

Door Insert

SKOPE Cool and Freezer Room



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CONTENTS

1	Commissioning	
	Before Installing	4
	Compliance	4
	Installation	4
	Commissioning Checklist	4
	Warranty	4
2	Safety	
	Safety First	5
	Power Supply	5
	Structural Integrity	5
	Unpacking and Moving Parts	5
3	Unpacking	
	Storage	6
	Unpacking the Frame	6
	Unpacking the Doors	6
	Parts	7
	Configuration	7
	Sealant and Mastic	7
4	Installation	
	Cut-Out Opening	8
	Cut-Out Size	8
	Where to Cut	9
	Cutting the Opening	10
	Fit Frame	10
	Check for Correct Fit	10
	Raw edges and Gaps	10
	Single Module Frame	11
	Split Module Frame	12
	External Fascia	14
	Internal flashing	14
	Doors	15
	Fitting the Doors	15
	Fitting the Door Handles	17
	Removing Door Handles	18
	Electrics	19
	Mains Supply	19
	Door Heaters	19
	Wiring	20
	Humidity Sensor Probe	22

1 Commissioning

Before Installing

Compliance All parts and equipment supplied by SKOPE must be installed in accordance with all relevant laws, regulations, building codes and standards ("Building Codes"). SKOPE may provide information regarding aspects of the Building Codes but this is provided as general information only and does not detract from the installer's responsibility to ensure that all equipment is installed in accordance with the Building Codes.

The installer must ensure all electrical work is carried out by licensed technicians in accordance with all relevant electrical wiring rules and regulations. Refer to the rating label for power supply requirements. The rating label is located on the inside of the insert frame, next to the mains supply cable entry. A single point for all-pole isolation must be provided in the supply wiring (regardless of supply - single phase/circuit, or lighting and heating on separate phases/circuits).

Installation Installation must be completed in accordance with the SKOPE Door Insert installation manual provided by SKOPE.

Commissioning Checklist After the insert has been installed the installer must complete the SKOPE Door Insert installation checklist (supplied in the bag with this manual). A completed copy of the checklist must stay on site and a copy sent to SKOPE.

IMPORTANT

The SKOPE Door Insert Installation Checklist **MUST** be completed and returned to SKOPE.

Warranty Subject to the conditions and exclusions set out in the SKOPE Warranty Terms (<http://www.skope.com/support/warranty>), and provided that the installation is completed in accordance with the installation guidelines set out in this SKOPE Door Insert installation manual and a completed copy of the SKOPE Door Commissioning Checklist sheet is returned to SKOPE, SKOPE warrants that, for the period of five years commencing on the date of purchase, the SKOPE products will be free from any defect in workmanship or material. Where there is any conflict between this installation manual and the SKOPE Warranty Terms, the SKOPE Warranty Terms shall prevail.

SKOPE's sole obligation should the products be found upon inspection by or on behalf of SKOPE not to meet the warranty is to, at SKOPE's option, repair or replace the products without charge provided that the liability of SKOPE shall in no event exceed the purchase price of the products.

The application of any warranty provided by SKOPE for SKOPE Door Insert products is expressly excluded where a defect, malfunction or failure of equipment is due to inadequate installation, and the customer's recourse will be solely against the installer.

2 Safety

Safety First

Always observe safety precautions when using any electrical equipment. Read these instructions carefully and retain them for future reference.

- ▣ When the equipment is used by or near young children or infirm persons, close supervision is necessary, especially to ensure children do not play with it.
- ▣ Do **not** use this equipment for other than its intended use.
- ▣ Do **not** probe any opening.
- ▣ Only use this equipment with the voltage specified on the rating label affixed to the inside of the insert frame.
- ▣ For your own safety and that of others, ensure that all electrical work is done by authorised personnel.
- ▣ Do **not** store flammable or explosive substances such as aerosol cans with a flammable propellant in the refrigerated room.
- ▣ Do **not** use this equipment in areas subject to cleaning by hosing-down.
- ▣ Ensure all necessary safety precautions are observed during installation or removal of the equipment.

CAUTION

Never overload the power supply. See the rating label on the inside of the insert frame for the safe power supply and current draw.

WARNING

Always isolate the Door Insert from all poles of the mains power supply before cleaning or maintenance.

Power Supply This Door Insert must be installed in accordance with the relevant electrical wiring rules and regulations. Refer to the rating label for power supply requirements. The rating label is located on the inside of the insert frame, next to the mains supply cable entry.

Structural Integrity The frame must not be used as a cool room structural element. Ensure the cool room is structurally sound before and after the frame cut-out opening is made.

Unpacking and Moving Parts Extra care must be taken when unpacking and moving parts. Some parts are heavy, and are two or more person lift.

3 Unpacking

Storage

To prevent damage, keep all parts under cover inside their protective packaging in an upright position until the site is close to completion. Ensure the doors and door insert frame are supported and cannot fall over.

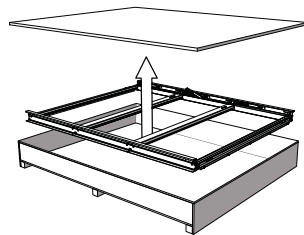
Unpacking the Frame

It is recommended to leave the frame in the crate until it can be fitted.

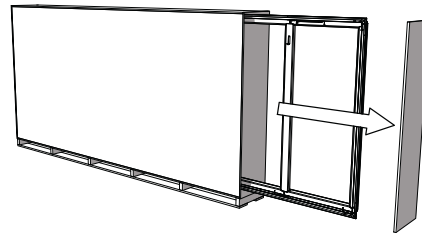
1 to 3 door frames are shipped lying down in a wooden crate. Remove the top of the crate to access and remove the frame.

4+ door frames are shipped upright in a wooden crate. Remove one side of the crate to access the frame, and slide the frame out from the crate.

Two or more people may be required to unpack, move and fit the frame/s. Take care not to scratch components when unpacking and moving.



1 - 3 door frame



4+ door frame

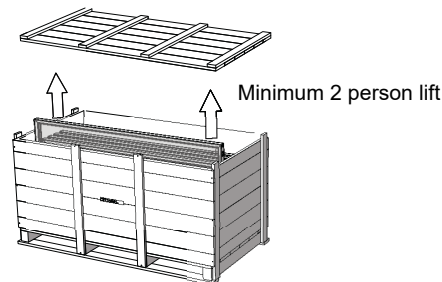
Unpacking the Doors

It is recommended to leave the doors in the crate until they can be fitted.

1 or 2 doors are shipped lying down in a wooden crate. Remove the top of the crate to access and remove the doors.

3+ doors are shipped on their side in a wooden crate. Remove the top of the crate to access and remove the doors.

The doors are heavy. Two or more people are required to lift the doors out of the crate. Do **NOT** use the handles to lift the doors as this may damage the handle or break the door glass.



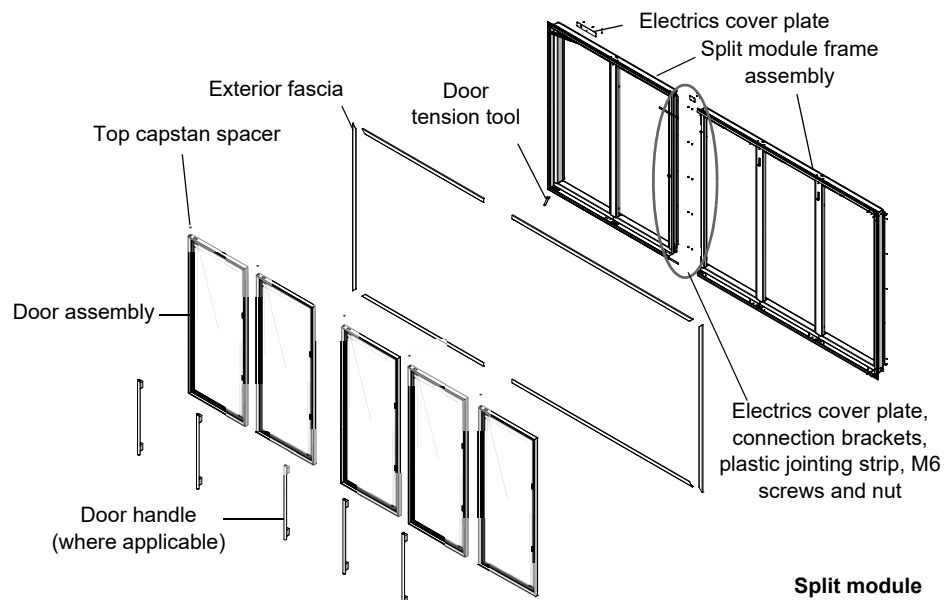
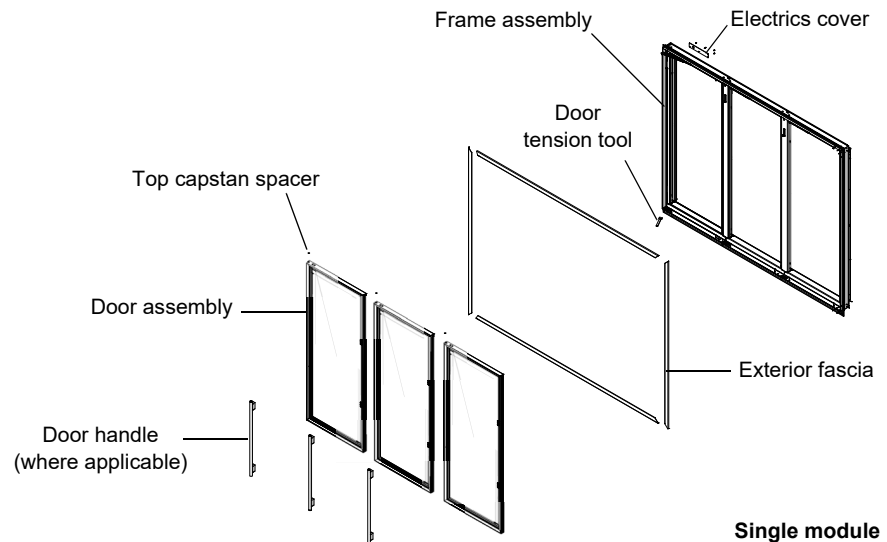
3+ doors

Parts

Configuration Depending on the number of doors, the installation will be made from a single module frame (1-3 doors), or a combination of 2 and 3 door split modules.

Where applicable, follow the single or split module instructions depending on the installation type.

The following parts are supplied as part of the Door Insert kit and are required for a standard Door Insert installation.



Sealant and Mastic Sealant and mastic for door insert installation is not supplied as part of the kit. Ensure the sealant and mastic is foodsafe and mould resistant. SKOPE recommend the following sealant and mastic:

- ▣ Sealant: **Sika Sikaflex N**
- ▣ Mastic: **Sika Sikaflex Cold Room Mastic**

4 Installation

Cut-Out Opening

Structural Integrity The frame must not be used as a cool room structural element. Ensure the cool room is structurally sound before and after the frame cut-out opening is made.

Cut-Out Size The cut-out size can be calculated by using the following formulas for width and height. For assistance or clarification of cut-out sizes, contact SKOPE.

Cut-out width (mm)

Use the following formula to determine the cut-out width (in mm, where n = number of doors, and door width is the width of a single door).

$$n(\text{door width} + 28) + 36$$

For example the cut-out width for a 5 door insert with 700mm wide doors is calculated as follows:

$$700 + 28 = 728$$

$$728 \times 5 = 3640$$

$$3640 + 36 = 3676\text{mm cut-out width}$$

Cut-out height (mm)

Use the following formula to determine the cut-out height (in mm, where door height is the height of a single door).

$$\text{Door height} + 55$$

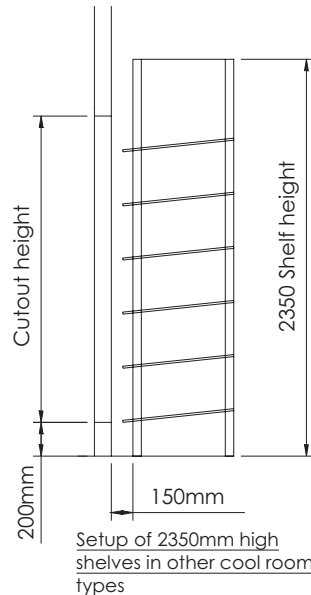
For example the cut-out height for an insert with 1800mm high doors is calculated as follows:

$$1800 + 55 = 1855\text{mm cut-out height}$$

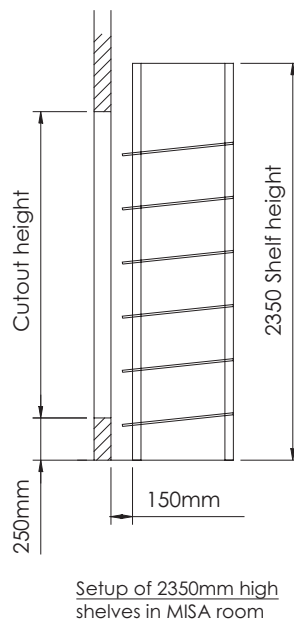
Where to Cut When marking out where to cut the opening, start with the bottom edge and work around the sides and top.

If the installation includes shelves, the bottom edge of the frame opening must align with the bottom edge of the bottom shelf where possible. If it is not possible to align the bottom edge with the bottom shelf (due to cool room height, MISA Cool Room cam locks, or other situations), the bottom edge should be raised or lowered as required.

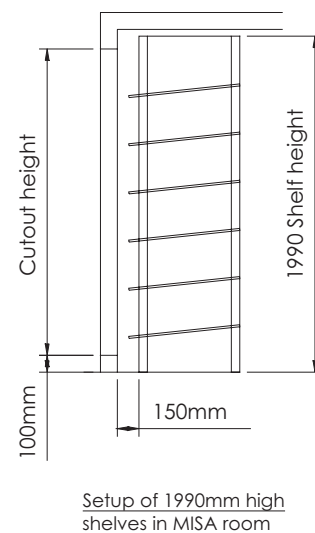
The following examples show various options that must be considered when installing the frame with SKOPE Door Insert Shelves.



Preferred solution, where frame height is not affected by low ceiling or MISA Cool Room cam lock.
Bottom edge 200mm from floor.



Alternative solution, where bottom edge is affected by MISA Cool Room cam lock.
Bottom edge 250mm from floor.



Alternative solution, where frame height is affected by MISA Cool Room ceiling height.
Bottom edge 100mm from floor.

Cutting the Opening Before cutting the opening for the frame, ensure the frame opening size dimensions are correct as per the formulas on page 8. Please contact SKOPE for clarification if required.

Cut frame opening

1. Determine the frame opening size as per table on page 8 (or contact SKOPE) and mark out in the correct position on the room wall.
Ensure the marked frame opening size is square and level.

 2. Double check the marked frame opening size, and once confirmed as correct cut opening in room using an appropriate tool.

 3. If a bare steel edge has been exposed when cutting the frame opening, use masking tape to mask around inside and outside of cut, and prime all exposed steel edges on the inside and outside of the opening.
Once the primer has dried, remove the masking tape.
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-

Fit Frame

Depending on the door configuration, the frame is supplied as a fully assembled single module frame (1-3 doors), or as split module frames of 2 and/or 3 door modules. Where applicable, follow the single or split module instructions depending on the installation type.

Check for Correct Fit Check the size of the finished frame to the frame opening and correct if necessary. Do not try to fit the frame into an opening that is too tight or loose. If the opening is bigger than the size stated in the installation specification, all gaps must be filled with appropriate insulation.

If a bare steel edge has been exposed when correcting the frame opening, use masking tape to mask around inside and outside of cut, and prime all exposed steel edges on the inside and outside of the opening. Once the primer has dried, remove the masking tape.

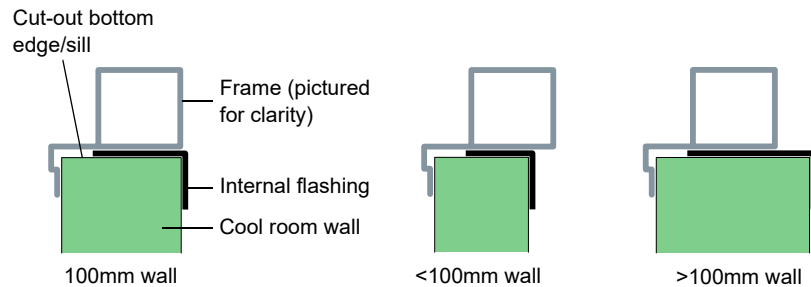
Raw Edges and Gaps Any raw edges must be covered with internal flashing as required. Internal flashing is not supplied by SKOPE.

Gaps between the frame and the cut-out inside the room must be filled with expanding foam.

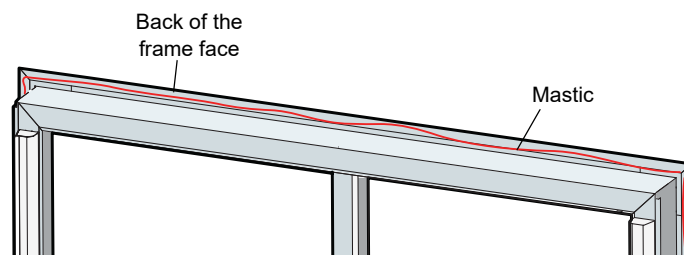
IMPORTANT
All raw edges **MUST** be covered.
All gaps **MUST** be filled.

Single Module Frame

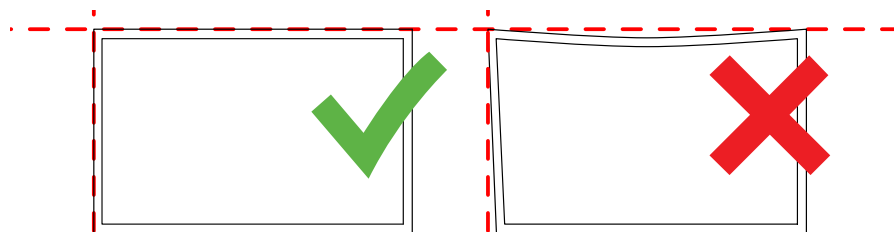
1. Fit internal flashing (not supplied by SKOPE) to the bottom edge of the cut-out. The internal flashing must hide and protect the bottom cut edge on the inside of the room, and cover any voids or gaps between the frame and cut-out edge.



2. Apply a continuous bead of mastic around the back of the frame face.

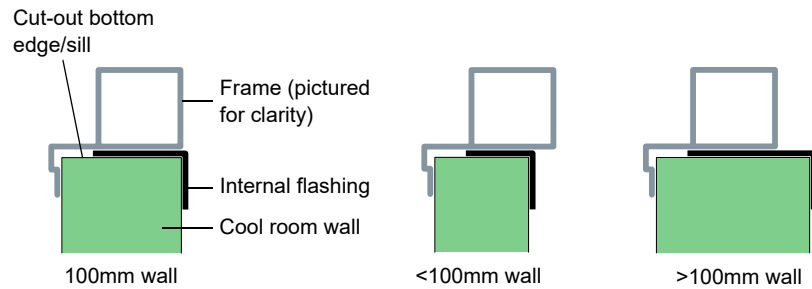


3. Lift the insert into the opening.
4. Clean up any mastic that may have squeezed out.
5. Run a level across the frame and check that the frame is level, and adjust as necessary.
6. Fit internal flashing (not supplied by SKOPE) to the side and top edges of the cut-out. The internal flashing must hide and protect the cut edge on the inside of the room, and cover any voids or gaps between the frame and cut-out edge.
7. The perimeter of the frame is pre-drilled with pilot holes for screw location. Fix the frame in place with #8 self tapping screws (not supplied by SKOPE):
 - Start with the sides, ensuring they are plumb and level.
 - The horizontal top of the frame must be straight. Ensure there is absolutely no sagging as this would stop the doors from fitting properly.

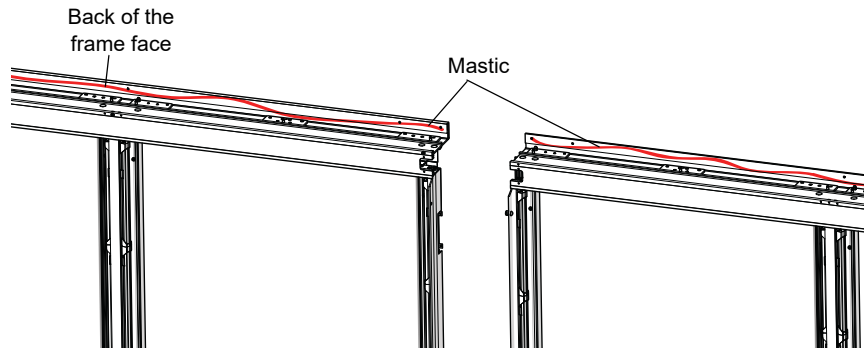


Split Module Frame

1. Fit internal flashing (not supplied by SKOPE) to the bottom edge of the cut-out. The internal flashing must hide and protect the bottom cut edge on the inside of the room, and cover any voids or gaps between the frame and cut-out edge.

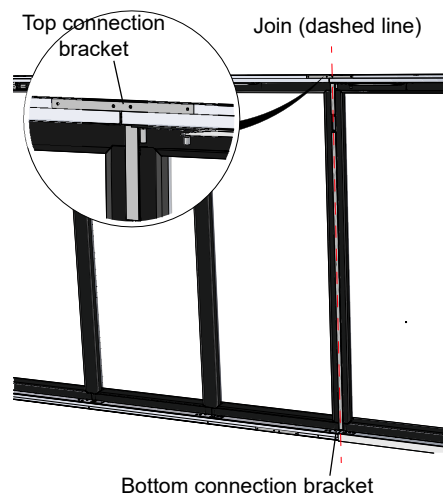


2. Arrange each module into the correct order for installation.
3. Apply a continuous bead of mastic around the back of each frame face.



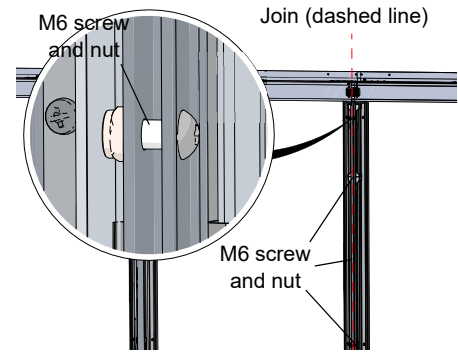
4. Lift all modules into the opening, ensuring all frame electric plugs are accessible (to connect at a later stage).
5. Clean up any mastic that may have squeezed out.

6. Position the connection brackets horizontally across the join at the top and bottom extrusions (do not screw in place yet).

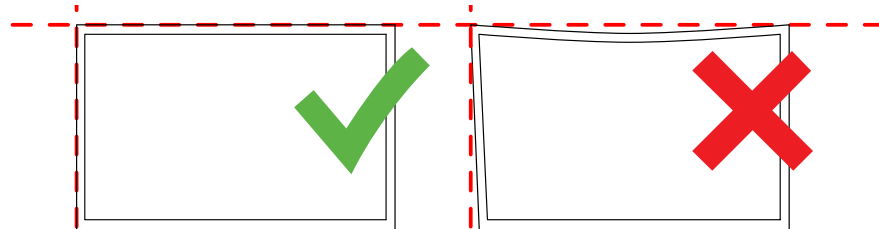


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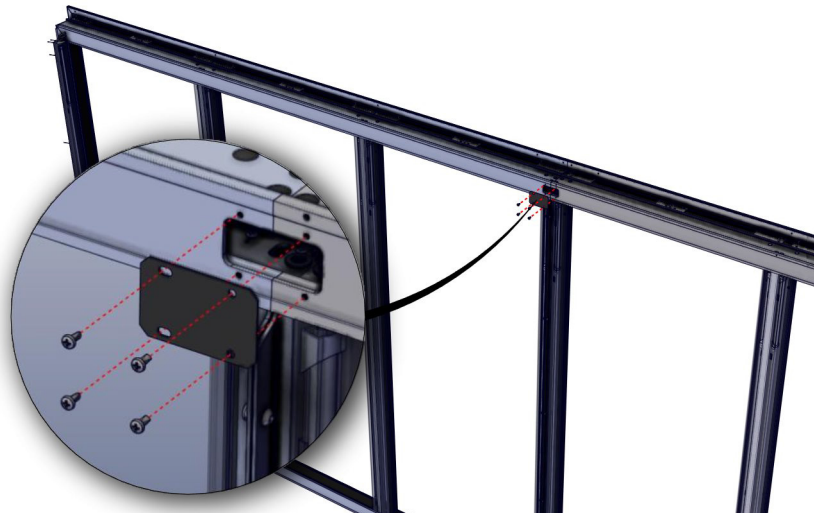
7. Join the frame modules together by fitting and tightening the supplied M6 screws and nuts through the vertical part of the frame extrusion at the join (on the inside of the room). This will pull the modules together. The frames are pre-drilled with pilot holes for screw location.



8. The perimeter of the frame is pre-drilled with pilot holes for screw location. Fix the frame in place with #8 self tapping screws (not supplied by SKOPE):
- Start with the sides, ensuring they are plumb and level.
 - The horizontal top of the frame must be straight. Ensure there is absolutely no sagging as this would stop the doors from fitting properly.
- Screw the connection brackets (positioned in step 5) into the frame modules. The brackets and frames are pre-drilled with pilot holes for screw location (Note: The holes are slightly offset to provide a tight fit), then the remaining fixing screws across the top and bottom of the frame.



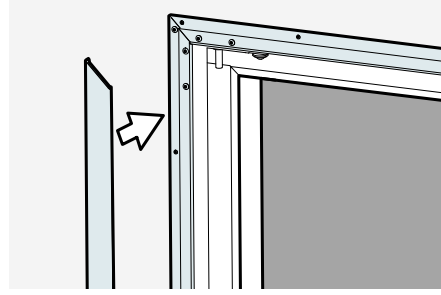
9. Connect the two frame electric plugs (located from the inside of the room, through the hole at the top of the frame join), and fit the electric cover plate.



External Fascia The top left fascia has a SKOPE logo on it. Ensure the logo is at the top left corner of the frame.

Fit the external fascia

1. Clip the external fascia into place around the outside perimeter of the frame.
Take care when matching the fascia to the frame, as it cannot be easily removed.

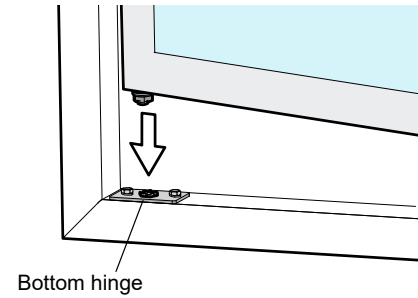
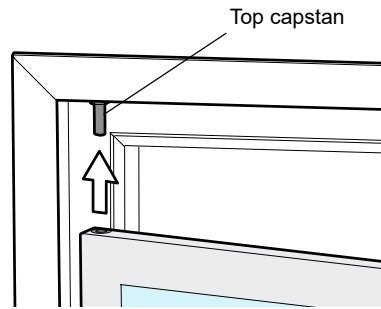


Internal flashing Cover any raw edges or gaps with internal flashing as required. Internal flashing is not supplied by SKOPE.

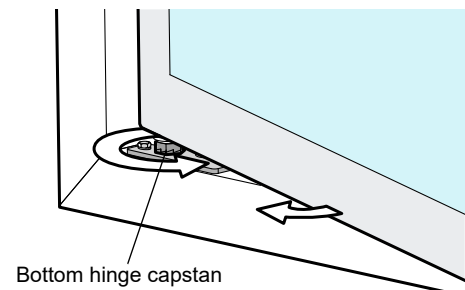
Doors

Fitting the Doors

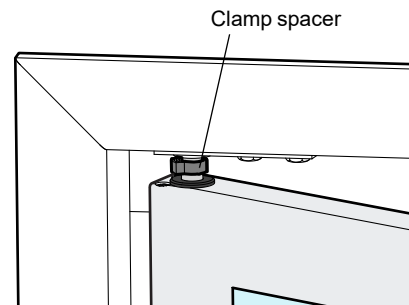
1. Unpack the door/s.
2. Fit each door into the frame. Fit the top of the door onto the top capstan, then sit the bottom of the door on the hexagon shaped bottom hinge.



3. Apply tension to each door with the supplied door tension tool. Use the tool to rotate the hexagon shaped bottom hinge capstan four audible clicks against the door opening direction (LH door pictured).



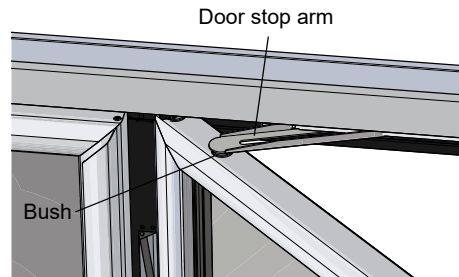
4. Fit the plastic clamp spacer to the capstan above the door.



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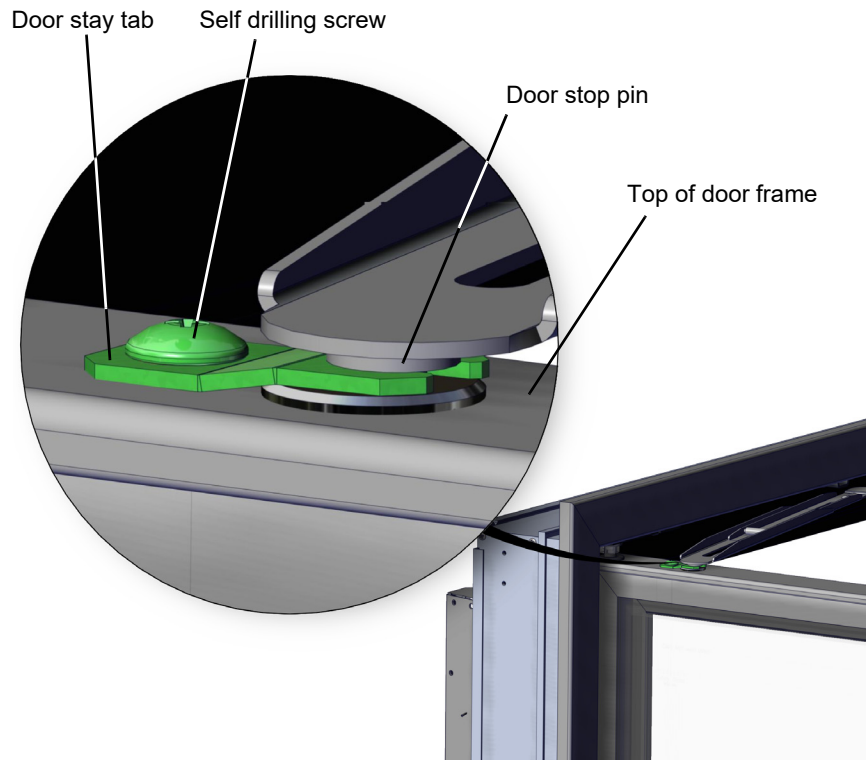
5. Open the door to 90°, and unscrew the door stay tab from the top of the door.

6. Rotate the door stop arm out from the insert frame, and locate the arm pin into the bush on the top of the door frame.



7. Clip the door stay tab into the door stop arm pin groove.

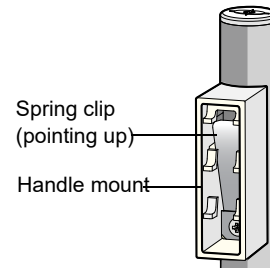
8. Screw the door stay tab back onto the top of the door.



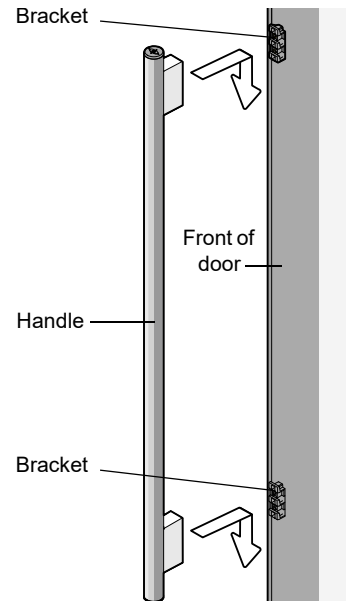
Fitting the Door Handles For transit purposes, door handles are packed separately. Follow the steps below to fit them to the door/s.

To fit a door handle

1. A metal spring clip is fitted inside the handle mounts at each end of the handle. Ensure that the spring clips point up.



2. Locate **BOTH** handle mounts simultaneously onto both door brackets. Then push the handle down onto the brackets, until the handle locks into place.



CAUTION

Ensure **BOTH** handle mounts are located before pushing down.

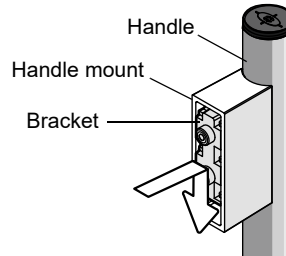
3. If the handle does not lock into place, check that the spring clips are pointing up and try again.
If only one end of the handle locks into place, unscrew the door handle (see over page), and refit ensuring both of the handle mounts are located onto the brackets before pushing the handle down and locking into place.

Removing Door Handles The door handles can be removed for transporting and moving the cabinet through doorways, or for refitting.

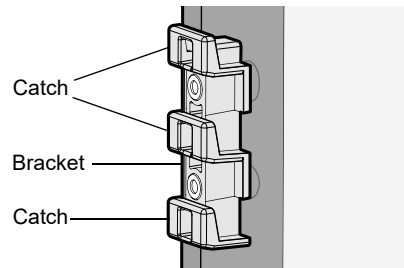
To remove a door handle

1. Open the door, and peel back the door gasket from behind the handle mounts on the inside of the door frame.
 2. Unscrew the handle mounts through the holes on the inside of the door frame, and remove the handle.
-

3. Remove the bracket/s from the handle mount by pressing the bracket in and down until it unclips from the handle mount.



4. Fit and screw the bracket/s back onto the door. Ensure the catches are pointing up as pictured.



5. Refit the door gasket by clipping it back into place on the inside of the door frame. If the gasket is out of shape after refitting it, a hair drier can be used to heat and reshape it.
-
-

Electrics

Mains Supply Once the frame and door/s have been fitted, the electrical wiring can be connected. All electrical wiring must be completed by a licensed electrician, and installed and tested in accordance with the relevant electrical wiring rules and regulations. Refer to “Before Installing” on page 4 for more information.

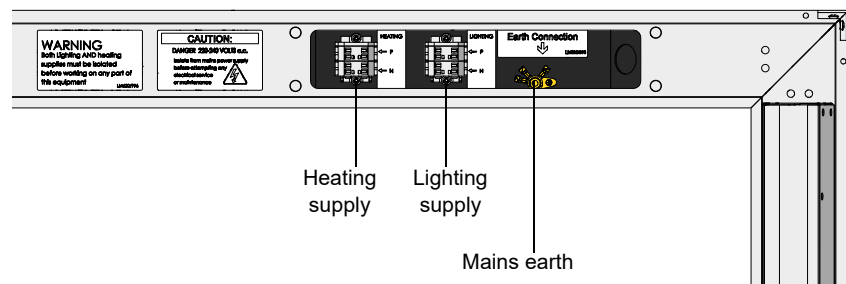
The rated current specification is stated on the rating label, located next to the mains supply cable entry point.

Refer to page 19 for full wiring schematics.

Connection to the mains power supply is made at the top LH corner of the frame. Remove the electrics cover to access the connection terminals.

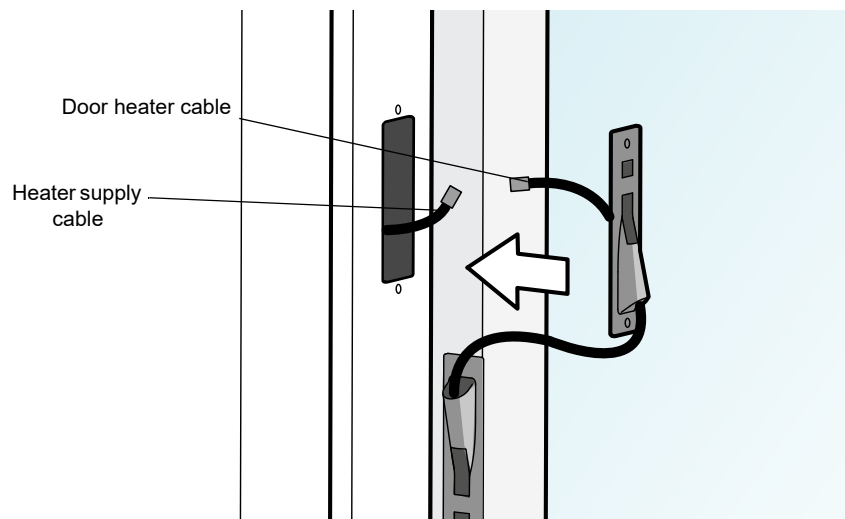
Separate heating and lighting terminals are available to allow for a light switch. A loop wire can be used between the heating and lighting if required.

IMPORTANT
Power **MUST** be connected to both the heating and lighting circuits.



Door Heaters Freezer and tropical climate inserts are fitted with door heaters (one per door). The door heater cable exits the door frame on the non-handle side of the door, and must be connected to the heater supply cable which exits the insert frame or pillar nearby.

Once connected, remove the P-Clip (initially holding the flexible cord in place), and use a screw driver to push out two holes in the cover and fix to the corresponding holes in the frame with supplied screws.

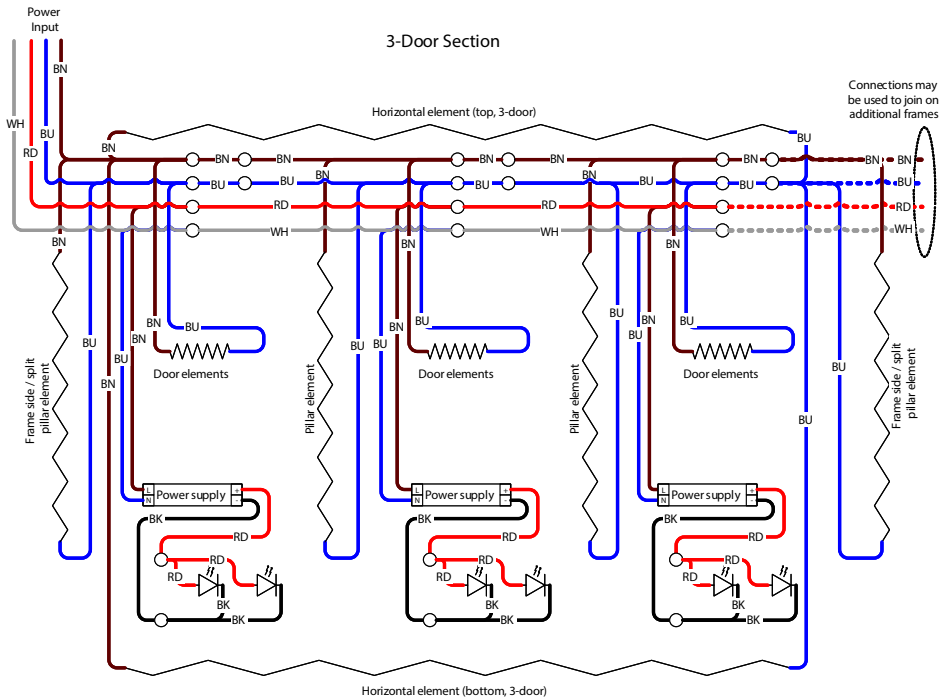


Wiring The wiring schematics on the next pages detail the door insert cool room and freezer room wiring.

Wiring schematics for inserts with four or more doors are made by chaining together two and/or three door segments. When segments are chained together, the two frame side elements become a pillar element.

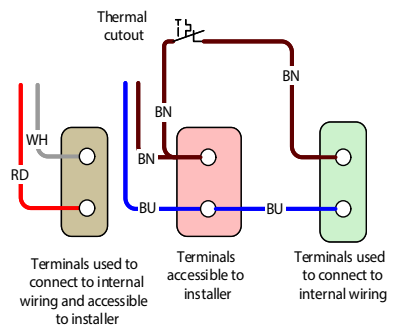
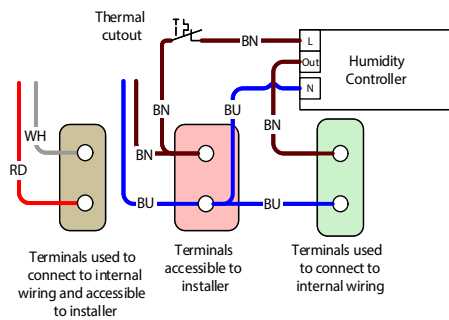
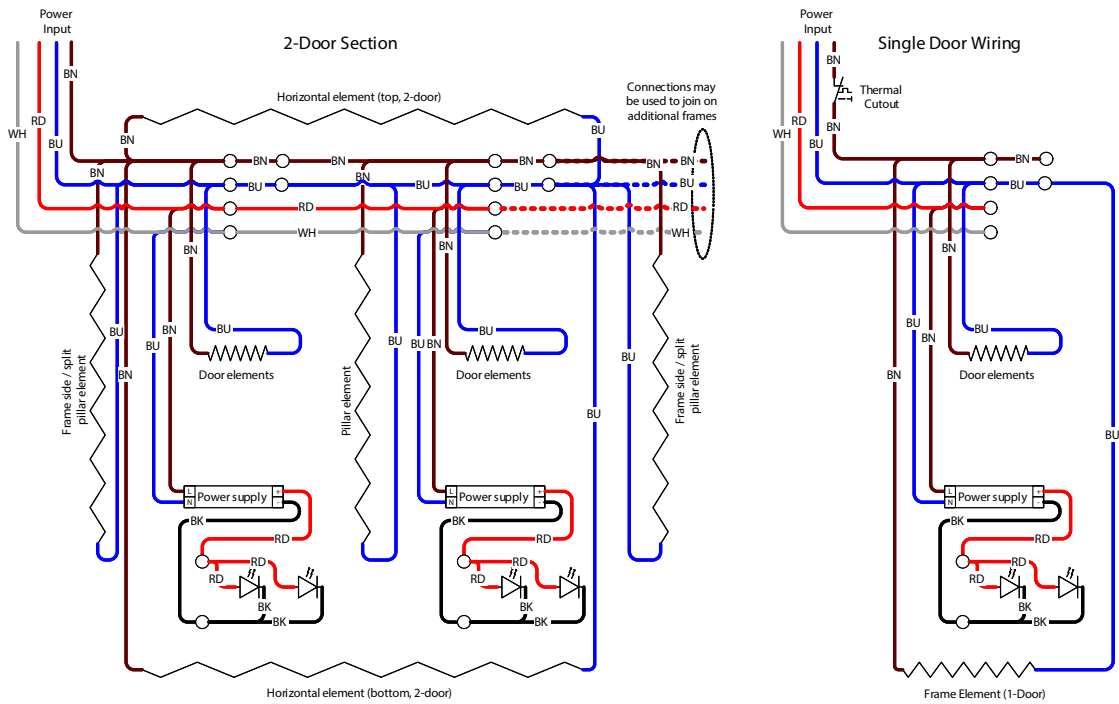
All frames are earthed at the supply.

Note: Only freezer and tropical climate doors are fitted with elements.



Notes:

- Larger numbers of doors are made by chaining together 2- or 3-door segments.
- All frames are earthed at the supply.
- The chiller door frame does not use any door elements.

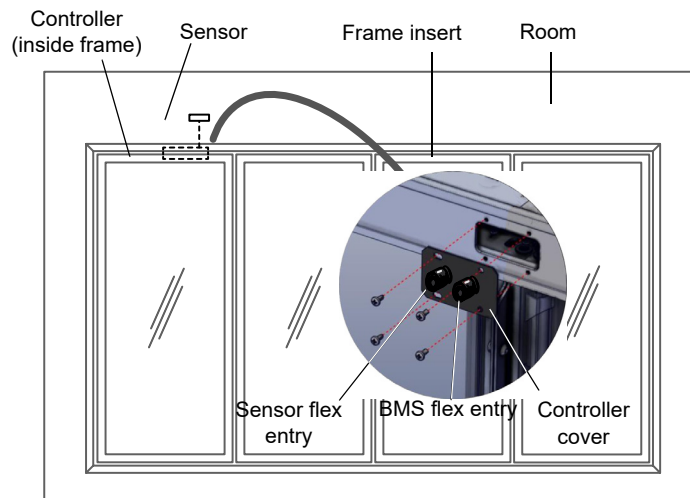


Humidity Sensor Probe

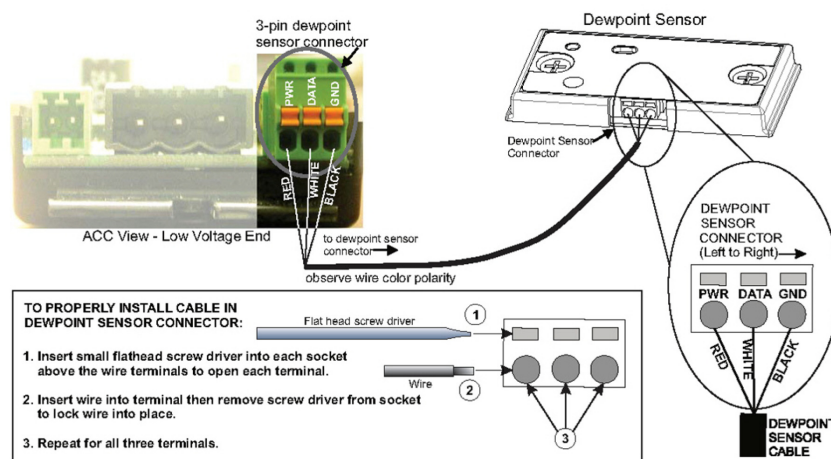
Not applicable to all installations. Some freezer and 'tropical' chiller inserts are supplied with a humidity sensor probe (Emerson Control Link ACC Dewpoint Sensor) to optimise running of the heating elements and eliminate door and frame condensation.

The sensor must be located above the doors on the outside of the room. It must NOT be located near the bottom of the doors or any place where cold room air can affect sensor reading. Avoid mounting the sensor in an area with excessive water spray or moisture, extremely dirty environments, near heat sources, or in the direct path of HVAC returns.

Drill a hole through the room where the sensor will be located, and route the sensor wire to the inside of the room. Screw the sensor in place over the hole.



The sensor connects to a controller inside the door frame. Remove the controller cover to access the controller connections.



Ensure the hole is filled with expanding foam after fitting the sensor. Do NOT let any RTV sealants touch the sensor element, and keep the sensor element as far as possible from RTV sealed areas. Refer to Emerson installation guide for more information.

SKOPE Contacts

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Door Insert
SKOPE Cool and Freezer Room
Installation Manual

MAN11093
Rev. 5.0 Nov. 2018

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