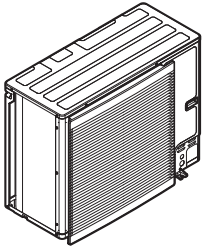


# Installation manual

## Daikin Altherma 3 R

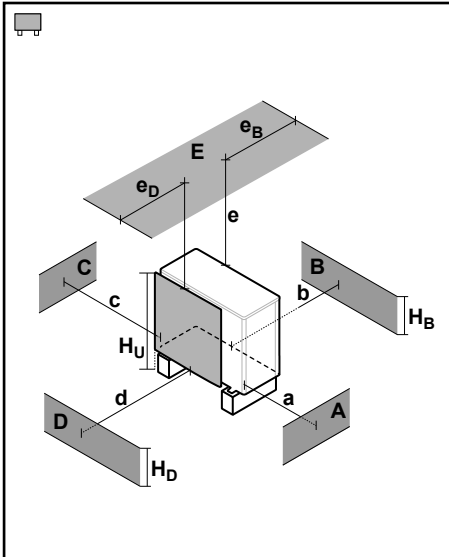
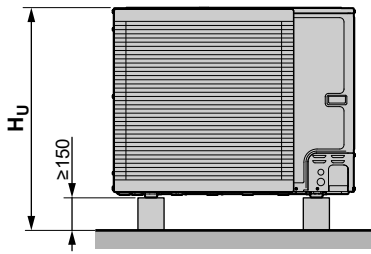


<https://daikintechdatahub.eu>

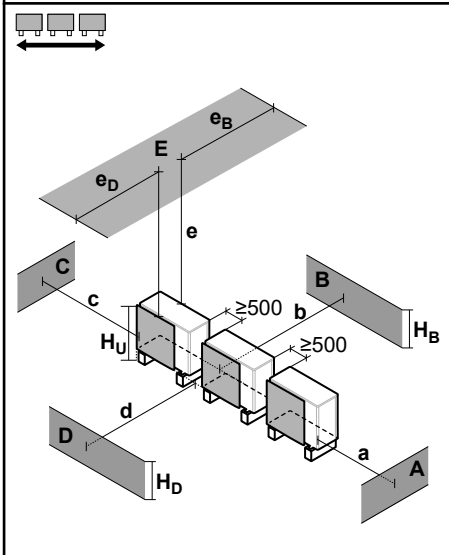


ERLA11D▲V3▼  
ERLA14D▲V3▼  
ERLA16D▲V3▼  
ERLA11D▲W1▼  
ERLA14D▲W1▼  
ERLA16D▲W1▼

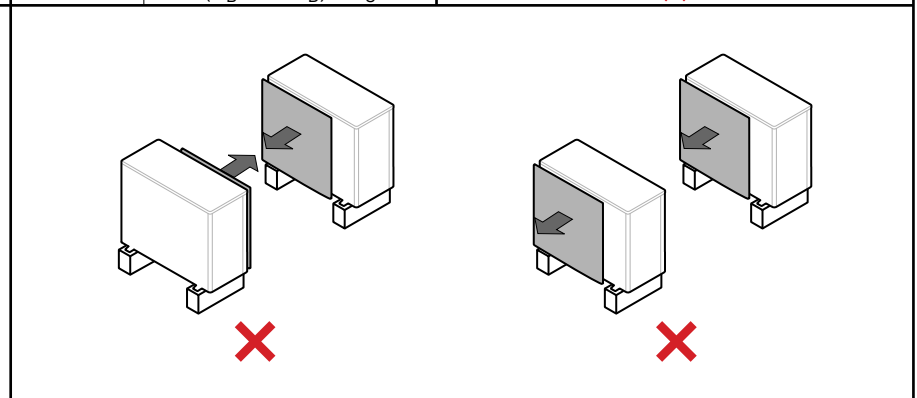
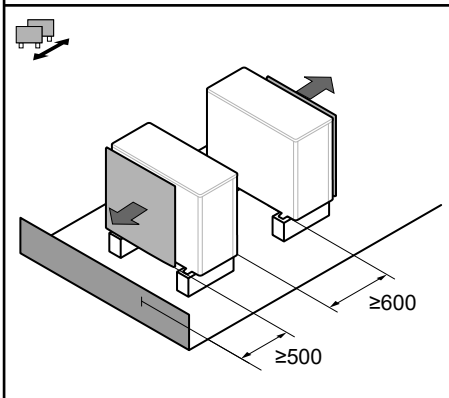
▲ = 1, 2, 3, ..., 9, A, B, C, ..., Z  
▼ = , , 1, 2, 3, ..., 9



A~E	H <sub>B</sub> H <sub>D</sub> H <sub>U</sub>	(mm)							
		a	b	c	d	e	e <sub>B</sub>	e <sub>D</sub>	
B	—		≥300						
A, B, C	—	≥500	≥300	≥100					
B, E	—		≥300			≥1000		≤500	
A, B, C, E	—	≥500	≥300	≥150		≥1000		≤500	
D	—				≥500				
D, E	—				≥500	≥1000	≤500		
A, C	—	≥500		≥100					
B, D	(H <sub>B</sub> OR H <sub>D</sub> ) ≤ H <sub>U</sub> (H <sub>B</sub> AND H <sub>D</sub> ) > H <sub>U</sub>		≥300		≥500				
B, D, E	(H <sub>B</sub> OR H <sub>D</sub> ) ≤ H <sub>U</sub> H <sub>B</sub> > H <sub>D</sub> H <sub>B</sub> < H <sub>D</sub>		≥300		≥1000	≥1000		≤500	
			≥300		≥1000	≥1000	≤500		
	(H <sub>B</sub> AND H <sub>D</sub> ) > H <sub>U</sub>							✗	
A, C, D, E	—	≥500		≥150	≥500	≥1000	≤500		
A, B, C, D, E	(H <sub>B</sub> OR H <sub>D</sub> ) ≤ H <sub>U</sub> H <sub>B</sub> > H <sub>D</sub> H <sub>B</sub> < H <sub>D</sub>		≥500	≥300	≥150	≥1000	≥1000		≤500
			≥500	≥300	≥150	≥1000	≥1000	≤500	
	(H <sub>B</sub> AND H <sub>D</sub> ) > H <sub>U</sub>							✗	



B	—		≥300						
A, B, C	—	≥500	≥300	≥500					
B, E	—		≥300			≥1000		≤500	
A, B, C, E	—	≥500	≥300	≥500		≥1000		≤500	
D	—				≥500				
D, E	—				≥1000	≥1000	≤500		
A, C	—	≥500		≥500					
B, D	(H <sub>B</sub> OR H <sub>D</sub> ) ≤ H <sub>U</sub> (H <sub>B</sub> AND H <sub>D</sub> ) > H <sub>U</sub>		≥300		≥500				
								✗	
B, D, E	(H <sub>B</sub> OR H <sub>D</sub> ) ≤ H <sub>U</sub> H <sub>B</sub> > H <sub>D</sub> H <sub>B</sub> < H <sub>D</sub>		≥300		≥1000	≥1000		≤500	
			≥300		≥1000	≥1000	≤500		
	(H <sub>B</sub> AND H <sub>D</sub> ) > H <sub>U</sub>							✗	
A, C, D, E	—	≥500		≥500	≥1000	≥1000	≤500		
A, B, C, D, E	(H <sub>B</sub> OR H <sub>D</sub> ) ≤ H <sub>U</sub> H <sub>B</sub> > H <sub>D</sub> H <sub>B</sub> < H <sub>D</sub>		≥500	≥300	≥500	≥1000	≥1000		≤500
			≥500	≥300	≥500	≥1000	≥1000	≤500	
	(H <sub>B</sub> AND H <sub>D</sub> ) > H <sub>U</sub>							✗	



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## 1 About this document

### Target audience

Authorised installers

### Documentation set

This document is part of a documentation set. The complete set consists of:

- **General safety precautions:**
  - Safety instructions that you must read before installing
  - Format: Paper (in the box of the indoor unit)
- **Operation manual:**
  - Quick guide for basic usage
  - Format: Paper (in the box of the indoor unit)

- **User reference guide:**
  - Detailed step-by-step instructions and background information for basic and advanced usage
  - Format: Digital files on <https://www.daikin.eu>. Use the search function 🔍 to find your model.
- **Installation manual – Outdoor unit:**
  - Installation instructions
  - Format: Paper (in the box of the outdoor unit)
- **Installation manual – Indoor unit:**
  - Installation instructions
  - Format: Paper (in the box of the indoor unit)
- **Installer reference guide:**
  - Preparation of the installation, good practices, reference data, ...
  - Format: Digital files on <https://www.daikin.eu>. Use the search function 🔍 to find your model.
- **Addendum book for optional equipment:**
  - Additional info about how to install optional equipment
  - Format: Paper (in the box of the indoor unit) + Digital files on <https://www.daikin.eu>. Use the search function 🔍 to find your model.

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your dealer.

The original documentation is written in English. All other languages are translations.

### Technical engineering data

- A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible).
- The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

### Online tools

In addition to the documentation set, some online tools are available for installers:

- **Daikin Technical Data Hub**
  - Central hub for technical specifications of the unit, useful tools, digital resources, and more.
  - Publicly accessible via <https://daikintechdatahub.eu>.
- **Heating Solutions Navigator**
  - Digital toolbox that offers a variety of tools to facilitate the installation and configuration of heating systems.
  - To access Heating Solutions Navigator, registration to the Stand By Me platform is required. For more information, see <https://professional.standbyme.daikin.eu>.
- **Daikin e-Care**
  - Mobile app for installers and service technicians that allows you to register, configure and troubleshoot heating systems.
  - The mobile app can be downloaded for iOS and Android devices using the QR codes below. Registration to the Stand By Me platform is required to access the app.

App Store



Google Play



## 2 Specific installer safety instructions

### 2 Specific installer safety instructions

Always observe the following safety instructions and regulations.

Installation site (see "4.1 Preparing the installation site" ▶ 5)



#### WARNING

Follow the service space dimensions in this manual for correct installation of the unit. See "4.1.1 Installation site requirements of the outdoor unit" ▶ 5].

Mounting the outdoor unit (see "4.2 Mounting the outdoor unit" ▶ 5)



#### WARNING

Fixing method of the outdoor unit MUST be in accordance with the instructions from this manual. See "4.2 Mounting the outdoor unit" ▶ 5].



#### CAUTION

To avoid injury, do NOT touch the air inlet or aluminium fins of the unit.

Opening and closing the unit (see "4.3 Opening and closing the unit" ▶ 7)



#### DANGER: RISK OF ELECTROCUTION



#### DANGER: RISK OF BURNING/SCALDING

Piping installation (see "5 Piping installation" ▶ 7)



#### WARNING

The field piping method MUST be in accordance with the instructions from this manual. See "5 Piping installation" ▶ 7].



#### DANGER: RISK OF BURNING/SCALDING



#### WARNING

Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.



#### WARNING

- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.

Electrical installation (see "6 Electrical installation" ▶ 10)



#### DANGER: RISK OF ELECTROCUTION



#### WARNING

Electrical wiring connection method MUST be in accordance with the instructions from:

- This manual. See "6 Electrical installation" ▶ 10].
- The wiring diagram, which is delivered with the unit, located at the inside of the service cover. For a translation of its legend, see "9.2 Wiring diagram: Outdoor unit" ▶ 14].



#### WARNING

- All wiring MUST be performed by an authorised electrician and MUST comply with the applicable national wiring regulation.
- Make electrical connections to the fixed wiring.
- All components procured on-site and all electrical construction MUST comply with the applicable legislation.



#### WARNING

**Rotating fan.** Before powering ON the outdoor unit, make sure that the discharge grille covers the fan as protection against a rotating fan. See "4.2.4 To install the discharge grille" ▶ 7].



#### WARNING

If the supply cord is damaged, it MUST be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



#### WARNING

ALWAYS use multicore cable for power supply cables.



#### CAUTION

Do NOT push or place redundant cable length into the unit.



#### INFORMATION

Details of type and rating of fuses, or rating of circuit breakers are described in "6 Electrical installation" ▶ 10].

## 3 About the box

Keep the following in mind:

- At delivery, the unit MUST be checked for damage and completeness. Any damage or missing parts MUST be reported immediately to the claims agent of the carrier.
- Bring the packed unit as close as possible to its final installation position to prevent damage during transport.
- Prepare in advance the path along which you want to bring the unit to its final installation position.

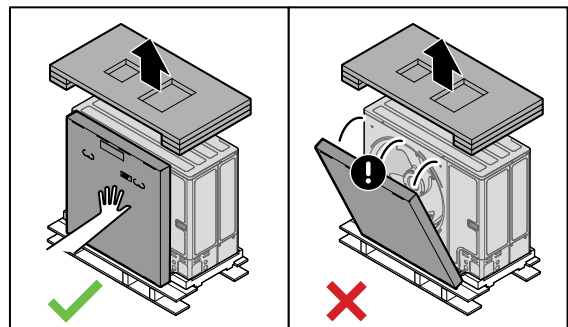
### 3.1 Outdoor unit

#### 3.1.1 To remove the accessories from the outdoor unit

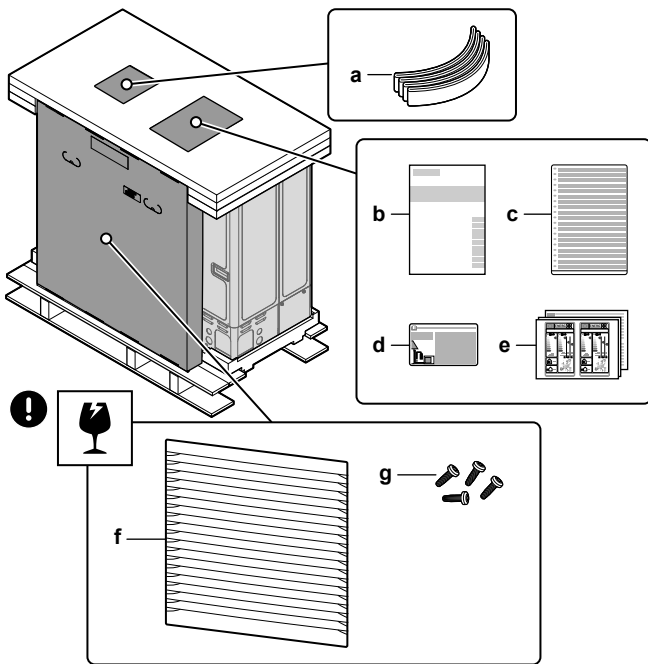


#### NOTICE

**Unpacking – Top packaging.** When you remove the top packaging, hold the box containing the discharge grille to prevent it from falling.

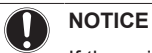


- 1 Remove the accessories on top and in front of the unit.



- a Sling to carry the unit
- b Installation manual – Outdoor unit
- c Multilingual fluorinated greenhouse gases label
- d Fluorinated greenhouse gases label
- e Energy labels
- f Discharge grille
- g Screws for discharge grille

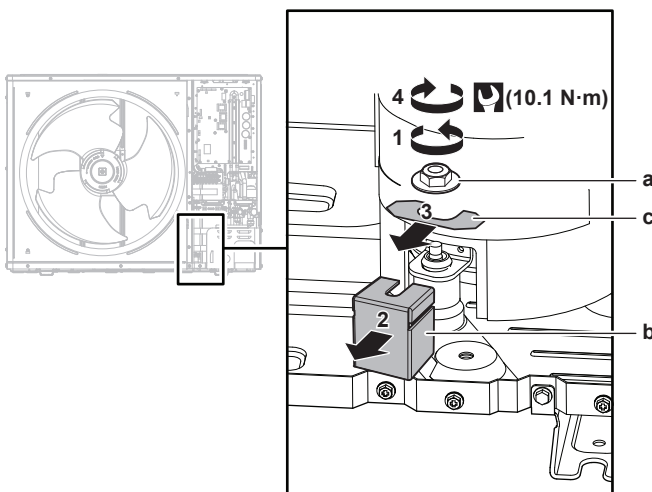
### 3.1.2 To remove the transportation stay



**NOTICE**  
If the unit is operated with the transportation stay attached, abnormal vibration or noise may be generated.

The transportation stay protects the unit during transport. During installation it must be removed.

**Prerequisite:** Open the service cover. See "4.3.1 To open the outdoor unit" [p 7].



- a Nut
- b Transportation stay
- c Spacer

- 1 Remove the nut (a) of the compressor mounting bolt.
- 2 Remove and discard the transportation stay (b).
- 3 Remove and discard the spacer (c).
- 4 Reinstall the nut (a) of the compressor mounting bolt and torque to 10.1 N·m.

## 4 Unit installation

### 4.1 Preparing the installation site

#### 4.1.1 Installation site requirements of the outdoor unit

Mind the spacing guidelines. See figure 1 on the inside of the front cover.



**NOTICE**

**Cascading outdoor units.** The installation layouts with multiple outdoor units shown in (side-to-side) and (back-to-back) are only allowed in combination with wall-mounted indoor units, NOT in combination with floor-standing indoor units. Front-to-front, and front-to-back installations are NOT allowed.

The symbols can be interpreted as follows:

- A, C Right side and left side obstacles (walls/baffle plates)
- B Suction side obstacle (wall/baffle plate)
- D Discharge side obstacle (wall/baffle plate)
- E Top side obstacle (roof)
- a,b,c,d,e Minimum service space between the unit and obstacles A, B, C, D and E
- e<sub>a</sub> Maximum distance between the unit and the edge of obstacle E, in the direction of obstacle B
- e<sub>b</sub> Maximum distance between the unit and the edge of obstacle E, in the direction of obstacle D
- H<sub>u</sub> Height of the unit including the installation structure
- H<sub>B</sub>, H<sub>D</sub> Height of obstacles B and D
- ✗ NOT allowed

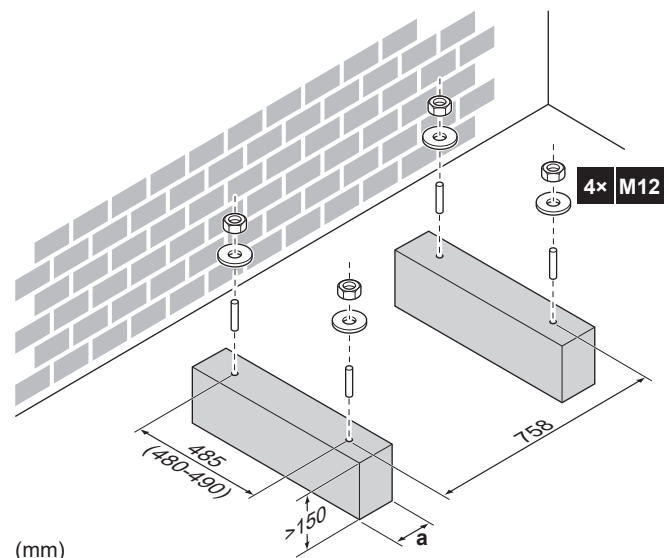
The outdoor unit is designed for outdoor installation only, and for the following ambient temperatures:

Cooling mode	10~43°C
Heating mode	-25~35°C
DHW production	-25~35°C

### 4.2 Mounting the outdoor unit

#### 4.2.1 To provide the installation structure

Use 4 sets of M12 anchor bolts, nuts and washers (field supply). Provide at least 150 mm of free space below the unit. Additionally, make sure the unit is positioned at least 100 mm above the maximum expected level of snow.



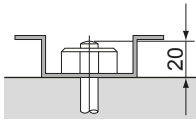
## 4 Unit installation

- a Make sure not to cover the drain holes. See "Drain holes (dimensions in mm)" [6].



### INFORMATION

The recommended height of the upper protruding part of the bolts is 20 mm.



### NOTICE

Fix the outdoor unit to the foundation bolts using nuts with resin washers (a). If the coating on the fastening area is stripped off, the metal can rust easily.



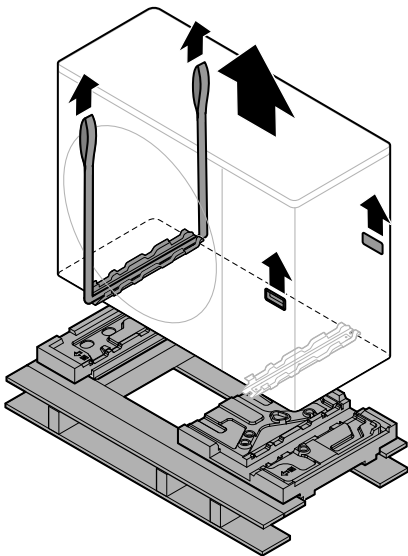
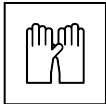
### 4.2.2 To install the outdoor unit



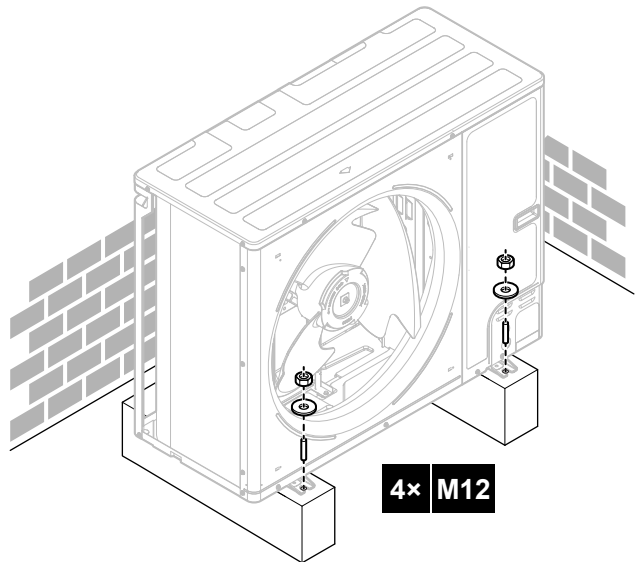
### CAUTION

To avoid injury, do NOT touch the air inlet or aluminium fins of the unit.

- 1 Put the sling (delivered as accessory) through the unit's left feet.
- 2 Carry the unit using the sling (left) and the unit's handles (right), and put it onto the installation structure.



- 3 Remove the sling, and dispose of it.
- 4 Fix the unit to the installation structure.



### 4.2.3 To provide drainage

Make sure that condensation water can be evacuated properly.



### INFORMATION

If necessary, you can use a drain pan (field supply) to prevent drain water from dripping.



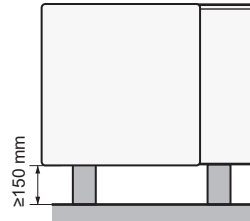
### NOTICE

If the unit CANNOT be installed fully level, always make sure that the inclination is towards the backside of the unit. This is required to guarantee proper drainage.

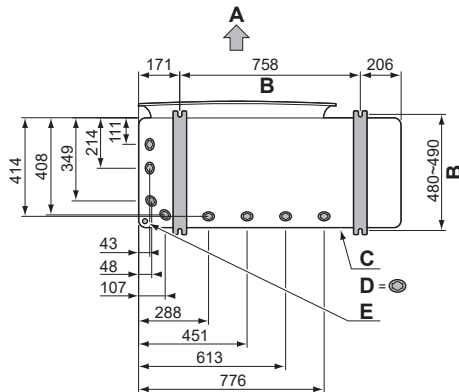


### NOTICE

If drain holes of the outdoor unit are covered by a mounting base or by floor surface, raise the unit to provide a free space of more than 150 mm under the outdoor unit.



### Drain holes (dimensions in mm)



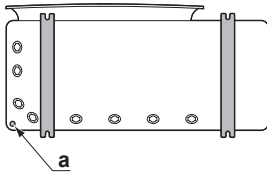
- A Discharge side
- B Distance between anchor points
- C Bottom frame
- D Drain holes
- E Knockout hole for snow



## Snow

In regions with snowfall, snow might build up and freeze between the heat exchanger and the casing of the unit. This might decrease the operating efficiency. To prevent this:

- 1 Remove the knockout hole (a) by tapping on the attachment points with a flat head screwdriver and a hammer.



- 2 Remove the burrs, and paint the edges and areas around the edges using repair paint to prevent rusting.

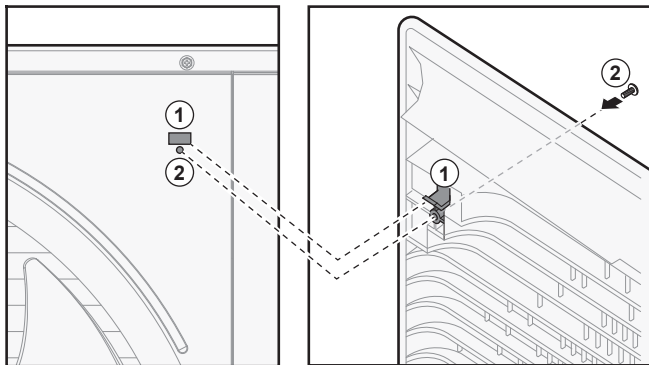


### NOTICE

When making knockout holes, do NOT damage the casing and underlying piping.

## 4.2.4 To install the discharge grille

- 1 Insert the hooks. To prevent breaking the hooks:
  - First insert the bottom hooks (2×).
  - Then insert the top hooks (2×).
- 2 Insert and fix the screws (4×)(delivered as accessory).



4x  
T25



4 N·m

## 4.3 Opening and closing the unit

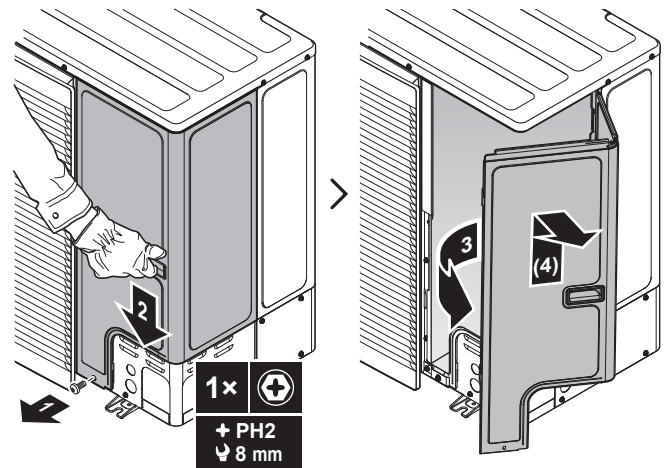
### 4.3.1 To open the outdoor unit



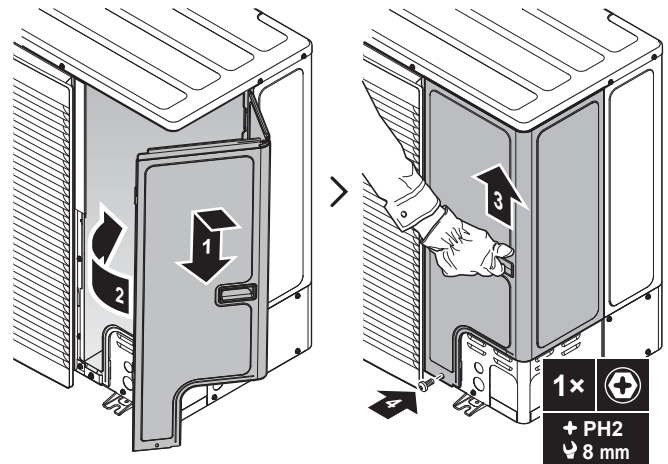
**DANGER: RISK OF ELECTROCUTION**



**DANGER: RISK OF BURNING/SCALDING**



### 4.3.2 To close the outdoor unit



## 5 Piping installation

### 5.1 Connecting the refrigerant piping



**DANGER: RISK OF BURNING/SCALDING**



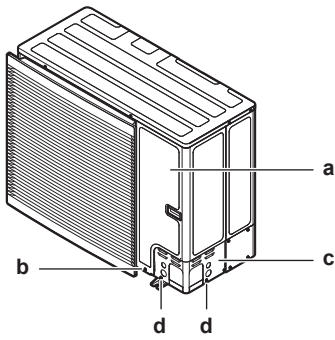
#### NOTICE

**Vibration.** To prevent vibration of the refrigerant piping during operation, fixate the piping between the outdoor and indoor unit.

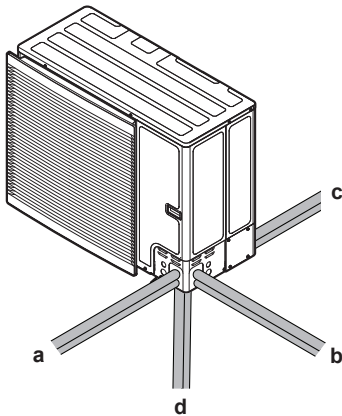
#### 5.1.1 To connect the refrigerant piping to the outdoor unit

- **Piping length.** Keep field piping as short as possible.
  - **Piping protection.** Protect the field piping against physical damage.
- 1 Do the following:
    - Remove the service cover (a) with screw (b).
    - Remove the piping intake plate (c) with screws (d).

## 5 Piping installation

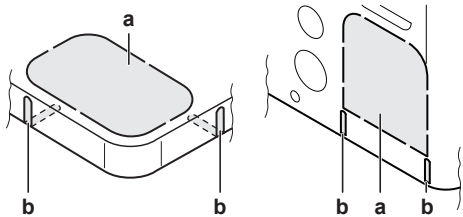


2 Choose a piping route (a, b, c or d).



a Front  
b Side  
c Rear  
d Bottom

### INFORMATION



- Remove the knockout hole (a) in the bottom plate or cover plate by tapping on the attachment points with a flat head screwdriver and a hammer.
- Optionally, cut out the slits (b) with a metal saw.

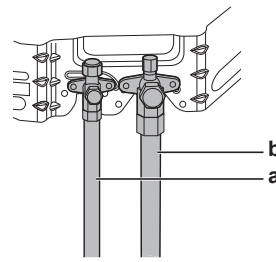
### NOTICE

Precautions when making knockout holes:

- Avoid damaging the casing and underlying piping.
- After making the knockout holes, we recommend to remove the burrs and paint the edges and areas around the edges using repair paint to prevent rusting.
- When passing electrical wiring through the knockout holes, wrap the wiring with protective tape to prevent damage.

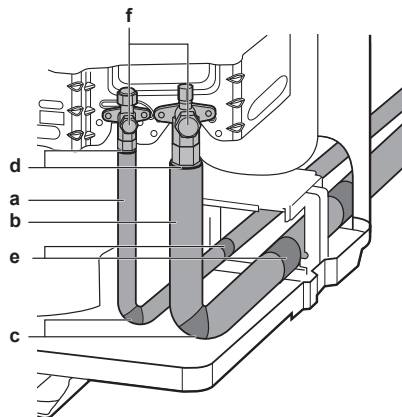
3 Do the following:

- Connect the liquid pipe (a) to the liquid stop valve.
- Connect the gas pipe (b) to the gas stop valve.



4 Do the following:

- Insulate the liquid piping (a) and the gas piping (b).
- Wind heat insulation around the curves, and then cover it with vinyl tape (c).
- Make sure the field piping does not touch any compressor components.
- Seal the insulation ends (sealant etc.) (d).
- Wrap the field piping with vinyl tape (e) to protect it against sharp edges



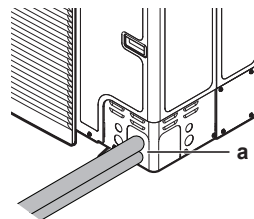
5 If the outdoor unit is installed above the indoor unit, cover the stop valves (f, see above) with sealing material to prevent condensed water on the stop valves from moving to the indoor unit.

### NOTICE

Any exposed piping might cause condensation.

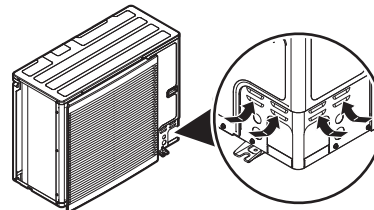
6 Reattach the service cover and the piping intake plate.

7 Seal all gaps (example: a) to prevent snow and small animals from entering the system.



### NOTICE

Do not block the air vents. This could affect air circulation inside the unit.







## WARNING

Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.



## NOTICE

Make sure to open the stop valves after installing the refrigerant piping and performing vacuum drying. Running the system with the stop valves closed may break the compressor.

## 5.2 Checking the refrigerant piping

### 5.2.1 To check for leaks



## NOTICE

Do NOT exceed the unit's maximum working pressure (see "PS High" on the unit name plate).



## NOTICE

ALWAYS use a recommended bubble test solution from your wholesaler.

NEVER use soap water:

- Soap water may cause cracking of components, such as flare nuts or stop valve caps.
- Soap water may contain salt, which absorbs moisture that will freeze when the piping gets cold.
- Soap water contains ammonia which may lead to corrosion of flared joints (between the brass flare nut and the copper flare).

- 1 Charge the system with nitrogen gas up to a gauge pressure of at least 200 kPa (2 bar). It is recommended to pressurize to 3000 kPa (30 bar) in order to detect small leaks.
- 2 Check for leaks by applying the bubble test solution to all connections.
- 3 Discharge all nitrogen gas.

### 5.2.2 To perform vacuum drying



## NOTICE

- Connect the vacuum pump to **both** the service port of the gas stop valve and the service port of the liquid stop valve to increase efficiency.
- Make sure that the gas stop valve and liquid stop valve are firmly closed before performing the leak test or vacuum drying.

- 1 Vacuum the system until the pressure on the manifold indicates  $-0.1$  MPa ( $-1$  bar).
- 2 Leave as is for 4-5 minutes and check the pressure:

If the pressure...	Then...
Does not change	There is no moisture in the system. This procedure is finished.
Increases	There is moisture in the system. Go to the next step.

- 3 Vacuum the system for at least 2 hours to a manifold pressure of  $-0.1$  MPa ( $-1$  bar).
- 4 After turning the pump OFF, check the pressure for at least 1 hour.
- 5 If you do NOT reach the target vacuum or CANNOT maintain the vacuum for 1 hour, do the following:

- Check for leaks again.
- Perform vacuum drying again.



## NOTICE

Make sure to open the stop valves after installing the refrigerant piping and performing vacuum drying. Running the system with the stop valves closed may break the compressor.

## 5.3 Charging refrigerant

### 5.3.1 To determine the additional refrigerant amount

If the total liquid piping length is...	Then...
$\leq 10$ m	Do NOT add additional refrigerant.
$> 10$ m	$R = (\text{total length (m) of liquid piping} - 10 \text{ m}) \times 0.050$ $R = \text{Additional charge (kg) (rounded in units of 0.01 kg)}$



## INFORMATION

Piping length is the one-way length of liquid piping.

### 5.3.2 To charge additional refrigerant



## WARNING

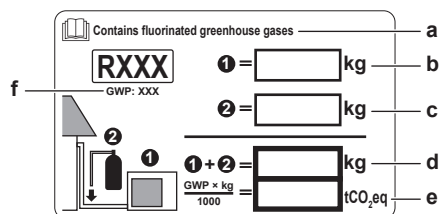
- Only use R32 as refrigerant. Other substances may cause explosions and accidents.
- R32 contains fluorinated greenhouse gases. Its global warming potential (GWP) value is 675. Do NOT vent these gases into the atmosphere.
- When charging refrigerant, ALWAYS use protective gloves and safety glasses.

**Prerequisite:** Before charging refrigerant, make sure the refrigerant piping is connected and checked (leak test and vacuum drying).

- 1 Connect the refrigerant cylinder to both the service port of the gas stop valve and the service port of the liquid stop valve.
- 2 Charge the additional refrigerant amount.
- 3 Open the stop valves.

### 5.3.3 To fix the fluorinated greenhouse gases label

- 1 Fill in the label as follows:



- a If a multilingual fluorinated greenhouse gases label is delivered with the unit (see accessories), peel off the applicable language and stick it on top of a.
- b Factory refrigerant charge: see unit name plate
- c Additional refrigerant amount charged
- d Total refrigerant charge
- e **Quantity of fluorinated greenhouse gases** of the total refrigerant charge expressed as tonnes CO<sub>2</sub> equivalent.
- f GWP = Global Warming Potential

## 6 Electrical installation



### NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO<sub>2</sub> equivalent.

**Formula to calculate the quantity in CO<sub>2</sub> equivalent tonnes:** GWP value of the refrigerant × total refrigerant charge [in kg] / 1000

Use the GWP value mentioned on the refrigerant charge label.

- Fix the label on the inside of the outdoor unit. There is a dedicated place for it on the wiring diagram label.

## 6 Electrical installation



### DANGER: RISK OF ELECTROCUTION



### WARNING

**Rotating fan.** Before powering ON the outdoor unit, make sure that the discharge grille covers the fan as protection against a rotating fan. See "4.2.4 To install the discharge grille" [p 7].



### WARNING

ALWAYS use multicore cable for power supply cables.



### CAUTION

Do NOT push or place redundant cable length into the unit.



### NOTICE

The distance between the high voltage and low voltage cables should be at least 50 mm.

### 6.1 About electrical compliance

#### Only for ERLA11~16D▲V3▼

Equipment complying with EN/IEC 61000-3-12 (European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase.).

### 6.2 Specifications of standard wiring components



### NOTICE

We recommend using solid (single-core) wires. If stranded wires are used, twist the conductor to consolidate the end or twist the conductor to consolidate the end in combination with the usage of a round crimp-style terminal on the end of the conductor. Details are described in "Guidelines when connecting the electrical wiring" in the installer reference guide.

Component	V3	W1
Power supply cable	MCA <sup>(a)</sup>	30.8 A
	Voltage range	220~240 V
	Phase	1~
	Frequency	50 Hz
	Wire sizes	Must comply with applicable legislation
Interconnection cable	Minimum cable section of 1.5 mm <sup>2</sup> and applicable for 230 V	

Component	V3	W1
Recommended field fuse	32 A, C curve	16 A or 20 A, C curve
Earth leakage circuit breaker	30 mA – Must comply with applicable legislation	

<sup>(a)</sup> MCA=Minimum circuit ampacity. Stated values are maximum values (see electrical data of combination with indoor units for exact values).

### 6.3 Guidelines when connecting the electrical wiring

#### Tightening torques

Outdoor unit:

Item	Tightening torque (N·m)
M4 (X1M)	1.2~1.8
M4 (earth)	1.2~1.4
M5 (X1M)	2.0~3.0
M5 (earth)	2.4~2.9

### 6.4 Connections to the outdoor unit

Item	Description
Power supply cable	See "6.4.1 To connect the electrical wiring to the outdoor unit" [p 10].
Interconnection cable	

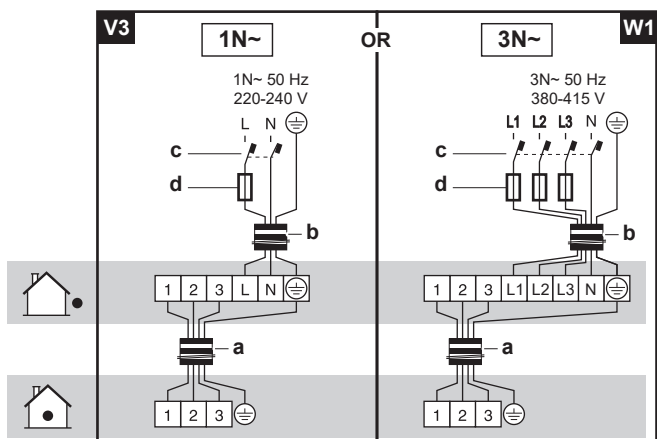
#### 6.4.1 To connect the electrical wiring to the outdoor unit



### NOTICE

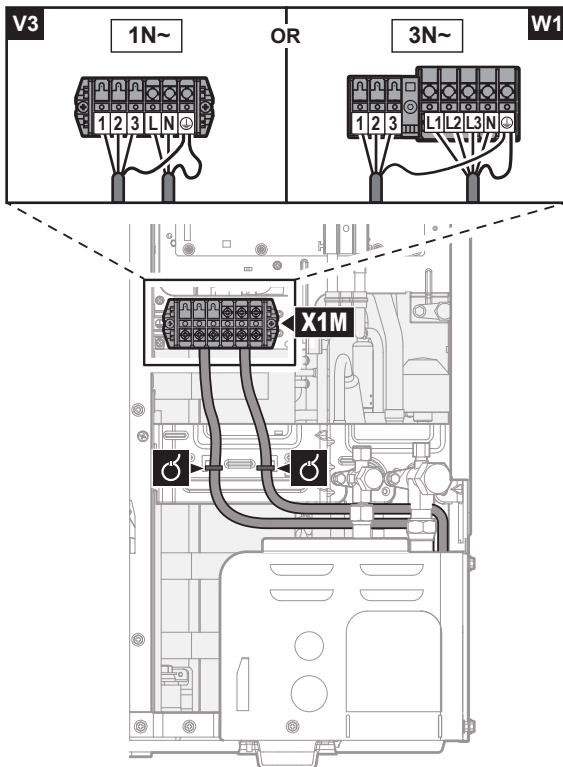
- Follow the wiring diagram (delivered with the unit, located at the inside of the service cover).
- Make sure the electrical wiring does NOT obstruct proper reattachment of the service cover.

- Remove the service cover.
- Connect the interconnection cable and power supply (1N~ or 3N~ depending on model, see name plate) as follows:

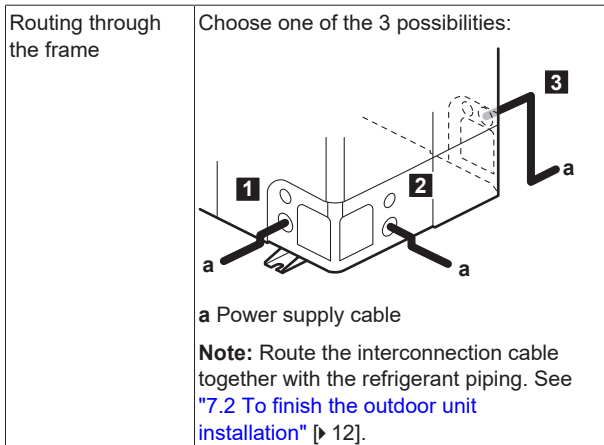


- a Interconnection cable  
b Power supply cable  
c Earth leakage circuit breaker  
d Fuse

## 7 Finishing the outdoor unit installation



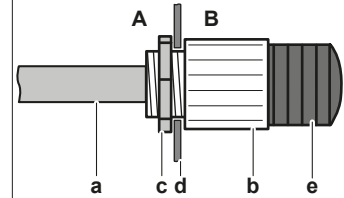
- 3 Fix the cables (power supply and interconnection cable) with a cable tie to the stop valve attachment plate and route the wiring according to the illustration above.
- 4 Choose a knockout hole and remove the knockout hole by tapping on the attachment points with a flat head screwdriver and a hammer.
- 5 Route the wiring through the frame and connect the wiring to the frame at the knockout hole.



Connecting to the frame

When cables are routed from the unit, a protection sleeve for the conduits (PG insertions) can be inserted at the knockout hole.

When you do not use a wire conduit, protect the wires with vinyl tubes to prevent the edge of the knockout hole from cutting the wires.



A Inside of the outdoor unit

B Outside of the outdoor unit

a Wire

b Bush

c Nut

d Frame

e Hose



### NOTICE

Precautions when making knockout holes:

- Avoid damaging the casing and underlying piping.
- After making the knockout holes, we recommend to remove the burrs and paint the edges and areas around the edges using repair paint to prevent rusting.
- When passing electrical wiring through the knockout holes, wrap the wiring with protective tape to prevent damage.

6 Reattach the service cover.

7 Connect an earth leakage circuit breaker and fuse to the power supply line.

## 7 Finishing the outdoor unit installation

### 7.1 To check the insulation resistance of the compressor



### NOTICE

If, after installation, refrigerant accumulates in the compressor, the insulation resistance over the poles can drop, but if it is at least 1 MΩ, then the unit will not break down.

- Use a 500 V mega-tester when measuring insulation.
- Do NOT use a mega-tester for low voltage circuits.

1 Measure the insulation resistance over the poles.

If	Then
≥1 MΩ	Insulation resistance is OK. This procedure is finished.
<1 MΩ	Insulation resistance is not OK. Go to the next step.

2 Turn ON the power and leave it on for 6 hours.

**Result:** The compressor will heat up and evaporate any refrigerant in the compressor.

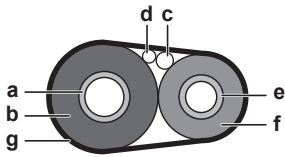
## 8 Starting up the outdoor unit

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- 3 Measure the insulation resistance again.

### 7.2 To finish the outdoor unit installation

- 1 Insulate and fix the refrigerant piping and cables as follows:



- a Gas pipe
- b Gas pipe insulation
- c Interconnection cable
- d Field wiring (if applicable)
- e Liquid pipe
- f Liquid pipe insulation
- g Finishing tape

- 2 Install the service cover.

## 8 Starting up the outdoor unit

See the indoor unit installation manual for configuration and commissioning of the system.



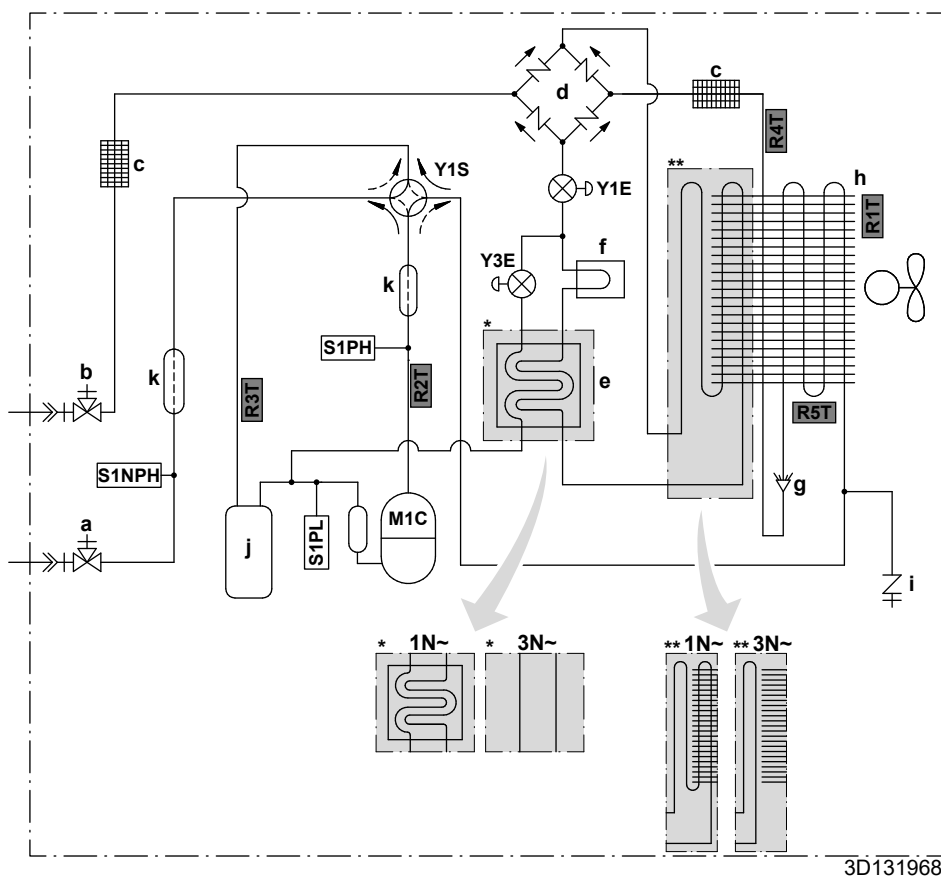
### WARNING

**Rotating fan.** Before powering ON the outdoor unit, make sure that the discharge grille covers the fan as protection against a rotating fan. See "[4.2.4 To install the discharge grille](#)" [▶ 7].

## 9 Technical data

A **subset** of the latest technical data is available on the regional Daikin website (publicly accessible). The **full set** of latest technical data is available on the Daikin Business Portal (authentication required).

### 9.1 Piping diagram: Outdoor unit



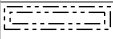
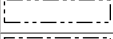
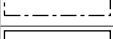

- |   |   |
|---|---|
| <p>a Gas stop valve with service port<br/> b Liquid stop valve with service port<br/> c Filter<br/> d Rectifier<br/> e Economiser<br/> f Heat sink<br/> g Distributor<br/> h Heat exchanger<br/> i Service port 5/16" flare<br/> j Accumulator<br/> k Muffler</p> <p><b>M1C</b> Compressor<br/> <b>S1PH</b> High pressure switch<br/> <b>S1PL</b> Low pressure switch<br/> <b>S1NPH</b> Pressure sensor<br/> <b>Y1E</b> Electronic expansion valve (main)<br/> <b>Y3E</b> Electronic expansion valve (injection)<br/> <b>Y1S</b> Solenoid valve (4-way valve)</p> | <p><b>Thermistors:</b><br/> <b>R1T</b> Outdoor air<br/> <b>R2T</b> Compressor discharge<br/> <b>R3T</b> Compressor suction<br/> <b>R4T</b> Air heat exchanger<br/> <b>R5T</b> Air heat exchanger, middle</p> <p><b>Refrigerant flow:</b><br/>  Heating<br/>  Cooling</p> <p><b>Connections:</b><br/>  Flare connection<br/>  Braze connection</p> |
|---|---|

## 9 Technical data

### 9.2 Wiring diagram: Outdoor unit

The wiring diagram is delivered with the unit, located at the inside of the service cover.

Translation of text on wiring diagram:

English	Translation
(1) Connection diagram	(1) Connection diagram
Compressor SWB	Compressor switch box
Hydro SWB	Hydro switch box
Indoor	Indoor
Outdoor	Outdoor
(2) Compressor switch box layout	(2) Compressor switch box layout
Front	Front
Rear	Rear
(3) Legend	(3) Legend
	*: Optional; #: Field supply
A1P	Printed circuit board (main)
A2P	Printed circuit board (noise filter)
A3P (only for 1N~ models)	Printed circuit board (flash)
Q1DI	# Earth leakage circuit breaker
X1M	Terminal strip
(4) Notes	(4) Notes
X1M	Main terminal
-----	Earth wiring
-----	Field supply
①	Several wiring possibilities
	Option
	Wiring depending on model
	Switch box
	PCB





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4P670043-1 00000001

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4P670043-1 2022.10