Rittal – The System.

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Climate control door

SK 3201.800
SK 3201.810
SK 3201.820
SK 3201.830
SK 3201.840
SK 3201.850

Assembly and operating instructions

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

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Contents

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1 Notes on documentation

These instructions are aimed at tradespersons who are familiar with the assembly and installation of the cooling unit, and at trained specialists who are familiar with the operation of the cooling unit.

1.1 Associated documents

We cannot accept any liability for damage associated with failure to observe these instructions. The instructions for the accessories used should also be observed where applicable.

1.2 Retention of documents

These instructions and all associated documents are part of the product. They must be given to the plant operator. The operator is responsible for storage of the documents so they are readily available when needed.

1.3 Symbols used

Please observe the following safety instructions and other notes in this guide:

Symbol for an instructed action:

■ The bullet point indicates that you should perform an action.

Safety and other instructions:

Danger!
Immediate danger to life and limb!

Caution!
Potential threat to the product and its environment.

Note:
Useful information and special features.

2 Safety notes

Please observe the following general safety notes when assembling and operating the unit:

– Assembly, installation and servicing may only be performed by properly trained specialists.
– Screw the enclosure to the floor to prevent it from tipping over when the cooling unit is installed.
– When transporting the enclosure with the cooling unit externally mounted, always use an additional shipping brace (e.g. wooden structure made from square timber) to support the enclosure at the bottom.
– Use only original spare parts and accessories.
– Do not make any changes to the climate control door other than those described in these instructions or associated instructions.

3 Device description

Depending on the model chosen, your cooling unit may vary in appearance from the illustrations contained in these instructions. However, the functions are identical in principle.

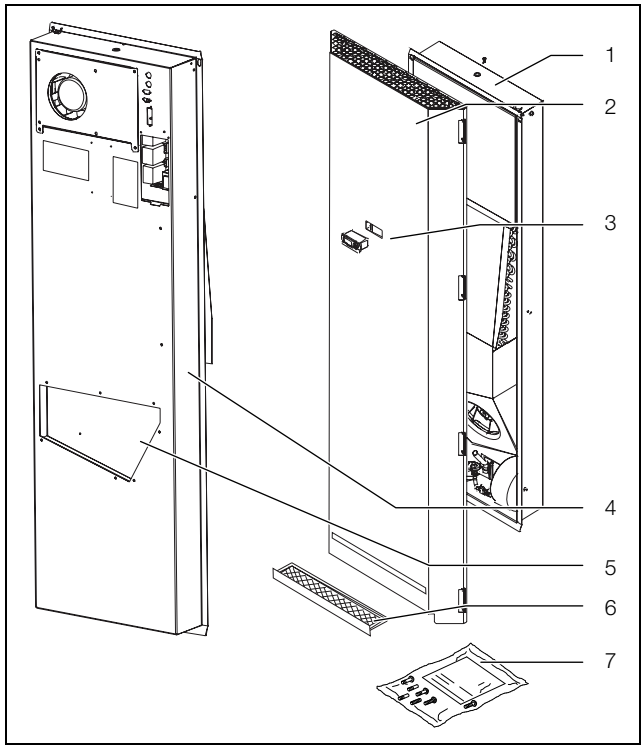

Fig. 1: Device description

Key

1 Climate control module
2 Climate control door
3 Display (controller)
4 Rear half of the enclosure
5 Air outlet hole
6 Filter (accessory)
7 Dispatch bag

3.1 Functional description

The climate control door is designed to dissipate heat from enclosures and cool the air inside the enclosure in order to protect temperature-sensitive components. It is installed in place of the enclosure door.

3.2 Proper usage

Rittal climate control doors were developed and designed in accordance with the state of the art and the recognised rules governing technical safety. Nevertheless, if used improperly, they may pose a threat to life and limb or cause damage to property. The climate control door is only intended for cooling enclosures. Any other use is deemed improper. The manufacturer will not be liable for any damages caused as a result of improper use, or for incorrect assembly, installation or use. All risk is borne solely by the user. Proper usage also includes the observation of all valid documents and compliance with the inspection and servicing conditions.

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3.3 Scope of supply

The climate control door is supplied in a packaging unit in a fully assembled state.
Please check the delivery for completeness:

Qty.	Description
1	Climate control dorr
1	Dispatch bag: – Double-bit key

Tab. 1: Scope of supply

4 Assembly and connection

4.1 Choosing the installation site

When choosing the installation site for the enclosure, please observe the following:

– The site for the enclosure, and hence the arrangement of the cooling unit, must be carefully selected so as to ensure good ventilation. Depending on the siting of the unit, if several units are installed directly adjacent to one another, the distance from the wall must be at least 200 mm.
– The climate control door must be installed and operated in a vertical position (maximum deviation: 2°).
– The site must be free from excessive dirt and moisture.
– The ambient temperature must not exceed 55 °C.

4.2 Assembly instructions

4.2.1 General

– The enclosure must be sealed on all sides. Increased condensation will occur if the enclosure is not airtight.

4.2.2 Layout of the electronic components in the enclosure

Caution!
Risk of condensation!
When arranging the components inside the enclosure, please ensure that the cold airflow from the cooling unit is not directed at active components. Please also ensure that the cold airflow is not directed at the warm exhaust airflow from active components such as converters. This may lead to an air shortcircuit and therefore prevent adequate climate control, or may even cause the cooling unit's internal safety devices to cease cooling operation.

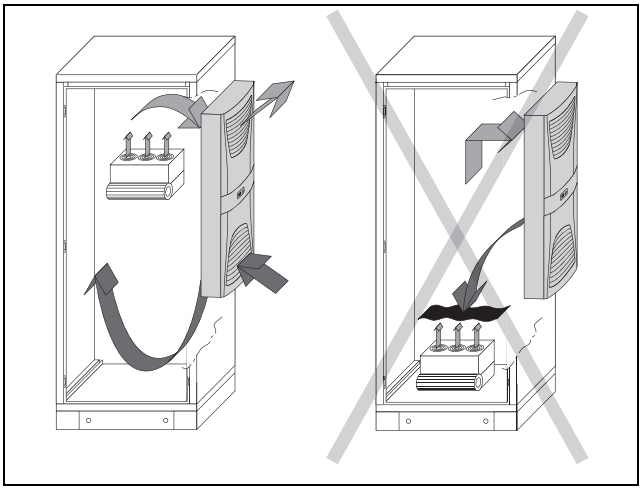

Fig. 2: Never direct the cold airflow at active components

Note:
In order to ensure perfect operation of the climate control door, an enclosure base/plinth at least 100 mm high is required.

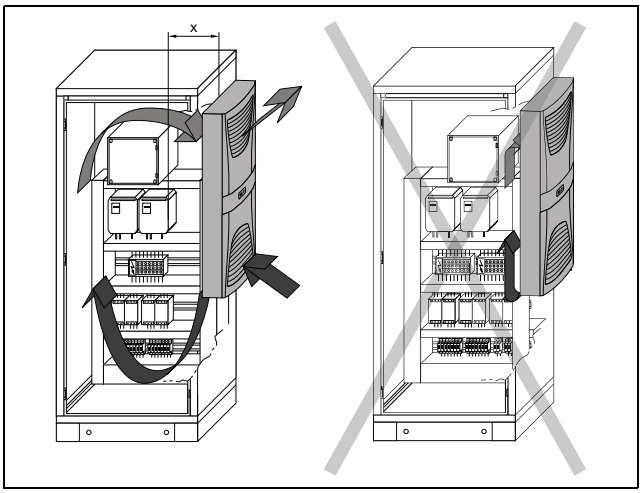

Fig. 3: Air circulation inside the enclosure

4.3 Fitting the climate control door

4.3.1 Assembly sequence

The climate control door must be fitted in the following sequence:

1. Fitting the climate control door (see section 4.3.2 "Fitting the climate control door")

4.3.2 Fitting the climate control door

■ Screw-fasten the climate control door to the enclosure using the four preassembled hinges.

Fig. 4: Climate control door

Fig. 5: 180° hinge

Note:
The climate control door must always be fitted by two people.

4.3.3 Fitting the climate control module

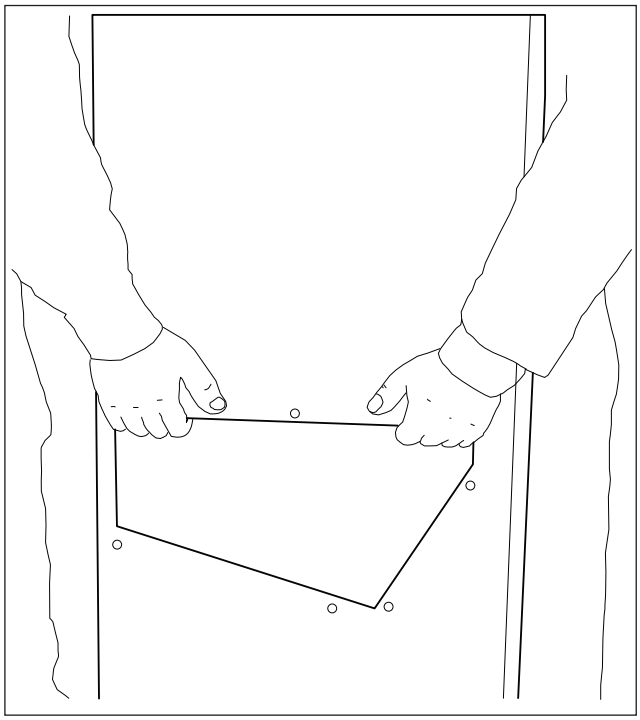

Fig. 6: Transporting the climate control module

- Slide the module onto the lowest rail on the inside of the mounted climate control door.

Fig. 7: Fit the climate control module in the climate control door

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- Screw-fasten the module to the top edge of the climate control door using two screws.

4.3.4 Fitting the display into the climate control door, and the earthing and display cable

Fitting the display into the climate control door:

- Insert the display into the climate control door opening from the outside.

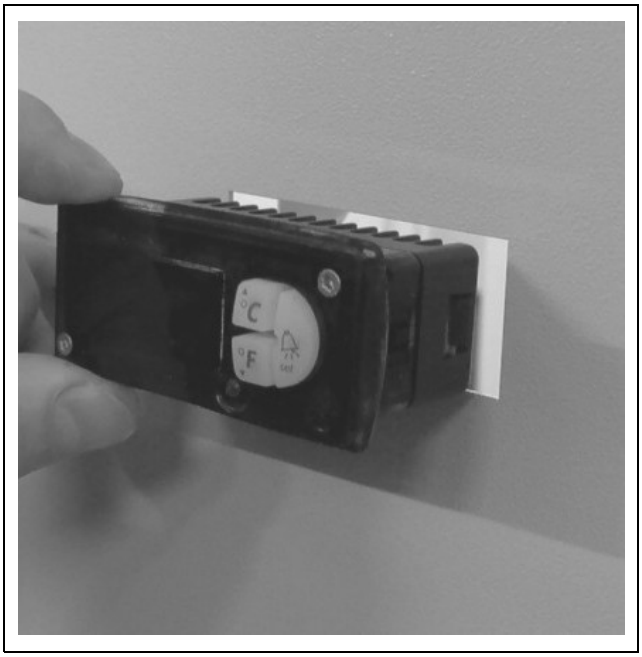

Fig. 8: Insert the display into the climate control door opening

- Secure the display to the climate control door using the two screws on the climate control door and attach the trim panel.

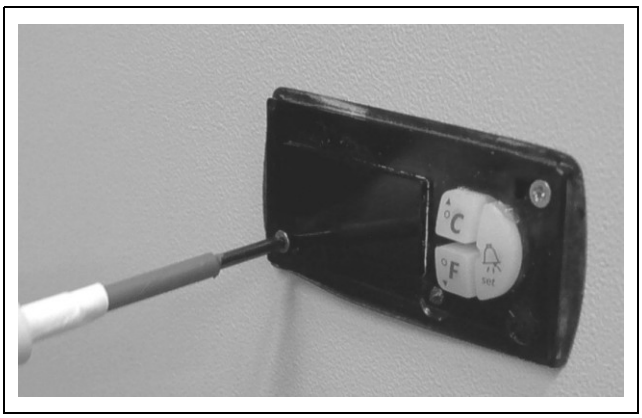

Fig. 9: Secure the display

Fig. 10: Attach the trim panel

Fit the earth onto the climate control door:

- Re-attach the earthing cable to the inside of the climate control door.

Fig. 11: Connections for the earthing cable

Fit the display cable:

- Release the cover plate on the inside of the climate control door.

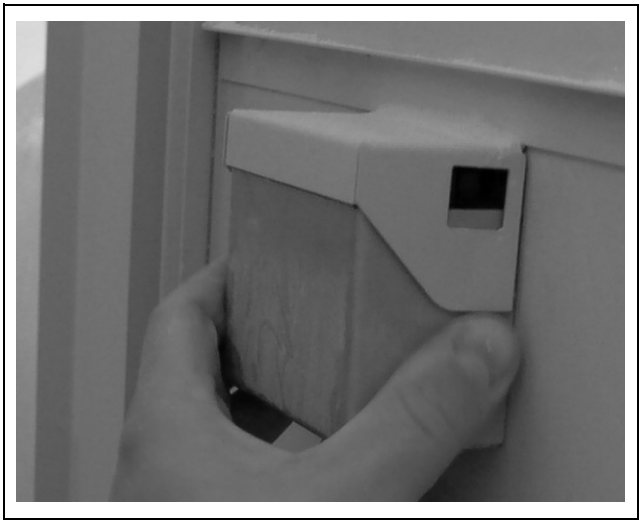

Fig. 12: Release the cover plate

■ Connect the controller cable on the climate control module into the display.

Fig. 13: Connect the display connection cable

■ Push the cover plate back over the display on the inside of the climate control door and clamp it securely.

Fig. 14: Insert the cable sleeve

Fig. 15: Slide on the cover

4.4 Notes on electrical installation

4.4.1 Door limit switch (optional) with climate control module

– Each door limit switch must only be assigned to one cooling unit.
– Several door limit switches may be connected in parallel and operated on one cooling unit.
– The minimum cross-section of the connection cable is 0.3 mm^2 for a cable length of 2 m. We recommend the use of a shielded cable.
– The line resistance to the door limit switch must not exceed a maximum of 50 Ω.
– The door limit switch only supports a floating connection; no external voltages.
– The contact of the door limit switch must be closed when the door is open.

4.4.2 Notes on the flicker standard

The flicker limits specified in standard EN 61 000-3-3 or -3-11 are adhered to, provided the supply impedance is less than approx. 1.5 Ω.

Where necessary, the unit operator should measure the connected impedance or consult the responsible power supply company. If there is no way of influencing the supply impedance and sensitive installed components (e.g. BUS) are subjected to interference, a line reactor or starting-current limiting device should be connected upstream of the cooling unit to restrict the startup current of the cooling unit.

4.4.3 Potential equalisation

If, for EMC reasons, the unit is to be integrated into the existing potential equalisation system at the customer, a conductor with a larger nominal cross-section can be connected to the potential equalisation connection point (attachment points) on the climate control module.

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According to the standard, the PE conductor in the mains connection cable is not classified as an equipotential bonding conductor.

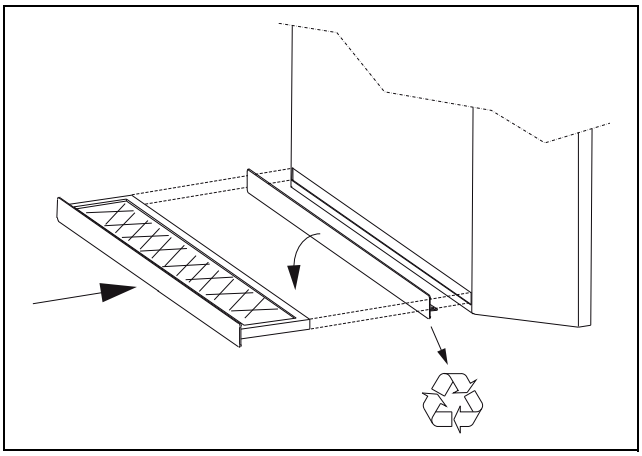
4.5 Finalising assembly

4.5.1 Installing the filter media (optional)

For dry, coarse dust and lint in the ambient air, we recommend installing a filter in the cooling unit. For air containing oil condensation, we recommend the use of metal filters (accessory SK 3284.210).

When used in textile plants with heavy lint contamination, lint screens should be used (available as an optional extra).

- Slide the metal filter into the bottom of the climate control door.
- When removing from below, grasp through the hole and pull the filter out forwards.



5 Storage and disposal

Caution! Risk of damage!
The cooling unit must not be subjected to temperatures above +70 °C during storage.

During storage, the climate control door must stand upright.

The closed cooling circuit contains refrigerant and oil which must be properly disposed of for the sake of the environment. Disposal can be performed at the Rittal plant. Please contact us for advice.

6 Technical specifications

Model No.	Pack	3201.800	3201.810	3201.820
Dimensions to fit enclosure type		VX	VX	VX
with height mm		= 1800	= 2000	= 1800
with width mm		= 600 / 1200	= 600 / 1200	= 800
Unit positioned on the left		–	–	–
Unit positioned on the right		–	–	–
Weight kg		24	27	34
Note on Model No.		R/h door hinge	R/h door hinge	R/h door hinge
Accessories				
Door-operated switch	1 St.	4315.820	4315.820	4315.820
Metal filter	1 St.	3284.210	3284.210	3284.210
Comfort handle	1 St.	8618.250	8618.250	8618.250
Ride-up roller	1 St.	-	8618.420	-

Tab. 2: Technical specifications 3201.800 – 3201.820

Model No.	Pack	3201.830	3201.840	3201.850
Dimensions to fit enclosure type		VX	VX	VX
with height mm		= 2000	= 1800	= 2000
with width mm		= 800	= 600 / 1200	= 600 / 1200
Unit positioned on the left		–	X	X
Unit positioned on the right		–	–	–
Weight kg		35	25	28
Note on Model No.		R/h door hinge	L/h door hinge	L/h door hinge
Accessories				
Door-operated switch	1 St.	4315.820	4315.820	4315.820
Metal filter	1 St.	3284.210	3284.210	3284.210
Comfort handle	1 St.	8618.250	8618.250	8618.250
Ride-up roller	1 St.	8618.420	-	8618.420

Tab. 3: Technical specifications 3201.830 – 3201.850

Notes

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