | | PI | 3.45 | 3.45 | 3.45 | 3.45 | 3.44 | 3.44 | 3.44 | 3.44 | 3.44 | 3.44 | 3.44 | 3.44 | 3.46 | 3.46 | 3.46 | 3.46 |
| | 0 | TC | 15.07 | 15.07 | 15.22 | 15.36 | 15.91 | 15.91 | 15.91 | 15.91 | 16.34 | 16.34 | 16.34 | 16.34 | 17.42 | 17.42 | 17.42 | 17.42 |
| | | S/T | 0.73 | 0.82 | 1.00 | 1.00 | 0.58 | 0.67 | 0.75 | 0.99 | 0.51 | 0.60 | 0.68 | 0.76 | 0.34 | 0.43 | 0.51 | 0.59 |
| | | PI | 3.46 | 3.46 | 3.46 | 3.46 | 3.45 | 3.45 | 3.45 | 3.45 | 3.46 | 3.46 | 3.46 | 3.46 | 3.47 | 3.47 | 3.47 | 3.47 |
| | 5 | TC | 14.99 | 14.99 | 15.14 | 15.29 | 15.85 | 15.85 | 15.85 | 15.85 | 16.29 | 16.29 | 16.29 | 16.29 | 17.41 | 17.41 | 17.41 | 17.41 |
| | | S/T | 0.73 | 0.83 | 1.00 | 1.00 | 0.58 | 0.67 | 0.76 | 1.00 | 0.51 | 0.60 | 0.68 | 0.77 | 0.34 | 0.43 | 0.51 | 0.59 |
| | | PI | 3.49 | 3.49 | 3.49 | 3.49 | 3.49 | 3.49 | 3.49 | 3.49 | 3.48 | 3.48 | 3.48 | 3.48 | 3.50 | 3.50 | 3.50 | 3.50 |
| | 10 | TC | 14.90 | 14.90 | 15.05 | 15.19 | 15.78 | 15.78 | 15.78 | 15.78 | 16.22 | 16.22 | 16.22 | 16.22 | 17.36 | 17.36 | 17.36 | 17.36 |
| | | S/T | 0.73 | 0.83 | 1.00 | 1.00 | 0.58 | 0.67 | 0.76 | 1.00 | 0.51 | 0.60 | 0.68 | 0.77 | 0.35 | 0.44 | 0.51 | 0.59 |
| | | PI | 3.55 | 3.55 | 3.55 | 3.55 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 | 3.54 |
| | 15 | TC | 14.78 | 14.78 | 14.93 | 15.07 | 15.67 | 15.67 | 15.67 | 15.67 | 16.12 | 16.12 | 16.12 | 16.12 | 17.29 | 17.29 | 17.29 | 17.29 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 3.64 | 3.64 | 3.64 | 3.64 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 | 3.62 |
| | 20 | TC | 14.61 | 14.61 | 14.76 | 14.90 | 15.50 | 15.50 | 15.50 | 15.50 | 15.96 | 15.96 | 15.96 | 15.96 | 17.14 | 17.14 | 17.14 | 17.14 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 3.76 | 3.76 | 3.76 | 3.76 | 3.75 | 3.75 | 3.75 | 3.75 | 3.74 | 3.74 | 3.74 | 3.74 | 3.73 | 3.73 | 3.73 | 3.73 |
| | 25 | TC | 13.95 | 13.95 | 14.10 | 14.24 | 14.81 | 14.81 | 14.81 | 14.81 | 15.25 | 15.25 | 15.25 | 15.25 | 16.42 | 16.42 | 16.42 | 16.42 |
| | | S/T | 0.75 | 0.85 | 0.95 | 1.00 | 0.59 | 0.69 | 0.78 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 |
| | 30 | TC | 13.29 | 13.29 | 13.44 | 13.58 | 14.13 | 14.13 | 14.13 | 14.27 | 14.56 | 14.56 | 14.56 | 14.56 | 15.68 | 15.68 | 15.68 | 15.68 |
| | | S/T | 0.76 | 0.87 | 0.97 | 1.00 | 0.60 | 0.70 | 0.80 | 0.89 | 0.52 | 0.62 | 0.72 | 0.81 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 4.54 | 4.54 | 4.54 | 4.54 | 4.55 | 4.55 | 4.55 | 4.55 | 4.56 | 4.56 | 4.56 | 4.56 | 4.58 | 4.58 | 4.58 | 4.58 |
| | 35 | TC | 12.63 | 12.75 | 12.86 | 12.98 | 13.44 | 13.44 | 13.44 | 13.58 | 13.87 | 13.87 | **14.07** | 13.87 | 14.96 | 14.96 | 14.96 | 14.96 |
| | | S/T | 0.78 | 0.89 | 0.99 | 1.00 | 0.61 | 0.71 | 0.82 | 0.92 | 0.53 | 0.63 | **0.73** | 0.83 | 0.35 | 0.44 | 0.53 | 0.63 |
| | | PI | 4.96 | 4.96 | 4.96 | 4.96 | 4.98 | 4.98 | 4.98 | 4.98 | 4.99 | 4.99 | **5.00** | 4.99 | 5.03 | 5.03 | 5.03 | 5.03 |
| | 40 | TC | 11.79 | 11.91 | 12.02 | 12.14 | 12.57 | 12.57 | 12.57 | 12.70 | 12.97 | 12.97 | 13.08 | 13.02 | 14.01 | 14.01 | 14.01 | 14.01 |
| | | S/T | 0.81 | 0.92 | 1.00 | 1.00 | 0.62 | 0.74 | 0.85 | 0.96 | 0.53 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.55 | 0.90 |
| | | PI | 5.48 | 5.48 | 5.48 | 5.48 | 5.50 | 5.50 | 5.50 | 5.50 | 5.51 | 5.51 | 5.52 | 5.51 | 5.56 | 5.56 | 5.56 | 5.56 |
| | 46 | TC | 10.91 | 11.02 | 11.14 | 11.25 | 11.65 | 11.65 | 11.65 | 11.76 | 12.02 | 12.02 | 12.02 | 12.13 | 13.02 | 13.02 | 13.02 | 13.02 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.87 | 0.98 | 0.54 | 0.66 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.92 |
| | | PI | 6.10 | 6.10 | 6.10 | 6.10 | 6.12 | 6.12 | 6.12 | 6.12 | 6.14 | 6.14 | 6.14 | 6.14 | 6.19 | 6.19 | 6.19 | 6.19 |
| | 50 | TC | 10.25 | 10.37 | 10.48 | 10.60 | 10.97 | 10.97 | 11.08 | 11.19 | 11.31 | 11.31 | 11.31 | 11.42 | 12.28 | 12.28 | 12.28 | 12.28 |
| | | S/T | 0.84 | 0.97 | 1.00 | 1.00 | 0.64 | 0.77 | 0.89 | 1.00 | 0.55 | 0.67 | 0.79 | 0.91 | 0.33 | 0.45 | 0.56 | 0.97 |
| | | PI | 6.60 | 6.60 | 6.60 | 6.60 | 6.63 | 6.63 | 6.63 | 6.63 | 6.65 | 6.65 | 6.65 | 6.65 | 6.70 | 6.70 | 6.70 | 6.70 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 55k+MOE30U-55HFN8-RRD0W(GA) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 1650 | -15 | TC | 16.55 | 16.56 | 16.56 | 16.74 | 17.41 | 17.77 | 17.77 | 17.77 | 17.84 | 17.84 | 17.84 | 17.84 | 18.95 | 18.95 | 18.95 | 18.95 |
| | | S/T | 0.67 | 0.73 | 0.80 | 0.87 | 0.55 | 0.61 | 0.68 | 0.74 | 0.49 | 0.56 | 0.62 | 0.68 | 0.37 | 0.42 | 0.48 | 0.54 |
| | | PI | 3.77 | 3.77 | 3.77 | 3.77 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 | 3.75 |
| | -10 | TC | 16.45 | 16.46 | 16.46 | 16.64 | 17.31 | 17.67 | 17.67 | 17.67 | 17.75 | 17.75 | 17.75 | 17.75 | 18.89 | 18.89 | 18.89 | 18.89 |
| | | S/T | 0.67 | 0.74 | 0.81 | 0.87 | 0.55 | 0.62 | 0.68 | 0.75 | 0.49 | 0.56 | 0.62 | 0.68 | 0.37 | 0.43 | 0.49 | 0.54 |
| | | PI | 3.75 | 3.75 | 3.75 | 3.75 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.75 | 3.75 | 3.75 | 3.75 |
| | -5 | TC | 16.36 | 16.36 | 16.36 | 16.54 | 17.24 | 17.61 | 17.61 | 17.61 | 17.68 | 17.68 | 17.68 | 17.68 | 18.84 | 18.84 | 18.84 | 18.84 |
| | | S/T | 0.67 | 0.74 | 0.81 | 0.88 | 0.56 | 0.62 | 0.68 | 0.75 | 0.50 | 0.57 | 0.62 | 0.68 | 0.37 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.74 | 3.76 | 3.76 | 3.76 | 3.76 |
| | 0 | TC | 16.27 | 16.28 | 16.28 | 16.46 | 17.18 | 17.54 | 17.54 | 17.54 | 17.63 | 17.63 | 17.63 | 17.63 | 18.82 | 18.82 | 18.82 | 18.82 |
| | | S/T | 0.68 | 0.74 | 0.81 | 0.88 | 0.56 | 0.62 | 0.69 | 0.75 | 0.50 | 0.57 | 0.63 | 0.69 | 0.37 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.76 | 3.76 | 3.76 | 3.76 | 3.75 | 3.75 | 3.75 | 3.75 | 3.76 | 3.76 | 3.76 | 3.76 | 3.77 | 3.77 | 3.77 | 3.77 |
| | 5 | TC | 16.19 | 16.20 | 16.20 | 16.38 | 17.11 | 17.47 | 17.47 | 17.47 | 17.58 | 17.58 | 17.58 | 17.58 | 18.81 | 18.81 | 18.81 | 18.81 |
| | | S/T | 0.68 | 0.75 | 0.82 | 0.89 | 0.56 | 0.63 | 0.69 | 0.76 | 0.50 | 0.57 | 0.63 | 0.69 | 0.37 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.80 | 3.80 | 3.80 | 3.80 |
| | 10 | TC | 16.09 | 16.10 | 16.10 | 16.28 | 17.03 | 17.39 | 17.39 | 17.39 | 17.50 | 17.50 | 17.50 | 17.50 | 18.76 | 18.76 | 18.76 | 18.76 |
| | | S/T | 0.68 | 0.75 | 0.82 | 0.89 | 0.56 | 0.63 | 0.69 | 0.76 | 0.50 | 0.57 | 0.63 | 0.69 | 0.38 | 0.44 | 0.50 | 0.55 |
| | | PI | 3.86 | 3.86 | 3.86 | 3.86 | 3.84 | 3.84 | 3.84 | 3.84 | 3.84 | 3.84 | 3.84 | 3.84 | 3.85 | 3.85 | 3.85 | 3.85 |
| | 15 | TC | 15.96 | 15.97 | 15.97 | 16.15 | 16.92 | 17.27 | 17.27 | 17.27 | 17.40 | 17.40 | 17.40 | 17.40 | 18.68 | 18.68 | 18.68 | 18.68 |
| | | S/T | 0.69 | 0.76 | 0.83 | 0.90 | 0.57 | 0.63 | 0.70 | 0.77 | 0.51 | 0.58 | 0.64 | 0.70 | 0.38 | 0.44 | 0.50 | 0.56 |
| | | PI | 3.95 | 3.95 | 3.95 | 3.95 | 3.94 | 3.94 | 3.94 | 3.94 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 |
| | 20 | TC | 15.78 | 15.79 | 15.79 | 15.96 | 16.74 | 16.74 | 16.74 | 16.74 | 17.23 | 17.23 | 17.23 | 17.23 | 18.52 | 18.52 | 18.52 | 18.52 |
| | | S/T | 0.69 | 0.76 | 0.83 | 0.90 | 0.57 | 0.64 | 0.70 | 0.77 | 0.51 | 0.58 | 0.64 | 0.70 | 0.38 | 0.44 | 0.50 | 0.56 |
| | | PI | 4.09 | 4.09 | 4.09 | 4.09 | 4.07 | 4.07 | 4.07 | 4.07 | 4.06 | 4.06 | 4.06 | 4.06 | 4.05 | 4.05 | 4.05 | 4.05 |
| | 25 | TC | 15.04 | 15.04 | 15.04 | 15.19 | 15.99 | 15.99 | 15.99 | 15.99 | 16.48 | 16.48 | 16.48 | 16.48 | 17.71 | 17.71 | 17.71 | 17.71 |
| | | S/T | 0.70 | 0.77 | 0.84 | 0.91 | 0.57 | 0.64 | 0.71 | 0.78 | 0.51 | 0.58 | 0.65 | 0.71 | 0.38 | 0.44 | 0.50 | 0.56 |
| | | PI | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| | 30 | TC | 14.36 | 14.36 | 14.36 | 14.50 | 15.25 | 15.25 | 15.25 | 15.25 | 15.71 | 15.71 | 15.71 | 15.71 | 16.94 | 16.94 | 16.94 | 16.94 |
| | | S/T | 0.70 | 0.78 | 0.86 | 0.93 | 0.57 | 0.64 | 0.72 | 0.79 | 0.51 | 0.58 | 0.65 | 0.72 | 0.37 | 0.44 | 0.50 | 0.57 |
| | | PI | 4.93 | 4.93 | 4.93 | 4.93 | 4.94 | 4.94 | 4.94 | 4.94 | 4.95 | 4.95 | 4.95 | 4.95 | 4.97 | 4.97 | 4.97 | 4.97 |
| | 35 | TC | 13.64 | 13.64 | 13.64 | 13.78 | 14.50 | 14.50 | 14.50 | 14.50 | 14.96 | 14.96 | 15.19 | 14.96 | 16.14 | 16.14 | 16.14 | 16.14 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.95 | 0.58 | 0.65 | 0.73 | 0.80 | 0.51 | 0.59 | 0.66 | 0.73 | 0.37 | 0.44 | 0.51 | 0.57 |
| | | PI | 5.39 | 5.39 | 5.39 | 5.39 | 5.41 | 5.41 | 5.41 | 5.41 | 5.42 | 5.42 | 5.43 | 5.42 | 5.46 | 5.46 | 5.46 | 5.46 |
| | 40 | TC | 12.83 | 12.83 | 12.88 | 13.01 | 13.66 | 13.66 | 13.66 | 13.66 | 14.09 | 14.09 | 14.22 | 14.09 | 15.23 | 15.23 | 15.23 | 15.23 |
| | | S/T | 0.73 | 0.81 | 0.90 | 0.99 | 0.58 | 0.67 | 0.75 | 0.83 | 0.51 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 5.95 | 5.95 | 5.95 | 5.95 | 5.97 | 5.97 | 5.97 | 5.97 | 5.98 | 5.98 | 5.99 | 5.98 | 6.03 | 6.03 | 6.03 | 6.03 |
| | 46 | TC | 11.87 | 11.87 | 11.99 | 12.10 | 12.68 | 12.68 | 12.68 | 12.68 | 13.08 | 13.08 | 13.08 | 13.08 | 14.17 | 14.17 | 14.17 | 14.17 |
| | | S/T | 0.73 | 0.83 | 0.92 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.69 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 6.61 | 6.61 | 6.61 | 6.61 | 6.64 | 6.64 | 6.64 | 6.64 | 6.66 | 6.66 | 6.66 | 6.66 | 6.72 | 6.72 | 6.72 | 6.72 |
| | 50 | TC | 11.13 | 11.13 | 11.24 | 11.36 | 11.90 | 11.90 | 11.90 | 11.90 | 12.30 | 12.30 | 12.30 | 12.30 | 13.34 | 13.34 | 13.34 | 13.34 |
| | | S/T | 0.75 | 0.85 | 0.94 | 1.00 | 0.59 | 0.68 | 0.78 | 0.87 | 0.52 | 0.61 | 0.70 | 0.79 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 7.16 | 7.16 | 7.16 | 7.16 | 7.19 | 7.19 | 7.19 | 7.19 | 7.21 | 7.21 | 7.21 | 7.21 | 7.27 | 7.27 | 7.27 | 7.27 |
| 1950 | -15 | TC | 16.90 | 16.90 | 16.90 | 17.08 | 17.77 | 17.77 | 17.77 | 17.77 | 18.23 | 18.23 | 18.23 | 18.23 | 19.34 | 19.34 | 19.34 | 19.34 |
| | | S/T | 0.69 | 0.76 | 0.98 | 1.00 | 0.56 | 0.63 | 0.70 | 0.77 | 0.49 | 0.57 | 0.64 | 0.71 | 0.36 | 0.42 | 0.49 | 0.55 |
| | | PI | 3.84 | 3.84 | 3.84 | 3.84 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.82 | 3.82 | 3.82 | 3.82 |
| | -10 | TC | 16.80 | 16.80 | 16.80 | 16.98 | 17.67 | 17.67 | 17.67 | 17.67 | 18.14 | 18.14 | 18.14 | 18.14 | 19.28 | 19.28 | 19.28 | 19.28 |
| | | S/T | 0.69 | 0.77 | 0.99 | 1.00 | 0.56 | 0.63 | 0.71 | 0.78 | 0.49 | 0.57 | 0.64 | 0.72 | 0.36 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.82 | 3.83 | 3.83 | 3.83 | 3.83 |
| | -5 | TC | 16.70 | 16.70 | 16.70 | 16.88 | 17.61 | 17.61 | 17.61 | 17.61 | 18.07 | 18.07 | 18.07 | 18.07 | 19.23 | 19.23 | 19.23 | 19.23 |
| | | S/T | 0.69 | 0.77 | 0.99 | 1.00 | 0.57 | 0.63 | 0.71 | 0.78 | 0.50 | 0.58 | 0.64 | 0.72 | 0.36 | 0.43 | 0.50 | 0.56 |
| | | PI | 3.82 | 3.82 | 3.82 | 3.82 | 3.81 | 3.81 | 3.81 | 3.81 | 3.82 | 3.82 | 3.82 | 3.82 | 3.83 | 3.83 | 3.83 | 3.83 |
| | 0 | TC | 16.61 | 16.61 | 16.61 | 16.79 | 17.54 | 17.54 | 17.54 | 17.54 | 18.02 | 18.02 | 18.02 | 18.02 | 19.21 | 19.21 | 19.21 | 19.21 |
| | | S/T | 0.70 | 0.77 | 1.00 | 1.00 | 0.57 | 0.64 | 0.72 | 0.78 | 0.50 | 0.58 | 0.65 | 0.73 | 0.36 | 0.43 | 0.50 | 0.56 |
| | | PI | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.83 | 3.84 | 3.84 | 3.84 | 3.84 | 3.85 | 3.85 | 3.85 | 3.85 |
| | 5 | TC | 16.53 | 16.53 | 16.53 | 16.71 | 17.47 | 17.47 | 17.47 | 17.47 | 17.96 | 17.96 | 17.96 | 17.96 | 19.19 | 19.19 | 19.19 | 19.19 |
| | | S/T | 0.70 | 0.78 | 1.00 | 1.00 | 0.57 | 0.64 | 0.72 | 0.79 | 0.50 | 0.58 | 0.65 | 0.73 | 0.36 | 0.43 | 0.50 | 0.56 |
| | | PI | 3.87 | 3.87 | 3.87 | 3.87 | 3.86 | 3.86 | 3.86 | 3.86 | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 | 3.87 |
| | 10 | TC | 16.43 | 16.43 | 16.43 | 16.61 | 17.39 | 17.39 | 17.39 | 17.39 | 17.89 | 17.89 | 17.89 | 17.89 | 19.15 | 19.15 | 19.15 | 19.15 |
| | | S/T | 0.70 | 0.78 | 1.00 | 1.00 | 0.57 | 0.64 | 0.72 | 0.79 | 0.50 | 0.58 | 0.65 | 0.73 | 0.37 | 0.44 | 0.50 | 0.56 |
| | | PI | 3.93 | 3.93 | 3.93 | 3.93 | 3.92 | 3.92 | 3.92 | 3.92 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 | 3.93 |
| | 15 | TC | 16.30 | 16.30 | 16.30 | 16.47 | 17.27 | 17.27 | 17.27 | 17.27 | 17.78 | 17.78 | 17.78 | 17.78 | 19.06 | 19.06 | 19.06 | 19.06 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.95 | 0.58 | 0.65 | 0.73 | 0.80 | 0.51 | 0.59 | 0.66 | 0.74 | 0.37 | 0.44 | 0.51 | 0.57 |
| | | PI | 4.03 | 4.03 | 4.03 | 4.03 | 4.01 | 4.01 | 4.01 | 4.01 | 4.02 | 4.02 | 4.02 | 4.02 | 4.01 | 4.01 | 4.01 | 4.01 |
| | 20 | TC | 16.11 | 16.11 | 16.11 | 16.29 | 17.09 | 17.09 | 17.09 | 17.09 | 17.61 | 17.61 | 17.61 | 17.61 | 18.90 | 18.90 | 18.90 | 18.90 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.95 | 0.58 | 0.65 | 0.73 | 0.80 | 0.51 | 0.59 | 0.66 | 0.74 | 0.37 | 0.44 | 0.51 | 0.57 |
| | | PI | 4.17 | 4.17 | 4.17 | 4.17 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.15 | 4.13 | 4.13 | 4.13 | 4.13 |
| | 25 | TC | 15.37 | 15.37 | 15.51 | 15.65 | 16.31 | 16.31 | 16.31 | 16.31 | 16.80 | 16.80 | 16.80 | 16.80 | 18.10 | 18.10 | 18.10 | 18.10 |
| | | S/T | 0.72 | 0.80 | 0.88 | 0.96 | 0.58 | 0.66 | 0.74 | 0.82 | 0.51 | 0.59 | 0.67 | 0.75 | 0.36 | 0.44 | 0.51 | 0.58 |
| | | PI | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.60 | 4.60 | 4.60 | 4.60 |
| | 30 | TC | 14.65 | 14.65 | 14.79 | 14.94 | 15.57 | 15.57 | 15.57 | 15.57 | 16.06 | 16.06 | 16.06 | 16.06 | 17.29 | 17.29 | 17.29 | 17.29 |
| | | S/T | 0.73 | 0.82 | 0.90 | 0.99 | 0.58 | 0.67 | 0.75 | 0.83 | 0.52 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 5.03 | 5.03 | 5.03 | 5.03 | 5.04 | 5.04 | 5.04 | 5.04 | 5.05 | 5.05 | 5.05 | 5.05 | 5.07 | 5.07 | 5.07 | 5.07 |
| | 35 | TC | 13.90 | 13.90 | 14.05 | 14.19 | 14.82 | 14.82 | 14.82 | 14.82 | 15.28 | 15.28 | 15.51 | 15.28 | 16.49 | 16.49 | 16.49 | 16.49 |
| | | S/T | 0.74 | 0.83 | 0.92 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.68 | 0.77 | 0.36 | 0.44 | 0.52 | 0.59 |
| | | PI | 5.50 | 5.50 | 5.50 | 5.50 | 5.52 | 5.52 | 5.52 | 5.52 | 5.53 | 5.53 | 5.54 | 5.53 | 5.53 | 5.53 | 5.53 | 5.53 |
| | 40 | TC | 13.11 | 13.11 | 13.24 | 13.37 | 13.99 | 13.99 | 13.99 | 14.05 | 14.43 | 14.43 | 14.56 | 14.43 | 15.59 | 15.59 | 15.59 | 15.59 |
| | | S/T | 0.76 | 0.86 | 0.96 | 1.00 | 0.60 | 0.69 | 0.79 | 0.88 | 0.52 | 0.62 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 6.08 | 6.08 | 6.08 | 6.08 | 6.10 | 6.10 | 6.10 | 6.10 | 6.12 | 6.12 | 6.12 | 6.12 | 6.14 | 6.14 | 6.14 | 6.14 |
| | 46 | TC | 12.13 | 12.13 | 12.25 | 12.36 | 12.97 | 12.97 | 12.97 | 13.11 | 13.40 | 13.40 | 13.40 | 13.40 | 14.49 | 14.49 | 14.49 | 14.49 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.80 | 0.90 | 0.52 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 6.76 | 6.76 | 6.76 | 6.76 | 6.79 | 6.79 | 6.79 | 6.79 | 6.81 | 6.81 | 6.81 | 6.81 | 6.86 | 6.86 | 6.86 | 6.86 |
| | 50 | TC | 11.39 | 11.50 | 11.62 | 11.73 | 12.19 | 12.19 | 12.19 | 12.31 | 12.59 | 12.59 | 12.59 | 12.59 | 13.66 | 13.66 | 13.66 | 13.66 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.82 | 0.93 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.91 |
| | | PI | 7.32 | 7.32 | 7.32 | 7.32 | 7.35 | 7.35 | 7.35 | 7.35 | 7.37 | 7.37 | 7.37 | 7.37 | 7.43 | 7.43 | 7.43 | 7.43 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2200 | -15 | TC | 17.26 | 17.26 | 17.44 | 17.62 | 18.13 | 18.13 | 18.13 | 18.13 | 18.59 | 18.59 | 18.59 | 18.59 | 19.72 | 19.72 | 19.72 | 19.72 |
| | | S/T | 0.70 | 0.79 | 1.00 | 1.00 | 0.56 | 0.65 | 0.72 | 0.98 | 0.50 | 0.58 | 0.66 | 0.73 | 0.35 | 0.42 | 0.49 | 0.57 |
| | | PI | 3.92 | 3.92 | 3.92 | 3.92 | 3.91 | 3.91 | 3.91 | 3.91 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 |
| | -10 | TC | 17.16 | 17.16 | 17.34 | 17.52 | 18.03 | 18.03 | 18.03 | 18.03 | 18.49 | 18.49 | 18.49 | 18.49 | 19.66 | 19.66 | 19.66 | 19.66 |
| | | S/T | 0.71 | 0.80 | 1.00 | 1.00 | 0.56 | 0.65 | 0.73 | 0.98 | 0.50 | 0.58 | 0.66 | 0.74 | 0.35 | 0.43 | 0.49 | 0.57 |
| | | PI | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 |
| | -5 | TC | 17.06 | 17.06 | 17.23 | 17.41 | 17.96 | 17.96 | 17.96 | 17.96 | 18.43 | 18.43 | 18.43 | 18.43 | 19.61 | 19.61 | 19.61 | 19.61 |
| | | S/T | 0.71 | 0.80 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.99 | 0.51 | 0.59 | 0.66 | 0.74 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 3.90 | 3.90 | 3.90 | 3.90 | 3.89 | 3.89 | 3.89 | 3.89 | 3.90 | 3.90 | 3.90 | 3.90 | 3.91 | 3.91 | 3.91 | 3.91 |
| | 0 | TC | 16.97 | 16.97 | 17.15 | 17.33 | 17.89 | 17.89 | 17.89 | 17.89 | 18.38 | 18.38 | 18.38 | 18.38 | 19.59 | 19.59 | 19.59 | 19.59 |
| | | S/T | 0.72 | 0.80 | 1.00 | 1.00 | 0.57 | 0.66 | 0.74 | 0.99 | 0.51 | 0.59 | 0.67 | 0.74 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.92 | 3.92 | 3.92 | 3.92 |
| | 5 | TC | 16.88 | 16.88 | 17.06 | 17.24 | 17.83 | 17.83 | 17.83 | 17.83 | 18.32 | 18.32 | 18.32 | 18.32 | 19.57 | 19.57 | 19.57 | 19.57 |
| | | S/T | 0.72 | 0.81 | 1.00 | 1.00 | 0.57 | 0.66 | 0.74 | 1.00 | 0.51 | 0.59 | 0.67 | 0.75 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 3.95 | 3.95 | 3.95 | 3.95 | 3.94 | 3.94 | 3.94 | 3.94 | 3.94 | 3.94 | 3.94 | 3.94 | 3.95 | 3.95 | 3.95 | 3.95 |
| | 10 | TC | 16.78 | 16.78 | 16.96 | 17.13 | 17.74 | 17.74 | 17.74 | 17.74 | 18.24 | 18.24 | 18.24 | 18.24 | 19.52 | 19.52 | 19.52 | 19.52 |
| | | S/T | 0.72 | 0.81 | 1.00 | 1.00 | 0.57 | 0.66 | 0.74 | 1.00 | 0.51 | 0.59 | 0.67 | 0.75 | 0.36 | 0.44 | 0.50 | 0.58 |
| | | PI | 4.02 | 4.02 | 4.02 | 4.02 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| | 15 | TC | 16.65 | 16.65 | 16.82 | 16.99 | 17.62 | 17.62 | 17.62 | 17.62 | 18.13 | 18.13 | 18.13 | 18.13 | 19.44 | 19.44 | 19.44 | 19.44 |
| | | S/T | 0.73 | 0.82 | 0.90 | 0.99 | 0.58 | 0.67 | 0.75 | 0.84 | 0.52 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 4.11 | 4.11 | 4.11 | 4.11 | 4.10 | 4.10 | 4.10 | 4.10 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 |
| | 20 | TC | 16.46 | 16.46 | 16.63 | 16.80 | 17.43 | 17.43 | 17.43 | 17.43 | 17.95 | 17.95 | 17.95 | 17.95 | 19.27 | 19.27 | 19.27 | 19.27 |
| | | S/T | 0.73 | 0.82 | 0.90 | 0.99 | 0.58 | 0.67 | 0.75 | 0.84 | 0.52 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 4.26 | 4.26 | 4.26 | 4.26 | 4.24 | 4.24 | 4.24 | 4.24 | 4.23 | 4.23 | 4.23 | 4.23 | 4.21 | 4.21 | 4.21 | 4.21 |
| | 25 | TC | 15.68 | 15.68 | 15.83 | 16.00 | 16.66 | 16.66 | 16.66 | 16.66 | 17.15 | 17.15 | 17.15 | 17.15 | 18.47 | 18.47 | 18.47 | 18.47 |
| | | S/T | 0.74 | 0.83 | 0.92 | 1.00 | 0.59 | 0.68 | 0.76 | 0.85 | 0.52 | 0.60 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 4.69 | 4.69 | 4.69 | 4.69 | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 | 4.69 | 4.69 | 4.69 | 4.69 |
| | 30 | TC | 14.94 | 14.94 | 15.08 | 15.22 | 15.88 | 15.88 | 15.88 | 15.88 | 16.37 | 16.37 | 16.37 | 16.37 | 17.64 | 17.64 | 17.64 | 17.64 |
| | | S/T | 0.75 | 0.85 | 0.94 | 1.00 | 0.59 | 0.68 | 0.78 | 0.87 | 0.52 | 0.61 | 0.70 | 0.79 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 5.13 | 5.13 | 5.13 | 5.13 | 5.14 | 5.14 | 5.14 | 5.14 | 5.15 | 5.15 | 5.15 | 5.15 | 5.17 | 5.17 | 5.17 | 5.17 |
| | 35 | TC | 14.19 | 14.19 | 14.33 | 14.48 | 15.11 | 15.11 | 15.11 | 15.25 | 15.60 | 15.60 | **15.83** | 15.60 | 16.80 | 16.80 | 16.80 | 16.80 |
| | | S/T | 0.76 | 0.86 | 0.96 | 1.00 | 0.60 | 0.70 | 0.79 | 0.89 | 0.52 | 0.62 | **0.71** | 0.81 | 0.35 | 0.44 | 0.53 | 0.61 |
| | | PI | 5.61 | 5.61 | 5.61 | 5.61 | 5.63 | 5.63 | 5.63 | 5.63 | 5.64 | 5.64 | **5.65** | 5.64 | 5.68 | 5.68 | 5.68 | 5.68 |
| | 40 | TC | 13.38 | 13.43 | 13.56 | 13.69 | 14.26 | 14.26 | 14.26 | 14.41 | 14.72 | 14.72 | 14.85 | 14.72 | 15.89 | 15.89 | 15.89 | 15.89 |
| | | S/T | 0.79 | 0.90 | 1.00 | 1.00 | 0.61 | 0.72 | 0.82 | 0.93 | 0.53 | 0.63 | 0.74 | 0.84 | 0.34 | 0.44 | 0.54 | 0.90 |
| | | PI | 6.19 | 6.19 | 6.19 | 6.19 | 6.22 | 6.22 | 6.22 | 6.22 | 6.23 | 6.23 | 6.24 | 6.23 | 6.28 | 6.28 | 6.28 | 6.28 |
| | 46 | TC | 12.39 | 12.51 | 12.62 | 12.74 | 13.23 | 13.23 | 13.23 | 13.37 | 13.66 | 13.66 | 13.66 | 13.66 | 14.78 | 14.78 | 14.78 | 14.78 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.92 |
| | | PI | 6.89 | 6.89 | 6.89 | 6.89 | 6.92 | 6.92 | 6.92 | 6.92 | 6.94 | 6.94 | 6.94 | 6.94 | 7.00 | 7.00 | 7.00 | 7.00 |
| | 50 | TC | 11.62 | 11.73 | 11.85 | 11.96 | 12.42 | 12.42 | 12.42 | 12.54 | 12.85 | 12.85 | 12.85 | 12.85 | 13.92 | 13.92 | 13.92 | 13.92 |
| | | S/T | 0.82 | 0.94 | 1.00 | 1.00 | 0.63 | 0.75 | 0.86 | 0.98 | 0.54 | 0.65 | 0.77 | 0.88 | 0.34 | 0.44 | 0.55 | 0.97 |
| | | PI | 7.46 | 7.46 | 7.46 | 7.46 | 7.49 | 7.49 | 7.49 | 7.49 | 7.51 | 7.51 | 7.51 | 7.51 | 7.57 | 7.57 | 7.57 | 7.57 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 55k+MOX630U-55HFN8-RRD0W(GA) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | OUTDOOR DB(℃) | ID WB (℃) | 16.0 | | | | 18.0 | | | | 19.0 | | | | 22.0 | | | |
| | | ID DB (℃) | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 | 23.0 | 25.0 | 27.0 | 29.0 |
| 1650 | -15 | TC | 15.98 | 15.98 | 15.98 | 16.13 | 16.80 | 17.13 | 17.13 | 17.13 | 17.20 | 17.20 | 17.20 | 17.20 | 18.27 | 18.27 | 18.27 | 18.27 |
| | | S/T | 0.67 | 0.74 | 0.81 | 0.88 | 0.55 | 0.62 | 0.69 | 0.75 | 0.49 | 0.56 | 0.63 | 0.69 | 0.37 | 0.42 | 0.48 | 0.54 |
| | | PI | 3.93 | 3.93 | 3.93 | 3.93 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.91 | 3.90 | 3.90 | 3.90 | 3.90 |
| | -10 | TC | 15.88 | 15.88 | 15.88 | 16.03 | 16.71 | 17.04 | 17.04 | 17.04 | 17.12 | 17.12 | 17.12 | 17.12 | 18.21 | 18.21 | 18.21 | 18.21 |
| | | S/T | 0.67 | 0.75 | 0.82 | 0.88 | 0.55 | 0.62 | 0.69 | 0.76 | 0.49 | 0.56 | 0.63 | 0.69 | 0.37 | 0.43 | 0.49 | 0.54 |
| | | PI | 3.91 | 3.91 | 3.91 | 3.91 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.91 | 3.91 | 3.91 | 3.91 |
| | -5 | TC | 15.79 | 15.79 | 15.79 | 15.94 | 16.64 | 16.97 | 16.97 | 16.97 | 17.05 | 17.05 | 17.05 | 17.05 | 18.16 | 18.16 | 18.16 | 18.16 |
| | | S/T | 0.67 | 0.75 | 0.82 | 0.89 | 0.56 | 0.62 | 0.69 | 0.76 | 0.50 | 0.57 | 0.63 | 0.69 | 0.37 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.90 | 3.91 | 3.91 | 3.91 | 3.91 |
| | 0 | TC | 15.71 | 15.71 | 15.71 | 15.86 | 16.58 | 16.91 | 16.91 | 16.91 | 17.01 | 17.01 | 17.01 | 17.01 | 18.14 | 18.14 | 18.14 | 18.14 |
| | | S/T | 0.68 | 0.75 | 0.82 | 0.89 | 0.56 | 0.63 | 0.70 | 0.76 | 0.50 | 0.57 | 0.64 | 0.70 | 0.37 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.92 | 3.92 | 3.92 | 3.92 | 3.91 | 3.91 | 3.91 | 3.91 | 3.92 | 3.92 | 3.92 | 3.92 | 3.92 | 3.92 | 3.92 | 3.92 |
| | 5 | TC | 15.63 | 15.63 | 15.63 | 15.78 | 16.52 | 16.85 | 16.85 | 16.85 | 16.95 | 16.95 | 16.95 | 16.95 | 18.13 | 18.13 | 18.13 | 18.13 |
| | | S/T | 0.68 | 0.76 | 0.83 | 0.90 | 0.56 | 0.63 | 0.70 | 0.77 | 0.50 | 0.57 | 0.64 | 0.70 | 0.37 | 0.43 | 0.49 | 0.55 |
| | | PI | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 | 3.95 |
| | 10 | TC | 15.53 | 15.53 | 15.53 | 15.68 | 16.44 | 16.77 | 16.77 | 16.77 | 16.88 | 16.88 | 16.88 | 16.88 | 18.08 | 18.08 | 18.08 | 18.08 |
| | | S/T | 0.68 | 0.76 | 0.83 | 0.90 | 0.56 | 0.63 | 0.70 | 0.77 | 0.50 | 0.57 | 0.64 | 0.70 | 0.38 | 0.44 | 0.50 | 0.55 |
| | | PI | 4.02 | 4.02 | 4.02 | 4.02 | 4.01 | 4.01 | 4.01 | 4.01 | 4.01 | 4.01 | 4.01 | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 |
| | 15 | TC | 15.41 | 15.41 | 15.41 | 15.55 | 16.33 | 16.65 | 16.65 | 16.65 | 16.78 | 16.78 | 16.78 | 16.78 | 18.01 | 18.01 | 18.01 | 18.01 |
| | | S/T | 0.69 | 0.77 | 0.84 | 0.91 | 0.57 | 0.64 | 0.71 | 0.78 | 0.51 | 0.58 | 0.65 | 0.71 | 0.38 | 0.44 | 0.50 | 0.56 |
| | | PI | 4.12 | 4.12 | 4.12 | 4.12 | 4.10 | 4.10 | 4.10 | 4.10 | 4.10 | 4.10 | 4.10 | 4.10 | 4.09 | 4.09 | 4.09 | 4.09 |
| | 20 | TC | 15.23 | 15.23 | 15.23 | 15.38 | 16.15 | 16.15 | 16.15 | 16.15 | 16.61 | 16.61 | 16.61 | 16.61 | 17.85 | 17.85 | 17.85 | 17.85 |
| | | S/T | 0.69 | 0.77 | 0.84 | 0.91 | 0.57 | 0.64 | 0.71 | 0.78 | 0.51 | 0.58 | 0.65 | 0.71 | 0.38 | 0.44 | 0.50 | 0.56 |
| | | PI | 4.26 | 4.26 | 4.26 | 4.26 | 4.24 | 4.24 | 4.24 | 4.24 | 4.23 | 4.23 | 4.23 | 4.23 | 4.21 | 4.21 | 4.21 | 4.21 |
| | 25 | TC | 14.54 | 14.54 | 14.54 | 14.69 | 15.44 | 15.44 | 15.44 | 15.44 | 15.90 | 15.90 | 15.90 | 15.90 | 17.10 | 17.10 | 17.10 | 17.10 |
| | | S/T | 0.70 | 0.78 | 0.85 | 0.92 | 0.57 | 0.64 | 0.72 | 0.79 | 0.51 | 0.58 | 0.65 | 0.72 | 0.37 | 0.44 | 0.50 | 0.57 |
| | | PI | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 | 4.69 |
| | 30 | TC | 13.85 | 13.85 | 13.85 | 14.00 | 14.72 | 14.72 | 14.72 | 14.72 | 15.18 | 15.18 | 15.18 | 15.18 | 16.36 | 16.36 | 16.36 | 16.36 |
| | | S/T | 0.71 | 0.79 | 0.87 | 0.94 | 0.57 | 0.65 | 0.72 | 0.80 | 0.51 | 0.59 | 0.66 | 0.73 | 0.37 | 0.44 | 0.50 | 0.57 |
| | | PI | 5.14 | 5.14 | 5.14 | 5.14 | 5.15 | 5.15 | 5.15 | 5.15 | 5.16 | 5.16 | 5.16 | 5.16 | 5.18 | 5.18 | 5.18 | 5.18 |
| | 35 | TC | 13.17 | 13.17 | 13.17 | 13.31 | 14.00 | 14.00 | 14.00 | 14.00 | 14.43 | 14.43 | 14.66 | 14.43 | 15.58 | 15.58 | 15.58 | 15.58 |
| | | S/T | 0.72 | 0.80 | 0.88 | 0.96 | 0.58 | 0.66 | 0.74 | 0.81 | 0.51 | 0.59 | 0.66 | 0.74 | 0.37 | 0.44 | 0.51 | 0.58 |
| | | PI | 5.62 | 5.62 | 5.62 | 5.62 | 5.64 | 5.64 | 5.64 | 5.64 | 5.65 | 5.65 | 5.66 | 5.65 | 5.69 | 5.69 | 5.69 | 5.69 |
| | 40 | TC | 12.41 | 12.41 | 12.46 | 12.59 | 13.22 | 13.22 | 13.22 | 13.22 | 13.64 | 13.64 | 13.76 | 13.64 | 14.74 | 14.74 | 14.74 | 14.74 |
| | | S/T | 0.73 | 0.83 | 0.91 | 1.00 | 0.58 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.68 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 6.21 | 6.21 | 6.21 | 6.21 | 6.24 | 6.24 | 6.24 | 6.24 | 6.25 | 6.25 | 6.26 | 6.25 | 6.29 | 6.29 | 6.29 | 6.29 |
| | 46 | TC | 11.49 | 11.49 | 11.60 | 11.72 | 12.26 | 12.26 | 12.26 | 12.26 | 12.67 | 12.67 | 12.67 | 12.67 | 13.70 | 13.70 | 13.70 | 13.70 |
| | | S/T | 0.74 | 0.84 | 0.93 | 1.00 | 0.59 | 0.68 | 0.77 | 0.86 | 0.52 | 0.61 | 0.69 | 0.78 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 6.90 | 6.90 | 6.90 | 6.90 | 6.94 | 6.94 | 6.94 | 6.94 | 6.96 | 6.96 | 6.96 | 6.96 | 7.01 | 7.01 | 7.01 | 7.01 |
| | 50 | TC | 10.77 | 10.77 | 10.88 | 11.00 | 11.51 | 11.51 | 11.51 | 11.51 | 11.92 | 11.92 | 11.92 | 11.92 | 12.90 | 12.90 | 12.90 | 12.90 |
| | | S/T | 0.76 | 0.86 | 0.96 | 1.00 | 0.60 | 0.69 | 0.79 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 7.48 | 7.48 | 7.48 | 7.48 | 7.51 | 7.51 | 7.51 | 7.51 | 7.53 | 7.53 | 7.53 | 7.53 | 7.59 | 7.59 | 7.59 | 7.59 |
| 1950 | -15 | TC | 16.28 | 16.28 | 16.28 | 16.43 | 17.13 | 17.13 | 17.13 | 17.13 | 17.57 | 17.57 | 17.57 | 17.57 | 18.66 | 18.66 | 18.66 | 18.66 |
| | | S/T | 0.70 | 0.77 | 0.98 | 1.00 | 0.56 | 0.64 | 0.71 | 0.79 | 0.49 | 0.57 | 0.65 | 0.71 | 0.35 | 0.42 | 0.49 | 0.56 |
| | | PI | 4.01 | 4.01 | 4.01 | 4.01 | 4.00 | 4.00 | 4.00 | 4.00 | 3.99 | 3.99 | 3.99 | 3.99 | 3.98 | 3.98 | 3.98 | 3.98 |
| | -10 | TC | 16.19 | 16.19 | 16.19 | 16.34 | 17.04 | 17.04 | 17.04 | 17.04 | 17.48 | 17.48 | 17.48 | 17.48 | 18.59 | 18.59 | 18.59 | 18.59 |
| | | S/T | 0.70 | 0.78 | 0.99 | 1.00 | 0.56 | 0.64 | 0.72 | 0.80 | 0.49 | 0.57 | 0.65 | 0.72 | 0.35 | 0.43 | 0.49 | 0.56 |
| | | PI | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | 3.99 | 3.98 | 3.98 | 3.98 | 3.98 | 3.99 | 3.99 | 3.99 | 3.99 |
| | -5 | TC | 16.09 | 16.09 | 16.09 | 16.24 | 16.97 | 16.97 | 16.97 | 16.97 | 17.41 | 17.41 | 17.41 | 17.41 | 18.55 | 18.55 | 18.55 | 18.55 |
| | | S/T | 0.70 | 0.78 | 0.99 | 1.00 | 0.57 | 0.64 | 0.72 | 0.80 | 0.50 | 0.58 | 0.65 | 0.72 | 0.35 | 0.43 | 0.50 | 0.57 |
| | | PI | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.98 | 3.99 | 3.99 | 3.99 | 3.99 |
| | 0 | TC | 16.01 | 16.01 | 16.01 | 16.16 | 16.91 | 16.91 | 16.91 | 16.91 | 17.37 | 17.37 | 17.37 | 17.37 | 18.53 | 18.53 | 18.53 | 18.53 |
| | | S/T | 0.71 | 0.78 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.80 | 0.50 | 0.58 | 0.66 | 0.73 | 0.35 | 0.43 | 0.50 | 0.57 |
| | | PI | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.01 | 4.01 | 4.01 | 4.01 |
| | 5 | TC | 15.93 | 15.93 | 15.93 | 16.08 | 16.85 | 16.85 | 16.85 | 16.85 | 17.31 | 17.31 | 17.31 | 17.31 | 18.52 | 18.52 | 18.52 | 18.52 |
| | | S/T | 0.71 | 0.79 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.81 | 0.50 | 0.58 | 0.66 | 0.73 | 0.35 | 0.43 | 0.50 | 0.57 |
| | | PI | 4.04 | 4.04 | 4.04 | 4.04 | 4.03 | 4.03 | 4.03 | 4.03 | 4.03 | 4.03 | 4.03 | 4.03 | 4.04 | 4.04 | 4.04 | 4.04 |
| | 10 | TC | 15.83 | 15.83 | 15.83 | 15.98 | 16.77 | 16.77 | 16.77 | 16.77 | 17.24 | 17.24 | 17.24 | 17.24 | 18.47 | 18.47 | 18.47 | 18.47 |
| | | S/T | 0.71 | 0.79 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.81 | 0.50 | 0.58 | 0.66 | 0.73 | 0.36 | 0.44 | 0.50 | 0.57 |
| | | PI | 4.11 | 4.11 | 4.11 | 4.11 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 |
| | 15 | TC | 15.70 | 15.70 | 15.70 | 15.85 | 16.65 | 16.65 | 16.65 | 16.65 | 17.13 | 17.13 | 17.13 | 17.13 | 18.39 | 18.39 | 18.39 | 18.39 |
| | | S/T | 0.72 | 0.80 | 0.88 | 0.96 | 0.58 | 0.66 | 0.74 | 0.82 | 0.51 | 0.59 | 0.67 | 0.74 | 0.36 | 0.44 | 0.51 | 0.58 |
| | | PI | 4.20 | 4.20 | 4.20 | 4.20 | 4.19 | 4.19 | 4.19 | 4.19 | 4.18 | 4.18 | 4.18 | 4.18 | 4.18 | 4.18 | 4.18 | 4.18 |
| | 20 | TC | 15.53 | 15.53 | 15.53 | 15.67 | 16.48 | 16.48 | 16.48 | 16.48 | 16.97 | 16.97 | 16.97 | 16.97 | 18.23 | 18.23 | 18.23 | 18.23 |
| | | S/T | 0.72 | 0.80 | 0.88 | 0.96 | 0.58 | 0.66 | 0.74 | 0.82 | 0.51 | 0.59 | 0.67 | 0.74 | 0.36 | 0.44 | 0.51 | 0.58 |
| | | PI | 4.35 | 4.35 | 4.35 | 4.35 | 4.33 | 4.33 | 4.33 | 4.33 | 4.32 | 4.32 | 4.32 | 4.32 | 4.30 | 4.30 | 4.30 | 4.30 |
| | 25 | TC | 14.81 | 14.81 | 14.95 | 15.10 | 15.73 | 15.73 | 15.73 | 15.73 | 16.22 | 16.22 | 16.22 | 16.22 | 17.45 | 17.45 | 17.45 | 17.45 |
| | | S/T | 0.72 | 0.81 | 0.90 | 0.98 | 0.58 | 0.66 | 0.75 | 0.83 | 0.51 | 0.60 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| | 30 | TC | 14.12 | 14.12 | 14.26 | 14.41 | 15.01 | 15.01 | 15.01 | 15.01 | 15.47 | 15.47 | 15.47 | 15.47 | 16.68 | 16.68 | 16.68 | 16.68 |
| | | S/T | 0.73 | 0.83 | 0.92 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.69 | 0.77 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 5.25 | 5.25 | 5.25 | 5.25 | 5.26 | 5.26 | 5.26 | 5.26 | 5.27 | 5.27 | 5.27 | 5.27 | 5.29 | 5.29 | 5.29 | 5.29 |
| | 35 | TC | 13.40 | 13.40 | 13.54 | 13.69 | 14.29 | 14.29 | 14.29 | 14.29 | 14.72 | 14.72 | 14.95 | 14.72 | 15.87 | 15.87 | 15.87 | 15.87 |
| | | S/T | 0.74 | 0.84 | 0.94 | 1.00 | 0.59 | 0.68 | 0.77 | 0.87 | 0.52 | 0.61 | 0.69 | 0.79 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 5.74 | 5.74 | 5.74 | 5.74 | 5.76 | 5.76 | 5.76 | 5.76 | 5.77 | 5.77 | 5.78 | 5.77 | 5.77 | 5.77 | 5.77 | 5.77 |
| | 40 | TC | 12.62 | 12.67 | 12.80 | 12.93 | 13.46 | 13.46 | 13.46 | 13.51 | 13.87 | 13.87 | 14.00 | 13.87 | 14.98 | 14.98 | 14.98 | 14.98 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.80 | 0.90 | 0.52 | 0.62 | 0.72 | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 6.33 | 6.33 | 6.33 | 6.33 | 6.36 | 6.36 | 6.36 | 6.36 | 6.37 | 6.37 | 6.38 | 6.37 | 6.40 | 6.40 | 6.40 | 6.40 |
| | 46 | TC | 11.69 | 11.81 | 11.92 | 12.04 | 12.47 | 12.47 | 12.47 | 12.58 | 12.87 | 12.87 | 12.87 | 12.87 | 13.93 | 13.93 | 13.93 | 13.93 |
| | | S/T | 0.78 | 0.89 | 0.99 | 1.00 | 0.61 | 0.71 | 0.82 | 0.92 | 0.53 | 0.63 | 0.73 | 0.83 | 0.35 | 0.44 | 0.53 | 0.63 |
| | | PI | 7.04 | 7.04 | 7.04 | 7.04 | 7.07 | 7.07 | 7.07 | 7.07 | 7.09 | 7.09 | 7.09 | 7.09 | 7.15 | 7.15 | 7.15 | 7.15 |
| | 50 | TC | 10.98 | 11.09 | 11.21 | 11.32 | 11.72 | 11.72 | 11.72 | 11.84 | 12.12 | 12.12 | 12.12 | 12.12 | 13.13 | 13.13 | 13.13 | 13.13 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.95 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.91 |
| | | PI | 7.63 | 7.63 | 7.63 | 7.63 | 7.66 | 7.66 | 7.66 | 7.66 | 7.68 | 7.68 | 7.68 | 7.68 | 7.74 | 7.74 | 7.74 | 7.74 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2200 | -15 | TC | 16.62 | 16.62 | 16.80 | 16.98 | 17.46 | 17.46 | 17.46 | 17.46 | 17.89 | 17.89 | 17.89 | 17.89 | 19.01 | 19.01 | 19.01 | 19.01 |
| | | S/T | 0.70 | 0.80 | 1.00 | 1.00 | 0.57 | 0.65 | 0.73 | 0.98 | 0.50 | 0.58 | 0.67 | 0.74 | 0.35 | 0.42 | 0.50 | 0.58 |
| | | PI | 4.09 | 4.09 | 4.09 | 4.09 | 4.08 | 4.08 | 4.08 | 4.08 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 |
| | -10 | TC | 16.52 | 16.52 | 16.70 | 16.88 | 17.37 | 17.37 | 17.37 | 17.37 | 17.80 | 17.80 | 17.80 | 17.80 | 18.95 | 18.95 | 18.95 | 18.95 |
| | | S/T | 0.71 | 0.81 | 1.00 | 1.00 | 0.57 | 0.65 | 0.74 | 0.98 | 0.50 | 0.58 | 0.67 | 0.75 | 0.35 | 0.43 | 0.50 | 0.58 |
| | | PI | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.07 | 4.06 | 4.06 | 4.06 | 4.06 | 4.07 | 4.07 | 4.07 | 4.07 |
| | -5 | TC | 16.42 | 16.42 | 16.60 | 16.78 | 17.30 | 17.30 | 17.30 | 17.30 | 17.74 | 17.74 | 17.74 | 17.74 | 18.90 | 18.90 | 18.90 | 18.90 |
| | | S/T | 0.71 | 0.81 | 1.00 | 1.00 | 0.58 | 0.65 | 0.74 | 0.99 | 0.51 | 0.59 | 0.67 | 0.75 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 4.07 | 4.07 | 4.07 | 4.07 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.06 | 4.08 | 4.08 | 4.08 | 4.08 |
| | 0 | TC | 16.34 | 16.34 | 16.51 | 16.69 | 17.23 | 17.23 | 17.23 | 17.23 | 17.69 | 17.69 | 17.69 | 17.69 | 18.88 | 18.88 | 18.88 | 18.88 |
| | | S/T | 0.72 | 0.81 | 1.00 | 1.00 | 0.58 | 0.66 | 0.74 | 0.99 | 0.51 | 0.59 | 0.68 | 0.75 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.09 | 4.09 | 4.09 | 4.09 |
| | 5 | TC | 16.25 | 16.25 | 16.43 | 16.61 | 17.17 | 17.17 | 17.17 | 17.17 | 17.63 | 17.63 | 17.63 | 17.63 | 18.87 | 18.87 | 18.87 | 18.87 |
| | | S/T | 0.72 | 0.82 | 1.00 | 1.00 | 0.58 | 0.66 | 0.75 | 1.00 | 0.51 | 0.59 | 0.68 | 0.76 | 0.35 | 0.43 | 0.51 | 0.59 |
| | | PI | 4.12 | 4.12 | 4.12 | 4.12 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.12 | 4.12 | 4.12 | 4.12 |
| | 10 | TC | 16.16 | 16.16 | 16.33 | 16.51 | 17.09 | 17.09 | 17.09 | 17.09 | 17.56 | 17.56 | 17.56 | 17.56 | 18.82 | 18.82 | 18.82 | 18.82 |
| | | S/T | 0.72 | 0.82 | 1.00 | 1.00 | 0.58 | 0.66 | 0.75 | 1.00 | 0.51 | 0.59 | 0.68 | 0.76 | 0.36 | 0.44 | 0.51 | 0.59 |
| | | PI | 4.19 | 4.19 | 4.19 | 4.19 | 4.18 | 4.18 | 4.18 | 4.18 | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 |
| | 15 | TC | 16.02 | 16.02 | 16.20 | 16.37 | 16.97 | 16.97 | 16.97 | 16.97 | 17.45 | 17.45 | 17.45 | 17.45 | 18.74 | 18.74 | 18.74 | 18.74 |
| | | S/T | 0.73 | 0.83 | 0.92 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.69 | 0.77 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 4.29 | 4.29 | 4.29 | 4.29 | 4.27 | 4.27 | 4.27 | 4.27 | 4.27 | 4.27 | 4.27 | 4.27 | 4.26 | 4.26 | 4.26 | 4.26 |
| | 20 | TC | 15.84 | 15.84 | 16.02 | 16.19 | 16.79 | 16.79 | 16.79 | 16.79 | 17.28 | 17.28 | 17.28 | 17.28 | 18.58 | 18.58 | 18.58 | 18.58 |
| | | S/T | 0.73 | 0.83 | 0.92 | 1.00 | 0.59 | 0.67 | 0.76 | 0.85 | 0.52 | 0.60 | 0.69 | 0.77 | 0.36 | 0.44 | 0.52 | 0.60 |
| | | PI | 4.44 | 4.44 | 4.44 | 4.44 | 4.42 | 4.42 | 4.42 | 4.42 | 4.41 | 4.41 | 4.41 | 4.41 | 4.39 | 4.39 | 4.39 | 4.39 |
| | 25 | TC | 15.10 | 15.10 | 15.24 | 15.38 | 16.05 | 16.05 | 16.05 | 16.05 | 16.53 | 16.53 | 16.53 | 16.53 | 17.77 | 17.77 | 17.77 | 17.77 |
| | | S/T | 0.75 | 0.84 | 0.94 | 1.00 | 0.59 | 0.68 | 0.77 | 0.87 | 0.52 | 0.61 | 0.70 | 0.79 | 0.35 | 0.44 | 0.52 | 0.60 |
| | | PI | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| | 30 | TC | 14.41 | 14.41 | 14.55 | 14.69 | 15.30 | 15.30 | 15.30 | 15.44 | 15.79 | 15.79 | 15.79 | 15.79 | 16.99 | 16.99 | 16.99 | 16.99 |
| | | S/T | 0.76 | 0.86 | 0.96 | 1.00 | 0.60 | 0.69 | 0.79 | 0.88 | 0.52 | 0.61 | 0.71 | 0.80 | 0.35 | 0.44 | 0.52 | 0.61 |
| | | PI | 5.36 | 5.36 | 5.36 | 5.36 | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 | 5.40 | 5.40 | 5.40 | 5.40 |
| | 35 | TC | 13.66 | 13.66 | 13.80 | 13.95 | 14.55 | 14.55 | 14.55 | 14.69 | 15.01 | 15.01 | **15.24** | 15.01 | 16.19 | 16.19 | 16.19 | 16.19 |
| | | S/T | 0.77 | 0.88 | 0.98 | 1.00 | 0.60 | 0.70 | 0.81 | 0.90 | 0.52 | 0.62 | **0.72** | 0.82 | 0.35 | 0.44 | 0.53 | 0.62 |
| | | PI | 5.86 | 5.86 | 5.86 | 5.86 | 5.88 | 5.88 | 5.88 | 5.88 | 5.89 | 5.89 | **5.90** | 5.89 | 5.93 | 5.93 | 5.93 | 5.93 |
| | 40 | TC | 12.86 | 12.92 | 13.05 | 13.18 | 13.72 | 13.72 | 13.72 | 13.85 | 14.15 | 14.15 | 14.27 | 14.15 | 15.29 | 15.29 | 15.29 | 15.29 |
| | | S/T | 0.80 | 0.91 | 1.00 | 1.00 | 0.62 | 0.73 | 0.84 | 0.94 | 0.53 | 0.64 | 0.75 | 0.86 | 0.34 | 0.44 | 0.54 | 0.90 |
| | | PI | 6.46 | 6.46 | 6.46 | 6.46 | 6.49 | 6.49 | 6.49 | 6.49 | 6.50 | 6.50 | 6.51 | 6.50 | 6.55 | 6.55 | 6.55 | 6.55 |
| | 46 | TC | 11.92 | 12.04 | 12.15 | 12.27 | 12.73 | 12.73 | 12.73 | 12.84 | 13.13 | 13.13 | 13.13 | 13.13 | 14.22 | 14.22 | 14.22 | 14.22 |
| | | S/T | 0.81 | 0.93 | 1.00 | 1.00 | 0.62 | 0.74 | 0.85 | 0.97 | 0.54 | 0.65 | 0.76 | 0.87 | 0.34 | 0.44 | 0.55 | 0.92 |
| | | PI | 7.19 | 7.19 | 7.19 | 7.19 | 7.22 | 7.22 | 7.22 | 7.22 | 7.24 | 7.24 | 7.24 | 7.24 | 7.30 | 7.30 | 7.30 | 7.30 |
| | 50 | TC | 11.18 | 11.29 | 11.41 | 11.52 | 11.95 | 11.95 | 11.95 | 12.07 | 12.35 | 12.35 | 12.35 | 12.47 | 13.39 | 13.39 | 13.39 | 13.39 |
| | | S/T | 0.83 | 0.96 | 1.00 | 1.00 | 0.63 | 0.76 | 0.88 | 1.00 | 0.54 | 0.66 | 0.78 | 0.90 | 0.34 | 0.45 | 0.56 | 0.97 |
| | | PI | 7.79 | 7.79 | 7.79 | 7.79 | 7.82 | 7.82 | 7.82 | 7.82 | 7.84 | 7.84 | 7.84 | 7.84 | 7.90 | 7.90 | 7.90 | 7.90 |

TC:Total Cooling Capacity (kW)

S/T:Sensible Cooling Capacity Ratio

PI:Power Input(kW)

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

## 7.2 Heating

| 18k | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 723 | -15.0 | 3.77 | 3.74 | 3.72 | 3.69 | 1.36 | 1.40 | 1.40 | 1.41 |
| | -10.0 | 4.02 | 4.00 | 3.97 | 3.94 | 1.45 | 1.50 | 1.50 | 1.51 |
| | -7.0 | 4.21 | 4.19 | 4.16 | 4.13 | 1.54 | 1.59 | 1.59 | 1.60 |
| | -5.6 | 4.33 | 4.30 | 4.27 | 4.24 | 1.52 | 1.55 | 1.57 | 1.59 |
| | -2.8 | 4.45 | 4.39 | 4.36 | 4.33 | 1.50 | 1.53 | 1.54 | 1.56 |
| | 0.0 | 4.48 | 4.45 | 4.42 | 4.39 | 1.47 | 1.50 | 1.51 | 1.53 |
| | 2.8 | 4.71 | 4.65 | 4.62 | 4.56 | 1.46 | 1.49 | 1.50 | 1.52 |
| | 5.6 | 5.06 | 5.00 | 4.97 | 4.94 | 1.45 | 1.47 | 1.49 | 1.50 |
| | 7.0 | 5.46 | 5.39 | 5.28 | 5.25 | 1.44 | 1.47 | 1.49 | 1.50 |
| | 11.1 | 5.68 | 5.63 | 5.57 | 5.54 | 1.42 | 1.44 | 1.46 | 1.47 |
| | 13.9 | 5.92 | 5.83 | 5.77 | 5.74 | 1.40 | 1.42 | 1.44 | 1.45 |
| | 16.7 | 6.12 | 6.03 | 5.97 | 5.95 | 1.38 | 1.40 | 1.42 | 1.43 |
| | 18.0 | 6.21 | 6.12 | 6.09 | 6.03 | 1.37 | 1.39 | 1.41 | 1.42 |
| 839 | -15.0 | 3.84 | 3.81 | 3.79 | 3.76 | 1.38 | 1.42 | 1.42 | 1.43 |
| | -10.0 | 4.10 | 4.07 | 4.05 | 4.02 | 1.47 | 1.52 | 1.52 | 1.53 |
| | -7.0 | 4.29 | 4.27 | 4.24 | 4.21 | 1.56 | 1.61 | 1.61 | 1.62 |
| | -5.6 | 4.42 | 4.39 | 4.36 | 4.33 | 1.54 | 1.57 | 1.59 | 1.60 |
| | -2.8 | 4.53 | 4.48 | 4.45 | 4.42 | 1.51 | 1.54 | 1.56 | 1.57 |
| | 0.0 | 4.59 | 4.53 | 4.51 | 4.48 | 1.49 | 1.51 | 1.53 | 1.54 |
| | 2.8 | 4.80 | 4.74 | 4.71 | 4.68 | 1.47 | 1.50 | 1.52 | 1.53 |
| | 5.6 | 5.17 | 5.12 | 5.09 | 5.06 | 1.46 | 1.49 | 1.50 | 1.51 |
| | 7.0 | 5.57 | 5.51 | 5.39 | 5.37 | 1.46 | 1.48 | 1.50 | 1.51 |
| | 11.1 | 5.83 | 5.74 | 5.71 | 5.66 | 1.43 | 1.45 | 1.46 | 1.48 |
| | 13.9 | 6.03 | 5.95 | 5.92 | 5.86 | 1.40 | 1.43 | 1.44 | 1.45 |
| | 16.7 | 6.24 | 6.15 | 6.12 | 6.06 | 1.38 | 1.41 | 1.42 | 1.43 |
| | 18.0 | 6.35 | 6.26 | 6.21 | 6.18 | 1.37 | 1.40 | 1.41 | 1.42 |
| 958 | -15.0 | 3.90 | 3.85 | 3.82 | 3.80 | 1.40 | 1.44 | 1.44 | 1.45 |
| | -10.0 | 4.16 | 4.11 | 4.08 | 4.05 | 1.49 | 1.54 | 1.54 | 1.54 |
| | -7.0 | 4.36 | 4.30 | 4.27 | 4.25 | 1.58 | 1.63 | 1.63 | 1.64 |
| | -5.6 | 4.48 | 4.42 | 4.39 | 4.36 | 1.56 | 1.59 | 1.61 | 1.62 |
| | -2.8 | 4.56 | 4.51 | 4.51 | 4.48 | 1.53 | 1.56 | 1.58 | 1.59 |
| | 0.0 | 4.62 | 4.56 | 4.53 | 4.51 | 1.50 | 1.53 | 1.55 | 1.56 |
| | 2.8 | 4.85 | 4.80 | 4.74 | 4.71 | 1.49 | 1.52 | 1.53 | 1.55 |
| | 5.6 | 5.23 | 5.17 | 5.12 | 5.09 | 1.48 | 1.51 | 1.52 | 1.53 |
| | 7.0 | 5.63 | 5.57 | 5.45 | 5.42 | 1.48 | 1.50 | 1.52 | 1.53 |
| | 11.1 | 5.89 | 5.80 | 5.77 | 5.71 | 1.44 | 1.47 | 1.48 | 1.50 |
| | 13.9 | 6.09 | 6.00 | 5.97 | 5.95 | 1.42 | 1.45 | 1.46 | 1.47 |
| | 16.7 | 6.32 | 6.24 | 6.18 | 6.15 | 1.40 | 1.43 | 1.44 | 1.45 |
| | 18.0 | 6.44 | 6.32 | 6.29 | 6.24 | 1.39 | 1.42 | 1.43 | 1.44 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 24k+MOX430U-24HFN8-QRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 853 | -15.0 | 5.20 | 5.15 | 5.13 | 5.10 | 2.27 | 2.34 | 2.30 | 2.32 |
| | -10.0 | 5.56 | 5.50 | 5.48 | 5.45 | 2.42 | 2.50 | 2.45 | 2.47 |
| | -7.0 | 5.82 | 5.77 | 5.74 | 5.71 | 2.57 | 2.66 | 2.61 | 2.63 |
| | -5.6 | 5.97 | 5.91 | 5.88 | 5.85 | 2.51 | 2.53 | 2.55 | 2.56 |
| | -2.8 | 6.11 | 6.03 | 6.00 | 5.97 | 2.39 | 2.42 | 2.43 | 2.44 |
| | 0.0 | 6.17 | 6.08 | 6.05 | 6.00 | 2.28 | 2.30 | 2.31 | 2.32 |
| | 2.8 | 6.43 | 6.34 | 6.32 | 6.26 | 2.19 | 2.20 | 2.21 | 2.22 |
| | 5.6 | 6.92 | 6.84 | 6.81 | 6.75 | 2.10 | 2.11 | 2.11 | 2.11 |
| | 7.0 | 7.48 | 7.39 | 7.24 | 7.19 | 2.05 | 2.01 | 2.06 | 2.07 |
| | 11.1 | 7.79 | 7.68 | 7.65 | 7.59 | 1.90 | 1.90 | 1.90 | 1.90 |
| | 13.9 | 8.08 | 7.97 | 7.91 | 7.85 | 1.80 | 1.80 | 1.79 | 1.79 |
| | 16.7 | 8.34 | 8.23 | 8.17 | 8.11 | 1.70 | 1.69 | 1.68 | 1.68 |
| | 18.0 | 8.49 | 8.37 | 8.32 | 8.23 | 1.65 | 1.64 | 1.63 | 1.62 |
| 1023 | -15.0 | 5.30 | 5.25 | 5.20 | 5.17 | 2.29 | 2.37 | 2.33 | 2.34 |
| | -10.0 | 5.66 | 5.60 | 5.55 | 5.52 | 2.45 | 2.53 | 2.48 | 2.50 |
| | -7.0 | 5.93 | 5.87 | 5.81 | 5.79 | 2.60 | 2.68 | 2.64 | 2.66 |
| | -5.6 | 6.08 | 6.03 | 5.97 | 5.94 | 2.53 | 2.56 | 2.57 | 2.59 |
| | -2.8 | 6.23 | 6.14 | 6.11 | 6.08 | 2.42 | 2.44 | 2.45 | 2.46 |
| | 0.0 | 6.29 | 6.20 | 6.17 | 6.11 | 2.30 | 2.32 | 2.33 | 2.34 |
| | 2.8 | 6.55 | 6.49 | 6.43 | 6.40 | 2.21 | 2.22 | 2.23 | 2.24 |
| | 5.6 | 7.07 | 6.98 | 6.92 | 6.90 | 2.12 | 2.13 | 2.13 | 2.14 |
| | 7.0 | 7.63 | 7.53 | 7.39 | 7.33 | 2.08 | 2.03 | 2.08 | 2.09 |
| | 11.1 | 7.94 | 7.85 | 7.79 | 7.74 | 1.92 | 1.92 | 1.92 | 1.92 |
| | 13.9 | 8.23 | 8.11 | 8.05 | 8.00 | 1.82 | 1.81 | 1.81 | 1.81 |
| | 16.7 | 8.52 | 8.40 | 8.34 | 8.29 | 1.72 | 1.70 | 1.70 | 1.69 |
| | 18.0 | 8.66 | 8.52 | 8.46 | 8.40 | 1.67 | 1.65 | 1.65 | 1.64 |
| 1192 | -15.0 | 5.36 | 5.31 | 5.28 | 5.26 | 2.31 | 2.39 | 2.34 | 2.36 |
| | -10.0 | 5.72 | 5.67 | 5.64 | 5.62 | 2.46 | 2.55 | 2.50 | 2.52 |
| | -7.0 | 6.00 | 5.94 | 5.91 | 5.88 | 2.62 | 2.71 | 2.66 | 2.68 |
| | -5.6 | 6.14 | 6.08 | 6.05 | 6.03 | 2.55 | 2.58 | 2.60 | 2.61 |
| | -2.8 | 6.29 | 6.23 | 6.17 | 6.14 | 2.44 | 2.46 | 2.47 | 2.49 |
| | 0.0 | 6.34 | 6.26 | 6.23 | 6.20 | 2.33 | 2.34 | 2.35 | 2.36 |
| | 2.8 | 6.63 | 6.55 | 6.52 | 6.46 | 2.23 | 2.25 | 2.25 | 2.26 |
| | 5.6 | 7.16 | 7.07 | 7.01 | 6.95 | 2.14 | 2.15 | 2.15 | 2.16 |
| | 7.0 | 7.71 | 7.62 | 7.48 | 7.42 | 2.10 | 2.05 | 2.10 | 2.11 |
| | 11.1 | 8.03 | 7.94 | 7.88 | 7.82 | 1.94 | 1.94 | 1.94 | 1.94 |
| | 13.9 | 8.32 | 8.20 | 8.14 | 8.08 | 1.84 | 1.83 | 1.83 | 1.83 |
| | 16.7 | 8.61 | 8.49 | 8.43 | 8.37 | 1.73 | 1.72 | 1.72 | 1.71 |
| | 18.0 | 8.75 | 8.63 | 8.58 | 8.52 | 1.68 | 1.67 | 1.66 | 1.66 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 24k+MOX430U-24HFN8-QRD1W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 853 | -20.0 | 5.79 | 5.74 | 5.71 | 5.69 | 2.16 | 2.24 | 2.19 | 2.20 |
| | -15.0 | 6.26 | 6.21 | 6.18 | 6.16 | 2.36 | 2.45 | 2.39 | 2.40 |
| | -10.0 | 6.69 | 6.63 | 6.60 | 6.57 | 2.52 | 2.61 | 2.55 | 2.56 |
| | -7.0 | 7.01 | 6.95 | 6.92 | 6.89 | 2.67 | 2.77 | 2.71 | 2.72 |
| | -5.6 | 6.95 | 6.89 | 6.86 | 6.83 | 2.61 | 2.62 | 2.62 | 2.63 |
| | -2.8 | 6.89 | 6.83 | 6.80 | 6.74 | 2.46 | 2.48 | 2.48 | 2.49 |
| | 0.0 | 6.77 | 6.68 | 6.66 | 6.60 | 2.32 | 2.33 | 2.33 | 2.34 |
| | 2.8 | 6.86 | 6.77 | 6.71 | 6.68 | 2.20 | 2.20 | 2.20 | 2.20 |
| | 5.6 | 7.15 | 7.06 | 7.00 | 6.98 | 2.08 | 2.07 | 2.07 | 2.07 |
| | 7.0 | 7.48 | 7.39 | 7.33 | 7.27 | 2.02 | 1.94 | 2.01 | 2.00 |
| | 11.1 | 7.59 | 7.50 | 7.45 | 7.39 | 1.82 | 1.80 | 1.80 | 1.79 |
| | 13.9 | 7.68 | 7.56 | 7.50 | 7.48 | 1.69 | 1.67 | 1.65 | 1.64 |
| | 16.7 | 7.77 | 7.65 | 7.59 | 7.53 | 1.56 | 1.53 | 1.51 | 1.50 |
| | 18.0 | 7.82 | 7.68 | 7.62 | 7.56 | 1.49 | 1.47 | 1.46 | 1.44 |
| 1023 | -20.0 | 5.91 | 5.86 | 5.83 | 5.81 | 2.19 | 2.26 | 2.21 | 2.22 |
| | -15.0 | 6.39 | 6.34 | 6.31 | 6.29 | 2.39 | 2.48 | 2.42 | 2.43 |
| | -10.0 | 6.82 | 6.77 | 6.74 | 6.71 | 2.55 | 2.64 | 2.58 | 2.59 |
| | -7.0 | 7.15 | 7.09 | 7.06 | 7.03 | 2.71 | 2.81 | 2.74 | 2.75 |
| | -5.6 | 7.09 | 7.03 | 7.00 | 6.98 | 2.63 | 2.65 | 2.66 | 2.67 |
| | -2.8 | 7.03 | 6.98 | 6.92 | 6.89 | 2.49 | 2.51 | 2.51 | 2.52 |
| | 0.0 | 6.89 | 6.83 | 6.77 | 6.74 | 2.35 | 2.35 | 2.36 | 2.36 |
| | 2.8 | 6.98 | 6.89 | 6.86 | 6.80 | 2.22 | 2.22 | 2.22 | 2.23 |
| | 5.6 | 7.30 | 7.21 | 7.15 | 7.12 | 2.10 | 2.09 | 2.09 | 2.09 |
| | 7.0 | 7.62 | 7.53 | 7.48 | 7.42 | 2.04 | 1.96 | 2.03 | 2.02 |
| | 11.1 | 7.74 | 7.65 | 7.59 | 7.53 | 1.84 | 1.82 | 1.81 | 1.80 |
| | 13.9 | 7.82 | 7.71 | 7.65 | 7.62 | 1.71 | 1.68 | 1.67 | 1.66 |
| | 16.7 | 7.91 | 7.79 | 7.74 | 7.68 | 1.57 | 1.54 | 1.53 | 1.51 |
| | 18.0 | 7.97 | 7.82 | 7.77 | 7.71 | 1.51 | 1.48 | 1.47 | 1.45 |
| 1192 | -20.0 | 5.95 | 5.91 | 5.88 | 5.86 | 2.21 | 2.29 | 2.24 | 2.25 |
| | -15.0 | 6.44 | 6.39 | 6.37 | 6.34 | 2.41 | 2.50 | 2.45 | 2.46 |
| | -10.0 | 6.88 | 6.83 | 6.80 | 6.77 | 2.57 | 2.67 | 2.61 | 2.62 |
| | -7.0 | 7.21 | 7.15 | 7.12 | 7.09 | 2.73 | 2.83 | 2.77 | 2.78 |
| | -5.6 | 7.15 | 7.09 | 7.06 | 7.03 | 2.65 | 2.67 | 2.68 | 2.69 |
| | -2.8 | 7.09 | 7.03 | 7.00 | 6.95 | 2.52 | 2.53 | 2.54 | 2.54 |
| | 0.0 | 6.98 | 6.89 | 6.83 | 6.80 | 2.37 | 2.38 | 2.38 | 2.39 |
| | 2.8 | 7.06 | 6.98 | 6.92 | 6.89 | 2.25 | 2.25 | 2.25 | 2.25 |
| | 5.6 | 7.38 | 7.30 | 7.24 | 7.18 | 2.12 | 2.11 | 2.11 | 2.11 |
| | 7.0 | 7.71 | 7.62 | 7.56 | 7.50 | 2.06 | 1.98 | 2.05 | 2.04 |
| | 11.1 | 7.85 | 7.74 | 7.68 | 7.62 | 1.86 | 1.84 | 1.83 | 1.82 |
| | 13.9 | 7.94 | 7.82 | 7.77 | 7.71 | 1.72 | 1.70 | 1.69 | 1.68 |
| | 16.7 | 8.03 | 7.91 | 7.85 | 7.77 | 1.59 | 1.56 | 1.54 | 1.53 |
| | 18.0 | 8.05 | 7.94 | 7.88 | 7.82 | 1.52 | 1.49 | 1.48 | 1.47 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 36k+MOD30U-36HFN8-QRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1504 | -15.0 | 8.07 | 8.00 | 7.95 | 7.92 | 3.40 | 3.52 | 3.48 | 3.51 |
| | -10.0 | 8.62 | 8.54 | 8.49 | 8.46 | 3.63 | 3.75 | 3.71 | 3.74 |
| | -7.0 | 9.03 | 8.95 | 8.89 | 8.86 | 3.85 | 3.98 | 3.94 | 3.97 |
| | -5.6 | 9.24 | 9.15 | 9.09 | 9.06 | 3.78 | 3.84 | 3.86 | 3.89 |
| | -2.8 | 9.44 | 9.32 | 9.27 | 9.24 | 3.66 | 3.71 | 3.73 | 3.76 |
| | 0.0 | 9.53 | 9.41 | 9.35 | 9.30 | 3.53 | 3.58 | 3.60 | 3.62 |
| | 2.8 | 9.93 | 9.82 | 9.76 | 9.67 | 3.44 | 3.48 | 3.50 | 3.52 |
| | 5.6 | 10.69 | 10.57 | 10.49 | 10.43 | 3.34 | 3.38 | 3.40 | 3.42 |
| | 7.0 | 11.50 | 11.38 | 11.14 | 11.08 | 3.30 | 3.29 | 3.35 | 3.37 |
| | 11.1 | 11.98 | 11.84 | 11.75 | 11.67 | 3.14 | 3.17 | 3.18 | 3.19 |
| | 13.9 | 12.42 | 12.25 | 12.16 | 12.07 | 3.03 | 3.05 | 3.06 | 3.07 |
| | 16.7 | 12.83 | 12.65 | 12.56 | 12.45 | 2.92 | 2.94 | 2.94 | 2.95 |
| | 18.0 | 13.03 | 12.86 | 12.74 | 12.65 | 2.87 | 2.88 | 2.89 | 2.89 |
| 1728 | -15.0 | 8.26 | 8.16 | 8.13 | 8.08 | 3.44 | 3.55 | 3.52 | 3.54 |
| | -10.0 | 8.82 | 8.71 | 8.68 | 8.63 | 3.67 | 3.79 | 3.75 | 3.78 |
| | -7.0 | 9.24 | 9.13 | 9.10 | 9.04 | 3.89 | 4.03 | 3.98 | 4.01 |
| | -5.6 | 9.44 | 9.32 | 9.30 | 9.24 | 3.83 | 3.87 | 3.90 | 3.93 |
| | -2.8 | 9.64 | 9.53 | 9.47 | 9.41 | 3.70 | 3.75 | 3.77 | 3.80 |
| | 0.0 | 9.70 | 9.59 | 9.53 | 9.47 | 3.57 | 3.61 | 3.64 | 3.66 |
| | 2.8 | 10.14 | 10.02 | 9.93 | 9.88 | 3.47 | 3.51 | 3.53 | 3.55 |
| | 5.6 | 10.92 | 10.78 | 10.72 | 10.63 | 3.38 | 3.41 | 3.43 | 3.45 |
| | 7.0 | 11.76 | 11.61 | 11.38 | 11.29 | 3.33 | 3.32 | 3.38 | 3.40 |
| | 11.1 | 12.25 | 12.07 | 11.98 | 11.90 | 3.17 | 3.19 | 3.21 | 3.22 |
| | 13.9 | 12.65 | 12.48 | 12.39 | 12.30 | 3.06 | 3.08 | 3.09 | 3.10 |
| | 16.7 | 13.09 | 12.91 | 12.80 | 12.71 | 2.94 | 2.96 | 2.97 | 2.97 |
| | 18.0 | 13.29 | 13.12 | 13.00 | 12.91 | 2.89 | 2.90 | 2.91 | 2.92 |
| 1955 | -15.0 | 8.33 | 8.23 | 8.21 | 8.16 | 3.47 | 3.59 | 3.55 | 3.58 |
| | -10.0 | 8.90 | 8.79 | 8.76 | 8.71 | 3.70 | 3.82 | 3.79 | 3.81 |
| | -7.0 | 9.32 | 9.21 | 9.18 | 9.12 | 3.93 | 4.06 | 4.02 | 4.05 |
| | -5.6 | 9.53 | 9.41 | 9.38 | 9.32 | 3.85 | 3.91 | 3.94 | 3.96 |
| | -2.8 | 9.73 | 9.61 | 9.56 | 9.50 | 3.73 | 3.78 | 3.81 | 3.83 |
| | 0.0 | 9.82 | 9.67 | 9.61 | 9.56 | 3.60 | 3.65 | 3.67 | 3.69 |
| | 2.8 | 10.25 | 10.11 | 10.05 | 9.96 | 3.50 | 3.54 | 3.57 | 3.59 |
| | 5.6 | 11.04 | 10.89 | 10.81 | 10.75 | 3.41 | 3.44 | 3.46 | 3.48 |
| | 7.0 | 11.88 | 11.72 | 11.49 | 11.40 | 3.37 | 3.35 | 3.41 | 3.43 |
| | 11.1 | 12.36 | 12.19 | 12.10 | 12.01 | 3.20 | 3.22 | 3.24 | 3.25 |
| | 13.9 | 12.80 | 12.62 | 12.54 | 12.45 | 3.08 | 3.10 | 3.11 | 3.12 |
| | 16.7 | 13.23 | 13.03 | 12.94 | 12.86 | 2.97 | 2.99 | 2.99 | 3.00 |
| | 18.0 | 13.44 | 13.23 | 13.15 | 13.06 | 2.92 | 2.93 | 2.94 | 2.94 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 36k+MOD30U-36HFN8-RRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1504 | -15.0 | 7.96 | 7.89 | 7.83 | 7.78 | 3.34 | 3.46 | 3.42 | 3.45 |
| | -10.0 | 8.50 | 8.42 | 8.37 | 8.31 | 3.57 | 3.69 | 3.65 | 3.68 |
| | -7.0 | 8.91 | 8.82 | 8.76 | 8.71 | 3.79 | 3.92 | 3.88 | 3.91 |
| | -5.6 | 9.14 | 9.05 | 8.99 | 8.94 | 3.72 | 3.78 | 3.81 | 3.84 |
| | -2.8 | 9.34 | 9.26 | 9.20 | 9.14 | 3.60 | 3.66 | 3.69 | 3.71 |
| | 0.0 | 9.46 | 9.34 | 9.29 | 9.23 | 3.49 | 3.54 | 3.56 | 3.59 |
| | 2.8 | 9.89 | 9.75 | 9.69 | 9.63 | 3.40 | 3.45 | 3.47 | 3.49 |
| | 5.6 | 10.68 | 10.53 | 10.47 | 10.39 | 3.33 | 3.36 | 3.38 | 3.40 |
| | 7.0 | 11.53 | 11.38 | 11.14 | 11.06 | 3.29 | 3.29 | 3.35 | 3.37 |
| | 11.1 | 12.01 | 11.84 | 11.75 | 11.69 | 3.14 | 3.17 | 3.19 | 3.21 |
| | 13.9 | 12.45 | 12.27 | 12.19 | 12.10 | 3.04 | 3.07 | 3.08 | 3.10 |
| | 16.7 | 12.88 | 12.71 | 12.62 | 12.51 | 2.94 | 2.96 | 2.97 | 2.99 |
| | 18.0 | 13.09 | 12.91 | 12.83 | 12.71 | 2.90 | 2.91 | 2.92 | 2.93 |
| 1728 | -15.0 | 8.11 | 8.04 | 7.99 | 7.94 | 3.38 | 3.49 | 3.46 | 3.48 |
| | -10.0 | 8.66 | 8.58 | 8.53 | 8.47 | 3.60 | 3.72 | 3.69 | 3.72 |
| | -7.0 | 9.08 | 8.99 | 8.93 | 8.88 | 3.83 | 3.96 | 3.92 | 3.95 |
| | -5.6 | 9.31 | 9.23 | 9.17 | 9.11 | 3.76 | 3.82 | 3.85 | 3.88 |
| | -2.8 | 9.55 | 9.43 | 9.37 | 9.31 | 3.64 | 3.69 | 3.72 | 3.75 |
| | 0.0 | 9.63 | 9.52 | 9.46 | 9.40 | 3.52 | 3.57 | 3.59 | 3.62 |
| | 2.8 | 10.10 | 9.95 | 9.89 | 9.84 | 3.44 | 3.48 | 3.50 | 3.52 |
| | 5.6 | 10.88 | 10.74 | 10.68 | 10.59 | 3.35 | 3.39 | 3.41 | 3.43 |
| | 7.0 | 11.76 | 11.61 | 11.38 | 11.29 | 3.32 | 3.32 | 3.38 | 3.40 |
| | 11.1 | 12.25 | 12.10 | 12.01 | 11.93 | 3.17 | 3.20 | 3.22 | 3.23 |
| | 13.9 | 12.71 | 12.54 | 12.45 | 12.36 | 3.07 | 3.10 | 3.11 | 3.12 |
| | 16.7 | 13.15 | 12.97 | 12.88 | 12.77 | 2.97 | 2.99 | 3.00 | 3.01 |
| | 18.0 | 13.38 | 13.17 | 13.09 | 13.00 | 2.92 | 2.94 | 2.95 | 2.96 |
| 1955 | -15.0 | 8.22 | 8.12 | 8.07 | 8.04 | 3.41 | 3.53 | 3.49 | 3.52 |
| | -10.0 | 8.78 | 8.67 | 8.62 | 8.59 | 3.64 | 3.76 | 3.73 | 3.75 |
| | -7.0 | 9.20 | 9.08 | 9.03 | 9.00 | 3.87 | 4.00 | 3.96 | 3.99 |
| | -5.6 | 9.43 | 9.31 | 9.26 | 9.23 | 3.80 | 3.86 | 3.89 | 3.92 |
| | -2.8 | 9.63 | 9.52 | 9.46 | 9.40 | 3.68 | 3.73 | 3.76 | 3.79 |
| | 0.0 | 9.75 | 9.60 | 9.55 | 9.49 | 3.56 | 3.61 | 3.63 | 3.65 |
| | 2.8 | 10.18 | 10.07 | 9.98 | 9.92 | 3.47 | 3.51 | 3.54 | 3.56 |
| | 5.6 | 11.00 | 10.85 | 10.79 | 10.71 | 3.38 | 3.42 | 3.44 | 3.46 |
| | 7.0 | 11.88 | 11.72 | 11.49 | 11.40 | 3.36 | 3.35 | 3.41 | 3.43 |
| | 11.1 | 12.36 | 12.22 | 12.13 | 12.04 | 3.20 | 3.23 | 3.25 | 3.26 |
| | 13.9 | 12.83 | 12.65 | 12.56 | 12.48 | 3.10 | 3.12 | 3.14 | 3.15 |
| | 16.7 | 13.29 | 13.09 | 13.00 | 12.91 | 2.99 | 3.01 | 3.02 | 3.03 |
| | 18.0 | 13.49 | 13.32 | 13.20 | 13.12 | 2.94 | 2.96 | 2.97 | 2.98 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 48k+MOE30U-48HFN8-RRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1600 | -15.0 | 10.33 | 10.20 | 10.15 | 10.08 | 4.64 | 4.79 | 4.78 | 4.82 |
| | -10.0 | 11.03 | 10.89 | 10.84 | 10.76 | 4.95 | 5.11 | 5.10 | 5.14 |
| | -7.0 | 11.55 | 11.41 | 11.36 | 11.27 | 5.26 | 5.42 | 5.41 | 5.46 |
| | -5.6 | 11.99 | 11.85 | 11.79 | 11.70 | 5.20 | 5.30 | 5.35 | 5.40 |
| | -2.8 | 12.40 | 12.25 | 12.17 | 12.08 | 5.10 | 5.21 | 5.26 | 5.31 |
| | 0.0 | 12.63 | 12.49 | 12.40 | 12.31 | 5.01 | 5.11 | 5.16 | 5.21 |
| | 2.8 | 13.36 | 13.18 | 13.10 | 13.01 | 4.97 | 5.07 | 5.11 | 5.16 |
| | 5.6 | 14.58 | 14.37 | 14.29 | 14.17 | 4.93 | 5.02 | 5.07 | 5.11 |
| | 7.0 | 15.85 | 15.63 | 15.25 | 15.13 | 4.92 | 5.00 | 5.05 | 5.10 |
| | 11.1 | 16.61 | 16.38 | 16.29 | 16.18 | 4.82 | 4.90 | 4.95 | 4.99 |
| | 13.9 | 17.34 | 17.11 | 16.99 | 16.87 | 4.75 | 4.83 | 4.88 | 4.92 |
| | 16.7 | 18.06 | 17.80 | 17.69 | 17.57 | 4.68 | 4.76 | 4.80 | 4.84 |
| | 18.0 | 18.41 | 18.15 | 18.03 | 17.89 | 4.65 | 4.73 | 4.77 | 4.81 |
| 1850 | -15.0 | 10.54 | 10.42 | 10.37 | 10.32 | 4.68 | 4.83 | 4.82 | 4.87 |
| | -10.0 | 11.26 | 11.12 | 11.07 | 11.02 | 4.99 | 5.15 | 5.14 | 5.20 |
| | -7.0 | 11.79 | 11.65 | 11.60 | 11.54 | 5.31 | 5.48 | 5.46 | 5.52 |
| | -5.6 | 12.23 | 12.08 | 12.02 | 11.96 | 5.25 | 5.35 | 5.40 | 5.45 |
| | -2.8 | 12.66 | 12.49 | 12.43 | 12.34 | 5.15 | 5.26 | 5.31 | 5.35 |
| | 0.0 | 12.92 | 12.75 | 12.66 | 12.57 | 5.06 | 5.16 | 5.21 | 5.26 |
| | 2.8 | 13.65 | 13.47 | 13.39 | 13.27 | 5.02 | 5.12 | 5.17 | 5.21 |
| | 5.6 | 14.87 | 14.66 | 14.58 | 14.46 | 4.98 | 5.07 | 5.12 | 5.16 |
| | 7.0 | 16.17 | 15.95 | 15.57 | 15.45 | 4.97 | 5.05 | 5.11 | 5.15 |
| | 11.1 | 16.96 | 16.73 | 16.61 | 16.50 | 4.87 | 4.95 | 5.00 | 5.04 |
| | 13.9 | 17.69 | 17.45 | 17.34 | 17.22 | 4.80 | 4.88 | 4.92 | 4.97 |
| | 16.7 | 18.44 | 18.18 | 18.03 | 17.92 | 4.73 | 4.81 | 4.85 | 4.89 |
| | 18.0 | 18.79 | 18.53 | 18.38 | 18.26 | 4.70 | 4.78 | 4.82 | 4.86 |
| 2100 | -15.0 | 10.64 | 10.51 | 10.46 | 10.41 | 4.72 | 4.88 | 4.87 | 4.92 |
| | -10.0 | 11.36 | 11.23 | 11.17 | 11.12 | 5.04 | 5.21 | 5.20 | 5.24 |
| | -7.0 | 11.90 | 11.76 | 11.70 | 11.65 | 5.35 | 5.53 | 5.52 | 5.57 |
| | -5.6 | 12.34 | 12.20 | 12.14 | 12.08 | 5.30 | 5.40 | 5.45 | 5.51 |
| | -2.8 | 12.78 | 12.63 | 12.55 | 12.46 | 5.21 | 5.31 | 5.36 | 5.41 |
| | 0.0 | 13.04 | 12.86 | 12.78 | 12.69 | 5.11 | 5.21 | 5.27 | 5.32 |
| | 2.8 | 13.79 | 13.62 | 13.50 | 13.42 | 5.07 | 5.17 | 5.22 | 5.27 |
| | 5.6 | 15.01 | 14.81 | 14.72 | 14.64 | 5.03 | 5.12 | 5.17 | 5.22 |
| | 7.0 | 16.34 | 16.12 | 15.71 | 15.63 | 5.02 | 5.10 | 5.16 | 5.20 |
| | 11.1 | 17.13 | 16.90 | 16.79 | 16.67 | 4.91 | 5.00 | 5.05 | 5.09 |
| | 13.9 | 17.89 | 17.66 | 17.51 | 17.40 | 4.84 | 4.93 | 4.97 | 5.02 |
| | 16.7 | 18.64 | 18.38 | 18.26 | 18.12 | 4.77 | 4.86 | 4.90 | 4.94 |
| | 18.0 | 18.99 | 18.73 | 18.61 | 18.47 | 4.74 | 4.82 | 4.86 | 4.90 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 55k+MOE30U-55HFN8-RRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1650 | -15.0 | 11.22 | 11.07 | 11.02 | 10.95 | 4.88 | 5.03 | 5.07 | 5.14 |
| | -10.0 | 11.98 | 11.82 | 11.77 | 11.69 | 5.20 | 5.36 | 5.41 | 5.48 |
| | -7.0 | 12.55 | 12.38 | 12.33 | 12.24 | 5.53 | 5.70 | 5.75 | 5.83 |
| | -5.6 | 13.11 | 12.93 | 12.88 | 12.79 | 5.52 | 5.67 | 5.74 | 5.82 |
| | -2.8 | 13.63 | 13.49 | 13.40 | 13.31 | 5.52 | 5.67 | 5.75 | 5.83 |
| | 0.0 | 14.01 | 13.83 | 13.75 | 13.63 | 5.53 | 5.68 | 5.76 | 5.84 |
| | 2.8 | 14.91 | 14.70 | 14.62 | 14.50 | 5.60 | 5.75 | 5.83 | 5.91 |
| | 5.6 | 16.33 | 16.12 | 16.01 | 15.89 | 5.66 | 5.82 | 5.90 | 5.97 |
| | 7.0 | 17.87 | 17.65 | 17.18 | 17.07 | 5.71 | 5.93 | 5.95 | 6.03 |
| | 11.1 | 18.84 | 18.61 | 18.46 | 18.35 | 5.76 | 5.92 | 6.00 | 6.08 |
| | 13.9 | 19.74 | 19.48 | 19.33 | 19.22 | 5.80 | 5.96 | 6.04 | 6.12 |
| | 16.7 | 20.64 | 20.35 | 20.20 | 20.06 | 5.84 | 6.00 | 6.08 | 6.16 |
| | 18.0 | 21.07 | 20.78 | 20.64 | 20.49 | 5.85 | 6.02 | 6.10 | 6.18 |
| 1950 | -15.0 | 11.44 | 11.29 | 11.24 | 11.16 | 4.92 | 5.08 | 5.12 | 5.19 |
| | -10.0 | 12.21 | 12.05 | 12.00 | 11.92 | 5.25 | 5.42 | 5.47 | 5.53 |
| | -7.0 | 12.79 | 12.63 | 12.57 | 12.49 | 5.58 | 5.75 | 5.81 | 5.88 |
| | -5.6 | 13.37 | 13.20 | 13.14 | 13.05 | 5.57 | 5.72 | 5.80 | 5.87 |
| | -2.8 | 13.92 | 13.75 | 13.66 | 13.57 | 5.58 | 5.73 | 5.81 | 5.88 |
| | 0.0 | 14.30 | 14.09 | 14.01 | 13.92 | 5.59 | 5.74 | 5.82 | 5.89 |
| | 2.8 | 15.20 | 14.99 | 14.88 | 14.79 | 5.65 | 5.81 | 5.89 | 5.96 |
| | 5.6 | 16.65 | 16.44 | 16.33 | 16.21 | 5.72 | 5.88 | 5.96 | 6.03 |
| | 7.0 | 18.22 | 18.00 | 17.50 | 17.39 | 5.77 | 5.99 | 6.01 | 6.09 |
| | 11.1 | 19.22 | 18.95 | 18.84 | 18.69 | 5.82 | 5.98 | 6.06 | 6.15 |
| | 13.9 | 20.12 | 19.85 | 19.71 | 19.59 | 5.86 | 6.02 | 6.10 | 6.19 |
| | 16.7 | 21.04 | 20.75 | 20.61 | 20.46 | 5.90 | 6.06 | 6.14 | 6.23 |
| | 18.0 | 21.48 | 21.19 | 21.04 | 20.90 | 5.91 | 6.08 | 6.16 | 6.24 |
| 2200 | -15.0 | 11.53 | 11.41 | 11.33 | 11.28 | 4.98 | 5.13 | 5.18 | 5.25 |
| | -10.0 | 12.31 | 12.18 | 12.10 | 12.05 | 5.31 | 5.47 | 5.52 | 5.60 |
| | -7.0 | 12.90 | 12.76 | 12.68 | 12.62 | 5.64 | 5.82 | 5.87 | 5.95 |
| | -5.6 | 13.49 | 13.34 | 13.25 | 13.20 | 5.63 | 5.79 | 5.86 | 5.94 |
| | -2.8 | 14.07 | 13.89 | 13.80 | 13.72 | 5.64 | 5.79 | 5.87 | 5.95 |
| | 0.0 | 14.44 | 14.24 | 14.15 | 14.04 | 5.64 | 5.80 | 5.88 | 5.96 |
| | 2.8 | 15.34 | 15.14 | 15.05 | 14.94 | 5.71 | 5.87 | 5.95 | 6.02 |
| | 5.6 | 16.82 | 16.59 | 16.47 | 16.36 | 5.78 | 5.94 | 6.01 | 6.09 |
| | 7.0 | 18.43 | 18.17 | 17.68 | 17.56 | 5.83 | 6.05 | 6.07 | 6.15 |
| | 11.1 | 19.39 | 19.13 | 19.01 | 18.90 | 5.88 | 6.04 | 6.12 | 6.21 |
| | 13.9 | 20.32 | 20.06 | 19.91 | 19.77 | 5.92 | 6.08 | 6.16 | 6.25 |
| | 16.7 | 21.25 | 20.96 | 20.81 | 20.67 | 5.95 | 6.12 | 6.20 | 6.28 |
| | 18.0 | 21.68 | 21.39 | 21.25 | 21.07 | 5.97 | 6.14 | 6.22 | 6.30 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 48k+MOX630U-48HFN8-QRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1600 | -20.0 | 11.69 | 11.59 | 11.52 | 11.47 | 4.70 | 4.86 | 4.78 | 4.81 |
| | -15.0 | 12.65 | 12.55 | 12.47 | 12.42 | 5.14 | 5.31 | 5.23 | 5.26 |
| | -10.0 | 13.51 | 13.40 | 13.31 | 13.26 | 5.48 | 5.67 | 5.58 | 5.61 |
| | -7.0 | 14.15 | 14.03 | 13.95 | 13.89 | 5.82 | 6.02 | 5.93 | 5.96 |
| | -5.6 | 14.15 | 14.03 | 13.95 | 13.89 | 5.68 | 5.75 | 5.78 | 5.82 |
| | -2.8 | 14.12 | 13.98 | 13.92 | 13.83 | 5.45 | 5.51 | 5.54 | 5.55 |
| | 0.0 | 13.95 | 13.77 | 13.72 | 13.63 | 5.21 | 5.26 | 5.28 | 5.30 |
| | 2.8 | 14.24 | 14.06 | 13.98 | 13.86 | 5.02 | 5.05 | 5.07 | 5.09 |
| | 5.6 | 14.99 | 14.79 | 14.70 | 14.58 | 4.82 | 4.85 | 4.86 | 4.88 |
| | 7.0 | 15.84 | 15.63 | 15.45 | 15.37 | 4.73 | 4.65 | 4.77 | 4.78 |
| | 11.1 | 16.18 | 15.95 | 15.83 | 15.74 | 4.41 | 4.42 | 4.42 | 4.42 |
| | 13.9 | 16.47 | 16.24 | 16.12 | 15.97 | 4.20 | 4.20 | 4.20 | 4.20 |
| | 16.7 | 16.76 | 16.50 | 16.38 | 16.24 | 3.99 | 3.97 | 3.97 | 3.96 |
| | 18.0 | 16.87 | 16.61 | 16.50 | 16.38 | 3.88 | 3.86 | 3.86 | 3.85 |
| 1850 | -20.0 | 11.94 | 11.82 | 11.78 | 11.73 | 4.74 | 4.90 | 4.82 | 4.86 |
| | -15.0 | 12.93 | 12.80 | 12.74 | 12.69 | 5.18 | 5.36 | 5.28 | 5.31 |
| | -10.0 | 13.80 | 13.66 | 13.61 | 13.55 | 5.53 | 5.72 | 5.63 | 5.67 |
| | -7.0 | 14.46 | 14.31 | 14.26 | 14.20 | 5.87 | 6.08 | 5.98 | 6.02 |
| | -5.6 | 14.44 | 14.30 | 14.24 | 14.18 | 5.74 | 5.80 | 5.84 | 5.87 |
| | -2.8 | 14.41 | 14.27 | 14.18 | 14.12 | 5.50 | 5.55 | 5.58 | 5.61 |
| | 0.0 | 14.24 | 14.06 | 13.98 | 13.89 | 5.26 | 5.31 | 5.33 | 5.36 |
| | 2.8 | 14.53 | 14.32 | 14.24 | 14.15 | 5.07 | 5.11 | 5.12 | 5.14 |
| | 5.6 | 15.28 | 15.08 | 14.99 | 14.90 | 4.87 | 4.90 | 4.91 | 4.93 |
| | 7.0 | 16.16 | 15.95 | 15.77 | 15.66 | 4.78 | 4.70 | 4.82 | 4.83 |
| | 11.1 | 16.50 | 16.29 | 16.18 | 16.06 | 4.46 | 4.47 | 4.47 | 4.47 |
| | 13.9 | 16.79 | 16.55 | 16.44 | 16.32 | 4.25 | 4.25 | 4.25 | 4.24 |
| | 16.7 | 17.08 | 16.84 | 16.70 | 16.58 | 4.03 | 4.02 | 4.01 | 4.01 |
| | 18.0 | 17.22 | 16.96 | 16.84 | 16.70 | 3.93 | 3.91 | 3.90 | 3.89 |
| 2100 | -20.0 | 12.07 | 11.95 | 11.88 | 11.83 | 4.78 | 4.95 | 4.87 | 4.90 |
| | -15.0 | 13.06 | 12.93 | 12.86 | 12.80 | 5.23 | 5.42 | 5.33 | 5.36 |
| | -10.0 | 13.95 | 13.81 | 13.73 | 13.67 | 5.58 | 5.78 | 5.68 | 5.72 |
| | -7.0 | 14.61 | 14.47 | 14.38 | 14.32 | 5.93 | 6.14 | 6.04 | 6.08 |
| | -5.6 | 14.61 | 14.47 | 14.38 | 14.32 | 5.79 | 5.86 | 5.90 | 5.93 |
| | -2.8 | 14.58 | 14.41 | 14.35 | 14.27 | 5.55 | 5.61 | 5.64 | 5.67 |
| | 0.0 | 14.38 | 14.21 | 14.12 | 14.03 | 5.32 | 5.36 | 5.39 | 5.41 |
| | 2.8 | 14.67 | 14.50 | 14.41 | 14.32 | 5.12 | 5.16 | 5.18 | 5.20 |
| | 5.6 | 15.45 | 15.25 | 15.16 | 15.05 | 4.92 | 4.95 | 4.97 | 4.98 |
| | 7.0 | 16.33 | 16.12 | 15.95 | 15.83 | 4.83 | 4.75 | 4.87 | 4.88 |
| | 11.1 | 16.70 | 16.47 | 16.35 | 16.24 | 4.51 | 4.51 | 4.52 | 4.52 |
| | 13.9 | 16.99 | 16.73 | 16.61 | 16.50 | 4.29 | 4.28 | 4.28 | 4.28 |
| | 16.7 | 17.28 | 17.02 | 16.90 | 16.76 | 4.08 | 4.06 | 4.06 | 4.05 |
| | 18.0 | 17.42 | 17.16 | 17.02 | 16.87 | 3.97 | 3.95 | 3.94 | 3.94 |

**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 48k+MOX630U-48HFN8-RRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1600 | -20.0 | 11.52 | 11.40 | 11.36 | 11.28 | 4.71 | 4.87 | 4.80 | 4.83 |
| | -15.0 | 12.47 | 12.34 | 12.29 | 12.21 | 5.15 | 5.33 | 5.25 | 5.28 |
| | -10.0 | 13.32 | 13.18 | 13.12 | 13.04 | 5.50 | 5.68 | 5.60 | 5.64 |
| | -7.0 | 13.95 | 13.80 | 13.75 | 13.66 | 5.84 | 6.04 | 5.95 | 5.99 |
| | -5.6 | 13.98 | 13.83 | 13.78 | 13.69 | 5.70 | 5.77 | 5.81 | 5.84 |
| | -2.8 | 13.98 | 13.83 | 13.75 | 13.69 | 5.47 | 5.53 | 5.56 | 5.59 |
| | 0.0 | 13.83 | 13.66 | 13.60 | 13.51 | 5.24 | 5.29 | 5.31 | 5.34 |
| | 2.8 | 14.15 | 13.98 | 13.89 | 13.80 | 5.05 | 5.09 | 5.11 | 5.13 |
| | 5.6 | 14.94 | 14.76 | 14.65 | 14.56 | 4.86 | 4.89 | 4.91 | 4.92 |
| | 7.0 | 15.81 | 15.63 | 15.42 | 15.34 | 4.78 | 4.70 | 4.81 | 4.83 |
| | 11.1 | 16.21 | 16.00 | 15.89 | 15.77 | 4.46 | 4.47 | 4.48 | 4.48 |
| | 13.9 | 16.53 | 16.29 | 16.18 | 16.06 | 4.26 | 4.26 | 4.26 | 4.26 |
| | 16.7 | 16.87 | 16.61 | 16.50 | 16.35 | 4.05 | 4.04 | 4.03 | 4.03 |
| | 18.0 | 17.02 | 16.76 | 16.64 | 16.50 | 3.95 | 3.93 | 3.92 | 3.92 |
| 1850 | -20.0 | 11.76 | 11.64 | 11.59 | 11.52 | 4.75 | 4.92 | 4.85 | 4.87 |
| | -15.0 | 12.73 | 12.60 | 12.54 | 12.47 | 5.20 | 5.38 | 5.30 | 5.33 |
| | -10.0 | 13.59 | 13.45 | 13.40 | 13.31 | 5.54 | 5.74 | 5.66 | 5.68 |
| | -7.0 | 14.24 | 14.09 | 14.03 | 13.95 | 5.89 | 6.09 | 6.01 | 6.04 |
| | -5.6 | 14.27 | 14.12 | 14.07 | 13.98 | 5.76 | 5.83 | 5.86 | 5.90 |
| | -2.8 | 14.27 | 14.12 | 14.04 | 13.95 | 5.52 | 5.58 | 5.61 | 5.64 |
| | 0.0 | 14.12 | 13.95 | 13.86 | 13.78 | 5.29 | 5.34 | 5.37 | 5.38 |
| | 2.8 | 14.44 | 14.27 | 14.18 | 14.09 | 5.10 | 5.14 | 5.16 | 5.18 |
| | 5.6 | 15.26 | 15.05 | 14.97 | 14.85 | 4.91 | 4.94 | 4.96 | 4.97 |
| | 7.0 | 16.16 | 15.95 | 15.74 | 15.66 | 4.83 | 4.75 | 4.86 | 4.88 |
| | 11.1 | 16.55 | 16.32 | 16.21 | 16.09 | 4.51 | 4.52 | 4.53 | 4.53 |
| | 13.9 | 16.87 | 16.64 | 16.53 | 16.38 | 4.31 | 4.31 | 4.31 | 4.31 |
| | 16.7 | 17.19 | 16.96 | 16.82 | 16.70 | 4.09 | 4.08 | 4.08 | 4.07 |
| | 18.0 | 17.37 | 17.11 | 16.96 | 16.84 | 3.99 | 3.98 | 3.97 | 3.96 |
| 2100 | -20.0 | 11.88 | 11.76 | 11.72 | 11.64 | 4.80 | 4.97 | 4.89 | 4.93 |
| | -15.0 | 12.86 | 12.73 | 12.68 | 12.60 | 5.25 | 5.43 | 5.35 | 5.39 |
| | -10.0 | 13.73 | 13.59 | 13.54 | 13.45 | 5.60 | 5.79 | 5.71 | 5.75 |
| | -7.0 | 14.38 | 14.24 | 14.18 | 14.10 | 5.95 | 6.16 | 6.07 | 6.11 |
| | -5.6 | 14.41 | 14.27 | 14.21 | 14.12 | 5.82 | 5.89 | 5.92 | 5.96 |
| | -2.8 | 14.41 | 14.27 | 14.18 | 14.12 | 5.58 | 5.64 | 5.67 | 5.70 |
| | 0.0 | 14.27 | 14.09 | 14.01 | 13.92 | 5.35 | 5.39 | 5.41 | 5.44 |
| | 2.8 | 14.62 | 14.41 | 14.33 | 14.24 | 5.16 | 5.20 | 5.22 | 5.24 |
| | 5.6 | 15.43 | 15.23 | 15.11 | 15.02 | 4.96 | 5.00 | 5.01 | 5.03 |
| | 7.0 | 16.33 | 16.12 | 15.92 | 15.83 | 4.88 | 4.80 | 4.92 | 4.93 |
| | 11.1 | 16.73 | 16.50 | 16.38 | 16.26 | 4.56 | 4.57 | 4.57 | 4.58 |
| | 13.9 | 17.05 | 16.82 | 16.70 | 16.58 | 4.34 | 4.34 | 4.34 | 4.34 |
| | 16.7 | 17.40 | 17.13 | 17.02 | 16.87 | 4.14 | 4.13 | 4.12 | 4.12 |
| | 18.0 | 17.54 | 17.28 | 17.16 | 17.02 | 4.03 | 4.02 | 4.01 | 4.01 |

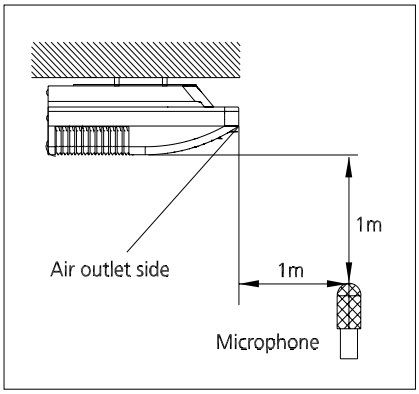
**Note: The table shows the case where the operation frequency of a compressor is fixed.**

| 55k+MOX630U-55HFN8-RRD0W(GA) | | | | | | | | | [SI_Unit] |
|---|---|---|---|---|---|---|---|---|---|
| INDOOR AIRFLOW (CMH) | HEATING PERFORMANCE AT INDOOR DRY BULB TEMPERATURE | | | | | | | | |
| | OUTDOOR DB(°C) | TC:TOTAL CAPACITY IN KILOWATTS (KW) | | | | PI:TOTAL POWER IN KILOWATTS (KW) | | | |
| | | Indoor Conditions (DB °C ) | | | | Indoor Conditions (DB °C ) | | | |
| | | 16.0 | 20.0 | 22.0 | 24.0 | 16.0 | 20.0 | 22.0 | 24.0 |
| 1650 | -20.0 | 11.82 | 11.68 | 11.63 | 11.56 | 4.76 | 4.91 | 4.92 | 4.97 |
| | -15.0 | 12.79 | 12.64 | 12.58 | 12.51 | 5.20 | 5.37 | 5.38 | 5.43 |
| | -10.0 | 13.66 | 13.49 | 13.44 | 13.36 | 5.55 | 5.73 | 5.74 | 5.79 |
| | -7.0 | 14.31 | 14.13 | 14.08 | 13.99 | 5.90 | 6.09 | 6.10 | 6.16 |
| | -5.6 | 14.57 | 14.40 | 14.34 | 14.25 | 5.85 | 5.98 | 6.05 | 6.11 |
| | -2.8 | 14.80 | 14.66 | 14.57 | 14.48 | 5.78 | 5.91 | 5.97 | 6.04 |
| | 0.0 | 14.89 | 14.72 | 14.63 | 14.51 | 5.71 | 5.84 | 5.90 | 5.96 |
| | 2.8 | 15.50 | 15.30 | 15.21 | 15.09 | 5.70 | 5.82 | 5.89 | 5.95 |
| | 5.6 | 16.63 | 16.43 | 16.31 | 16.20 | 5.69 | 5.81 | 5.87 | 5.93 |
| | 7.0 | 17.87 | 17.65 | 17.33 | 17.21 | 5.69 | 5.83 | 5.88 | 5.94 |
| | 11.1 | 18.55 | 18.32 | 18.17 | 18.06 | 5.63 | 5.75 | 5.81 | 5.87 |
| | 13.9 | 19.16 | 18.90 | 18.75 | 18.64 | 5.59 | 5.71 | 5.77 | 5.83 |
| | 16.7 | 19.77 | 19.48 | 19.33 | 19.19 | 5.55 | 5.67 | 5.73 | 5.78 |
| | 18.0 | 20.06 | 19.77 | 19.62 | 19.48 | 5.53 | 5.65 | 5.70 | 5.76 |
| 1950 | -20.0 | 12.04 | 11.92 | 11.85 | 11.78 | 4.81 | 4.96 | 4.97 | 5.02 |
| | -15.0 | 13.03 | 12.90 | 12.82 | 12.75 | 5.26 | 5.43 | 5.43 | 5.49 |
| | -10.0 | 13.91 | 13.77 | 13.69 | 13.61 | 5.61 | 5.79 | 5.79 | 5.86 |
| | -7.0 | 14.57 | 14.43 | 14.34 | 14.26 | 5.96 | 6.15 | 6.16 | 6.22 |
| | -5.6 | 14.86 | 14.72 | 14.63 | 14.54 | 5.91 | 6.04 | 6.11 | 6.18 |
| | -2.8 | 15.12 | 14.95 | 14.86 | 14.77 | 5.84 | 5.97 | 6.04 | 6.10 |
| | 0.0 | 15.18 | 15.01 | 14.92 | 14.80 | 5.77 | 5.90 | 5.96 | 6.03 |
| | 2.8 | 15.82 | 15.61 | 15.50 | 15.41 | 5.76 | 5.88 | 5.95 | 6.01 |
| | 5.6 | 16.95 | 16.75 | 16.63 | 16.51 | 5.74 | 5.87 | 5.93 | 5.99 |
| | 7.0 | 18.22 | 18.00 | 17.65 | 17.53 | 5.75 | 5.89 | 5.94 | 6.00 |
| | 11.1 | 18.93 | 18.66 | 18.55 | 18.40 | 5.69 | 5.81 | 5.87 | 5.93 |
| | 13.9 | 19.54 | 19.27 | 19.13 | 18.98 | 5.65 | 5.77 | 5.83 | 5.89 |
| | 16.7 | 20.15 | 19.85 | 19.71 | 19.56 | 5.61 | 5.72 | 5.78 | 5.84 |
| | 18.0 | 20.44 | 20.15 | 20.00 | 19.85 | 5.59 | 5.70 | 5.76 | 5.82 |
| 2200 | -20.0 | 12.15 | 12.04 | 11.97 | 11.89 | 4.86 | 5.01 | 5.02 | 5.08 |
| | -15.0 | 13.15 | 13.02 | 12.95 | 12.87 | 5.32 | 5.48 | 5.49 | 5.55 |
| | -10.0 | 14.04 | 13.91 | 13.83 | 13.74 | 5.67 | 5.85 | 5.86 | 5.92 |
| | -7.0 | 14.71 | 14.57 | 14.48 | 14.40 | 6.03 | 6.22 | 6.22 | 6.29 |
| | -5.6 | 15.01 | 14.86 | 14.77 | 14.69 | 5.97 | 6.11 | 6.17 | 6.23 |
| | -2.8 | 15.27 | 15.09 | 15.01 | 14.92 | 5.90 | 6.03 | 6.10 | 6.17 |
| | 0.0 | 15.35 | 15.15 | 15.06 | 14.95 | 5.83 | 5.96 | 6.02 | 6.09 |
| | 2.8 | 15.96 | 15.76 | 15.64 | 15.56 | 5.82 | 5.94 | 6.01 | 6.07 |
| | 5.6 | 17.12 | 16.89 | 16.80 | 16.69 | 5.80 | 5.93 | 5.99 | 6.06 |
| | 7.0 | 18.42 | 18.17 | 17.82 | 17.71 | 5.81 | 5.95 | 6.00 | 6.06 |
| | 11.1 | 19.10 | 18.84 | 18.72 | 18.58 | 5.75 | 5.87 | 5.93 | 5.99 |
| | 13.9 | 19.71 | 19.45 | 19.30 | 19.19 | 5.71 | 5.83 | 5.89 | 5.95 |
| | 16.7 | 20.35 | 20.06 | 19.91 | 19.77 | 5.66 | 5.78 | 5.84 | 5.90 |
| | 18.0 | 20.64 | 20.35 | 20.20 | 20.03 | 5.64 | 5.76 | 5.82 | 5.88 |

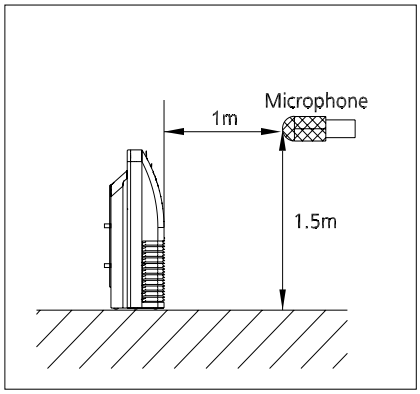
**Note: The table shows the case where the operation frequency of a compressor is fixed.**

# 7. Noise Criterion Curves

## 7.1 Indoor Unit




Ceiling




Floor

Notes:

-Sound measured at 1m away from the center of the unit.

-Data is valid at free field condition

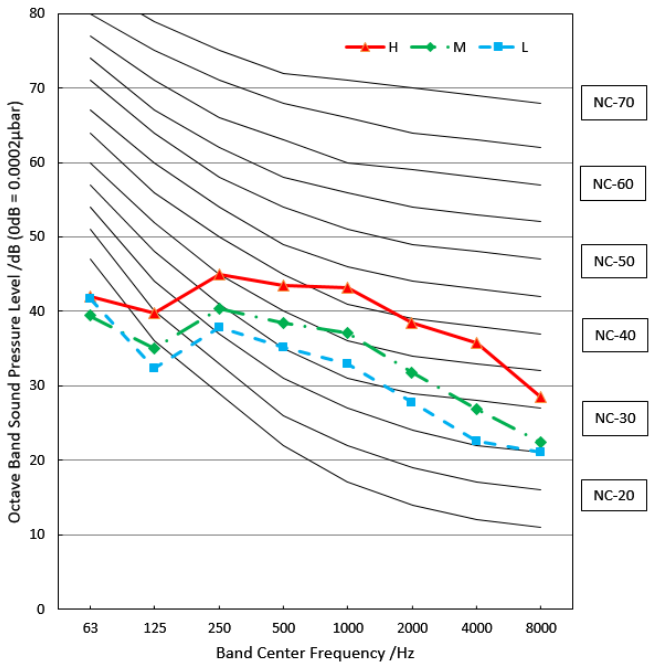
-Data is valid at nominal operation condition

-Reference acoustic pressure OdB = 20μPa

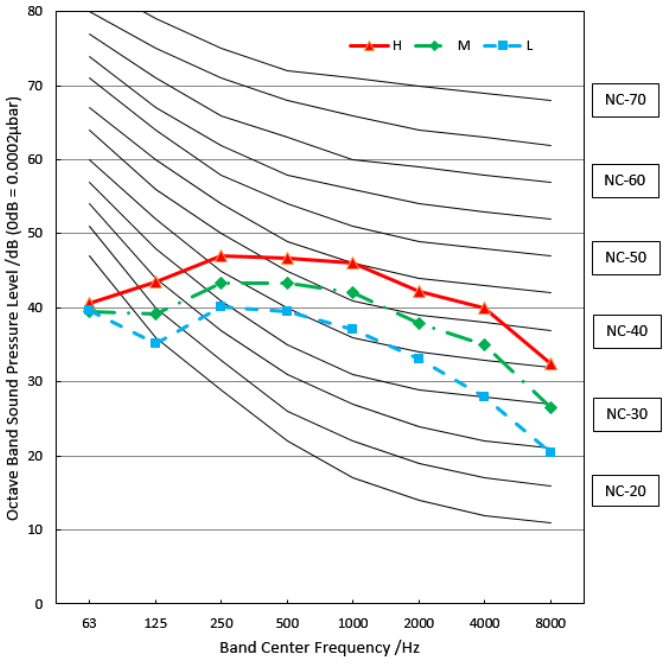
-Sound level will vary depending on a range of factors such as the construction -(acoustic absorption coefficient) of particular room in which the equipment is installed.

-The operating conditions are assumed to be standard.

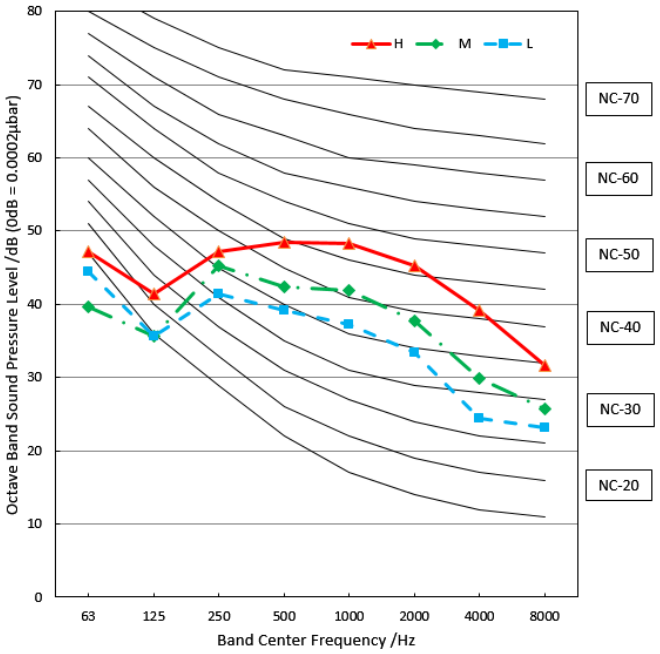
18k



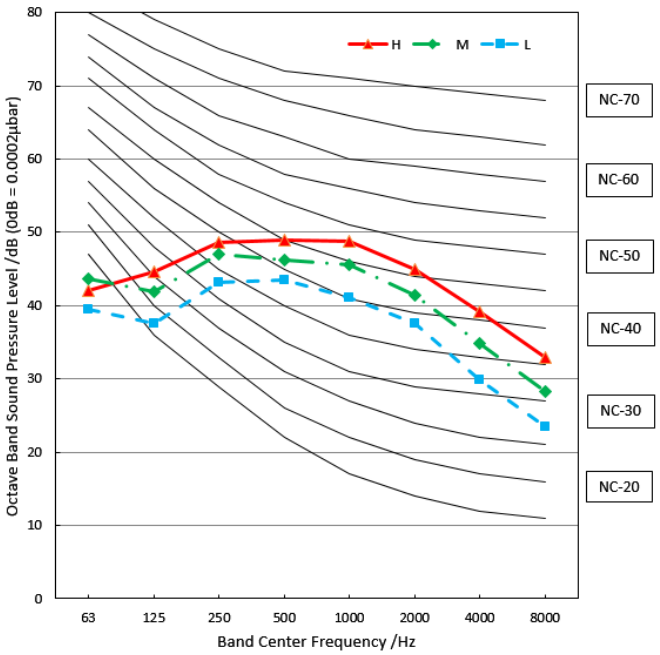

24k



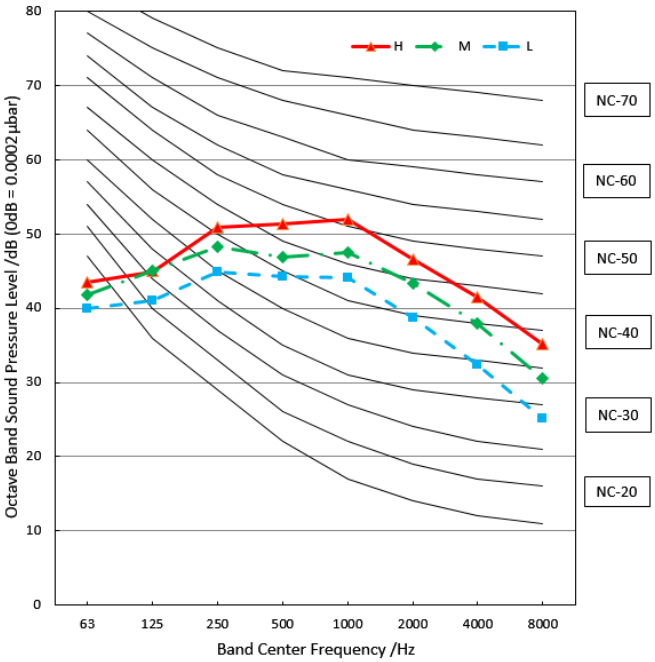
36k


H
M
L
NC-70
NC-60
NC-50
NC-40
NC-30
NC-20
Octave Band Sound Pressure Level /dB (0dB = 0.0002μbar)
Band Center Frequency /Hz
0
10
20
30
40
50
60
70
80
63
125
250
500
1000
2000
4000
8000

48k


H
M
L
NC-70
NC-60
NC-50
NC-40
NC-30
NC-20
Octave Band Sound Pressure Level /dB (0dB = 0.0002μbar)
Band Center Frequency /Hz
0
10
20
30
40
50
60
70
80
63
125
250
500
1000
2000
4000
8000

55k


H
M
L
NC-70
NC-60
NC-50
NC-40
NC-30
NC-20
Octave Band Sound Pressure Level /dB (0dB = 0.0002 μbar)
Band Center Frequency /Hz
0
10
20
30
40
50
60
70
80
63
125
250
500
1000
2000
4000
8000

## 7. Electrical Characteristics

| Capacity (Btu/h) | | 12k~18k | 24k | 30k | 36k |
|---|---|---|---|---|---|
| OUDOOR UNIT POWER | Phase | 1-phase | 1-phase | 1-phase | 1-phase |
| | Frequency and Voltage | 220-240V, 50Hz | 220-240V, 50Hz | 220-240V, 50Hz | 220-240V, 50Hz |
| | Power Wiring ($mm^2$) | 3×1.5 | 3×2.5 | 3×2.5 | 3×4.0 |
| | Circuit Breaker/ Fuse (A) | 25/20 | 25/20 | 40/30 | 40/30 |
| Indoor/Outdoor Connecting Wiring | Weak Electric Signal)($mm^2$) | | | | |
| | Strong Electric Signal($mm^2$) | 4×1.0 | 4×1.0 | 4×1.0 | 4×1.0 |

| Capacity (Btu/h) | | 36k | 42k/48k | 48~55k |
|---|---|---|---|---|
| OUDOOR UNIT POWER | Phase | 3-phase | 1-phase | 3-phase |
| | Frequency and Voltage | 380-415V, 50Hz | 220-240V, 50Hz | 380-415V, 50Hz |
| | Power Wiring ($mm^2$) | 5×2.5 | 3×4.0 | 5×2.5 |
| | Circuit Breaker/ Fuse (A) | 25/20 | 50/40 | 32/25 |
| Indoor/Outdoor Connecting Wiring | Weak Electric Signal) ($mm^2$) | | | |
| | Strong Electric Signal($mm^2$) | 4×1.0 | 4×1.0 | 4×1.0 |

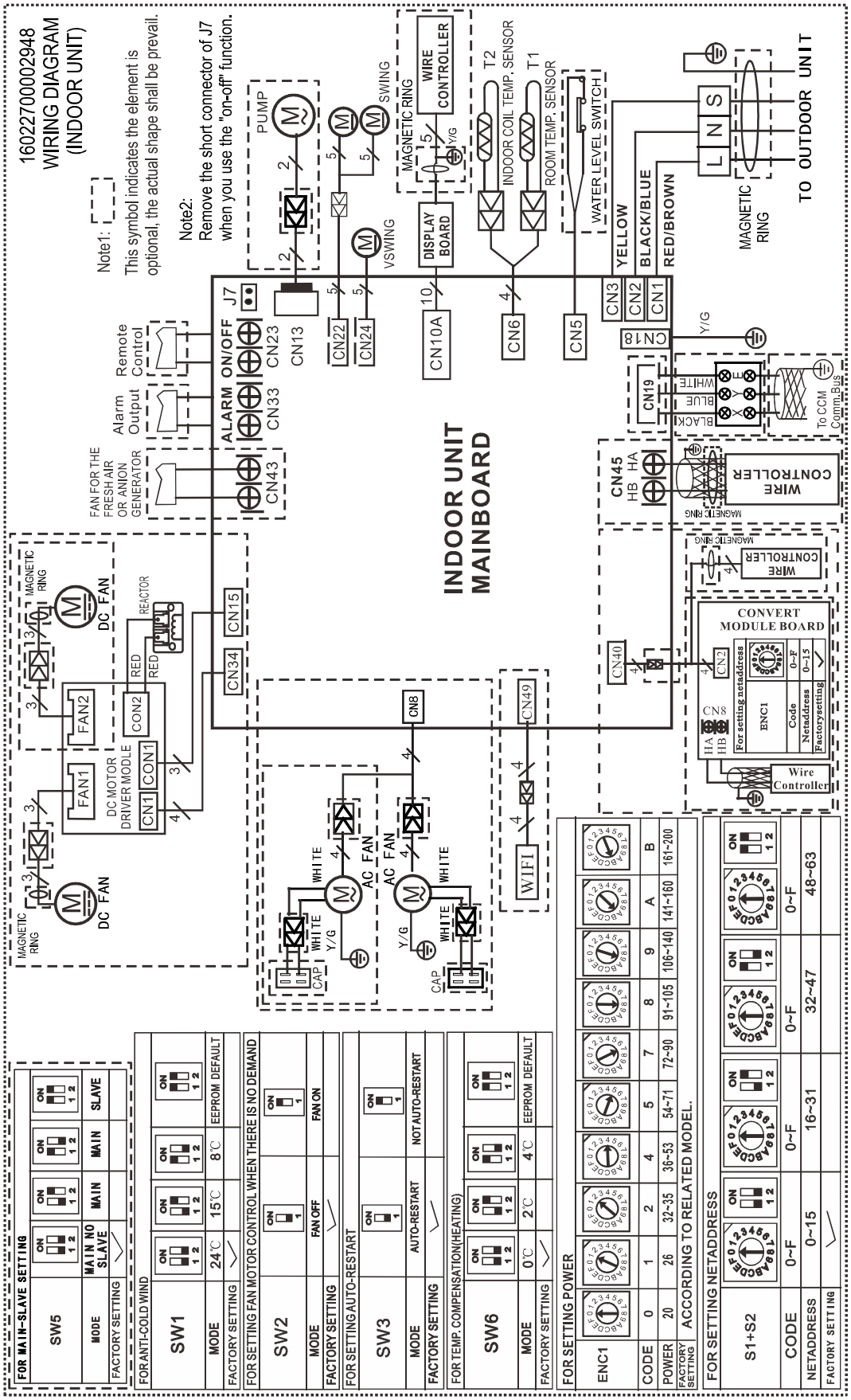
NOTE: Electric auxiliary heating type circuit breaker/fuse need to add more than 10 A.

## 7. Electrical Wiring Diagrams

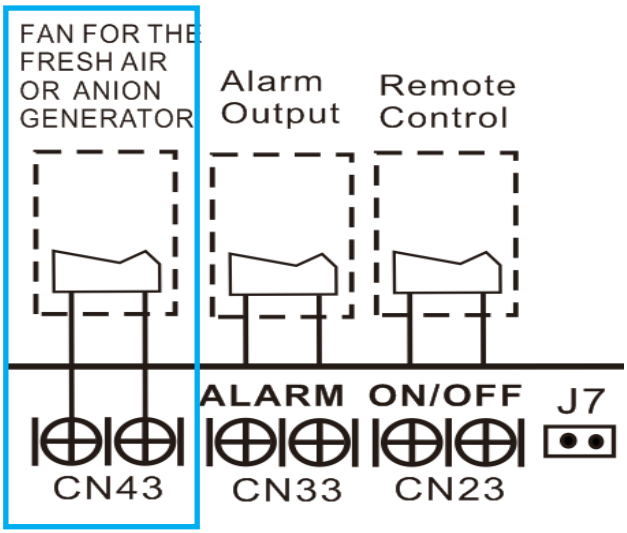
| IDU Capacity (Btu/h) | IDU Wiring Diagram |
|---|---|
| 12k~55k | 16022700002948 |

| Abbreviation | Paraphrase |
|---|---|
| Y/G | Yellow-Green Conductor |
| CAP1 | Indoor Fan Capacitor |
| FAN1 | Indoor Fan |
| PUMP | PUMP |
| L | LIVE |
| N | NEUTRAL |
| TO CCM Comm.Bus | Central Controller |
| T1 | Indoor Room Temperature |
| T2 | Coil Temperature of Indoor Heat Exchanger |
| P1 | Super High Speed |
| P2 | High Speed |

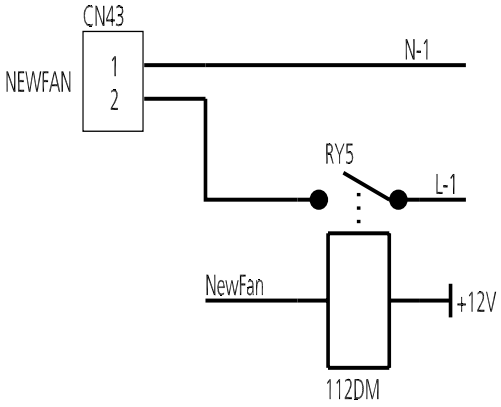
Indoor unit wiring diagram: 16022700002948

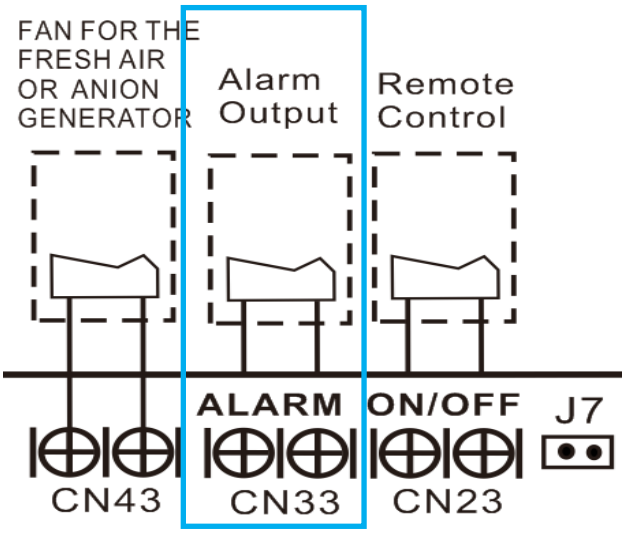


## 10.1 Some connectors introduce:



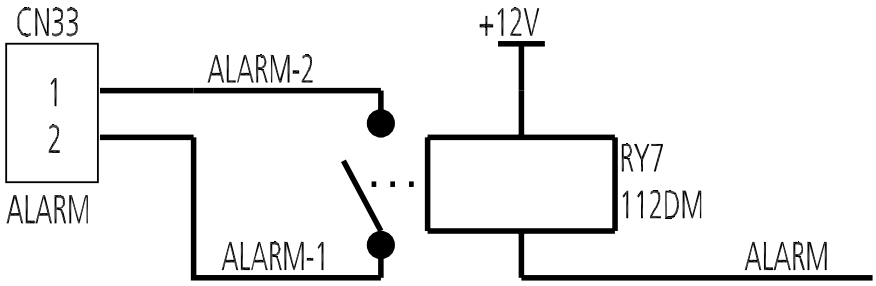

A. For new fresh motor terminal port (also for Anion generator) CN43:
1. Connect the fan motor to the port, no need care L/N of the motor;
2. The output voltage is the power supply;
3. The fresh motor can not excess 200W or 1A, follow the smaller one;
4. The new fresh motor will be worked when the indoor fan motor work ;when the indoor fan motor stops , the new fresh motor would be stopped;
5. When the unit enters force cooling mode or capacity testing mode , the fresh motor isn't work.

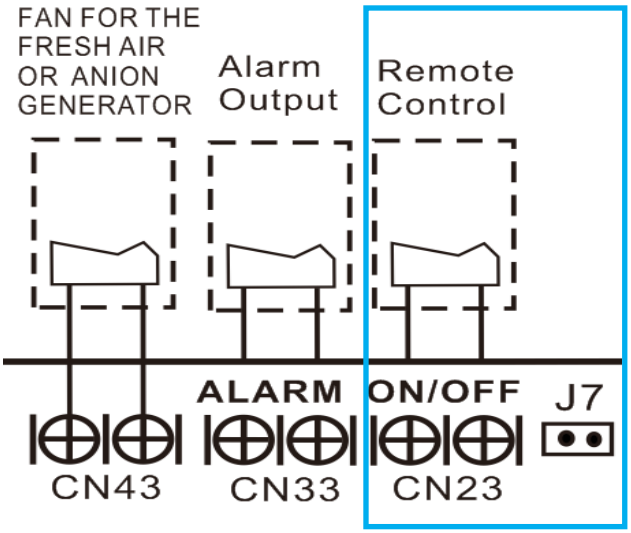





B For ALARM terminal  port CN33

1. Provide the terminal port to connect ALARM, but no voltage of the terminal port, the power from the ALARM system (not from the unit);
2. Although design voltage can support higher voltage, but we strongly ask you connect the power less than 24V, current less than 0.5A;
3. When the unit occurs the problem, the relay would be closed, then ALARM works.



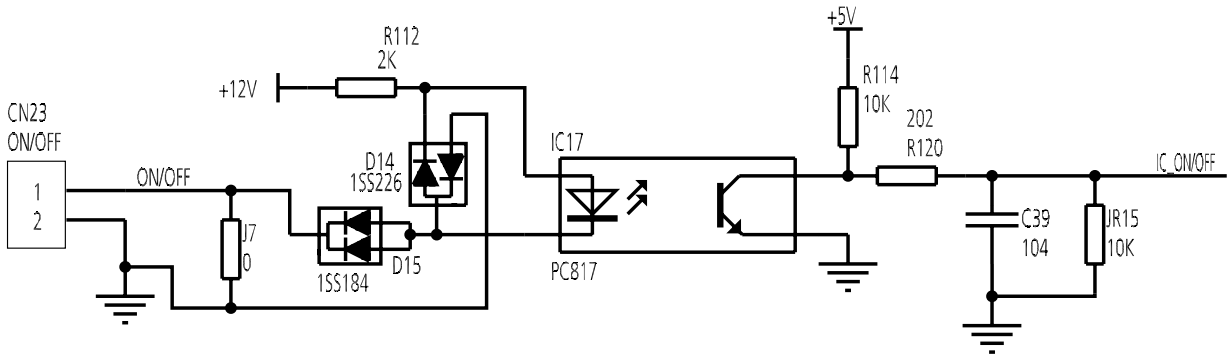



C. For remote control (ON-OFF) terminal  port CN23 and short connector of J7

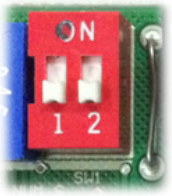
1. Remove the short connector of J7 when you use ON-OFF function;
2. When remote switch off (OPEN); the unit would be off;
3. When remote switch on (CLOSE); the unit would be on;
4. When close/open the remote switch, the unit would be responded the demand within 2 seconds;
5. When the remote switch on, you can use remote controller/ wire controller to select the mode what you want; when the remote switch off, the unit would not respond the demand from remote controller/wire controller.

when the remote switch off, but the remote controller/wire controller are on, CP code would be shown on the display board.

6. The voltage of the port is 12V DC, design Max. current is 5mA.



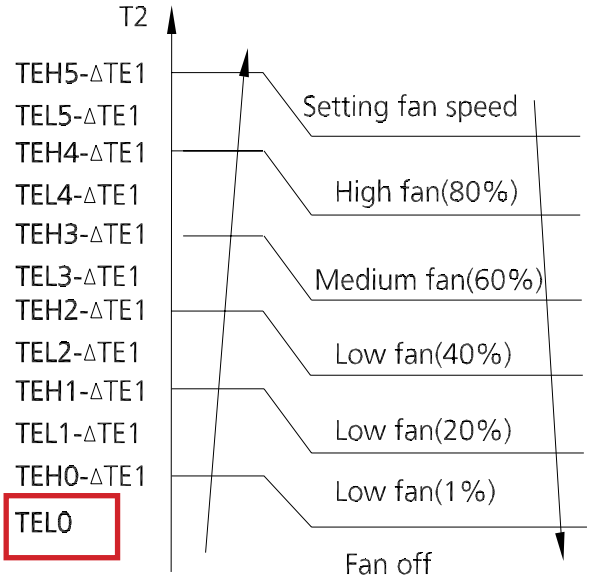
## 10.2 Micro-Switch Introduce:




| FOR ANTI-COLD WIND | | | | |
|---|---|---|---|---|
| SW1 | ON 1 2 | ON 1 2 | ON 1 2 | ON 1 2 |
| TEL0 | 24℃ | 15℃ | 8℃ | EEPROM DEFAULT |
| FACTORY SETTING | ✓ | | | |

A. Micro-switch SW1 is for selection of indoor fan stop temperature (TEL0) when it is in anti-cold wind action in heating mode.

Range: 24°C, 15°C, 8°C, according to EEROM setting (reserved for special customizing).





| FOR SETTING FAN MOTOR CONTROL WHEN THERE IS NO DEMAND | | |
|---|---|---|
| SW2 | ON 1 | ON 1 |
| MODE | FAN OFF | FAN ON |
| FACTORY SETTING | ✓ | |

B. Micro-switch SW2 is for selection of indoor FAN ACTION if room temperature reaches the set point and the compressor stops.

Range: OFF (in 127s), Keep running.


| FOR SETTING AUTO-RESTART | | |
|---|---|---|
| SW3 | ON 1 | ON 1 |
| MODE | AUTO-RESTART | NOT AUTO-RESTART |
| FACTORY SETTING | ✓ | |

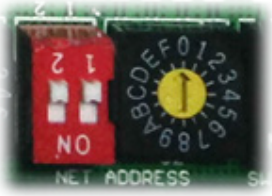
C. Micro-switch SW3 is for selection of auto-restart function.

Range: Active, inactive


| FOR TEMP. COMPENSATION(HEATING) | | | | |
|---|---|---|---|---|
| SW6 | ON 1 2 | ON 1 2 | ON 1 2 | ON 1 2 |
| CODE | 0℃ | 2℃ | 4℃ | EEPROM default |
| FACTORY SETTING | ✓ | | | |

D. Micro-switch SW6 is for selection of temperature compensation in heating mode. This helps to reduce the real temperature difference between ceiling and floor so that the unit could run properly. If the height of installation is lower, smaller value could be chosen.

Range: 6°C, 4°C, 2°C, E function (reserved for special customizing)




| FOR SETTING NETADDRESS | | | | |
|---|---|---|---|---|
| S1+S2 | ON 1 2 | ON 1 2 | ON 1 2 | ON 1 2 |
| CODE | 0~F | 0~F | 0~F | 0~F |
| NETADDRESS | 0~15 | 16~31 | 32~47 | 48~63 |
| FACTORY SETTING | ✓ | | | |

E. Micro-switch S1 and dial-switch S2 are for address setting when you want to control this unit by a central controller.

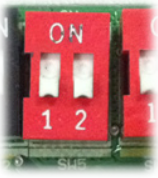
Range: 00-63


| FOR SETTING POWER(DC MOTOR MODEL ONLY) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ENC1 | | | | | | | | | | |
| CODE | 0 | 1 | 2 | 4 | 5 | 7 | 8 | 9 | A | B |
| POWER | 20 | 26 | 32~35 | 36~53 | 54~71 | 72~90 | 91~105 | 106~140 | 141~160 | 161~200 |
| FACTORY SETTING | ACCORDING TO RELATED MODEL. | | | | | | | | | |

F. Dial-switch ENC1: The indoor PCB is universal designed for whole series units from 7K to 68K. This ENC1 setting will tell the main program what size the unit is.

NOTE: Usually there is glue on it because the switch position cannot be changed at random unless you want to use this PCB as a spare part to use in another unit. Then you have to select the right position to match the size of the unit.

“20” means 2kW (7K),“105” means 10.5kW(36K), and so on.




| FOR MAIN-SLAVE SETTING | | | | |
|---|---|---|---|---|
| SW5 | ON 1 2 | ON 1 2 | ON 1 2 | ON 1 2 |
| MODE | MAIN NO SLAVE | MAIN | MAIN | SLAVE |
| FACTORY SETTING | ✓ | | | |

G. Micro-switch SW5 is for setting the master or slave unit when the unit is in twin connection.

Range: Master no slave (Normal 1 drive 1 connection), Master (2 positions without difference), Slave

# Outdoor Unit

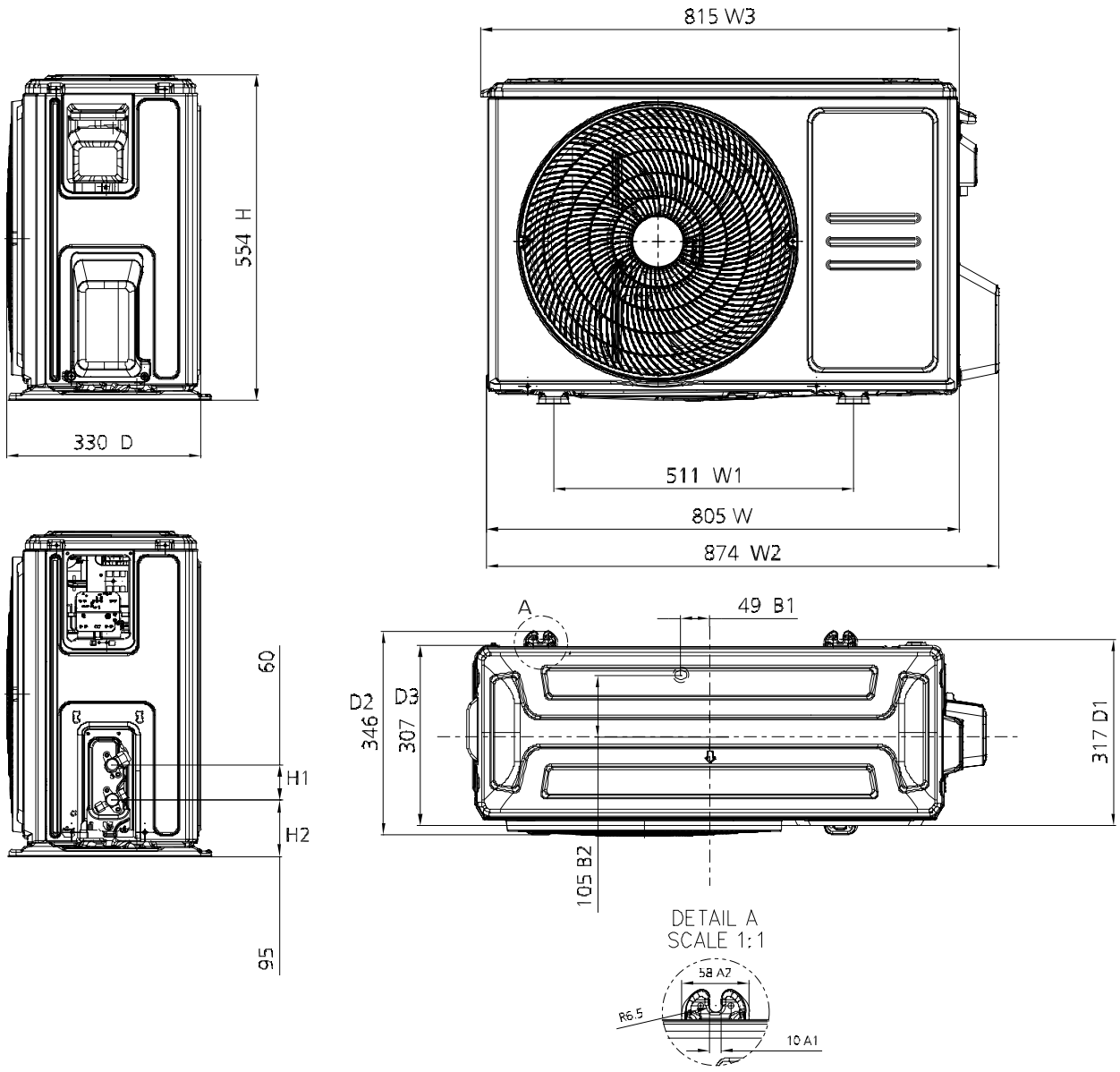
## Contents

# 1. Dimensional Drawings

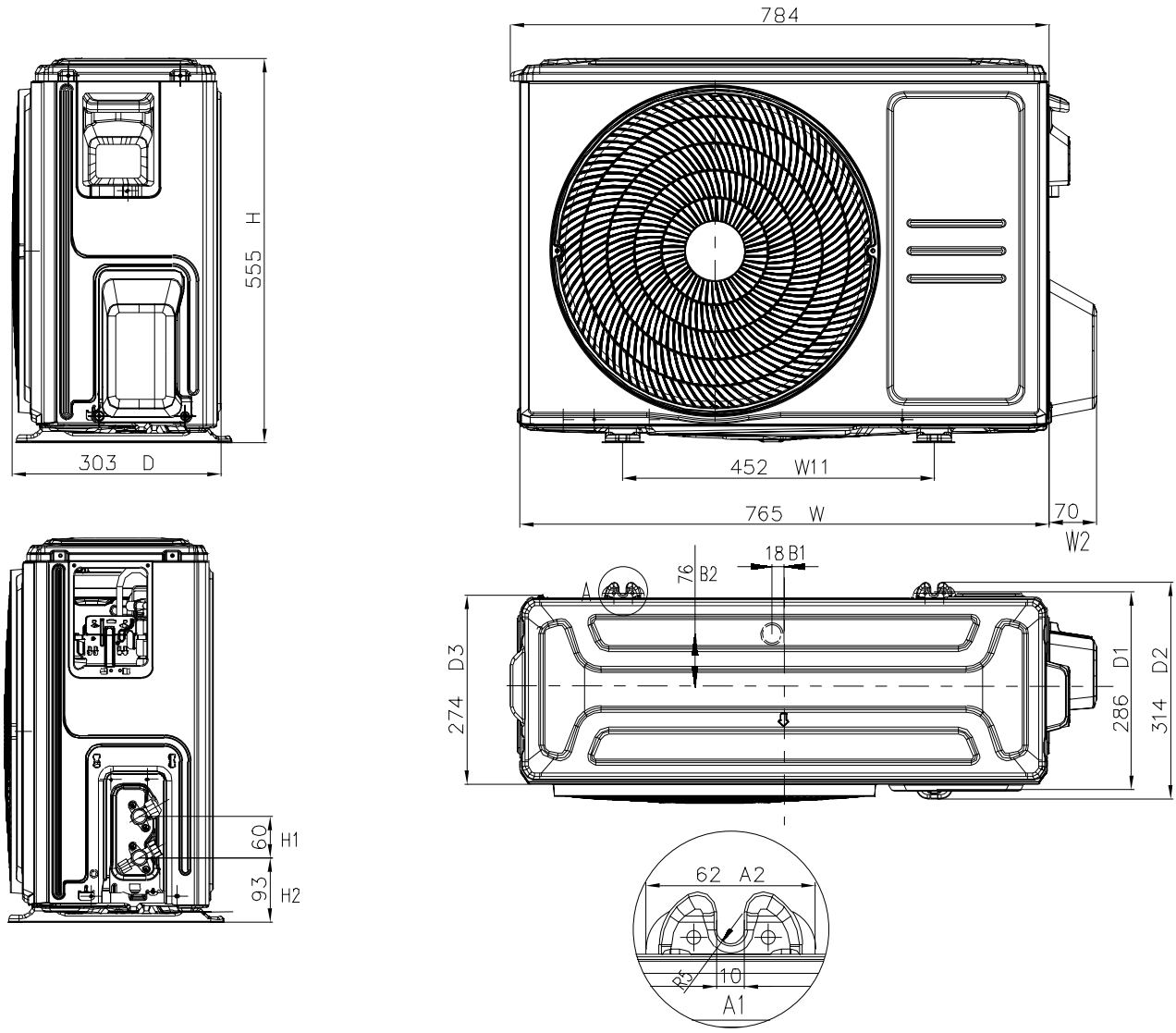
Please check the corresponding dimensional drawing according to the panel plate.

| ODU Model | Panel Plate |
|---|---|
| MOX330U-18HFN8-QRD0W(GA) | X330 |
| MOX430U-24HFN8-QRD0W(GA) | X430 |
| MOX430U-24HFN8-QRD1W(GA) | X430 |
| MOD30U-36HFN8-QRD0W(GA) | D30 |
| MOD30U-36HFN8-RRD0W(GA) | D30 |
| MOX630U-48HFN8-QRD0W(GA) | X630 |
| MOE30U-48HFN8-RRD0W(GA) | E30 |
| MOX630U-48HFN8-RRD0W(GA) | X630 |
| MOE30U-55HFN8-RRD0W(GA) | E30 |
| MOX630U-55HFN8-RRD0W(GA) | X630 |

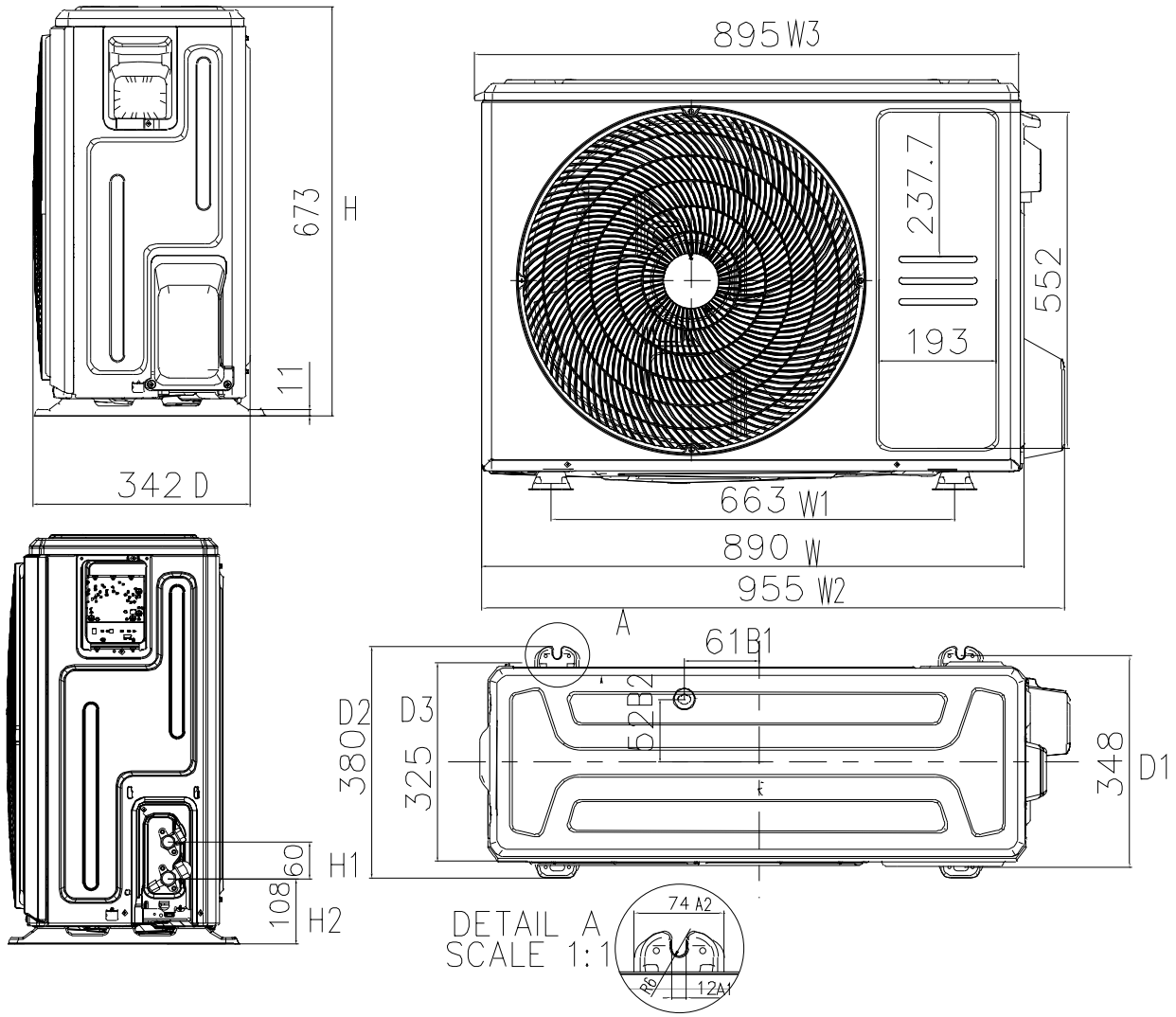
## Panel Plate X330



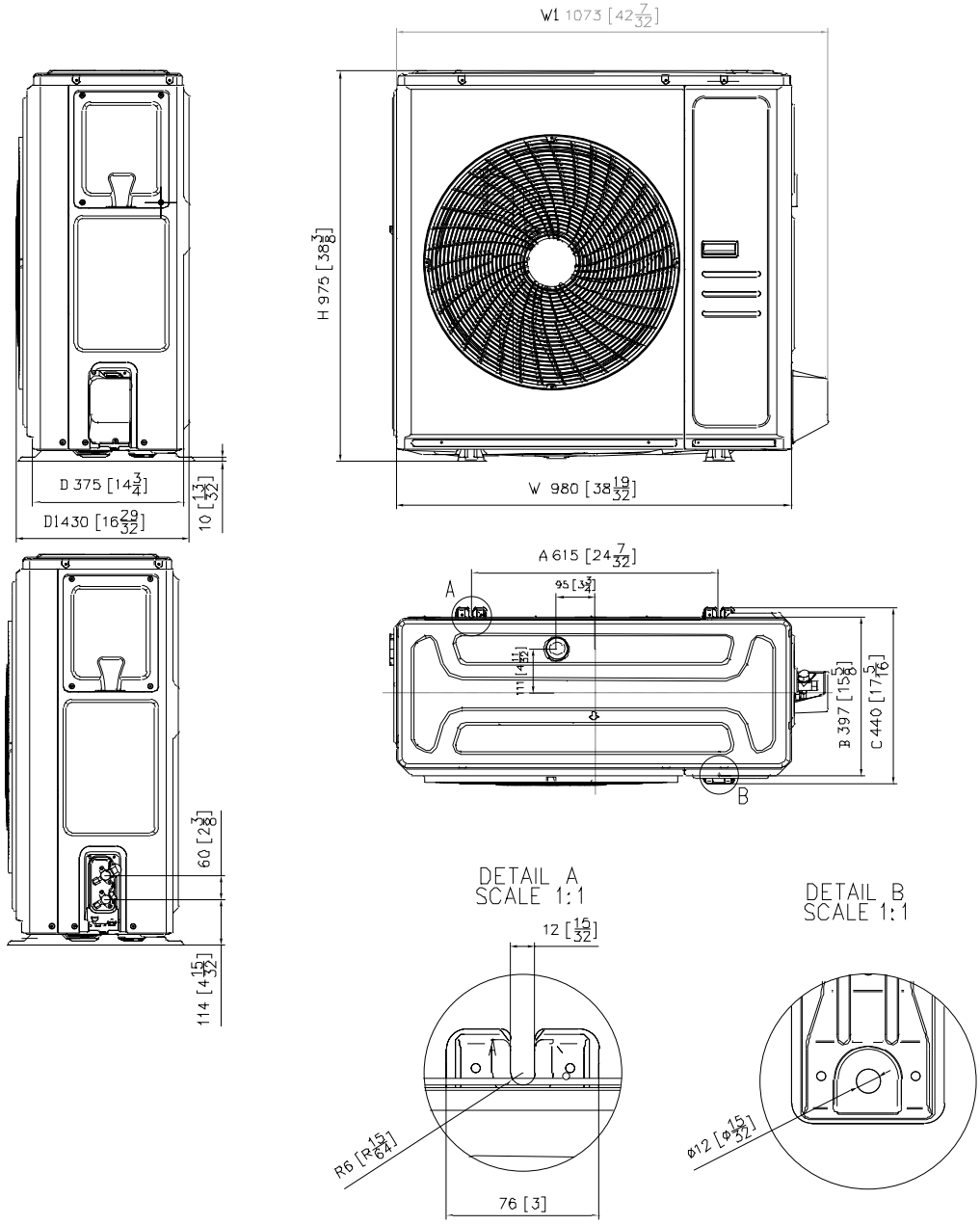
## Panel Plate X230



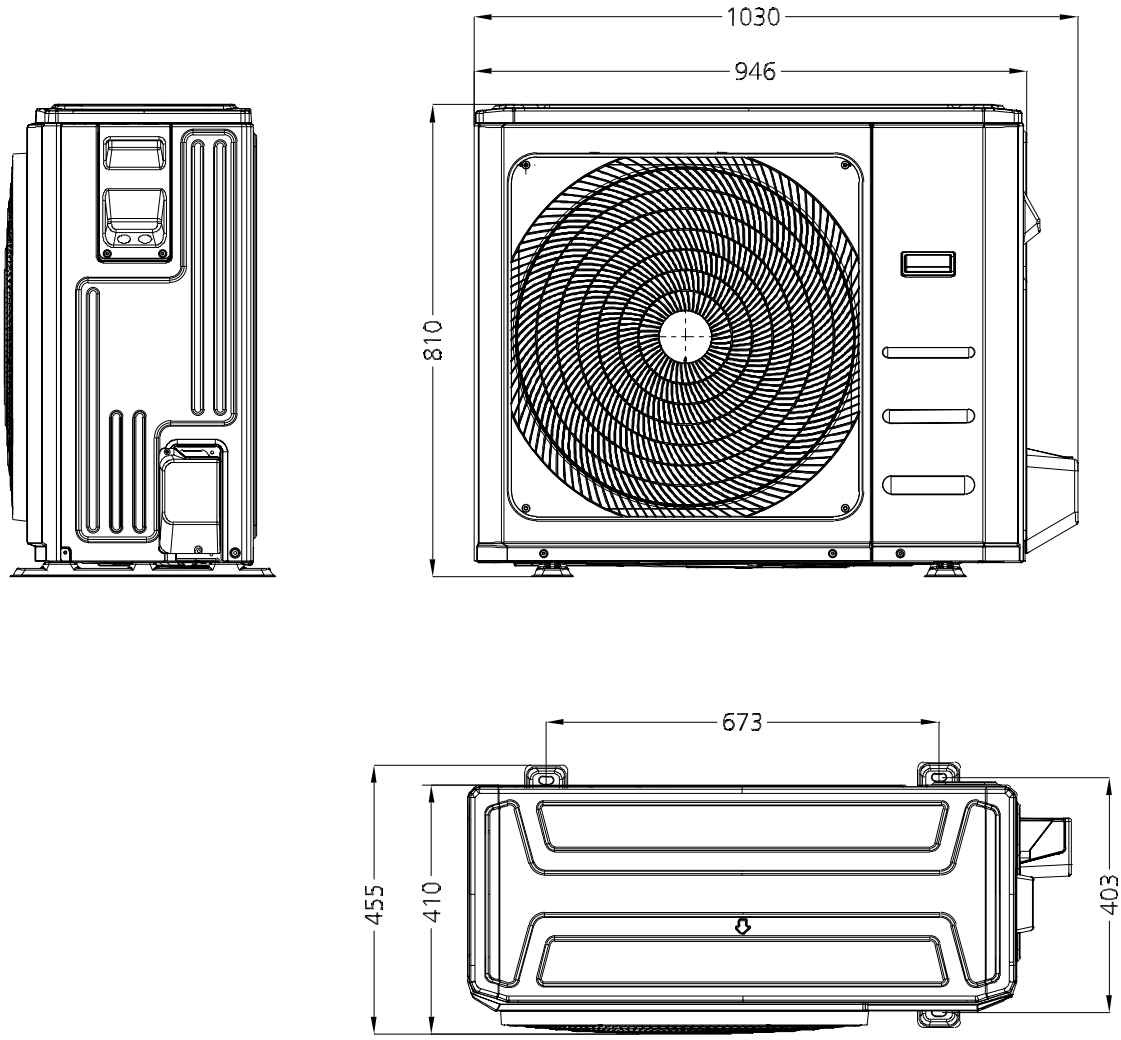
## Panel Plate X430



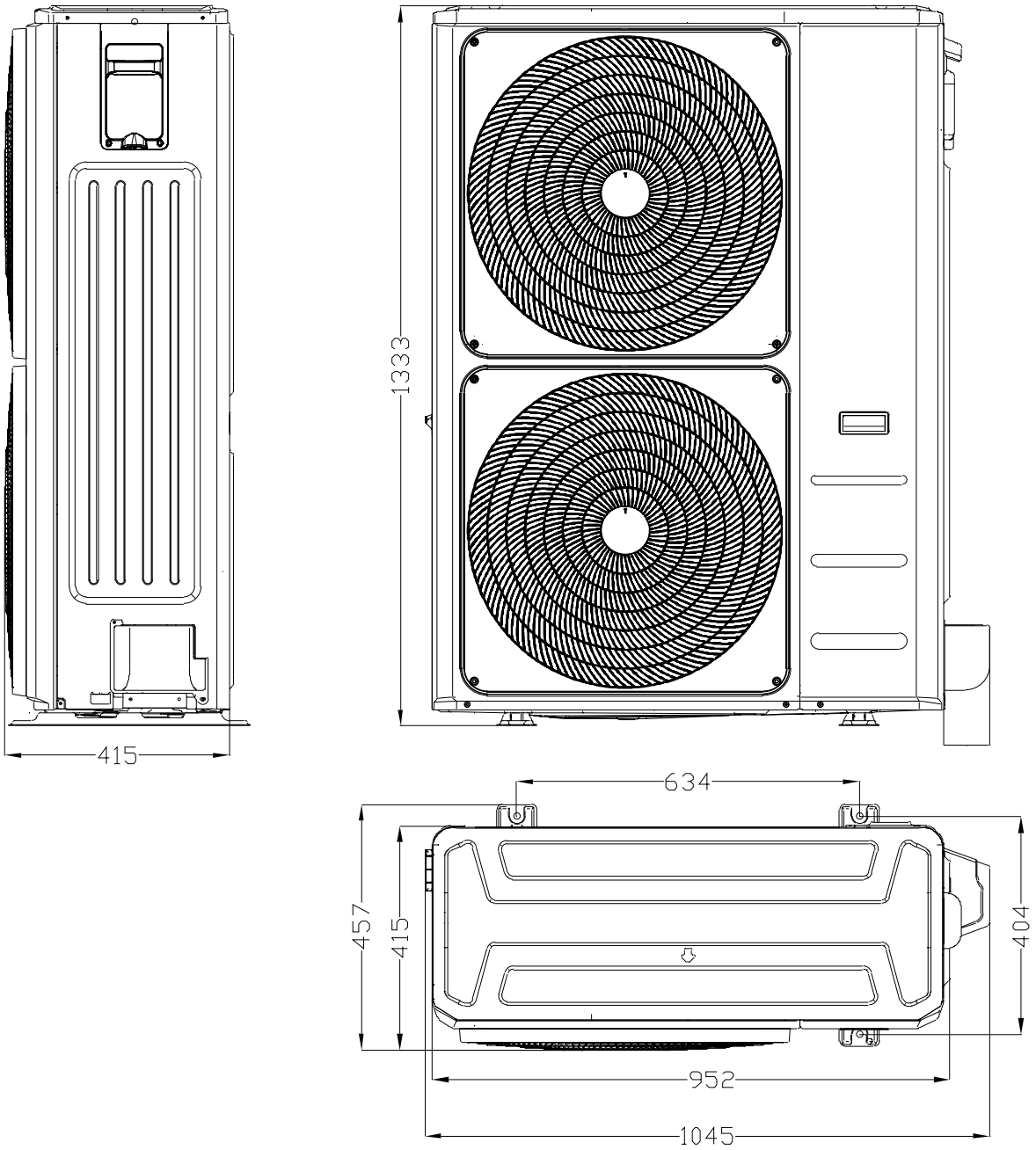
## Panel Plate X630



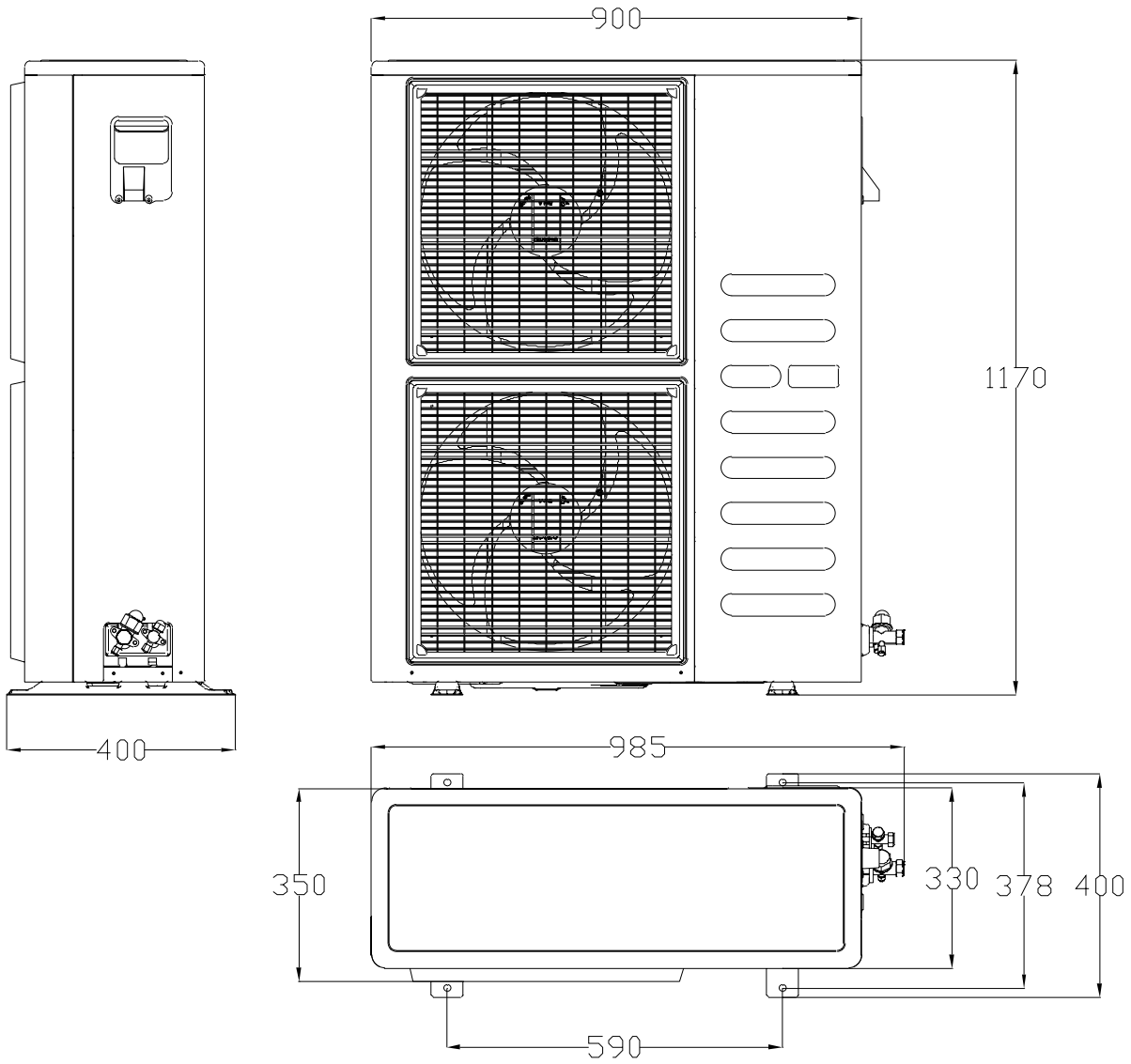
**Panel Plate D30**



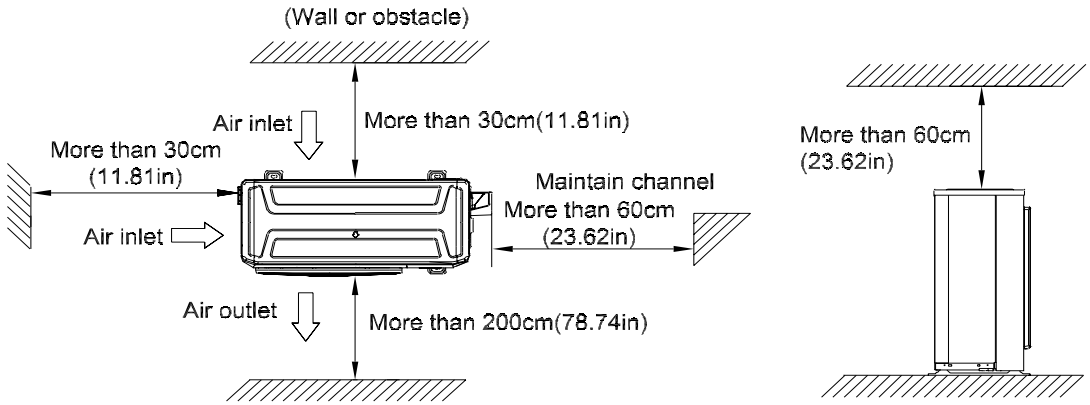
**Panel Plate E30**



**Panel Plate 590**



## 2. Service Place



## 3. Capacity Correction Factor for Height Difference

| Capacity(Btu/h) | 9k | | Pipe Length (m) | | | |
|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 10 | 20 | 25 |
| Height difference H (m) | Cooling | 10 | | 0.969 | 0.936 | 0.920 |
| | | 5 | 0.995 | 0.979 | 0.946 | 0.929 |
| | | 0 | 1.000 | 0.984 | 0.951 | 0.934 |
| | Heating | 10 | | 0.989 | 0.967 | 0.956 |
| | | 5 | 1.000 | 0.989 | 0.967 | 0.956 |
| | | 0 | 1.000 | 0.989 | 0.967 | 0.956 |
| | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 10 | 20 | 25 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.984 | 0.951 | 0.934 |
| | | 5 | 1.000 | 0.984 | 0.951 | 0.934 |
| | | 10 | | 0.984 | 0.951 | 0.934 |
| | Heating | 0 | 1.000 | 0.989 | 0.967 | 0.956 |
| | | 5 | 0.992 | 0.981 | 0.959 | 0.948 |
| | | 10 | | 0.973 | 0.952 | 0.941 |

| Capacity(Btu/h) | 12k | | Pipe Length (m) | | | |
|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 10 | 20 | 25 |
| Height difference H (m) | Cooling | 10 | | 0.973 | 0.948 | 0.936 |
| | | 5 | 0.995 | 0.983 | 0.958 | 0.945 |
| | | 0 | 1.000 | 0.988 | 0.963 | 0.950 |
| | Heating | 10 | | 0.993 | 0.978 | 0.970 |
| | | 5 | 1.000 | 0.993 | 0.978 | 0.970 |
| | | 0 | 1.000 | 0.993 | 0.978 | 0.970 |
| | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 10 | 20 | 25 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.988 | 0.963 | 0.950 |
| | | 5 | 1.000 | 0.988 | 0.963 | 0.950 |
| | | 10 | | 0.988 | 0.963 | 0.950 |
| | Heating | 0 | 1.000 | 0.993 | 0.978 | 0.970 |
| | | 5 | 0.992 | 0.985 | 0.970 | 0.962 |
| | | 10 | | 0.977 | 0.962 | 0.955 |

| Capacity(Btu/h) | 18k | | Pipe Length (m) | | | |
|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 10 | 20 | 30 |
| Height difference H (m) | Cooling | 20 | | | 0.928 | 0.912 |
| | | 10 | | 0.969 | 0.937 | 0.921 |
| | | 5 | 0.995 | 0.979 | 0.946 | 0.930 |
| | | 0 | 1.000 | 0.984 | 0.951 | 0.935 |
| | Heating | 20 | | | 0.982 | 0.976 |
| | | 10 | | 0.994 | 0.982 | 0.976 |
| | | 5 | 1.000 | 0.994 | 0.982 | 0.976 |
| | | 0 | 1.000 | 0.994 | 0.982 | 0.976 |
| | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 10 | 20 | 30 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.984 | 0.951 | 0.935 |
| | | 5 | 1.000 | 0.984 | 0.951 | 0.935 |
| | | 10 | | 0.984 | 0.951 | 0.935 |
| | | 20 | | | 0.951 | 0.935 |
| | Heating | 0 | 1.000 | 0.994 | 0.982 | 0.976 |
| | | 5 | 0.992 | 0.986 | 0.974 | 0.968 |
| | | 10 | | 0.978 | 0.966 | 0.960 |
| | | 20 | | | 0.959 | 0.953 |

| Capacity(Btu/h) | 24k | | Pipe Length (m) | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 10 | 20 | 30 | 40 | 50 |
| Height difference H (m) | Cooling | 25 | | | | 0.914 | 0.894 | 0.874 |
| | | 20 | | | 0.944 | 0.924 | 0.903 | 0.883 |
| | | 10 | | 0.975 | 0.954 | 0.933 | 0.912 | 0.891 |
| | | 5 | 0.995 | 0.984 | 0.963 | 0.942 | 0.921 | 0.900 |
| | | 0 | 1.000 | 0.989 | 0.968 | 0.947 | 0.926 | 0.905 |
| | Heating | 25 | | | | 0.983 | 0.977 | 0.97 |
| | | 20 | | | 0.990 | 0.983 | 0.977 | 0.97 |
| | | 10 | | 0.997 | 0.990 | 0.983 | 0.977 | 0.97 |
| | | 5 | 1.000 | 0.997 | 0.990 | 0.983 | 0.977 | 0.97 |
| | | 0 | 1.000 | 0.997 | 0.990 | 0.983 | 0.977 | 0.97 |
| | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 10 | 20 | 30 | 40 | 50 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.989 | 0.968 | 0.947 | 0.926 | 0.905 |
| | | 5 | 1.000 | 0.989 | 0.968 | 0.947 | 0.926 | 0.905 |
| | | 10 | | 0.989 | 0.968 | 0.947 | 0.926 | 0.905 |
| | | 20 | | | 0.968 | 0.947 | 0.926 | 0.905 |
| | | 25 | | | | 0.947 | 0.926 | 0.905 |
| | Heating | 0 | 1.000 | 0.997 | 0.990 | 0.983 | 0.977 | 0.970 |
| | | 5 | 0.992 | 0.989 | 0.982 | 0.975 | 0.969 | 0.962 |
| | | 10 | | 0.981 | 0.974 | 0.968 | 0.961 | 0.955 |
| | | 20 | | | 0.966 | 0.960 | 0.953 | 0.947 |
| | | 25 | | | | 0.952 | 0.946 | 0.939 |

| Capacity(Btu/h) | 30k | | Pipe Length (m) | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 10 | 20 | 30 | 40 | 50 |
| Height difference H (m) | Cooling | 25 | | | | 0.887 | 0.856 | 0.824 |
| | | 20 | | | 0.928 | 0.896 | 0.864 | 0.833 |
| | | 10 | | 0.969 | 0.937 | 0.905 | 0.873 | 0.841 |
| | | 5 | 0.995 | 0.979 | 0.947 | 0.914 | 0.882 | 0.850 |
| | | 0 | 1.000 | 0.984 | 0.951 | 0.919 | 0.886 | 0.854 |
| | Heating | 25 | | | | 0.958 | 0.942 | 0.925 |
| | | 20 | | | 0.975 | 0.958 | 0.942 | 0.925 |
| | | 10 | | 0.992 | 0.975 | 0.958 | 0.942 | 0.925 |
| | | 5 | 1.000 | 0.992 | 0.975 | 0.958 | 0.942 | 0.925 |
| | | 0 | 1.000 | 0.992 | 0.975 | 0.958 | 0.942 | 0.925 |
| | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 10 | 20 | 30 | 40 | 50 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.984 | 0.951 | 0.919 | 0.886 | 0.854 |
| | | 5 | 1.000 | 0.984 | 0.951 | 0.919 | 0.886 | 0.854 |
| | | 10 | | 0.984 | 0.951 | 0.919 | 0.886 | 0.854 |
| | | 20 | | | 0.951 | 0.919 | 0.886 | 0.854 |
| | | 25 | | | | 0.919 | 0.886 | 0.854 |
| | Heating | 0 | 1.000 | 0.992 | 0.975 | 0.958 | 0.942 | 0.925 |
| | | 5 | 0.992 | 0.984 | 0.967 | 0.951 | 0.934 | 0.918 |
| | | 10 | | 0.976 | 0.959 | 0.943 | 0.927 | 0.910 |
| | | 20 | | | 0.952 | 0.936 | 0.919 | 0.903 |
| | | 25 | | | | 0.928 | 0.912 | 0.896 |

| Capacity(Btu/h) | 36k | | Pipe Length (m) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 30 | | | | 0.885 | 0.845 | 0.805 | 0.778 |
| | | 20 | | | 0.921 | 0.894 | 0.854 | 0.813 | 0.786 |
| | | 10 | | 0.958 | 0.930 | 0.903 | 0.862 | 0.821 | 0.794 |
| | | 5 | 0.995 | 0.967 | 0.940 | 0.912 | 0.871 | 0.830 | 0.802 |
| | | 0 | 1.000 | 0.972 | 0.945 | 0.917 | 0.875 | 0.834 | 0.806 |
| | Heating | 30 | | | | 0.962 | 0.943 | 0.924 | 0.911 |
| | | 20 | | | 0.975 | 0.962 | 0.943 | 0.924 | 0.911 |
| | | 10 | | 0.987 | 0.975 | 0.962 | 0.943 | 0.924 | 0.911 |
| | | 5 | 1.000 | 0.987 | 0.975 | 0.962 | 0.943 | 0.924 | 0.911 |
| | | 0 | 1.000 | 0.987 | 0.975 | 0.962 | 0.943 | 0.924 | 0.911 |
| | | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.972 | 0.945 | 0.917 | 0.875 | 0.834 | 0.806 |
| | | 5 | 1.000 | 0.972 | 0.945 | 0.917 | 0.875 | 0.834 | 0.806 |
| | | 10 | | 0.972 | 0.945 | 0.917 | 0.875 | 0.834 | 0.806 |
| | | 20 | | | 0.945 | 0.917 | 0.875 | 0.834 | 0.806 |
| | | 30 | | | | 0.917 | 0.875 | 0.834 | 0.806 |
| | Heating | 0 | 1.000 | 0.987 | 0.975 | 0.962 | 0.943 | 0.924 | 0.911 |
| | | 5 | 0.992 | 0.979 | 0.967 | 0.954 | 0.935 | 0.916 | 0.904 |
| | | 10 | | 0.972 | 0.959 | 0.947 | 0.928 | 0.909 | 0.896 |
| | | 20 | | | 0.951 | 0.939 | 0.920 | 0.902 | 0.889 |
| | | 30 | | | | 0.931 | 0.913 | 0.895 | 0.882 |

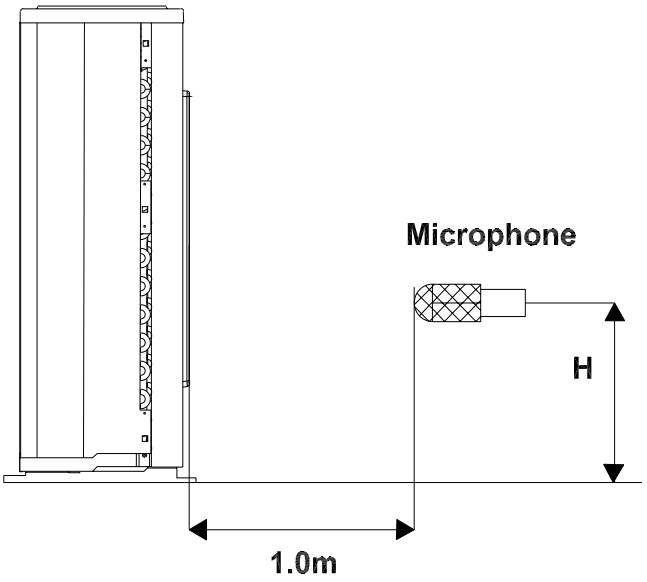
| Capacity(Btu/h) | 42k | | Pipe Length (m) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 30 | | | | 0.881 | 0.839 | 0.797 | 0.769 |
| | | 20 | | | 0.919 | 0.890 | 0.848 | 0.806 | 0.777 |
| | | 10 | | 0.956 | 0.928 | 0.899 | 0.857 | 0.814 | 0.785 |
| | | 5 | 0.995 | 0.966 | 0.937 | 0.908 | 0.865 | 0.822 | 0.793 |
| | | 0 | 1.000 | 0.971 | 0.942 | 0.913 | 0.870 | 0.826 | 0.797 |
| | Heating | 30 | | | | 0.960 | 0.940 | 0.920 | 0.907 |
| | | 20 | | | 0.973 | 0.960 | 0.940 | 0.920 | 0.907 |
| | | 10 | | 0.987 | 0.973 | 0.960 | 0.940 | 0.920 | 0.907 |
| | | 5 | 1.000 | 0.987 | 0.973 | 0.960 | 0.940 | 0.920 | 0.907 |
| | | 0 | 1.000 | 0.987 | 0.973 | 0.960 | 0.940 | 0.920 | 0.907 |
| | | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.971 | 0.942 | 0.913 | 0.870 | 0.826 | 0.797 |
| | | 5 | 1.000 | 0.971 | 0.942 | 0.913 | 0.870 | 0.826 | 0.797 |
| | | 10 | | 0.971 | 0.942 | 0.913 | 0.870 | 0.826 | 0.797 |
| | | 20 | | | 0.942 | 0.913 | 0.870 | 0.826 | 0.797 |
| | | 30 | | | | 0.913 | 0.870 | 0.826 | 0.797 |
| | Heating | 0 | 1.000 | 0.987 | 0.973 | 0.960 | 0.940 | 0.920 | 0.907 |
| | | 5 | 0.992 | 0.979 | 0.966 | 0.952 | 0.933 | 0.913 | 0.900 |
| | | 10 | | 0.971 | 0.958 | 0.945 | 0.925 | 0.906 | 0.893 |
| | | 20 | | | 0.950 | 0.937 | 0.918 | 0.898 | 0.885 |
| | | 30 | | | | 0.930 | 0.910 | 0.891 | 0.878 |

| Capacity(Btu/h) | 48k | | Pipe Length (m) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 30 | | | | 0.881 | 0.838 | 0.796 | 0.768 |
| | | 20 | | | 0.918 | 0.890 | 0.847 | 0.804 | 0.775 |
| | | 10 | | 0.956 | 0.927 | 0.899 | 0.855 | 0.812 | 0.783 |
| | | 5 | 0.995 | 0.966 | 0.937 | 0.908 | 0.864 | 0.820 | 0.791 |
| | | 0 | 1.000 | 0.971 | 0.941 | 0.912 | 0.868 | 0.824 | 0.795 |
| | Heating | 30 | | | | 0.955 | 0.933 | 0.911 | 0.896 |
| | | 20 | | | 0.970 | 0.955 | 0.933 | 0.911 | 0.896 |
| | | 10 | | 0.985 | 0.970 | 0.955 | 0.933 | 0.911 | 0.896 |
| | | 5 | 1.000 | 0.985 | 0.970 | 0.955 | 0.933 | 0.911 | 0.896 |
| | | 0 | 1.000 | 0.985 | 0.970 | 0.955 | 0.933 | 0.911 | 0.896 |
| | | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.971 | 0.941 | 0.912 | 0.868 | 0.824 | 0.795 |
| | | 5 | 1.000 | 0.971 | 0.941 | 0.912 | 0.868 | 0.824 | 0.795 |
| | | 10 | | 0.971 | 0.941 | 0.912 | 0.868 | 0.824 | 0.795 |
| | | 20 | | | 0.941 | 0.912 | 0.868 | 0.824 | 0.795 |
| | | 30 | | | | 0.912 | 0.868 | 0.824 | 0.795 |
| | Heating | 0 | 1.000 | 0.985 | 0.970 | 0.955 | 0.933 | 0.911 | 0.896 |
| | | 5 | 0.992 | 0.977 | 0.963 | 0.948 | 0.926 | 0.904 | 0.889 |
| | | 10 | | 0.969 | 0.955 | 0.940 | 0.918 | 0.896 | 0.882 |
| | | 20 | | | 0.947 | 0.933 | 0.911 | 0.889 | 0.875 |
| | | 30 | | | | 0.925 | 0.904 | 0.882 | 0.868 |

| Capacity(Btu/h) | 55k | | Pipe Length (m) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 30 | | | | 0.866 | 0.816 | 0.767 | 0.734 |
| | | 20 | | | 0.908 | 0.875 | 0.825 | 0.775 | 0.741 |
| | | 10 | | 0.951 | 0.918 | 0.884 | 0.833 | 0.782 | 0.749 |
| | | 5 | 0.995 | 0.961 | 0.927 | 0.893 | 0.841 | 0.790 | 0.756 |
| | | 0 | 1.000 | 0.966 | 0.931 | 0.897 | 0.846 | 0.794 | 0.760 |
| | Heating | 30 | | | | 0.952 | 0.929 | 0.905 | 0.889 |
| | | 20 | | | 0.968 | 0.952 | 0.929 | 0.905 | 0.889 |
| | | 10 | | 0.984 | 0.968 | 0.952 | 0.929 | 0.905 | 0.889 |
| | | 5 | 1.000 | 0.984 | 0.968 | 0.952 | 0.929 | 0.905 | 0.889 |
| | | 0 | 1.000 | 0.984 | 0.968 | 0.952 | 0.929 | 0.905 | 0.889 |
| | | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.966 | 0.931 | 0.897 | 0.846 | 0.794 | 0.760 |
| | | 5 | 1.000 | 0.966 | 0.931 | 0.897 | 0.846 | 0.794 | 0.760 |
| | | 10 | | 0.966 | 0.931 | 0.897 | 0.846 | 0.794 | 0.760 |
| | | 20 | | | 0.931 | 0.897 | 0.846 | 0.794 | 0.760 |
| | | 30 | | | | 0.897 | 0.846 | 0.794 | 0.760 |
| | Heating | 0 | 1.000 | 0.984 | 0.968 | 0.952 | 0.929 | 0.905 | 0.889 |
| | | 5 | 0.992 | 0.976 | 0.961 | 0.945 | 0.921 | 0.898 | 0.882 |
| | | 10 | | 0.968 | 0.953 | 0.937 | 0.914 | 0.890 | 0.875 |
| | | 20 | | | 0.945 | 0.930 | 0.907 | 0.883 | 0.868 |
| | | 30 | | | | 0.922 | 0.899 | 0.876 | 0.861 |

| Capacity(Btu/h) | 60k | | Pipe Length (m) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Indoor Upper than Outdoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 30 | | | | 0.861 | 0.811 | 0.761 | 0.724 |
| | | 20 | | | 0.903 | 0.869 | 0.819 | 0.769 | 0.731 |
| | | 10 | | 0.946 | 0.912 | 0.878 | 0.827 | 0.777 | 0.739 |
| | | 5 | 0.995 | 0.955 | 0.921 | 0.887 | 0.836 | 0.785 | 0.746 |
| | | 0 | 1.000 | 0.960 | 0.926 | 0.891 | 0.840 | 0.789 | 0.750 |
| | Heating | 30 | | | | 0.943 | 0.920 | 0.896 | 0.880 |
| | | 20 | | | 0.959 | 0.943 | 0.920 | 0.896 | 0.880 |
| | | 10 | | 0.975 | 0.959 | 0.943 | 0.920 | 0.896 | 0.880 |
| | | 5 | 1.000 | 0.975 | 0.959 | 0.943 | 0.920 | 0.896 | 0.880 |
| | | 0 | 1.000 | 0.975 | 0.959 | 0.943 | 0.920 | 0.896 | 0.880 |
| | | | | | | | | | |
| Outdoor Upper than Indoor | | | 5 | 15 | 25 | 35 | 50 | 65 | 75 |
| Height difference H (m) | Cooling | 0 | 1.000 | 0.960 | 0.926 | 0.891 | 0.840 | 0.789 | 0.750 |
| | | 5 | 1.000 | 0.960 | 0.926 | 0.891 | 0.840 | 0.789 | 0.750 |
| | | 10 | | 0.960 | 0.926 | 0.891 | 0.840 | 0.789 | 0.750 |
| | | 20 | | | 0.926 | 0.891 | 0.840 | 0.789 | 0.750 |
| | | 30 | | | | 0.891 | 0.840 | 0.789 | 0.750 |
| | Heating | 0 | 1.000 | 0.975 | 0.959 | 0.943 | 0.920 | 0.896 | 0.880 |
| | | 5 | 0.992 | 0.967 | 0.951 | 0.936 | 0.912 | 0.889 | 0.873 |
| | | 10 | | 0.959 | 0.944 | 0.928 | 0.905 | 0.881 | 0.866 |
| | | 20 | | | 0.936 | 0.921 | 0.898 | 0.874 | 0.859 |
| | | 30 | | | | 0.913 | 0.890 | 0.867 | 0.852 |

## 4. Noise Criterion Curves




Note: H= 0.5 × height of outdoor unit

Notes:

-Sound measured at 1.0m away from the center of the unit.

-Data is valid at free field condition

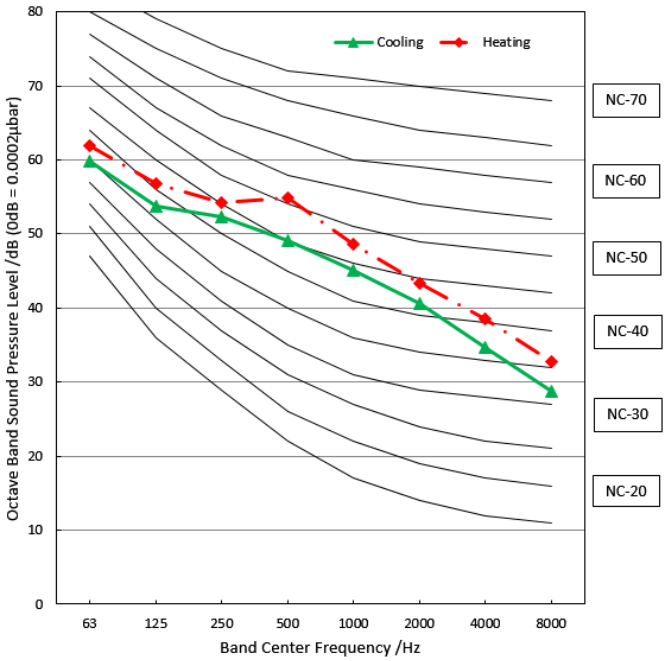
-Data is valid at nominal operation condition

-Reference acoustic pressure OdB=20μPa

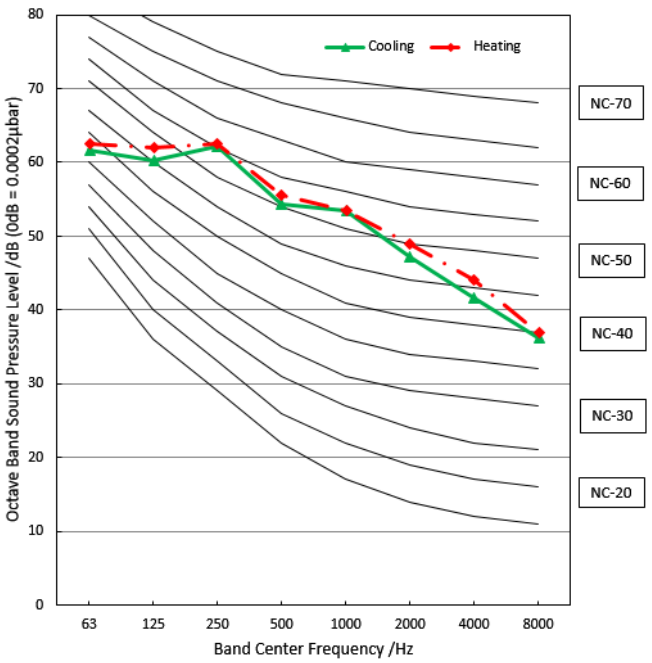
-Sound level will vary depending on arrange off actors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.

-The operating conditions are assumed to be standard.

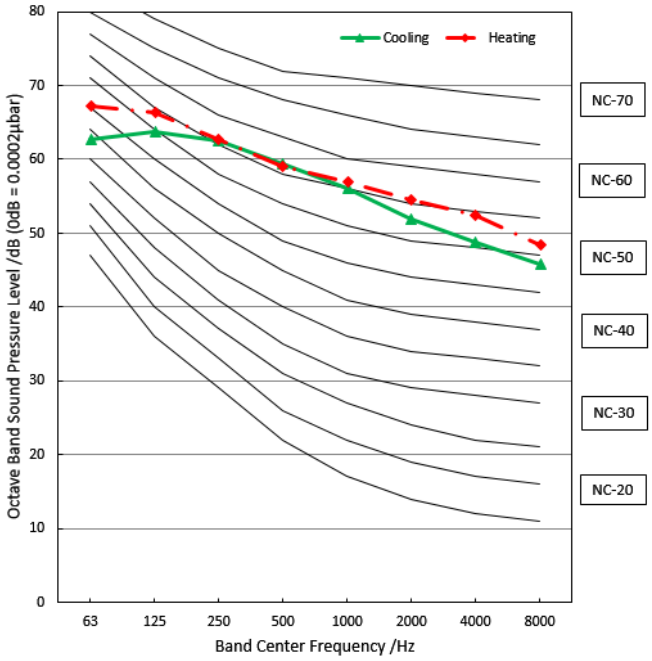
MOX330U-18HFN8-QRD0W(GA)



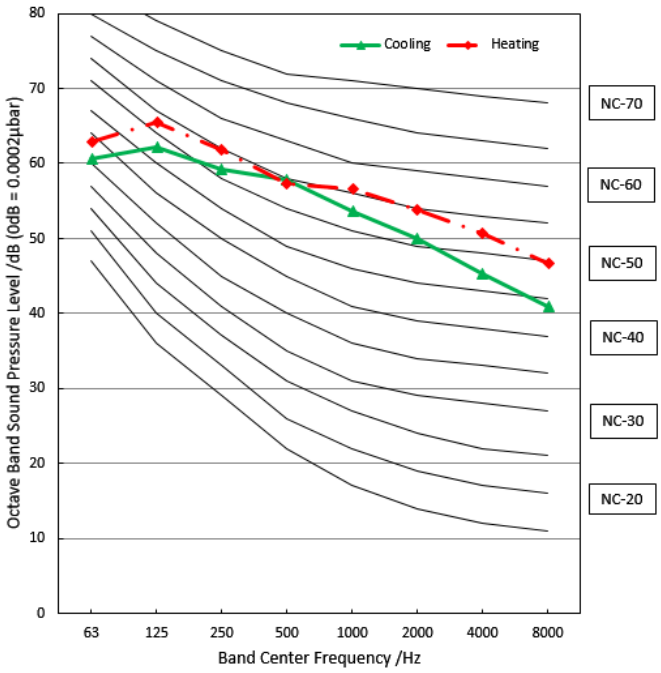

MOX430U-24HFN8-QRD0W(GA)



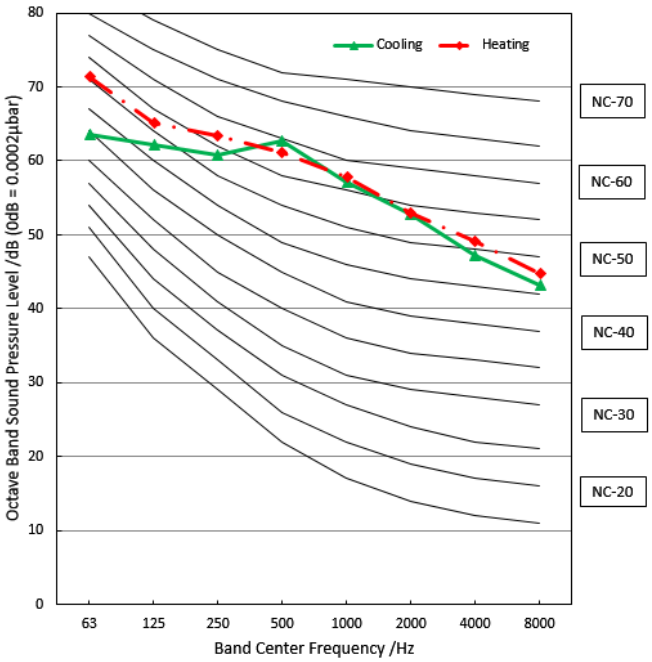
MOD30U-36HFN8-QRD0W(GA)



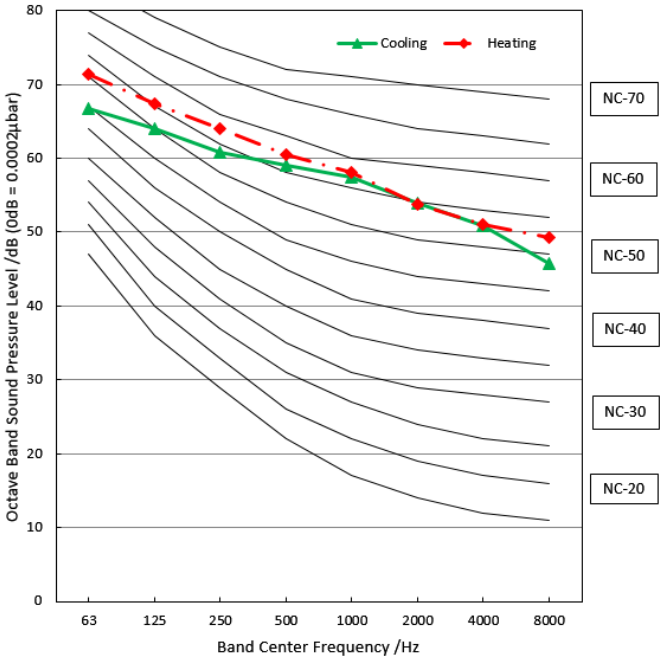

MOD30U-36HFN8-RRD0W(GA)



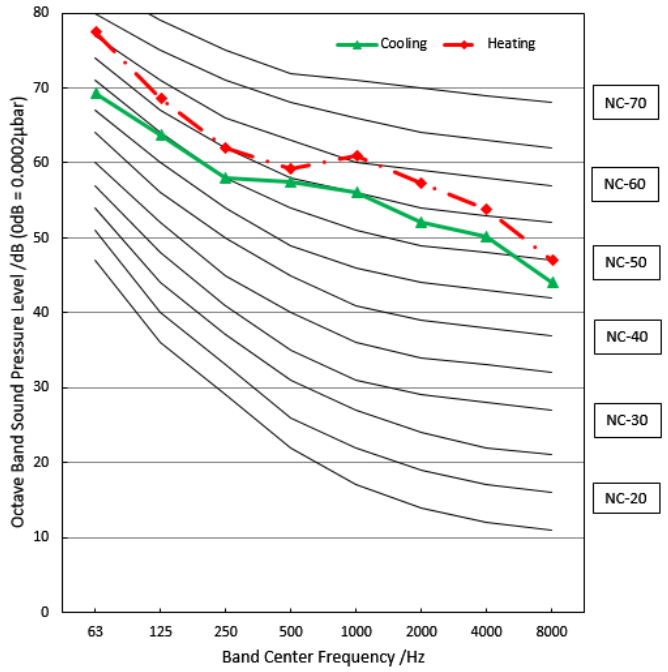

MOE30U-48HFN8-RRD0W(GA)



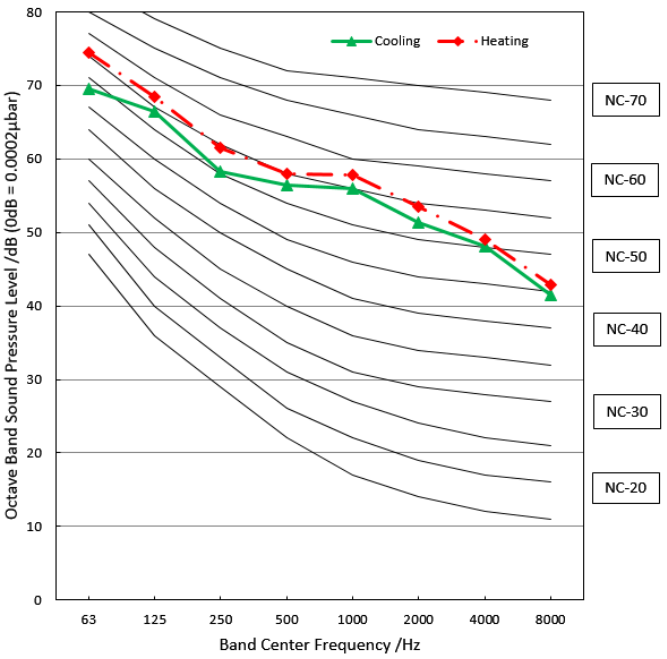

MOE30U-55HFN8-RRD0W(GA)



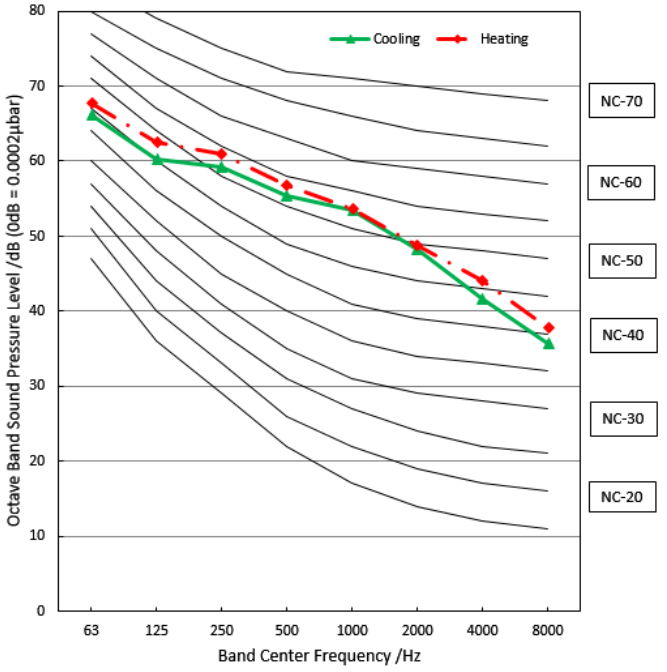
MOX630U-48HFN8-QRD0W(GA)



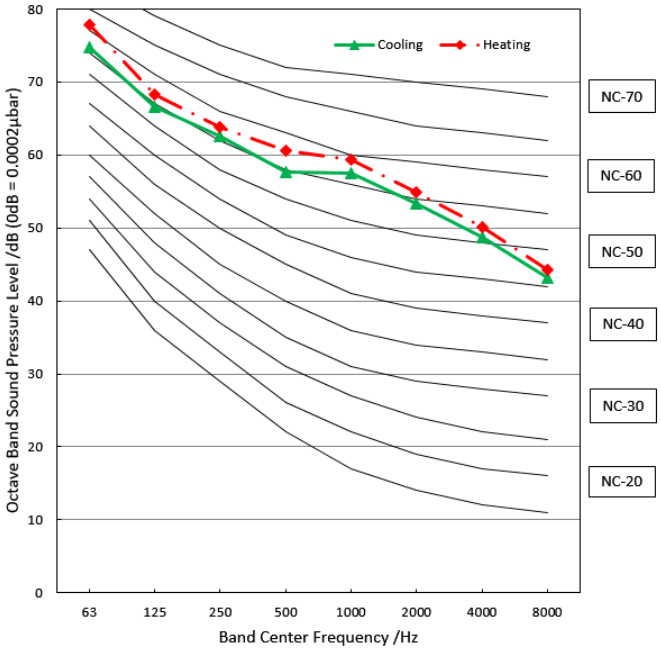

MOX630U-48HFN8-RRD0W(GA)



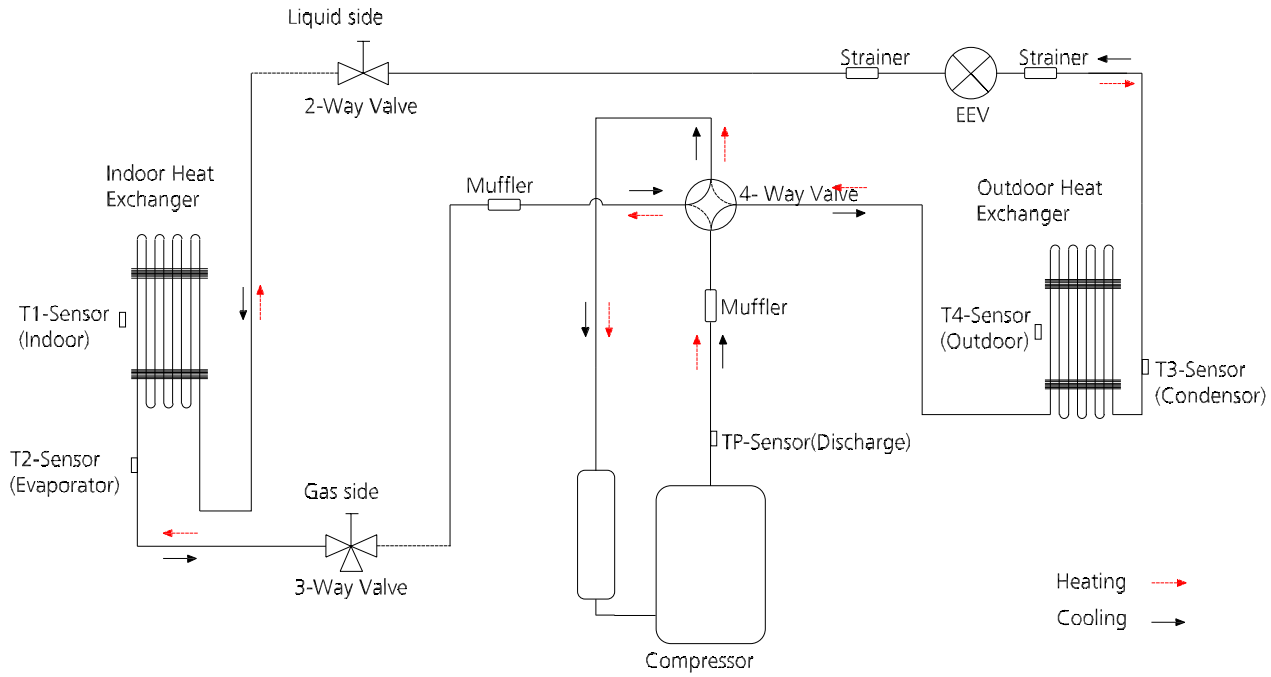

MOX430U-24HFN8-QRD1W(GA)



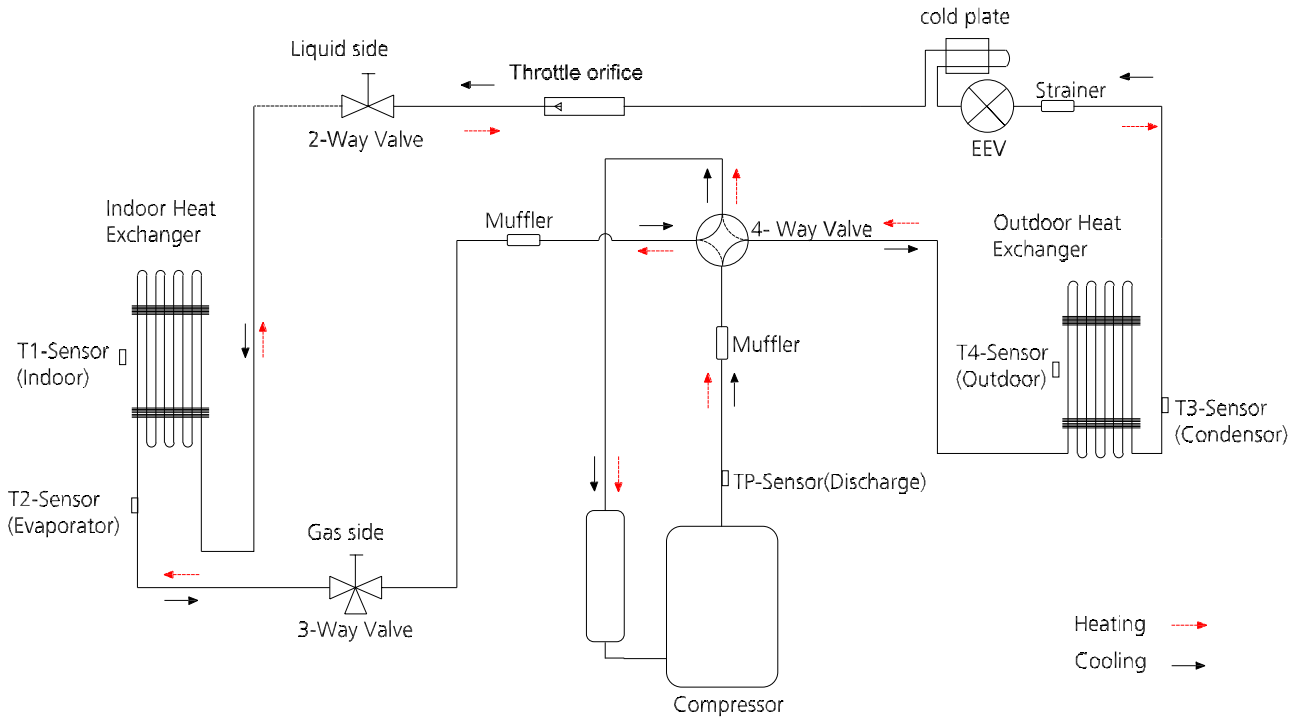

MOX630U-55HFN8-RRD0W(GA)



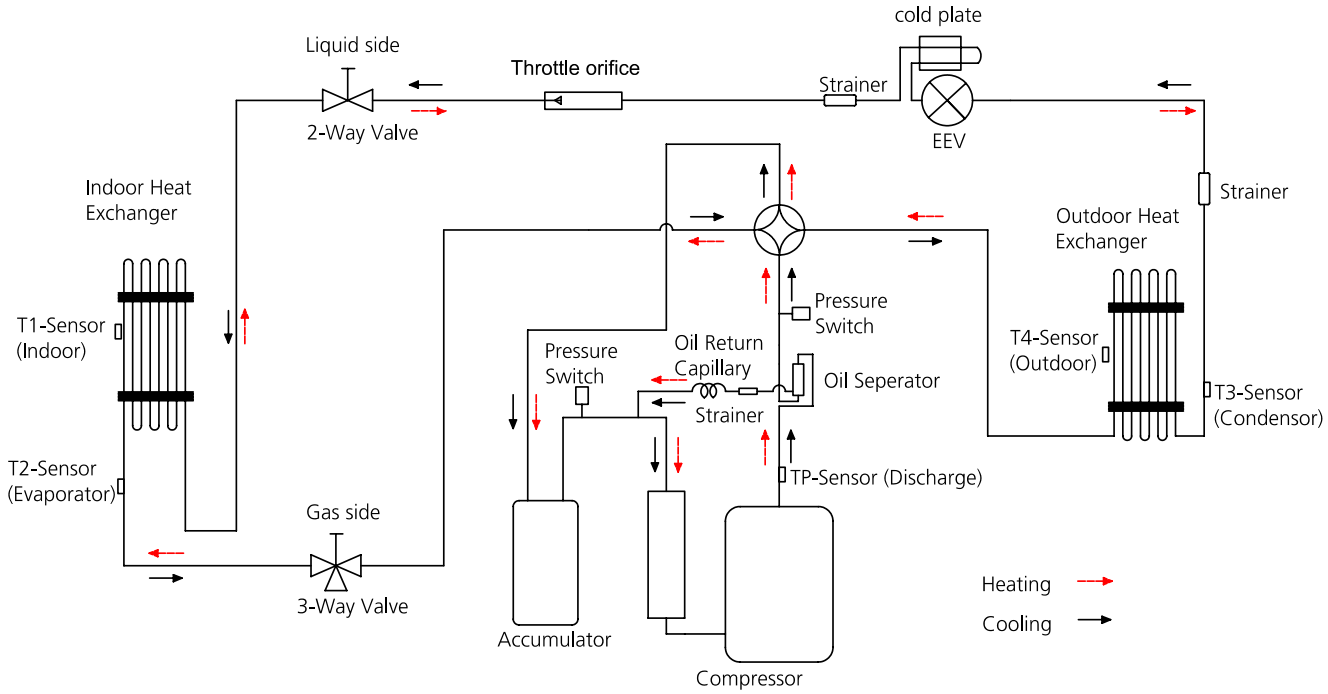
## 5. Refrigerant Cycle Diagrams




| Model | Pipe Size (Diameter:ø) mm(inch) | | Piping length (m/ft) | | Elevation (m/ft) | | Additional Refrigerant |
|---|---|---|---|---|---|---|---|
| | Gas | Liquid | Rated | Max. | Rated | Max. | |
| MOX330U-18HFN8-QRD0W(GA) | 12.7(1/2) | 6.35(1/4) | 5/16.4 | 30/98.4 | 0 | 20/65.6 | 12g/m (0.13oz/ft) |




| Model | Pipe Size (Diameter:ø) mm(inch) | | Piping length (m/ft) | | Elevation (m/ft) | | Additional Refrigerant |
|---|---|---|---|---|---|---|---|
| | Gas | Liquid | Rated | Max. | Rated | Max. | |
| MOX430U-24HFN8-QRD0W(GA) | 15.9(5/8) | 9.52(3/8) | 5/16.4 | 50/164 | 0 | 25/82 | 24g/m (0.26oz/ ft) |
| MOX430U-24HFN8-QRD1W(GA) | 15.9(5/8) | 9.52(3/8) | 5/16.4 | 50/164 | 0 | 25/82 | |

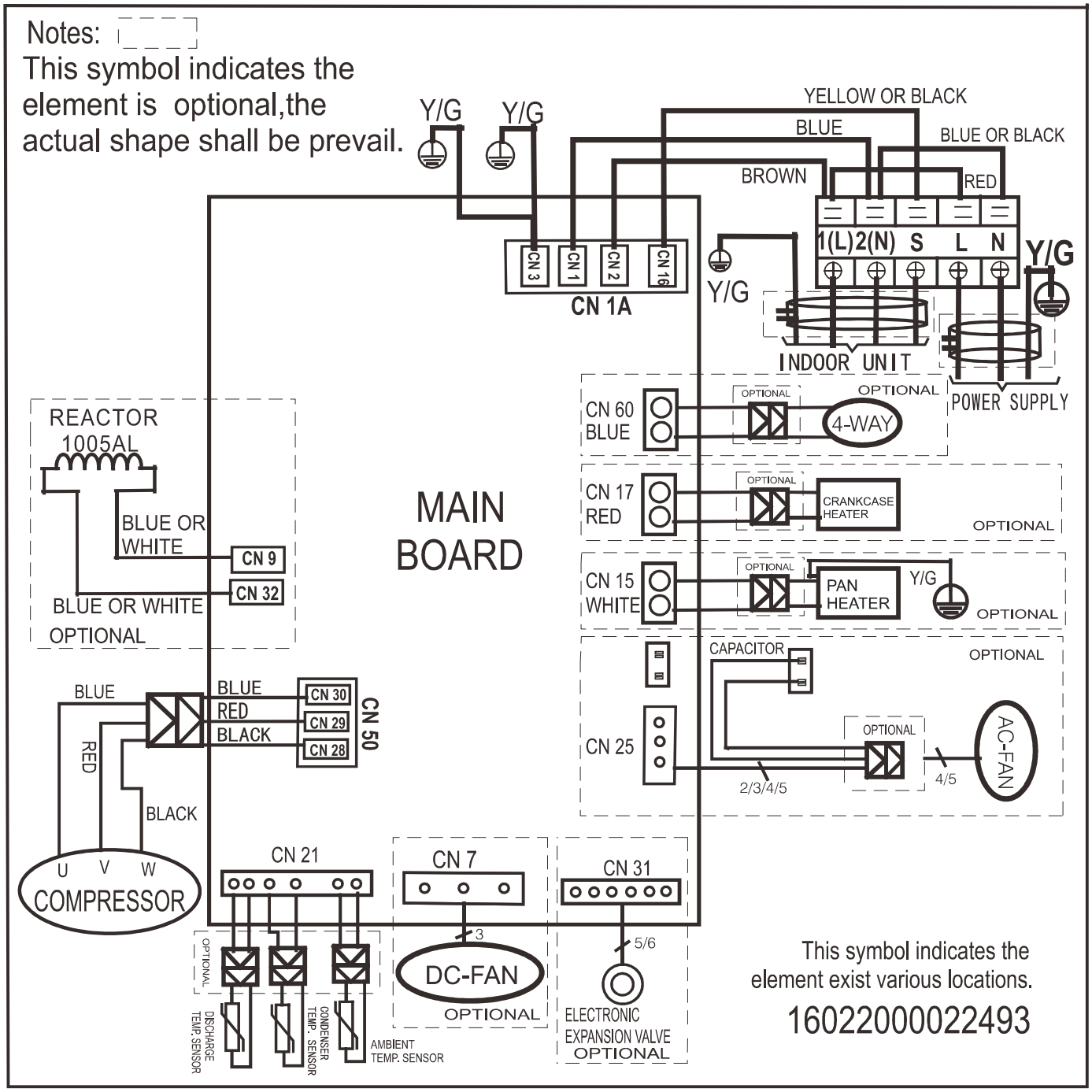



| Model | Pipe Size (Diameter:ø) mm(inch) | | Piping length (m/ft) | | Elevation (m/ft) | | Additional Refrigerant |
|---|---|---|---|---|---|---|---|
| | Gas | Liquid | Rated | Max. | Rated | Max. | |
| MOD30U-36HFN8-QRD0W(GA) | 15.9(5/8) | 9.52(3/8) | 5/16.4 | 75/246.1 | 0 | 30/98.4 | 24g/m (0.26oz/ft) |
| MOD30U-36HFN8-RRD0W(GA) | 15.9(5/8) | 9.52(3/8) | | | | | |
| MOX630U-48HFN8-QRD0W(GA) | 15.9(5/8) | 9.52(3/8) | | | | | |
| MOE30U-48HFN8-RRD0W(GA) | 15.9(5/8) | 9.52(3/8) | | | | | |
| MOX630U-48HFN8-RRD0W(GA) | 15.9(5/8) | 9.52(3/8) | | | | | |
| MOE30U-55HFN8-RRD0W(GA) | 15.9(5/8) | 9.52(3/8) | | | | | |
| MOX630U-55HFN8-RRD0W(GA) | 15.9(5/8) | 9.52(3/8) | | | | | |

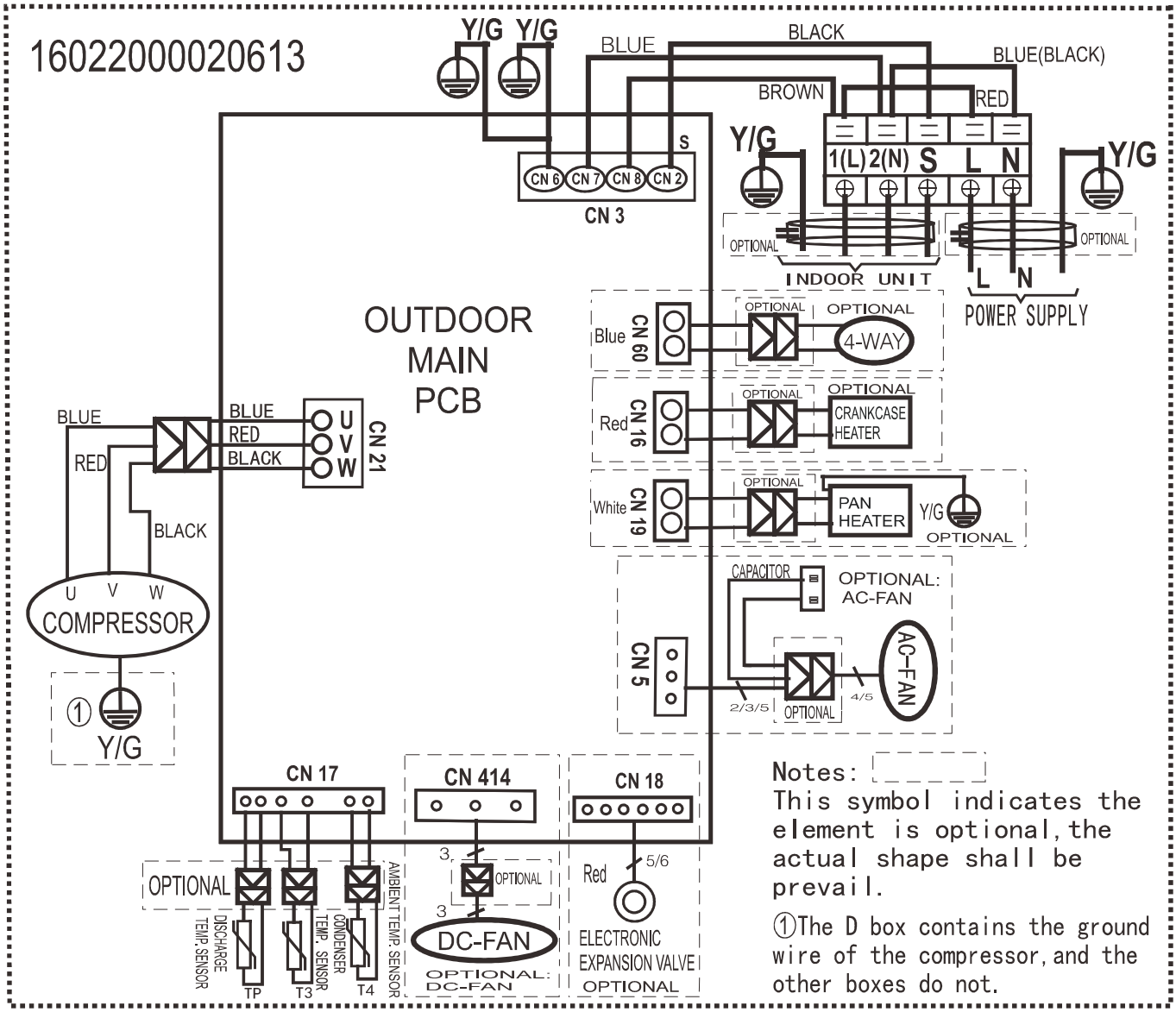
## 6. Electrical Wiring Diagrams

| ODU Model | ODU Wiring Diagram | ODU Main Printed Circuit Board | ODU IPM Printed Circuit Board |
|---|---|---|---|
| MOX330U-18HFN8-QRD0W(GA) | 16022000022493 | 17122000057661 | / |
| MOX430U-24HFN8-QRD0W(GA) | 16022000020613 | 17122000048064 | / |
| MOX430U-24HFN8-QRD1W(GA) | | | |
| MOD30U-36HFN8-QRD0W(GA) | 16022000035289 | 17122000047742 | / |
| MOD30U-36HFN8-RRD0W(GA) | 16022000033470 | 17122000041841 | 17122000008625 |
| MOX630U-48HFN8-QRD0W(GA) | 16022000040450 | 17122300007152 | / |
| MOE30U-48HFN8-RRD0W(GA) | 16022000033470 | 17122000041841 | 17122000021912 |
| MOE30U-55HFN8-RRD0W(GA) | | 17122000041841 | 17122000021912 |
| MOX630U-48HFN8-RRD0W(GA) | 16022000039770 | 17122000054636 | / |
| MOX630U-55HFN8-RRD0W(GA) | 16022000039770 | 17122000054636 | / |

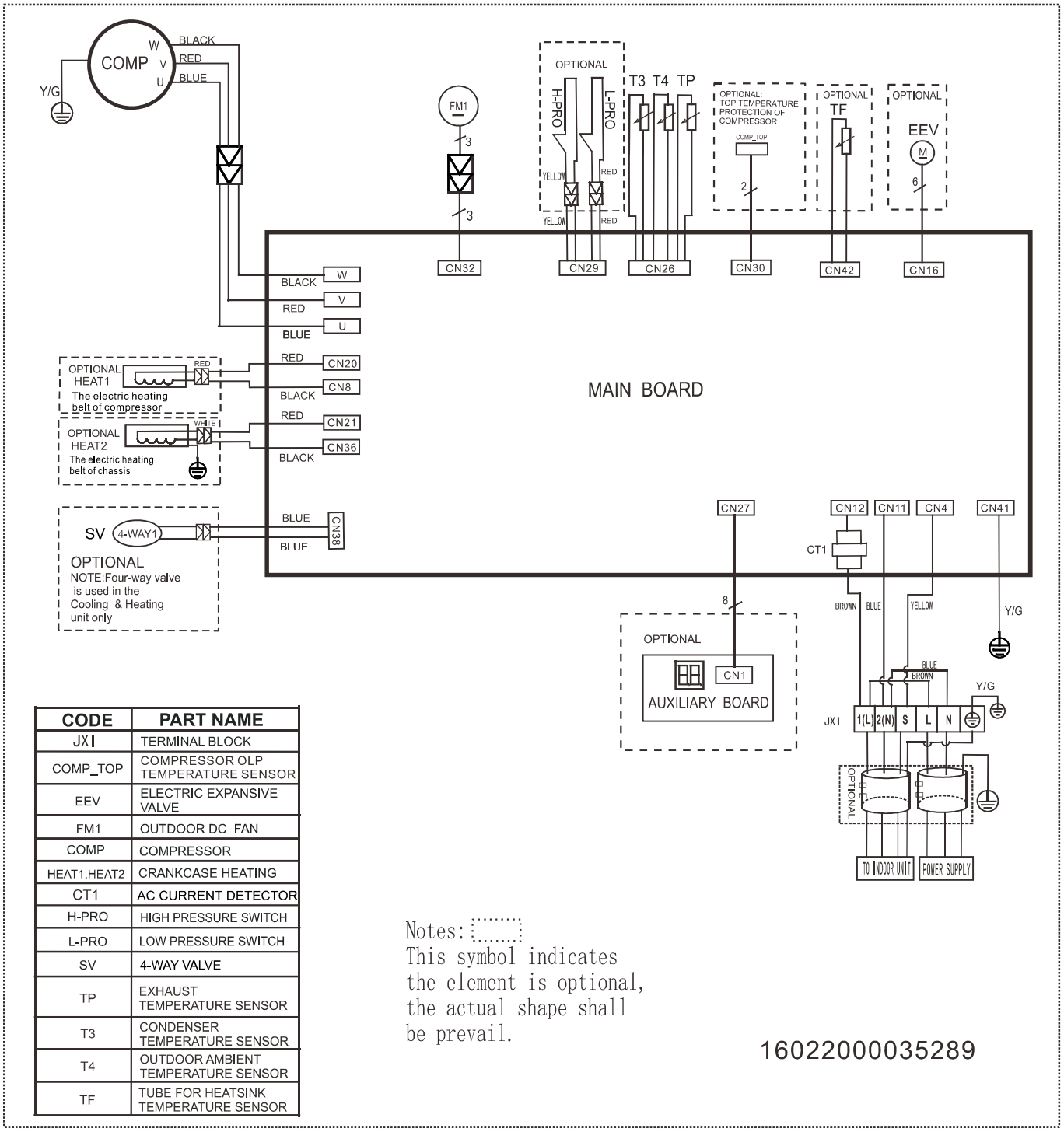
Outdoor unit wiring diagram: 16022000022493



Outdoor unit wiring diagram: 16022000020613



Outdoor unit wiring diagram: 16022000035289

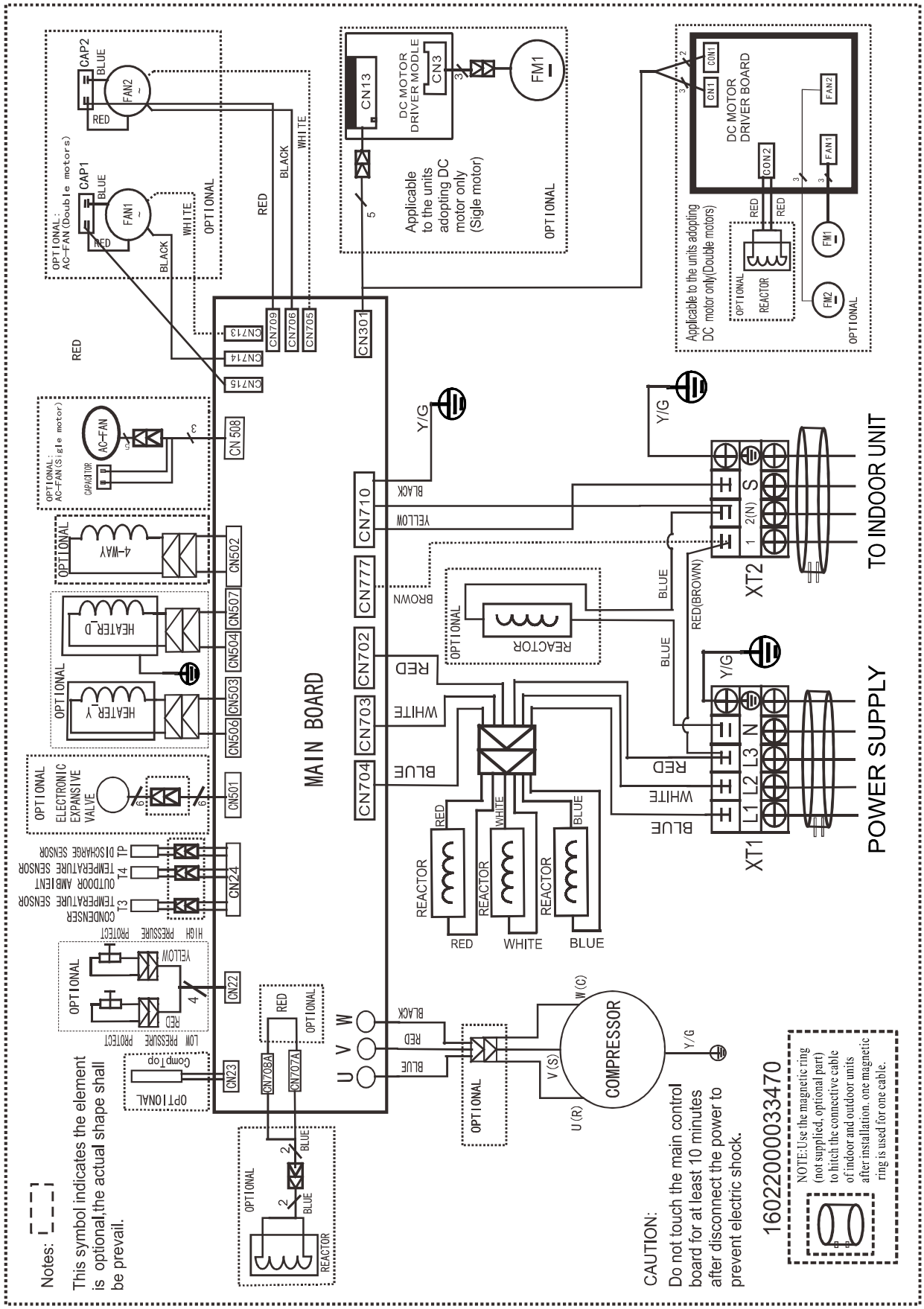



| CODE | PART NAME |
|---|---|
| JXI | TERMINAL BLOCK |
| COMP_TOP | COMPRESSOR OLP TEMPERATURE SENSOR |
| EEV | ELECTRIC EXPANSIVE VALVE |
| FM1 | OUTDOOR DC FAN |
| COMP | COMPRESSOR |
| HEAT1,HEAT2 | CRANKCASE HEATING |
| CT1 | AC CURRENT DETECTOR |
| H-PRO | HIGH PRESSURE SWITCH |
| L-PRO | LOW PRESSURE SWITCH |
| SV | 4-WAY VALVE |
| TP | EXHAUST TEMPERATURE SENSOR |
| T3 | CONDENSER TEMPERATURE SENSOR |
| T4 | OUTDOOR AMBIENT TEMPERATURE SENSOR |
| TF | TUBE FOR HEATSINK TEMPERATURE SENSOR |

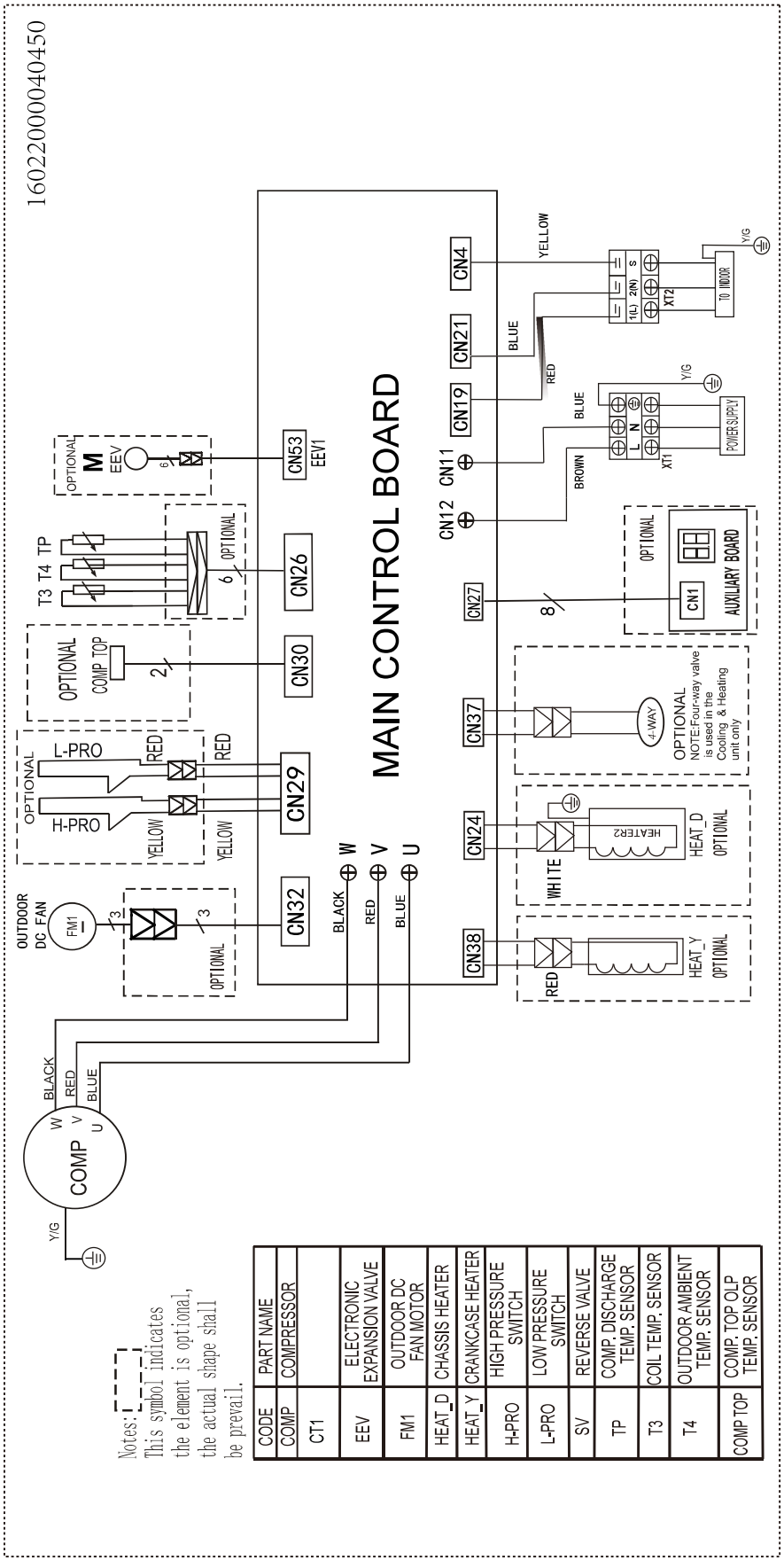
Notes:
This symbol indicates the element is optional, the actual shape shall be prevail.

16022000035289

Outdoor unit wiring diagram: 16022000033470

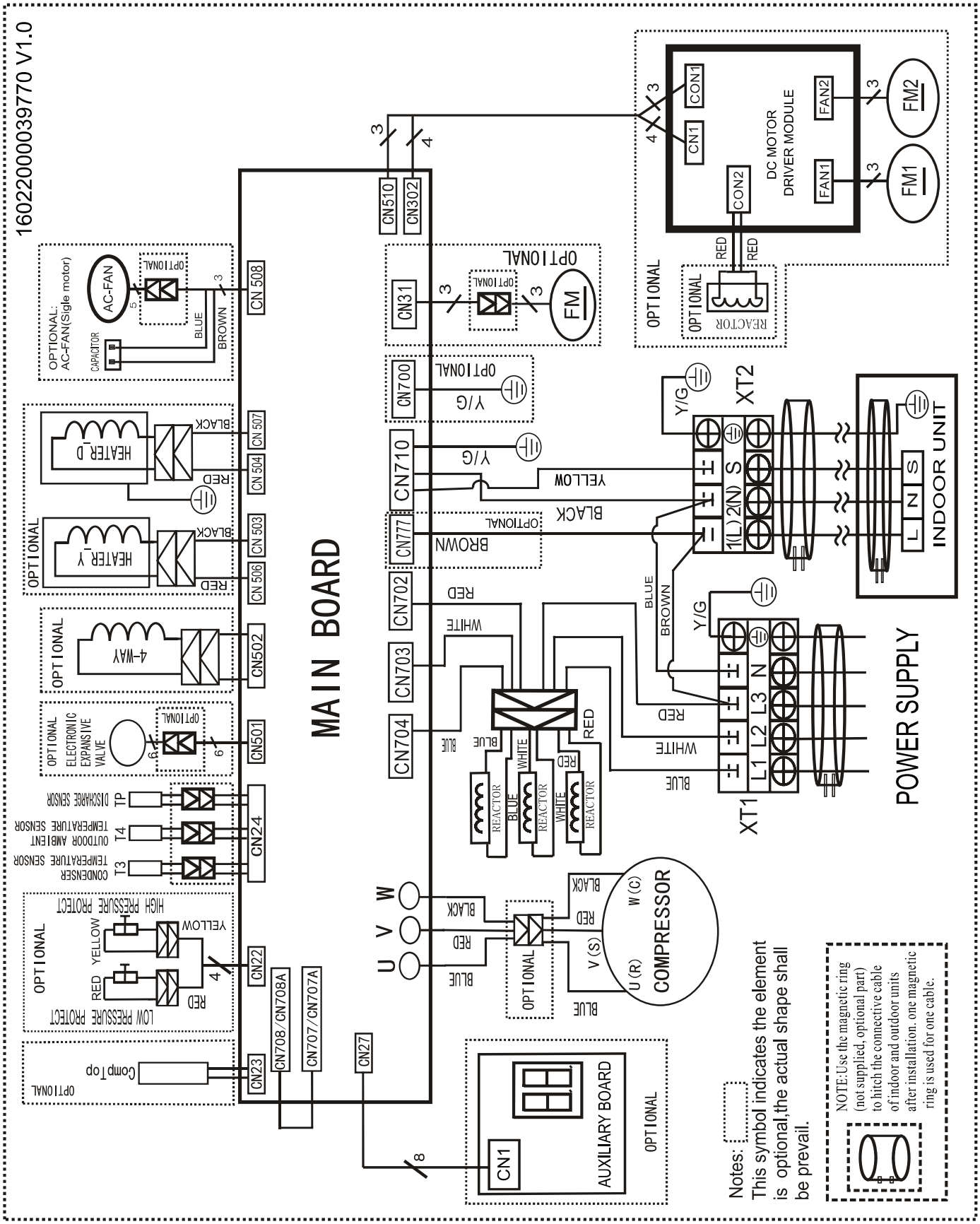


Outdoor unit wiring diagram:16022000040450

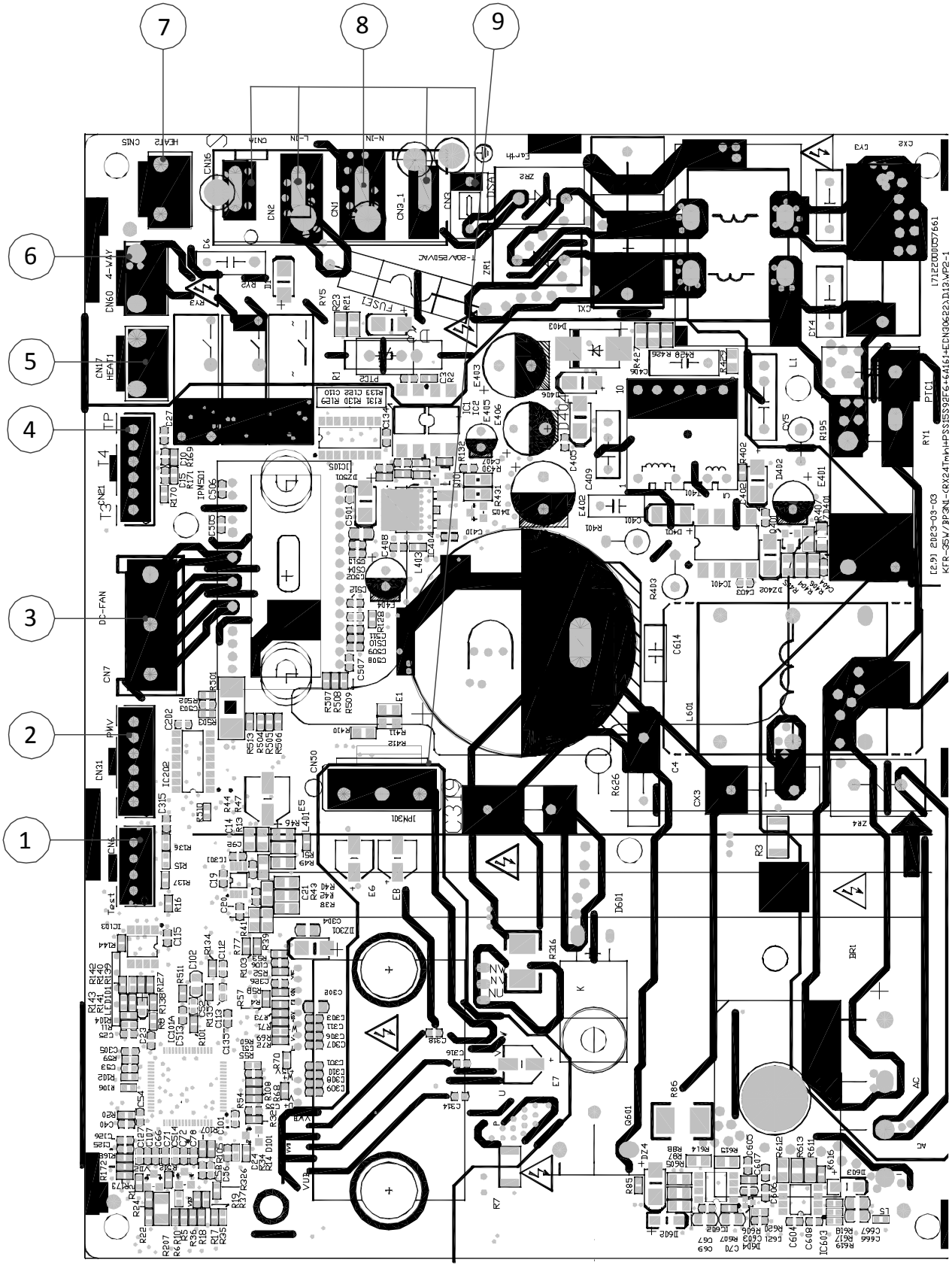



| CODE | PART NAME |
|---|---|
| COMP | COMPRESSOR |
| CT1 | |
| EEV | ELECTRONIC EXPANSION VALVE |
| FM1 | OUTDOOR DC FAN MOTOR |
| HEAT_D | CHASSIS HEATER |
| HEAT_Y | CRANKCASE HEATER |
| H-PRO | HIGH PRESSURE SWITCH |
| L-PRO | LOW PRESSURE SWITCH |
| SV | REVERSE VALVE |
| TP | COMP. DISCHARGE TEMP. SENSOR |
| T3 | COIL TEMP. SENSOR |
| T4 | OUTDOOR AMBIENT TEMP. SENSOR |
| COMP TOP | COMP. TOP OLP TEMP. SENSOR |

Outdoor unit wiring diagram:16022000039770



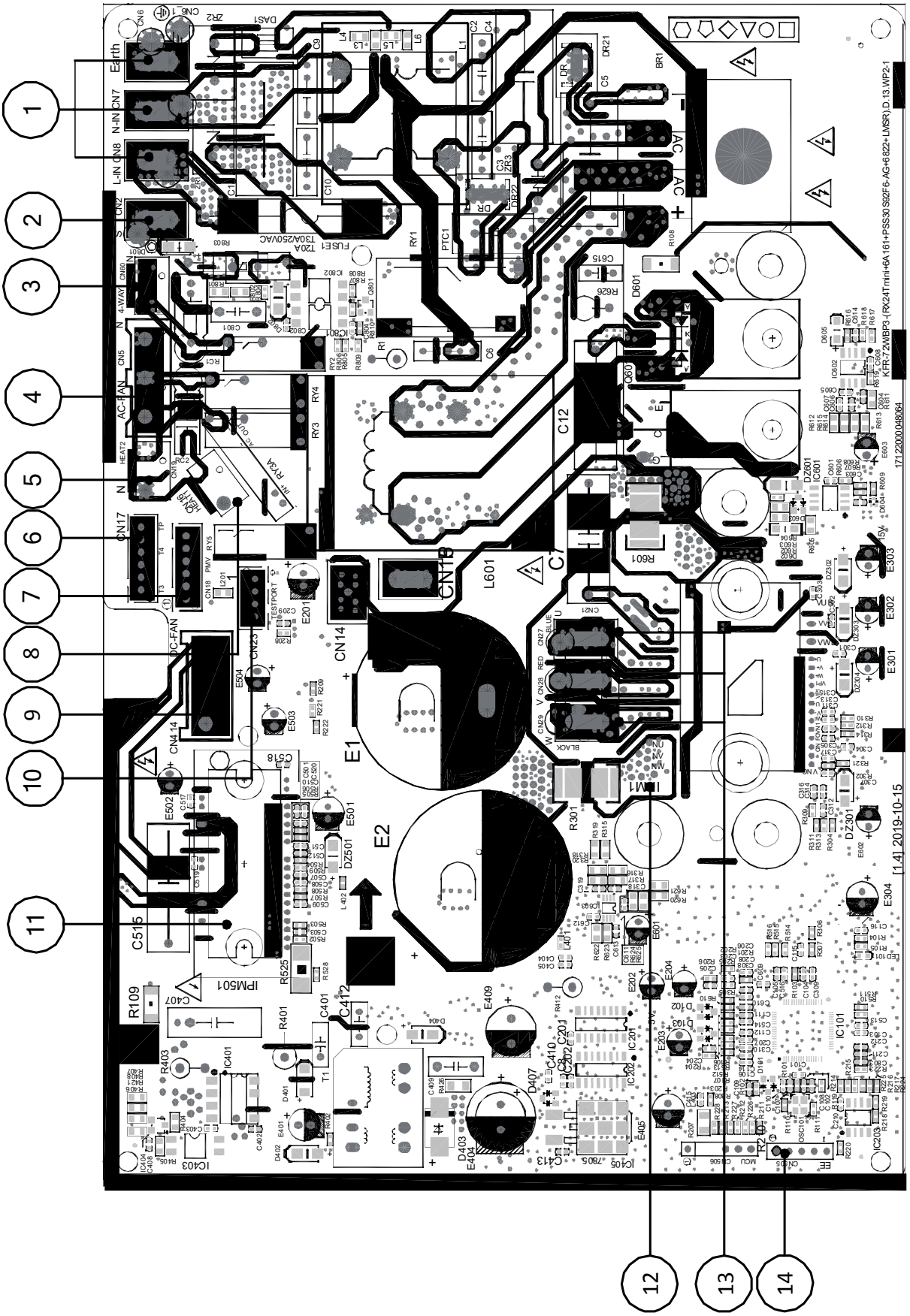
Outdoor unit printed circuit board diagram: 17122000057661



| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | TESTPORT | CN6 | used for testing |
| 2 | PMV | CN31 | connect to electric expansion valve (Output:0~2V DC) |
| 3 | DC-FAN | CN7 | connect to DC fan (Output: 0~310V AC). |
| 4 | TP T4 T3 | CN21 | connect to pipe temp. sensor T3, ambient temp. sensor T4, exhaust temp. sensor TP (Output: 0~5V DC) |
| 5 | HEAT1 | CN17 | connect to compressor heater (Output: 230V AC). |
| 6 | 4-WAY | CN60 | connect to 4 way valve (Output: 230V AC) |
| 7 | HEAT2 | CN15 | connect to chassis heater (Output: 230V AC) |
| 8 | CN1A | CN16 | S: connect to indoor unit communication |
| | | CN2 | L_in: connect to L-line (230V AC input) |
| | | CN1 | N_in: connect to N-line (230V AC input) |
| | | CN3 | Earth |
| 9 | CN50 | W | connect to compressor (Output: 0-310V AC) |
| | | V | |
| | | U | |

**Note: This section is for reference only. Please take practicality as standard.**

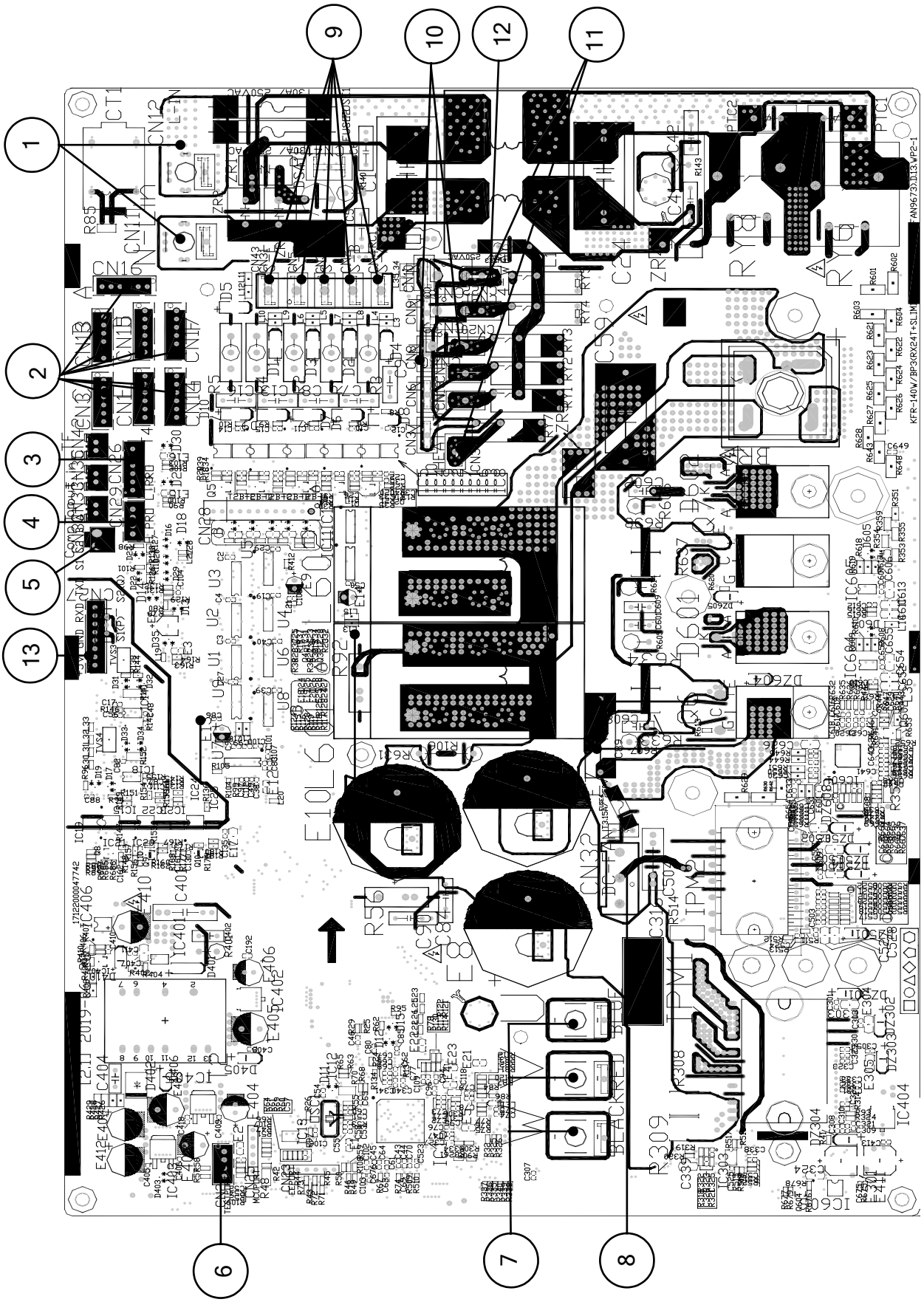
Outdoor unit printed circuit board diagram: 17122000048064& 17122000048066



| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | Power Supply | CN6 | Earth: connect to Ground |
| | | CN7 | N_in: connect to N-line (230V AC input) |
| | | CN8 | L_in: connect to L-line (230V AC input) |
| 2 | S | CN2 | S: connect to indoor unit communication(230V AC input) |
| 3 | 4-WAY | CN60 | connect to 4 way valve(Output: 230V AC) |
| 4 | AC-FAN | CN5 | connect to AC fan |
| 5 | HEAT2 | CN19 | connect to chassis heater(Output: 230V AC) |
| 6 | TP T4 T3 | CN17 | connect to pipe temp. sensor T3, ambient temp. sensor T4, exhaust temp. sensor TP(Output: 0~5V DC) |
| 7 | PMV | CN18 | connect to Electric Expansion Valve |
| 8 | HEAT1 | CN16 | connect to compressor heater(Output: 230V AC) |
| 9 | DC-FAN | CN414 | connect to DC fan(Output: 0~310V AC) |
| 10 | TESTPORT | CN23 | used for testing |
| 11 | FAN_IPM | IPM501 | IPM for DC fan |
| 12 | COMP_IPM | IPM1 | IPM for compressor |
| 13 | U | CN27 | connect to compressor(Output: 0~310V AC) |
| | V | CN28 | |
| | W | CN29 | |
| 14 | EE_PORT | CN505 | EEPROM programer port |

**Note: This section is for reference only. Please take practicality as standard.**

Outdoor unit printed circuit board diagram: 17122000047742

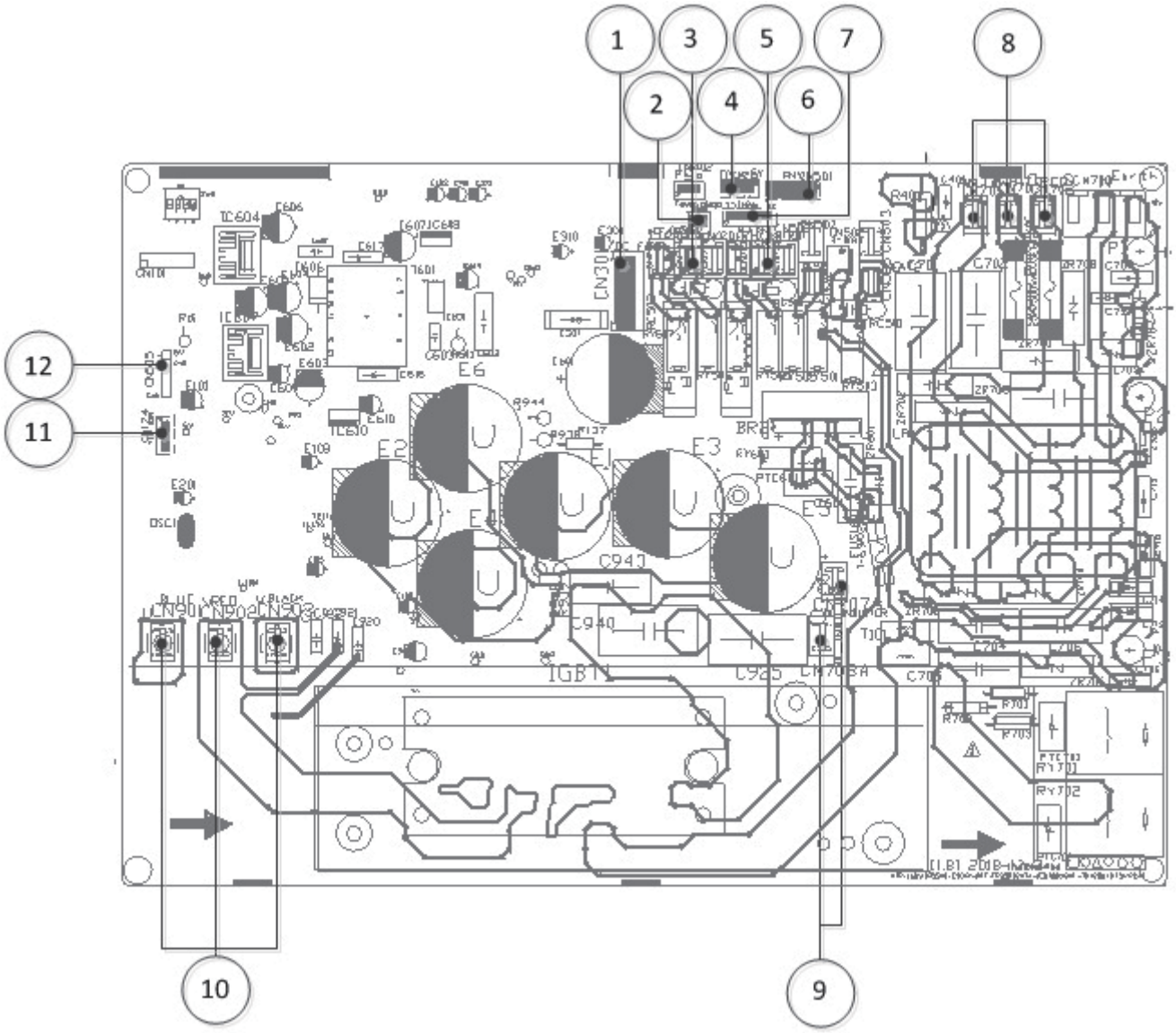


| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | Power Supply | CN11 | N_in: connect to N-line (208-230V AC input) |
| | | CN12 | L_in: connect to L-line (208-230V AC input) |
| 2 | EEV-A | CN16 | connect to electric expansion valve |
| | EEV-B | CN13 | |
| | EEV-C | CN3 | |
| | EEV-D | CN15 | |
| | EEV-E | CN1 | |
| | EEV-F | CN17 | |
| | EEV-G | CN14 | |
| 3 | T3 T4 TP | CN26 | connect to pipe temp. sensor T3, ambient temp. sensor T4, exhaust temp. sensor TP |
| 4 | H-PRO,L-RPO | CN29 | connect to high and low pressure swtich(pin1-pin2&pin3-pin4:5VDC pulse wave) |
| 5 | OLP TEMP. SENSOR | CN30 | connect to compressor top temp. sensor (5VDC Pulse wave) |
| 6 | TESTPORT | CN24 | used for testing |
| 7 | COMPRESSOR | U | connect to compressor |
| | | V | 0V AC (standby) |
| | | W | 10-200V AC (running) |
| 8 | DC-FAN | CN32 | connect to DC fan |
| 9 | S-E | CN31 | S: connect to indoor unit communication(pin1-pin2: 24VDC Pulse wave; pin2-pin3: 208-230V AC input) |
| | S-D | CN5 | |
| | S-C(mono) | CN34 | |
| | S-B | CN2 | |
| | S-A | CN4 | |

| No. | Name | CN# | Meaning |
|---|---|---|---|
| 10 | HEAT_D | CN8 | connect to the heater, 208-230V AC when is ON |
| | | CN20 | |
| 11 | HEAT_Y | CN21 | |
| | | CN36 | |
| 12 | 4-WAY | CN38 | connect to 4 way valve, 208-230V AC when is ON. |
| 13 | / | CN27 | connect to key board CN1 |

**Note: This section is for reference only. Please take practicality as standard.**

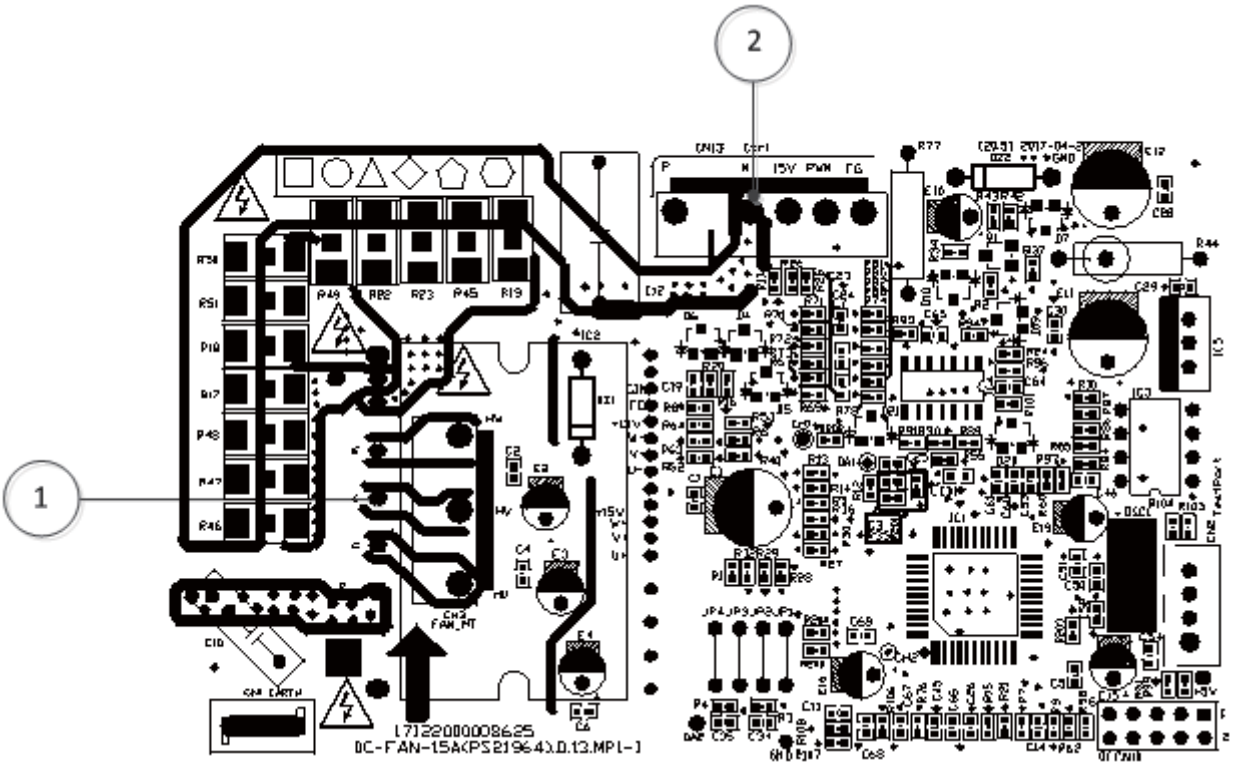
Outdoor unit printed circuit board diagram: 17122000041841



| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | CN301 | CN301 | Connect to DC fan motor |
| 2 | CN23 | CN23 | Connect to Comp Top |
| 3 | CN705 | CN705 | Connect to AC fan motor |
| | CN706 | CN706 | Connect to AC fan motor |
| | CN709 | CN709 | Connect to AC fan motor |
| 4 | CN22 | CN22 | Connect to high/low pressure protect |
| 5 | CN715 | CN715 | Connect to AC fan motor |
| | CN714 | CN714 | |
| | CN714 | CN714 | |
| 6 | CN501 | CN501 | Connect to electronic expansive valve |
| 7 | CN24 | CN24 | Connect to condenser temperature, outdoor ambient and discharge sensor |
| 8 | CN704 | CN704 | Power Supply (L1) |
| | CN703 | CN703 | Power Supply (L2) |
| | CN702 | CN702 | Power Supply (L3) |
| 9 | CN708A | CN708A | Connect to reactor |
| | CN707A | CN707A | |
| 10 | U | U | Connect to compressor |
| | V | V | |
| | W | W | |
| 11 | CN174 | CN174 | Test port |
| 12 | CN505 | CN505 | EEprom port |

**Note: This section is for reference only. Please take practicality as standard.**

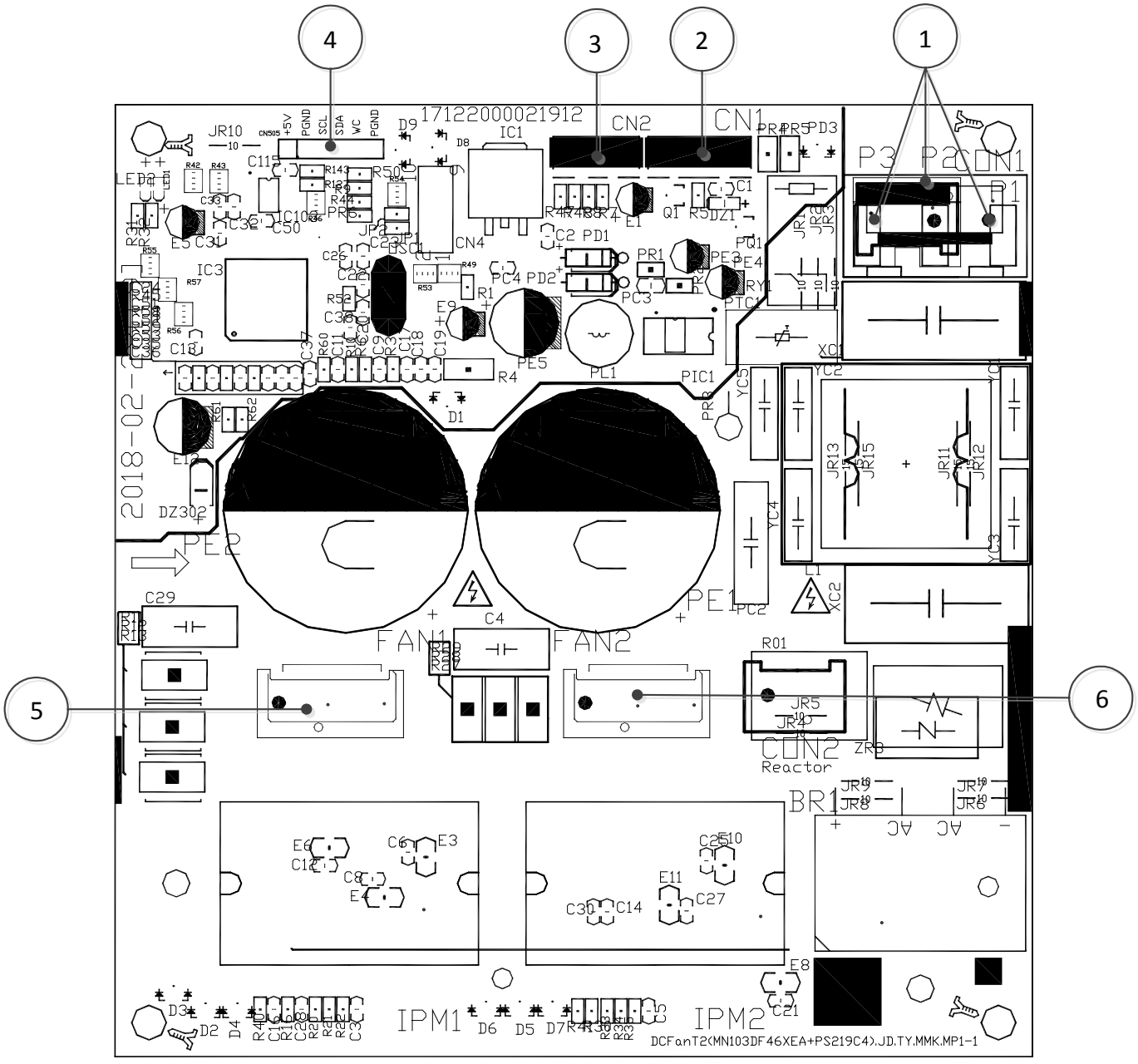
Outdoor unit IPM board diagram: 17122000008625



| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | U | CN3 | Connect to FM1 |
| | V | | |
| | W | | |
| 2 | CN54 | CN13 | Connect to CN301 |

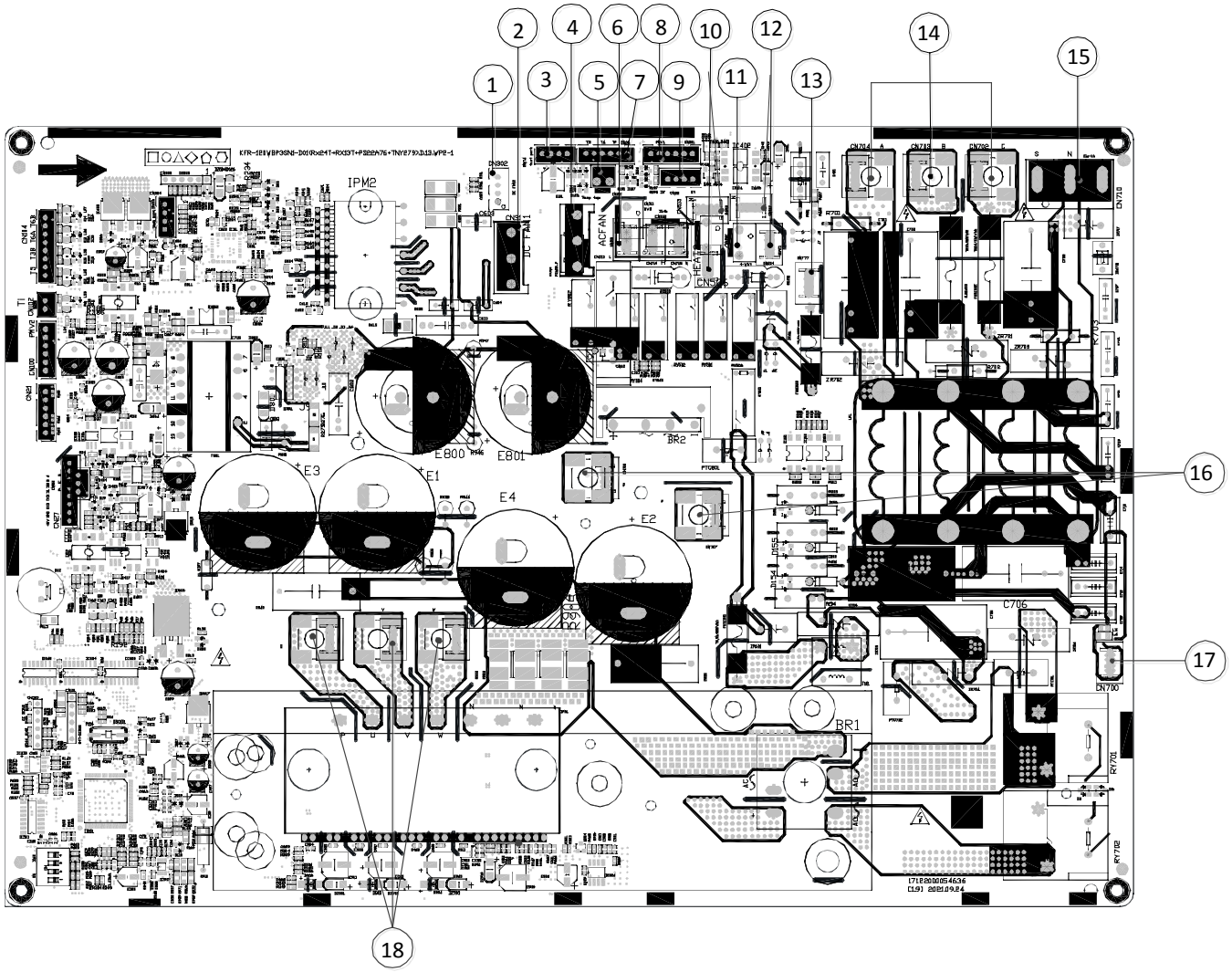
**Note: This section is for reference only. Please take practicality as standard.**

Outdoor unit DC motor driver board diagram: 17122000021912



| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | POWER | CON1 | Power supply 208-230V AC |
| | | P2 | |
| | | P3 | |
| 2 | CN1 | CN1 | connect to main board |
| 3 | TESTPORT | CN2 | used for testing |
| 4 | CN505 | CN505 | connect to PC communication |
| 5 | FAN1 | FAN1 | connect to DC fan1 |
| 6 | FAN2 | FAN2 | connect to DC fan2 |

Outdoor unit printed circuit board diagram: 17122000054636

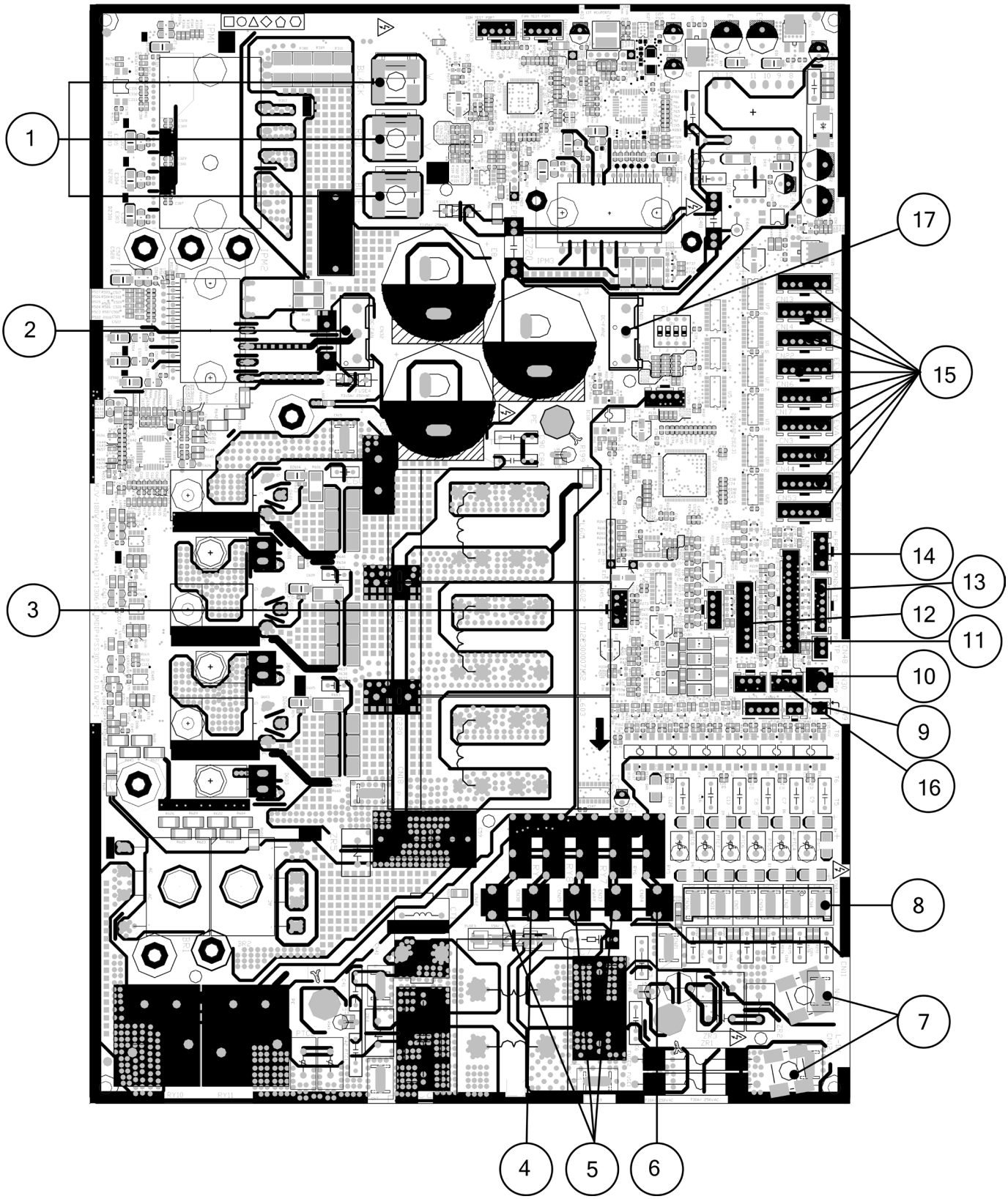


| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | DC FAN2 | CN302 | Connect to DC motor driver module(for double fan models) |
| 2 | DA FAN1 | CN31 | Connect to DC fan motor(for single fan models) |
| 3 | Test port | CN174 | used for testing |
| 4 | POWER_F | CN510 | Connect to DC motor driver module,208-230V AC(for double fan models) |
| 5 | Temp top | CN23 | Connect to Comp Top |
| 6 | AC FAN | CN508 | Connect to AC fan motor |
| 7 | CN24 | CN24 | connect to pipe temp. sensor T3, ambient temp. sensor T4, exhaust temp. sensor TP |
| 8 | PMV1 | CN501 | Connect to electronic expansion valve |
| 9 | DY/GY | CN22 | Connect to high/low pressure protect |
| 10 | HEAT2 | CN503 | connect to compressor heater, 208-230V AC when is ON |
| | | CN506 | |
| 11 | 4-WAY | CN502 | connect to 4 way valve, 208-230V AC when is ON. |
| 12 | HEAT1 | CN504 | connect to chassis heater, 208-230V AC when is ON |
| | | CN507 | |
| 13 | CN777 | CN777 | Power Supply (L3) |
| 14 | CN704 | CN704 | Power Supply (L1) |
| | CN703 | CN703 | Power Supply (L2) |
| | CN702 | CN702 | Power Supply (L3) |
| 15 | S | CN710 | S: connect to indoor unit communication |
| | 2(N) | | N_in: connect to N-line (208-230V AC input) |
| | Earth | | Earth: connect to Ground |

| No. | Name | CN# | Meaning |
|---|---|---|---|
| 16 | CN708 | CN708 | Connect to reactor |
| | CN707 | CN707 | |
| 17 | CN700 | CN700 | Earth: connect to Ground |
| 18 | U | U | Connect to compressor |
| | V | V | |
| | W | W | |

**Note: This section is for reference only. Please take practicality as standard.**

Outdoor unit printed circuit board diagram: 17122300007152



| No. | Name | CN# | Meaning |
|---|---|---|---|
| 1 | COMPRESSOR | W | connect to compressor(Output: 0~310V AC) |
| | | V | |
| | | U | |
| 2 | DC-FAN1 | CN32 | connect to DC fan(Output: 0~310V AC) |
| 3 | TESTPORT | CN45 | used for testing |
| 4 | HEAT_Y | CN38 | connect to compressor heater(Output: 230V AC) |
| 5 | 4-WAY | CN37 | connect to 4 way valve 1(Output: 230V AC) |
| | | CN25 | connect to 4 way valve 2(Output: 230V AC) |
| | | CN42 | connect to 4 way valve 3(Output: 230V AC) |
| 6 | HEAT_D | CN24 | connect to chassis heater(Output: 230V AC) |
| 7 | Power Supply | CN11 | N_in: connect to N-line (230V AC input) |
| | | CN12 | L_in: connect to L-line (230V AC input) |
| 8 | S-A | CN43 | S: connect to indoor unit communication(230V AC input) |
| | S-B | | |
| | S-C | | |
| | S-D | | |
| | S-E | | |
| | S-F | | |
| 9 | TBH-IN TBH-OUT T3B TF | CN9 | connect to cold plate inlet temp. sensor TBH-IN, cold plate outlet temp. sensor TBH-OUT, condenser coil middle temp. sensor T3B, refrigerant tube inlet temp. sensor TF |
| 10 | OLP TEMP. SENSOR | CN30 | connect to compressor top temp. sensor (Output: 0~5V DC) |
| 11 | T2B | CN28 | connect to evaporator coil outlet temperature sensor T2B |
| 12 | / | CN27 | connect to key board CN1 |
| 13 | T3 T4 TP | CN26 | connect to condenser coil temp. sensor T3, ambient temp. sensor T4, exhaust temp. sensor TP(Output: 0~5V DC) |
| 14 | H-PRO,L-RPO | CN29 | connect to high and low pressure switch(pin1-pin2&pin3-pin4:5VDC pulse wave) |

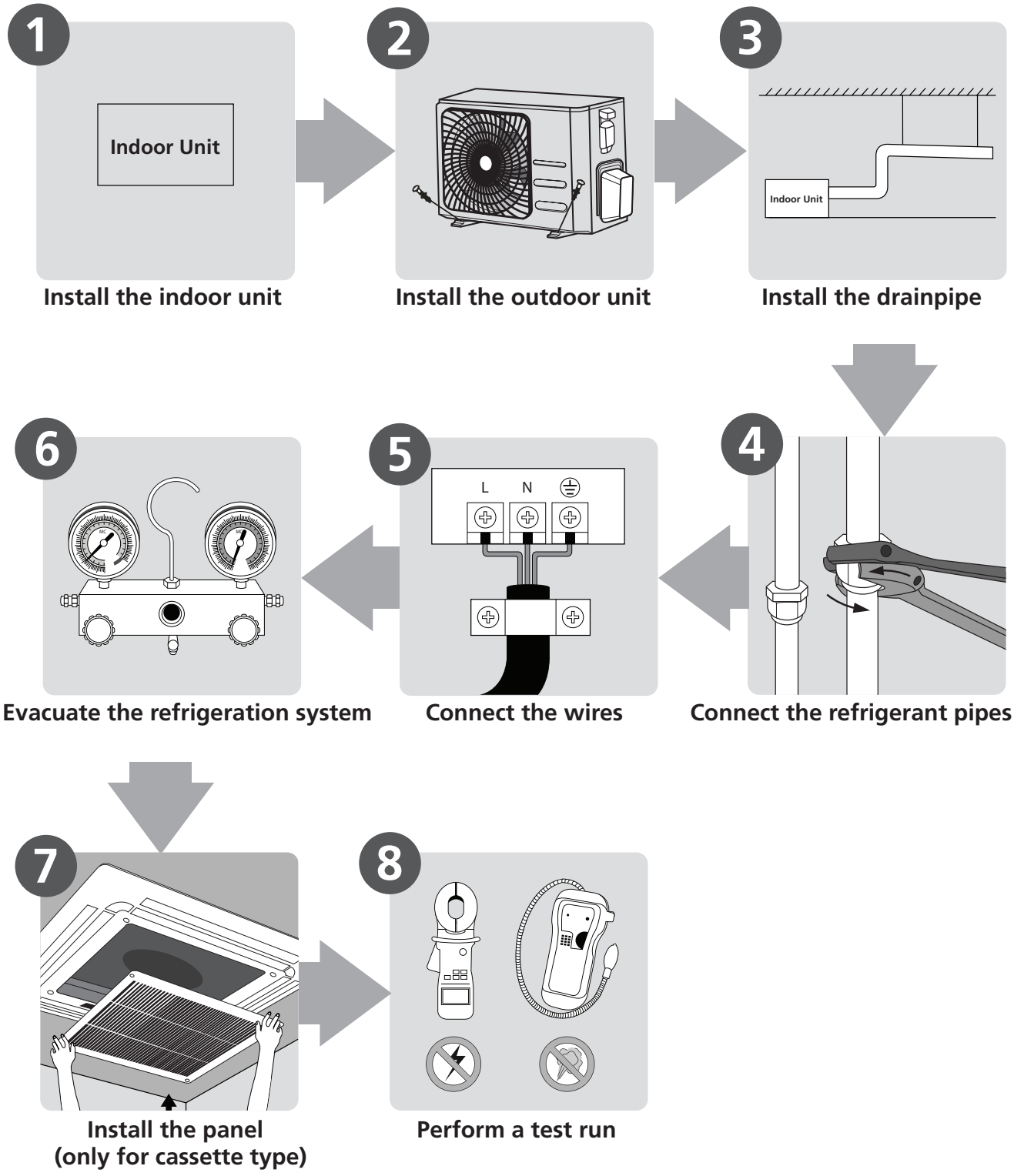
| No. | Name | CN# | Meaning |
|---|---|---|---|
| 15 | EEVA | CN17 | connect to electric expansion valve(Output: 0~12V DC) |
| | EEVB | CN16 | |
| | EEVC | CN22 | |
| | EEVD | CN14 | |
| | EEVE | CN13 | |
| | EEVF | CN1 | |
| | EEV1 | CN53 | |
| | EEV2 | CN44 | |
| | EEV3 | CN3 | |
| 16 | H_YL | CN49 | connect to high pressure sensor |
| 17 | DC-FAN2 | CN10 | connect to DC fan(Output: 0~310V AC) |

**Note: This section is for reference only. Please take practicality as standard.**

# Installation

## Contents

## 1. Installation Overview



# 2. Location selection

## 2.1 Unit location selection can refer to installation manual.

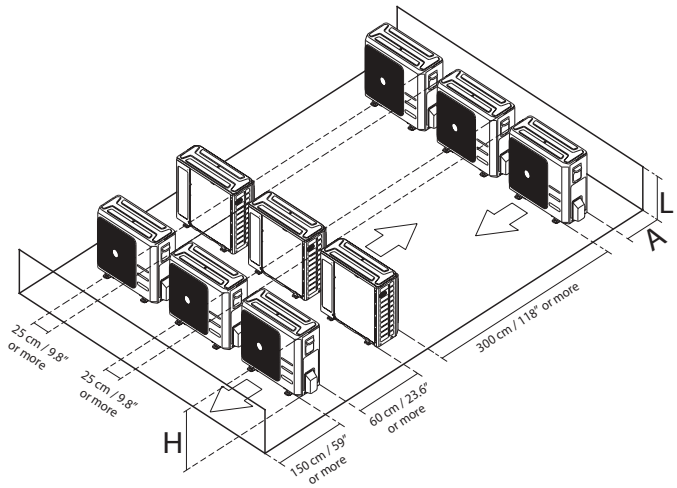
## 2.2 DO NOT install the unit in the following locations:

- Where oil drilling or fracking is taking place.
- Coastal areas with high salt content in the air.
- Areas with caustic gases in the air, such as near hot springs.
- Areas with power fluctuations, such as factories.
- Enclosed spaces, such as cabinets.
- Areas with strong electromagnetic waves.
- Areas that store flammable materials or gas.
- Rooms with high humidity, such as bathrooms or laundry rooms.
- If possible, DO NOT install the unit where it is exposed to direct sunlight.

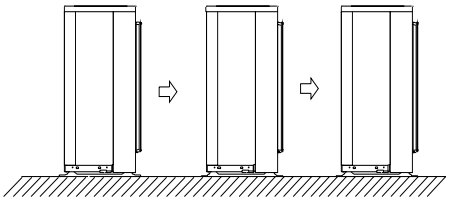
## 2.3 Rows of series installation

The relations between H, A and L are as follows.

| | L | A |
|---|---|---|
| L ≤ H | L ≤ 1/2H | 25 cm / 9.8" or more |
| | 1/2H < L ≤ H | 30 cm / 11.8" or more |
| L > H | Can not be installed | |

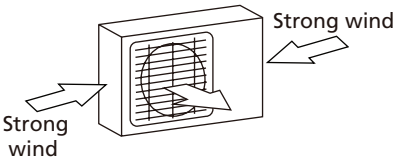


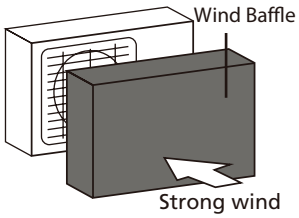

DO NOT install the rows of series like following figure.



## 2.4 If the unit is exposed to heavy wind:

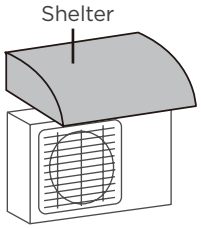
- Install unit so that air outlet fan is at a 90° angle to the direction of the wind. If needed, build a barrier in front of the unit to protect it from extremely heavy winds.




## 2.5 If the unit is frequently exposed to heavy rain or snow:

Build a shelter above the unit to protect it from the rain or snow. Be careful not to obstruct air flow around the unit.

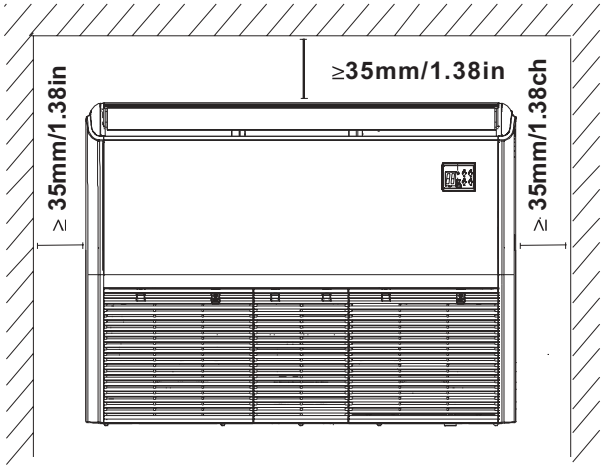


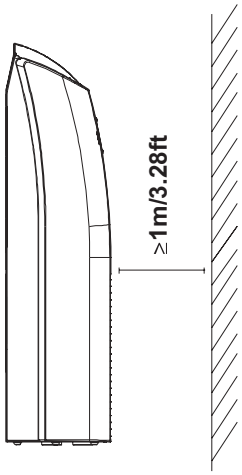

## 2.6 If the unit is frequently exposed to salty air (seaside):

Use outdoor unit that is specially designed to resist corrosion.

# 3. Indoor Unit Installation(Floor Ceiling Type)

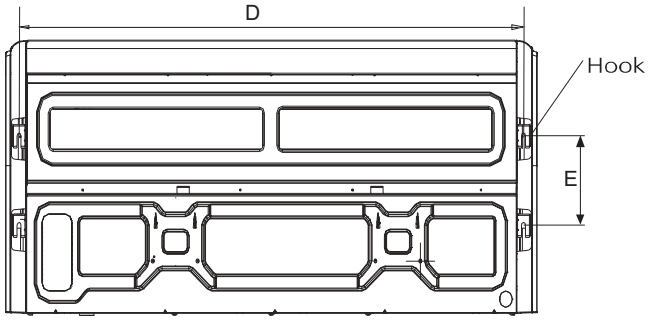
## 3.1 Service space for indoor unit



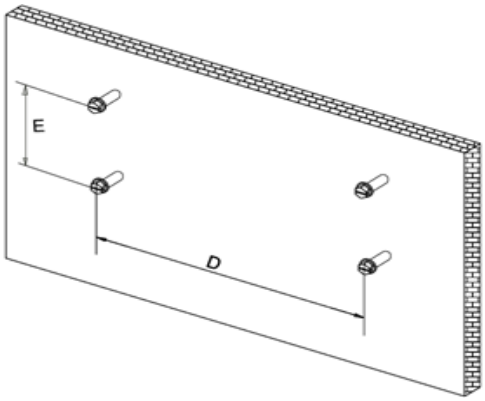

## 3.2 Bolt Pitch

Ceiling Installation



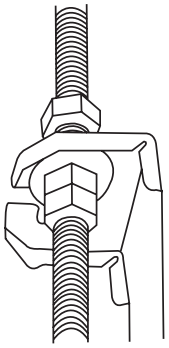

| Capacity(kBtu/h) | Length of D (mm/inch) | Length of E (mm/inch) |
|---|---|---|
| 18~24 | 983/38.7 | 220/8.7 |
| 36~60 | 1565/61.6 | 220/8.7 |

Wall-Mounted Installation

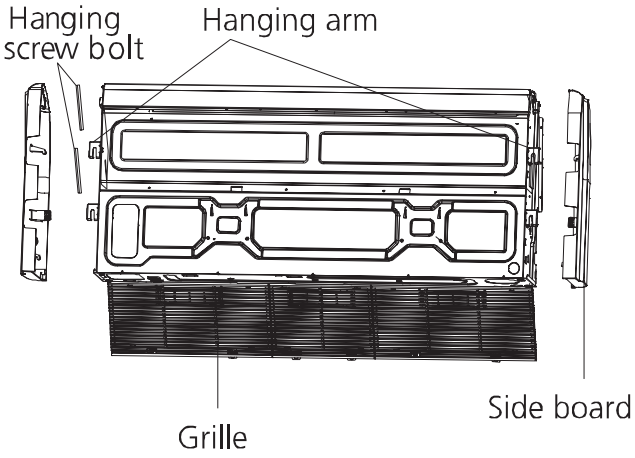



## 3.3 Hang Indoor Unit

1. The installation of hanging screw bolts.
   - Cut off the roof beam.
   - Strengthen the area at which the cut was made and consolidate the roof beam.
2. After the selection of the installation location, position the refrigerant pipes, drain pipes, and indoor and outdoor wires to the connection points before mounting the machine.
3. Drill 4 holes 10cm (4") deep at the ceiling hook positions in the internal ceiling. Be sure to hold the drill at a 90° angle to the ceiling.
4. Secure the bolt using the included washers and nuts.
5. Install the four suspension bolts.
6. Mount the indoor unit. You will need two people to lift and secure it. Insert suspension bolts into the unit's hanging holes. Fasten them using the included washers and nuts

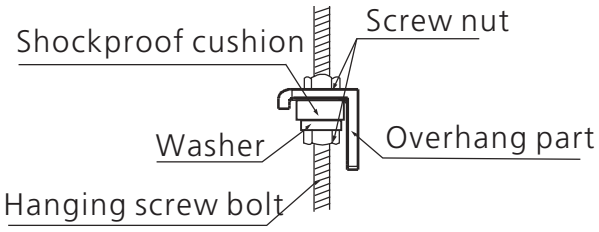


7. Remove the side board and the grille.



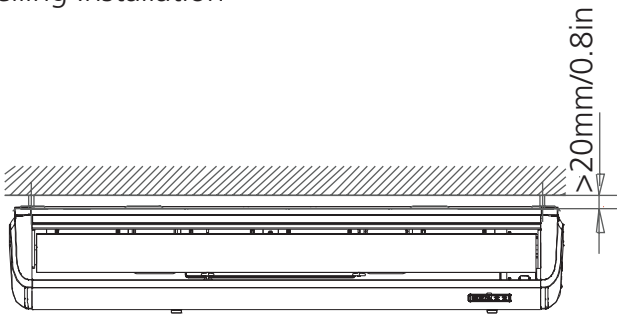

8. Mount the indoor unit onto the hanging screw bolts with a block.

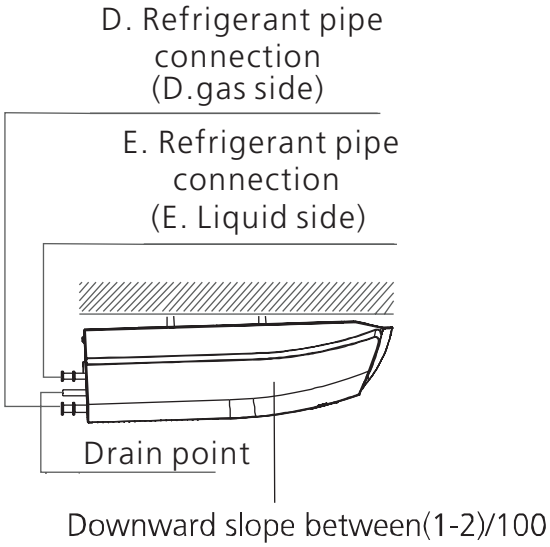
Position the indoor unit on a flat level by using a level to prevent leaks.



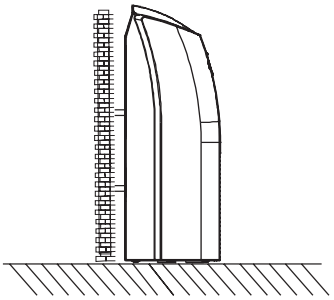

Note: Confirm the minimum drain tilt is 1/100 or more.

Ceiling Installation



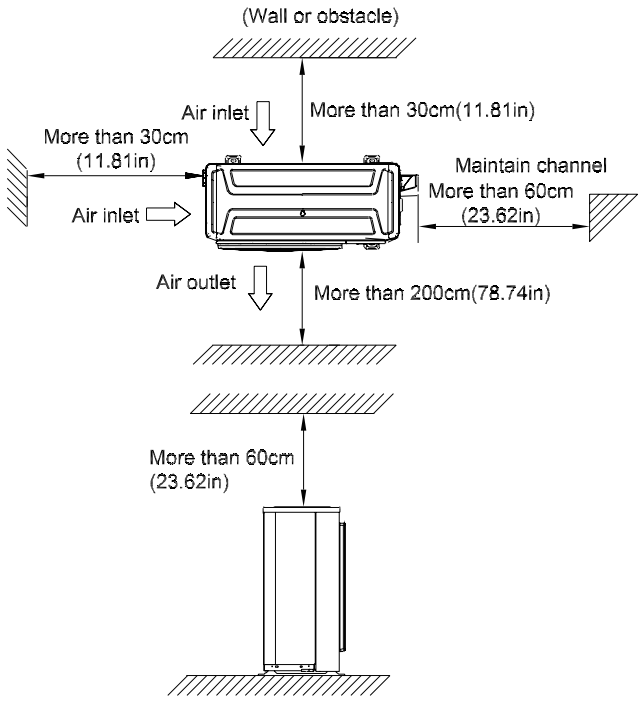




Wall-Mounted Installation



# 4. Outdoor unit installation

## 4.1 Service space for outdoor unit




## 4.2 Install drain joint(Heat pump unit only)

Before bolting the outdoor unit in place, you must install the drain joint at the bottom of the unit.

Note that there are two different types of drain joints depending on the type of outdoor unit.

If the drain joint comes with a rubber seal(see Fig. A ), do the following:

1. Fit the rubber seal on the end of the drain joint that will connect to the outdoor unit.

2. Insert the drain joint into the hole in the base pan of the unit.

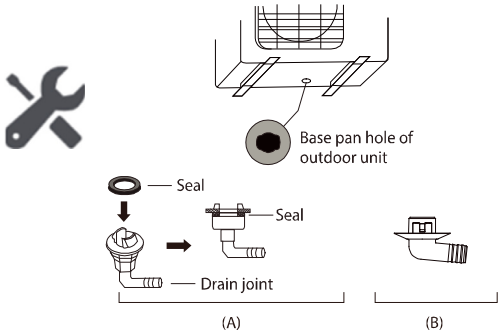
3. Rotate the drain joint 90° until it clicks in place facing the front of the unit. **For some panel plates, you need to use tool.**

4. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.

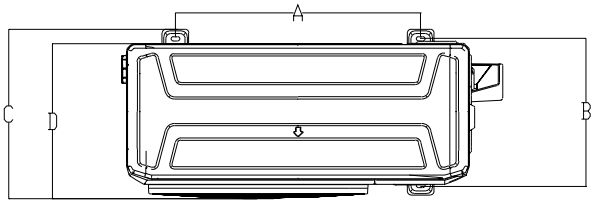
If the drain joint doesn't come with a rubber seal (see Fig. B ), do the following:

1. Insert the drain joint into the hole in the base pan of the unit. The drain joint will click in place.

2. Connect a drain hose extension (not included) to the drain joint to redirect water from the unit during heating mode.



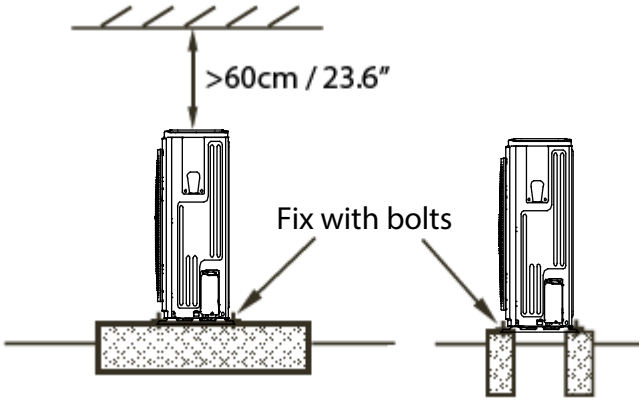

## 4.3 Bolt pitch




| Panel Plate | Unit | D | A | B | C |
|---|---|---|---|---|---|
| X2 | mm | 303 | 452 | 286 | 314 |
| | inch | 11.93 | 17.80 | 11.26 | 12.36 |
| X3 | mm | 330 | 511 | 317 | 346 |
| | inch | 12.99 | 20.12 | 12.48 | 13.62 |
| X4 | mm | 342 | 663 | 354 | 394 |
| | inch | 13.46 | 26.1 | 13.94 | 15.5 |
| X6 | mm | 375 | 615 | 397 | 440 |
| | inch | 14.76 | 24.2 | 15.6 | 17.3 |
| D30 | mm | 410 | 673 | 403 | 455 |
| | inch | 16.14 | 26.50 | 15.87 | 17.9 |
| E30 | mm | 415 | 634 | 404 | 457 |
| | inch | 16.34 | 24.96 | 15.9 | 17.99 |
| 590 | mm | 350 | 590 | 378 | 400 |
| | inch | 13.78 | 23.23 | 14.88 | 15.75 |

## 4.4 Install Outdoor Unit

### Fix the outdoor unit with anchor bolts(M10)




### Caution

Since the gravity center of the unit is not at its physical center, so please be careful when lifting it with a sling.

Never hold the inlet of the outdoor unit to prevent it from deforming.

Do not touch the fan with hands or other objects.

Do not lean it more than 45, and do not lay it sidelong.

Make concrete foundation according to the specifications of the outdoor units.

Fasten the feet of this unit with bolts firmly to prevent it from collapsing in case of earthquake or strong wind.

# 5. Drainage Pipe Installation

Install the drainage pipe as shown below and take measures against condensation. Improperly installation could lead to leakage and eventually wet furniture and belongings.

## 5.1 Installation principle

- Ensure at least 1/100 slope of the drainage pipe
- Adopt suitable pipe diameter
- Adopt nearby condensate water discharge

## 5.2 Key points of drainage water pipe installation

1. Considering the pipeline route and elevation.
   - Before installing condensate water pipeline, determine its route and elevation to avoid intersection with other pipelines and ensure slope is straight.
2. Drainage pipe selection
   - The drainage pipe diameter shall not small than the drain hose of indoor unit
   - According to the water flowrate and drainage pipe slope to choose the suitable pipe, the water flowrate is decided by the capacity of indoor unit.

**Relationship between water flowrate and capacity of indoor unit**

| Capacity (kBtu/h) | Water flowrate (l/h) |
|---|---|
| 12 | 2.4 |
| 18 | 4 |
| 24 | 6 |
| 30 | 7 |
| 36 | 8 |
| 42 | 10 |
| 48 | 12 |
| 60 | 14 |

According to the above table to calculate the total water flowrate for the confluence pipe selection.

**For horizontal drainage pipe** (The following table is for reference)

| PVC pipe | Reference value of inner diameter of pipe (mm) | Allowable maximum water flowrate (l/h) | | Remark |
|---|---|---|---|---|
| | | Slope 1/50 | Slope 1/100 | |
| PVC25 | 20 | 39 | 27 | For branch pipe |
| PVC32 | 25 | 70 | 50 | |
| PVC40 | 31 | 125 | 88 | Could be used for confluence pipe |
| PVC50 | 40 | 247 | 175 | |
| PVC63 | 51 | 473 | 334 | |

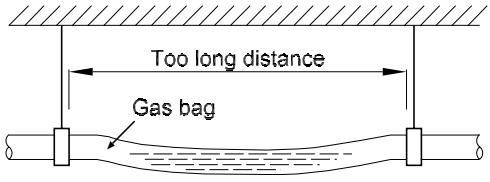
Attention: Adopt PVC40 or bigger pipe to be the main pipe.

**For Vertical drainage pipe** (The following table is for reference)

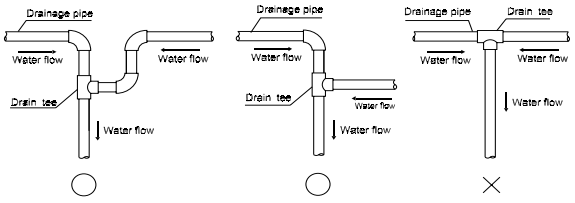
| PVC pipe | Reference value of inner diameter of pipe (mm) | Allowable maximum water flowrate (l/h) | Remark |
|---|---|---|---|
| PVC25 | 20 | 220 | For branch pipe |
| PVC32 | 25 | 410 | |
| PVC40 | 31 | 730 | Could be used for confluence pipe |
| PVC50 | 40 | 1440 | |
| PVC63 | 51 | 2760 | |
| PVC75 | 67 | 5710 | |
| PVC90 | 77 | 8280 | |

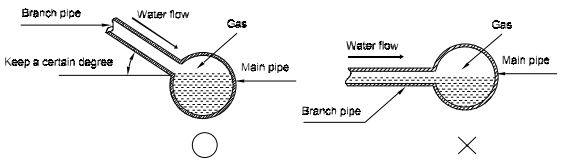
Attention: Adopt PVC40 or bigger pipe to be the main pipe.

3. Individual design of drainage pipe system
   - The drainage pipe of air conditioner shall be installed separately with other sewage pipe, rainwater pipe and drainage pipe in building.
   - The drainage pipe of the indoor unit with water pump should be apart from the one without water pump.
4. Supporter gap of drainage pipe
   - In general, the supporter gap of the drainage pipe horizontal pipe and vertical pipe is respectively 1m~1.5m and 1.5m~2.0m.
   - Each vertical pipe shall be equipped with not less than two hangers.
   - Overlarge hanger gap for horizontal pipe shall create bending, thus leading to air block.




5. The horizontal pipe layout should avoid converse flow or bad flow

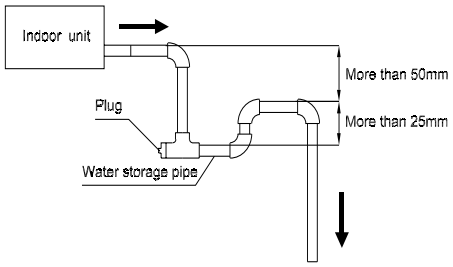





- The correct installation will not cause converse water flow and the slope of the branch pipes can be adjusted freely
- The false installation will cause converse water flow and the slope of the branch pipe can not be adjusted.

6. Water storage pipe setting

- If the indoor unit has high extra static pressure and without water pump to elevate the condensate water, such as high extra static pressure duct unit , the water storage pipe should be set to avoid converse flow or blow water phenomena.

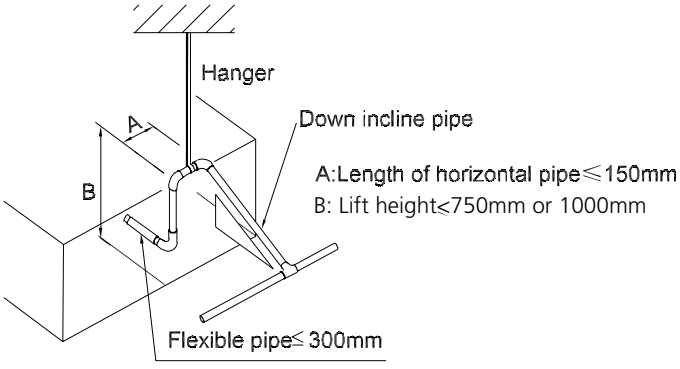



7. Lifting pipe setting of indoor unit with water pump

- The length of lifting pipe should not exceed 750mm/29.5in or 1m/39.4in(for new 4-way cassette);

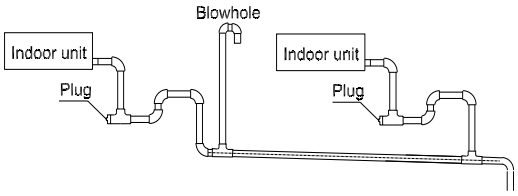
The drainage pipe should be set down inclined after the lifting pipe immediately to avoid wrong operation of water level switch.

- Refer the following picture for installation reference.




8. Blowhole setting

- For the concentrated drainage pipe system, there should design a blowhole at the highest point of main pipe to ensure the condensate water discharge smoothly.
- The air outlet shall face down to prevent dirt entering pipe.
- Each indoor unit of the system should be installed it.
- The installation should be considering the convenience for future cleaning.




9. The end of drainage pipe shall not contact with ground directly.

## 5.3 Insulation work of drainage pipe

**Refer the introduction to the insulation engineering parts.**

# 6. Refrigerant Pipe Installation

## 6.1 Recommended copper pipe thickness

| Pipe Diameter | Thickness(mm) |
|---|---|
| 1/4" (6.35) | 0.6 |
| 3/8" (9.52) | 0.7 |
| 1/2" (12.7) | 0.75 |
| 5/8" (15.9) | 0.75 |
| 3/4" (19) | 0.8 |
| 7/8" (22) | 1 |

## 6.2 Maximum length and drop height

Ensure that the length of the refrigerant pipe, the number of bends, and the drop height between the indoor and outdoor units meets the requirements shown in the following table.

For North America, Australia and Europe 3D Inverter models:

| Capacity(kBtu/h) | Max. Length (m/ft) | Max. Elevation (m/ft) |
|---|---|---|
| <15 | 25/82 | 10/32.8 |
| 15-23 | 30/98.4 | 20/65.6 |
| 24~35 | 50/164 | 25/82 |
| 36~60 | 75/246.06 | 30/98.4 |

For other models:

| Capacity(kBtu/h) | Max. Length (m/ft) | Max. Elevation (m/ft) |
|---|---|---|
| 12 | 15/49 | 8/26 |
| 18-24 | 25/82 | 15/49 |
| 30-36 | 30/98.4 | 20/65.6 |
| 42~60 | 50/164 | 30/98.4 |

Caution:

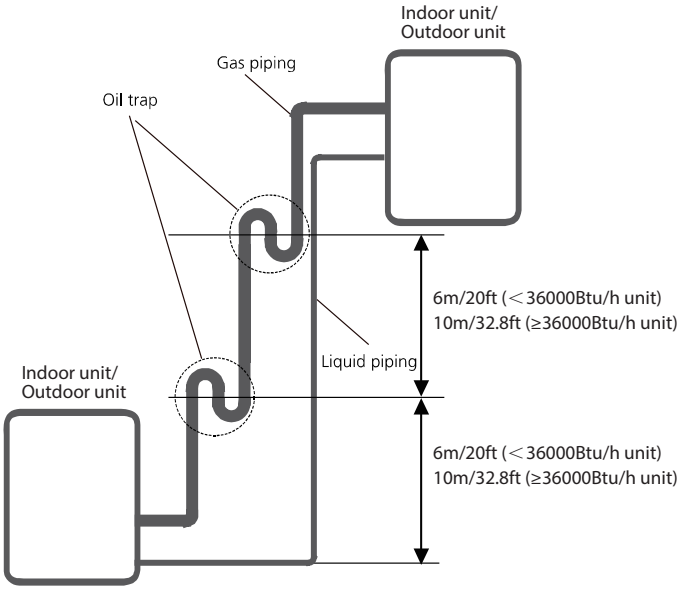
1. The capacity test is based on the standard length and the maximum permissive length is based on the system reliability.

2. Oil traps

-If oil flows back into the outdoor unit's compressor, this might cause liquid compression or deterioration of oil return. Oil traps in the rising gas piping can prevent this.

-An oil trap should be installed every 6m(20ft) of vertical suction line riser (<36000Btu/h unit).

-An oil trap should be installed every 10m(32.8ft) of vertical suction line riser (≥36000Btu/h unit).



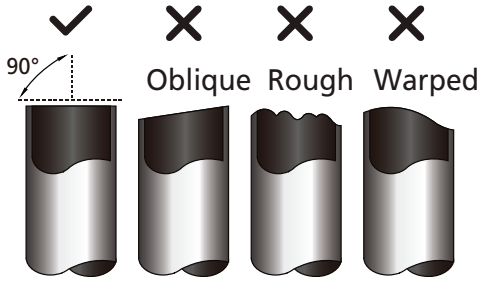

## 6.3 The procedure of connecting pipes

1. Choose the pipe size according to the specification table.

2. Confirm the cross way of the pipes.

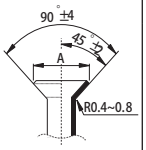
3. Measure the necessary pipe length.

4. Cut the selected pipe with pipe cutter
   - Make the section flat and smooth.




5. Insulate the copper pipe
   - Before test operation, the joint parts should not be heat insulated.

6. Flare the pipe
   - Insert a flare nut into the pipe before flaring the pipe
   - According to the following table to flare the pipe.

| Pipe diameter (inch(mm)) | Flare dimension A (mm/inch) | | Flare shape |
|---|---|---|---|
| | Min | Max | |
| 1/4" (6.35) | 8.4/0.33 | 8.7/0.34 |  |
| 3/8" (9.52) | 13.2/0.52 | 13.5/0.53 | |
| 1/2" (12.7) | 16.2/0.64 | 16.5/0.65 | |
| 5/8" (15.9) | 19.2/0.76 | 19.7/0.78 | |
| 3/4" (19) | 23.2/0.91 | 23.7/0.93 | |
| 7/8" (22) | 26.4/1.04 | 26.9/1.06 | |



- After flared the pipe, the opening part must be seal by end cover or adhesive tape to avoid duct or exogenous impurity come into the pipe.

7. Drill holes if the pipes need to pass the wall.

8. According to the field condition to bend the pipes so that it can pass the wall smoothly.

9. Bind and wrap the wire together with the insulated pipe if necessary.

10. Set the wall conduit

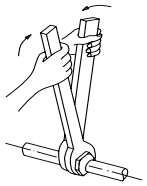
11. Set the supporter for the pipe.

12. Locate the pipe and fix it by supporter

- For horizontal refrigerant pipe, the distance between supporters should not be exceed 1m.
- For vertical refrigerant pipe, the distance between supporters should not be exceed 1.5m.

13. Connect the pipe to indoor unit and outdoor unit by using two spanners.

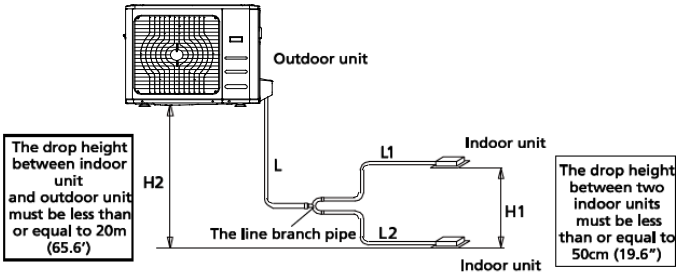
- Be sure to use two spanners and proper torque to fasten the nut, too large torque will damage the bellmouthing, and too small torque may cause leakage. Refer the following table for different pipe connection.

| Pipe Diameter | Torque N.m(lb.ft) | Sketch map |
|---|---|---|
| 1/4" (6.35) | 18~20 (13.3~14.8) |  |
| 3/8" (9.52) | 32~39 (23.6~28.8) | |
| 1/2" (12.7) | 49~59 (36.1~43.5) | |
| 5/8" (15.9) | 57~71 (42~52.4) | |
| 3/4" (19) | 67~101 (49.4~74.5) | |
| 7/8" (22) | 85-110 (62.7-81.1) | |

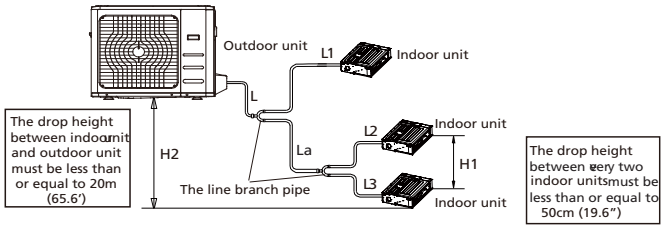
## 6.4 Refrigerant Piping with Twins/Triple/ Double Twins Indoor Units

When installing multiple indoor units with a single outdoor unit, ensure that the length of the refrigerant pipe and the drop height between the indoor and outdoor units meet the requirements illustrated in the following diagram:

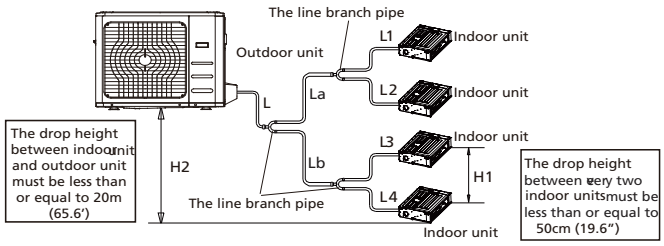
Twins:




Triple:




Double-Twins:




other types:

| Permitted length(Unit:m.) | | | | |
|---|---|---|---|---|
| Piping length | Total piping length | 12k+12k | 25 | L+Max (L1, L2) |
| | | 18k+18k | 30 | |
| | | 24k+24k 30k+30k | 50 | |
| | (farthest distance from the line pipe branch) | 15 | | L1, L2 |
| | (farthest distance between L1 and L2) | 10 | | L1-L2 |
| Drop height | Drop height between indoor and outdoor unit | 20 | | H2 |
| | Drop height between two indoor units | 0.5 | | H1 |

A7 Duct&New compact Cassette type(A4):

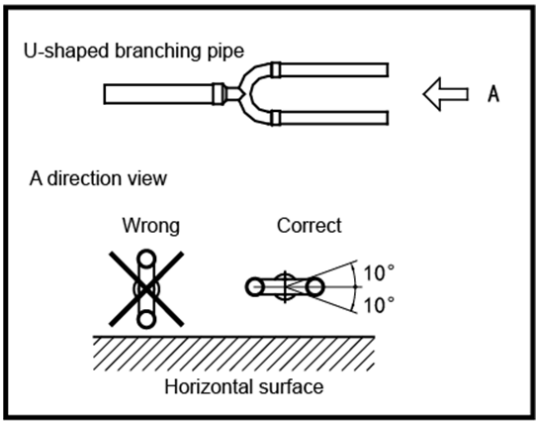
| Permitted length(Unit:m) | | | | | |
|---|---|---|---|---|---|
| Piping length | Twins | Total piping length | 9k+9k A4 | 30 | L+L1+ L2 |
| | | | 9k+9k A7 | 50 | |
| | | | 12k+12k | 50 | |
| | | | 18k+18k | 75 | |
| | | | 24k+24k<br>30k+30k | | |
| | | Farthest distance from line pipe branch | 15 | | L1, L2 |
| | | farthest distance from the line pipe branch | 10 | | L1-L2 |
| | Triple | Total piping length | 9k+9k+9k A4 | 50 | L+L1+L2+ L3+La |
| | | | 9k+9k+9k A7 | 75 | |
| | | | 12k+12k+12k | | |
| | | | 18k+18k+18k | | |
| | | Farthest distance from line pipe branch | 15 | | L1, L2+La, L3+La |
| | | farthest distance from the line pipe branch | 10 | | L1-(L2+La) , L1-(L3+La), L2-L3 |
| | Double Twins | Total piping length | 9k+9k+9k+9k A4 | 75 | L+L1+ L2+L3+ L4+ La+Lb |
| | | | 9k+9k+9k+9k A7 | | |
| | | | 12k+12k+ 12k+12k | | |
| | | Farthest distance from line pipe branch | 15 | | L1, L2, L3, L4 |
| | | farthest distance from the line pipe branch | 10 | | L1-L2,L1-L3,L1-L4,L2-L3,L2-L4,L3-L4 |
| Drop height | Drop height between indoor and outdoor unit | | 20 | | H2 |
| | Drop height between two indoor units | | 0.5 | | H1 |

- branching pipe

| IDU | IDU | IDU Pipe Diameter (liquid&gas) | ODU | ODU Pipe Diameter (liquid&gas) |
|---|---|---|---|---|
| A7 Duct | 9k +9k | 6.35&9.52 | 24k | 9.52&15.9 |
| New compact Cassette | | | 18k | 6.35&12.7 |
| Duct | 12k+12k | 6.35&9.52 | 24k | 9.52&15.9 |
| New compact Cassette | | | | |
| Duct | 18k+18k | 6.35&12.7 | 36k | 9.52&15.9 |
| New compact Cassette | | | | |
| C&F | | | | |
| Duct | 24k+24k | 9.52&15.9 | 48k | 9.52&15.9 |
| Cassette | | | | |
| C&F | | | | |
| Duct | 30k+30k | 9.52&15.9 | 55k | 9.52&15.9 |
| Cassette | | | | |
| A7 Duct | 9k+9k+9k | 6.35&9.52 | 36k | 9.52&15.9 |
| New compact Cassette | | | 24K | |
| Duct | 12k+12k+12k | 6.35&9.52 | 36k | 9.52&15.9 |
| New compact Cassette | | | | |
| Duct | 18k+18k+18k | 6.35&12.7 | 55K | 9.52&15.9 |
| New compact Cassette | | | | |
| A7 Duct | 9k+9k+9k+9k | 6.35&9.52 | 48K | 9.52&15.9 |
| New compact Cassette | | | 36K | |
| Duct | 12k+12k+12k+12k | 6.35&9.52 | 48K | 9.52&15.9 |
| New compact Cassette | | | | |

Caution:

- The branching pipe must be installed horizontally. An angle of more than 10° may cause malfunction.
- DO NOT install the connecting pipe until both indoor and outdoor units have been installed.
- Insulate both the gas and liquid piping to prevent water leakage.




# 7. Vacuum Drying and Leakage Checking

## 7.1 Purpose of vacuum drying

- Eliminating moisture in system to prevent the phenomena of ice-blockage and copper oxidation.

  Ice-blockage shall cause abnormal operation of system, while copper oxide shall damage compressor.
- Eliminating the non-condensable gas (air) in system to prevent the components oxidizing, pressure fluctuation and bad heat exchange during the operation of system.

## 7.2 Selection of vacuum pump

- The ultimate vacuum degree of vacuum pump shall be -756mmHg or above.
- Precision of vacuum pump shall reach 0.02mmHg or above.

## 7.3 Operation procedure for vacuum drying

Due to different construction environment, two kinds of vacuum drying ways could be chosen, namely ordinary vacuum drying and special vacuum drying.

### 7.3.1 Ordinary vacuum drying

1. When conduct first vacuum drying, connect pressure gauge to the infusing mouth of gas pipe and liquid pipe, and keep vacuum pump running for 1hour (vacuum degree of vacuum pump shall be reached -755mmHg).

2. If the vacuum degree of vacuum pump could not reach -755mmHg after 1 hour of drying, it indicates that there is moisture or leakage in pipeline system and need to go on with drying for half an hour.

3. If the vacuum degree of vacuum pump still could not reach -755mmHg after 1.5 hours of drying, check whether there is leakage source.

4 . Leakage test: After the vacuum degree reaches -755mmHg, stop vacuum drying and keep the pressure for 1 hour. If the indicator of vacuum gauge does not go up, it is qualified. If going up, it indicates that there is moisture or leak source.

### 7.3.2 Special vacuum drying

The special vacuum drying method shall be adopted when:

1. Finding moisture during flushing refrigerant pipe.

2. Conducting construction on rainy day, because rain water might penetrated into pipeline.

3. Construction period is long, and rain water might penetrated into pipeline.

4. Rain water might penetrate into pipeline during construction.

Procedures of special vacuum drying are as follows:

1. Vacuum drying for 1 hour.

2. Vacuum damage, filling nitrogen to reach 0.5Kgf/cm$^2$ .

Because nitrogen is dry gas, vacuum damage could achieve the effect of vacuum drying, but this method could not achieve drying thoroughly when there is too much moisture. Therefore, special attention shall be drawn to prevent the entering of water and the formation of condensate water.

3. Vacuum drying again for half an hour.

If the pressure reached -755mmHg, start to pressure leakage test. If it cannot reached the value, repeat vacuum damage and vacuum drying again for 1 hour.

4. Leakage test: After the vacuum degree reaches -755mmHg, stop vacuum drying and keep the pressure for 1 hour. If the indicator of vacuum gauge does not go up, it is qualified. If going up, it indicates that there is moisture or leak source.

## 8. Additional Refrigerant Charge

- After the vacuum drying process is carried out, the additional refrigerant charge process need to be performed.
- The outdoor unit is factory charged with refrigerant. The additional refrigerant charge volume is decided by the diameter and length of the liquid pipe between indoor and outdoor unit. Refer the following formula to calculate the charge volume.

| | Diameter of liquid pipe (mm(inch)) | Formula |
|---|---|---|
| R410A(Throttling part in the outdoor unit) | 6.35(1/4) | V=15(0.16)g/m(oz/ft)×(L-standard pipe length) |
| | 9.52(3/8) | V=30(0.32)g/m(oz/ft)×(L-standard pipe length) |
| | 12.7(1/2) | V=65(0.69)g/m(oz/ft)×(L-standard pipe length) |
| R32 | 6.35(1/4) | V=12(0.13)g/m(oz/ft)×(L-standard pipe length) |
| | 9.52(3/8) | V=24(0.26)g/m(oz/ft)×(L-standard pipe length) |
| | 12.7(1/2) | V=40(0.42)g/m(oz/ft)×(L-standard pipe length) |

**V:** Additional refrigerant charge volume.

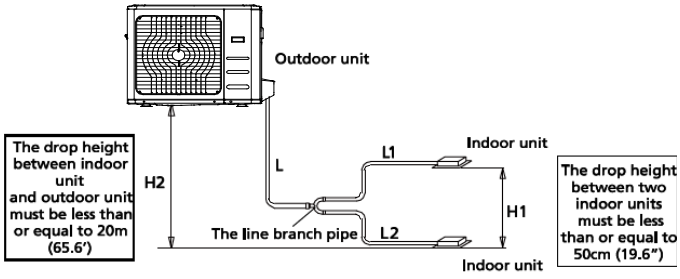
**L :** The length of the liquid pipe.

Note:

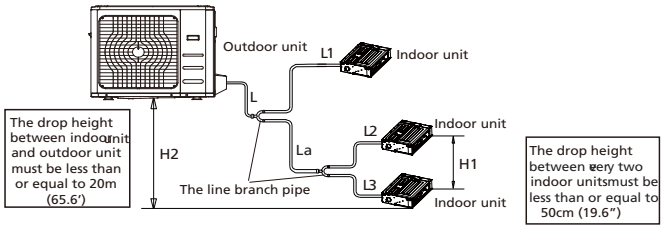
- Refrigerant may only be charged after performed the vacuum drying process.
- Always use gloves and glasses to protect your hands and eyes during the charge work.
- Use electronic scale or fluid infusion apparatus to weight refrigerant to be recharged. Be sure to avoid extra refrigerant charged, it may cause liquid hammer of the compressor or protections.
- Use supplementing flexible pipe to connect refrigerant cylinder, pressure gauge and outdoor unit. And The refrigerant should be charged in liquid state. Before recharging, The air in the flexible pipe and manifold gauge should be exhausted.
- After finished refrigerant recharge process, check whether there is refrigerant leakage at the connection joint part.(Using gas leakage detector or soap water to detect).

## Additional Refrigerant Charge for Twins/ Triple/Double Twins System

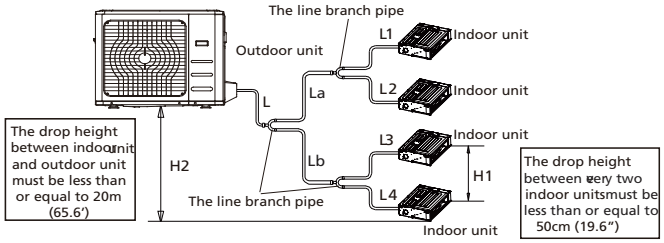
Twins:




Triple:




Double-Twins:




| ODU | IDU | Formula |
|---|---|---|
| Twins | | |
| 18k | New compact Cassette-9k | (L1+L2+L-5)*12 |
| 24k | A6 Duct-12k<br>A7 Duct-9k/12k | (L1+L2)*12+(L-5)*24-120 |
| 24k | New compact Cassette-12k | (L1+L2)*12+(L-5)*24+700 |
| 36k | New compact Cassette-18k | (L1+L2)*12+(L-5)*24 |
| 36k | A6 Duct-18k | (L1+L2)*12+(L-5)*24-120 |
| 36k | A7 Duct-18k | (L1+L2)*12+(L-5)*24-240 |
| 36k | C&F-18k | (L1+L2)*12+(L-5)*24+390 |
| 48k | A6 Duct-24k | (L1+L2+L-5)*24 |
| 48K | A7 DUCT-24k | (L1+L2+L-5)*24-240 |
| 48k | C&F-24k | (L1+L2+L-5)*24+390 |
| 48k | Cassette-24k | (L1+L2+L-5)*24 |
| 60k | Cassette-30k | (L1+L2+L-5)*24+250 |
| 60k | A6 Duct-30k | (L1+L2+L-5)*24+780 |
| 60K | A7 DUCT-30k | (L1+L2+L-5)*24-240 |
| Triple | | |
| 24k | New compact Cassette-9k | (L1+L2+L3)*12+(L+La-5)*24+540 |
| 36k | A7 Duct-9k/12k | (L1+L2+L3)*12+(L+La-5)*24-180 |
| 60k | A7 Duct-18k | (L1+L2+L3)*12+(L+La-5)*24-180 |
| 36k | New compact Cassette-12k | (L1+L2+L3)*12+(L+La-5)*24+570 |
| 60k | New compact Cassette-18k | (L1+L2+L3)*12+(L+La-5)*24+500 |
| Double Twins | | |
| 36k | New compact Cassette-9k | (L1+L2+L3+L4)*12+(L+La+Lb-5)*24 |
| 48k | A7 Duct-9k/12k | (L1+L2+L3+L4)*12+(L+La+ Lb-5)*24-240 |
| 48k | New compact Cassette-12k | (L1+L2+L3+L4)*12+(L+La+ Lb-5)*24+660 |

Note:

1. It is suggested to add refrigerant quantity (g) according to the formula in the table. If the calculation result is less than 0, there is no need to adjust it;

2. According to the system pressure adjustment additional refrigerant.

# 9 . Engineering of Insulation

## 9.1 Insulation of refrigerant pipe

### 1. Operational procedure of refrigerant pipe insulation

Cut the suitable pipe → insulation (except joint section) → flare the pipe → piping layout and connection→ vacuum drying → insulate the joint parts

### 2. Purpose of refrigerant pipe insulation

- During operation, temperature of gas pipe and liquid pipe shall be over-heating or over-cooling extremely. Therefore, it is necessary to carry out insulation; otherwise it shall debase the performance of unit and burn compressor.
- Gas pipe temperature is very low during cooling. If insulation is not enough, it shall form dew and cause leakage.
- Temperature of gas pipe is very high (generally 50-100℃) during heating. Insulation work must be carried out to prevent hurt by carelessness touching.

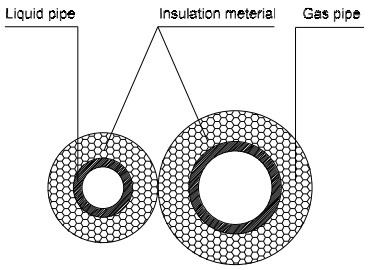
### 3. Insulation material selection for refrigerant pipe

- The burning performance should over 120℃
- According to the local law to choose insulation materials
- Recommended insulation casing thickness

| Humidity<80%RH | Humidity ≥80%RH |
|---|---|
| 10mm | 15mm |

### 4. Installation highlights of insulation construction

- Gas pipe and liquid pipe shall be insulated separately, if the gas pipe and liquid pipe were insulated together; it will decrease the performance of air conditioner.




- The insulation material at the joint pipe shall be 5~10cm longer than the gap of the insulation material.
- The insulation material at the joint pipe shall be inserted into the gap of the insulation material.
- The insulation material at the joint pipe shall be banded to the gap pipe and liquid pipe tightly.
- The linking part should be use glue to paste together
- Be sure not bind the insulation material over-tight, it may extrude out the air in the material to cause bad insulation and cause easy aging of the material.

## 9.2 Insulation of drainage pipe

### 1. Operational procedure of refrigerant pipe insulation

Select the suitable pipe → insulation (except joint section) → piping layout and connection→ drainage test→ insulate the joint parts

### 2. Purpose of drainage pipe insulation

The temperature of condensate drainage water is very low. If insulation is not enough, it shall form dew and cause leakage to damage the house decoration.

### 3. Insulation material selection for drainage pipe

- The insulation material should be flame retardant material, the flame retardancy of the material should be selected according to the local law.
- Thickness of insulation layer is usually above 10mm.
- Use specific glue to paste the seam of insulation material, and then bind with adhesive tape. The width of tape shall not be less than 5cm. Make sure it is firm and avoid dew.

### 4. Installation and highlights of insulation construction

- The single pipe should be insulated before connecting to another pipe, the joint part should be insulated after the drainage test.
- There should be no insulation gap between the insulation material.

# 10. Engineering of Electrical Wring

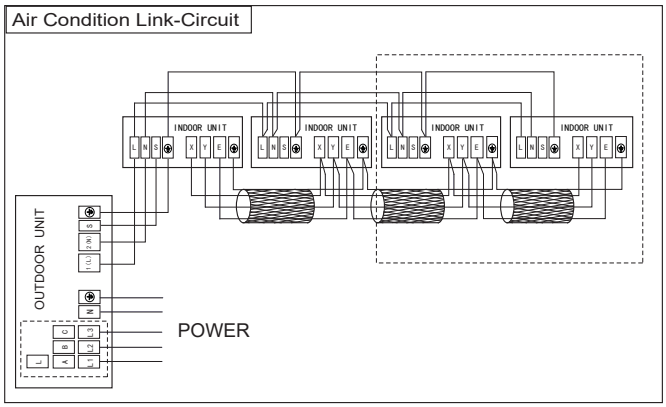
## 1. Highlights of electrical wiring installation

- All field wiring construction should be finished by qualified electrician.
- Air conditioning equipment should be grounded according to the local electrical regulations.
- Current leakage protection switch should be installed.
- Do not connect the power wire to the terminal of signal wire.
- When power wire is parallel with signal wire, put wires to their own wire tube and remain at least 300mm gap.
- According to table in indoor part named "the specification of the power" to choose the wiring, make sure the selected wiring not small than the date showing in the table.
- Select different colors for different wire according to relevant regulations.
- Do not use metal wire tube at the place with acid or alkali corrosion, adopt plastic wire tube to replace it.
- There must be not wire connect joint in the wire tube If joint is a must, set a connection box at the place.
- The wiring with different voltage should not be in one wire tube.
- Ensure that the color of the wires of outdoor and the terminal No. are same as those of indoor unit respectively.

Table: Minimum Cross-Sectional Area able of Power and Signal Cables

| Rated Current of Appliance (A) | Nominal Cross-Sectional Area($mm^2$) |
|---|---|
| ≤ 6 | 0.75 |
| 6 - 10 | 1 |
| 10 - 16 | 1.5 |
| 16 - 25 | 2.5 |
| 25 - 32 | 4 |
| 32 - 45 | 6 |

2. Wiring for Twins/Triple/Double Twins System




Note, Twins/Triple/Double Twins and Central controller use same terminal X/Y/E, so these two functions you can just choose one .

# 11. Test Operation

## 1. The test operation must be carried out after the entire installation has been completed.

## 2. Please confirm the following points before the test operation.

- The indoor unit and outdoor unit are installed properly.
- Piping and wiring are properly connected.
- Ensure that there are no obstacles near the inlet and outlet of the unit that might cause poor performance or product malfunction.
- The refrigeration system does not leak.
- The drainage system is unimpeded and draining to a safe location.
- The heating insulation is properly installed.
- The grounding wires are properly connected
- The length of the piping and the added refrigerant stow capacity have been recorded.
- The power voltage is the correct voltage for the air conditioner.

CAUTION: Failure to perform the test run may result in unit damage, property damage or personal injury.

## 3. Test Run Instructions

1. Open both the liquid and gas stop valves.

2. Turn on the main power switch and allow the unit to warm up.

3. Set the air conditioner to COOL mode, and check the following points.

**Indoor unit**

a. Ensure the remote control and its buttons work properly.

b. Ensure the louvers move properly and can be changed using the remote control.

c. Double check to see if the room temperature is being registered correctly.

d. Ensure the indicators on the remote control and the display panel on the indoor unit work properly.

e. Ensure the manual buttons on the indoor unit works properly.

f. Check to see that the drainage system is unimpeded and draining smoothly.

g. Ensure there is no vibration or abnormal noise during operation.

**Outdoor unit**

a. Check to see if the refrigeration system is leaking.

b. Make sure there is no vibration or abnormal noise during operation.

c. Ensure the wind, noise, and water generated by the unit do not disturb your neighbors or pose a safety hazard.

## 4. Drainage Test

a. Ensure the drainpipe flow smoothly. New buildings should perform this test before finishing the ceiling.

b. Remove the test cover. Add 2000ml of water to the tank through the attached tube.

c. Turn on the main power switch and run the air conditioner in COOL mode.

d. Listen to the sound of the drain pump to see if it makes any unusual noises.

e. Check to see that the water is discharged. It may take up to one minute before the unit begins to drain depending on the drainpipe.

f. Make sure that there are no leaks in any of the piping.

g. Stop the air conditioner. Turn off the main power switch and reinstall the test cover.

# Maintenance

## Contents

# 1. First Time Installation Check

Air and moisture trapped in the refrigerant system affects the performance of the air conditioner by:

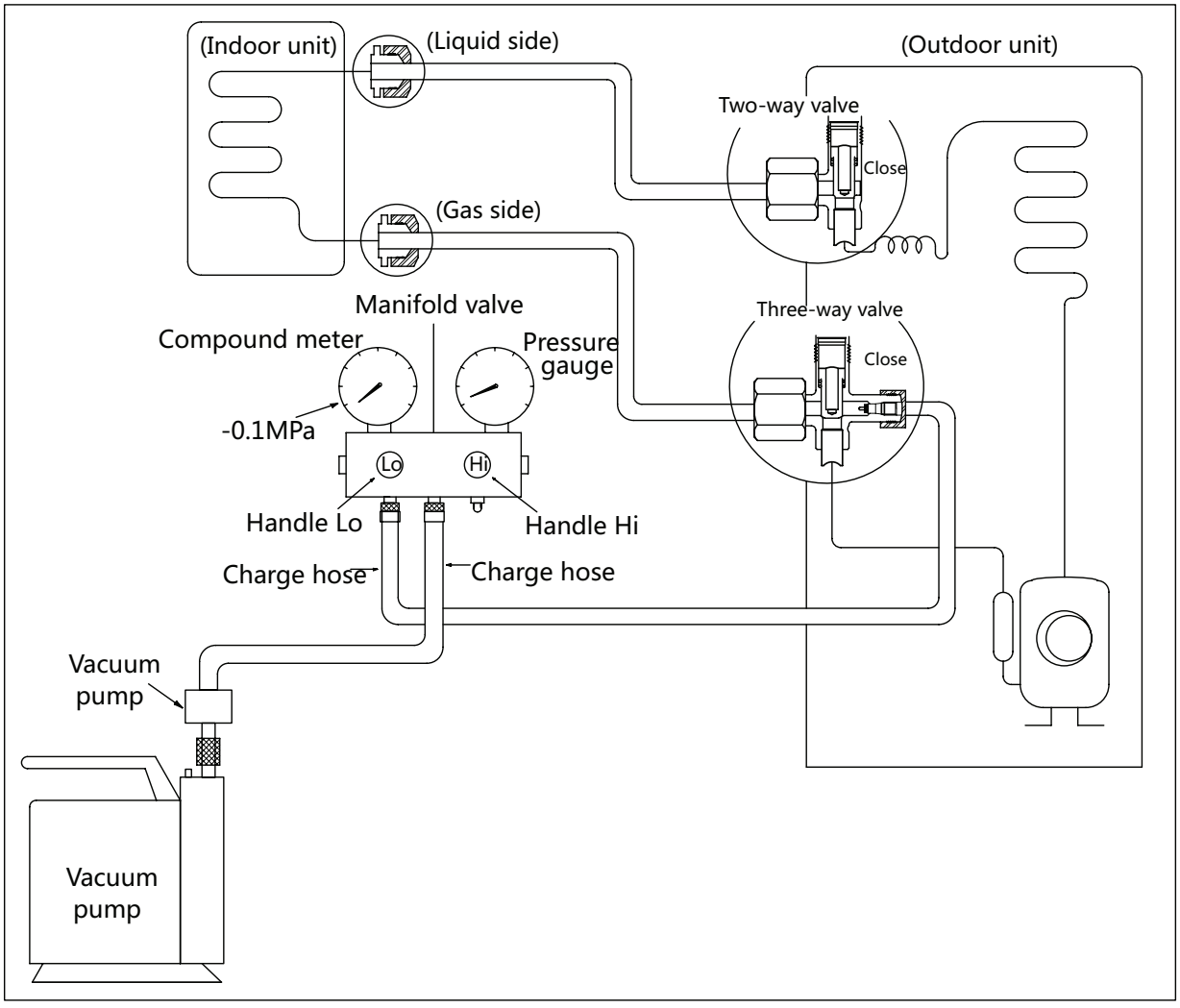
- Increasing pressure in the system.
- Increasing the operating current.
- Decreasing the cooling or heating efficiency.
- Congesting the capillary tubing due to ice build-up in the refrigerant circuit.
- Corroding the refrigerant system.

To prevent air and moisture from affecting the air conditioner's performance, the indoor unit, as well as the pipes between the indoor and outdoor unit, must be be leak tested and evacuated.

**Leak test (soap water method)**

Use a soft brush to apply soapy water or a neutral liquid detergent onto the indoor unit connections and outdoor unit connections. If there is gas leakage, bubbles will form on the connection.

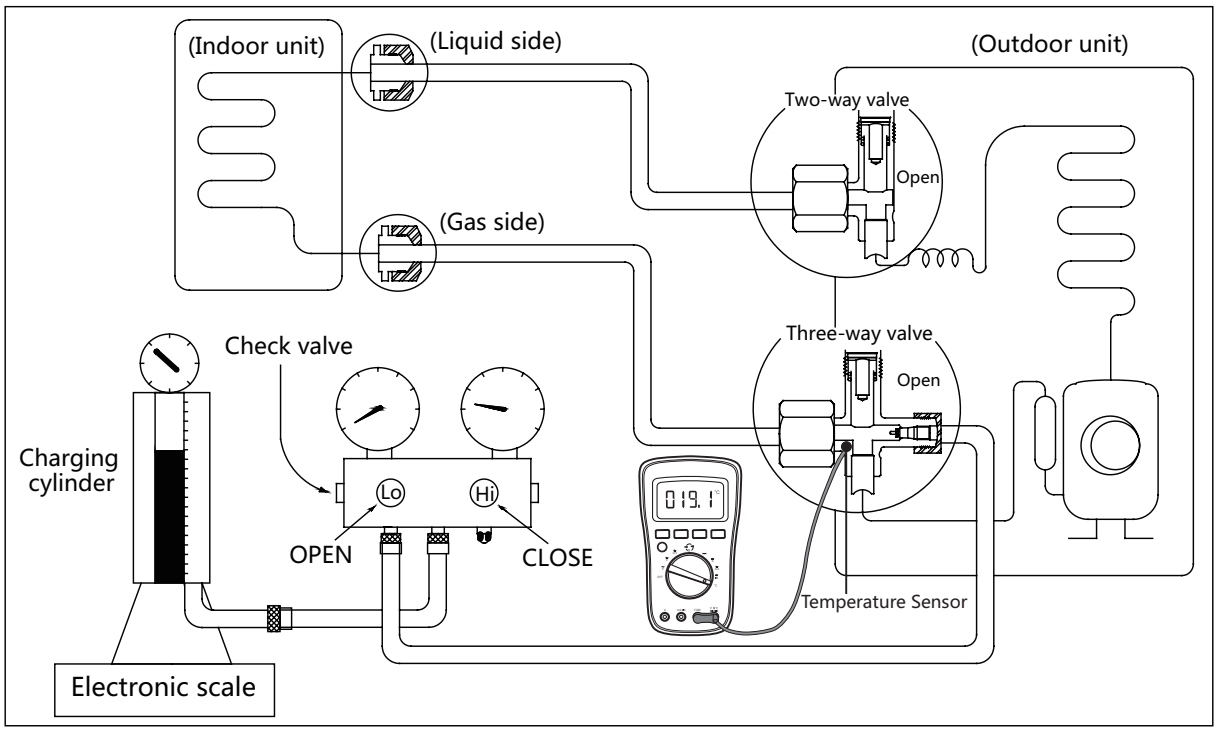
**Air purging with vacuum pump**



**Procedure:**

1. Tighten the flare nuts of the indoor and outdoor units, and confirm that both the 2- and 3-way valves are closed.
2. Connect the charge hose with the push pin of Handle Lo to the gas service port of the 3-way valve.
3. Connect another charge hose to the vacuum pump.
4. Fully open the Handle Lo manifold valve.
5. Using the vacuum pump, evacuate the system for 30 minutes.
   a. Check whether the compound meter indicates -0.1 MPa (14.5 Psi).
      - If the meter does not indicate -0.1 MPa (14.5 Psi) after 30 minutes, continue evacuating for an additional 20 minutes.
      - If the pressure does not achieve -0.1 MPa (14.5 Psi) after 50 minutes, check for leakage.
      - If the pressure successfully reaches -0.1 MPa (14.5 Psi), fully close the Handle Lo valve, then cease vacuum pump operations.
   b. Wait for 5 minutes then check whether the gauge needle moves after turning off the vacuum pump. If the gauge needle moves backward, check wether there is gas leakage.
6. Loosen the flare nut of the 3-way valve for 6 or 7 seconds and then tighten the flare nut again.
   a. Confirm the pressure display in the pressure indicator is slightly higher than the atmospheric pressure.
   b. Remove the charge hose from the 3-way valve.
7. Fully open the 2- and 3-way valves and tighten the cap of the 2- and 3-way valves.

## 2. Refrigerant Recharge



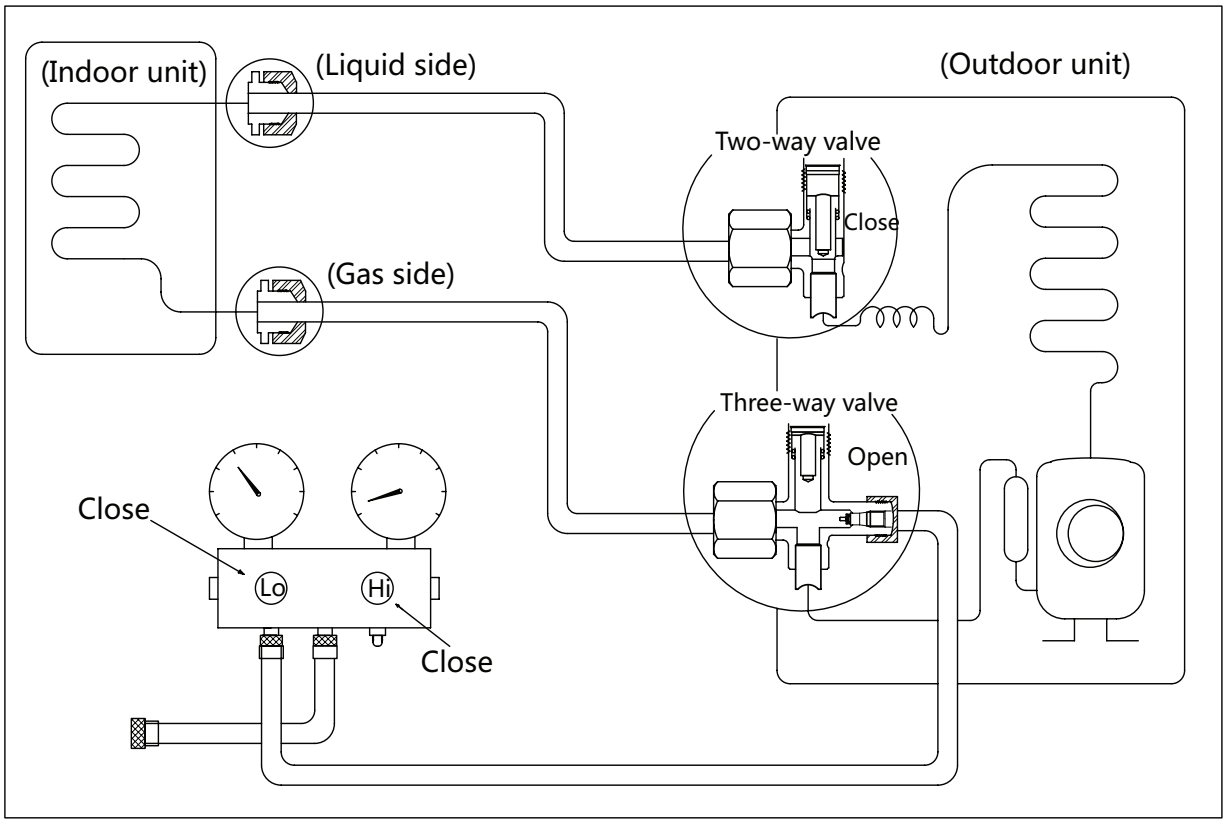

**Procedure:**

1. Close both 2- and 3-way valves.
2. Slightly connect the Handle Lo charge hose to the 3-way service port.
3. Connect the charge hose to the valve at the bottom of the cylinder.
4. If the refrigerant is R410A/R32, invert the cylinder to ensure a complete liquid charge.
5. Open the valve at the bottom of the cylinder for 5 seconds to purge the air in the charge hose, then fully tighten the charge hose with push pin Handle Lo to the service port of 3-way valve..
6. Place the charging cylinder onto an electronic scale and record the starting weight.
7. Fully open the Handle Lo manifold valve, 2- and 3-way valves.
8. Operate the air conditioner in cooling mode to charge the system with liquid refrigerant.
9. When the electronic scale displays the correct weight (refer to the gauge and the pressure of the low side to confirm, the value of pressure refers to chapter Appendix), turn off the air conditioner, then disconnect the charge hose from the 3-way service port immediately..
10. Mount the caps of service port and 2- and 3-way valves.
11. Use a torque wrench to tighten the caps to a torque of 18 N.m.
12. Check for gas leakage.

# 3. Re-Installation

## 3.1 Indoor Unit

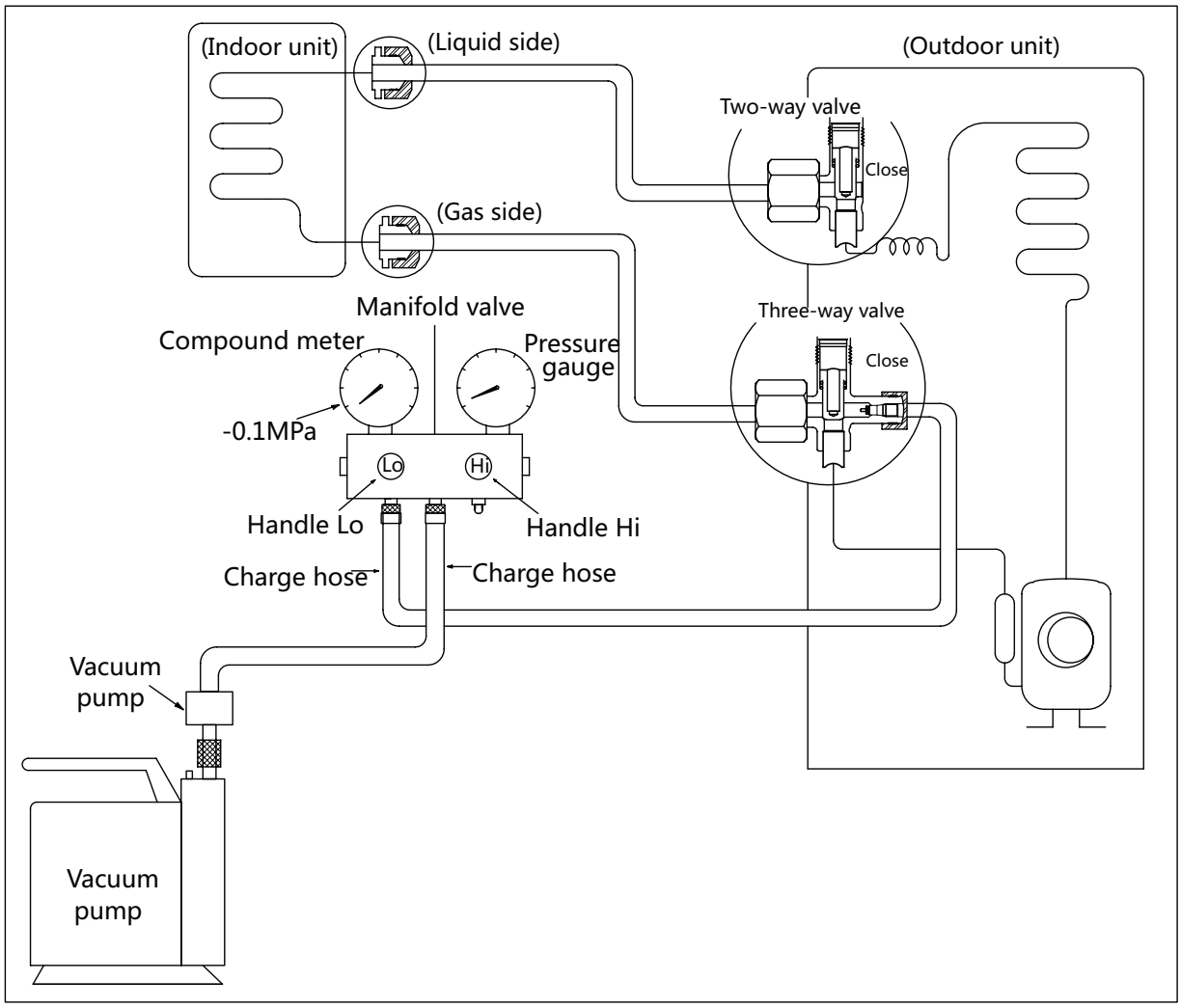
**Collecting the refrigerant into the outdoor unit**




**Procedure:**

1. Confirm that the 2- and 3-way valves are opened.
2. Connect the charge hose with the push pin of Handle Lo to the 3-way valve's gas service port.
3. Open the Handle Lo manifold valve to purge air from the charge hose for 5 seconds and then close it quickly.
4. Close the 2-way valve.
5. Operate the air conditioner in cooling mode. Cease operations when the gauge reaches 0.1 MPa (14.5 Psi).
6. Close the 3-way valve so that the gauge rests between 0.3 MPa (43.5 Psi) and 0.5 MPa (72.5 Psi).
7. Disconnect the charge set and mount the caps of service port and 2- and 3-way valves.
8. Use a torque wrench to tighten the caps to a torque of 18 N.m.
9. Check for gas leakage.

**Air purging with vacuum pump**



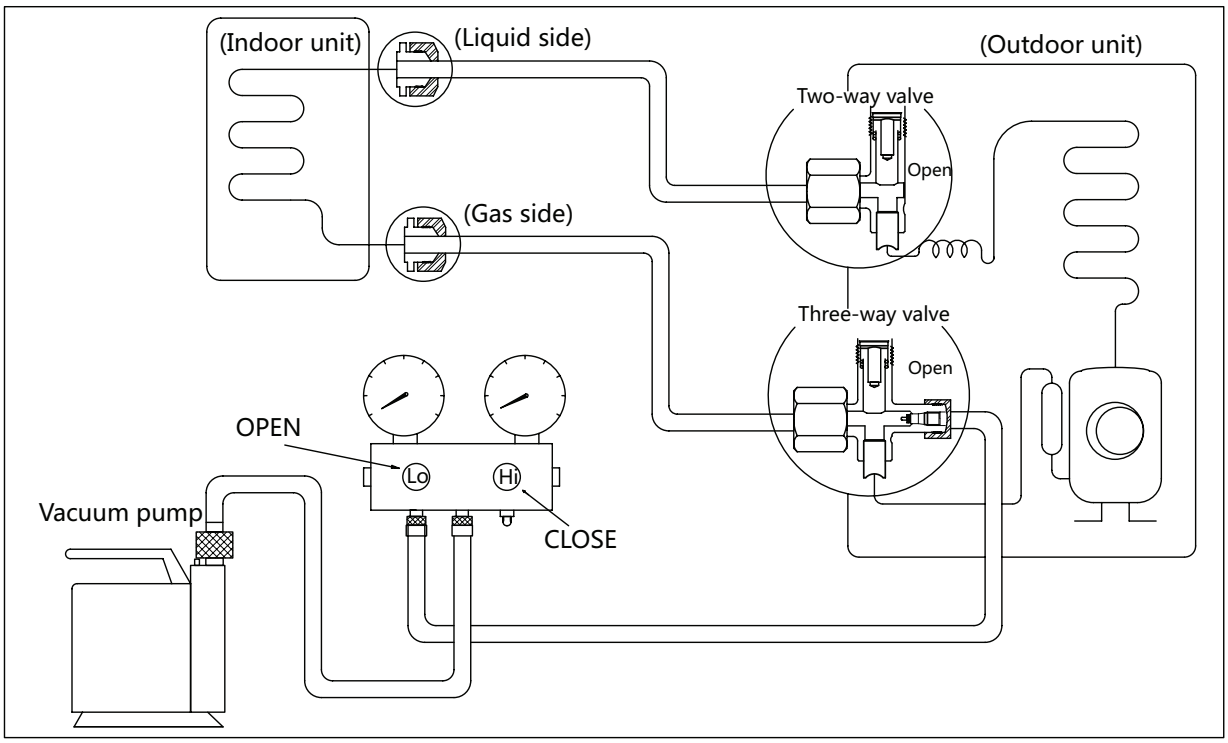

**Procedure:**

1. Tighten the flare nuts of the indoor and outdoor units, and confirm that both the 2- and 3-way valves are closed.
2. Connect the charge hose with the push pin of Handle Lo to the gas service port of the 3-way valve.
3. Connect another charge hose to the vacuum pump.
4. Fully open the Handle Lo manifold valve.
5. Using the vacuum pump, evacuate the system for 30 minutes.
   a. Check whether the compound meter indicates -0.1 MPa (14.5 Psi).
      - If the meter does not indicate -0.1 MPa (14.5 Psi) after 30 minutes, continue evacuating for an additional 20 minutes.
      - If the pressure does not achieve -0.1 MPa (14.5 Psi) after 50 minutes, check for leakage.
      - If the pressure successfully reaches -0.1 MPa (14.5 Psi), fully close the Handle Lo valve, then cease vacuum pump operations.

   b. Wait for 5 minutes then check whether the gauge needle moves after turning off the vacuum pump. If the gauge needle moves backward, check wether there is gas leakage.
6. Loosen the flare nut of the 3-way valve for 6 or 7 seconds and then tighten the flare nut again.
   a. Confirm the pressure display in the pressure indicator is slightly higher than the atmospheric pressure.
   b. Remove the charge hose from the 3-way valve.
7. Fully open the 2- and 3-way valves and tighten the cap of the 2- and 3-way valves.

## 3.2 Outdoor Unit

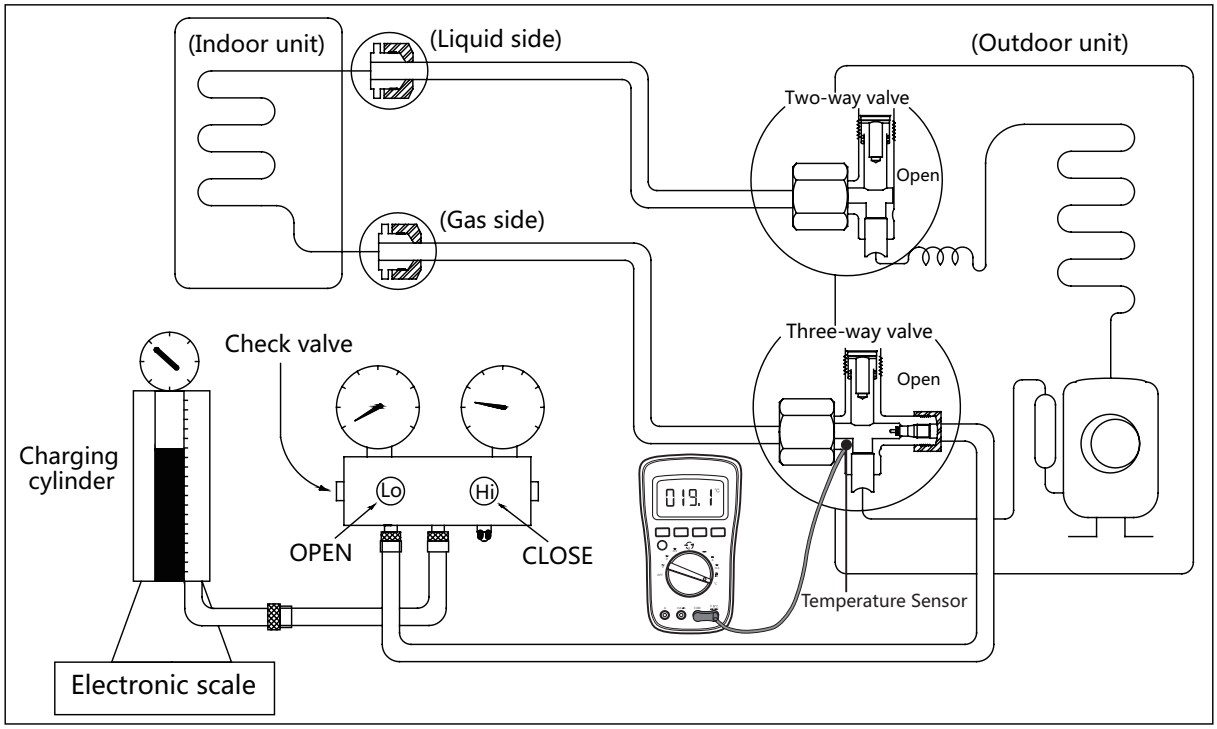
**Evacuation for the whole system**




**Procedure:**

1. Confirm that the 2- and 3-way valves are opened.
2. Connect the vacuum pump to the 3-way valve's service port.
3. Evacuate the system for approximately one hour. Confirm that the compound meter indicates -0.1 MPa (14.5Psi).
4. Close the valve (Low side) on the charge set and turn off the vacuum pump.
5. Wait for 5 minutes then check whether the gauge needle moves after turning off the vacuum pump. If the gauge needle moves backward, check whether there is gas leakage.
6. Disconnect the charge hose from the vacuum pump.
7. Mount the caps of service port and 2- and 3-way valves.
8. Use a torque wrench to tighten the caps to a torque of 18 N.m.

## Refrigerant charging




**Procedure:**

1. Close both 2- and 3-way valves.
2. Slightly connect the Handle Lo charge hose to the 3-way service port.
3. Connect the charge hose to the valve at the bottom of the cylinder.
4. If the refrigerant is R410A/R32, invert the cylinder to ensure a complete liquid charge.
5. Open the valve at the bottom of the cylinder for 5 seconds to purge the air in the charge hose, then fully tighten the charge hose with push pin Handle Lo to the service port of 3-way valve..
6. Place the charging cylinder onto an electronic scale and record the starting weight.
7. Fully open the Handle Lo manifold valve, 2- and 3-way valves.
8. Operate the air conditioner in cooling mode to charge the system with liquid refrigerant.
9. When the electronic scale displays the correct weight (refer to the gauge and the pressure of the low side to confirm, the value of pressure refers to chapter Appendix), turn off the air conditioner, then disconnect the charge hose from the 3-way service port immediately..
10. Mount the caps of service port and 2- and 3-way valves.
11. Use a torque wrench to tighten the caps to a torque of 18 N.m.
12. Check for gas leakage.

**Note: 1. Mechanical connectors used indoors shall comply with local regulations.**

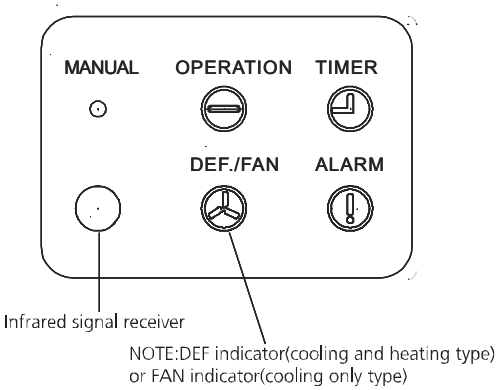
**2. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be re-fabricated.**

# Product Features

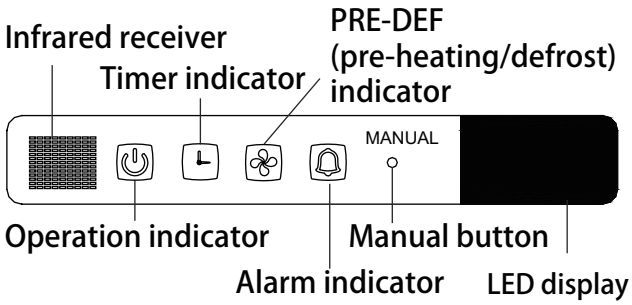
# Contents

## 1. Display Function

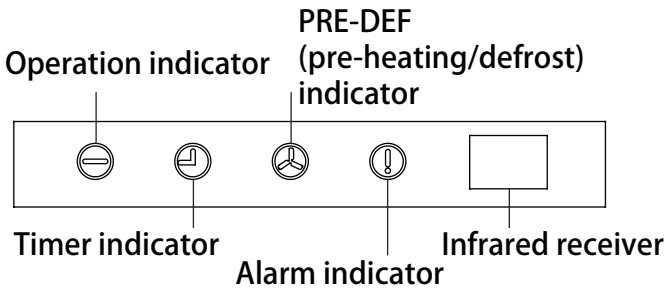
Floor Ceiling Type



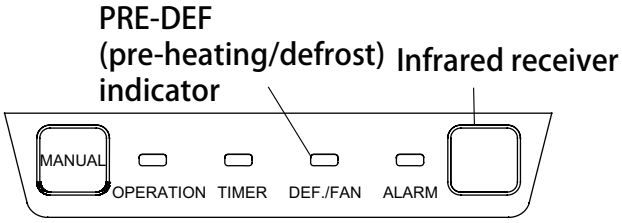

Display 1



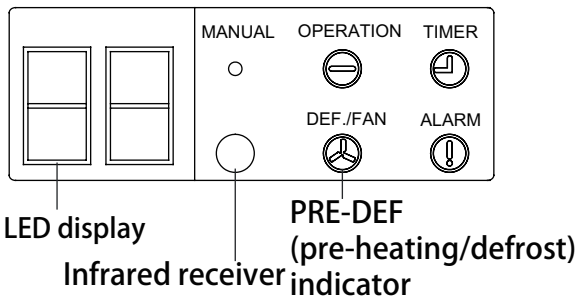

Display 2



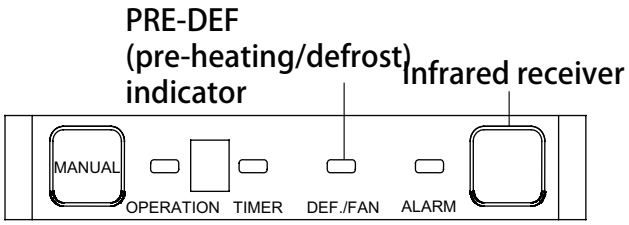

Display 3



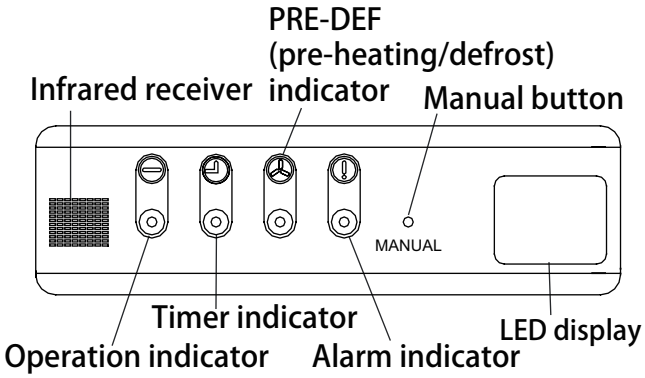

Display 4



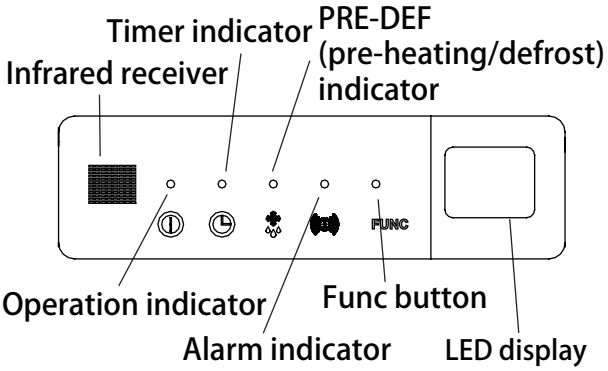

Display 5




Display 6

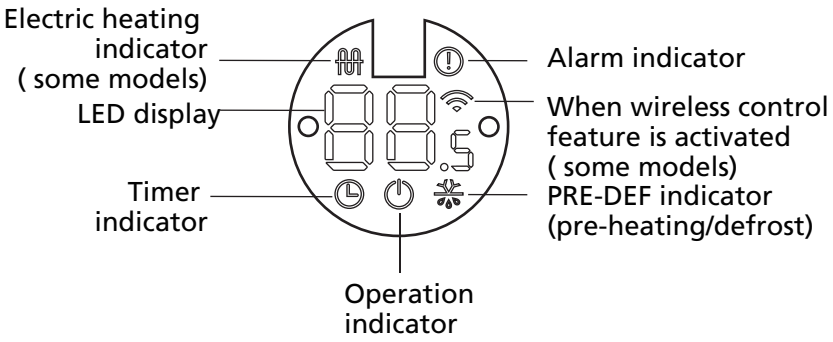



Display 7

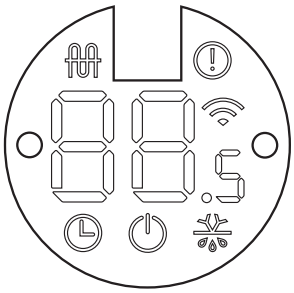



Display 8

New 4-way Cassette Type &New Compact Cassette Type




1-way Cassette Type



"" when Electric heating feature is activated (Not available for this unit)

"" when TIMER is set.

"" when the unit is on.

"" Alarm indicator.

"" when Wireless Control feature is activated(some units).

"" when pre-heating/defrost feature is activated.

"88.5" Displays temperature, operation feature and Error codes.

"FP" when 8℃ heating feature is turned on.

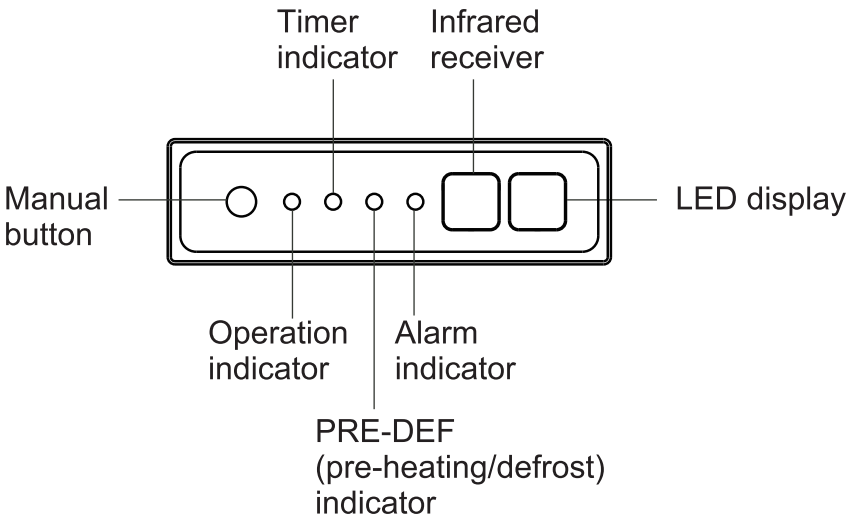
"CL" when Active Clean feature is turned on.

"AP" when WiFi module enters AP mode (some units).

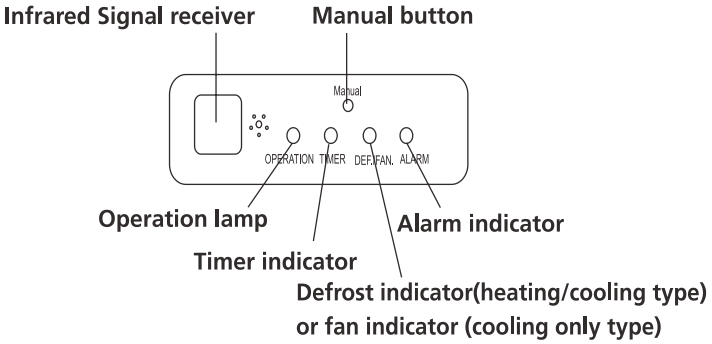
"FC" when Forced cooling feature is turned on.

"CF" Flter cleaning reminder.

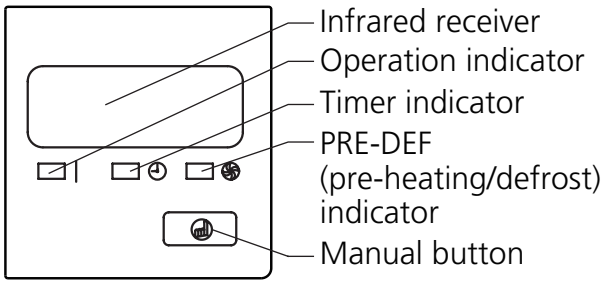
Duct Type



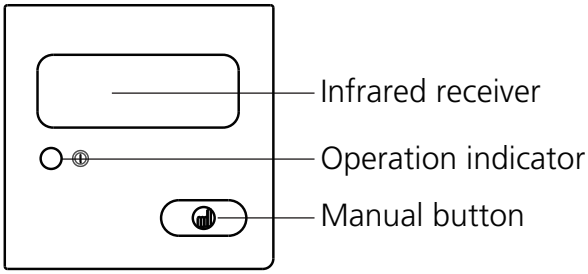
## Compact Cassette Type




## Console Type

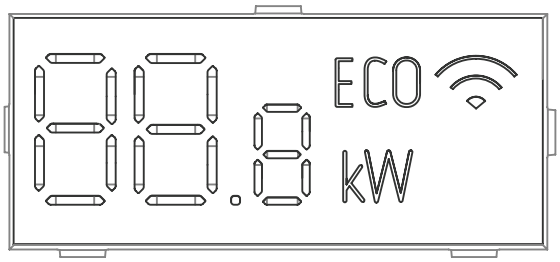



Display 1




Display 2

New Console Type




| Display | | Function |
|---|---|---|
| ECO | | ECO function (available on select units only) |
| | | When Wireless Control feature is activated (some units) |
| 88.8 | Temperature value | Temperature |
| | ON (3s) | Timer ON is set.<br>Activation of Swing, Boost, Silence or UV-C lamp |
| | OF (3s) | Timer OFF is set.<br>Cancellation of Swing, Boost, Silence or UV-C lamp |
| | dF | Defrost |
| | CL | Active Clean |
| | FP | Heating in room temperature under 8°C(46°F) |

**Note: Please select the display function according to your purchase product.**

## 2. Safety Features

### Compressor three-minute delay at restart

Compressor functions are delayed for up to ten seconds upon the first startup of the unit, and are delayed for up to three minutes upon subsequent unit restarts.

### Automatic shutoff based on discharge temperature

If the compressor discharge temperature exceeds a certain level for nine seconds, the compressor ceases operation.

### Inverter module protection

The inverter module has an automatic shutoff mechanism based on the unit's current, voltage, and temperature. If automatic shutoff is initiated, the corresponding error code is displayed on the indoor unit and the unit ceases operation.

### Indoor fan delayed operation

- When the unit starts, the louver is automatically activated and the indoor fan will operate after a period of setting time or the louver is in place.
- If the unit is in heating mode, the indoor fan is regulated by the anti-cold wind function.

### Compressor preheating

Preheating is automatically activated when T4 sensor is lower than setting temperature.

### Sensor redundancy and automatic shutoff

- If one temperature sensor malfunctions, the air conditioner continues operation and displays the corresponding error code, allowing for emergency use.
- When more than one temperature sensor is malfunctioning, the air conditioner ceases operation.

# 3. Basic Functions

## 3.1 Table

| Functions | | Cooling Mode&Heating mode | | Heating Mode | | | |
|---|---|---|---|---|---|---|---|
| | | Outdoor Fan Control | | Defrosting Mode | | Anti-cold Air Function | |
| Cases | | Case 1: Compressor Frequency and T4 | Case 2:T4 | Case 1 | Case 2 | Case 1 | Case 2 |
| Model | 18k | ✓ | | ✓ | | | ✓ |
| | 24k(match with MOX430U-24HFN8-QRD0W(GA)) | ✓ | | ✓ | | | ✓ |
| | 24k(match with MOX430U-24HFN8-QRD1W(GA)) | ✓ | | | ✓ | | ✓ |
| | 36k 1-phase | ✓ | | NA | NA | | ✓ |
| | 36k 3-phase | ✓ | | NA | NA | | ✓ |
| | 48k 1-phase | ✓ | | NA | NA | | ✓ |
| | 48k 3-phase | ✓ | | NA | NA | | ✓ |
| | 55k 3-phase | ✓ | | NA | NA | | ✓ |

| Functions | | Auto mode | | |
|---|---|---|---|---|
| Cases | | Case 1 | Case 2 | Case 3 |
| Type | Floor Ceiling | ✓ | | |

**Note: The detailed description of case 1 or case 2 is shown in the following function sections(from 3.4 to 3.6).**

## 3.2 Abbreviation

Unit element abbreviations

| Abbreviation | Element |
|---|---|
| T1 | Indoor room temperature |
| T2 | Coil temperature of evaporator |
| T3 | Coil temperature of condenser |
| T4 | Outdoor ambient temperature |
| TP | Compressor discharge temperature |
| Tsc | Adjusted setting temperature |
| CDIFTEMP | Cooling shutdown temperature |
| HDIFTEMP2 | Heating shutdown temperature |
| TCDE1 | Exit defrost temperature1 |
| TCDE2 | Exit defrost temperature2 (maintain for a period of time ) |
| TIMING_ DEFROST_TIME | Enter defrost time |

In this manual, such as CDIFTEMP, HDIFTEMP2, TCDE1, TCDE2, TIMING_DEFROST_TIME...etc., they are well-setting parameter of EEPROM.

## 3.3 Fan Mode

When fan mode is activated:

- The outdoor fan and compressor are stopped.
- Temperature control is disabled and no temperature setting is displayed.
- The indoor fan speed can be set to 1%~100%, or low, medium, high and auto.
- The louver operations are identical to those in cooling mode.
- Auto fan: In fan-only mode, AC operates the same as auto fan in cooling mode with the temperature set at 24°C(75°F).

## 3.4 Cooling Mode

### 3.4.1 Compressor Control

Reach the configured temperature:

1) When the compressor runs continuously for less than 120 minutes.
   - If the following conditions are satisfied, the compressor ceases operation.
     - Calculated frequency(fb) is less tha n minimum limit frequency(FminC).
     - Compressor runs at FminC more than ten minutes.
     - T1 is lower than or equal to (Tsc-CDIFTEMP-0.5°C/0.9°F)
2) When the compressor runs continuously for more than 120 minutes.
   - If the following conditions are satisfied, the compressor ceases operation.
     - Calculated frequency(fb) is less than minimum limit frequency(FminC).
     - Compressor runs at FminC more than 10 minutes.
     - When T1 is lower than or equal to (Tsc-CDIFTEMP).

Note: CDIFTEMP is EEPROM setting parameter. It is 2°C(35.6°F) usually.

3) If one of the following conditions is satisfied, not judge protective time.
   - Compressor running frequency is more than test frequency.
   - When compressor running frequency is equal to test frequency, T4 is more than 15°C(59 °F) or T4 fault.
   - Change setting temperature.
   - Turning on/off turbo or sleep function
   - Various frequency limit shutdown occurs.

### 3.4.2 Indoor Fan Control

1) In cooling mode, the indoor fan operates continuously. The fan speed can be set to 1%-100%, or low, medium, high and auto.
2) Auto fan action in cooling mode:
   - Descent curve
     - When T1-Tsc is lower than 3.5°C/6.3°F, fan speed reduces to 80%(High);
     - When T1-Tsc is lower than 1°C/1.8°F,, fan speed reduces to 60%(Medium);
     - When T1-Tsc is lower than 0.5°C/0.9°F, fan speed reduces to 40%(Low);
     - When T1-Tsc is lower than 0°C/0°F, fan speed reduces to 20%(Low);;
     - When T1-Tsc is lower than -0.5°C/-0.9°F, fan speed reduces to 1%(Low);.
   - Rise curve
     - When T1-Tsc is higher than or equal to 0°C/0°F, fan speed increases to 20%(Low);;
     - When T1-Tsc is higher than or equal to 0.5°C/0.9°F, fan speed increases to 40%(Low);
     - When T1-Tsc is higher than or equal to 1°C/1.8°F,, fan speed increases to 60%(Medium);
     - When T1-Tsc is higher than or equal to 1.5°C/2.7°F, fan speed increases to 80%(High);
     - When T1-Tsc is higher than or equal to 4°C/7.2°F, fan speed increases to 100%(High).

### 3.4.3 Outdoor Fan Control

**Case 1:**

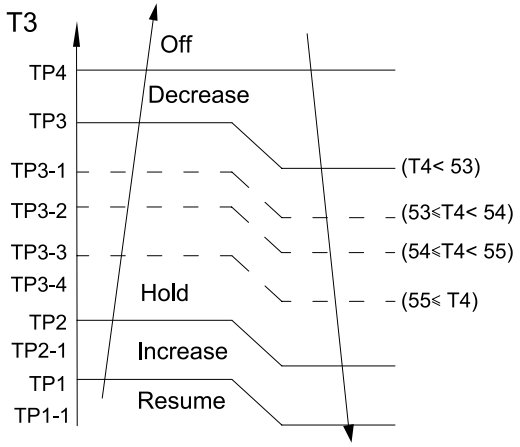
- The outdoor unit will be run at different fan speed according to T4 and compressor frequency.

- For different outdoor units, the fan speeds are different.

**Case 2:**

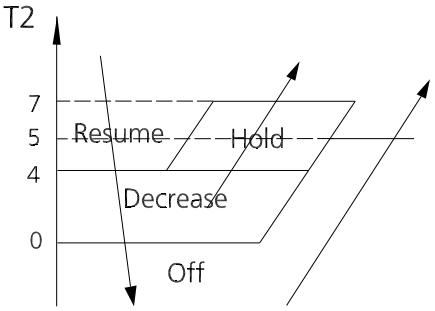
- The outdoor unit will be run at different fan speed according to T4.
- For different outdoor units, the fan speeds are different.

### 3.4.4 Condenser Temperature Protection




When the condenser temperature exceeds a configured value, the compressor ceases operation.

### 3.4.5 Evaporator Temperature Protection




- Off: Compressor stops.
- Decrease: Decrease the running frequency to the lower level per 1 minute.
- Hold: Keep the current frequency.
- Resume: No limitation for frequency.

## 3.5 Heating Mode(Heat Pump Units)

### 3.5.1 Compressor Control

1) Reach the configured temperature

- If the following conditions are satisfied, the compressor ceases operation.
  - Calculated frequency(fb) is less than minimum limit frequency(FminH).
  - Compressor runs at FminH more than 10 minutes.
  - T1 is higher than or equal to Tsc+ HDIFTEMP2.

Note: HDIFTEMP2 is EEPROM setting parameter. It is 2°C(35.6°F) usually.

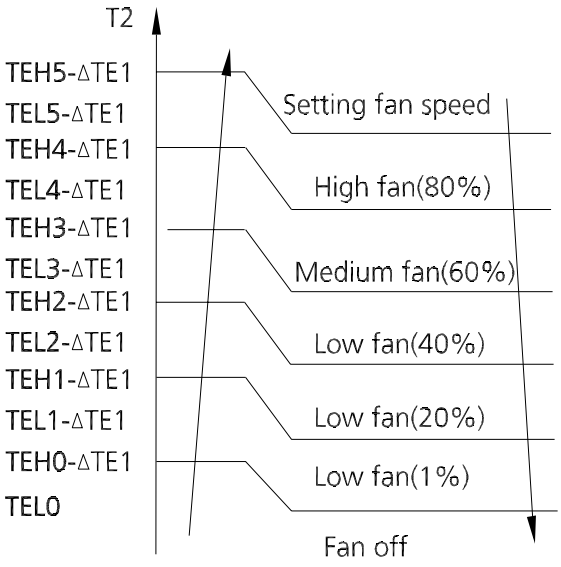
- If one of the following conditions is satisfied, not judge protective time.
  - Compressor running frequency is more than test frequency.
  - Compressor running frequency is equal to test frequency, T4 is more than 15°C(59 °F) or T4 fault.
  - Change setting temperature.
  - Turning on/off turbo or sleep function

2) When the current is higher than the predefined safe value, surge protection is activated, causing the compressor to cease operations.

### 3.5.2 Indoor Fan Control:

1) In heating mode, the indoor fan operates continuously. The fan speed can be set to 1%-100%,or low, medium, high and auto.

- Anti-cold air function
  - If the temperature difference of T2 changes during auto fan and causes the fan speed to change, run the current fan speed for 30 seconds first, the default interval is the interval before the fan speed changes, and then judge T2 according to the current interval after 30 seconds to get the final anti-cold air interval.




**Case 1:**

| | |
|---|---|
| T1 ≥ 19°C(66°F) | ΔTE1=0 |
| 15°C(59°F) ≤ T1 <19°C(66°F) | ΔTE1=19°C−T1 (66°F-T1) |
| T1<15°C(59°F) | ΔTE1=4°C(7.2°F) |

**Case 2:** ΔTE1=0

2) Auto fan action in heating mode:

- Rise curve
  - When T1-Tsc is higher than -1.5°C/-2.7°F,, fan speed reduces to 80%(High);
  - When T1-Tsc is higher than 0°C/0°F, fan speed reduces to 60%(Medium);
  - When T1-Tsc is higher than 0.5°C/0.9°F, fan speed reduces to 40%(Low);
  - When T1-Tsc is higher than 1°C/1.8°F, fan speed reduces to 20%(Low).
- Descent curve
  - When T1-Tsc is lower than or equal to 0.5°C/0.9°F, fan speed increases to 40%(Low);
  - When T1-Tsc is lower than or equal to 0°C/0°F, fan speed increases to 60%(Medium);
  - When T1-Tsc is lower than or equal to -1.5°C/-2.7°F,, fan speed increases to 80%(high);
  - When T1-Tsc is lower than or equal to -3°C/-5.4°F, fan speed increases to 100%(High).

### 3.5.3 Outdoor Fan Control:

**Case 1:**

- The outdoor unit will be run at different fan speed according to T4 and compressor frequency.
- For different outdoor units, the fan speeds are different.

**Case 2:**

- The outdoor unit will be run at different fan speed according to T4.
- For different outdoor units, the fan speeds are different.

### 3.5.4 Defrosting mode

- The unit enters defrosting mode according to the temperature value of T3 and T4 as well as the compressor running time.
- In defrosting mode, the compressor continues to run, the indoor and outdoor motor will cease operation, the defrost light of the indoor unit will turn on, and the "dF" symbol is displayed.
- If any one of the following conditions is satisfied, defrosting ends and the machine switches to normal heating mode:
  - T3 rises above TCDE1.
  - T3 maintained above TCDE2 for 80 seconds.
  - Unit runs for 15 minutes consecutively in defrosting mode.
- If T4 is lower than or equal to -22°C(-7.6 °F) and compressor running time is more than TIMING_DEFROST_TIME, if any one of the following conditions is satisfied, defrosting ends and the machine switches to normal heating mode:
  - Unit runs for 10 minutes consecutively in defrosting mode.
  - T3 rises above 10°C/50°F..

The following conditions apply only to certain models,

see table in section 3.1 for details.

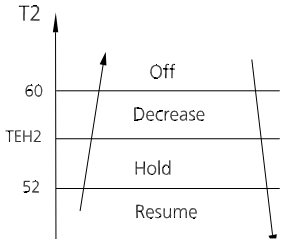
Case 1:

- T3 is lower than 3°C(37.4°F) and compressor running time is more than 120 minutes, at this time, if T3 is lower than TCDI1+4°C(39.2°F) for 3 minutes, the unit enters defrosting mode. If any one of the following conditions is satisfied, defrosting ends and the machine switches to normal heating mode:
- T3 rises above TCDE1+4°C/7.2°F.
- T3 maintained above TCDE2+4°C/7.2°F for 80 seconds.
- Unit runs for 15 minutes consecutively in defrosting mode.

Case 2:

- If any one of the following conditions is satisfied, the unit enters defrosting mode
  - If T3 or T4 is lower than -3°C for 30 seconds,Ts-T1 is lower than 5°C and compressor running time is more than EE_TIME_DEFROST7.
  - If T3 or T4 is lower than -3°C for 30 seconds and compressor running time is more than EE_TIME_DEFROST7+30 minutes.
- If any one of the following conditions is satisfied, defrosting ends and the machine switches to normal heating mode:
  - T3 rises above TCDE1+4°C/7.2°F.
  - T3 maintained above TCDE2+4°C/7.2°F for 80 seconds.
  - Unit runs for 15 minutes consecutively in defrosting mode.

### 3.5.5 Evaporator Coil Temperature Protection




- Off: Compressor stops.
- Decrease: Decrease the running frequency to the lower level per 20 seconds.
- Hold: Keep the current frequency.
- Resume: No limitation for frequency.

## 3.6 Auto-mode

- This mode can be selected with the remote controller and the temperature setting can be adjusted between 16°C~30°C.

Case 1:

- In auto mode, the machine selects cooling, heating, or fan-only mode on the basis of **Δ**T (**Δ**T =T1-TS).

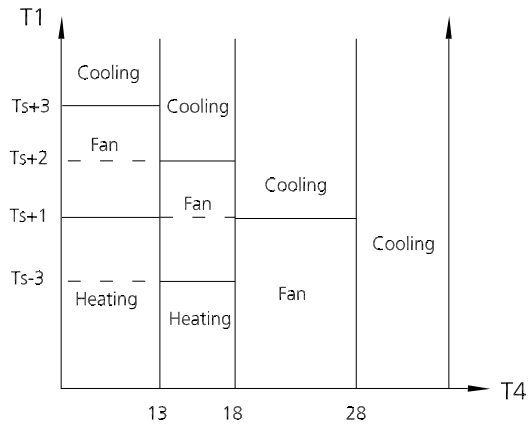
| ΔT | Running mode |
|---|---|
| ΔT>2°C(3.6°F) | Cooling |
| -3℃(-5.4°F)≤ΔT≤2°C(3.6°F) | Fan-only |
| ΔT<-3°C(-5.4°F) | Heating* |

Heating*: In auto mode, cooling only models run the fan

- Indoor fan will run at auto fan speed.
- The louver operates same as in relevant mode.
- If the machine switches mode between heating and cooling, the compressor will keep stopping for certain time and then choose mode according to **Δ**T.

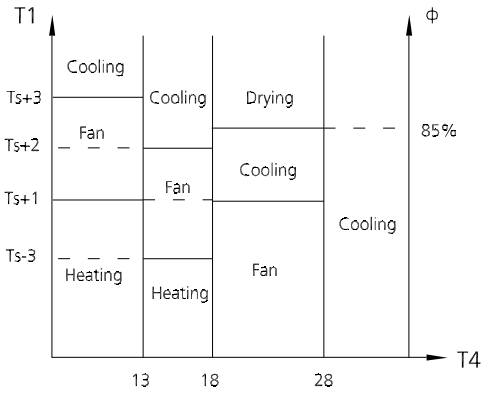
Case 2:

In auto mode, the machine selects cooling, heating or fan-only mode on the basis of T1,Ts and T4.




Case 3:

In auto mode, the machine selects cooling, heating or fan-only mode on the basis of T1,Ts, T4 and relative humidity(φ).



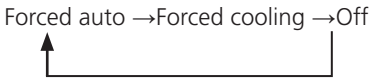

## 3.7 Drying mode

- In drying mode, AC operates the same as auto fan in cooling mode.
- All protections are activated and operate the same as they do that in cooling mode.
- Low Room Temperature Protection

If the room temperature is lower than 10°C/50°F, the compressor ceases operations and does not resume until room temperature exceeds 12°C/53.6°F.

## 3.8 Forced operation function

Press the AUTO/COOL button, the AC will run as below sequence:




- Forced cooling mode:

The compressor and outdoor fan continue to run and the indoor fan runs at breeze speed. After running for 30 minutes, the AC will switch to auto mode with a preset temperature of 24°C(76°F).

- Forced auto mode:

Forced auto mode operates the same as normal auto mode with a preset temperature of 24°C(76°F).

- The unit exits forced operation when it receives the following signals:
  - Switch off
  - Changes in:
    - mode
    - fan speed
    - sleep mode
    - Follow me

## 3.9 Timer Function

- The timing range is 24 hours.
- Timer On. The machine turns on automatically at the preset time.
- Timer Off. The machine turns off automatically at the preset time.
- Timer On/Off. The machine turns on automatically at the preset On Time, and then turns off automatically at the preset Off Time.
- Timer Off/On. The machine turns off automatically at the preset Off Time and then turns on automatically at the preset On Time.
- The timer does not change the unit operation mode. If the unit is off now, it does not start up immediately after the "timer off" function is set. When the setting time is reached, the timer LED switches off and the unit running mode remains unchanged.
- The timer uses relative time, not clock time

## 3.10 Sleep function

- The sleep function is available in cooling, heating, or auto mode.
- The operational process for sleep mode is as follows:
  - When cooling, the temperature rises 1°C/1.8°F (to not higher than 30°C/86°F) every hour. After 2 hours, the temperature stops rising and the indoor fan is fixed at low speed.
  - When heating, the temperature decreases 1°C/1.8°F(to not lower than 16°C/60.8°F) every hour. After 2 hours, the temperature stops decreasing and the indoor fan is fixed at low speed. Anti-cold wind function takes priority.
- The operating time for sleep mode is 8 hours, after which, the unit exits this mode.
- The timer setting is available in this mode.

## 3.11 Auto-Restart function

- The indoor unit has an auto-restart module that allows the unit to restart automatically. The module automatically stores the current settings and in the case of a sudden power failure, will restore those setting automatically within 3 minutes after power returns.

# 4. Optional Functions

## 4.1 8°C Heating(Heat pump units)

In heating mode, the temperature can be set to as low as 8°C, preventing the indoor area from freezing if unoccupied during severe cold weather.

## 4.2 Follow me

- If you press "Follow Me" on the remote, the indoor unit will beep. This indicates the follow me function is active.
- Once active, the remote control will send a signal every 3 minutes, with no beeps. The unit automatically sets the temperature according to the measurements from the remote control.
- The unit will only change modes if the information from the remote control makes it necessary, not from the unit's temperature setting.
- If the unit does not receive a signal for 7 minutes or you press "Follow Me," the function turns off. The unit regulates temperature based on its own sensor and settings.

## 4.3 Silence

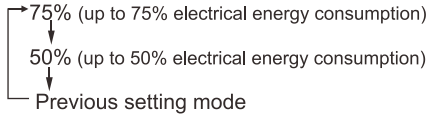
- Press "Silence" or keep pressing Fan button for more than 2 seconds on the remote control to enable the SILENCE function. While this function is active, the compressor frequency is maintained at a lower level than F3. The indoor unit will run at faint breeze(1%), which reduces noise to the lowest possible level.
- When match with multi outdoor unit, this function is disabled.

## 4.4 ECO Function

- Used to enter the energy efficient mode.
  - Under cooling mode, press ECO button, the remote controller will adjust the temperature automatically to 24°C/75°F, fan speed of Auto to save energy (but only if the set temperature is less than 24°C/75°F). If the set temperature is more than 24°C/75°F and 30°C/86°F, press the ECO button, the fan speed will change to Auto, the set temperature will remain unchanged.
- When pressing the ECO button, or modifying the mode or adjusting the set temperature to less than 24°C/75°F, the AC will quit the ECO operation.
- Operation time in ECO mode is 8 hours. After 8 hours the AC quits this mode.

## 4.5 Electrical energy consumption control function (Optional)

Press the "Gear" button on remote controller to enter the energy efficient mode in a sequence of following:




Turn off the unit or activate ECO, sleep, Super cool, 8°C Heating, Silence or self clean function will quit this function.

## 4.6 Breeze Away function (for some models)

- This feature avoids direct airflow blowing on the body and makes you feel indulging in silky coolness.
- NOTE: This feature is available under cooling mode, fan-only mode and drying mode.

## 4.7 Active Clean function

- The Active Clean Technology washes away dust, mold, and grease that may cause odors when it adheres to the heat exchanger by automatically freezing and then rapidly thawing the frost. The internal wind wheel then keeps operating to blow-dry the evaporator, thus preventing the growth of mold and keeping the inside clean.
- When this function is turned on, the indoor unit display window appears "CL", after 20 to 45 minutes, the unit will turn off automatically and cancel Active Clean function.

# 5. Remote Controller Functions

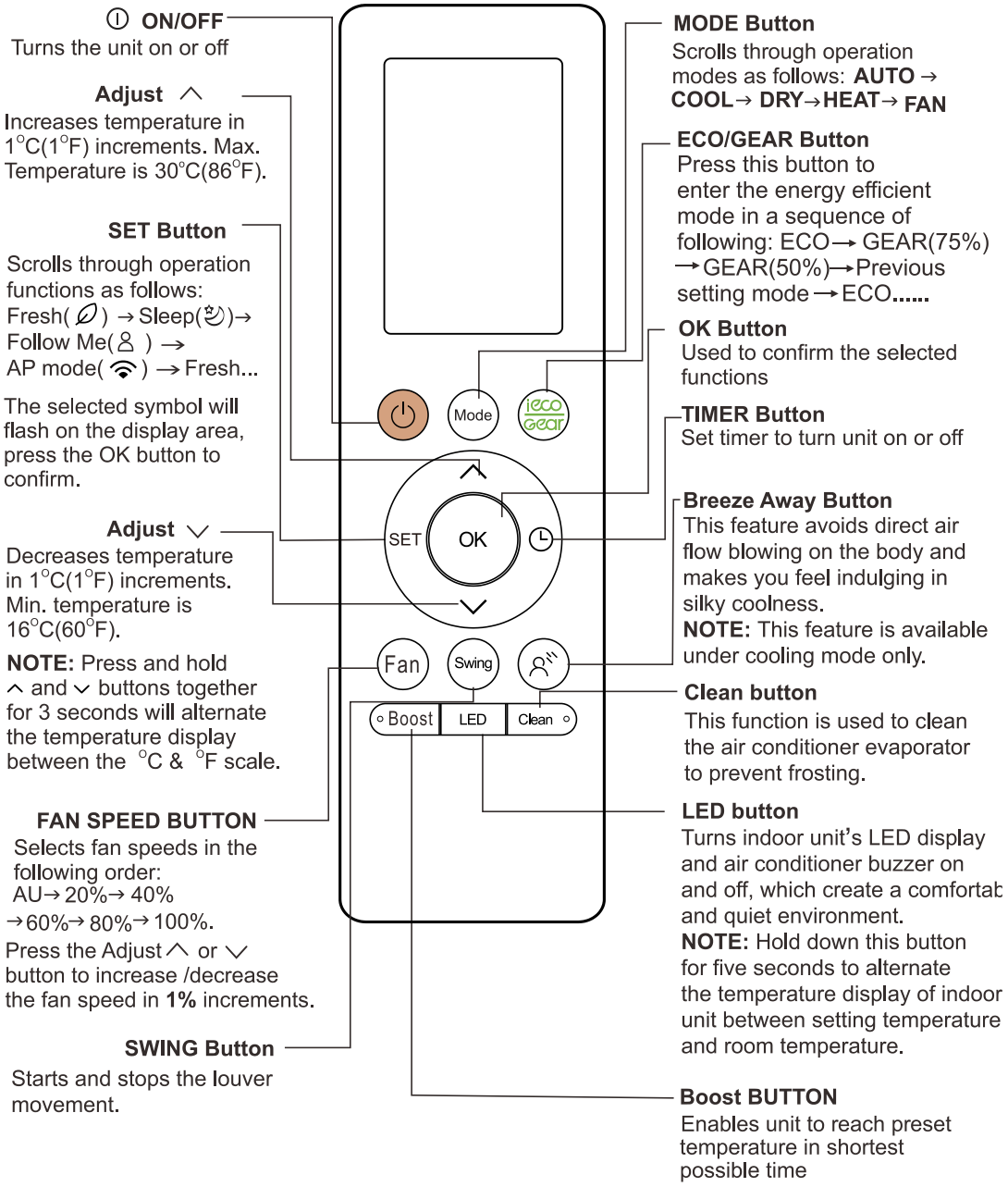
## 5.1 Infrared Wireless Remote Controller

### 5.1.1 RG10A(B2S)/BGEF (Standard for some units)

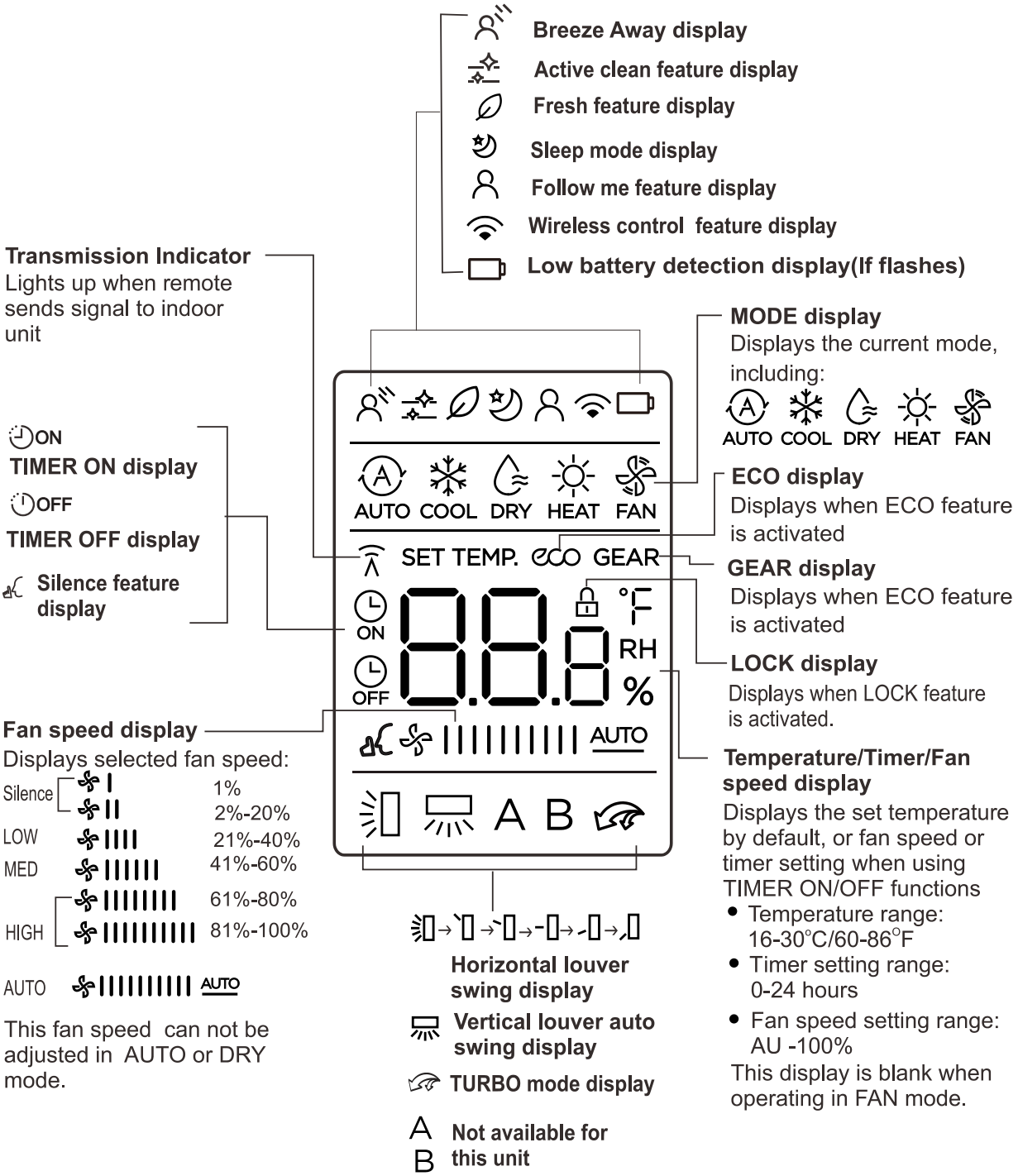
**Remote Controller Specifications**

| Model | RG10A(B2S)/BGEF |
|---|---|
| Rated Voltage | 3.0V (Dry batteries R03/LR03×2) |
| Reaching Distance | 8m |
| Environment Temperature Range | -5°C~60°C(23°F~140°F) |

**Buttons and Functions**



**Remote LCD Screen Indicators**




## Note:

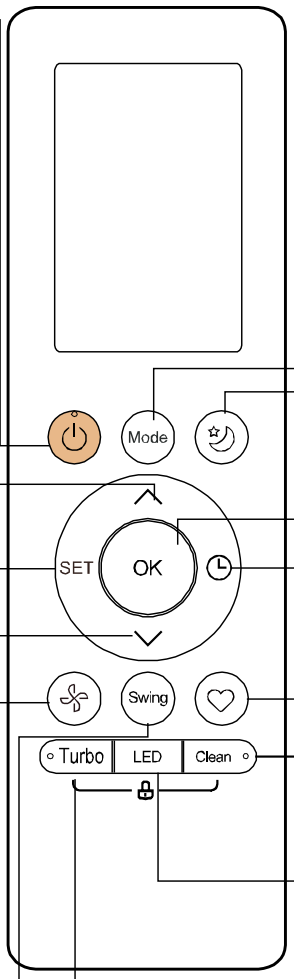
All indicators shown in the figure are for the purpose of clear presentation. But during the actual operation, only the relative function signs are shown on the display window.

### 5.1.2 RG10B(B2)/BGEF (Standard for some units)

**Remote Controller Specifications**

| Model | RG10B(B2)/BGEF |
|---|---|
| Rated Voltage | 3.0V (Dry batteries R03/LR03×2) |
| Reaching Distance | 8m |
| Environment Temperature Range | -5°C~60°C(23°F~140°F) |

**Buttons and Functions**




**ON/OFF**
Turns the unit on or off.

**TEMP ∧**
Increases temperate in 1°C (1°F) increments. Max. temperature is 30°C (86°F).
NOTE: Press together ∨& ∧ buttons at the same time for 3 seconds will alternate the temperature display between the °C & °F.

**SET**
Scrolls through operation functions as follows:
Fresh( ) →Follow Me( )
AP mode( ) → Fresh ....
The selected symbol will flash on the display area, press the OK button to confirm.

**TEMP ∨**
Decreases temperature in 1°C(1°F) increments. Min. temperature is 16°C(60°F).

**FAN SPEED**
Selects fan speeds in the following order:
AUTO → LOW→ MED→ HIGH
NOTE: Holding this button down for 2 seconds will activate Silence feature.

**SWING**
Starts and stops the horizontal louver movement. Hold down for 2 seconds to initiate vertical louver auto swing feature (some units).

**MODE**
Scrolls through operation modes as follows: **AUTO → COOL → DRY → HEAT → FAN**
**NOTE:** HEAT mode is not supported by the cooling only appliance.

**SLEEP**
Saves energy during sleeping hours.

**OK**
Used to confirm the selected functions

**TIMER**
Set timer to turn unit on or off.

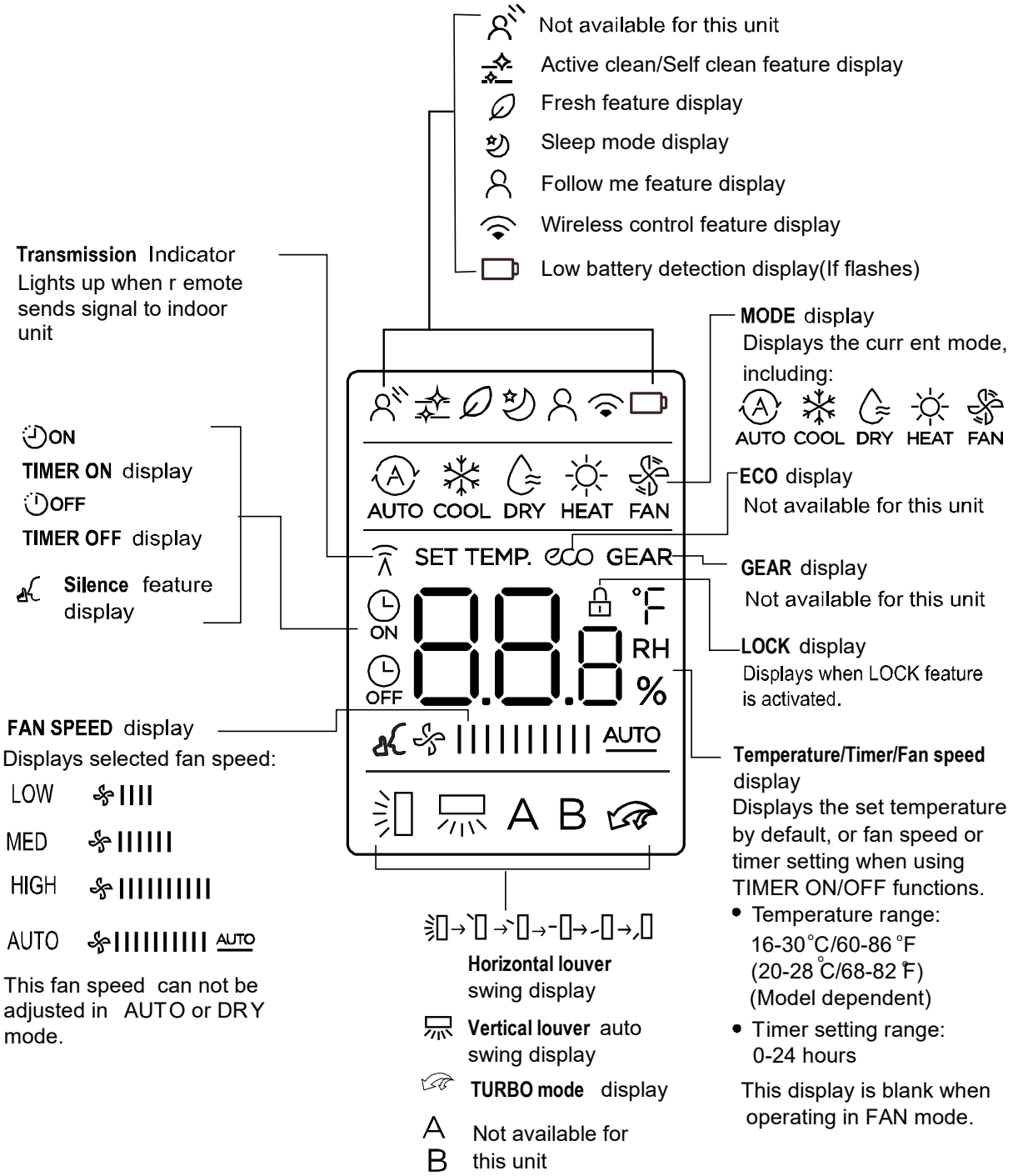
**SHORTCUT**
Used to restore the current settings or resume previous settings.

**CLEAN**
Used to start/stop the Self Clean or Active Clean function.

**LED**
Turns indoor unit's LED display and air conditioner buzzer on ar off (modeldependent), which create a comfortable and quiet environment.

**Turbo**
Enables unit to reach preset temperature in shortest possible time

**Remote LCD Screen Indicators**




## Note:

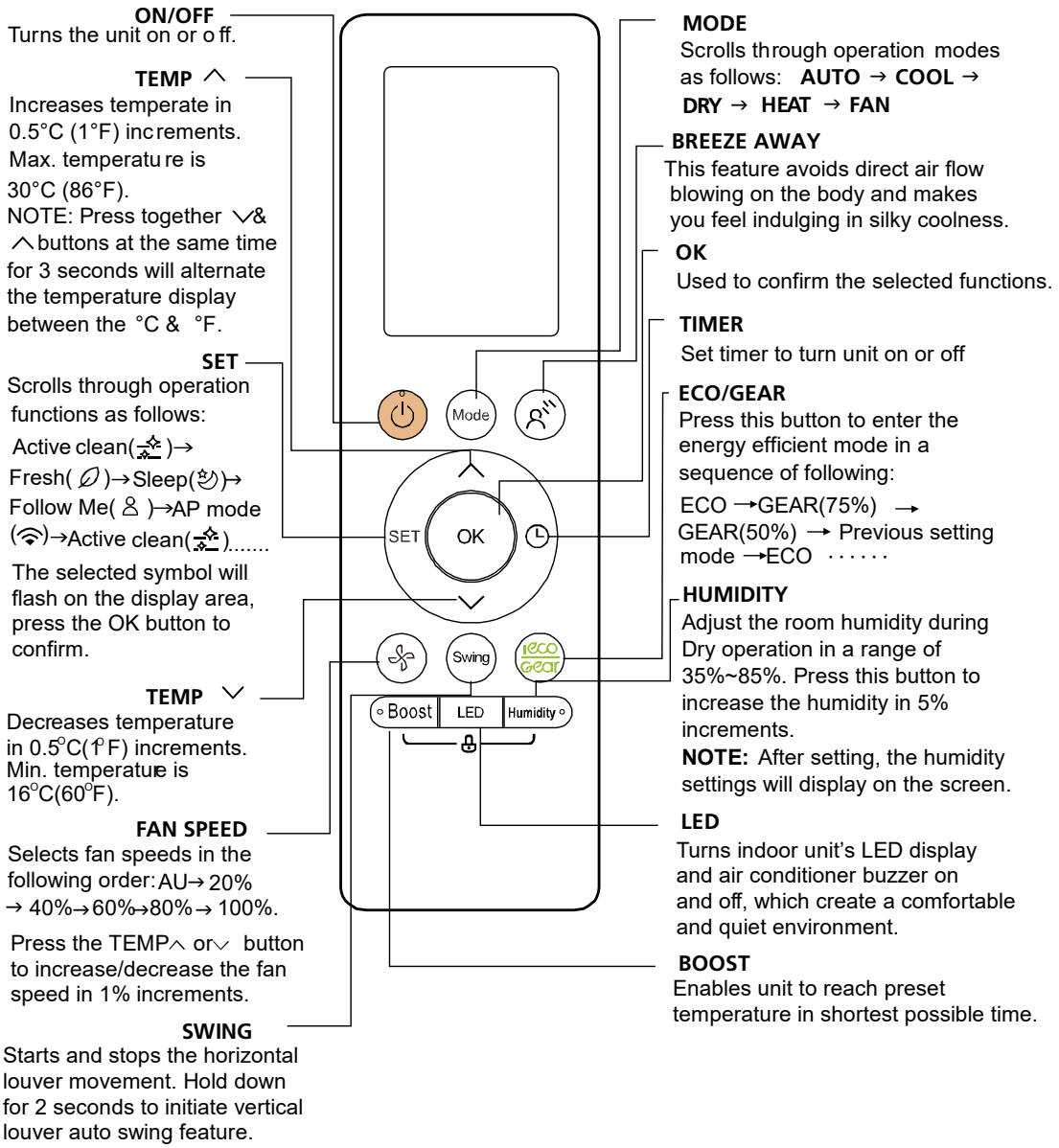
All indicators shown in the figure are for the purpose of clear presentation. But during the actual operation, only the relative function signs are shown on the display window.

### 5.1.3 RG10L3(2HS)/BGEFU1 (Standard for some units)

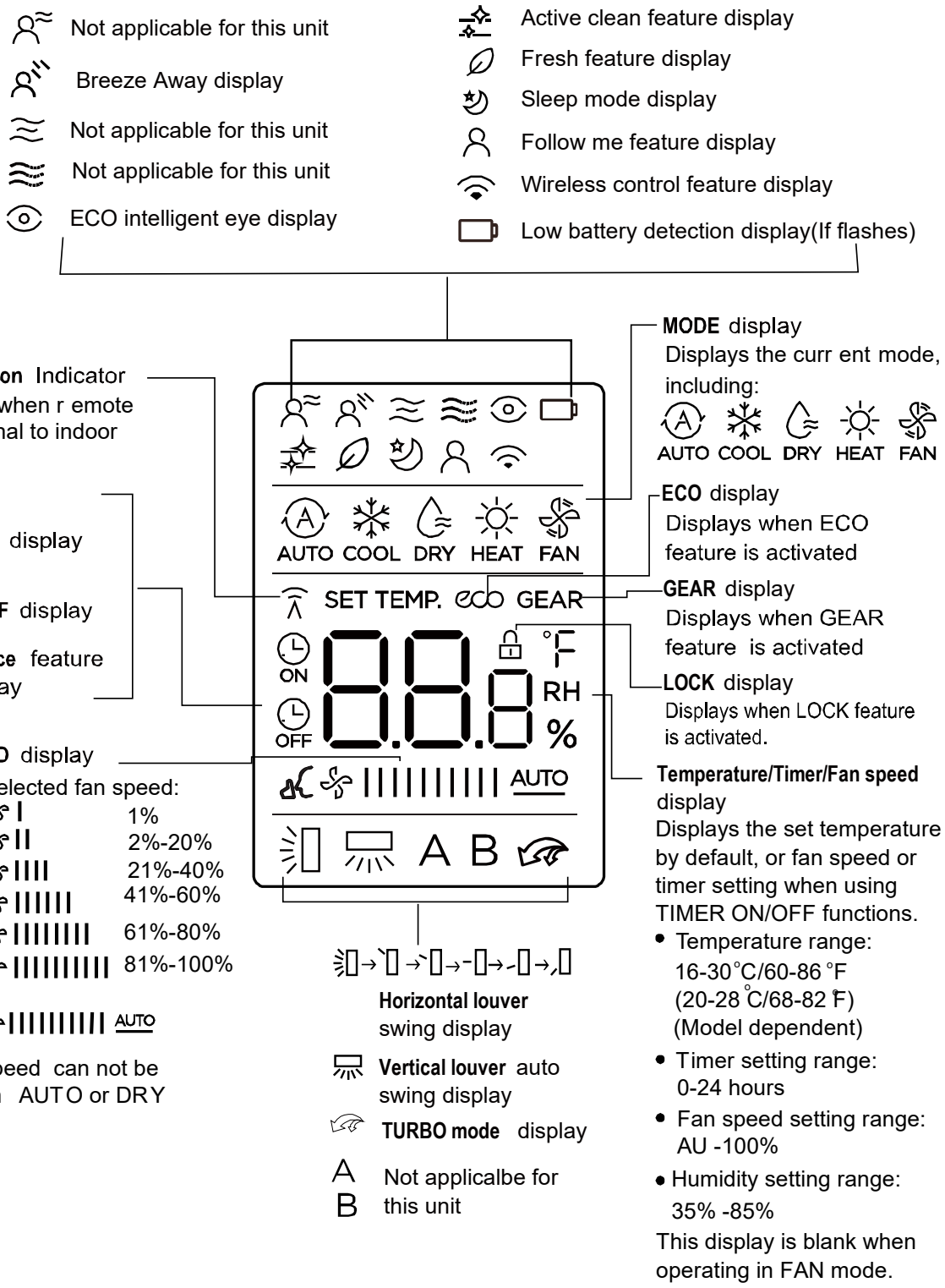
**Remote Controller Specifications**

| Model | RG10L3(2HS)/BGEFU1 |
|---|---|
| Rated Voltage | 3.0V (Dry batteries R03/LR03×2) |
| Reaching Distance | 8m |
| Environment Temperature Range | -5°C~60°C(23°F~140°F) |

**Buttons and Functions**



**Remote LCD Screen Indicators**




## Note:

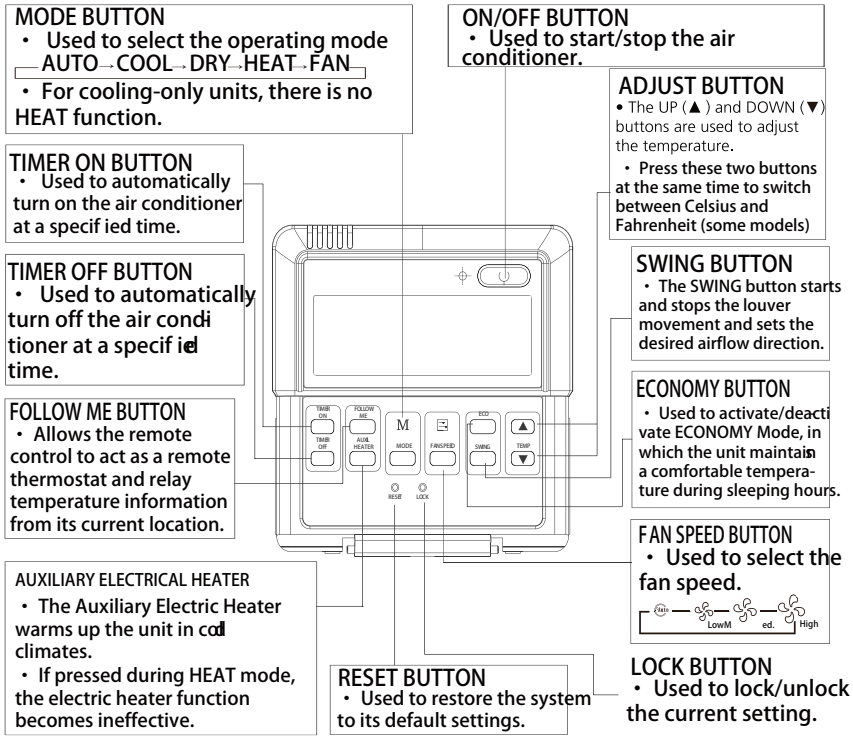
All indicators shown in the figure are for the purpose of clear presentation. But during the actual operation, only the relative function signs are shown on the display window.

## 5.2 LCD Wired Remote Controller

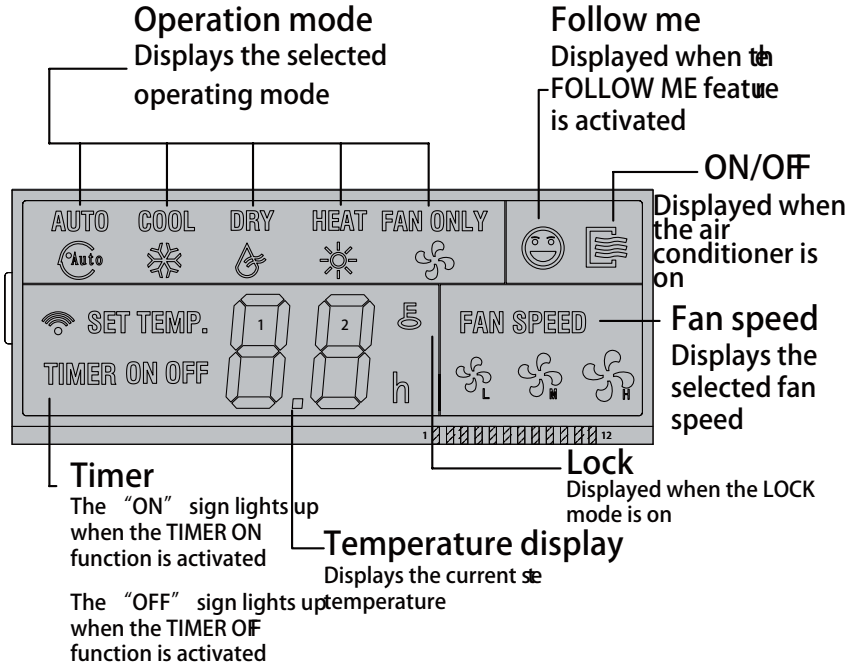
### 5.2.1 LCD Wired Remote Controller KJR-12B/DP(T)

The KJR-12B/DP(T) wired remote controller is standard for Duct type and is optional for some types.

#### i) Buttons and Functions

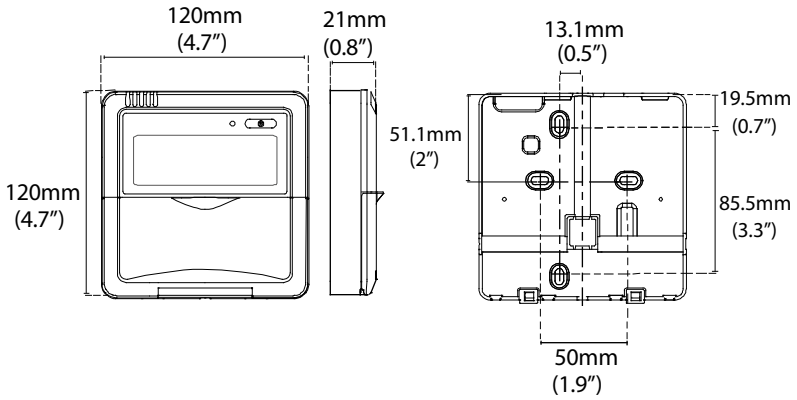



#### ii) LCD Screen



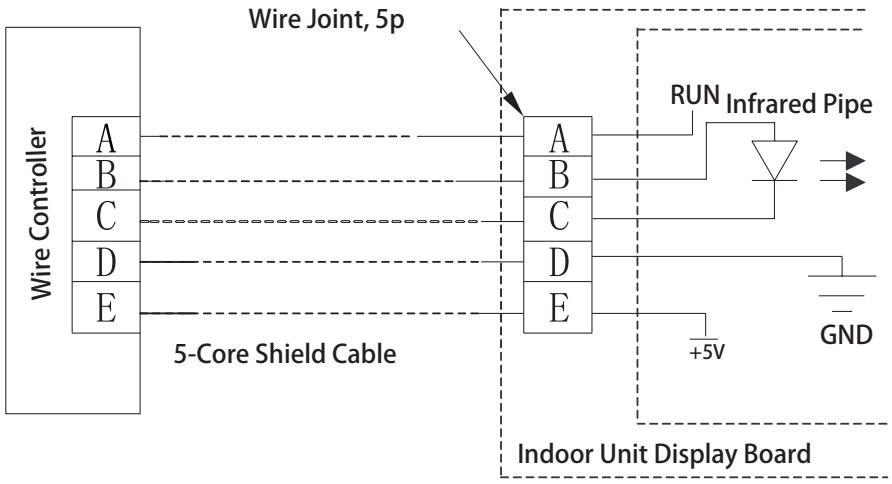
### iii) Installation

- **Dimensions**



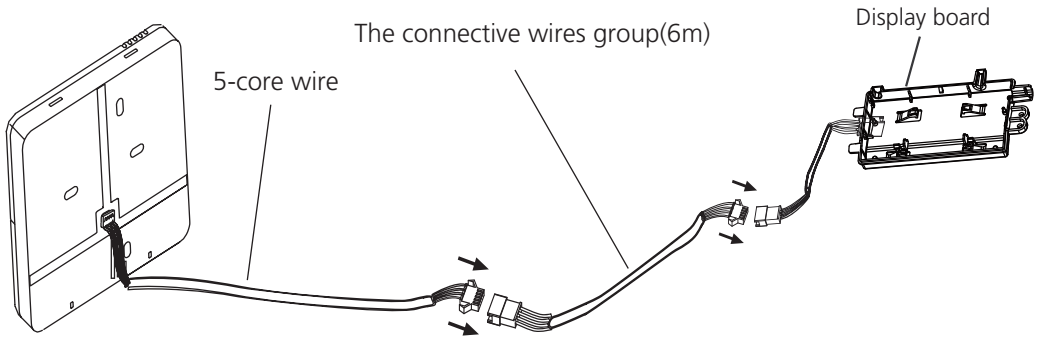

- **Wiring diagram**

Refer to the following diagram to wire the wall-mounted remote control to the indoor unit.

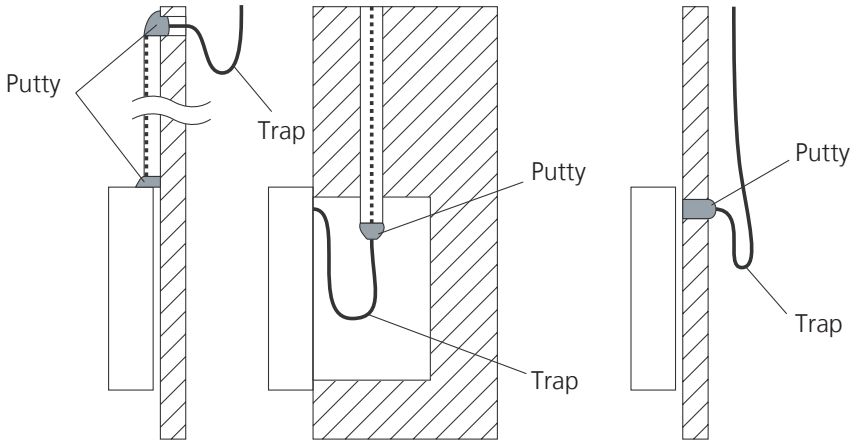



- **Installation Diagram**

Connect the wire from the display panel of the indoor unit to a connecting cable. Then connect the other side of the connecting cable to the remote control.

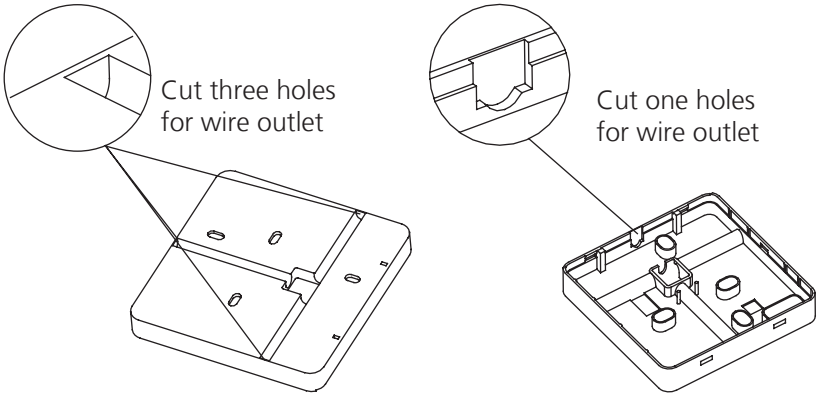



**Note:** Be sure to reserve a length of the connecting wire for periodic maintenance.

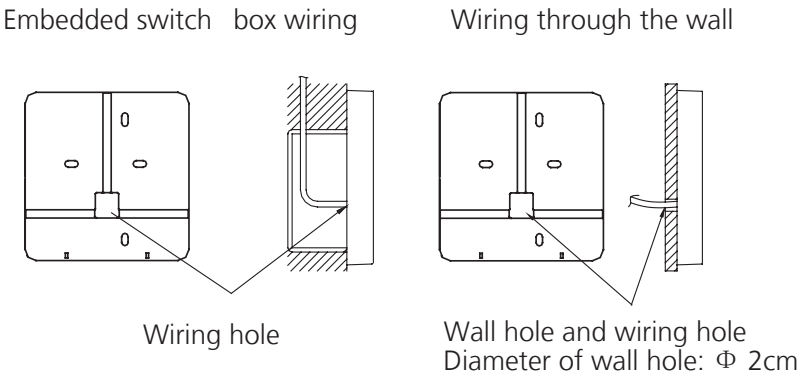



**Note: DO NOT** allow water to enter the remote control. Use the trap and putty to seal the wires.

- **For exposed mounting, cut holes on four of the sides according to the picture below.**



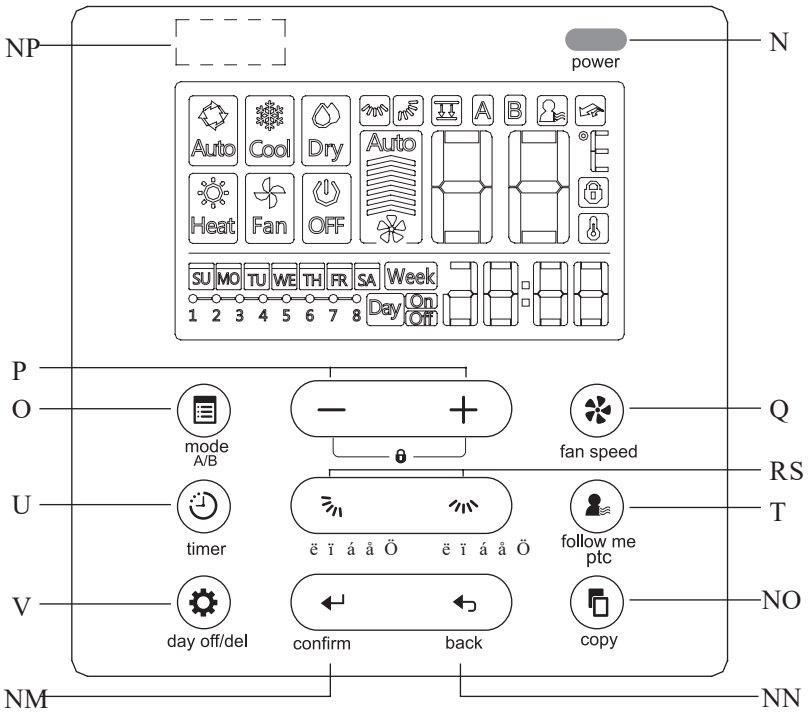

- **For shielded wiring, please refer to the picture below.**



### 5.2.2 LCD Wired Remote Controller KJR-120C/TF-E(Optional)

The KJR-120C/TF-E wired remote controller is optional for some types.

**i) Buttons and Functions**




1. POWER button

Turn on of turn off the unit.

2. MODE(A/B) button

Used to select the operation mode: Auto / Cooling / Drying / Heating / Fan;

Hold to active the operation of auto-lifting panel when off

3. Adjust button

To set temperature, time and timer; set up or down the auto-lifting panel

4. FAN SPEED button

Used to select the fan speed.

5. Up-down airflow direction and swing Button

Press for adjusting the angel of louver, hold for vertical swing; individual louver control for cassette panel

6. Left-right airflow swing Button

Press for stop or start the horizontal swing

7. FOLLOW ME(PTC) button

Allows the remote control to act as a remote thermostat and send temperature information from its current location.

8. TIMER button

To set timer on and timer off time of one day

9. DELAY/DAY OFF button

To set 1 to 2 hours delay off for each day or a whole day off in a weekly timer schedule

10. CONFIRM button

To confirm an setting or call up the menu

11. BACK button

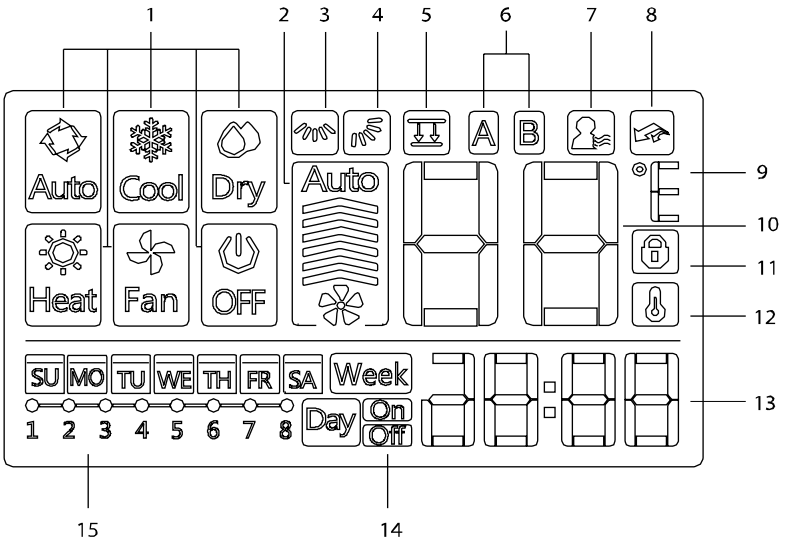
Back to previous operation or superior menu

12. COPY button

Copy timer setting of one day to another in weekly schedule setting

13 Infrared remote receiver (on some models)

**ii) LCD Screen**




1 Operation mode indication

2 Fan speed indication

3 Left-right swing indication

4 Up-down swing indication

5 Faceplate function indication

6 Main unit and secondary unit indication

7 Follow me function indication

8 PTC function indication

9 C° / F° indication

10 Temperature display

11 Lock indication

12 Room temperature indication

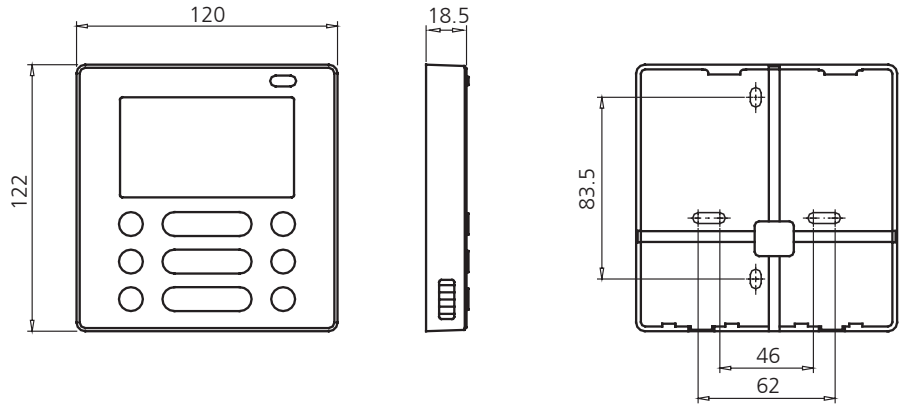
13 Clock display

14 On/Off timer

15 Timer display

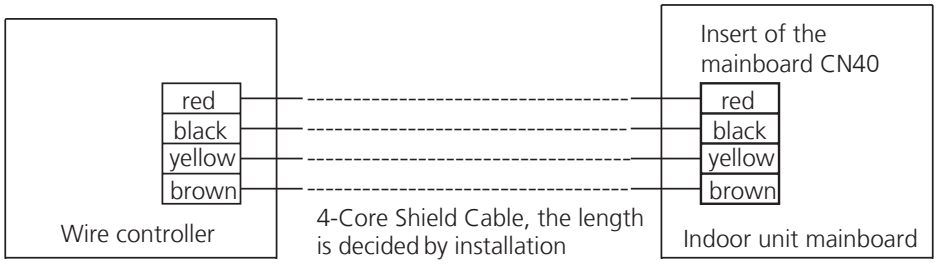
### iii) Installation

- **Dimensions**



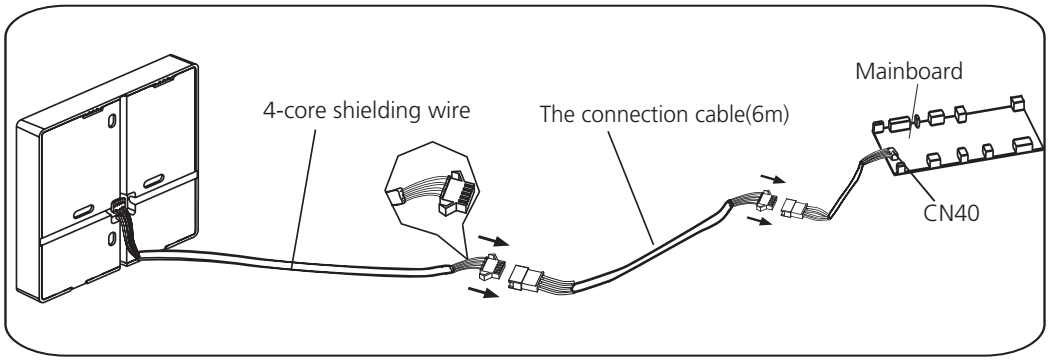

- **Wiring diagram**

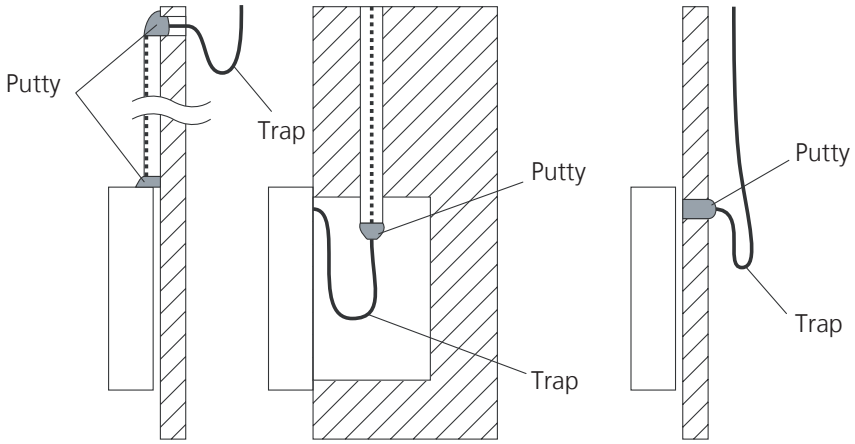
Refer to the following diagram to wire the wall-mounted remote control to the indoor unit.




- **Installation Diagram**

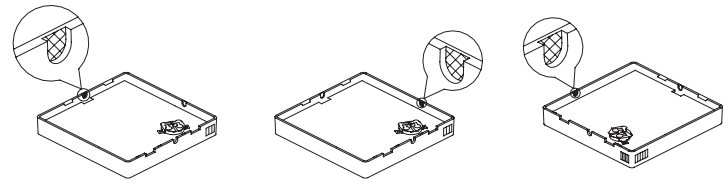
Connect the female joint of wires group from the main board with the male joint of connective wires group. Then connect the other side of connective wires group with the male joint of wires group leads from wire controller.






**Note: DO NOT** allow water to enter the remote control. Use the trap and putty to seal the wires.

- **For exposed mounting, four outletting positions. There are three need cutting.**

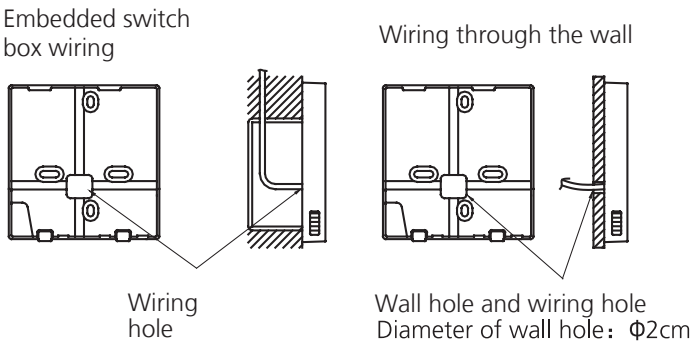


Cutting place of top side wire outlet

Cutting place of left side wire outlet

Cutting place of right side wire outlet

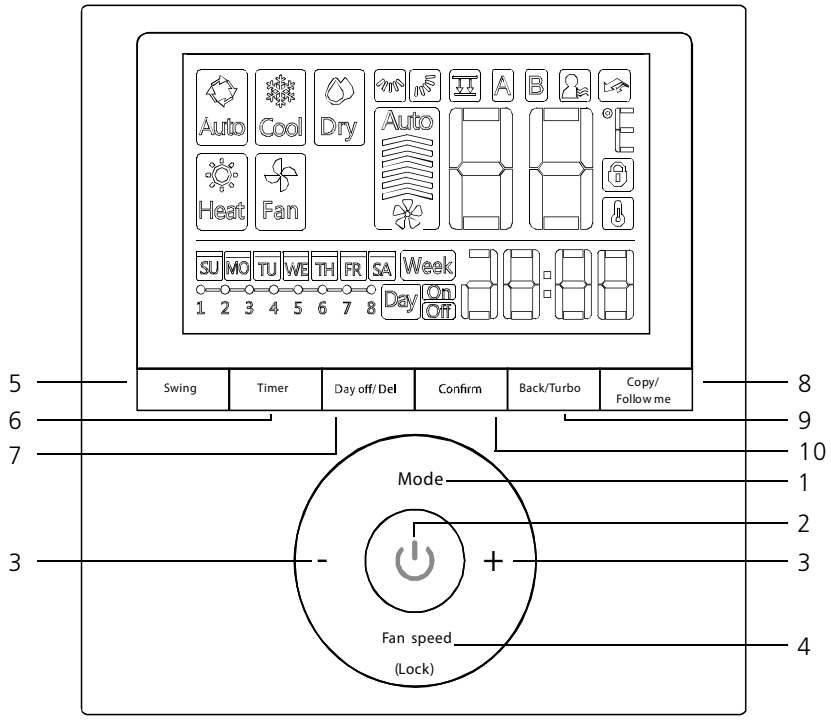
- **For shielded wiring, please refer to the picture below.**



### 5.2.3 LCD Wired Remote Controller KJR-120G/TF-E(Optional)

The KJR-120G/TF-E wired remote controller is optional for some types.

**i) Buttons and Functions**




1 MODE button

Used to select the operation mode: Auto / Cooling / Drying / Heating / Fan;

Hold to active the operation of auto-lifting panel when off

2. POWER button

Turn on of turn off the unit.

3. Adjust button

To set temperature, time and timer; set up or down the auto-lifting panel

4. FAN SPEED button

Used to select the fan speed.

5. Swing Button

Press to active vertical swing, hold for horizontal swing

6. TIMER button

To set timer on and timer off time of one day

7. DELAY/DAY OFF button

To set 1 to 2 hours delay off for each day or a whole day off in a weekly timer schedule

8. COPY/FOLLOW ME button

To copy timer setting of one day to another in weekly schedule setting;

To active the follow me function while in normal operation.

9. BACK/TURBO button

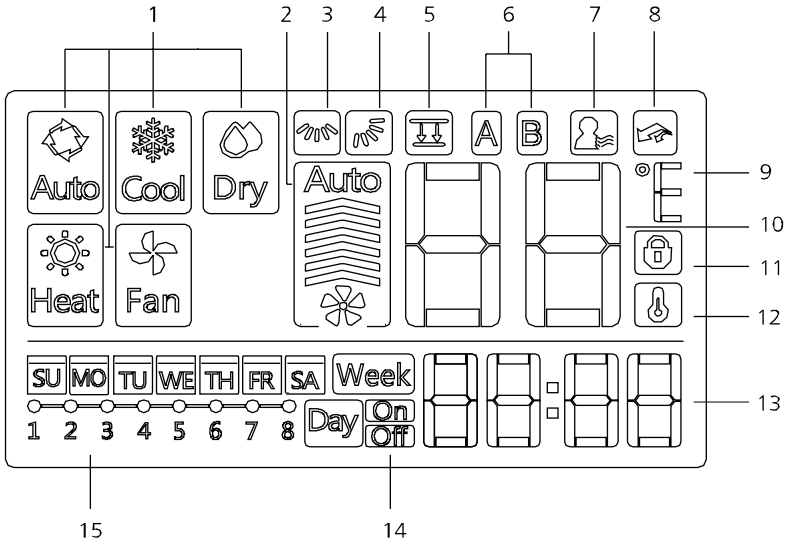
Back to previous operation or superior menu

To active turbo mode while in normal operation

10. CONFIRM button

To confirm an setting or call up the superior menu

**ii) LCD Screen**




1 Operation mode indication

2 Fan speed indication

3 Left-right swing indication

4 Up-down swing indication

5 Faceplate function indication

6 Main unit and secondary unit indication

7 Follow me function indication

8 Turbo/PTC function indication

9 C° / F° indication

10 Temperature display

11 Lock indication

12 Room temperature indication

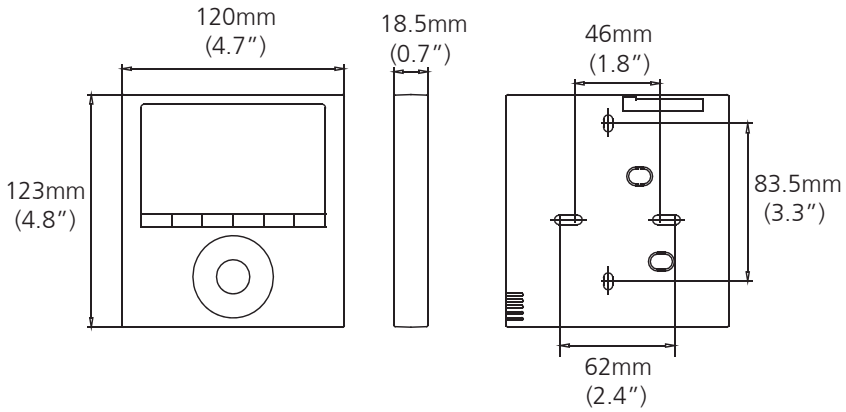
13 Clock display

14 On/Off timer

15 Timer display

### iii) Installation

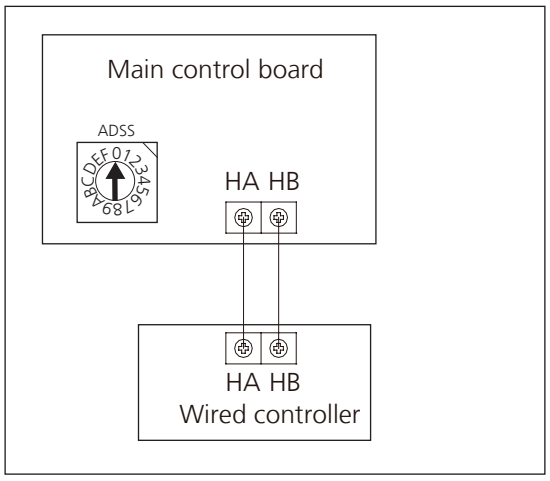
- **Dimensions**



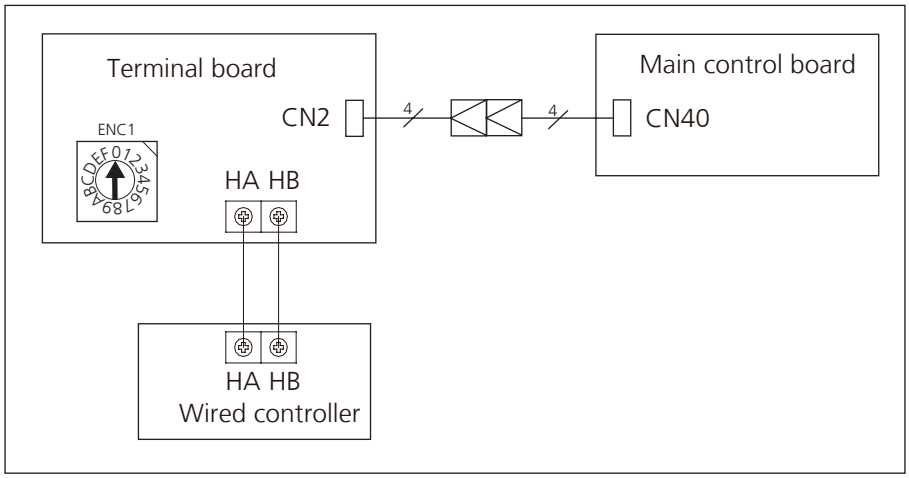

- **Wiring diagram**

1) Connection

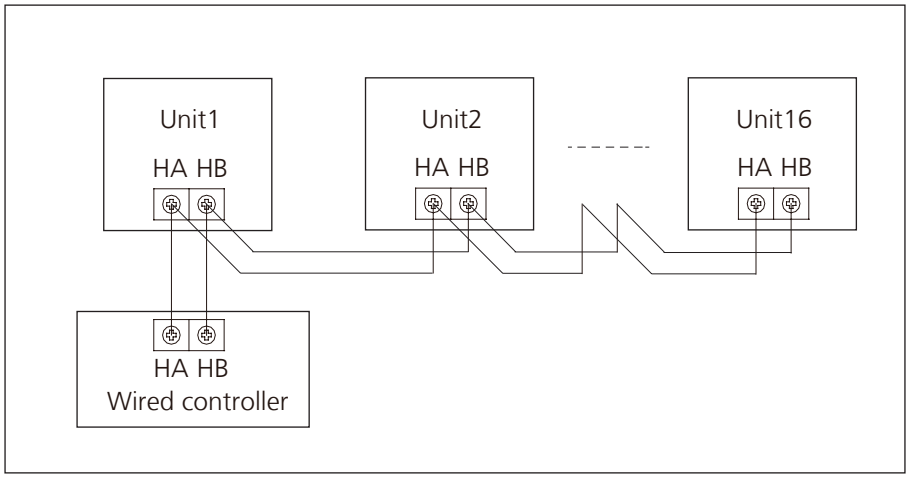
For Cassette: The wired controller connects to main control board directly.




For Duct, Ceiling& floor: The wired controller connects to terminal board, terminal board connects to main control board.



2) Address setting

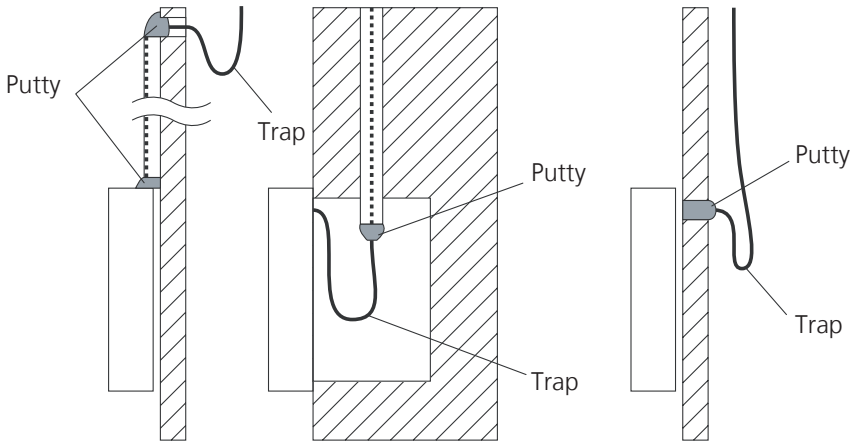



a. One non-polarity controller can control up to 16 indoor units.

b. When the non-polarity controller is connected to several units, every air-conditioner in network has only one network address to distinguish each other.

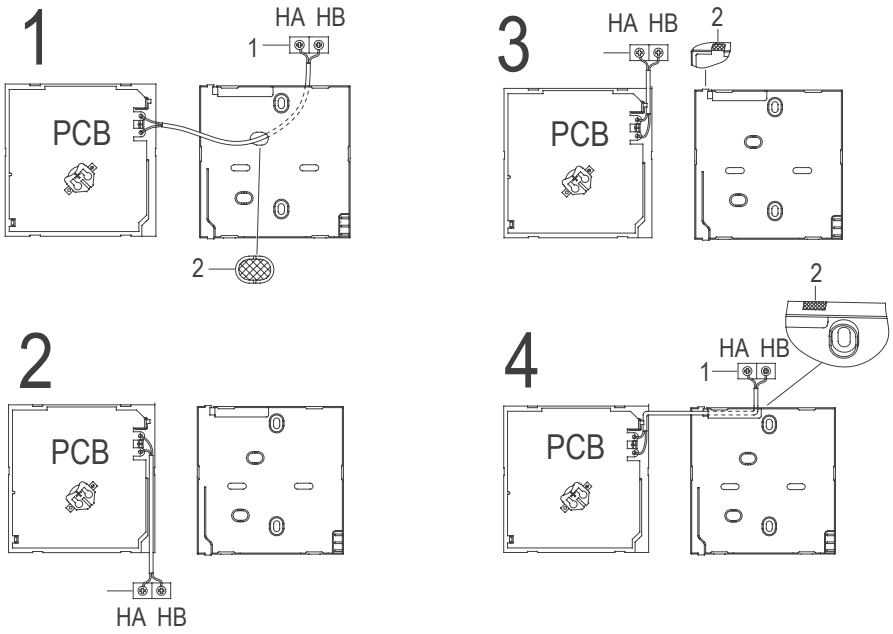
c. Address code of air-conditioner in LAN is set by code switch ENC1(Duct and Ceiling& Floor) or ADSS(Cassette) of the indoor unit, and the set range is 0-15.

d. Note: The indoor units are controlled at the same time, not independently. The purpose of setting network address is identify the unit when error occurs.




**Note: DO NOT** allow water to enter the remote control. Use the trap and putty to seal the wires.

- **For wiring the indoor unit, there are four methods:**
  - From the rear;
  - From the bottom;
  - From the top;
  - From the top center.

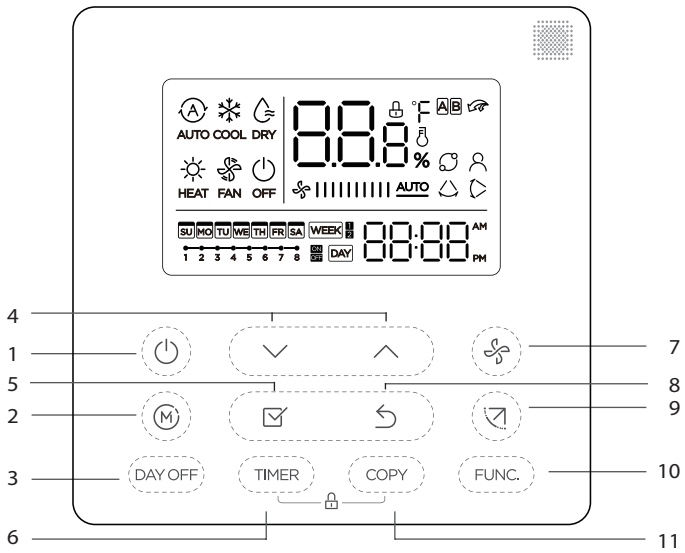



- 1: Indoor Unit.
- 2: Notch the part for the wiring to pass through with a nipper tool.
- Connect the terminals on the remote controller (HA ,HB), and the terminals of the indoor unit. (HA ,HB). (HA and HB do not have polarity.)

### 5.2.4 LCD Wired Remote Controller KJR-120X/TFBG-E(Optional)

The KJR-120X/TFBG-E wired remote controller is optional for some types.

**i) Buttons and Functions**




1. POWER button

Turn on of turn off the unit.

2 MODE button

Used to select the operation mode: Auto / Cooling / Drying / Heating / Fan;

3. DAY OFF/DEL button

To set 1 to 2 hours delay off for each day or a whole day off in a weekly timer schedule.

4. Adjust button

To set temperature, time and timer

5. CONFIRM button

To confirm an setting or call up the superior menu

6. TIMER button

To set timer on and timer off time of one day 7. FAN SPEED button

Used to select the fan speed.

8. BACK button

Back to previous operation or superior menu

9. Swing Button

Press to active vertical swing, hold for horizontal swing

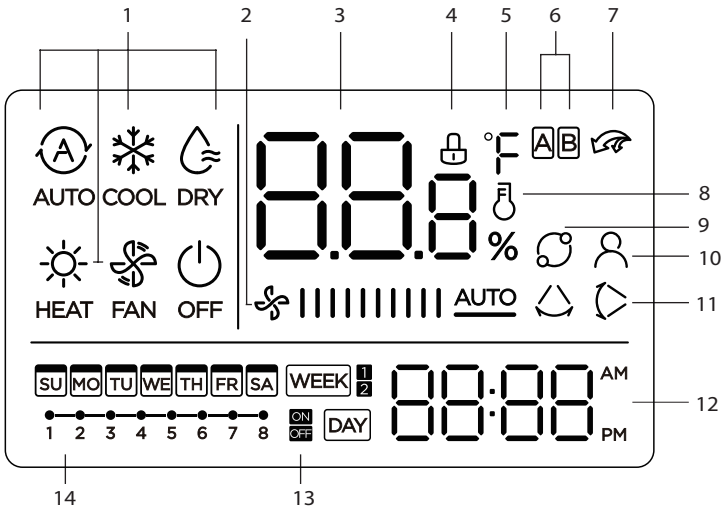
10. FUNC. button

Press the FUNC. button to set the turbo or rotating or Ifeel function.

11. COPY button

To copy timer setting of one day to another in weekly schedule setting.

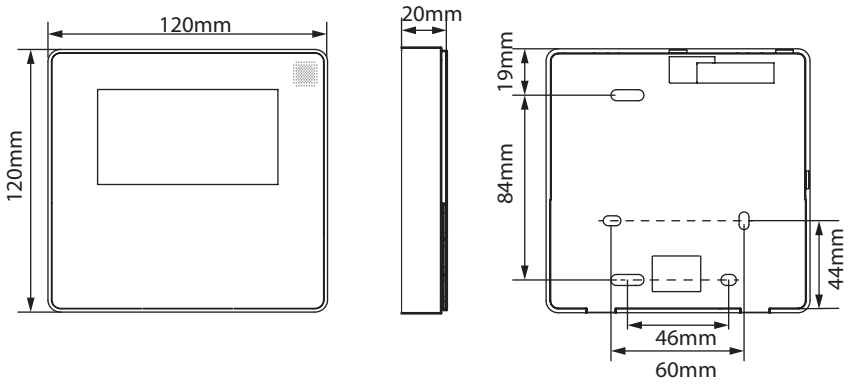
**ii) LCD Screen**




1 Operation mode indication
2 Fan speed indication
3 Temperature display
4 Lock indication
5 °C / °F indication
6 Main unit and secondary unit indication
7 Turbo function indication
8 Room temperature indication
9 Rotating indication
10 Follow Me function indication
11 Left-right swing indication (some models)
12 Clock display
13 On/Of timer
14 Timer display

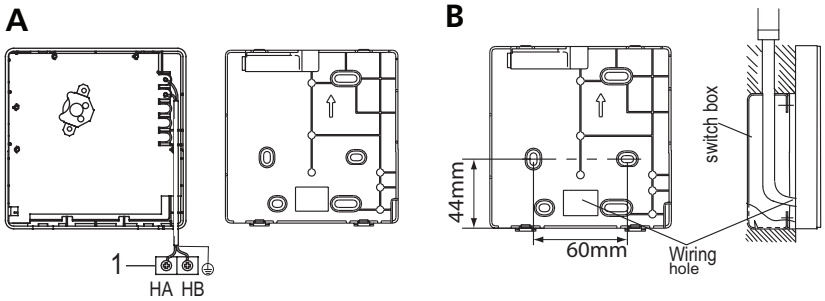
### iii) Installation

- **Dimensions**



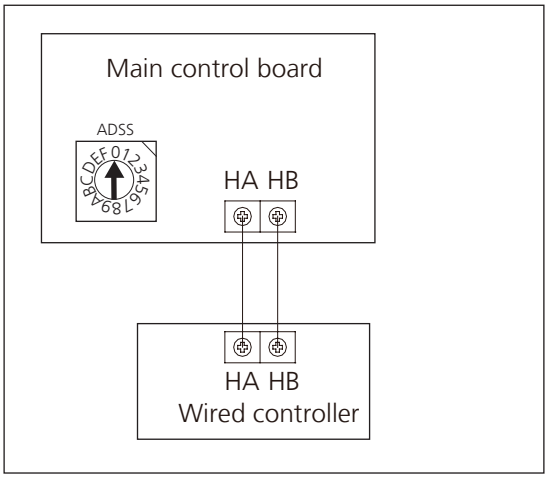

3) Connection

- **Wire with the indoor unit:**

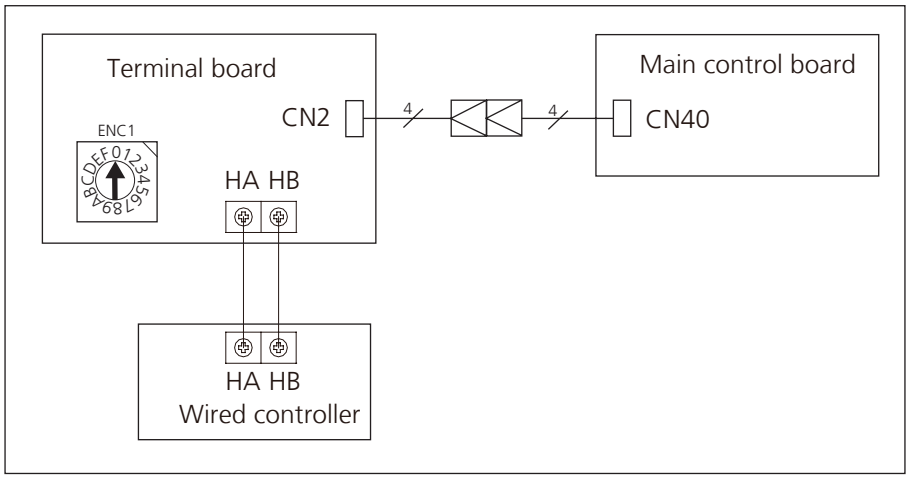



- 1: Indoor Unit.
- 2: Notch the part for the wiring to pass through with a nipper tool.
- Connect the terminals on the remote controller (HA ,HB), and the terminals of the indoor unit. (HA ,HB). (HA and HB do not have polarity.)

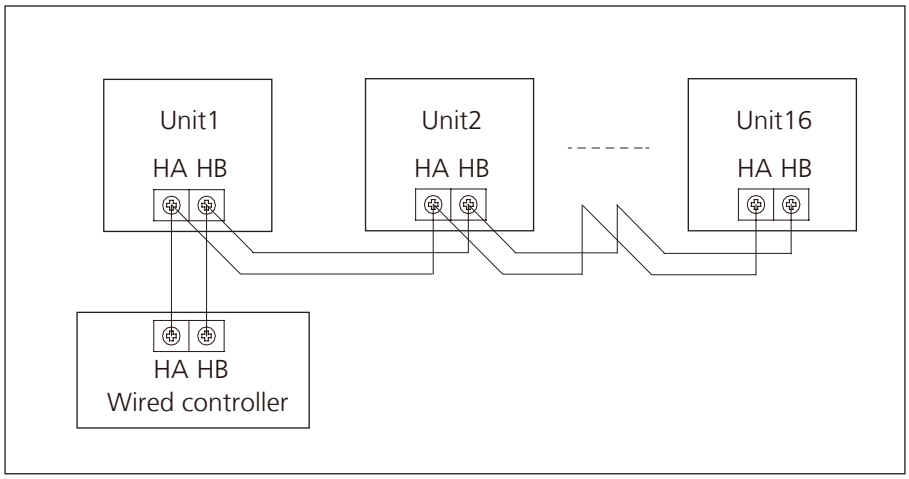
For some models: The wired controller connects to main control board directly.



For some models: The wired controller connects to terminal board, terminal board connects to main control board.




4) Address setting

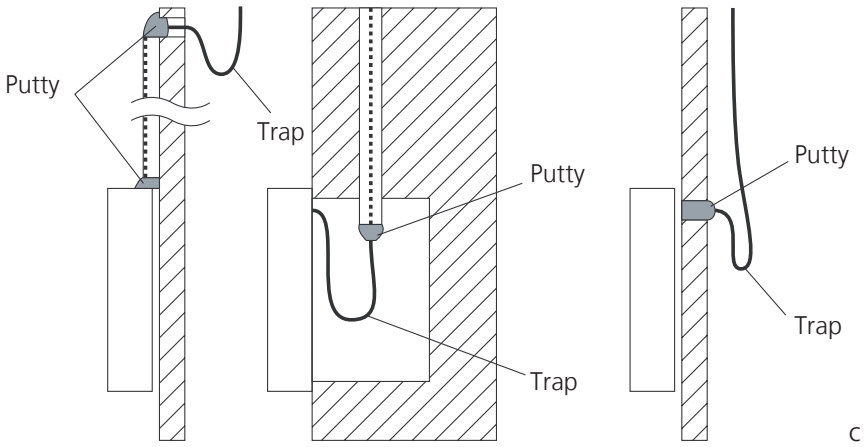



a. One non-polarity controller can control up to 16 indoor units.

b. When the non-polarity controller is connected to several units, every air-conditioner in network has only one network address to distinguish each other.

c. Address code of air-conditioner in LAN is set by code switch ENC1(Duct and Ceiling& Floor) or ADSS(Cassette) of the indoor unit, and the set range is 0-15.

d. Note: The indoor units are controlled at the same time, not independently. The purpose of setting network address is identify the unit when error occurs.

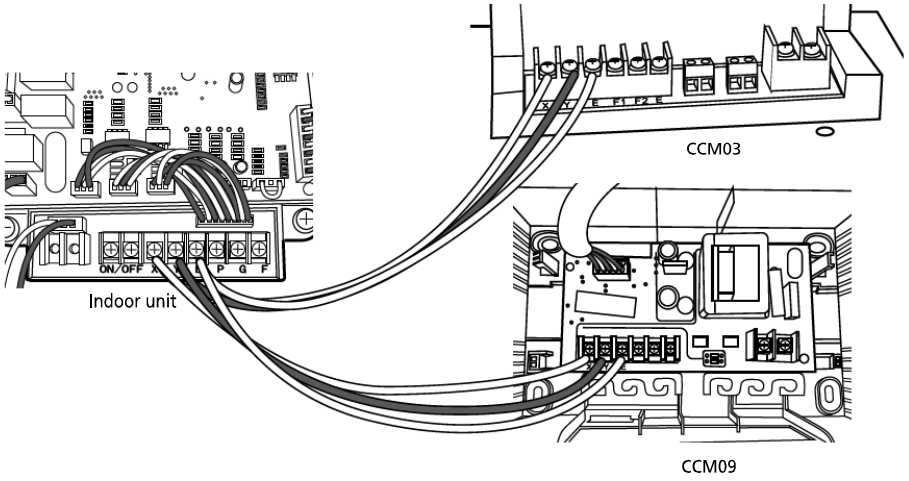



**Note: DO NOT** allow water to enter the remote control. Use the trap and putty to seal the wires.

## 5.3 Centralized Controller

1) Connection

For Light commercial air conditioner with XYE port, it can be directly connected to Centralized Controller (CCM03, CCM09).




2) Address setting

When setting the address, please make sure the unit is powered off. The address can be set from 0 to 63 by the switch. Turn on the unit, then the address will be effective.

| SWITCH | FOR CCM UNIT ADDRESS | |
|---|---|---|
| S2 + S1 | ON 1 2 | ON 1 2 |
| ADDRESS | 0~15 | 16~31 |
| Factory Setting | ✓ | |
| S2 + S1 | ON 1 2 | ON 1 2 |
| ADDRESS | 32~47 | 48~63 |
| Factory Setting | | |

Note: For light commercial aire conditioner with XYE port, it can be also connected to BMS (Building Management System).

If there is any CAC (central air conditioner ) connecting with the central controller at the same time, please set the address from largest (63,62,61…), since the CAC units could obtain address automatically from the smallest (00,01,02…)

# Troubleshooting

## Contents

# Troubleshooting

## Contents

## 1. Safety Caution

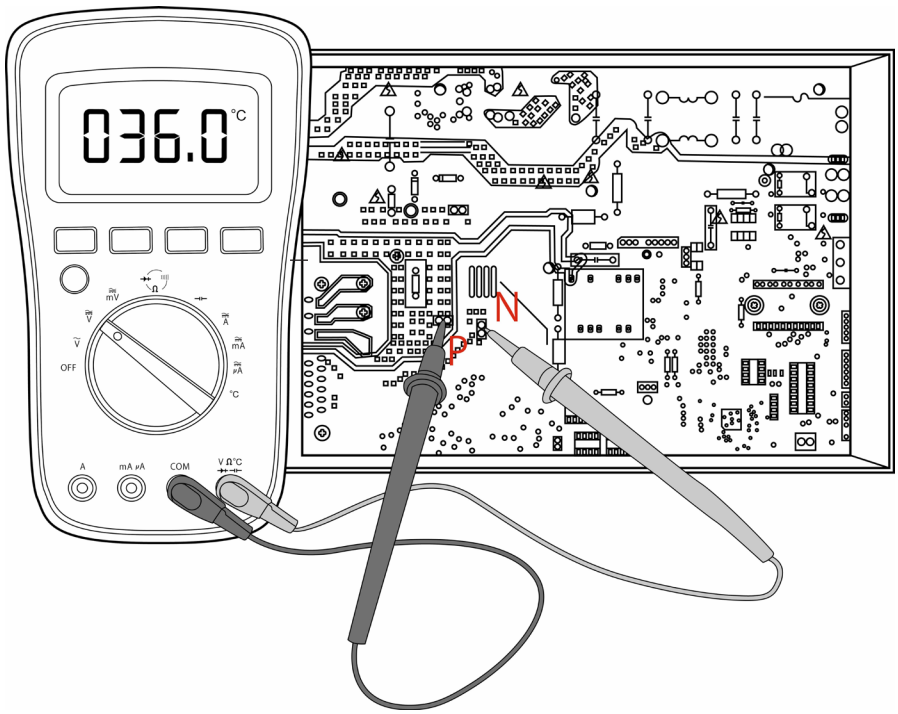
**WARNING**

**Be sure to turn off all power supplies or disconnect all wires to avoid electric shock. While checking indoor/outdoor PCB, please equip oneself with antistatic gloves or wrist strap to avoid damage to the board.**

**WARNING**

**Electricity remains in capacitors even when the power supply is off. Ensure the capacitors are fully discharged before troubleshooting.**

Test the voltage between P and N on back of the main PCB with multimeter. If the voltage is lower than 36V, the capacitors are fully discharged. For models that cannot be measured, wait 5 minutes after the power supply is off to ensure that the capacitors are fully discharged.




**Note: This picture is for reference only. Actual appearance may vary.**

# 2. General Troubleshooting

## 2.1 Error Display (Indoor Unit)

When the indoor unit encounters a recognized error, the operation lamp will flash in a corresponding series, the timer lamp may turn on or begin flashing, and an error code will be displayed. These error codes are described in the following table:

| Operation Lamp | Timer Lamp | Display | Error Information | Solution |
|---|---|---|---|---|
| 1 time | OFF | EH00/ EH0R | Indoor unit EEPROM malfunction/Indoor unit EEPROM parameter error | TS23 |
| 2 times | OFF | EL01 | Indoor / outdoor unit communication error | TS24 |
| 4 times | OFF | EH03 | The indoor fan speed is operating outside of the normal range(for some models) | TS26 |
| 4 times | OFF | EH31 | Upper indoor fan speed is operating outside of the normal range(for new console type) | TS26 |
| 4 times | OFF | EH32 | Lower indoor fan speed is operating outside of the normal range(for new console type) | TS26 |
| 6 times | OFF | EH60 | Indoor room temperature sensor T1 is in open circuit or has short circuited | TS31 |
| 6 times | OFF | EH61 | Evaporator coil temperature sensor T2 is in open circuit or has short circuited | TS31 |
| 8 times | OFF | EL0C | System lacks refrigerant | TS32 |
| 9 times | OFF | EH0b | Communication error between indoor two chips (For A6 duct type &floor ceiling type) | TS45 |
| 9 times | OFF | EH0b | Communication error between display board and main board(for new console type) | TS46 |
| 13 times | OFF | EH0E | Water-level alarm malfunction | TS33 |
| 5 times | OFF | EC53 | Outdoor room temperature sensor T4 is in open circuit or has short circuited | TS31 |
| 5 times | OFF | EC52 | Condenser coil temperature sensor T3 is in open circuit or has short circuited | TS31 |
| 5 times | OFF | EC54 | Compressor discharge temperature sensor TP is in open circuit or has short circuited | TS31 |
| 5 times | OFF | EC55 | Outdoor IPM module temperature sensor fault | TS53 |
| 5 times | OFF | EC56 | Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited(for free-match indoor units) | TS31 |
| 5 times | ON | EC51 | Outdoor unit EEPROM parameter error | TS23 |
| 12 times | OFF | EC07 | The outdoor fan speed is operating outside of the normal range(for some models) | TS26 |
| 7 times | FLASH | PC00 | IPM malfunction or IGBT over-strong current protection | TS34 |
| 2 times | FLASH | PC01 | Over voltage or over low voltage protection | TS35 |
| 3 times | FLASH | PC02 | Top temperature protection of compressor or High temperature protection of IPM module | TS37 |
| 5 times | FLASH | PC04 | Inverter compressor drive error | TS34 |

| | | | | |
|---|---|---|---|---|
| 7 times | FLASH | PC 03 | High pressure protection or low pressure protection (for some models) | TS47/ TS36 |
| 14 times | OFF | EC 0d | Outdoor unit malfunction(for some models) | TS38 |
| 2 times | OFF | EL 11 | Communication error between master and slave unit (for twins system) | TS50 |
| 2 times | OFF | EH 12 | Another indoor unit malfunction (for twins system) | TS50 |
| -- | -- | EH bR | Communication malfunction between external fan module and indoor unit (for some models) | TS52 |
| 4 times | OFF | EH 3R | External fan DC bus voltage is too low protection (for some models) | TS52 |
| 4 times | OFF | EH 3b | External fan DC bus voltage is too high fault (for some models) | TS52 |
| 1 time | ON | -- | Indoor units mode conflict(match with multi outdoor unit) (for some models) | -- |
| 4 times | FLASH | PC 0L | Low ambient temperature protection | TS45 |

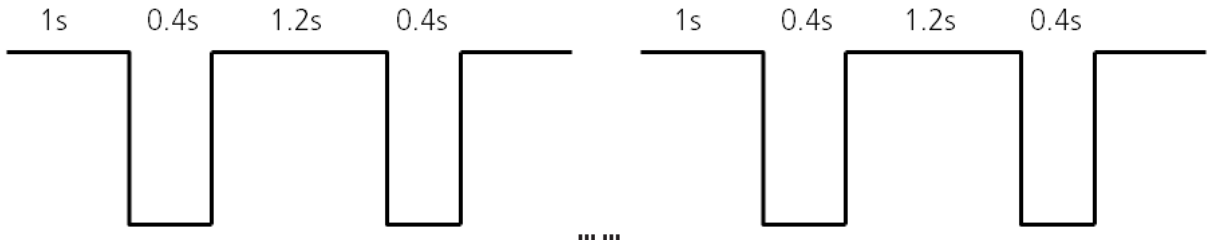
**For other errors:**

The display board may show a garbled code or a code undefined by the service manual. Ensure that this code is not a temperature reading.

**Troubleshooting:**

Test the unit using the remote control. If the unit does not respond to the remote, the indoor PCB requires replacement. If the unit responds, the display board requires replacement.

**LED flash frequency:**




## 2.2 Error Display (For Some Outdoor Units)

| Display | Malfunction or Protection | Solution |
|---|---|---|
| EC 51 | Outdoor EEPROM malfunction | TS23 |
| EL 01 | Indoor / outdoor units communication error | TS24 |
| PC 40 | Communication malfunction between IPM board and outdoor main board | TS39 |
| PC 08 | Outdoor overcurrent protection | TS40 |
| PC 10 | Outdoor unit low AC voltage protection | TS35 |
| PC 11 | Outdoor unit main control board DC bus high voltage protection | TS35 |
| PC 12 | Outdoor unit main control board DC bus high voltage protection /341 MCE error | TS35 |
| PC 00 | IPM module protection | TS34 |
| PC 0F | PFC module protection | TS42 |
| EC 71 | Over current failure of outdoor DC fan motor | TS26 |
| EC 72 | Lack phase failure of outdoor DC fan motor | TS43 |
| EC 07 | Outdoor fan speed has been out of control | TS26 |

| | | |
|---|---|---|
| PC43 | Outdoor compressor lack phase protection | TS44 |
| PC44 | Outdoor unit zero speed protection | TS40 |
| PC45 | Outdoor unit IR chip drive failure | TS45 |
| PC46 | Compressor speed has been out of control | TS40 |
| PC49 | Compressor overcurrent failure | TS40 |
| PC30 | High pressure protection | TS47 |
| PC31 | Low pressure protection | TS36 |
| PC0R | High temperature protection of condenser | TS48 |
| PC06 | Temperature protection of compressor discharge | TS49 |
| PH90 | High temperature protection of evaporator | -- |
| PH91 | Low temperature protection of evaporator | -- |
| PC02 | Top temperature protection of compressor | TS37 |
| EC52 | Condenser coil temperature sensor T3 is in open circuit or has short circuited | TS31 |
| EC53 | Outdoor room temperature sensor T4 is in open circuit or has short circuited | TS31 |
| EC54 | Compressor discharge temperature sensor TP is in open circuit or has short circuited | TS31 |
| EC55 | Outdoor IPM module temperature sensor fault | TS53 |
| EC50 | Open or short circuit of outdoor unit temperature sensor(T3,T4.TP) | TS31 |
| PC0L | Low ambient temperature protection | TS45 |

For some models, the outdoor main control board has 1 red LED, which is a status indicator. After power-on, slow flashing (0.5Hz flashing) means standby, long bright means power on, and fast flashing (2.5Hz flashing) means fault.

## 2.3 Error Display on Two Way Communication Wired Controller

| Display | Malfunction or Protection | Solution |
|---|---|---|
| EHb3 | Communication error between wire controller and indoor unit((for KJR-120X/KJR-120M/ KJR-120N series wired controller) | TS50 |

The other error codes displayed on the wire controller are same from those on the unit.

## 3. Information Inquiry

**A6 Duct type &Floor ceiling Type:**

- To enter information inquiry status, complete the following procedure within ten seconds:
  - Press LED(or DO NOT DISTURB) 3 times.
  - Press SWING(or AIR DIRECTION) 3 times.
- Finish 1 and 2 within 10 seconds, you will hear beeps for two seconds, which means the unit goes into parameter checking mode.
- Use the LED(or DO NOT DISTURB) and SWING(or AIR DIRECTION) buttons to cycle through information displayed.
- Pressing LED(or DO NOT DISTURB) will display the next code in the sequence. Pressing SWING(or AIR DIRECTION) will show the previous.
- The following table shows information codes. The screen will display this code for two seconds, then the information for 25 seconds.

| Displayed code | Explanation | Displayed value | Meaning | Additional Notes |
|---|---|---|---|---|
| T1 | Room temperature | -1F,-1E,-1d,-1c,-1b,-1A<br>-19—99<br>A0,A1,…A9<br>b0,b1,…b9<br>c0,c1,…c9<br>d0,d1,…d9<br>E0,E1,…E9<br>F0,F1,…F9 | -25,-24,-23,-22,-21,-20<br>-19—99<br>100,101,…109<br>110,111,…119<br>120,121,…129<br>130,131,…139<br>140,141,…149<br>150,151,…159 | 1. All displayed temperatures use actual values.<br>2. All temperatures are displayed in °C regardless of remote used.<br>3. T1, T2, T3, T4, and T2B display ranges from -25 to 70 °C. TP display ranges from -20 to 130 °C.<br>4. The frequency display ranges from 0 to 159HZ.<br>5. If the actual values exceed or fall short of the defined range, the values closest to the maximum and minimum values will be displayed. |
| T2 | Indoor coil temperature | | | |
| T3 | Outdoor coil temperature | | | |
| T4 | Ambient temperature | | | |
| TB | Outlet temperature of indoor coil | | | |
| TP | Discharge temperature | | | |
| TH | Suction temperature | | | |
| FT | Targeted frequency | | | |
| FR | Actual frequency | | | |
| IF | Indoor fan speed | 0<br>1,2,3,4 | OFF<br>Low speed, Medium speed, High speed, Turbo. | N/A<br>Used for some large capacity motors. |
| OF | Outdoor fan speed | 14-FF | Actual fan speed is equal to the display value converted to decimal value and multiplied by 10. This is measured in RPM. | Used for some small capacity motors.<br>The display value is 14-FF (hexadecimal). The corresponding fan speed ranges from 200 to 2550RPM. |
| LR | EXV opening angle | 0-FF | Actual EXV opening value is equal to the display value converted to decimal value and then multiplied by 2. | - |
| CT | Compressor continuous running time | 0-FF | 0-255 minutes | If the actual value exceeds or falls short of the defined range, the value closest to the maximum and minimum will be displayed. |
| ST | Causes of compressor stop | 0-99 | For a detailed explanation, contact technical support. | - |

| Displayed code | Explanation | Displayed value | Meaning | Additional Notes |
|---|---|---|---|---|
| A0 | | | | |
| A1 | | | | |
| b0 | | | | |
| b1 | | | | |
| b2 | | | | |
| b3 | | | | |
| b4 | | | | |
| b5 | | 0-FF | | |
| b6 | Reserved | 0-63 | - | - |
| dL | | 0-FF | | |
| Rc | | | | |
| Uo | | | | |
| Td | | | | |
| nR | | | | |
| CF | | | | |
| PR | | | | |
| Po | | | | |

**Console Type& Compact Cassette Type:**

- To enter information inquiry status, complete the following procedure within ten seconds:
  - Press LED(or DO NOT DISTURB) 3 times.
  - Press SWING(or AIR DIRECTION) 3 times.
- Finish 1 and 2 within 10 seconds, you will hear beeps for two seconds, which means the unit goes into parameter checking mode.
- Use the LED(or DO NOT DISTURB) and SWING(or AIR DIRECTION) buttons to cycle through information displayed.
- Pressing LED(or DO NOT DISTURB) will display the next code in the sequence. Pressing SWING(or AIR DIRECTION) will show the previous.
- The following table shows information codes. The screen will display this code for two seconds, then the information for 25 seconds.

| Displayed code | Explanation | Additional Notes |
|---|---|---|
| Error code | Error code | Refer to next list of error code |
| T1 | Room temperature | T1 temperature |
| T2 | Indoor coil temperature | T2 temperature |
| T3 | Outdoor coil temperature | T3 temperature |
| T4 | Ambient temperature | T4 temperature |
| TP | Discharge temperature | TP temperature |
| FT | Targeted frequency | Targeted Frequency |
| Fr | Actual frequency | Actual Frequency |
| dU | Compressor current | N/A |
| Uo | Outdoor AC voltage | N/A |
| nS | Indoor capacity test | N/A |
| od | Running mode | |
| Pr | Outdoor fan speed | Outdoor fan speed=value*8 |
| Lr | EXV opening angle | EXV opening angle-value*8 |
| Ir | Indoor fan speed | Indoor fan speed=value*8 |
| HU | Indoor humidity | N/A |
| TT | Adjusted setting temperature | N/A |
| DT | Reserve | N/A |
| IF | Reserve | N/A |
| nR | Reserve | N/A |
| oT | GA algorithm frequency | N/A |

**New Four-way Cassette Type, New Console Type &A7 Duct type:**

- To enter engineer mode, in power-on or standby mode, and in non-locked state, press the key combination "ON/OFF + Air Speed" for 7s:
- After entering the engineer mode, the remote control will display icons of "Auto, Cool, Dry, Heat", and the Battery icon; at the same time, it will also display the numeric code of the current engineer mode (for the initial engineer mode, the numeric code displayed is 0), and all other icons are inactive.
- In engineer mode, the value of the current numeric code can be adjusted circularly through the Up/Down key, with the setting range of 0 to 30.

| Code | Query Content | Additional Notes |
|---|---|---|
| 0 | Error code | Refer to next list of error code |
| 1 | Room temperature | T1 temperature |
| 2 | Indoor coil temperature | T2 temperature |
| 3 | Outdoor coil temperature | T3 temperature |
| 4 | Ambient temperature | T4 temperature |
| 5 | Discharge temperature | TP temperature |
| 6 | Compressor Target Frequency FT | Targeted Frequency |
| 7 | Compressor Running Frequency Fr | Actual Frequency |
| 8 | Unit Current dL | N/A |
| 9 | Outdoor AC Voltage Uo | N/A |
| 10 | Current indoor capacity test state Sn | N/A |
| 11 | Running mode od | |
| 12 | Set Speed Pr of the outdoor fan | Outdoor fan speed=value*8 |
| 13 | Opening Lr of EEV | EXV opening angle-value*8 |
| 14 | Actual Running Speed ir of the indoor fan | Indoor fan speed=value*8 |
| 15 | Indoor Humidity Hu | N/A |
| 16 | Set Temperature TT after compensation | N/A |
| 17 | | N/A |
| 18 | | N/A |
| 19 | / | N/A |
| 20 | Indoor Target Frequency oT | N/A |
| 21 | Reserve | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |
| 26 | | |
| 27 | | |
| 28 | | |
| 29 | | |
| 30 | Actual static pressure | Show the AP first, then the actual static pressure value |

Exit of engineer mode:
1)In engineer mode, press the key combination of "On/Off + Air speed" for 2s; 2)The engineer mode will be exited if there are no valid key operations for continuous 60s.

Error code of engineer mode

| Display | Error Information |
|---|---|
| EH00/EH0R | Indoor unit EEPROM parameter error |
| EL01 | Indoor / outdoor unit communication error |
| EH bR | Communication error between indoor unit and indoor external fan module |
| EH30 | Parameters error of indoor external fan |
| EH31 | Upper indoor fan speed is operating outside of the normal range(for new console type) |
| EH32 | Lower indoor fan speed is operating outside of the normal range(for new console type) |
| EH35 | Phase failure of indoor external fan |
| EH36 | Indoor external fan current sampling bias fault |
| EH37 | Indoor external fan zero speed failure |
| EH38 | Indoor external fan stall failure |
| EH39 | Out of step failure of indoor external fan |
| EH3R | Low voltage protection of indoor external fan DC bus |
| EH3b | Indoor external fan DC bus voltage is too high fault |
| EH3E | Indoor external fan overcurrent fault |
| EH3F | Indoor external fan module protection/hardware overcurrent protection |
| EH03 | The indoor fan speed is operating outside of the normal range |
| EC51 | Outdoor unit EEPROM parameter error |
| EC52 | Condenser coil temperature sensor T3 is in open circuit or has short circuited |
| EC53 | Outdoor room temperature sensor T4 is in open circuit or has short circuited |
| EC54 | Compressor discharge temperature sensor TP is in open circuit or has short circuited |
| EC55 | IGBT temperature sensor TH is in open circuit or has short circuited |
| EC0d | Outdoor unit malfunction |
| EH60 | Indoor room temperature sensor T1 is in open circuit or has short circuited |
| EH61 | Evaporator coil temperature sensor T2 is in open circuit or has short circuited |
| EC71 | Outdoor external fan overcurrent fault |
| EC75 | Outdoor external fan module protection/hardware overcurrent protection |
| EC72 | Outdoor external fan phase failure |
| EC74 | Outdoor external fan current sampling bias fault |
| EC73 | Zero speed failure of outdoor unit DC fan |
| EC07 | The outdoor fan speed is operating outside of the normal range( |
| EHbS | Intelligent eye communication failure |
| EL0C | Refrigerant leak detected |
| EH0b | Communication error between indoor two chips |
| EH0b | Communication error between display board and main board(for new console type) |
| EH0E | Water-level alarm malfunction |
| EH0F | Intelligent eye malfunction |

| | |
|---|---|
| PC00 | IPM malfunction or IGBT over-strong current protection |
| PC10 | Over low voltage protection |
| PC11 | Over voltage protection |
| PC12 | DC voltage protection |
| PC02 | Top temperature protection of compressor or High temperature protection of IPM module |
| PC40 | Communication error between outdoor main chip and compressor driven chip |
| PC41 | Current Input detection protection |
| PC42 | Compressor start error |
| PC43 | Lack of phase (3 phase) protection |
| PC44 | Outdoor unit zero speed protection |
| PC45 | 341PWM error |
| PC46 | Compressor speed malfunction |
| PC49 | Compressor over current protection |
| PC06 | Compressor discharge temperature  protection |
| PC08 | Outdoor current protection |
| PH09 | Anti-cold air in heating mode |
| PC0F | PFC module malfunction |
| PC30 | System overpressure protection |
| PC31 | System pressure is too low protection |
| PC03 | Pressure protection |
| PC0L | Outdoor low ambient temperature protection |
| PH90 | Evaporator coil temperature over high protection |
| PH91 | Evaporator coil temperature over low Protection |
| PC0H | Condenser high temperature protection |
| PH0C | Indoor unit humidity sensor failure |
| LH00 | Frequency limit caused by T2 |
| LH30 | Indoor external fan current limit |
| LH31 | Indoor external fan voltage limit |
| LC01 | Frequency limit caused by T3 |
| LC02 | Frequency limit caused by TP |
| LC05 | Frequency limit caused by voltage |
| LC03 | Frequency limit caused by current |
| LC06 | Frequency limit caused by PFC |
| LC30 | Frequency limit caused by high pressure |
| LC31 | Frequency limit caused by low pressure |
| LH07 | Frequency limit caused by remote controller |
| -- | Indoor units mode conflict(match with multi outdoor unit) |
| NR | No malfunction and protection |

## 4. Outdoor Unit Point Check Function(for some models)

- A check switch is included on the outdoor PCB.
- Push SW1 to check the unit's status while running. The digital display shows the following codes each time the SW1 is pushed.

| Number of Presses | Display | Remark |
|---|---|---|
| **00** | Normal display | Displays running frequency, running state, or malfunction code |
| **01** | Indoor unit capacity demand code | Actual data*HP*10<br>If capacity demand code is higher than 99, the digital display tube will show single digit and tens digit. (For example, the digital display tube show "5.0",it means the capacity demand is 15. the digital display tube show "60",it means the capacity demand is 6.0) |
| **02** | Amendatory capacity demand code | |
| **03** | The frequency after the capacity requirement transfer | |
| **04** | The frequency after the frequency limit | |
| **05** | The frequency of sending to 341 chip | |
| **06** | Indoor unit evaporator temperature (T2) | If the temp. is lower than 0 degree, the digital display tube will show "0".If the temp. is higher than 70 degree, the digital display tube will show "70". |
| **07** | Condenser pipe temp.(T3) | If the temp. is lower than -9 degree, the digital display tube will show "-9".If the temp. is higher than 70 degree, the digital display tube will show "70". If the indoor unit is not connected, the digital display tube will show: "--" |
| **08** | Outdoor ambient temp.(T4) | |
| **09** | Compressor discharge temp. (T5) | The display value is between 13~129 degree. If the temp. is lower than 13 degree, the digital display tube will show "13". If the temp. is higher than 99 degree, the digital display tube will show single digit and tens digit. (For example, the digital display tube show "0.5",it means the compressor discharge temp. is 105 degree. the digital display tube show "1.6",it means the compressor discharge temp. is 116 degree) |
| **10** | AD value of current | The display value is a hex number.<br>For example, the digital display tube shows "Cd", it means AD value is 205. |
| **11** | AD value of voltage | |
| **12** | Indoor unit running mode code | Standby:0, Fan only 1,Cooling:2, Heating:3, Forced cooling:4, Drying:6, Self clean:8 |
| **13** | Outdoor unit running mode code | Standby:0, Fan only 1,Cooling:2, Heating:3, Forced cooling:4, Drying:6, Self clean:8 |
| **14** | EXV open angle | Actual data/4.<br>If the value is higher than 99, the digital display tube will show single digit and tens digit. For example, the digital display tube show "2.0",it means the EXV open angle is 120×4=480p.) |

<table>
<tr><td rowspan="8">15</td><td rowspan="8">Frequency limit symbol</td><td>Bit7</td><td>Frequency limit caused by IGBT radiator</td><td rowspan="8">The display value is a hexidecimal number. For example, the digital display show 2A, then Bit5=1, Bit3=1, and Bit1=1.<br><br>This means that a frequency limit may be caused by T4, T3, or the current.</td></tr>
<tr><td>Bit6</td><td>Frequency limit caused by PFC</td></tr>
<tr><td>Bit5</td><td>Frequency limit caused by high temperature of T2.</td></tr>
<tr><td>Bit4</td><td>Frequency limit caused by low temperature of T2.</td></tr>
<tr><td>Bit3</td><td>Frequency limit caused by T3.</td></tr>
<tr><td>Bit2</td><td>Frequency limit caused by T5.</td></tr>
<tr><td>Bit1</td><td>Frequency limit caused by current</td></tr>
<tr><td>Bit0</td><td>Frequency limit caused by voltage</td></tr>
<tr><td>16</td><td>Outdoor unit fan motor state</td><td colspan="3">Off: 0, Turbo:1 High speed:2, Med speed: 3, Low speed: 4, Breeze:5, Super breeze: 6 other speed:7</td></tr>
<tr><td>17</td><td>IGBT radiator temp.</td><td colspan="3">The display value is between 0~130 degree. If the temp. is higher than 99 degree, the digital display tube will show single digit and tens digit. (For example, the digital display tube show “0.5”,it means the IGBT radiator temp. is 105 degree. the digital display tube show “1.6”,it means the IGBT radiator temp. is 116 degree)</td></tr>
<tr><td>18</td><td>Indoor unit number</td><td colspan="3">The indoor unit can communicate with outdoor unit well.<br><br>General:1, Twins:2</td></tr>
<tr><td>19</td><td>Evaporator pipe temp. T2 of 1# indoor unit</td><td colspan="3" rowspan="3">If the temp. is lower than 0 degree, the digital display tube will show “0”.If the temp. is higher than 70 degree, the digital display tube will show “70”. If the indoor unit is not connected, the digital display tube will show: “--”(heating T2, cooling T2B)</td></tr>
<tr><td>20</td><td>Evaporator pipe temp. T2 of 2# indoor unit</td></tr>
<tr><td>21</td><td>Reserved</td></tr>
<tr><td>22</td><td>1# Indoor unit capacity demand code</td><td colspan="3" rowspan="3">Actual data*HP*10<br><br>If capacity demand code is higher than 99, the digital display tube will show single digit and tens digit. (For example, the digital display tube show “5.0”,it means the capacity demand is 15. the digital display tube show “60”,it means the capacity demand is 6.0). If the indoor unit is not connected, the digital display tube will show: “--”</td></tr>
<tr><td>23</td><td>2# Indoor unit capacity demand code</td></tr>
<tr><td>24</td><td>Reserved</td></tr>
<tr><td>25</td><td>Room temp. T1 of 1# indoor unit</td><td colspan="3">If the temp. is lower than -9 degree, the digital display tube will show “-9”.If the temp. is higher than 70 degree, the digital display tube will show “70”. If the indoor unit is not connected, the digital display tube will show: “--”</td></tr>
<tr><td>26</td><td>Room temp. T1 of 2# indoor unit</td><td colspan="3">If the temp. is lower than 0 degree, the digital display tube will show “0”.If the temp. is higher than 70 degree, the digital display tube will show “70”. If the indoor unit is not connected, the digital display tube will show: “--”</td></tr>
<tr><td>27</td><td>Average room temp. T1</td><td colspan="3"></td></tr>
<tr><td>28</td><td>Reason of stop</td><td colspan="3"></td></tr>
<tr><td>29</td><td>Evaporator pipe temp. T2B of 1# indoor unit</td><td colspan="3">If the temp. is lower than -9 degree, the digital display tube will show “-9”.If the temp. is higher than 70 degree, the digital display tube will show “70”. If the indoor unit is not connected, the digital display tube will show: “--”</td></tr>
<tr><td>30</td><td>Evaporator pipe temp. T2B of 2# indoor unit</td><td colspan="3">If the temp. is lower than 0 degree, the digital display tube will show “0”.If the temp. is higher than 70 degree, the digital display tube will show “70”. If the indoor unit is not connected, the digital display tube will show: “--”</td></tr>
</table>

# 5. Error Diagnosis and Troubleshooting Without Error Code

**WARNING**

**Be sure to turn off unit before any maintenance to prevent damage or injury.**

## 5.1 Remote maintenance

**SUGGESTION:** When troubles occur, please check the following points with customers before field maintenance.

| No. | Problem | Solution |
|---|---|---|
| 1 | Unit will not start | TS18 - TS19 |
| 2 | The power switch is on but fans will not start | TS18 - TS19 |
| 3 | The temperature on the display board cannot be set | TS18 - TS19 |
| 4 | Unit is on but the wind is not cold(hot) | TS18 - TS19 |
| 5 | Unit runs, but shortly stops | TS18 - TS19 |
| 6 | The unit starts up and stops frequently | TS18 - TS19 |
| 7 | Unit runs continuously but insufficient cooling(heating) | TS18 - TS19 |
| 8 | Cool can not change to heat | TS18 - TS19 |
| 9 | Unit is noisy | TS18 - TS19 |

## 5.2 Field maintenance

| | Problem | Solution |
|---|---|---|
| 1 | Unit will not start | TS20 - TS21 |
| 2 | Compressor will not start but fans run | TS20 - TS21 |
| 3 | Compressor and condenser (outdoor) fan will not start | TS20 - TS21 |
| 4 | Evaporator (indoor) fan will not start | TS20 - TS21 |
| 5 | Condenser (Outdoor) fan will not start | TS20 - TS21 |
| 6 | Unit runs, but shortly stops | TS20 - TS21 |
| 7 | Compressor short-cycles due to overload | TS20 - TS21 |
| 8 | High discharge pressure | TS20 - TS21 |
| 9 | Low discharge pressure | TS20 - TS21 |
| 10 | High suction pressure | TS20 - TS21 |
| 11 | Low suction pressure | TS20 - TS21 |
| 12 | Unit runs continuously but insufficient cooling | TS20 - TS21 |
| 13 | Too cool | TS20 - TS21 |
| 14 | Compressor is noisy | TS20 - TS21 |
| 15 | Horizontal louver can not revolve | TS20 - TS21 |

| 1.Remote Maintenance | Electrical Circuit | | | | | | | Refrigerant Circuit | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Possible causes of trouble** | Power failure | The main power tripped | Loose connections | Faulty transformer | The voltage is too high or too low | The remote control is powered off | Broken remote control | Dirty air filter | Dirty condenser fins | The setting temperature is higher/lower than the room's(cooling/heating) | The ambient temperature is too high/low when the mode is cooling/heating | Fan mode | SILENCE function is activated(optional function) | Frosting and defrosting frequently | |
| Unit will not start | ☆ | ☆ | ☆ | ☆ | | | | | | | | | | | |
| The power switch is on but fans will not start | | | ☆ | ☆ | ☆ | | | | | | | | | | |
| The temperature on the display board cannot be set | | | | | | ☆ | ☆ | | | | | | | | |
| Unit is on but the wind is not cold(hot) | | | | | | | | | | ☆ | ☆ | ☆ | | | |
| Unit runs, but shortly stops | | | | | ☆ | | | | | ☆ | ☆ | | | | |
| The unit starts up and stops frequently | | | | | ☆ | | | | | | ☆ | | | ☆ | |
| Unit runs continuously but insufficient cooling(heating) | | | | | | | | ☆ | ☆ | ☆ | ☆ | | ☆ | | |
| Cool can not change to heat | | | | | | | | | | | | | | | |
| Unit is noisy | | | | | | | | | | | | | | | |
| **Test method / remedy** | Test voltage | Close the power switch | Inspect connections - tighten | Change the transformer | Test voltage | Replace the battery of the remote control | Replace the remote control | Clean or replace | Clean | Adjust the setting temperature | Turn the AC later | Adjust to cool mode | Turn off SILENCE function. | Turn the AC later | |

| 1.Remote Maintenance | Others | | | | | | |
|---|---|---|---|---|---|---|---|
| **Possible causes of trouble** | Heavy load condition | Loosen hold down bolts and / or screws | Bad airproof | The air inlet or outlet of either unit is blocked | Interference from cell phone towers and remote boosters | Shipping plates remain attached | |
| Unit will not start | | | | | | | |
| The power switch is on but fans will not start | | | | | ☆ | | |
| The temperature on the display board cannot be set | | | | | | | |
| Unit is on but the wind is not cold(hot) | | | | | | | |
| Unit runs, but shortly stops | | | | | | | |
| The unit starts up and stops frequently | | | | ☆ | | | |
| Unit runs continuously but insufficient cooling(heating) | ☆ | | ☆ | ☆ | | | |
| Cool can not change to heat | | | | | | | |
| Unit is noisy | | ☆ | | | | ☆ | |
| **Test method / remedy** | Check heat load | Tighten bolts or screws | Close all the windows and doors | Remove the obstacles | Reconnect the power or press **ON/OFF** button on remote control to restart operation | Remove them | |

| 2.Field Maintenance | Refrigerant Circuit | | | | | | | | | | | | | | | | | | | Others | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Possible causes of trouble** | Compressor stuck | Shortage of refrigerant | Restricted liquid line | Dirty air filter | Dirty evaporator coil | Insufficient air through evaporator coil | Overcharge of refrigerant | Dirty or partially blocked condenser | Air or incompressible gas in refrigerant cycle | Short cycling of condensing air | High temperature condensing medium | Insufficient condensing medium | Broken compressor internal parts | Inefficient compressor | Expansion valve obstructed | Expansion valve or capillary tube closed completely | Leaking power element on expansion valve | Poor installation of feeler bulb | Heavy load condition | Loosen hold down bolts and / or screws | Shipping plates remain attached | Poor choices of capacity | Contact of piping with other piping or external plate |
| Unit will not start | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor will not start but fans run | ☆ | | | | | | | | | | | | | | | | | | | | | | |
| Compressor and condenser (outdoor) fan will not start | | | | | | | | | | | | | | | | | | | | | | | |
| Evaporator (indoor) fan will not start | | | | | | | | | | | | | | | | | | | | | | | |
| Condenser (Outdoor) fan will not start | | | | | | | | | | | | | | | | | | | | | | | |
| Unit runs, but shortly stops | | ☆ | ☆ | | | | ☆ | ☆ | | | | | | | | ☆ | ☆ | | | | | | |
| Compressor short-cycles due to overload | | ☆ | | | | | ☆ | ☆ | | | | | | | | | | | | | | | |
| High discharge pressure | | | | | | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | | | | | | | | | | | |
| Low discharge pressure | | ☆ | | | | | | | | | | | | ☆ | | | | | | | | | |
| High suction pressure | | | | | | | ☆ | | | | | | | ☆ | | | | ☆ | ☆ | | | | |
| Low suction pressure | | ☆ | ☆ | ☆ | ☆ | ☆ | | | | | | | | | ☆ | ☆ | ☆ | | | | | | |
| Unit runs continuously but insufficient cooling | | ☆ | ☆ | ☆ | ☆ | ☆ | | ☆ | ☆ | ☆ | | | | ☆ | | | | | ☆ | | | ☆ | |
| Too cool | | | | | | | | | | | | | | | | | | | | | | | |
| Compressor is noisy | | | | | | | ☆ | | | | | | ☆ | | | | | | | ☆ | ☆ | | ☆ |
| Horizontal louver can not revolve | | | | | | | | | | | | | | | | | | | | | | | |
| **Test method / remedy** | Replace the compressor | Leak test | Replace restricted part | Clean or replace | Clean coil | Check fan | Change charged refrigerant volume | Clean condenser or remove obstacle | Purge, evacuate and recharge | Remove obstruction to air flow | Remove obstruction in air or water flow | Remove obstruction in air or water flow | Replace compressor | Test compressor efficiency | Replace valve | Replace valve | Replace valve | Fix feeler bulb | Check heat load | Tighten bolts or screws | Remove them | Choose AC of lager capacity or add the number of AC | Rectify piping so as not to contact each other or with external plate |

| 2.Field Maintenance | Electrical Circuit | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Possible causes of trouble** | Power failure | Blown fuse or varistor | Loose connections | Shorted or broken wires | Safety device opens | Faulty thermostat / room temperature sensor | Wrong setting place of temperature sensor | Faulty transformer | Shorted or open capacitor | Faulty magnetic contactor for compressor | Faulty magnetic contactor for fan | Low voltage | Faulty stepping motor | Shorted or grounded compressor | Shorted or grounded fan motor |
| Unit will not start | ☆ | ☆ | ☆ | ☆ | ☆ | | | ☆ | | | | | | | |
| Compressor will not start but fans run | | | | ☆ | | ☆ | | | ☆ | ☆ | | | | ☆ | |
| Compressor and condenser (outdoor) fan will not start | | | | ☆ | | ☆ | | | | ☆ | | | | | |
| Evaporator (indoor) fan will not start | | | | ☆ | | | | | ☆ | | ☆ | | | | ☆ |
| Condenser (Outdoor) fan will not start | | | | ☆ | | ☆ | | | ☆ | | ☆ | | | | ☆ |
| Unit runs, but shortly stops | | | | | | | | | | ☆ | | ☆ | | | |
| Compressor short-cycles due to overload | | | | | | | | | | ☆ | | ☆ | | | |
| High discharge pressure | | | | | | | | | | | | | | | |
| Low discharge pressure | | | | | | | | | | | | | | | |
| High suction pressure | | | | | | | | | | | | | | | |
| Low suction pressure | | | | | | | | | | | | | | | |
| Unit runs continuously but insufficient cooling | | | | | | | | | | | | | | | |
| Too cool | | | | | | ☆ | ☆ | | | | | | | | |
| Compressor is noisy | | | | | | | | | | | | | | | |
| Horizontal louver can not revolve | | | ☆ | ☆ | | | | | | | | | ☆ | | |
| **Test method / remedy** | Test voltage | Inspect fuse type & size | Inspect connections - tighten | Test circuits with tester | Test continuity of safety device | Test continuity of thermostat / sensor & wiring | Place the temperature sensor at the central of the air inlet grille | Check control circuit with tester | Check capacitor with tester | Test continuity of coil & contacts | Test continuity of coil & contacts | Test voltage | Replace the stepping motor | Check resistance with multimeter | Check resistance with multimeter |

## 6. Quick Maintenance by Error Code

If you do not have the time to test which specific parts are faulty, you can directly change the required parts according the error code.

You can find the parts to replace by error code in the following table.

| Part requiring replacement | Error Code | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | EH00/EH08 | EL01 | EH03/EH31/EH32 | EH60 | EH61 | EL0C | EH0E | EC53 | EH0b |
| Indoor PCB | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | x | ✓ |
| Outdoor PCB | x | ✓ | x | x | x | x | x | ✓ | x |
| Indoor fan motor | x | x | ✓ | x | x | x | x | x | x |
| T1 sensor | x | x | x | ✓ | x | x | x | x | x |
| T2 Sensor | x | x | x | x | ✓ | ✓ | ✓ | x | x |
| T3 Sensor | x | x | x | x | x | x | x | x | x |
| T4 Sensor | x | x | x | x | x | x | x | ✓ | x |
| Reactor | x | ✓ | x | x | x | x | x | x | x |
| Compressor | x | x | x | x | x | x | x | x | x |
| Additional refrigerant | x | x | x | x | x | ✓ | ✓ | x | x |
| Water-level switch | x | x | x | x | x | x | ✓ | x | x |
| Water pump | x | x | x | x | x | x | ✓ | x | x |
| Display board | x | x | x | x | x | x | x | x | ✓ |

| Part requiring replacement | EC54 | EC51 | EC52 | EC07 | PC00 | PC01 | PC02 | PC04 | PC03 |
|---|---|---|---|---|---|---|---|---|---|
| Indoor PCB | x | x | x | x | x | x | x | x | x |
| Outdoor PCB | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Outdoor fan motor | x | x | x | ✓ | ✓ | x | ✓ | ✓ | x |
| T3 Sensor | x | x | ✓ | x | x | x | x | x | x |
| TP Sensor | ✓ | x | x | x | x | x | x | x | x |
| Reactor | x | x | x | x | x | ✓ | x | x | x |
| Compressor | x | x | x | x | ✓ | x | x | ✓ | x |
| IPM module board | x | x | x | x | ✓ | ✓ | ✓ | ✓ | x |
| Low pressure protector | x | x | x | x | x | x | x | x | ✓ |
| Additional refrigerant | x | x | x | x | x | x | x | x | ✓ |

**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

# 7. Troubleshooting by Error Code

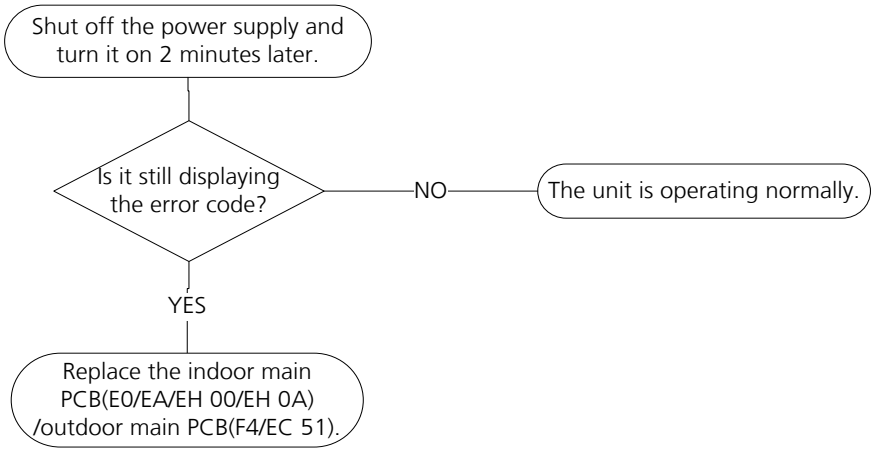
## 7.1 EH 00/ EH 0A / EC 51 (EEPROM malfunction/ EEPROM Parameter Error Diagnosis and Solution)

**Description**: Indoor or outdoor PCB main chip does not receive feedback from EEPROM chip.

**Recommended parts to prepare:**

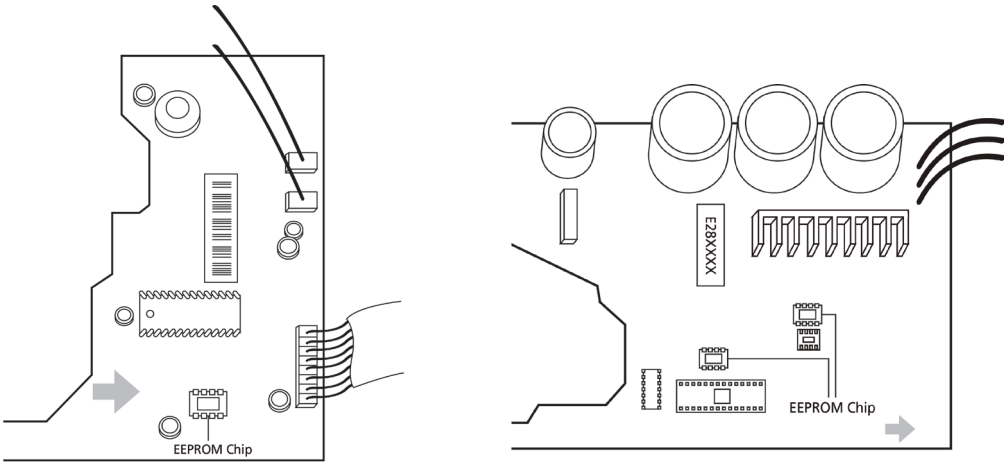
- Indoor PCB
- Outdoor PCB

**Troubleshooting and repair:**




**Remarks:**
**EEPROM:** A read-only memory whose contents can be erased and reprogrammed using a pulsed voltage.

The location of the EEPROM chip on the indoor and outdoor PCB is shown in the following two images:




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole. This pictures are only for reference, actual appearance may vary.**

**Troubleshooting and repair of compressor driven chip EEPROM parameter error and communication error between outdoor main chip and compressor driven chip are same as EC 51.**

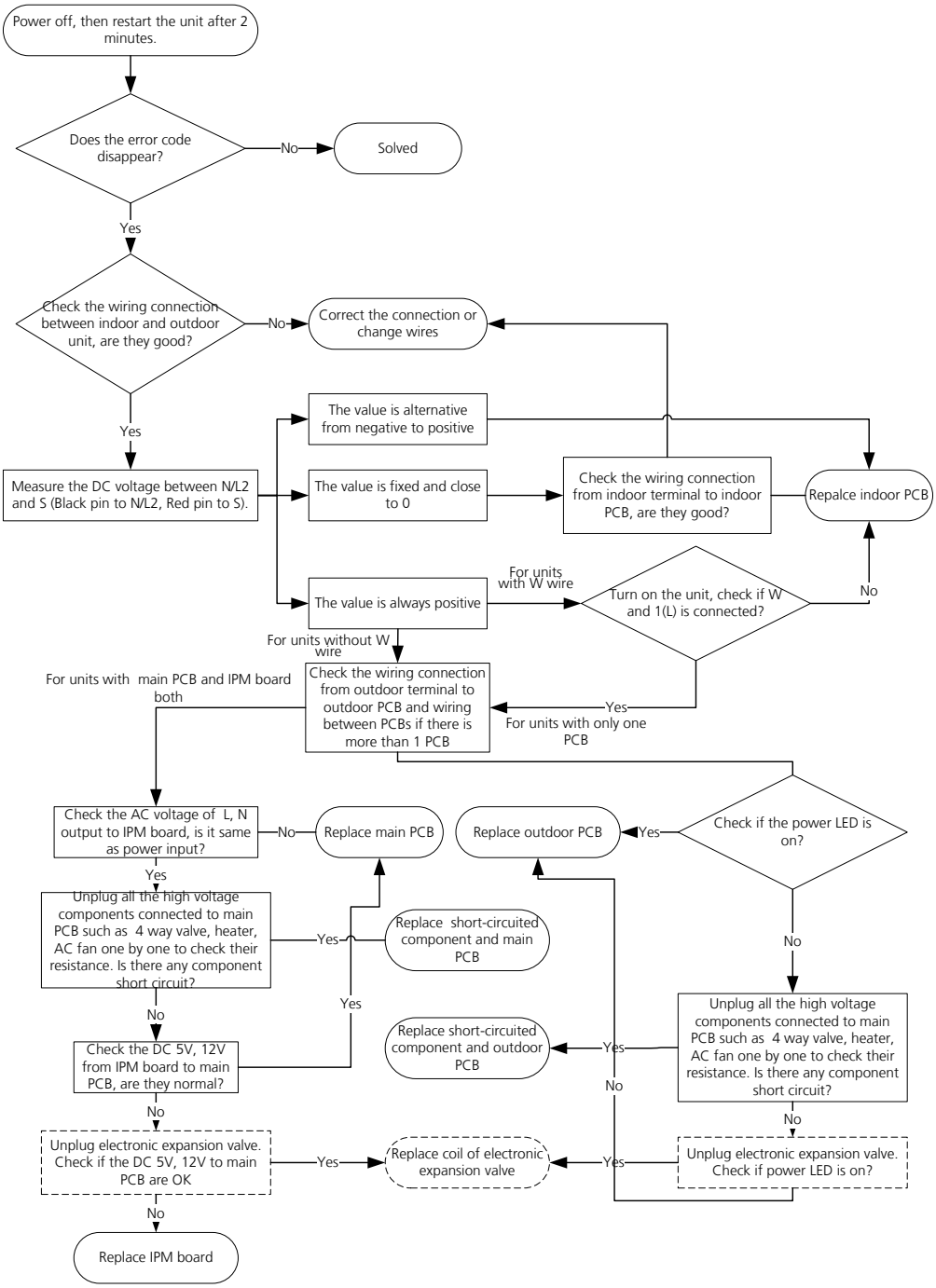
## 7.2 EL 01 (Indoor and Outdoor Unit Communication Error Diagnosis and Solution)

**Description**: Indoor unit can not communicate with outdoor unit

**Recommended parts to prepare:**

- Indoor PCB
- Outdoor PCB
- Reactor

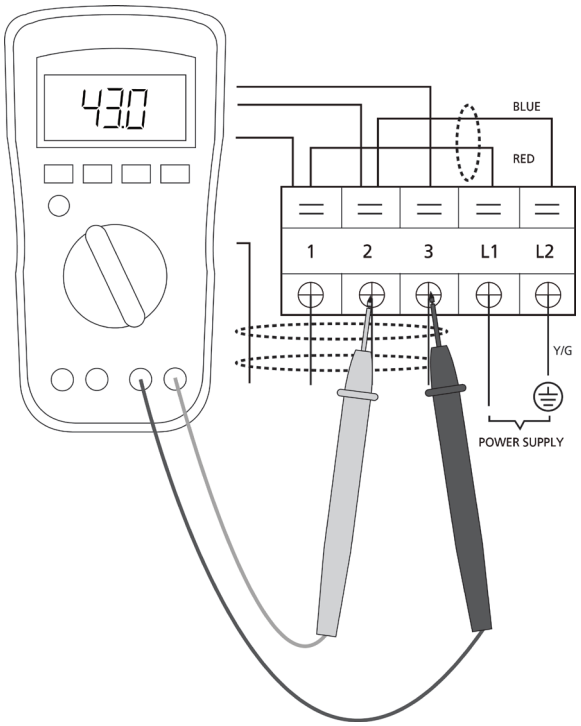
**Troubleshooting and repair:**




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

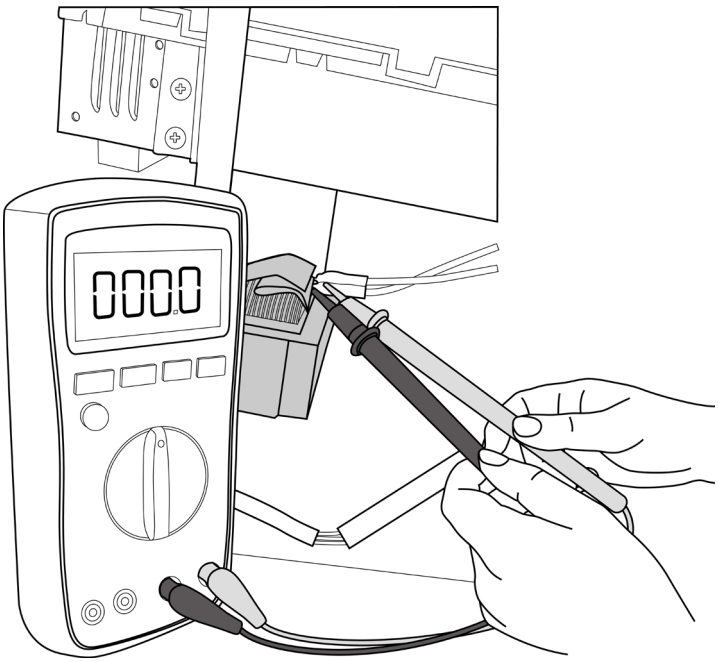
**Remarks:**

- Use a multimeter to test the DC voltage between 2 port(or S or L2 port) and 3 port(or N or S port) of outdoor unit. The red pin of multimeter connects with 2 port(or S or L2 port) while the black pin is for 3 port(or N or S port) .
- When AC is operating normally, the voltage is moving alternately as positive values and negative values
- If the outdoor unit has malfunction, the voltage has always been the positive value.
- While if the indoor unit has malfunction, the voltage has always been a certain value.




**S and N or L2 and S or 2 and 3**

- Use a multimeter to test the resistance of the reactor which does not connect with capacitor.
- The normal value should be around zero ohm. Otherwise, the reactor must have malfunction.




**Note: The picture and the value are only for reference, actual condition and specific value may vary.**

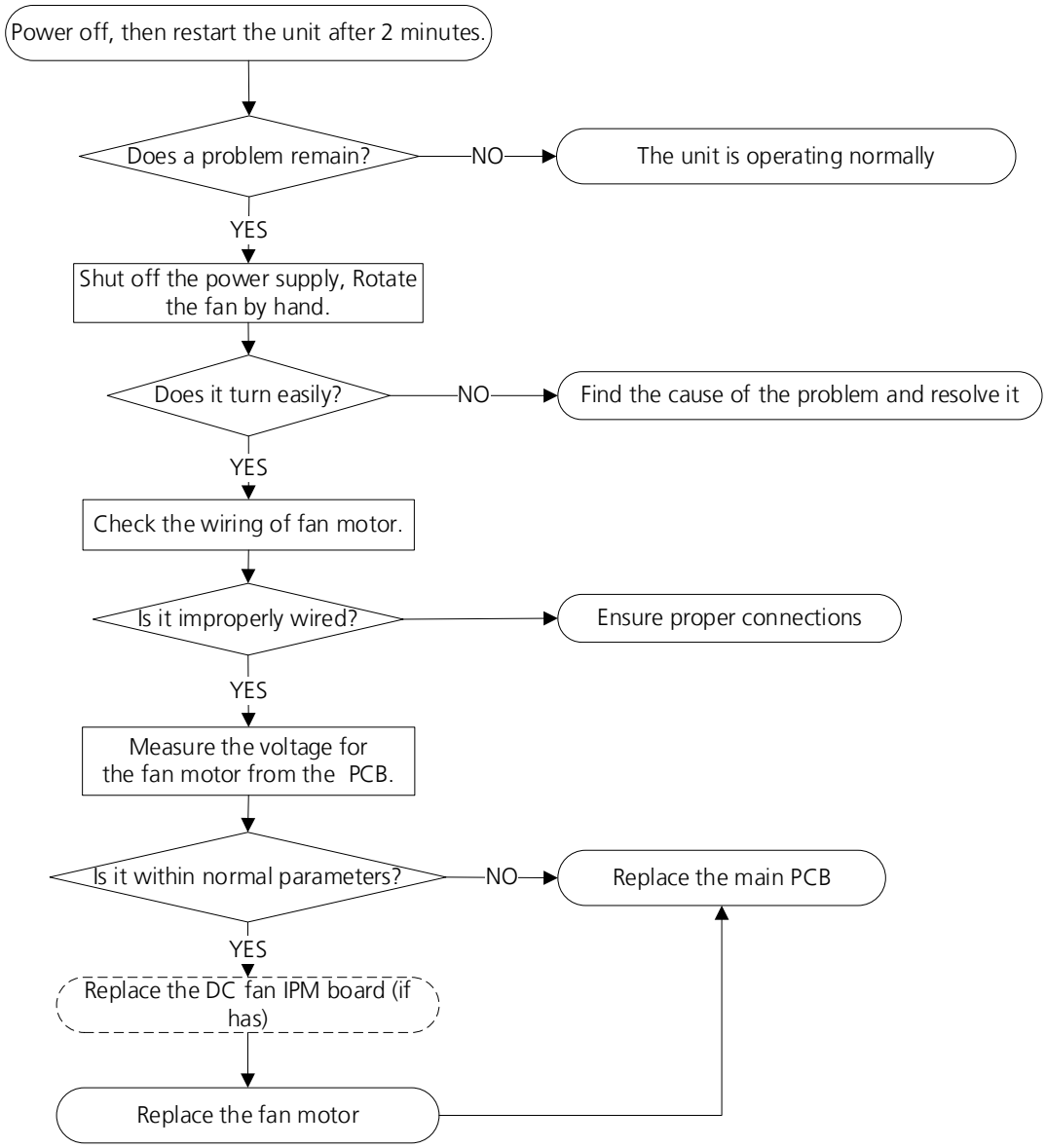
## 7.3 EH 03 / EH 31/EH 32/ EC 07 (Fan Speed Is Operating Outside of Normal Range)/EC 71(Over Current Failure of Outdoor DC Fan Motor) Diagnosis and Solution

**Description**: When indoor / outdoor fan speed keeps too low or too high for a certain time, the unit ceases operation and the LED displays the failure.

**Recommended parts to prepare:**

- Connection wires
- Fan assembly
- Fan motor
- PCB

**Troubleshooting and repair:**



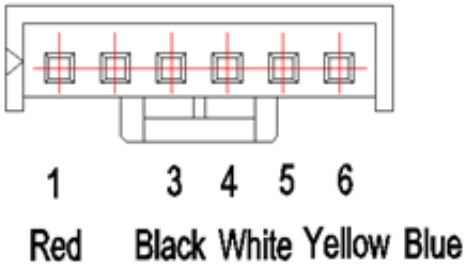

**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

**Index:**

**1. Indoor or Outdoor DC Fan Motor(control chip is in fan motor)**

Power on and when the unit is in standby, measure the voltage of pin1-pin3, pin4-pin3 in fan motor connector. If the value of the voltage is not in the range showing in below table, the PCB must has problems and need to be replaced.

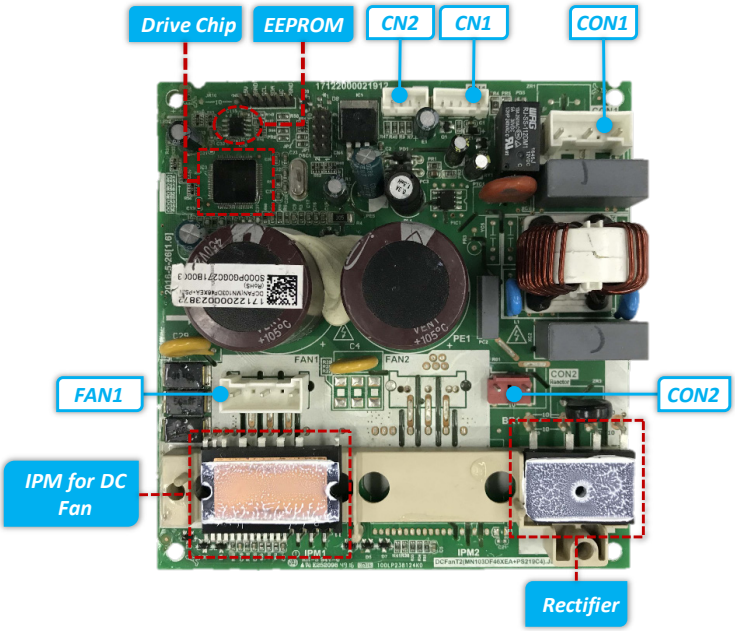
| No. | Color | Signal | Voltage |
|---|---|---|---|
| 1 | Red | Vs/Vm | 192V~380V |
| 2 | --- | --- | --- |
| 3 | Black | GND | 0V |
| 4 | White | Vcc | 13.5-16.5V |
| 5 | Yellow | Vsp | 0~6.5V |
| 6 | Blue | FG | 13.5-16.5V |




**2.Indoor DC Fan IPM Board**

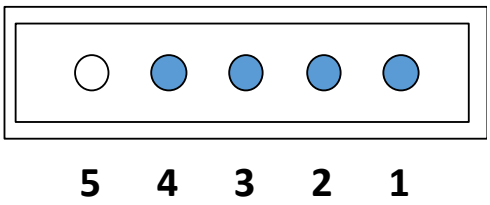
For A6 Duct and Ceiling-floor type:

Power on and when the unit is in standby, measure the voltage of CON1, pin1-pin2 and pin3-pin2 of CN1 in DC motor driver board. If the value of the voltage is not in the range showing in below tables, the indoor main PCB must has problems and need to be replaced.



| Port | Description | Parameter | Remark |
|---|---|---|---|
| CON1 | Power input for the PCB | 230V/AC | |
| CN1 | Communication with main PCB | DC | |
| CN2 | Test port | 5V/DC | For debugging board |
| CN23 | UVW output for DC fan motor | | |
| CON2 | Ports for reactor | | |

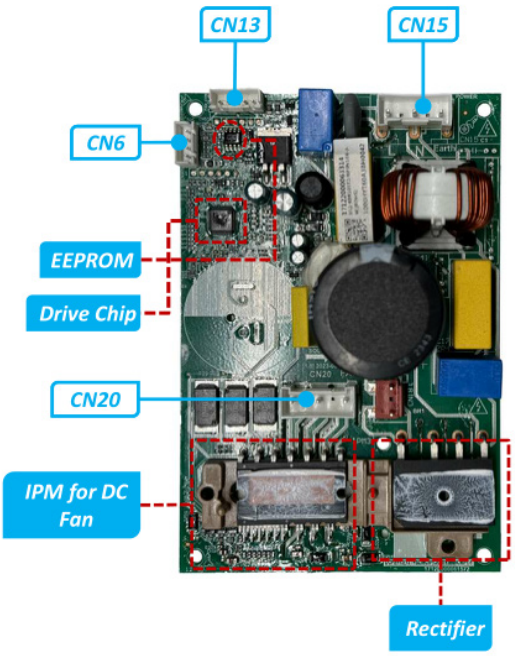
**CN1 Communication with main PCB**




| NO. | Signal | Voltage |
|---|---|---|
| 1 | Vcc | +15V |
| 2 | GND | |
| 3 | TXD | 0~6V |
| 4 | RXD | 0~15V |
| 5 | -- | -- |

For A7 Duct type:

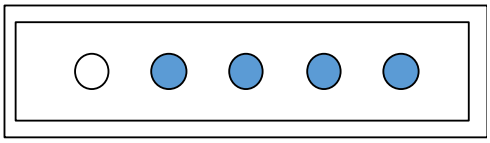
Power on and when the unit is in standby, measure the voltage of CN15, pin1-pin2 and pin3-pin2 of CN13 in DC motor driver board. If the value of the voltage is not in the range showing in below tables, the indoor main PCB must has problems and need to be replaced.




| Port | Description | Parameter | Remark |
|---|---|---|---|
| | | | |

| | | | |
|---|---|---|---|
| CN15 | Power input for the PCB | 230V/AC | L, N and Earth |
| CN13 | Communication with main PCB | DC | |
| CN6 | Test port | 5V/DC | For debugging board |
| CN20 | UVW output for DC fan motor | | |
| CN18L | Ports for reactor | | |

**CN13 Communication with main PCB**

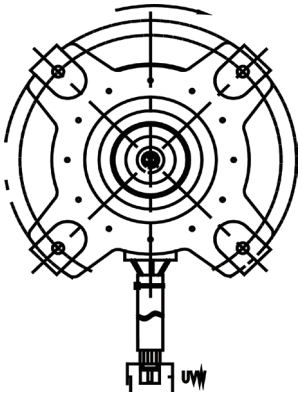


**5 4 3 2 1**

| NO. | Signal | Voltage |
|---|---|---|
| 1 | Vcc | +15V |
| 2 | GND | |
| 3 | TXD | 0~6V |
| 4 | RXD | 0~15V |
| 5 | -- | -- |

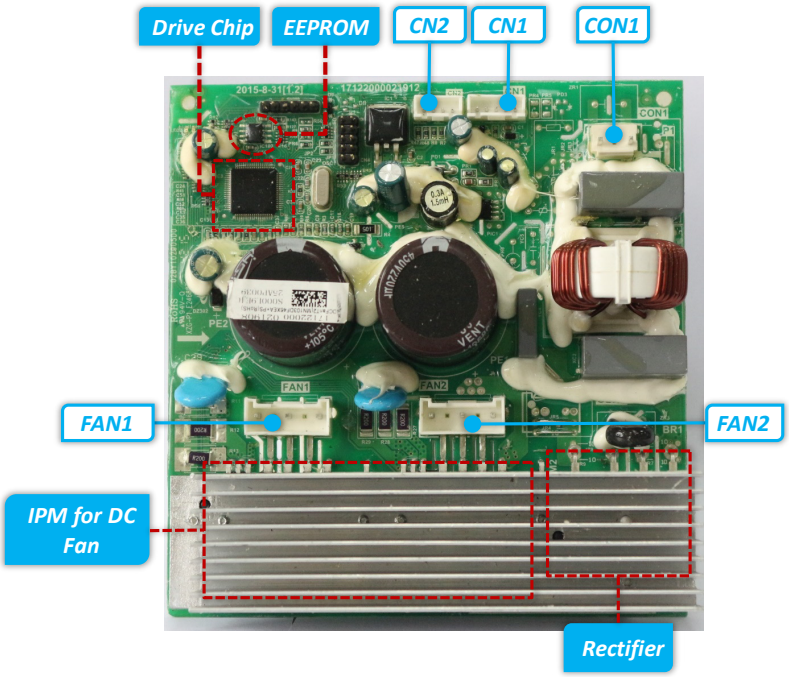
**3. Outdoor DC Fan Motor (control chip is in outdoor PCB)**

Release the UVW connector. Measure the resistance of U-V, U-W, V-W. If the resistance is not equal to each other, the fan motor must has problems and need to be replaced. otherwise the PCB must has problems and need to be replaced.



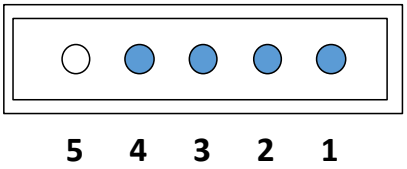

**4. Outdoor DC Fan IPM Board(for some double fan models)**

Power on and when the unit is in standby, measure the voltage of CON1, pin1-pin2 and pin3-pin2 of CN1 in DC motor driver board. If the value of the voltage is not in the range showing in below tables, the outdoor main PCB must has problems and need to be replaced.




| Part | Description | Parameter | Remark |
|---|---|---|---|
| CON1 | Power input for the PCB | 192-380V/DC | |
| CN1 | Communication with main PCB | DC | |
| CN2 | Test port | 5V/DC | For debugging board |
| FAN1 | UVW output for DC fan motor | | |
| FAN2 | UVW output for DC fan motor | | |

CN1 Communication with main PCB




| No. | Signal | Voltage |
|---|---|---|
| 1 | Vcc | 13.5-16.5V |
| 2 | GND | 0V |
| 3 | Vsp | 0~6.5V |
| 4 | FG | 13.5-16.5V |
| 5 | --- | --- |

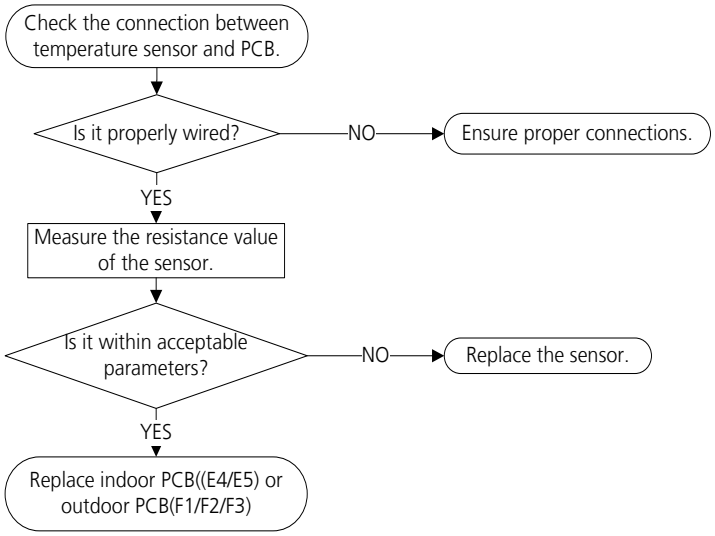
## 7.4 EH 60/EH 61/EC 53/EC 52/EC 54/EC 55/EC 56/EC 50 (Open Circuit or Short Circuit of Temperature Sensor Diagnosis and Solution)

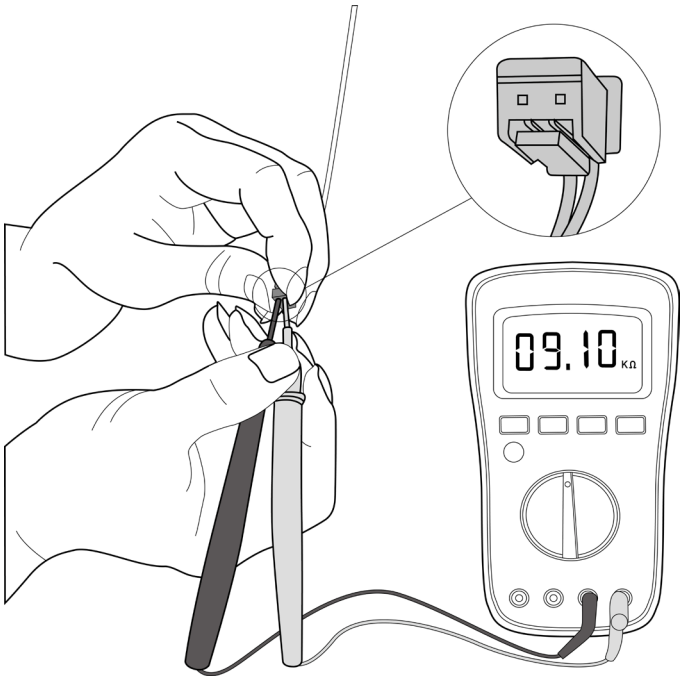
**Description**: If the sampling voltage is lower than 0.06V or higher than 4.94V, the LED displays the failure.

**Recommended parts to prepare:**

- Connection wires
- Sensors
- PCB

**Troubleshooting and repair:**




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole. This picture and the value are only for reference, actual appearance and value may vary**

## 7.5 EL 0C (System lacks refrigerant Diagnosis and Solution)

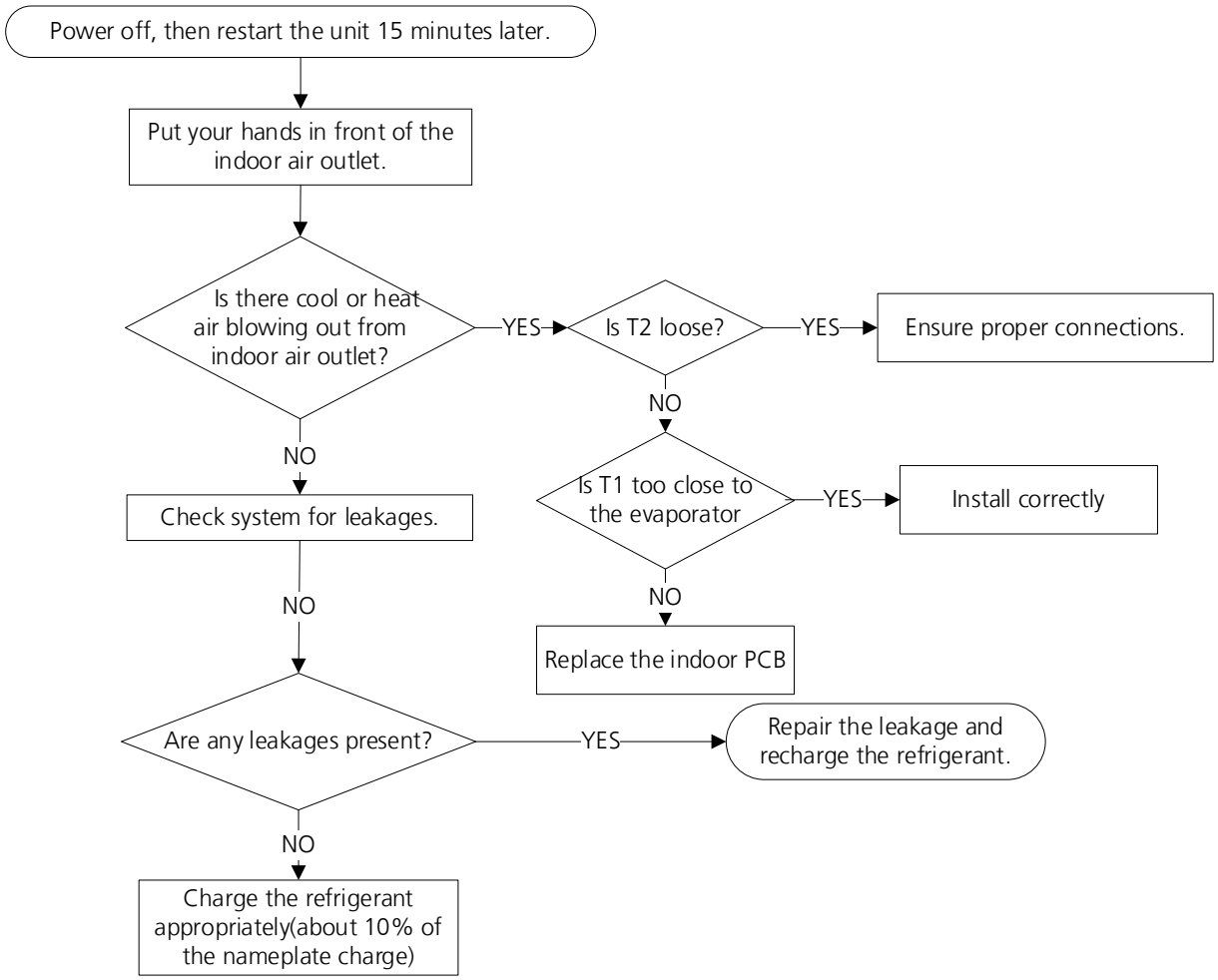
**Description**:

Judging the abnormality of the refrigeration system according to the number of compressor stops and the changes in operating parameters caused by excessive exhaust temperature.

**Recommended parts to prepare:**

- Indoor PCB
- Additional refrigerant

**Troubleshooting and repair:**

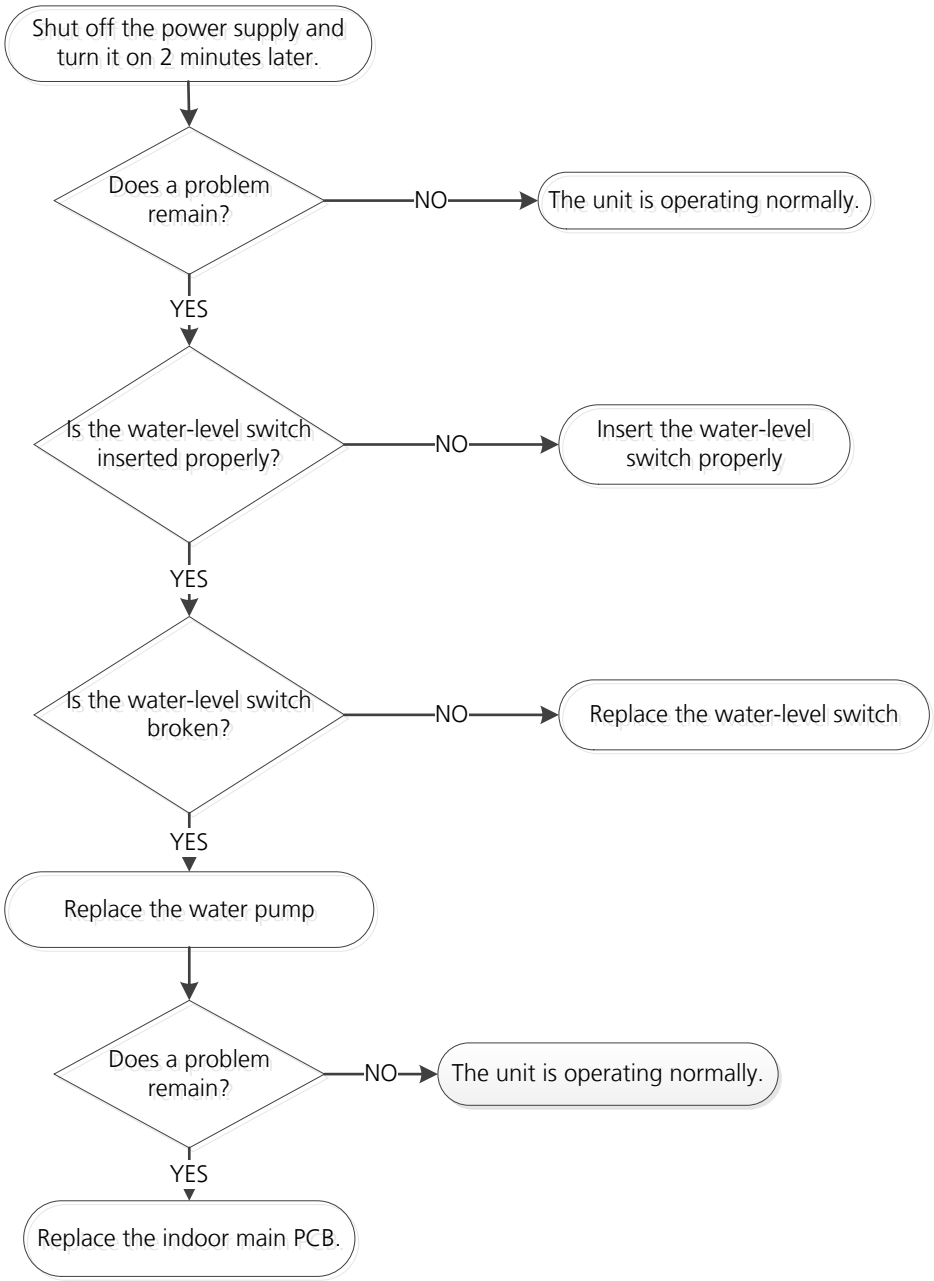


## 7.6 EH 0E(Water-Level Alarm Malfunction Diagnosis and Solution)

**Description**: If the sampling voltage is not 5V, the LED displays the failure code.

**Recommended parts to prepare:**

- Connection wires
- Water-level switch
- Water pump
- Indoor PCB



## 7.7 PC 00(IPM malfunction or IGBT over-strong current protection)/PC 04(Inverter compressor drive error) Diagnosis and Solution

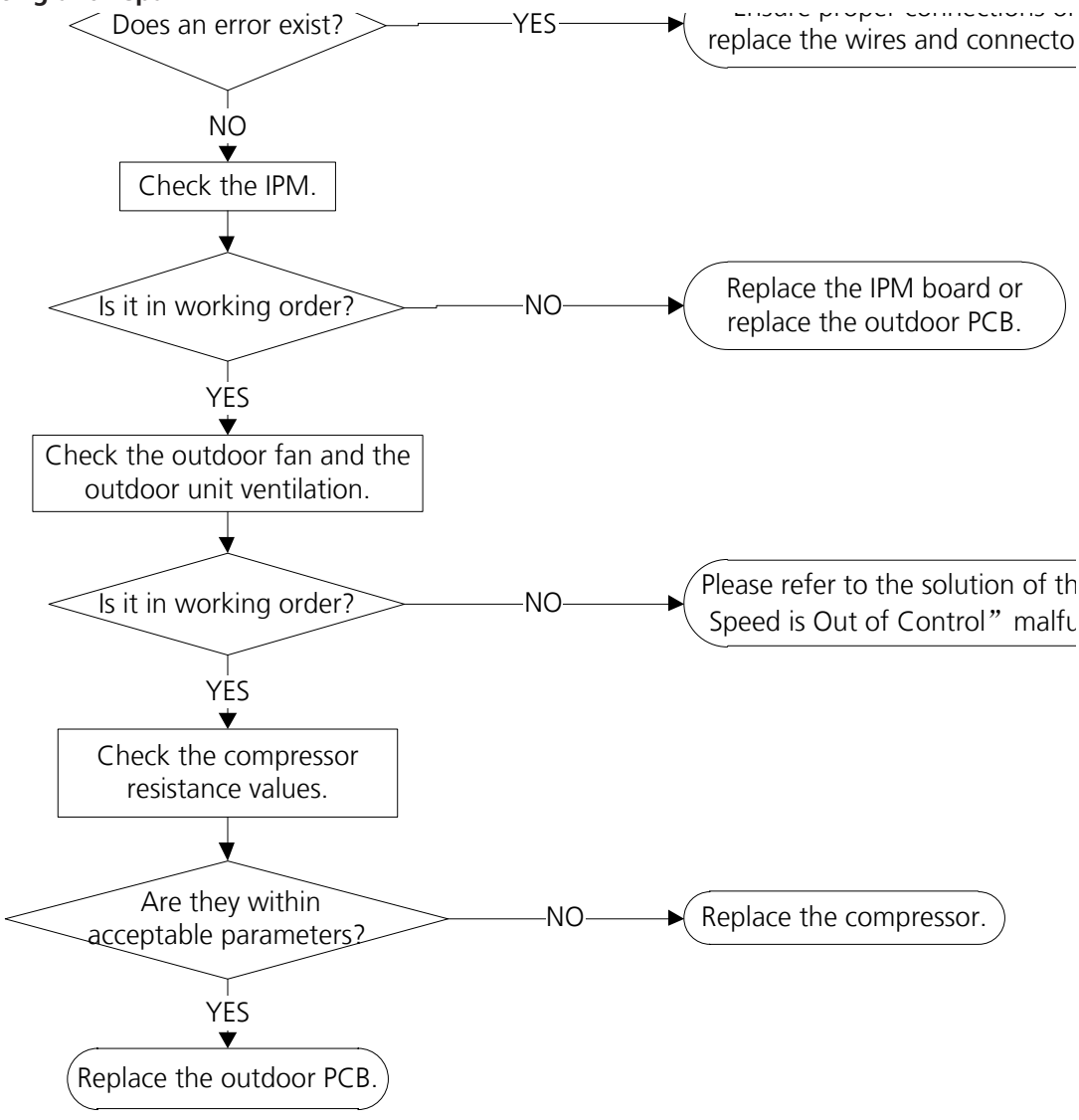
**Description:** When the voltage signal the IPM sends to the compressor drive chip is abnormal, the display LED shows "PC 00" and the AC turn off.

**Or** an abnormal inverter compressor drive is detected by a special detection circuit, including communication signal detection, voltage detection, compressor rotation speed signal detection and so on.

**Recommended parts to prepare:**

- Connection wires
- IPM module board
- Outdoor fan assembly
- Compressor
- Outdoor PCB

**Troubleshooting and repair:**




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

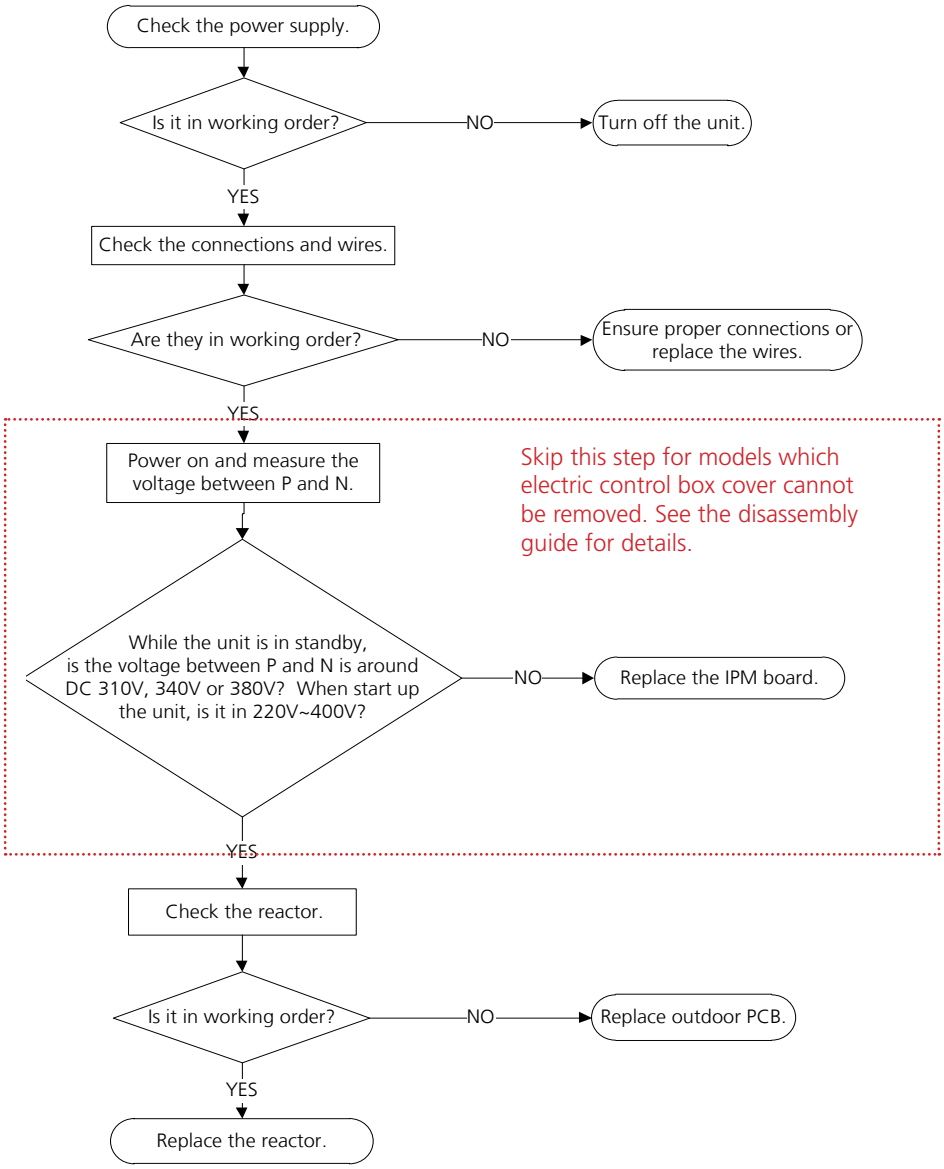
## 7.8 PC 01(Over voltage or too low voltage protection)/PC 10(Outdoor unit low AC voltage protection)/PC 11(Outdoor unit main control board DC bus high voltage protection)/PC 12(Outdoor unit main control board DC bus high voltage protection /341 MCE error) Diagnosis and Solution

**Description:** Abnormal increases or decreases in voltage are detected by checking the specified voltage detection circuit.

**Recommended parts to prepare:**

- Power supply wires
- IPM module board
- PCB
- Reactor

**Troubleshooting and repair:**




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

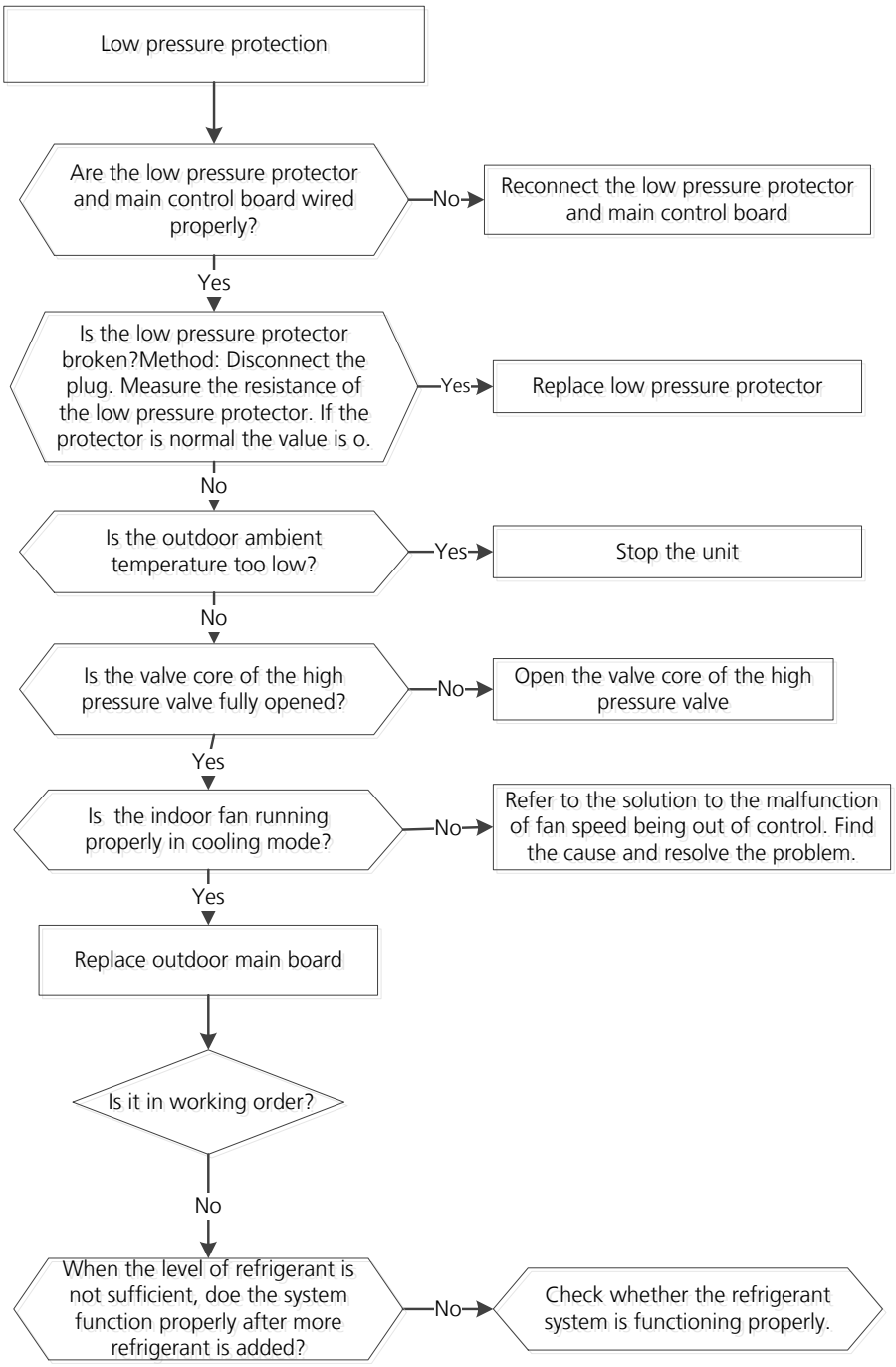
## 7.9 PC 03/PC 31(Low Pressure Protection Diagnosis and Solution)

**Description:** If the sampling voltage is not 5V, the LED displays a failure code.

**Recommended parts to prepare:**

- Connection wires
- Low pressure protector
- Indoor fan assembly
- Outdoor PCB

**Troubleshooting and repair:**




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

## 7.10 PC 02(Top temperature protection of compressor or High temperature protection of IPM module diagnosis and solution)

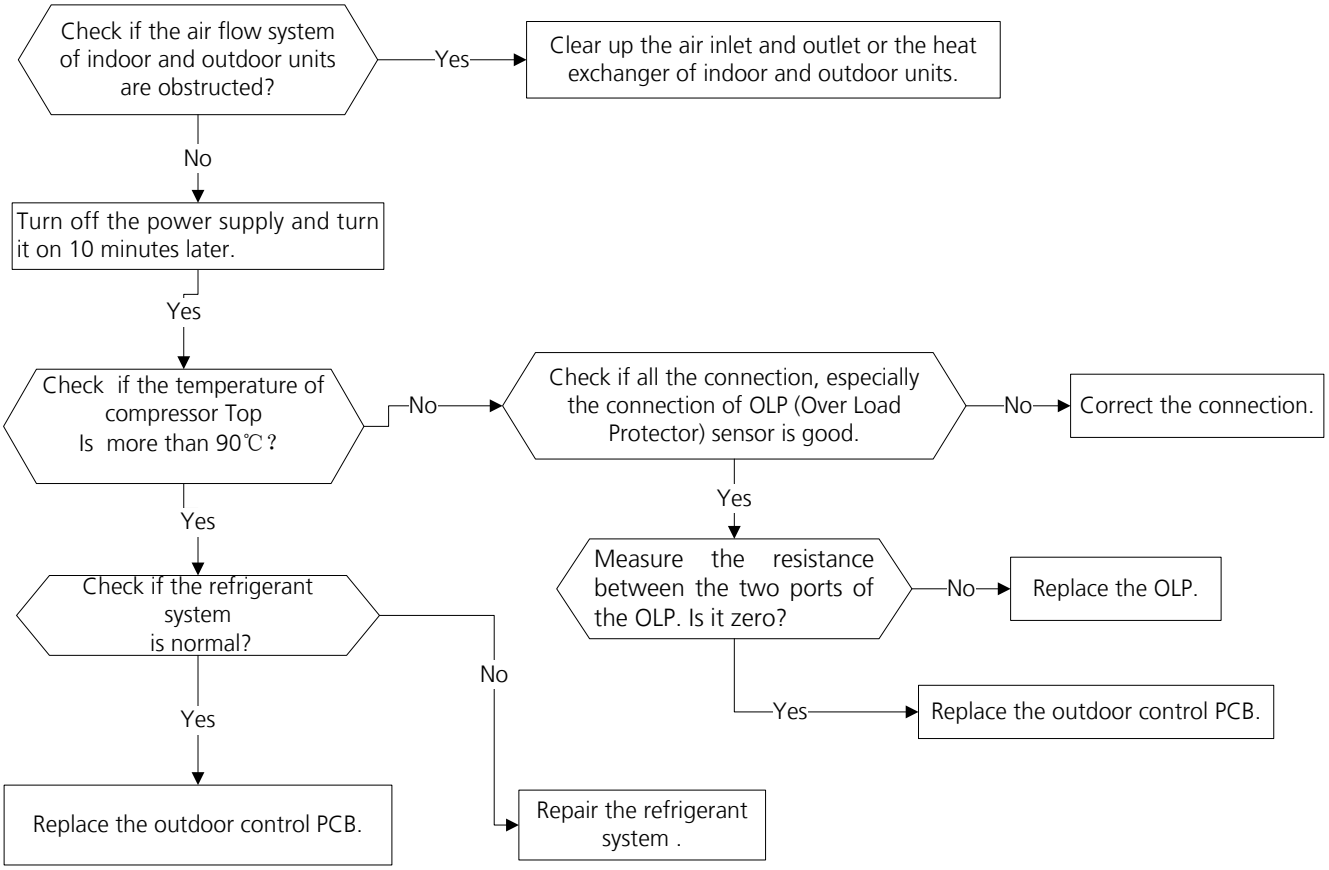
**Description:** For some models with overload protection, If the sampling voltage is not 5V, the LED will display the failure.

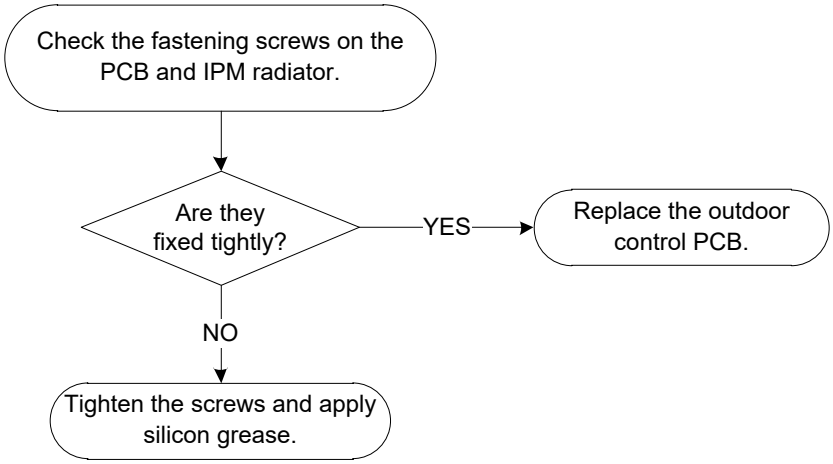
If the temperature of IPM module is higher than a certain value, the LED displays the failure code.

**Recommended parts to prepare:**

- Connection wires
- Outdoor PCB
- IPM module board
- High pressure protector
- System blockages

**Troubleshooting and repair:**





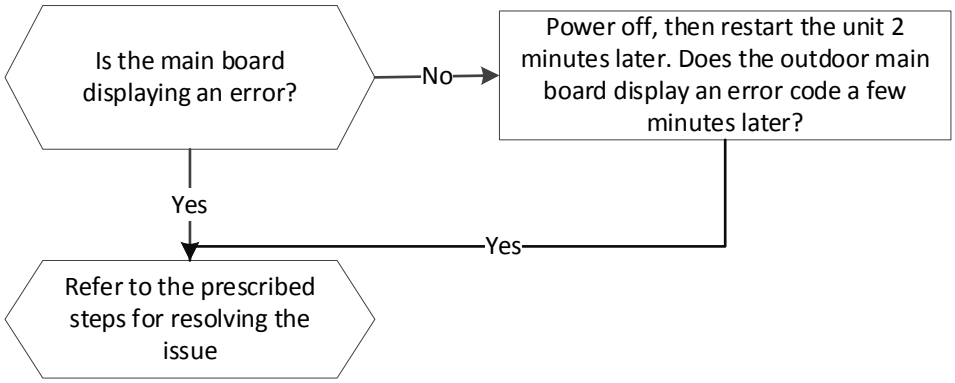

## 7.11 EC 0d(Outdoor unit malfunction Diagnosis and Solution)

**Description**: The indoor unit detect the outdoor unit is error.

**Recommended parts to prepare:**

- Outdoor unit

**Troubleshooting and repair:**



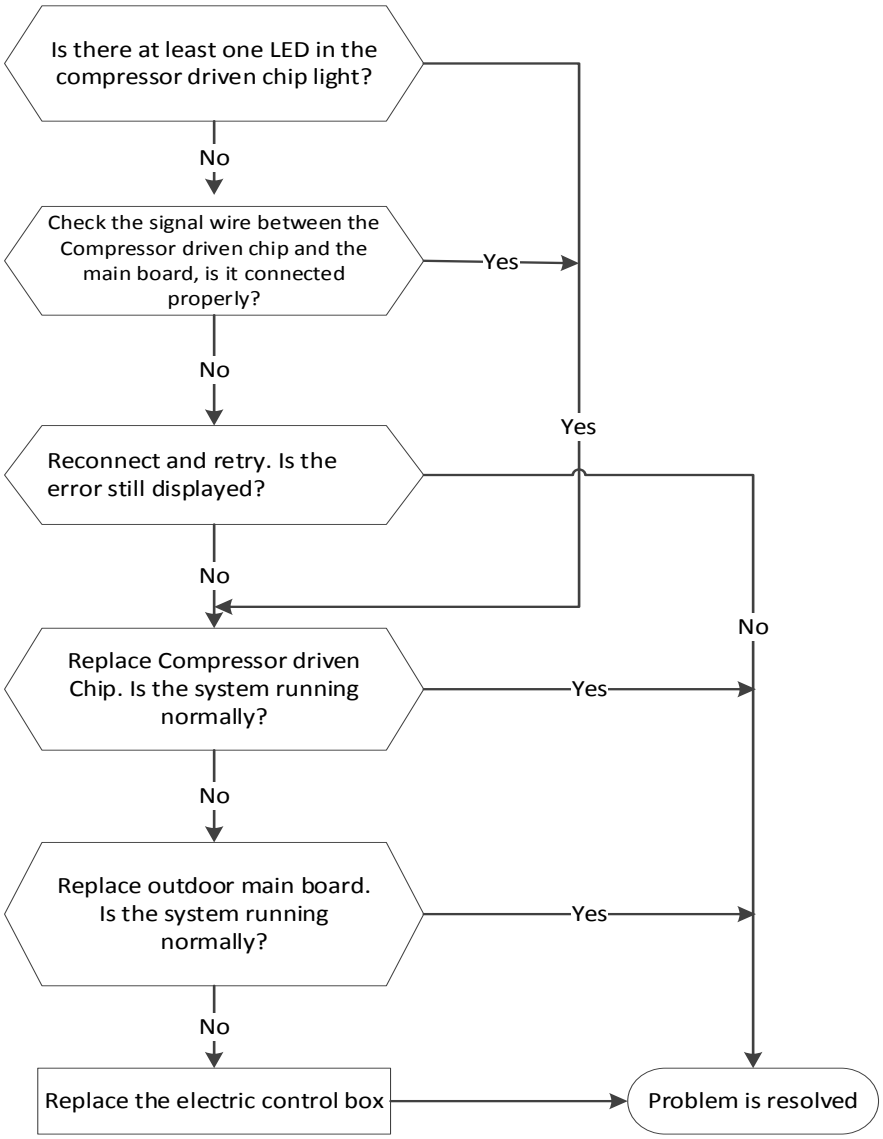
## 7.12 PC 40(Communication error between outdoor main PCB and IPM board diagnosis and solution)

**Description**: The main PCB cannot detect the IPM board.

**Recommended parts to prepare:**

- Connection wires
- IPM board
- Outdoor main PCB
- Electric control box

**Troubleshooting and repair:**



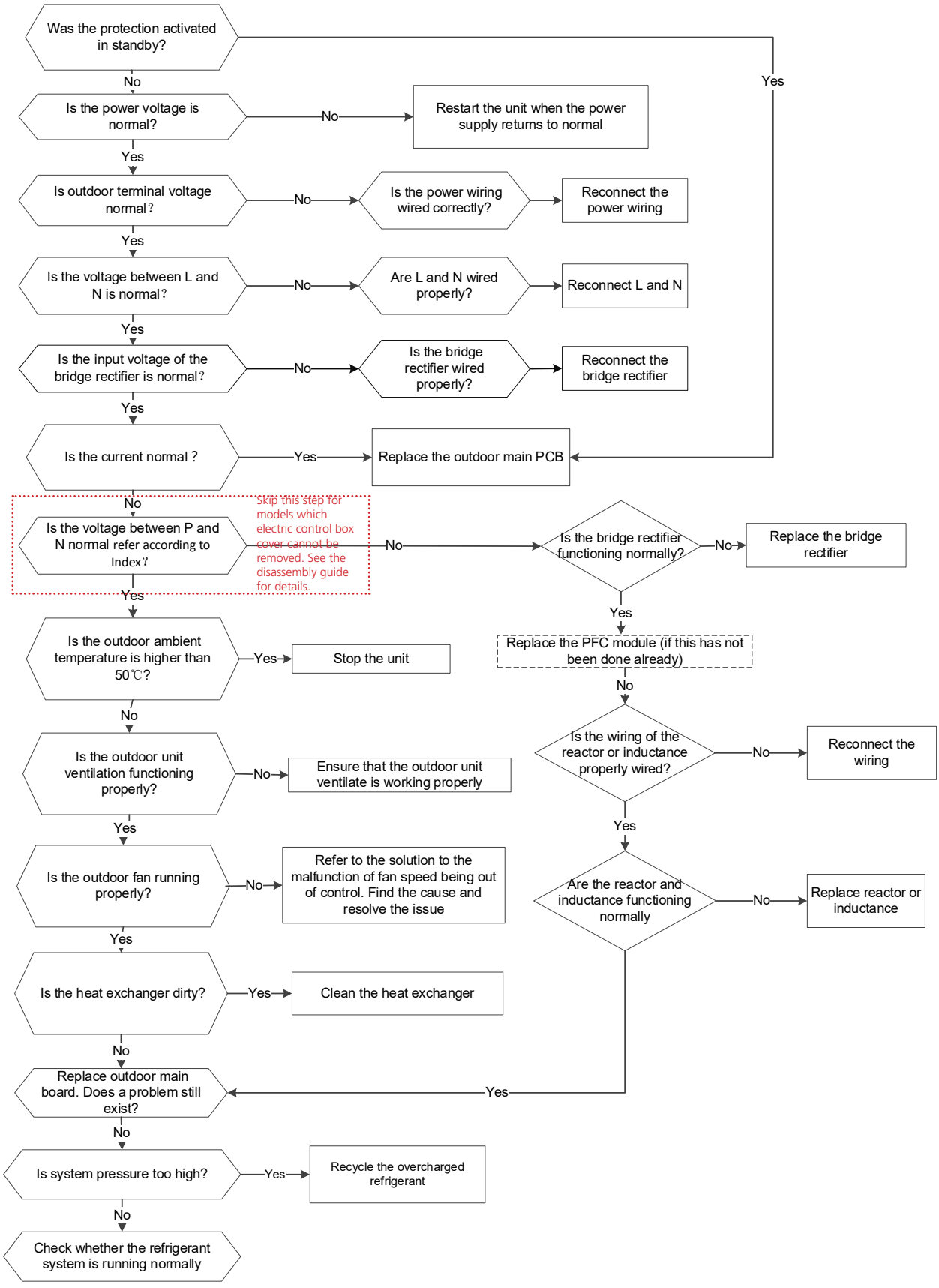
## 7.13 PC 08(Current overload protection)/PC 44(Outdoor unit zero speed protection)/ PC 46(Compressor speed has been out of control)/PC 49(Compressor overcurrent failure) diagnosis and solution

**Description:** An abnormal current rise is detected by checking the specified current detection circuit.

**Recommended parts to prepare:**

- Connection wires
- Rectifier
- PFC circuit or reactor
- Blocked refrigeration piping system
- Pressure switch
- Outdoor fan
- IPM module board
- Outdoor PCB

**Troubleshooting and repair:**




**Note: For certain models, outdoor PCB could not be removed separately. In this case, the outdoor electric control box should be replaced as a whole.**

## 7.14 PC 0F(PFC module protection diagnosis and solution)

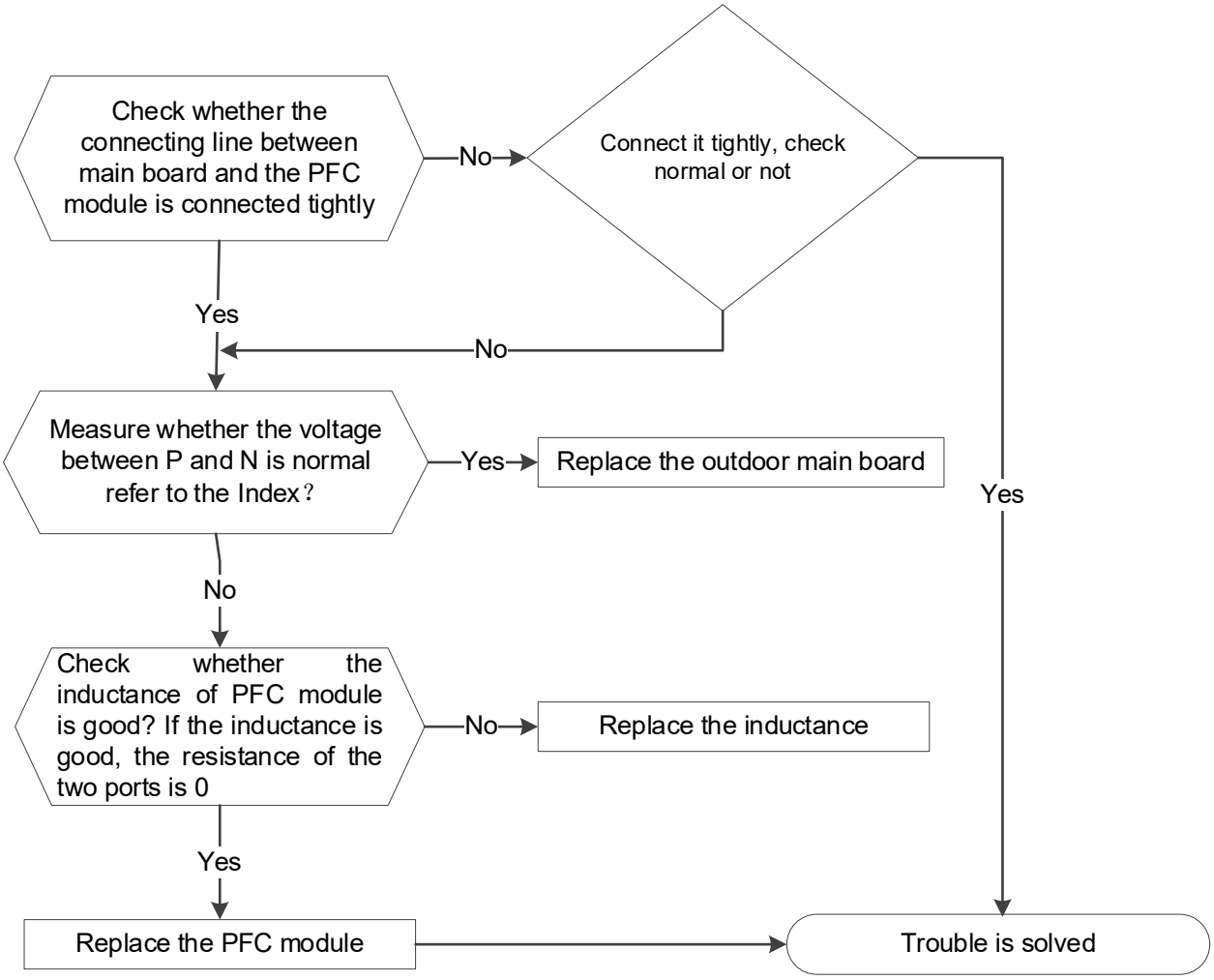
**Description**: When the voltage signal that IPM send to compressor drive chip is abnormal, the LED displays the failure code and the AC turns off.

**Recommended parts to prepare:**

- Connection wires
- Inductance
- Outdoor main PCB
- PFC module

**Troubleshooting and repair:**

At first test the resistance between every two ports of U, V, W of IPM and P, N. If any result of them is 0 or close to 0, the IPM is defective. Otherwise, please follow the procedure below:



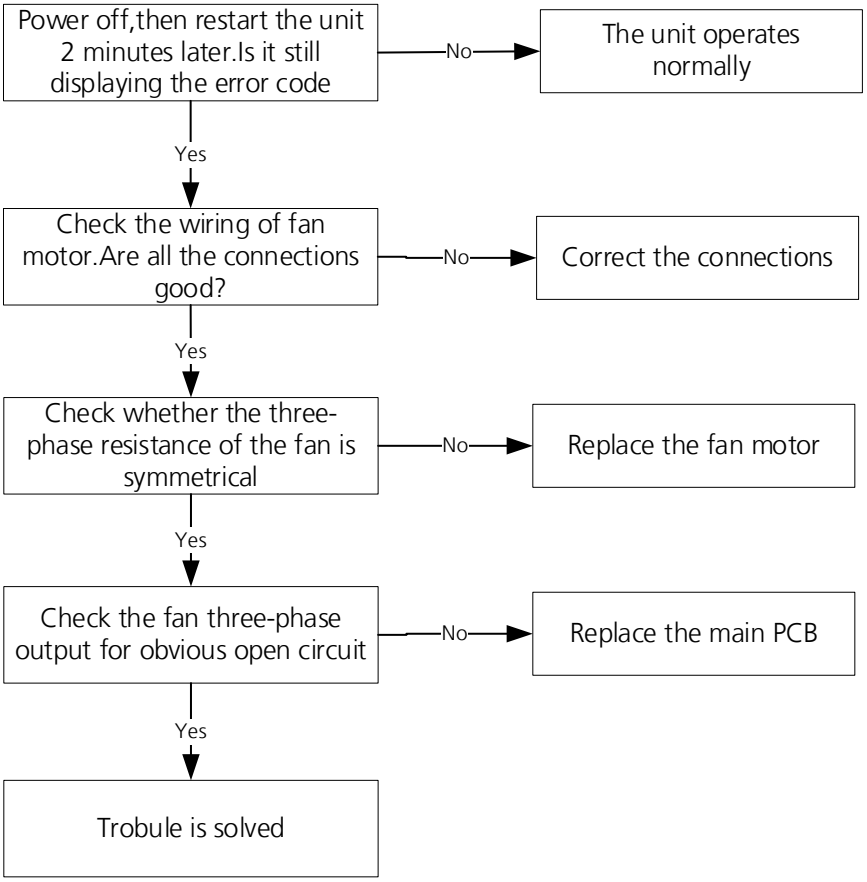
## 7.15 EC 72 (Lack phase failure of outdoor DC fan motor diagnosis and solution)

**Description**: When the three-phase sampling current of the DC motor is abnormal, especially when the current of one or more phases is always small and almost 0, the LED displays the failure code.

**Recommended parts to prepare:**

- Connection wire
- Fan motor
- Outdoor PCB

**Troubleshooting and repair:**



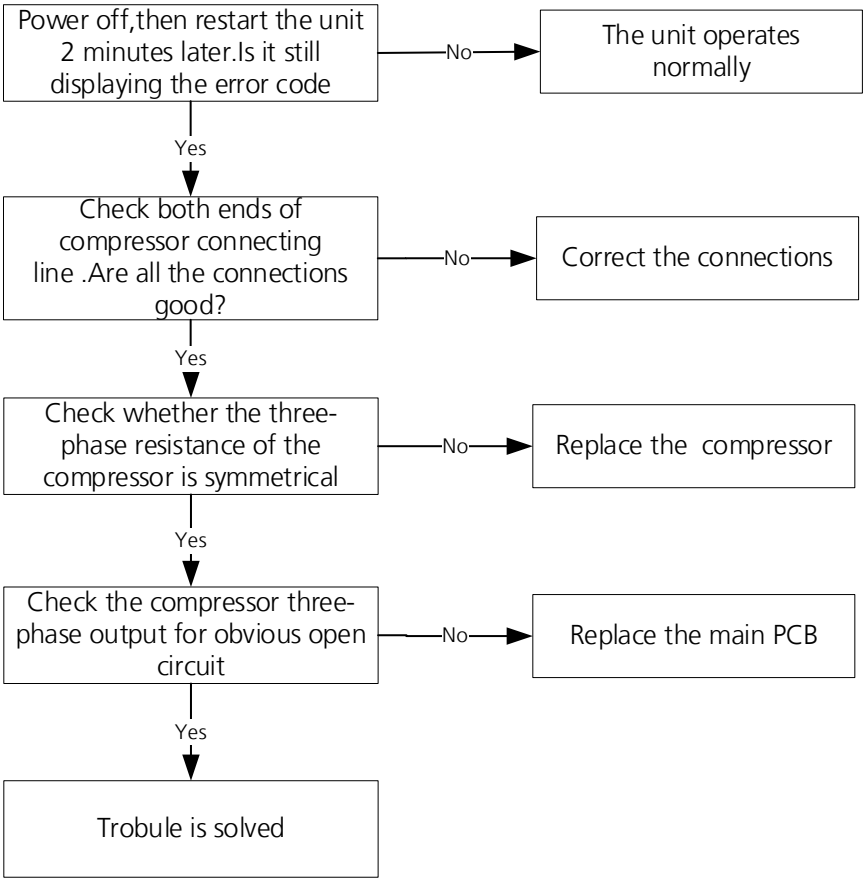
## 7.16 PC 43 (Outdoor compressor lack phase protection diagnosis and solution)

**Description**: When the three-phase sampling current of the compressor is abnormal, especially when the current of one or more phases is always small and almost 0, the LED displays the failure code

**Recommended parts to prepare:**

- Connection wire
- Compressor
- Outdoor PCB

**Troubleshooting and repair:**



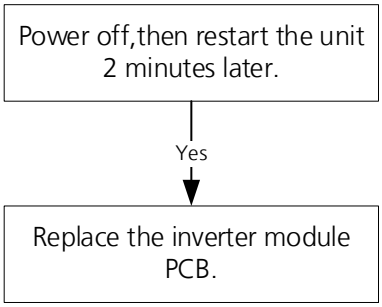
## 7.17 PC 45 (Outdoor unit IR chip drive failure diagnosis and solution)

**Description**: When the IR chip detects its own parameter error, the LED displays the failure code when power on.

**Recommended parts to prepare:**

- Inverter module PCB.

**Troubleshooting and repair:**




## 7.18 PC 0L (Low ambient temperature protection)

**Description**: It is a protection function. When compressor is off, outdoor ambient temperature(T4) is lower than -35°C. for 10s, the AC will stop and display the failure code.

When compressor is on, outdoor ambient temperature(T4) is lower than -40°C.for 10s, the AC will stop and display the failure code.

When outdoor ambient temperature(T4) is no lower than -32°C.for 10s, the unit will exit protection.

## 7.19 EH 0b(Communication error between indoor two chips diagnosis and solution)

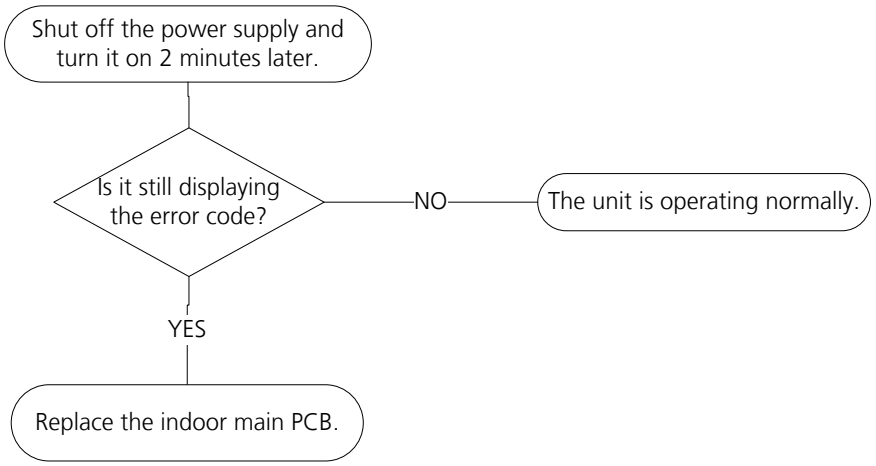
**For Duct type &Floor ceiling Type:**

**Description**: Indoor PCB main chip does not receive feedback from another chip.

**Recommended parts to prepare:**

- Indoor PCB

**Troubleshooting and repair:**



**For new console type,**

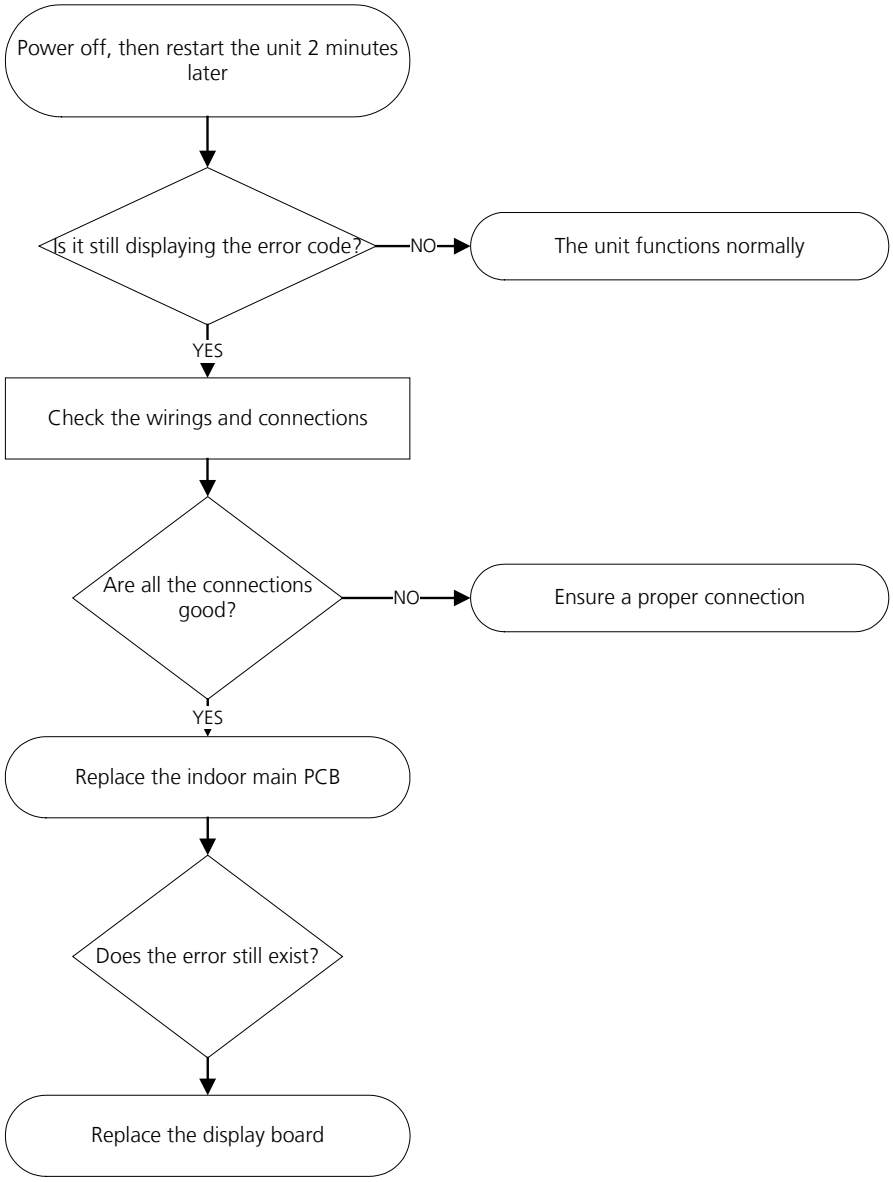
## EH 0b(Communication error between display board and main board)

**Description**: Indoor PCB does not receive feedback from the display board.

**Recommended parts to prepare:**

- Communication wire
- Indoor PCB
- Display board

**Troubleshooting and repair:**



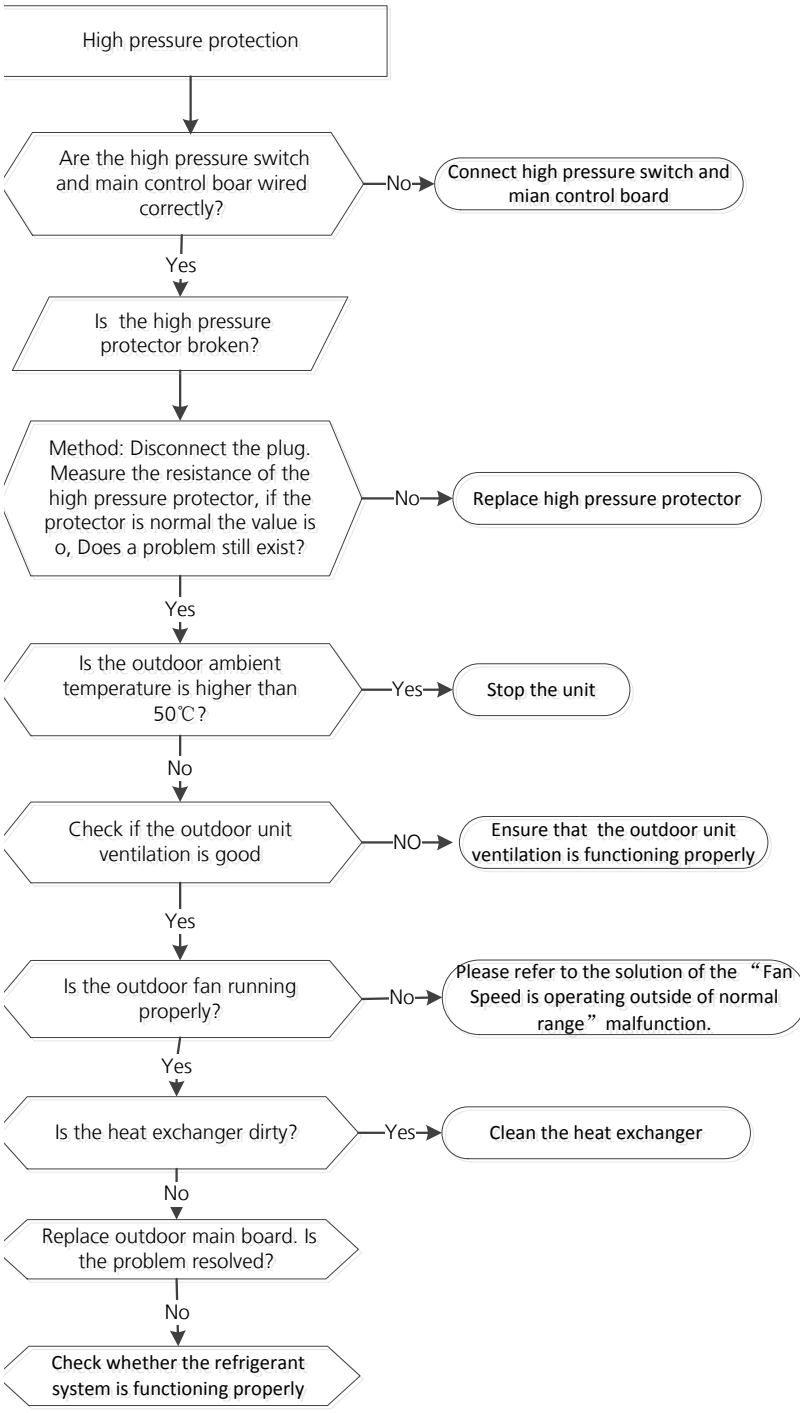
## 7.20 PC 03/PC 30 (High pressure protection diagnosis and solution)

**Description**: Outdoor pressure switch cut off the system because high pressure is higher than 4.4 MPa

**Recommended parts to prepare:**

- Connection wires
- Pressure switch
- Outdoor fan
- Outdoor main PCB

**Troubleshooting and repair:**



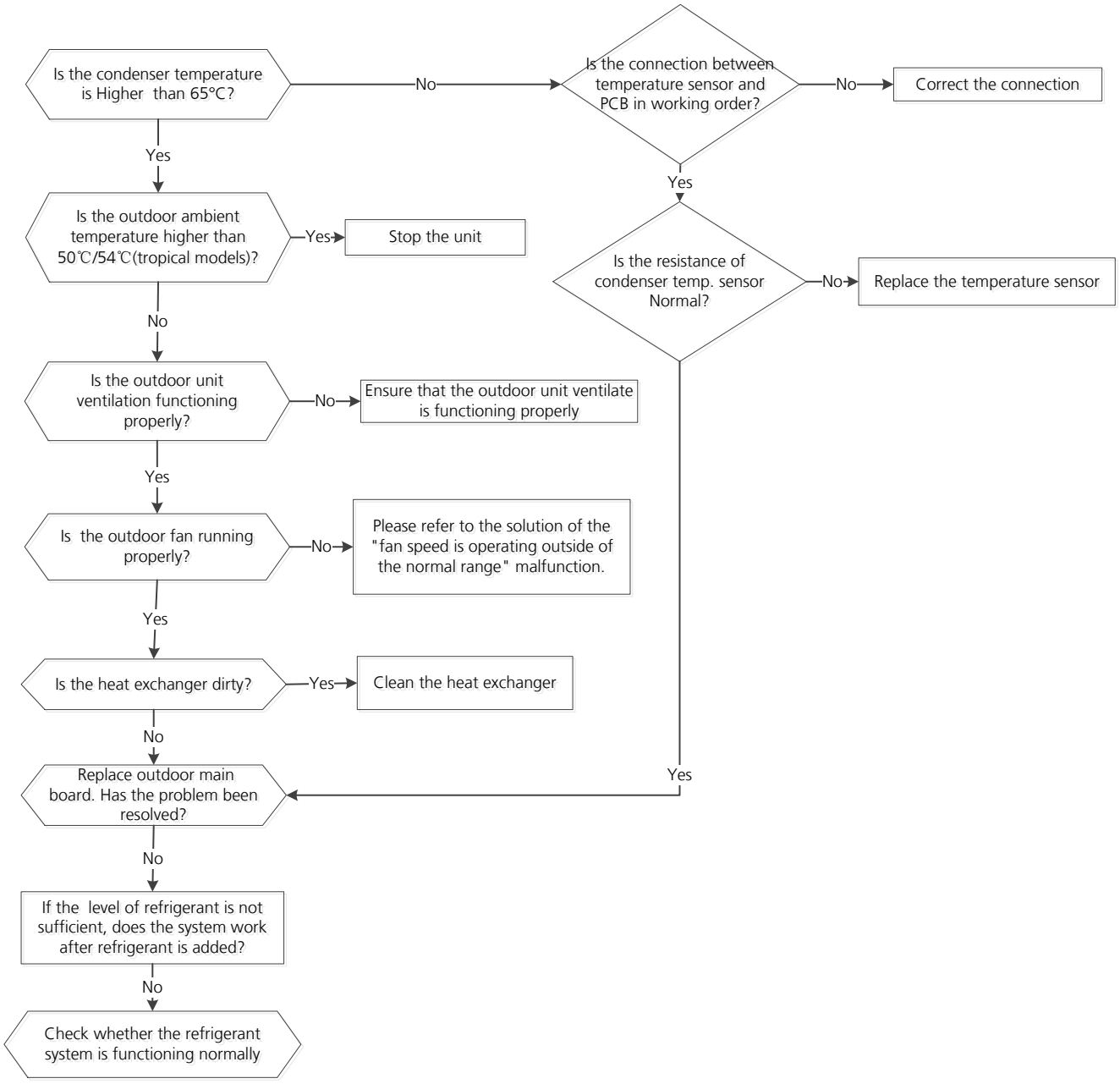
## 7.21 PC 0A (High temperature protection of condenser diagnosis and solution)

**Description**: When the outdoor pipe temperature is more than 65°C, the unit stops. It starts again only when the outdoor pipe temperature is less than 52°C.

**Recommended parts to prepare:**

- Connection wires
- Condenser temperature sensor
- Outdoor fan
- Outdoor main PCB
- Refrigerant

**Troubleshooting and repair:**



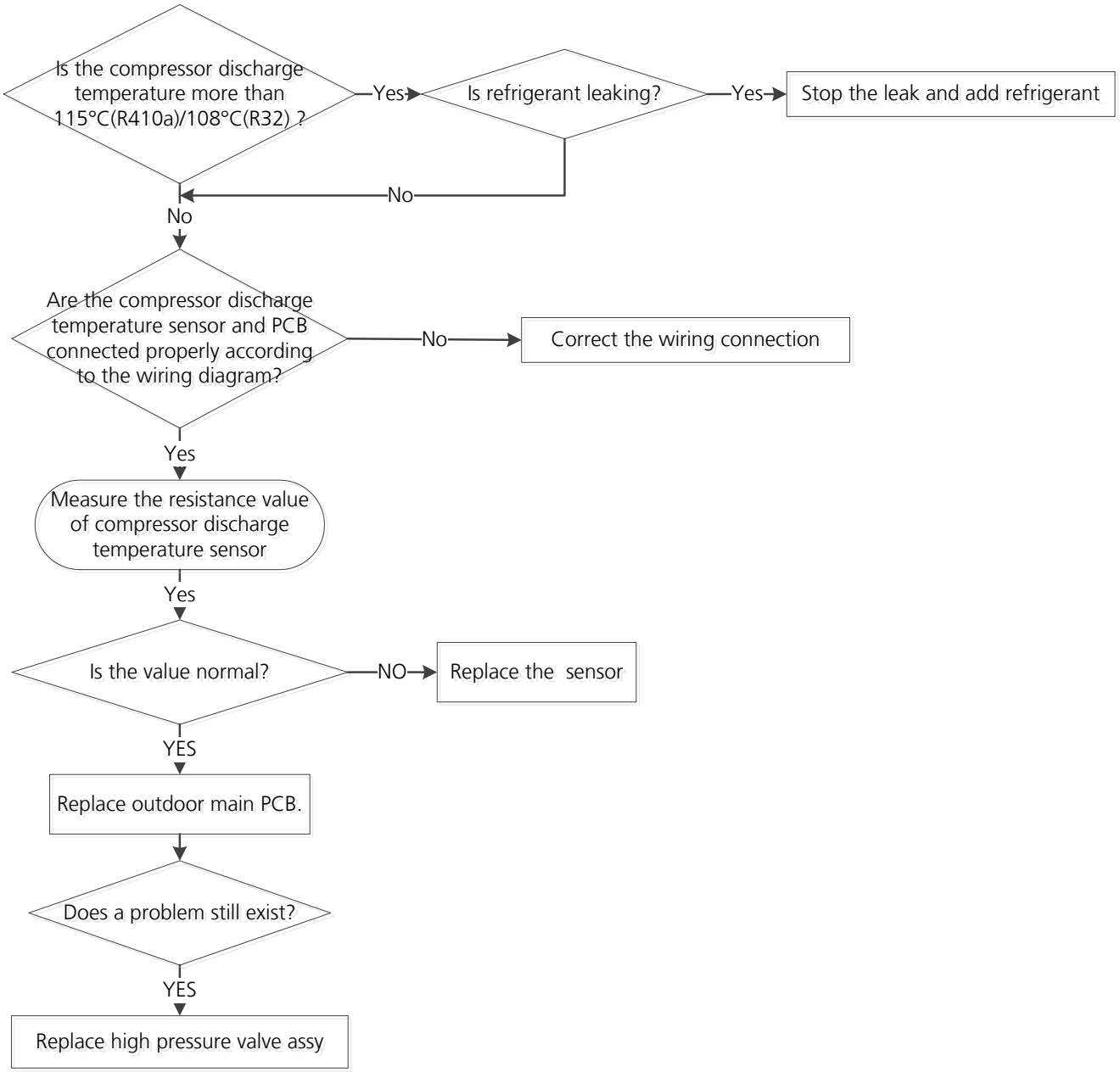
## 7.22 PC 06 (Discharge temperature protection of compressor diagnosis and solution)

**Description**: If the compressor discharge temperature exceeds a certain level for nine seconds, the compressor ceases operation, the LED displays the failure code

**Recommended parts to prepare:**

- Connection wires
- Discharge temperature sensor
- Additional refrigerant
- Outdoor main PCB

**Troubleshooting and repair:**



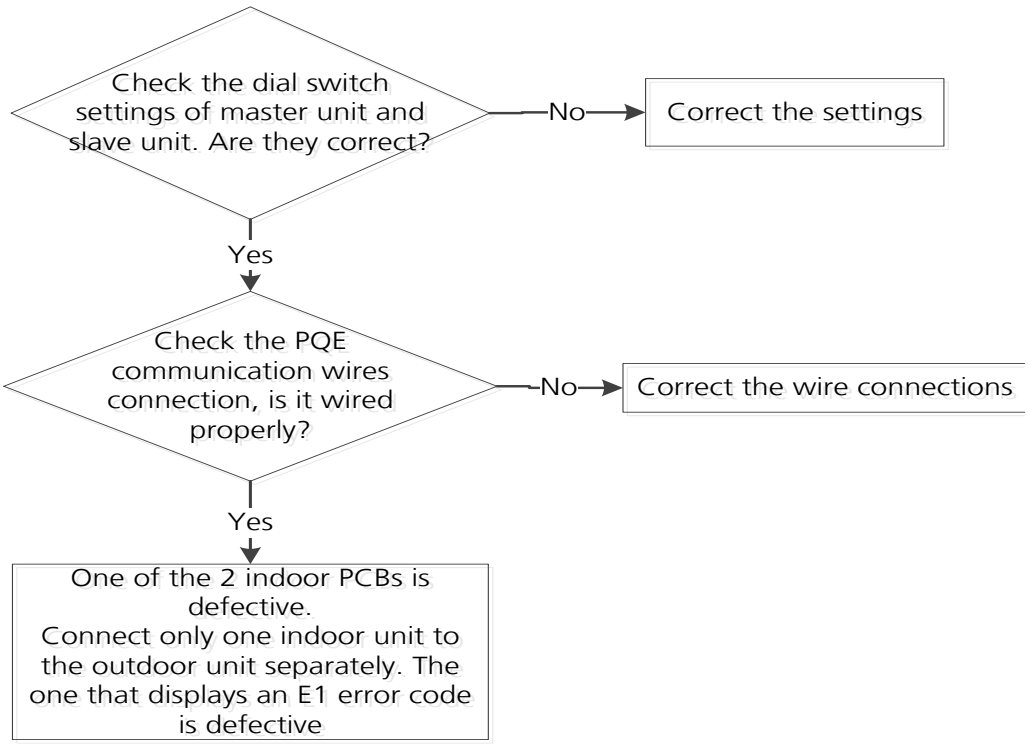

**Note: For certain models, outdoor unit uses combination sensor, T3,T4 and TP are the same of sensor. This picture and the value are only for reference, actual appearance and value may vary.**

## 7.23 EL11 (Communication error between master and slave unit (for twins system) Diagnosis and Solution)

**Description**: When set in twins system, master unit and slave unit cannot be recognized normally.

**Recommended parts to prepare:**

- Connection wires
- Indoor PCB




## 7.24 EH12 (Another indoor unit malfunction (for twins system) Diagnosis and Solution)

**Description**: When set in twins system, one indoor unit displays this error code, which means another indoor unit is faulty. Check another indoor unit's error code and then follow the prescribed solutions to resolve the malfunction.

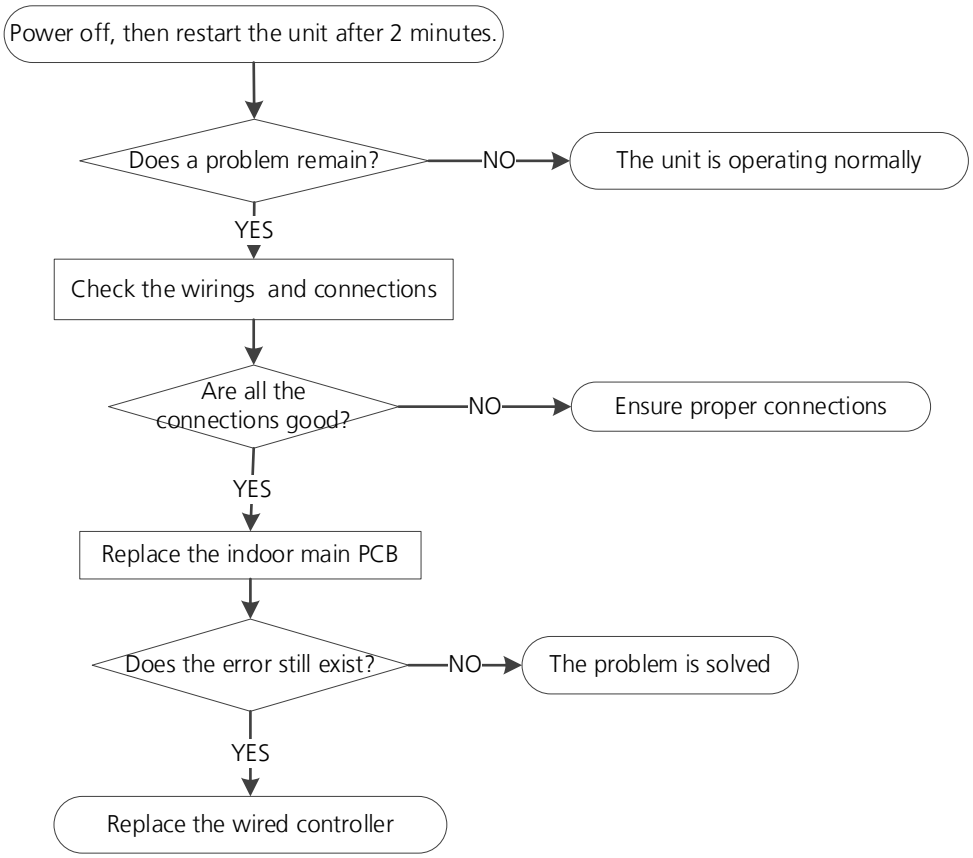
## 7.25 EH b3 (Communication error between wired controller and indoor unit Diagnosis and Solution

**Description**: If Indoor PCB does not receive feedback from wired controller, the error displays on the wired controller

**Recommended parts to prepare:**

- Connection wires
- Indoor PCB
- Wired controller

**Troubleshooting and repair:**



## 7.26 EH bA(Communication malfunction between external fan module and indoor unit)/ EH 3A(External fan DC bus voltage is too low protection)/ EH 3b(External fan DC bus voltage is too high fault) diagnosis and solution

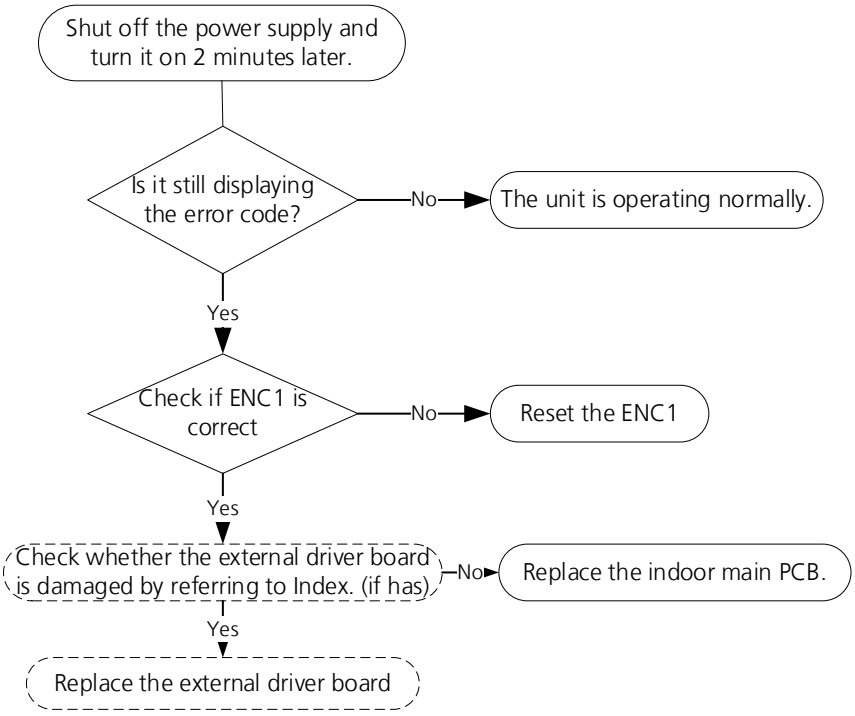
**Description**: Indoor unit does not receive the feedback from external fan module during 150 seconds.

or Indoor unit receives abnormal increases or decreases in voltage from external fan module.

**Recommended parts to prepare:**

- External drive board
- Indoor main PCB

**Troubleshooting and repair:**



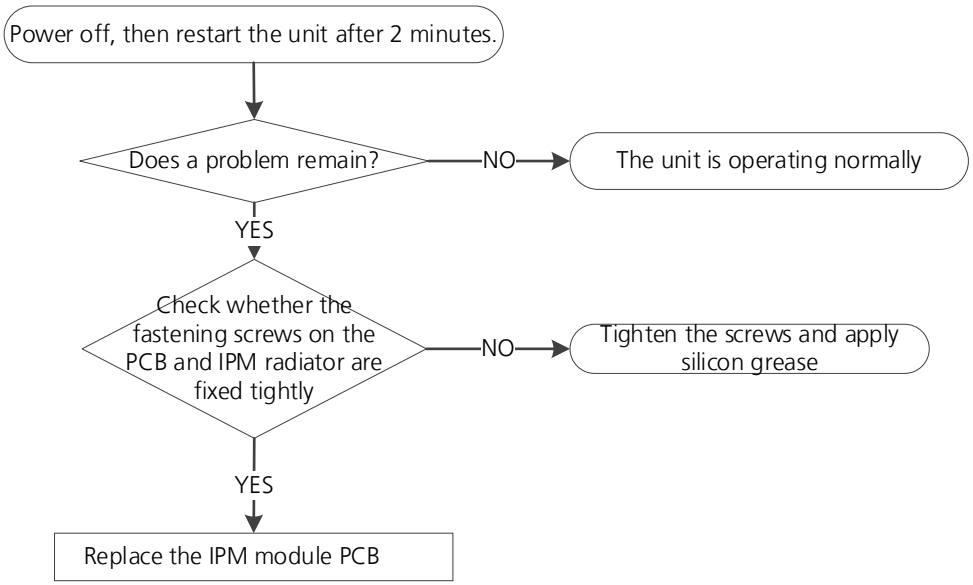
## 7.27 EC55 (Outdoor IPM module temperature sensor fault) diagnosis and solution

**Description**: If the sampling voltage is 0V or 5V, the LED displays the failure code.

**Recommended parts to prepare:**

- IPM module PCB

**Troubleshooting and repair:**



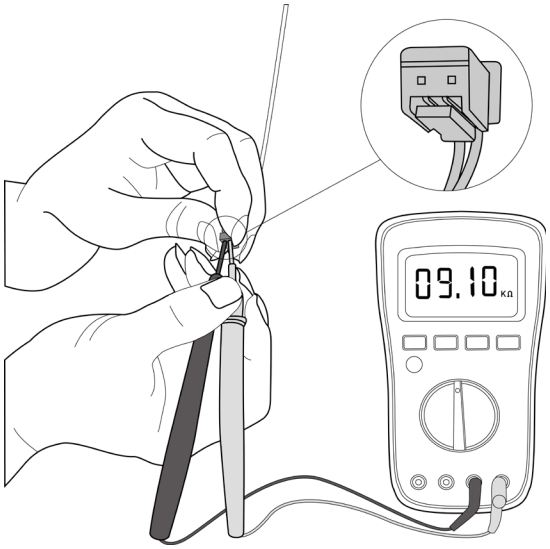
# 8. Check Procedures

## 8.1 Temperature Sensor Check

**WARNING**

**Be sure to turn off all power supplies or disconnect all wires to avoid electric shock. Operate after compressor and coil have returned to normal temperature in case of injury.**

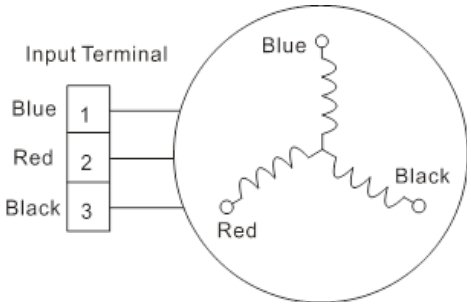
1. Disconnect the temperature sensor from PCB (Refer to Chapter 5&6. Indoor&Outdoor Unit Disassembly).
2. Measure the resistance value of the sensor using a multi-meter.
3. Check corresponding temperature sensor resistance value table (Refer to Chapter 8. Appendix).




**Note: The picture and the value are only for reference, actual condition and specific value may vary.**

## 8.2 Compressor Check

1. Disconnect the compressor power cord from outdoor PCB (Refer to Chapter 6. Outdoor Unit Disassembly)).
2. Measure the resistance value of each winding using a multi-meter.
3. Check the resistance value of each winding in the following table.

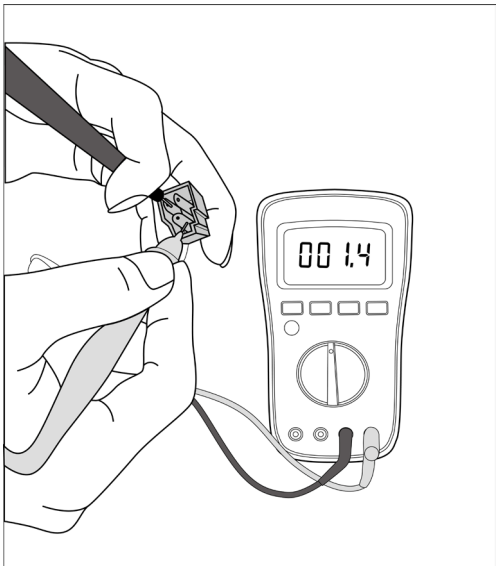


| Resistance Value | KSN98D64UFZ3 | KSN140D21UFZ | KTM240D43UKT | KTM240D57UMT | KTM240D63SKT2 |
|---|---|---|---|---|---|
| Blue-Red | 2.7Ω | 1.28Ω | 1.03Ω | 0.62Ω | 1.19Ω |
| Blue-Black | | | | | |
| Red-Black | | | | | |

| Resistance Value | KTF250D22UMT ATF235D22TMT | KSN140D58UFZ | KTF310D43UMT ATF310D43TMT | KTQ420D1UMU ATQ420D1SN5A1 EAPQ420D1UMUA EAPQ440D1UMUA KTQ420D41SN5A1 ATQ420D1TMU | KTN150D30SFZA |
|---|---|---|---|---|---|
| Blue-Red | 0.75Ω | 1.86Ω | 0.65Ω | 0.37Ω | 1.02Ω |
| Blue-Black | | | | | |
| Red-Black | | | | | |

| Resistance Value | ATM150D23TFZ | ATH307CDRC8DUL | KSK103D33UEZ3 | KTM240D46UKT2 | ASN140D35TFZ |
|---|---|---|---|---|---|
| Blue-Red | 1.72Ω | 1.09Ω | 2.13Ω | 1.04Ω | 0.83Ω |
| Blue-Black | | | | | |
| Red-Black | | | | | |

| Resistance Value | KTM310D86UMTA | | | |
|---|---|---|---|---|
| Blue-Red | 0.45Ω | | | |
| Blue-Black | | | | |
| Red-Black | | | | |




**Note: The picture and the value are only for reference, actual condition and specific value may vary.**

## 8.3 IPM Continuity Check

**WARNING**

**Electricity remains in capacitors even when the power supply is off.**
**Ensure the capacitors are fully discharged before troubleshooting.**

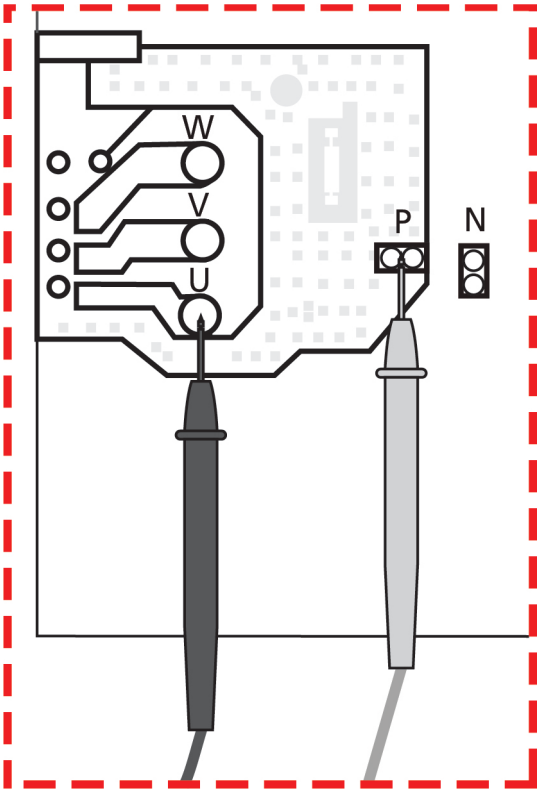
1. Turn off outdoor unit and disconnect power supply.
2. Discharge electrolytic capacitors and ensure all energy-storage unit has been discharged.
3. Disassemble outdoor PCB or disassemble IPM board.
4. Measure the resistance value between P and U(V, W, N); U(V, W) and N.

| Digital tester | | Resistance value | Digital tester | | Resistance value |
|---|---|---|---|---|---|
| (+)Red | (-)Black | | (+)Red | (-)Black | |
| P | N | ∞<br>(Several MΩ) | U | N | ∞<br>(Several MΩ) |
| | U | | V | | |
| | V | | W | | |
| | W | | - | | |

**Or test the conductivity of IPM with diode mode.**

| Needle-type Tester | | Normal Value | Needle-type Tester | | Normal Value |
|---|---|---|---|---|---|
| Red | Black | | Red | Black | |
| P | U | Open-circuit | N | U | 0.3-0.5V |
| | V | | | V | |
| | W | | | W | |

| Needle-type Tester | | Normal Value | Needle-type Tester | | Normal Value |
|---|---|---|---|---|---|
| Black | Red | | Black | Red | |
| P | U | 0.3-0.5V | N | U | Open-circuit |
| | V | | | V | |
| | W | | | W | |




**Note: The picture and the value are only for reference, actual condition and specific value may vary.**

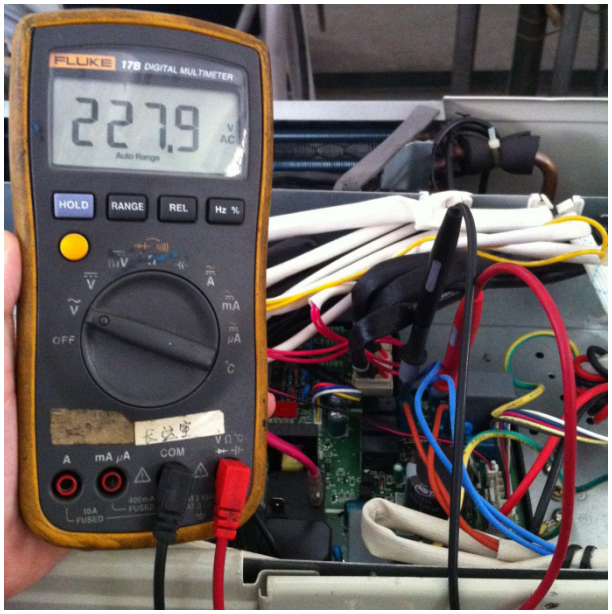
**8.4 Normal voltage of P and N**

| 208-240V(1-phase,3-phase) | 380-415V(3-phase) |
|---|---|
| In standby | |
| around 310VDC | around 530VDC |
| In operation | |
| >310VDC | >450VDC |

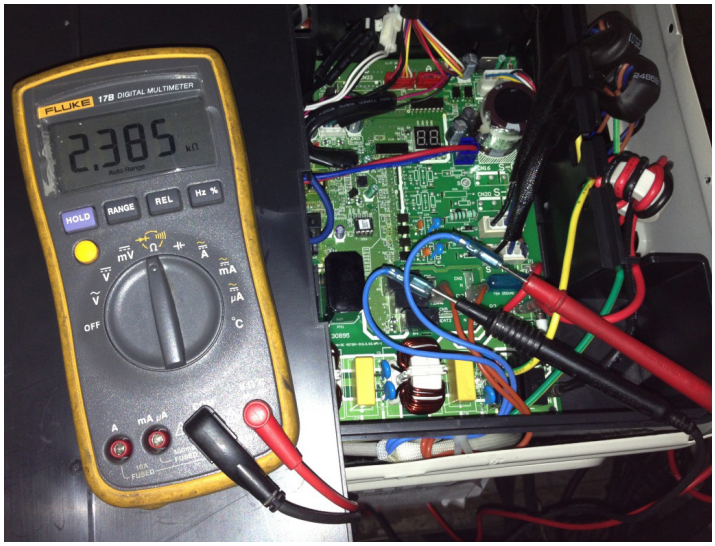
## 8.5 4-way Valve Check(Heat pump units)

1. Power on, use a digital tester to measure the voltage, when the unit operates in cooling, it is 0V. When the unit operates in heating, it is about 230VAC.

If the value of the voltage is not in the range, the PCB must have problems and need to be replaced.


2 Turn off the power, use a digital tester to measure the resistance. The value should be 1.8~2.5 KΩ.

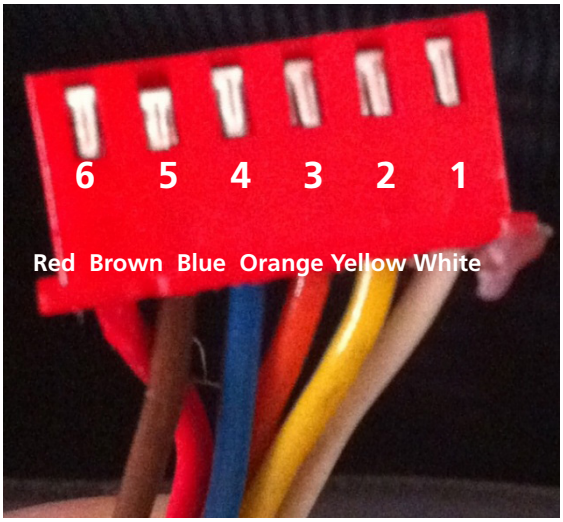


## 8.6 EEV Check(for some models)

**WARNING**

**Electricity remains in capacitors even when the power supply is off.**
**Ensure the capacitors are fully discharged before troubleshooting.**

1. Disconnect the connector from outdoor PCB.
2. Measure the resistance value of each winding using a multi-meter.
3. Check the resistance value of each winding in the following table.




| Color of lead winding | Normal Value |
|---|---|
| Red- Blue | About 50Ω |
| Red - Yellow | |
| Brown-Orange | |
| Brown-White | |

# Appendix

## Contents

## i) Temperature Sensor Resistance Value Table for T1,T2,T3 and T4 (°C – K)

| °C | °F | K Ohm | °C | °F | K Ohm | °C | °F | K Ohm | °C | °F | K Ohm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -20 | -4 | 115.266 | 20 | 68 | 12.6431 | 60 | 140 | 2.35774 | 100 | 212 | 0.62973 |
| -19 | -2 | 108.146 | 21 | 70 | 12.0561 | 61 | 142 | 2.27249 | 101 | 214 | 0.61148 |
| -18 | 0 | 101.517 | 22 | 72 | 11.5 | 62 | 144 | 2.19073 | 102 | 216 | 0.59386 |
| -17 | 1 | 96.3423 | 23 | 73 | 10.9731 | 63 | 145 | 2.11241 | 103 | 217 | 0.57683 |
| -16 | 3 | 89.5865 | 24 | 75 | 10.4736 | 64 | 147 | 2.03732 | 104 | 219 | 0.56038 |
| -15 | 5 | 84.219 | 25 | 77 | 10 | 65 | 149 | 1.96532 | 105 | 221 | 0.54448 |
| -14 | 7 | 79.311 | 26 | 79 | 9.55074 | 66 | 151 | 1.89627 | 106 | 223 | 0.52912 |
| -13 | 9 | 74.536 | 27 | 81 | 9.12445 | 67 | 153 | 1.83003 | 107 | 225 | 0.51426 |
| -12 | 10 | 70.1698 | 28 | 82 | 8.71983 | 68 | 154 | 1.76647 | 108 | 226 | 0.49989 |
| -11 | 12 | 66.0898 | 29 | 84 | 8.33566 | 69 | 156 | 1.70547 | 109 | 228 | 0.486 |
| -10 | 14 | 62.2756 | 30 | 86 | 7.97078 | 70 | 158 | 1.64691 | 110 | 230 | 0.47256 |
| -9 | 16 | 58.7079 | 31 | 88 | 7.62411 | 71 | 160 | 1.59068 | 111 | 232 | 0.45957 |
| -8 | 18 | 56.3694 | 32 | 90 | 7.29464 | 72 | 162 | 1.53668 | 112 | 234 | 0.44699 |
| -7 | 19 | 52.2438 | 33 | 91 | 6.98142 | 73 | 163 | 1.48481 | 113 | 235 | 0.43482 |
| -6 | 21 | 49.3161 | 34 | 93 | 6.68355 | 74 | 165 | 1.43498 | 114 | 237 | 0.42304 |
| -5 | 23 | 46.5725 | 35 | 95 | 6.40021 | 75 | 167 | 1.38703 | 115 | 239 | 0.41164 |
| -4 | 25 | 44 | 36 | 97 | 6.13059 | 76 | 169 | 1.34105 | 116 | 241 | 0.4006 |
| -3 | 27 | 41.5878 | 37 | 99 | 5.87359 | 77 | 171 | 1.29078 | 117 | 243 | 0.38991 |
| -2 | 28 | 39.8239 | 38 | 100 | 5.62961 | 78 | 172 | 1.25423 | 118 | 244 | 0.37956 |
| -1 | 30 | 37.1988 | 39 | 102 | 5.39689 | 79 | 174 | 1.2133 | 119 | 246 | 0.36954 |
| 0 | 32 | 35.2024 | 40 | 104 | 5.17519 | 80 | 176 | 1.17393 | 120 | 248 | 0.35982 |
| 1 | 34 | 33.3269 | 41 | 106 | 4.96392 | 81 | 178 | 1.13604 | 121 | 250 | 0.35042 |
| 2 | 36 | 31.5635 | 42 | 108 | 4.76253 | 82 | 180 | 1.09958 | 122 | 252 | 0.3413 |
| 3 | 37 | 29.9058 | 43 | 109 | 4.5705 | 83 | 181 | 1.06448 | 123 | 253 | 0.33246 |
| 4 | 39 | 28.3459 | 44 | 111 | 4.38736 | 84 | 183 | 1.03069 | 124 | 255 | 0.3239 |
| 5 | 41 | 26.8778 | 45 | 113 | 4.21263 | 85 | 185 | 0.99815 | 125 | 257 | 0.31559 |
| 6 | 43 | 25.4954 | 46 | 115 | 4.04589 | 86 | 187 | 0.96681 | 126 | 259 | 0.30754 |
| 7 | 45 | 24.1932 | 47 | 117 | 3.88673 | 87 | 189 | 0.93662 | 127 | 261 | 0.29974 |
| 8 | 46 | 22.5662 | 48 | 118 | 3.73476 | 88 | 190 | 0.90753 | 128 | 262 | 0.29216 |
| 9 | 48 | 21.8094 | 49 | 120 | 3.58962 | 89 | 192 | 0.8795 | 129 | 264 | 0.28482 |
| 10 | 50 | 20.7184 | 50 | 122 | 3.45097 | 90 | 194 | 0.85248 | 130 | 266 | 0.2777 |
| 11 | 52 | 19.6891 | 51 | 124 | 3.31847 | 91 | 196 | 0.82643 | 131 | 268 | 0.27078 |
| 12 | 54 | 18.7177 | 52 | 126 | 3.19183 | 92 | 198 | 0.80132 | 132 | 270 | 0.26408 |
| 13 | 55 | 17.8005 | 53 | 127 | 3.07075 | 93 | 199 | 0.77709 | 133 | 271 | 0.25757 |
| 14 | 57 | 16.9341 | 54 | 129 | 2.95896 | 94 | 201 | 0.75373 | 134 | 273 | 0.25125 |
| 15 | 59 | 16.1156 | 55 | 131 | 2.84421 | 95 | 203 | 0.73119 | 135 | 275 | 0.24512 |
| 16 | 61 | 15.3418 | 56 | 133 | 2.73823 | 96 | 205 | 0.70944 | 136 | 277 | 0.23916 |
| 17 | 63 | 14.6181 | 57 | 135 | 2.63682 | 97 | 207 | 0.68844 | 137 | 279 | 0.23338 |
| 18 | 64 | 13.918 | 58 | 136 | 2.53973 | 98 | 208 | 0.66818 | 138 | 280 | 0.22776 |
| 19 | 66 | 13.2631 | 59 | 138 | 2.44677 | 99 | 210 | 0.64862 | 139 | 282 | 0.22231 |

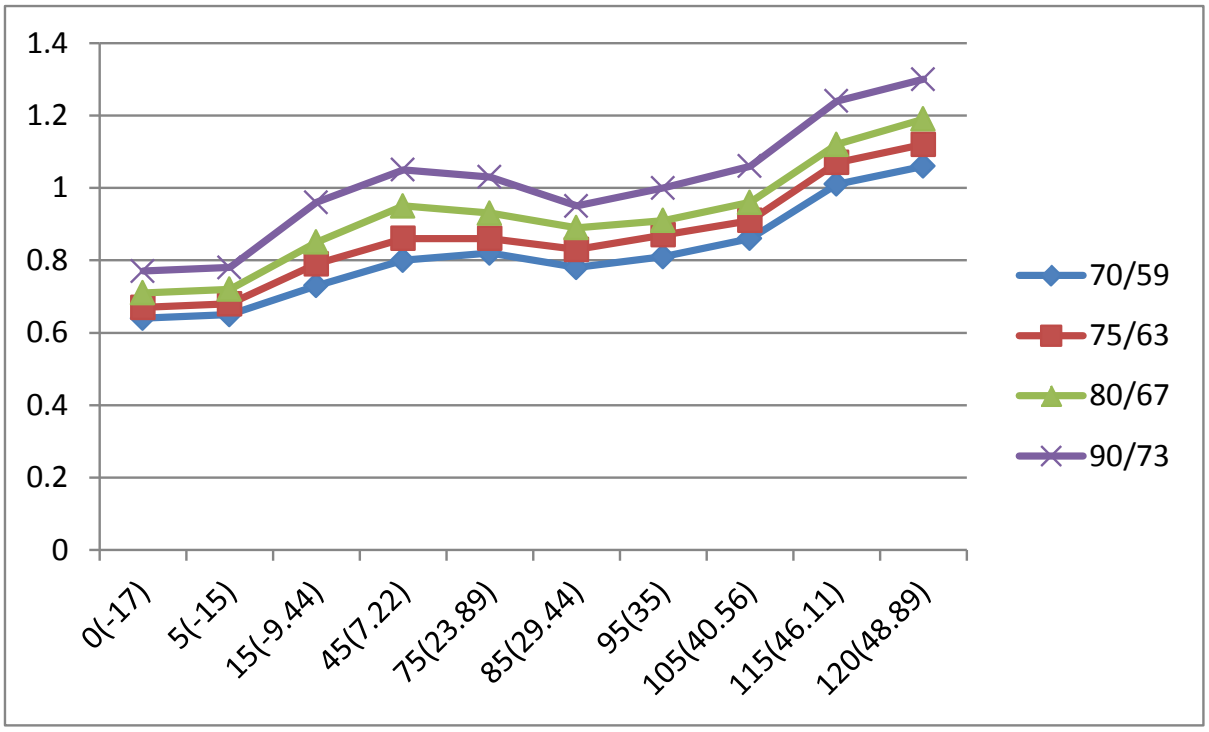
## ii) Temperature Sensor Resistance Value Table for TP(for some units) (°C --K)

| °C | °F | K Ohm | °C | °F | K Ohm | °C | °F | K Ohm | °C | °F | K Ohm |
|---|---|---|---|---|---|---|---|---|---|---|---|
| °C | °F | K Ohm | °C | °F | K Ohm | °C | °F | K Ohm | °C | °F | K Ohm |
| -20 | -4 | 542.7 | 20 | 68 | 68.66 | 60 | 140 | 13.59 | 100 | 212 | 3.702 |
| -19 | -2 | 511.9 | 21 | 70 | 65.62 | 61 | 142 | 13.11 | 101 | 214 | 3.595 |
| -18 | 0 | 483 | 22 | 72 | 62.73 | 62 | 144 | 12.65 | 102 | 216 | 3.492 |
| -17 | 1 | 455.9 | 23 | 73 | 59.98 | 63 | 145 | 12.21 | 103 | 217 | 3.392 |
| -16 | 3 | 430.5 | 24 | 75 | 57.37 | 64 | 147 | 11.79 | 104 | 219 | 3.296 |
| -15 | 5 | 406.7 | 25 | 77 | 54.89 | 65 | 149 | 11.38 | 105 | 221 | 3.203 |
| -14 | 7 | 384.3 | 26 | 79 | 52.53 | 66 | 151 | 10.99 | 106 | 223 | 3.113 |
| -13 | 9 | 363.3 | 27 | 81 | 50.28 | 67 | 153 | 10.61 | 107 | 225 | 3.025 |
| -12 | 10 | 343.6 | 28 | 82 | 48.14 | 68 | 154 | 10.25 | 108 | 226 | 2.941 |
| -11 | 12 | 325.1 | 29 | 84 | 46.11 | 69 | 156 | 9.902 | 109 | 228 | 2.86 |
| -10 | 14 | 307.7 | 30 | 86 | 44.17 | 70 | 158 | 9.569 | 110 | 230 | 2.781 |
| -9 | 16 | 291.3 | 31 | 88 | 42.33 | 71 | 160 | 9.248 | 111 | 232 | 2.704 |
| -8 | 18 | 275.9 | 32 | 90 | 40.57 | 72 | 162 | 8.94 | 112 | 234 | 2.63 |
| -7 | 19 | 261.4 | 33 | 91 | 38.89 | 73 | 163 | 8.643 | 113 | 235 | 2.559 |
| -6 | 21 | 247.8 | 34 | 93 | 37.3 | 74 | 165 | 8.358 | 114 | 237 | 2.489 |
| -5 | 23 | 234.9 | 35 | 95 | 35.78 | 75 | 167 | 8.084 | 115 | 239 | 2.422 |
| -4 | 25 | 222.8 | 36 | 97 | 34.32 | 76 | 169 | 7.82 | 116 | 241 | 2.357 |
| -3 | 27 | 211.4 | 37 | 99 | 32.94 | 77 | 171 | 7.566 | 117 | 243 | 2.294 |
| -2 | 28 | 200.7 | 38 | 100 | 31.62 | 78 | 172 | 7.321 | 118 | 244 | 2.233 |
| -1 | 30 | 190.5 | 39 | 102 | 30.36 | 79 | 174 | 7.086 | 119 | 246 | 2.174 |
| 0 | 32 | 180.9 | 40 | 104 | 29.15 | 80 | 176 | 6.859 | 120 | 248 | 2.117 |
| 1 | 34 | 171.9 | 41 | 106 | 28 | 81 | 178 | 6.641 | 121 | 250 | 2.061 |
| 2 | 36 | 163.3 | 42 | 108 | 26.9 | 82 | 180 | 6.43 | 122 | 252 | 2.007 |
| 3 | 37 | 155.2 | 43 | 109 | 25.86 | 83 | 181 | 6.228 | 123 | 253 | 1.955 |
| 4 | 39 | 147.6 | 44 | 111 | 24.85 | 84 | 183 | 6.033 | 124 | 255 | 1.905 |
| 5 | 41 | 140.4 | 45 | 113 | 23.89 | 85 | 185 | 5.844 | 125 | 257 | 1.856 |
| 6 | 43 | 133.5 | 46 | 115 | 22.89 | 86 | 187 | 5.663 | 126 | 259 | 1.808 |
| 7 | 45 | 127.1 | 47 | 117 | 22.1 | 87 | 189 | 5.488 | 127 | 261 | 1.762 |
| 8 | 46 | 121 | 48 | 118 | 21.26 | 88 | 190 | 5.32 | 128 | 262 | 1.717 |
| 9 | 48 | 115.2 | 49 | 120 | 20.46 | 89 | 192 | 5.157 | 129 | 264 | 1.674 |
| 10 | 50 | 109.8 | 50 | 122 | 19.69 | 90 | 194 | 5 | 130 | 266 | 1.632 |
| 11 | 52 | 104.6 | 51 | 124 | 18.96 | 91 | 196 | 4.849 | | | |
| 12 | 54 | 99.69 | 52 | 126 | 18.26 | 92 | 198 | 4.703 | | | |
| 13 | 55 | 95.05 | 53 | 127 | 17.58 | 93 | 199 | 4.562 | | | |
| 14 | 57 | 90.66 | 54 | 129 | 16.94 | 94 | 201 | 4.426 | | | |
| 15 | 59 | 86.49 | 55 | 131 | 16.32 | 95 | 203 | 4.294 | | | |
| 16 | 61 | 82.54 | 56 | 133 | 15.73 | 96 | 205 | 4.167 | | | |
| 17 | 63 | 78.79 | 57 | 135 | 15.16 | 97 | 207 | 4.045 | | | |
| 18 | 64 | 75.24 | 58 | 136 | 14.62 | 98 | 208 | 3.927 | | | |
| 19 | 66 | 71.86 | 59 | 138 | 14.09 | 99 | 210 | 3.812 | | | |

## iii) Pressure On Service Port

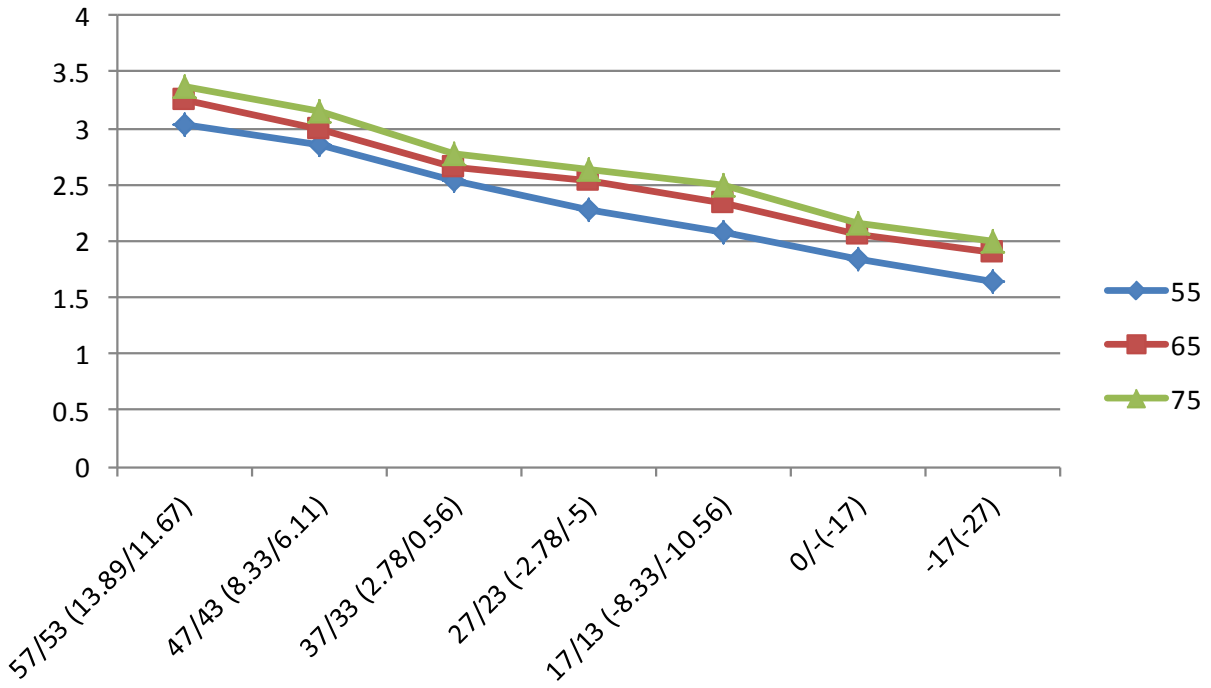
### Cooling chart(R410A):

| °F(°C) | ODU(DB) / IDU(DB/WB) | 0(-17) | 5(-15) | 15 (-9.44) | 45 (7.22) | 75 (23.89) | 85 (29.44) | 95 (35) | 105 (40.56) | 115 (46.11) | 120 (48.89) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BAR | 70/59 (21.11/15) | 6.4 | 6.5 | 7.3 | 8.0 | 8.2 | 7.8 | 8.1 | 8.6 | 10.1 | 10.6 |
| | 75/63 (23.89/17.22) | 6.7 | 6.8 | 7.9 | 8.6 | 8.6 | 8.3 | 8.7 | 9.1 | 10.7 | 11.2 |
| | 80/67 (26.67/19.44) | 7.1 | 7.2 | 8.5 | 9.5 | 9.3 | 8.9 | 9.1 | 9.6 | 11.2 | 11.9 |
| | 90/73 (32.22/22.78) | 7.7 | 7.8 | 9.6 | 10.5 | 10.3 | 9.5 | 10.0 | 10.6 | 12.4 | 13.0 |
| PSI | 70/59 (21.11/15) | 93 | 94 | 106 | 116 | 119 | 113 | 117 | 125 | 147 | 154 |
| | 75/63 (23.89/17.22) | 97 | 99 | 115 | 125 | 124 | 120 | 126 | 132 | 155 | 162 |
| | 80/67 (26.67/19.44) | 103 | 104 | 123 | 138 | 135 | 129 | 132 | 140 | 162 | 173 |
| | 90/73 (32.22/22.78) | 112 | 113 | 139 | 152 | 149 | 138 | 145 | 154 | 180 | 189 |
| MPa | 70/59 (21.11/15) | 0.64 | 0.65 | 0.73 | 0.8 | 0.82 | 0.78 | 0.81 | 0.86 | 1.01 | 1.06 |
| | 75/63 (23.89/17.22) | 0.67 | 0.68 | 0.79 | 0.86 | 0.86 | 0.83 | 0.87 | 0.91 | 1.07 | 1.12 |
| | 80/67 (26.67/19.44) | 0.71 | 0.72 | 0.85 | 0.95 | 0.93 | 0.89 | 0.91 | 0.96 | 1.12 | 1.19 |
| | 90/73 (32.22/22.78) | 0.77 | 0.78 | 0.96 | 1.05 | 1.03 | 0.95 | 1 | 1.06 | 1.24 | 1.3 |



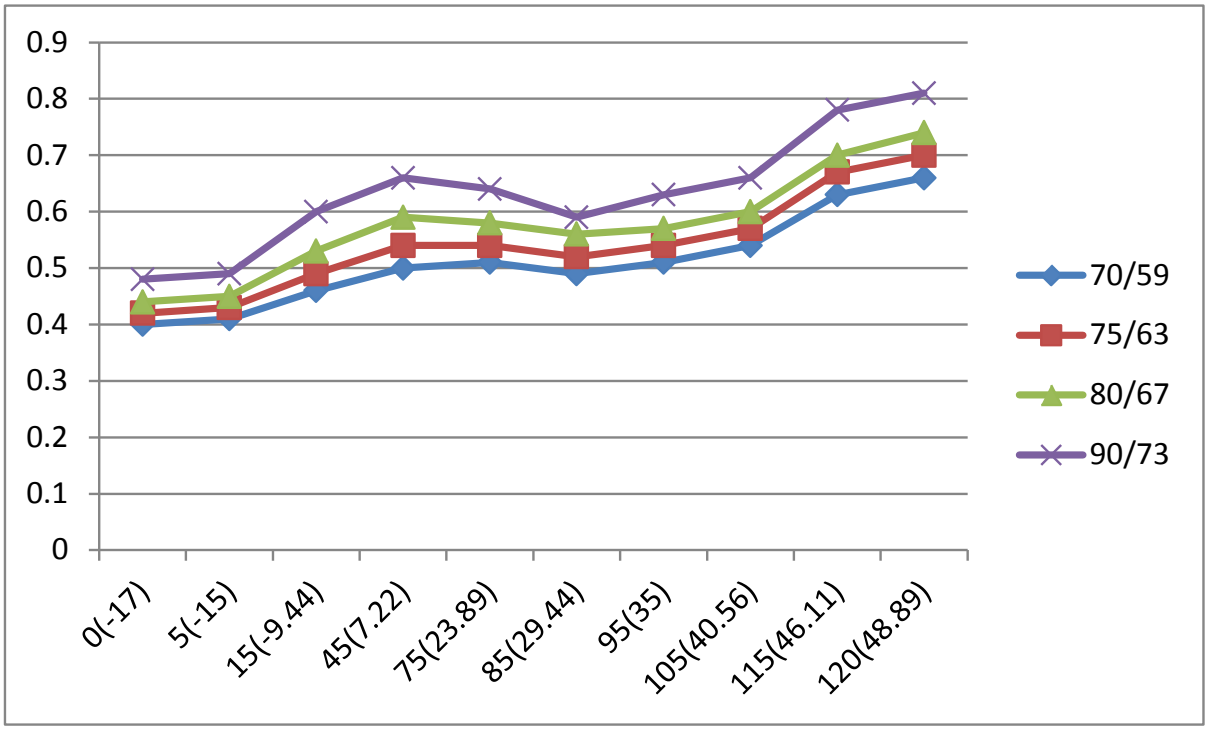
## Heating chart(R410A):

| °F(°C) | QDU(DB/WB) / IDU(DB) | 57/53 (13.89/11.67) | 47/43 (8.33/6.11) | 37/33 (2.78/0.56) | 27/23 (-2.78/-5) | 17/13 (-8.33/-10.56) | 0/-2 (-17/-19) | -17/-18 (-27/-28) |
|---|---|---|---|---|---|---|---|---|
| BAR | 55(12.78) | 30.3 | 28.5 | 25.3 | 22.8 | 20.8 | 18.5 | 16.5 |
| | 65(18.33) | 32.5 | 30.0 | 26.6 | 25.4 | 23.3 | 20.5 | 19.0 |
| | 75(23.89) | 33.8 | 31.5 | 27.8 | 26.3 | 24.9 | 21.5 | 20.0 |
| PSI | 55(12.78) | 439 | 413 | 367 | 330 | 302 | 268 | 239 |
| | 65(18.33) | 471 | 435 | 386 | 368 | 339 | 297 | 276 |
| | 75(23.89) | 489 | 457 | 403 | 381 | 362 | 312 | 290 |
| MPa | 55(12.78) | 3.03 | 2.85 | 2.53 | 2.28 | 2.08 | 1.85 | 1.65 |
| | 65(18.33) | 3.25 | 3.00 | 2.66 | 2.54 | 2.33 | 2.05 | 1.90 |
| | 75(23.89) | 3.38 | 3.15 | 2.78 | 2.63 | 2.49 | 2.15 | 2.00 |



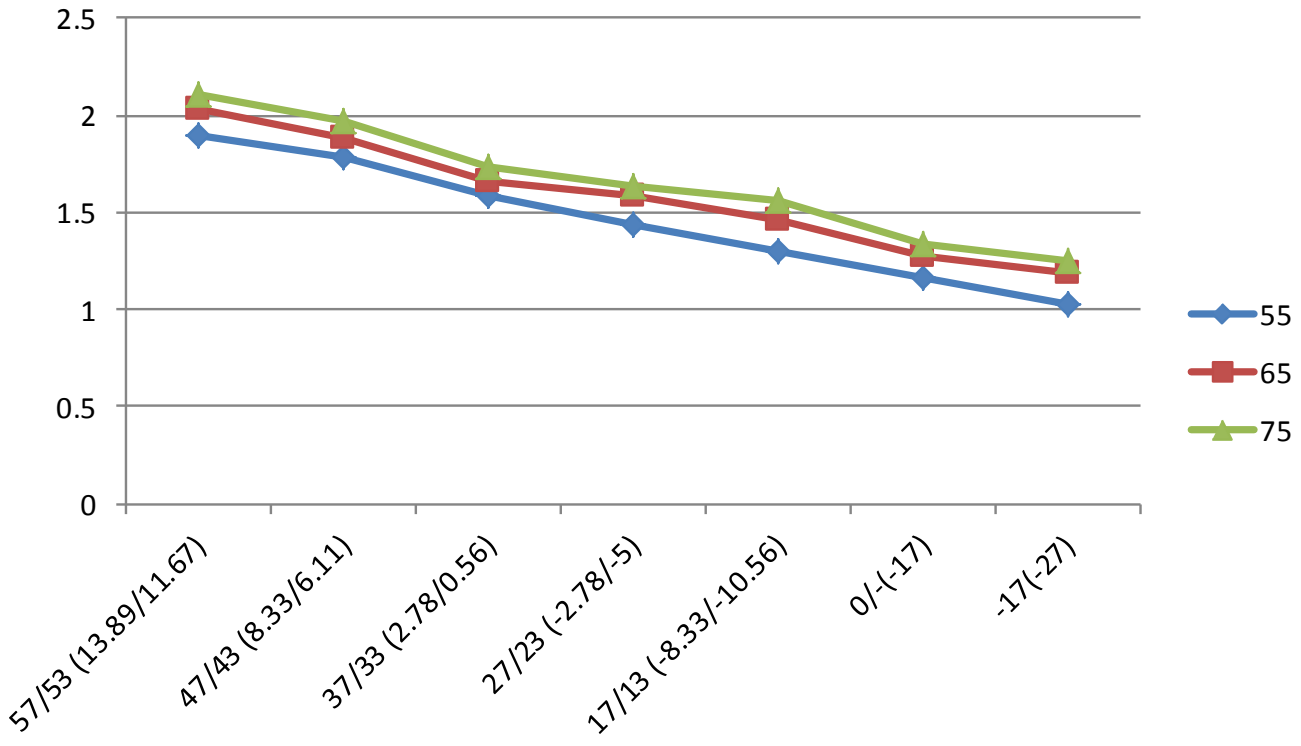
## Cooling chart(R22):

| °F(°C) | ODU(DB) / IDU(DB/WB) | 0(-17) | 5(-15) | 15 (-9.44) | 45 (7.22) | 75 (23.89) | 85 (29.44) | 95 (35) | 105 (40.56) | 115 (46.11) | 120 (48.89) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BAR | 70/59 (21.11/15) | 4.0 | 4.1 | 4.6 | 5.0 | 5.1 | 4.9 | 5.1 | 5.4 | 6.3 | 6.6 |
| | 75/63 (23.89/17.22) | 4.2 | 4.3 | 4.9 | 5.4 | 5.4 | 5.2 | 5.4 | 5.7 | 6.7 | 7.0 |
| | 80/67 (26.67/19.44) | 4.4 | 4.5 | 5.3 | 5.9 | 5.8 | 5.6 | 5.7 | 6.0 | 7.0 | 7.4 |
| | 90/73 (32.22/22.78) | 4.8 | 4.9 | 6.0 | 6.6 | 6.4 | 5.9 | 6.3 | 6.6 | 7.8 | 8.1 |
| PSI | 70/59 (21.11/15) | 58 | 59 | 67 | 73 | 74 | 71 | 74 | 78 | 91 | 96 |
| | 75/63 (23.89/17.22) | 61 | 62 | 71 | 78 | 78 | 75 | 78 | 83 | 97 | 102 |
| | 80/67 (26.67/19.44) | 64 | 65 | 77 | 86 | 84 | 81 | 83 | 87 | 102 | 107 |
| | 90/73 (32.22/22.78) | 70 | 71 | 87 | 96 | 93 | 86 | 91 | 96 | 113 | 117 |
| MPa | 70/59 (21.11/15) | 0.40 | 0.41 | 0.46 | 0.50 | 0.51 | 0.49 | 0.51 | 0.54 | 0.63 | 0.66 |
| | 75/63 (23.89/17.22) | 0.42 | 0.43 | 0.49 | 0.54 | 0.54 | 0.52 | 0.54 | 0.57 | 0.67 | 0.70 |
| | 80/67 (26.67/19.44) | 0.44 | 0.45 | 0.53 | 0.59 | 0.58 | 0.56 | 0.57 | 0.60 | 0.70 | 0.74 |
| | 90/73 (32.22/22.78) | 0.48 | 0.49 | 0.60 | 0.66 | 0.64 | 0.59 | 0.63 | 0.66 | 0.78 | 0.81 |



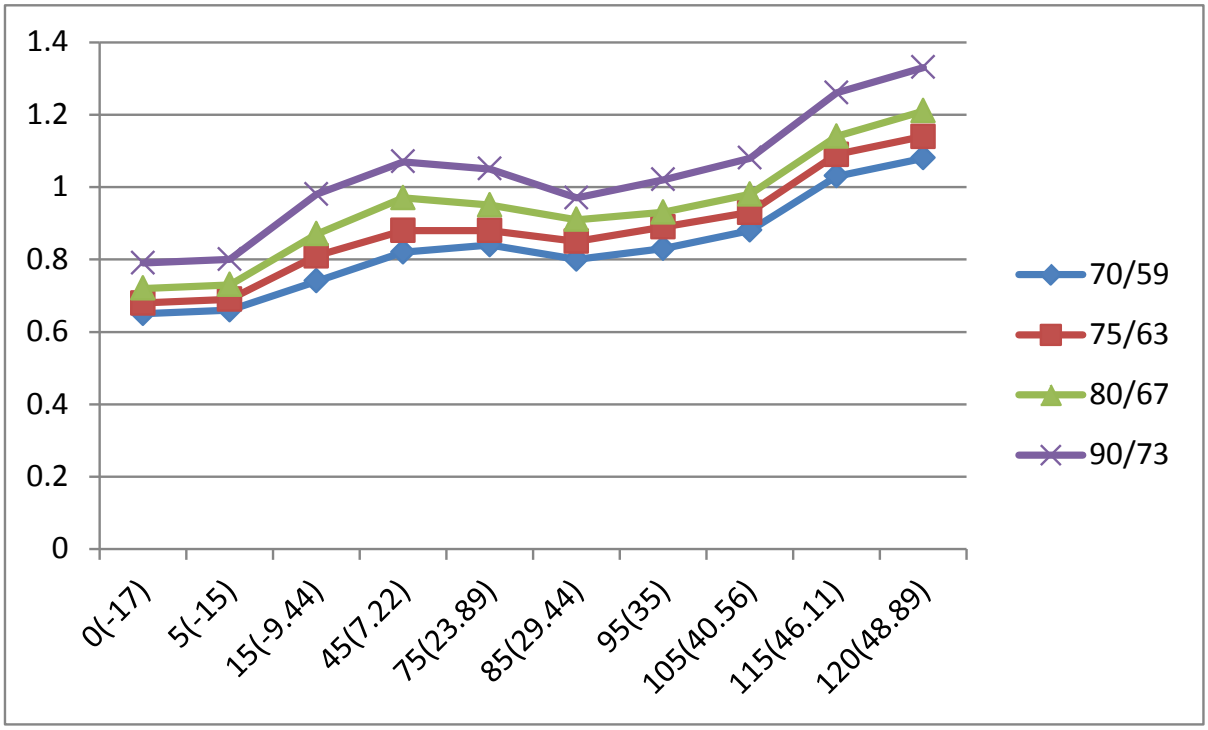
## Heating chart(R22):

| °F(°C) | QDU(DB/WB) / IDU(DB) | 57/53 (13.89/11.67) | 47/43 (8.33/6.11) | 37/33 (2.78/0.56) | 27/23 (-2.78/-5) | 17/13 (-8.33/-10.56) | 0/-2 (-17/-19) | -17/-18 (-27/-28) |
|---|---|---|---|---|---|---|---|---|
| BAR | 55(12.78) | 18.9 | 17.8 | 15.8 | 14.3 | 13.0 | 11.6 | 10.3 |
| | 65(18.33) | 20.3 | 18.8 | 16.6 | 15.9 | 14.6 | 12.8 | 11.9 |
| | 75(23.89) | 21.1 | 19.7 | 17.3 | 16.4 | 15.6 | 13.4 | 12.5 |
| PSI | 55(12.78) | 274 | 258 | 229 | 207 | 189 | 168 | 149 |
| | 65(18.33) | 294 | 273 | 241 | 231 | 212 | 186 | 172.6 |
| | 75(23.89) | 306 | 286 | 251 | 238 | 226 | 194 | 181 |
| MPa | 55(12.78) | 1.89 | 1.78 | 1.58 | 1.43 | 1.30 | 1.16 | 1.03 |
| | 65(18.33) | 2.03 | 1.88 | 1.66 | 1.59 | 1.46 | 1.28 | 1.19 |
| | 75(23.89) | 2.11 | 1.97 | 1.73 | 1.64 | 1.56 | 1.34 | 1.25 |



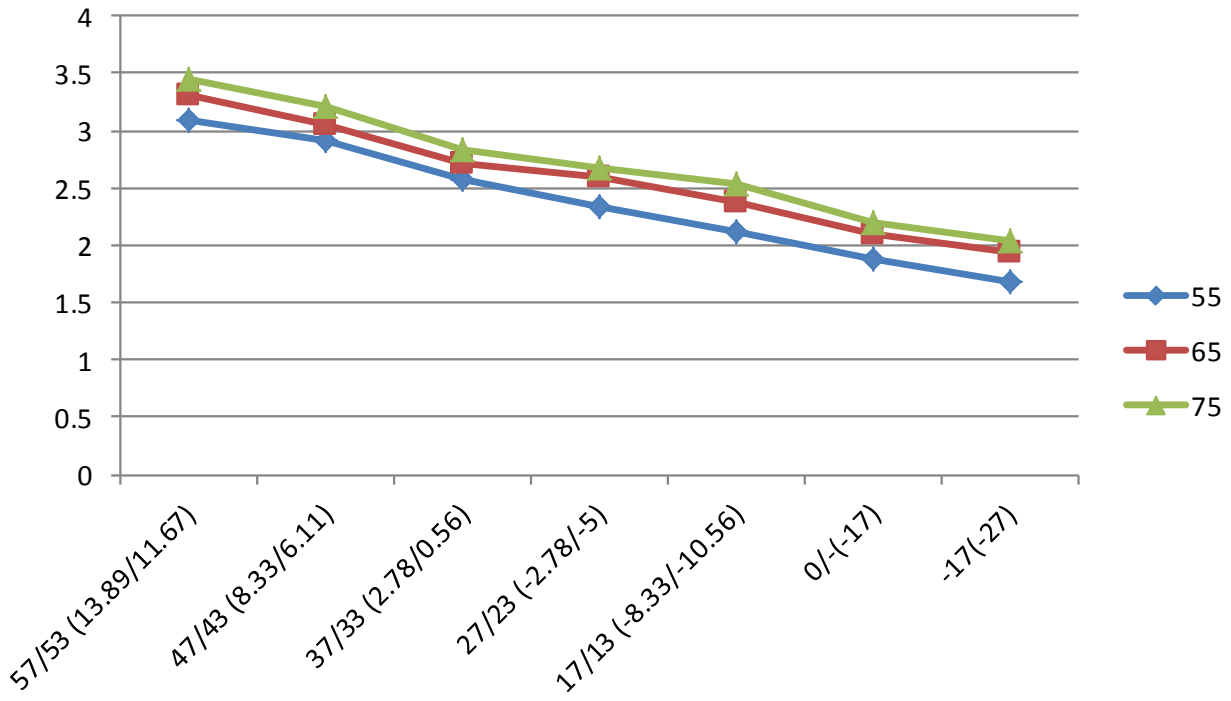
## Cooling chart(R32):

| °F(°C) | ODU(DB) / IDU(DB/WB) | 0(-17) | 5(-15) | 15 (-9.44) | 45 (7.22) | 75 (23.89) | 85 (29.44) | 95 (35) | 105 (40.56) | 115 (46.11) | 120 (48.89) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BAR | 70/59 (21.11/15) | 6.5 | 6.6 | 7.4 | 8.2 | 8.4 | 8.0 | 8.3 | 8.8 | 10.3 | 10.8 |
| | 75/63 (23.89/17.22) | 6.8 | 6.9 | 8.1 | 8.8 | 8.8 | 8.5 | 8.9 | 9.3 | 10.9 | 11.4 |
| | 80/67 (26.67/19.44) | 7.2 | 7.3 | 8.7 | 9.7 | 9.5 | 9.1 | 9.3 | 9.8 | 11.4 | 12.1 |
| | 90/73 (32.22/22.78) | 7.9 | 8.0 | 9.8 | 10.7 | 10.5 | 9.7 | 10.2 | 10.8 | 12.6 | 13.3 |
| PSI | 70/59 (21.11/15) | 95 | 96 | 108 | 118 | 121 | 115 | 119 | 128 | 150 | 157 |
| | 75/63 (23.89/17.22) | 99 | 101 | 117 | 128 | 126 | 122 | 129 | 135 | 158 | 165 |
| | 80/67 (26.67/19.44) | 105 | 106 | 125 | 141 | 138 | 132 | 135 | 143 | 165 | 176 |
| | 90/73 (32.22/22.78) | 114 | 115 | 142 | 155 | 152 | 141 | 148 | 157 | 184 | 193 |
| MPa | 70/59 (21.11/15) | 0.65 | 0.66 | 0.74 | 0.82 | 0.84 | 0.80 | 0.83 | 0.88 | 1.03 | 1.08 |
| | 75/63 (23.89/17.22) | 0.68 | 0.69 | 0.81 | 0.88 | 0.88 | 0.85 | 0.89 | 0.93 | 1.09 | 1.14 |
| | 80/67 (26.67/19.44) | 0.72 | 0.73 | 0.87 | 0.97 | 0.95 | 0.91 | 0.93 | 0.98 | 1.14 | 1.21 |
| | 90/73 (32.22/22.78) | 0.79 | 0.80 | 0.98 | 1.07 | 1.05 | 0.97 | 1.02 | 1.08 | 1.26 | 1.33 |



## Heating chart(R32):

| °F(°C) | QDU(DB/WB) / IDU(DB) | 57/53 (13.89/11.67) | 47/43 (8.33/6.11) | 37/33 (2.78/0.56) | 27/23 (-2.78/-5) | 17/13 (-8.33/-10.56) | 0/-2 (-17/-19) | -17/-18 (-27/-28) |
|---|---|---|---|---|---|---|---|---|
| BAR | 55(12.78) | 30.9 | 29.1 | 25.8 | 23.3 | 21.2 | 18.9 | 16.8 |
| | 65(18.33) | 33.2 | 30.6 | 27.1 | 25.9 | 23.8 | 20.9 | 19.4 |
| | 75(23.89) | 34.5 | 32.1 | 28.4 | 26.8 | 25.4 | 21.9 | 20.4 |
| PSI | 55(12.78) | 448 | 421 | 374 | 337 | 308 | 273 | 244 |
| | 65(18.33) | 480 | 444 | 394 | 375 | 346 | 303 | 282 |
| | 75(23.89) | 499 | 466 | 411 | 389 | 369 | 318 | 296 |
| MPa | 55(12.78) | 3.09 | 2.91 | 2.58 | 2.33 | 2.12 | 1.89 | 1.68 |
| | 65(18.33) | 3.32 | 3.06 | 2.71 | 2.59 | 2.38 | 2.09 | 1.94 |
| | 75(23.89) | 3.45 | 3.21 | 2.84 | 2.68 | 2.54 | 2.19 | 2.04 |



## System Pressure Table-R22

| Pressure | | | Temperature | | Pressure | | | Temperature | |
|---|---|---|---|---|---|---|---|---|---|
| Kpa | bar | PSI | °C | °F | Kpa | bar | PSI | °C | °F |
| 100 | 1 | 14.5 | -41.091 | -41.964 | 1600 | 16 | 232 | 41.748 | 107.146 |
| 150 | 1.5 | 21.75 | -32.077 | -25.739 | 1650 | 16.5 | 239.25 | 43.029 | 109.452 |
| 200 | 2 | 29 | -25.177 | -13.319 | 1700 | 17 | 246.5 | 44.281 | 111.706 |
| 250 | 2.5 | 36.25 | -19.508 | -3.114 | 1750 | 17.5 | 253.75 | 45.506 | 113.911 |
| 300 | 3 | 43.5 | -14.654 | 5.623 | 1800 | 18 | 261 | 46.706 | 116.071 |
| 350 | 3.5 | 50.75 | -10.384 | 13.309 | 1850 | 18.5 | 268.25 | 47.882 | 118.188 |
| 400 | 4 | 58 | -6.556 | 20.199 | 1900 | 19 | 275.5 | 49.034 | 120.261 |
| 450 | 4.5 | 65.25 | -3.075 | 26.464 | 1950 | 19.5 | 282.75 | 50.164 | 122.295 |
| 500 | 5 | 72.5 | 0.124 | 32.223 | 2000 | 20 | 290 | 51.273 | 124.291 |
| 550 | 5.5 | 79.75 | 3.091 | 37.563 | 2050 | 20.5 | 297.25 | 52.361 | 126.250 |
| 600 | 6 | 87 | 5.861 | 42.550 | 2100 | 21 | 304.5 | 53.43 | 128.174 |
| 650 | 6.5 | 94.25 | 8.464 | 47.234 | 2150 | 21.5 | 311.75 | 54.48 | 130.064 |
| 700 | 7 | 101.5 | 10.92 | 51.656 | 2200 | 22 | 319 | 55.512 | 131.922 |
| 750 | 7.5 | 108.75 | 13.249 | 55.848 | 2250 | 22.5 | 326.25 | 56.527 | 133.749 |
| 800 | 8 | 116 | 15.465 | 59.837 | 2300 | 23 | 333.5 | 57.526 | 135.547 |
| 850 | 8.5 | 123.25 | 17.58 | 63.644 | 2350 | 23.5 | 340.75 | 58.508 | 137.314 |
| 900 | 9 | 130.5 | 19.604 | 67.287 | 2400 | 24 | 348 | 59.475 | 139.055 |
| 950 | 9.5 | 137.75 | 21.547 | 70.785 | 2450 | 24.5 | 355.25 | 60.427 | 140.769 |
| 1000 | 10 | 145 | 23.415 | 74.147 | 2500 | 25 | 362.5 | 61.364 | 142.455 |
| 1050 | 10.5 | 152.25 | 25.216 | 77.389 | 2550 | 25.5 | 369.75 | 62.288 | 144.118 |
| 1100 | 11 | 159.5 | 26.953 | 80.515 | 2600 | 26 | 377 | 63.198 | 145.756 |
| 1150 | 11.5 | 166.75 | 28.634 | 83.541 | 2650 | 26.5 | 384.25 | 64.095 | 147.371 |
| 1200 | 12 | 174 | 30.261 | 86.470 | 2700 | 27 | 391.5 | 64.98 | 148.964 |
| 1250 | 12.5 | 181.25 | 31.839 | 89.310 | 2750 | 27.5 | 398.75 | 65.852 | 150.534 |
| 1300 | 13 | 188.5 | 33.371 | 92.068 | 2800 | 28 | 406 | 66.712 | 152.082 |
| 1350 | 13.5 | 195.75 | 34.86 | 94.748 | 2850 | 28.5 | 413.25 | 67.561 | 153.610 |
| 1400 | 14 | 203 | 36.308 | 97.354 | 2900 | 29 | 420.5 | 68.399 | 155.118 |
| 1450 | 14.5 | 210.25 | 37.719 | 99.894 | 2950 | 29.5 | 427.75 | 69.226 | 156.607 |
| 1500 | 15 | 217.5 | 39.095 | 102.371 | 3000 | 30 | 435 | 70.042 | 158.076 |
| 1550 | 15.5 | 224.75 | 40.437 | 104.787 | | | | | |

## System Pressure Table-R410A

| Pressure | | | Temperature | | Pressure | | | Temperature | |
|---|---|---|---|---|---|---|---|---|---|
| Kpa | bar | PSI | °C | °F | Kpa | bar | PSI | °C | °F |
| 100 | 1 | 14.5 | -51.623 | -60.921 | 2350 | 23.5 | 340.75 | 38.817 | 101.871 |
| 150 | 1.5 | 21.75 | -43.327 | -45.989 | 2400 | 24 | 348 | 39.68 | 103.424 |
| 200 | 2 | 29 | -36.992 | -34.586 | 2450 | 24.5 | 355.25 | 40.531 | 104.956 |
| 250 | 2.5 | 36.25 | -31.795 | -25.231 | 2500 | 25 | 362.5 | 41.368 | 106.462 |
| 300 | 3 | 43.5 | -27.351 | -17.232 | 2550 | 25.5 | 369.75 | 42.192 | 107.946 |
| 350 | 3.5 | 50.75 | -23.448 | -10.206 | 2600 | 26 | 377 | 43.004 | 109.407 |
| 400 | 4 | 58 | -19.953 | -3.915 | 2650 | 26.5 | 384.25 | 43.804 | 110.847 |
| 450 | 4.5 | 65.25 | -16.779 | 1.798 | 2700 | 27 | 391.5 | 44.592 | 112.266 |
| 500 | 5 | 72.5 | -13.863 | 7.047 | 2750 | 27.5 | 398.75 | 45.37 | 113.666 |
| 550 | 5.5 | 79.75 | -11.162 | 11.908 | 2800 | 28 | 406 | 46.136 | 115.045 |
| 600 | 6 | 87 | -8.643 | 16.444 | 2850 | 28.5 | 413.25 | 46.892 | 116.406 |
| 650 | 6.5 | 94.25 | -6.277 | 20.701 | 2900 | 29 | 420.5 | 47.638 | 117.748 |
| 700 | 7 | 101.5 | -4.046 | 24.716 | 2950 | 29.5 | 427.75 | 48.374 | 119.073 |
| 750 | 7.5 | 108.75 | -1.933 | 28.521 | 3000 | 30 | 435 | 49.101 | 120.382 |
| 800 | 8 | 116 | 0.076 | 32.137 | 3050 | 30.5 | 442.25 | 49.818 | 121.672 |
| 850 | 8.5 | 123.25 | 1.993 | 35.587 | 3100 | 31 | 449.5 | 50.525 | 122.945 |
| 900 | 9 | 130.5 | 3.826 | 38.888 | 3150 | 31.5 | 456.75 | 51.224 | 124.203 |
| 950 | 9.5 | 137.75 | 5.584 | 42.052 | 3200 | 32 | 464 | 51.914 | 125.445 |
| 1000 | 10 | 145 | 7.274 | 45.093 | 3250 | 32.5 | 471.25 | 52.596 | 126.673 |
| 1050 | 10.5 | 152.25 | 8.901 | 48.022 | 3300 | 33 | 478.5 | 53.27 | 127.886 |
| 1100 | 11 | 159.5 | 10.471 | 50.848 | 3350 | 33.5 | 485.75 | 53.935 | 129.083 |
| 1150 | 11.5 | 166.75 | 11.988 | 53.578 | 3400 | 34 | 493 | 54.593 | 130.267 |
| 1200 | 12 | 174 | 13.457 | 56.223 | 3450 | 34.5 | 500.25 | 55.243 | 131.437 |
| 1250 | 12.5 | 181.25 | 14.879 | 58.782 | 3500 | 35 | 507.5 | 55.885 | 132.593 |
| 1300 | 13 | 188.5 | 16.26 | 61.268 | 3550 | 35.5 | 514.75 | 56.52 | 133.736 |
| 1350 | 13.5 | 195.75 | 17.602 | 63.684 | 3600 | 36 | 522 | 57.148 | 134.866 |
| 1400 | 14 | 203 | 18.906 | 66.031 | 3650 | 36.5 | 529.25 | 57.769 | 135.984 |
| 1450 | 14.5 | 210.25 | 20.176 | 68.317 | 3700 | 37 | 536.5 | 58.383 | 137.089 |
| 1500 | 15 | 217.5 | 21.414 | 70.545 | 3750 | 37.5 | 543.75 | 58.99 | 138.182 |
| 1550 | 15.5 | 224.75 | 22.621 | 72.718 | 3800 | 38 | 551 | 59.591 | 139.264 |
| 1600 | 16 | 232 | 23.799 | 74.838 | 3850 | 38.5 | 558.25 | 60.185 | 140.333 |
| 1650 | 16.5 | 239.25 | 24.949 | 76.908 | 3900 | 39 | 565.5 | 60.773 | 141.391 |
| 1700 | 17 | 246.5 | 26.074 | 78.933 | 3950 | 39.5 | 572.75 | 61.355 | 142.439 |
| 1750 | 17.5 | 253.75 | 27.174 | 80.913 | 4000 | 40 | 580 | 61.93 | 143.474 |
| 1800 | 18 | 261 | 28.251 | 82.852 | 4050 | 40.5 | 587.25 | 62.499 | 144.498 |
| 1850 | 18.5 | 268.25 | 29.305 | 84.749 | 4100 | 41 | 594.5 | 63.063 | 145.513 |
| 1900 | 19 | 275.5 | 30.338 | 86.608 | 4150 | 41.5 | 601.75 | 63.62 | 146.516 |
| 1950 | 19.5 | 282.75 | 31.351 | 88.432 | 4200 | 42 | 609 | 64.172 | 147.510 |
| 2000 | 20 | 290 | 32.344 | 90.219 | 4250 | 42.5 | 616.25 | 64.719 | 148.494 |
| 2050 | 20.5 | 297.25 | 33.319 | 91.974 | 4300 | 43 | 623.5 | 65.259 | 149.466 |
| 2100 | 21 | 304.5 | 34.276 | 93.697 | 4350 | 43.5 | 630.75 | 65.795 | 150.431 |
| 2150 | 21.5 | 311.75 | 35.215 | 95.387 | 4400 | 44 | 638 | 66.324 | 151.383 |
| 2200 | 22 | 319 | 36.139 | 97.050 | 4450 | 44.5 | 645.25 | 66.849 | 152.328 |
| 2250 | 22.5 | 326.25 | 37.047 | 98.685 | 4500 | 45 | 652.5 | 67.368 | 153.262 |
| 2300 | 23 | 333.5 | 37.939 | 100.290 | | | | | |

## System Pressure Table-R32

| Pressure | | | Temperature | | Pressure | | | Temperature | |
|---|---|---|---|---|---|---|---|---|---|
| Kpa | bar | PSI | °C | °F | Kpa | bar | PSI | °C | °F |
| 100 | 1 | 14.5 | -51.909 | -61.436 | 1850 | 18.5 | 268.25 | 28.425 | 83.165 |
| 150 | 1.5 | 21.75 | -43.635 | -46.543 | 1900 | 19 | 275.5 | 29.447 | 85.005 |
| 200 | 2 | 29 | -37.323 | -35.181 | 1950 | 19.5 | 282.75 | 30.448 | 86.806 |
| 250 | 2.5 | 36.25 | -32.15 | -25.87 | 2000 | 20 | 290 | 31.431 | 88.576 |
| 300 | 3 | 43.5 | -27.731 | -17.916 | 2050 | 20.5 | 297.25 | 32.395 | 90.311 |
| 350 | 3.5 | 50.75 | -23.85 | -10.93 | 2100 | 21 | 304.5 | 33.341 | 92.014 |
| 400 | 4 | 58 | -20.378 | -4.680 | 2150 | 21.5 | 311.75 | 34.271 | 93.688 |
| 450 | 4.5 | 65.25 | -17.225 | 0.995 | 2200 | 22 | 319 | 35.184 | 95.331 |
| 500 | 5 | 72.5 | -14.331 | 6.204 | 2250 | 22.5 | 326.25 | 36.082 | 96.948 |
| 550 | 5.5 | 79.75 | -11.65 | 11.03 | 2300 | 23 | 333.5 | 36.965 | 98.537 |
| 600 | 6 | 87 | -9.150 | 15.529 | 2350 | 23.5 | 340.75 | 37.834 | 100.101 |
| 650 | 6.5 | 94.25 | -6.805 | 19.752 | 2400 | 24 | 348 | 38.688 | 101.638 |
| 700 | 7 | 101.5 | -4.593 | 23.734 | 2450 | 24.5 | 355.25 | 39.529 | 103.152 |
| 750 | 7.5 | 108.75 | -2.498 | 27.505 | 2500 | 25 | 362.5 | 40.358 | 104.644 |
| 800 | 8 | 116 | -0.506 | 31.089 | 2550 | 25.5 | 369.75 | 41.173 | 106.111 |
| 850 | 8.5 | 123.25 | 1.393 | 34.507 | 2600 | 26 | 377 | 41.977 | 107.559 |
| 900 | 9 | 130.5 | 3.209 | 37.777 | 2650 | 26.5 | 384.25 | 42.769 | 108.984 |
| 950 | 9.5 | 137.75 | 4.951 | 40.911 | 2700 | 27 | 391.5 | 43.55 | 110.39 |
| 1000 | 10 | 145 | 6.624 | 43.923 | 2750 | 27.5 | 398.75 | 44.32 | 111.776 |
| 1050 | 10.5 | 152.25 | 8.235 | 46.823 | 2800 | 28 | 406 | 45.079 | 113.142 |
| 1100 | 11 | 159.5 | 9.790 | 49.621 | 2850 | 28.5 | 413.25 | 45.828 | 114.490 |
| 1150 | 11.5 | 166.75 | 11.291 | 52.324 | 2900 | 29 | 420.5 | 46.567 | 115.821 |
| 1200 | 12 | 174 | 12.745 | 54.941 | 2950 | 29.5 | 427.75 | 47.296 | 117.133 |
| 1250 | 12.5 | 181.25 | 14.153 | 57.475 | 3000 | 30 | 435 | 48.015 | 118.427 |
| 1300 | 13 | 188.5 | 15.52 | 59.936 | 3050 | 30.5 | 442.25 | 48.726 | 119.707 |
| 1350 | 13.5 | 195.75 | 16.847 | 62.325 | 3100 | 31 | 449.5 | 49.428 | 120.970 |
| 1400 | 14 | 203 | 18.138 | 64.648 | 3150 | 31.5 | 456.75 | 50.121 | 122.218 |
| 1450 | 14.5 | 210.25 | 19.395 | 66.911 | 3200 | 32 | 464 | 50.806 | 123.451 |
| 1500 | 15 | 217.5 | 20.619 | 69.114 | 3250 | 32.5 | 471.25 | 51.482 | 124.668 |
| 1550 | 15.5 | 224.75 | 21.813 | 71.263 | 3300 | 33 | 478.5 | 52.15 | 125.87 |
| 1600 | 16 | 232 | 22.978 | 73.360 | 3350 | 33.5 | 485.75 | 52.811 | 127.060 |
| 1650 | 16.5 | 239.25 | 24.116 | 75.409 | 3400 | 34 | 493 | 53.464 | 128.235 |
| 1700 | 17 | 246.5 | 25.229 | 77.412 | 3450 | 34.5 | 500.25 | 54.11 | 129.398 |
| 1750 | 17.5 | 253.75 | 26.317 | 79.371 | 3500 | 35 | 507.5 | 54.748 | 130.546 |
| 1800 | 18 | 261 | 27.382 | 81.288 | | | | | |