Assembly Instructions

Flexomix

Size 060-3150

PRODUKT

Documentation for your unit:

1. Go to *docs.ivprodukt.com (*Order Portal) or scan the QR code.
2. Enter your order number.
3. Press ENTER or click on search.
4. Select your order.

Order Portal

Is any documentation missing?

See information in section

"2.1 Documentation and support", page 11.

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Assembly Instructions
Flexomix

1 SAFETY

This section addresses important safety aspects of assembly, with the aim of raising safety awareness and avoiding personal injuries and damage to surroundings and units.

- This manual contains important instructions. Read it carefully and follow the instructions.
- Pay special attention to warning and information messages, as well as markings on the product.
- Keep the manual for future use.

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1.1 Intended use

Intended use
The product is intended to be used air handling unit for comfort ventilation in properties.

Intended users
The contents of this manual are intended for personnel assembling the unit on site.

Intended user environment
- The unit is usually placed indoors, but is also available as an outdoor version.
- When installed indoors, the unit must be assembled in a ventilated area that maintains a temperature between +7 and +30 °C, and that maintains a moisture content of <3.5 g/kg in dry air in the winter.
- The unit can also be equipped for assembly in cold attics.

1.2 Unintended uses

Any use other than specified in Intended use is prohibited unless specifically permitted by IV Produkt. It is not permitted to use the unit in potentially explosive environments.

1.3 General safety

Failure to comply with the safety precautions may result in injury to persons or damage to the units. To avoid personal injuries and damage to surroundings or units:

- Follow national and local laws/regulations for safe work, e.g. fall protection when working at a height.
- Do not wear loose clothing or jewellery that may become fastened.
- Do not step or climb on the unit.
- Use appropriate tools.
- Use appropriate personal protective equipment.
- Note the unit's markings: product signs, information and warning stickers.

Personal Protective Equipment (PPE)
Personal protective equipment must always be used based on the risks present in the work-place. For example, wear protective footwear with steel toecaps, hearing protection, safety helmet, gloves, safety eyewear or goggles, fully-covering clothing, safety overalls, face mask/ protective mask and/or fall protection where the work and work environment require it.

1.4 Structure of warning notices

Warning notices in the instruction warn of risks when handling and assembling the product. Carefully follow the instructions published in warning notices.

 The warning symbol indicates that a risk exists.

WARNING! indicates a potential risk that, if not avoided, can cause **life-threatening or serious**situations that can lead to death or personal injury.
CAUTION! indicates a potential risk that, if not avoided, could cause **material damage** to the product or surroundings as well as impairment of product function.

“Risk of xxxxxx. “ indicates the risk in a short risk title.

A description in italics provides more detailed information about what the risk entails.

- The bullet points indicate how the user avoids harm.

1.5 General warning notices

WARNING!
Risk of life-threatening or serious personal injury.
Electrical voltage can cause electric shock, burns and death. The product must not be energised during assembly.

- Electrical connection and electrical work may only be carried out by a qualified electrician.
- For initial start-up of the unit, see Operation and Maintenance of the unit on IV Produkt's order portal.

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WARNING!
Risk of life-threatening or serious crushing or compression injury.
High unit parts, as well as unit parts with a high or offset centre of gravity, mean a greater risk of tipping.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.
- Exercise caution when working between unit parts.
- Exercise caution when placing unit parts on the support.
- Use the support to secure the parts against possible tipping risk.

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WARNING!
Risk of life-threatening or serious crushing or compression injury.
The unit parts are often heavy and cannot be lifted by hand. See weights indicated on the layout drawing.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.

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WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Slide stops must be fitted when lifting, if bracket is used.
- Replace used T-bolts and nuts with new ones after each lift.

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WARNING!
Risk of cutting.
Sharp edges can cause cuts.

- Use appropriate personal protective equipment when the work requires it.

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1.6 Signs on the unit

Keep signs and stickers free of dirt. Replace missing, damaged or unreadable signs and stickers on the machine. Contact IV Product for replacement stickers by specifying the article number.

1.6.1 Type plates

The unit and any associated cooling unit/reversible heat pump have a type plate affixed to the front. The type plate is used, among other things, for identification of the product.

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Figure: Example of a unit type plate

1. Order number
2. Product name/model
3. Product code
4. Unit designation
5. Place of manufacture
6. Date of manufacture
7. QR code

1.7 Product liability

The unit complies with industry requirements for quiet air handling units with high-efficiency recovery systems for heating and cooling.

CE marking (EU) and UKCA marking (UK)
The air handling unit is CE and UKCA marked and meets the applicable requirements according to specified directives and standards in the Declaration of Conformity. The marking covers the unit in the configuration in which it was delivered and provided that it has been assembled and commissioned in accordance with IV Produkt's instructions. The declaration does not cover assemblies that have been modified, retrofitted components, or other systems in which the unit may be included. The unit may not be commissioned until the system in which it is included complies with the requirements for CE-marking.

The Declaration Of Conformity can be found in the Order Portal, *"Documentation for your unit:", page 2*.

Manufacturer
The air handling unit is manufactured by IV Produkt AB, Sjöuddevägen 7, S-350 43 VÄXJÖ, Sweden

Warranty
For proper function and for the warranty to be valid, the assembly instructions must be followed.

Extended warranty
Extended warranty is a supplement to the order and to claim extended warranty (5 years), according to ABM07 with Appendix ABM-V07 or according to NL17 with Appendix VU20, a complete documented and signed IV Produkt Service and Warranty book must be presented.

Disclaimer
Continuous product development may give rise to specification changes without notice.

1.8 Lifting the units, functional section

Lifting should be carried out according to lifting instructions in this document, *"5 LIFTING THE UNIT", page 16* as well as according to markings and signs on the unit. If there are no lifting instructions or markings, lifting must be carried out according to lifting methods prepared by the transport industry.

1.9 After the product's service life

To disassemble and decommission the unit, refer to Operation and Maintenance.

2 GENERAL INFORMATION

2.1 Documentation and support

The documentation for your unit can be found in the Order Portal. See "Documentation for your unit:", page 2.

It can take up to two weeks for all documentation to be available in the Order Portal. The text "Documentation in progress" appears until the documentation is complete. In case of missing or incorrect documentation, contact DU/Documentation. For other support, please contact the relevant department. Contact details are listed on the last page of the manual.

2.2 Information messages, not safety-related

Symbol together with information text highlights difficulties and also gives tips and recommendations.

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2.3 Spare parts

Spare parts list can be found in the Order Portal. Order spare parts and accessories from IV Produkt. See contact details on the last page of the manual. When contacting a department, state the order number and unit designation as shown on the type plate located on the unit.

2.4 Terms and abbreviations used in the manual

Term	Explanation
Rotor	Rotary heat exchanger
Unit part	Part of the unit. Can contain a function (for example, fan, media, etc.) but can also be an empty part.

2.5 Symbols on dimension drawings and in the manual

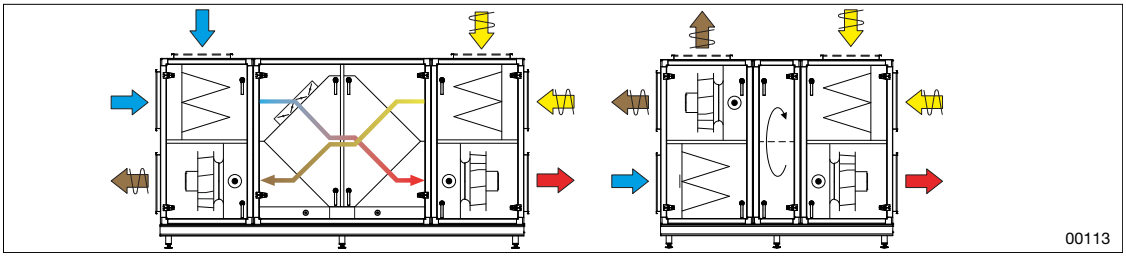

Figure: Example of a layout drawing

	Outdoor air		Extract air
	Supply air		Exhaust air
	Fan		Filter
	Shut-off damper		Trim damper
H_2O	Cooling coil water	H_2O	Heating coil water
	Heating coil electric		Sound attenuator
	Rotary heat exchanger		Cross-flow heat exchanger
	Counter-flow heat exchanger		Compressor
	Cooling unit		Quick connector
	Media section		

2.6 Signs/markings on the unit

All parts are marked with stickers that show what function the part has.


Filter


Rotary heat exchanger


Plate heat exchanger


Fan


Air cooler water


Air heater liquid


Air heater electric


Damper


Noise attenuator


Smoke by-pass


Air turner


Smoke by-pass from above


Media


Empty


Humidifier


Angle


Inspection section


Temperature sensors


Earth

3 DESCRIPTION OF THE UNIT

3.1 Configuration of the unit

The unit can be supplied with or without control and adjustment equipment. See "*11 ASSEMBLE CONTROL EQUIPMENT*", *page 48*.

The Flexomix unit is made up of modules with different fittings/functions in sizes 060-3150. The framework of the units consists of aluminium profiles:

- Size 060-980: 50 x 50 mm (50 profile)
- Size 1080-3150: 60 x 60 mm (60 profile).

Indoor units are mounted on supports (aluminium profiles) with legs and feet adjustable to different heights.

Outdoor units are pre-mounted on beam frames (aluminium profiles) with a fixed height of 100 mm (for 50 profile) or 160 mm (for 60 profile) and cannot be fitted with legs or adjustable feet.

Unit parts can be delivered in block form and must be assembled after delivery.

3.2 Orientation of the unit's sides/parts

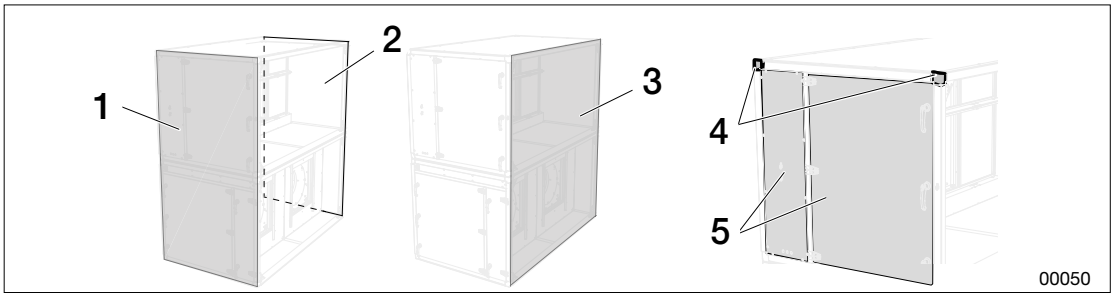

Figure: Parts of the unit

1. Access side
2. Back
3. Gable side
4. Corner fitting
5. Covers

4 DELIVERY RECEPTION / WAREHOUSING

4.1 Receive, unpack

Upon arrival, check the goods and their packaging. Make sure there is no damage.

4.2 Packaging and protection

The product's packaging is intended to protect the product from rain and dirt during transport and storage.

The product should be stored in its original packaging for as long as appropriate. See *"4.3 Recommended storage", page 15*. If the packaging is removed, the product must be protected so that particles (e.g. dust and dirt) or water do not penetrate the functional sections.

If the goods are dirty on arrival, rinse the unit with water and, if necessary, clean according to the instructions for the unit's surfaces in *"14.1 Check", page 53*.

4.3 Recommended storage

Before assembly, the product must be stored on a flat surface, preferably in a dry and warm area.

If stored outdoors, the product must be protected from weather conditions such as rain, snow and direct sunlight. Ventilation inside the assembly parts must be ensured during storage. The product can be stored in both warm and cold conditions (temperature range -40 °C to +50 °C.

Small amounts of condensation water, which occurs during storage in fluctuating temperatures, will dry up when the unit is put in operation, ensure that:

- there is good air circulation between the packaging and unit as well as inside functional sections. the packaging is opened to let air in if necessary.
- the product is protected against extreme temperatures and weather conditions.
- the product is protected against water ingress so that large volumes of stagnant water do not accumulate inside the unit.

5 LIFTING THE UNIT

WARNING!
Risk of life-threatening or serious crushing or compression injury.
High unit parts, as well as unit parts with a high or offset centre of gravity, mean a greater risk of tipping.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.
- Exercise caution when working between unit parts.
- Exercise caution when placing unit parts on the support.
- Use the support to secure the parts against possible tipping risk.

00189

WARNING!
Risk of life-threatening or serious crushing or compression injury.
The unit parts are often heavy and cannot be lifted by hand. See weights indicated on the layout drawing.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.

00179

WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Slide stops must be fitted when lifting, if bracket is used.
- Replace used T-bolts and nuts with new ones after each lift.

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CAUTION!
Risk of damage to the product
Chains/straps that are lying against the unit when lifting may damage the unit.

- Use spreader bars when lifting with bracket.
- Follow instructions for working with spreader bars.

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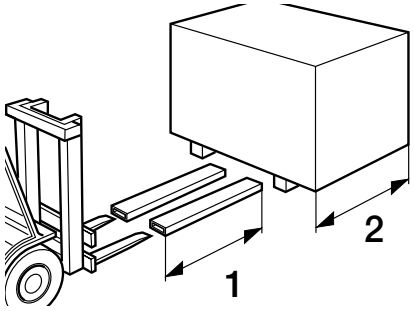
5.1 Lifting with forklift



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The forks (1) must be the same length as the unit packaging (2) or longer.

5.2 Lifting with bracket, spreader bar

- The maximum permitted angle at the lift hook is 80º
- The permitted tilt of the functional section when lifting is 15º. If the tilt is greater than 15º, the chains/straps must be shortened or extended until the angle is less than 15º.
- The spreader bar must be 100—400 mm wider than the unit.

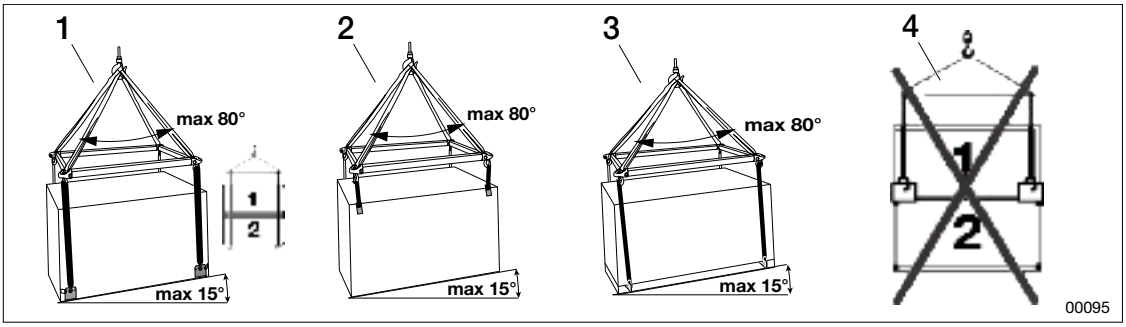

Figure: Illustration of lift with spreader bar and inclination

1. Lift with EMMT-08 with spreader bar
2. Lift with EMMT-12 with spreader bar
3. Lift in base frame with spreader bar
4. Incorrectly mounted lifting brackets in the centre profile

5.2.1 Lift of double stacked parts (parts on top of each other)

- Total weight ≤ 1600 kg - to be lifted with lifting brackets EMMT-12, mounted at the bottom of the lower part.
- Total weight > 1600 kg - to be lifted with pre-mounted lifting lugs. See *"5.4 Lifting of unit pre-mounted on base frame", page 21.*

5.2.2 Lift with bracket EMMT-08, for 50 profile

WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Slide stops must be fitted when lifting, if bracket is used.
- Replace used T-bolts and nuts with new ones after each lift.

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- The bracket does not fit the 60 profile.
- Load per lifting bracket ≤ 400 kg.
- Load if all four brackets are used ≤ 1600 kg.
- A safety factor of 1.6 has been utilised in static testing of the lifting bracket.
- Use shackle with safety factor 6:1.
- Brackets must not be mounted downwards or sideways.
- Lifting brackets must not be mounted in the middle profile of double stacked parts.

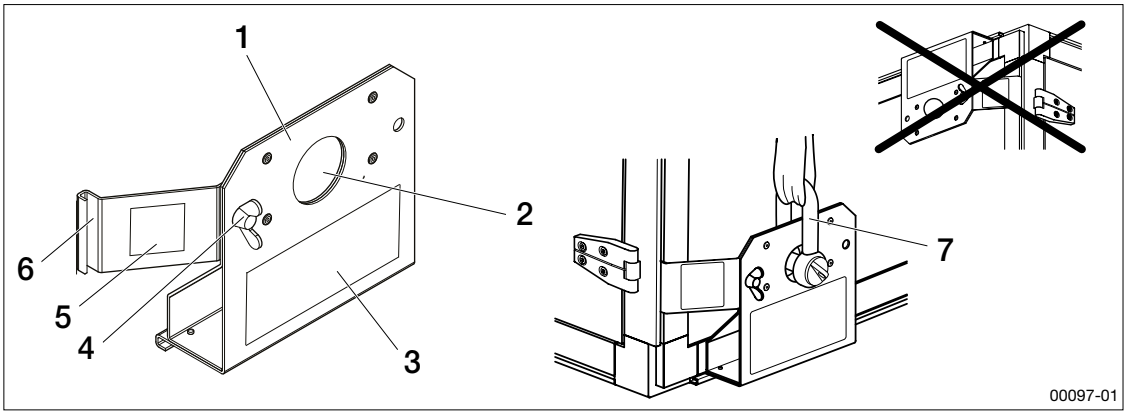

Figure: Lifting bracket EMMT-08

1. Lifting bracket EMMT-08
2. Lifting lug
3. Lift stop sticker
4. Wing nut
5. Slide stop sticker
6. Slide stop
7. Shackle

EMMT-08 is delivered in a set of four.

1. Place the lifting brackets in the bottom four corners of the unit or functional section (on the longest sides of the section), with the lifting lug upwards.
2. Push the brackets into the horizontal track in the unit's aluminium profile.
3. Push the slide stop into the vertical track in the unit's aluminium profile.
4. Lock by tightening the wing nut.

5.2.3 Lift with bracket EMMT-12, for 60 profile

WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Slide stops must be fitted when lifting, if bracket is used.
- Replace used T-bolts and nuts with new ones after each lift.

00180

- The bracket does not fit the 50 profile.
- Load per lifting bracket ≤ 500 kg.
- Load if all four brackets are used ≤ 2000 kg.
- A safety factor of 2.0 has been used in static testing of the lifting bracket.
- Use shackle with safety factor 6:1.
- Brackets must not be mounted downwards or sideways.
- Lifting brackets must not be mounted in the middle profile of double stacked parts.
- Lift only one part at a time.

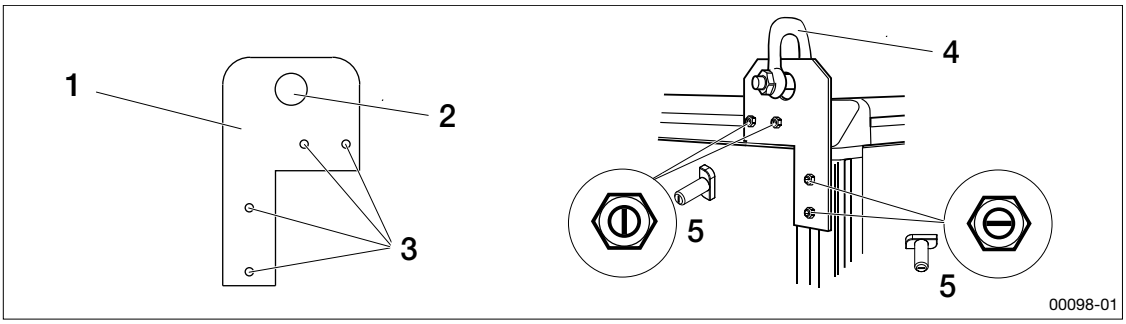

Figure: Lifting bracket EMMT-12

1. Lifting bracket EMMT-12
2. Lifting lug
3. Fixing holes
4. Shackle
5. T-bolts

EMMT-12 is delivered in a set of four.

1. Place the lifting brackets over the top four corners of the unit (on the longest sides), with the lifting lug upwards.
2. Insert the supplied T-bolts (MB 8×19 FZB 8.8), through the bracket and into the track in the aluminium profile.
3. Turn the T-bolts, with a tightening torque of 24 Nm, so that they are at 90° to the profile track and are firmly fixed under the edges of the track.

5.3 Lifting of unit pre-mounted on support

WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Never loosen or move the factory-fitted sliding stops.
- The lifting straps must always be pulled through the sliding stops to prevent the lifting straps from sliding underneath the unit.
- The sliding stops cannot be fitted to certain unit sizes; the person lifting the unit must therefore ensure that the straps do not slide together or apart during lifting.

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1. Pull the straps through the sliding stops mounted under the unit/parts.
2. Lift with suitable lifting equipment.

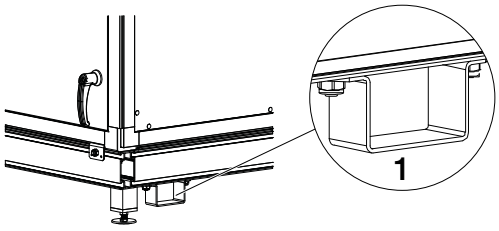

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Figure: Sliding stop on support

1. Lugs for straps (four)

5.4 Lifting of unit pre-mounted on base frame

WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Never remove or move the factory-fitted lifting lugs.
- Use shackle with safety factor 6:1.
- Lifting straps must not be pulled through the lifting lugs.

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Aluminium beam H=100mm:

- Maximum load=750 kg/lifting lug. Total load=3000kg (all four lifting lugs).

Aluminium beam H=160mm:

- Maximum load=1350kg/lifting lug. Total load=5400kg (all four lifting lugs).

1. Fit a shackle in each of the pre-mounted lifting lugs.
2. Pull straps through each shackle.
3. Lift with suitable lifting equipment.

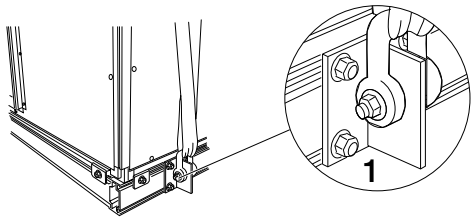

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Figure: Lifting loop pre-mounted on base frame

1. Lifting lug with shackle (four)

5.5 Lifting thermal wheel from truck

Instruction applies to 1150-D1, 1250-D1, 1540-D1 and 1550-D1.

WARNING!
Risk of serious crushing injury.
A falling unit when lifting can cause crushing injuries.

- Follow the instructions for lifting in this manual.
- Never exceed the specified weight for the respective lifting method or lifting equipment.
- Never remove or move the factory-fitted lifting lugs.
- Use shackle with safety factor 6:1.
- Lifting straps must not be pulled through the lifting lugs.

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Lifting brackets must be placed on different points on the thermal wheel depending on the kind of lifting to be done. See the upcoming image for the correct placement of the bracket.

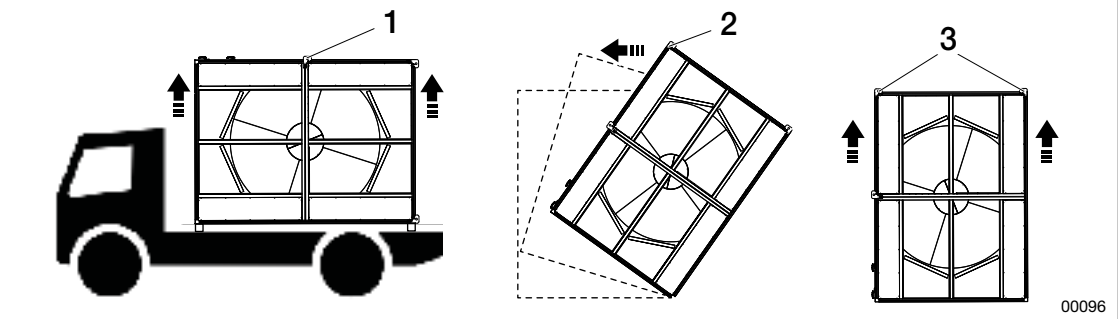

Figure: Position of the bracket when lifting thermal wheel from truck

1. Position of the bracket when lifting from truck
2. Position of the bracket to stand up the thermal wheel after lifting from truck
3. Position of the bracket for lifting the thermal wheel into the unit

6 PREPARE ASSEMBLY

When setting up the unit, it shall be horizontal at the longitudinal leading edge, as well as slightly inclined forward (towards the inspection side) to create proper drainage of condensation water.

Inlet grilles and duct systems shall be designed and assembled so that:

- water is prevented from penetrating into the unit.
- recirculation and short-circuiting between the exhaust air and outdoor air is prevented.
- drainage cannot run backwards to the unit.

The duct system shall be designed and the control system configured to prevent pressure increase through filter/air ducts, for example, by soft-starting fans and opening dampers when fans are operating. See *"13 DUCT ACCESSORIES, DUCT CONNECTION", page 51.*

Water trap is mounted as indicated. See *"12 CONNECT DRAINAGE, WATER TRAP", page 50.*

6.1 Recommended service area around unit

It is the customer's responsibility to ensure that the area in front of electrical switching equipment meets the legal requirements for electrical safety in the country where the unit is installed.

- To allow for servicing, part replacement, and cleaning,IV Produkt there should be an open area in front of the unit of approximately 1.5x the unit's depth.

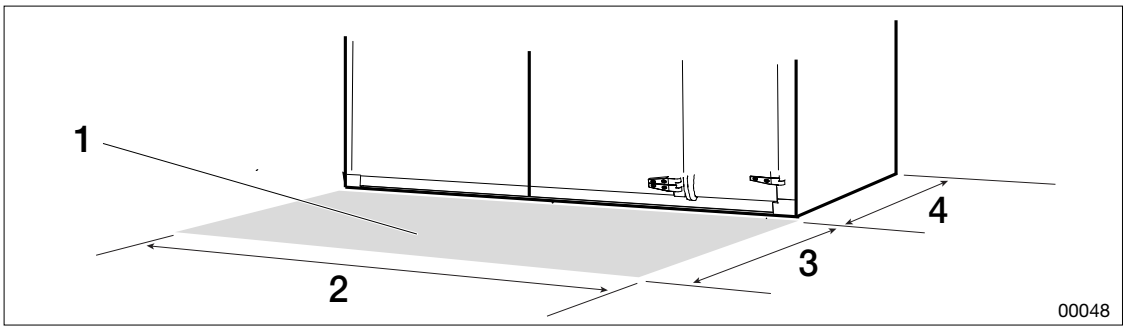

Figure: Service area on the inspection side

1. Service area
2. Service area width (width of the unit)
3. Service area depth (1.5 x depth of the unit)
4. Depth of the unit

6.2 Prepare for outdoor version

The location of outdoor units with respect to wind direction and proximity to surrounding walls may, in adverse cases, imply the recirculation of exhaust air to outdoor air intakes.
In unsafe conditions, ensure sufficient distance between exhaust air and outdoor air intakes.

For outdoor units, the unit is placed on longitudinal beams on top of a waterproof roof. Water ingress may occur between beams and functional sections.

- Underlying beams (for example, H or U profiles) and anchorage plates are not provided by IV Produkt.
- For sealing strip in outdoor version, see *"7.4.1 Sealing strip in outdoor version", page 30.*
- VWhen installed outdoors, the unit must be equipped with a protective roof structure, inlet grilles, and an exhaust hood.

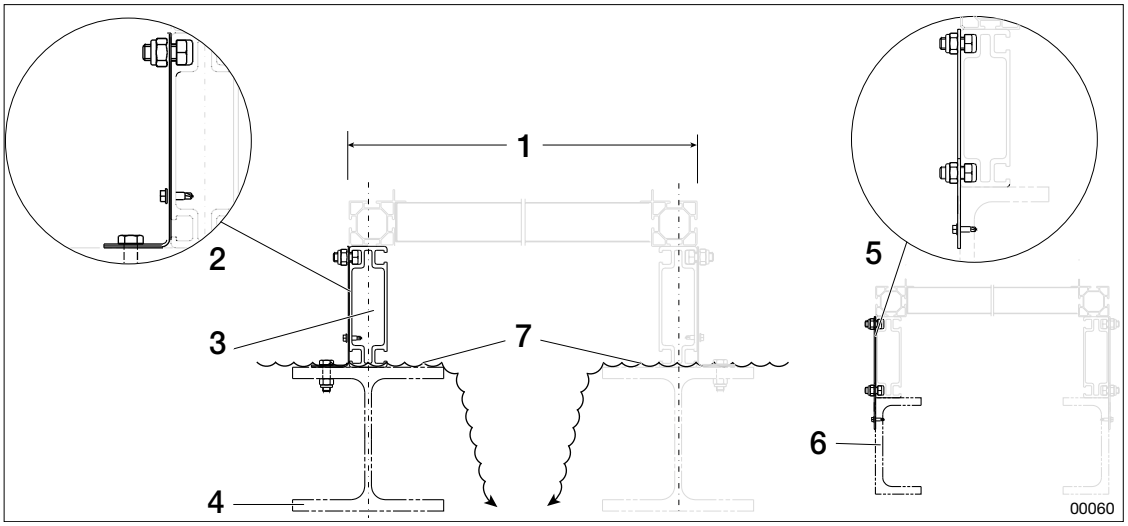

Figure: Aluminium profiles (support) and base frames in cross section as seen from the gable side

1. Unit width
2. Example, anchorage plate on H-profile (not included in delivery)
3. The unit's aluminium base frame
4. H profile (not included in delivery)
5. Example, anchorage plate on U profile (not included in delivery)
6. U profile (not included in delivery)
7. Risk of water ingress

The height of the aluminium base frame is 100 mm or 160 mm, and the width is 50 mm.

The unit on the underlying base frame must be dimensioned as distributed load.

The unit on the aluminium base frame is self-supporting between the inspection side and back, and only needs support under the longitudinal beam on the inspection side and on the back. The framework must be placed with the extruded profile centrally over the H-beam. See the previous figure.

Anchoring of base frame in underlying beams (underlay) is carried out with anchorage plates according to the example in the previous figure. Anchorage plates are not included in the delivery and must be fitted by the customer.

For delivery of a unit in divided outdoor version, see dimension drawing for cover plate fitting in the Order Portal.

6.3 Support pillars at overhang (protruding section)

Protruding functional sections and ducts mounted in the upper section must be supported by support legs if the overhang is longer than 300 mm. Ducts can also be suspended.

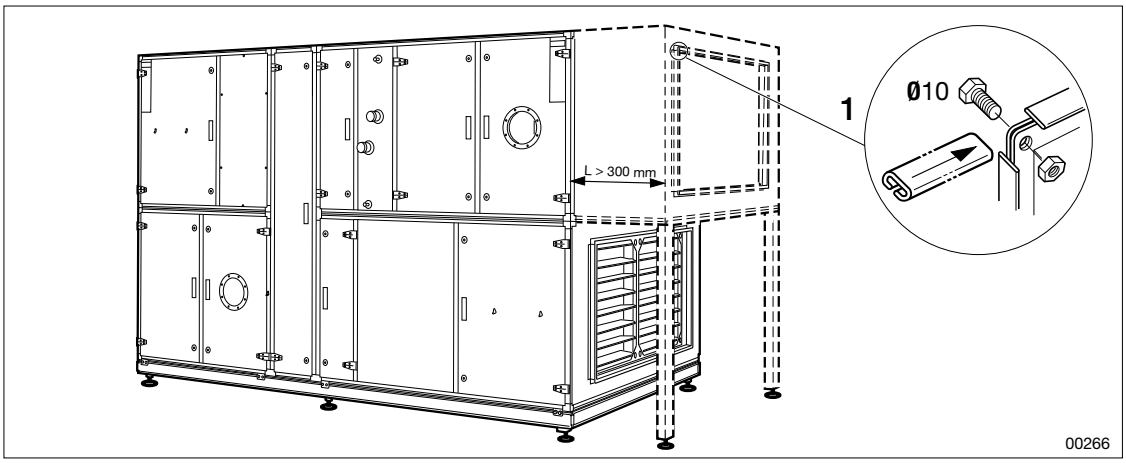

Figure: Support pillars at overhang (protruding section)

1. Connection using PG method

Ducts are connected using the PG method: gasket, guide pin and outer corner, or bolt in the corner of the connecting frame.

7 ASSEMBLY, GENERAL

Read and follow each step carefully to avoid making errors and causing personal injury or damage to surroundings or unit. See *"1 SAFETY", page 7*,*"5 LIFTING THE UNIT", page 16* as well as*"6 PREPARE ASSEMBLY", page 23* before starting assembly.

For example of set-up drawing and explanations of drawing symbols, see *"2.3 Spare parts", page 11.*

WARNING!
Risk of life-threatening or serious personal injury.
Electrical voltage can cause electric shock, burns and death. The product must not be energised during assembly.

- Electrical connection and electrical work may only be carried out by a qualified electrician.
- For initial start-up of the unit, see Operation and Maintenance of the unit on IV Produkt's order portal.

00176

WARNING!
Risk of life-threatening or serious crushing or compression injury.
The unit parts are often heavy and cannot be lifted by hand. See weights indicated on the layout drawing.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.

00179

WARNING!
Risk of life-threatening or serious crushing or compression injury.
High unit parts, as well as unit parts with a high or offset centre of gravity, mean a greater risk of tipping.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.
- Exercise caution when working between unit parts.
- Exercise caution when placing unit parts on the support.
- Use the support to secure the parts against possible tipping risk.

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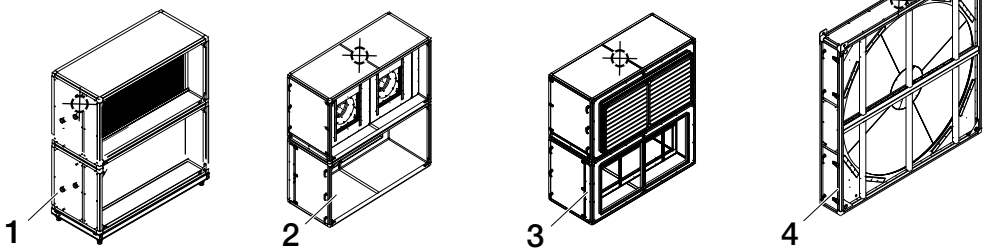

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Figure: Examples of parts with a high centre of gravity or high tipping risk

1. Unit part with a high-placed coil
2. Unit part with high-placed fans
3. Unit part with high-placed damper section
4. Rotary heat exchanger

7.1 Tools required for assembly

A bag of screws, nuts, corner fittings and other items to be used for assembly is supplied with each unit. The following tools are suitable for assembly:

- Power screwdriver with 16-socket, 13-socket, 1/4-inch bit and star bit
- Screwdriver
- Spirit level
- Putty syringe
- Rubber mallet
- Scissors
- Polygrip pliers
- Box spanners 13, 16, 18, 19
- Wooden blocks to lay between support and road
- Pop riveter
- Lubricating grease in spray bottle
- Pipe cutter

7.2 Assembly, step by step

Unit parts in sections must also be assembled according to the instructions in the section ASSEMBLY, IN SECTIONS.

1. Take out the layout drawing (Technical data) accompanying the unit and available in the Order Portal. See *"Documentation for your unit:", page 2.*
2. Take out suitable tools. See *"7.1 Tools required for assembly", page 27.*
3. Assembly and adjust the support. See *"7.3 Assemble fan compartment support (EMMT-05)", page 28.*
4. Assemble functional sections delivered in sections. See *"8 ASSEMBLE FUNCTIONAL SECTIONS DELIVERED IN SECTIONS", page 36.*
5. Slide the first functional section onto the support.
6. Assemble the sealing strip. See *"7.4 Fit sealing strip between functional sections", page 29*.
7. Slide on the next functional section and slide them together on the support.
8. Join the functional sections. See *"7.5 Join the parts", page 30*.
9. Repeat steps 4-7 until everything is in place and correctly assembled.
10. Assemble drainage and water trap. See *"12 CONNECT DRAINAGE, WATER TRAP", page 50*.
11. Assemble cover part. See *"7.9 Fit cover detail on join", page 35*.
12. Connect ducts and connect electrical and control equipment.
13. Ensure that everything is properly assembled. See *"14 AFTER ASSEMBLY", page 53* and if problems arise *"2.1 Documentation and support", page 11*.

7.3 Assemble fan compartment support (EMMT-05)

A general support drawing (Technical data) is included and available in the Order Portal. See *"Documentation for your unit:", page 2.*

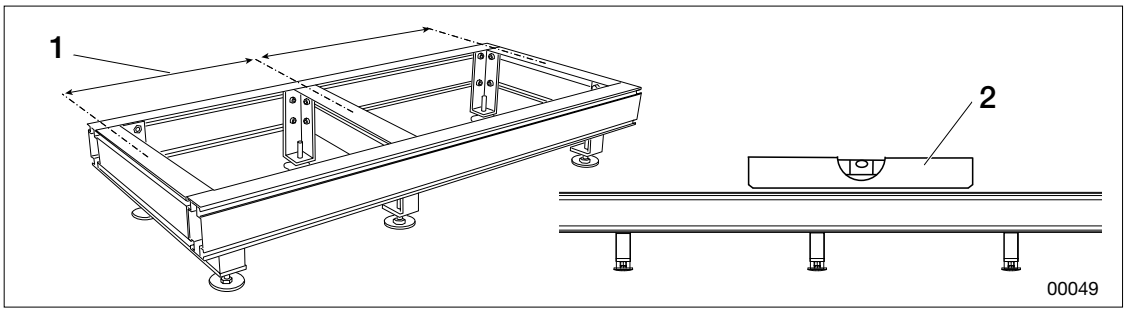


Figure: Support

1. Distance between transverse beams (c/c)
2. Longitudinal beam level

Ensure that the longitudinal beam is level and that the top of the support structure is level:

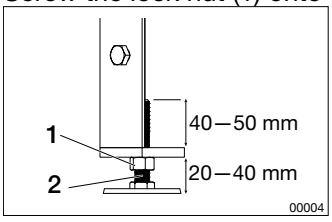
- The support must not, at any point, bend down more than 2 mm. If the distance between the transverse beams of the support is >1700 mm (c/c), additional cross-beams must be mounted to prevent downward bending.

Ensure that the unit receives proper condensation drainage:

- The unit must tilt slightly forwards (towards the inspection side). The tilt may be a maximum of 3 mm/m.
- Before positioning the functional sections on the support, unscrew the feet on the stand to enable the stand to be tilted towards the front edge.

7.3.1 Adjust support feet

1. Screw the lock nut (1) onto the support foot (2) and make sure it is some of the way in.



2. Screw all feet into the threaded holes in each angle profile.
3. Push in and locate, in the track of the profile, the screws that will later be used to tighten the corner stays. Make sure you have the right number (2 per corner stay).
4. Screw the angle profiles and support legs together.
5. Use a spirit level and ensure that the longitudinal beam of the unit is level.
6. Adjust the height and inclination of the support by screwing the support feet.
7. Secure all feet with the lock nuts.

7.4 Fit sealing strip between functional sections

- The supplied sealing strip is dimensioned for and intended for use in the assembly joint between functional sections.
- The sealing strip must only be fitted on one of two opposite parts.
- The sealing strip must not be fitted on the thermal wheel.
- For units in sections, the sealing strip must also be fitted in the joint. Not applicable to EcoCooler.
- For more information, see *"8 ASSEMBLE FUNCTIONAL SECTIONS DELIVERED IN SECTIONS", page 36.*

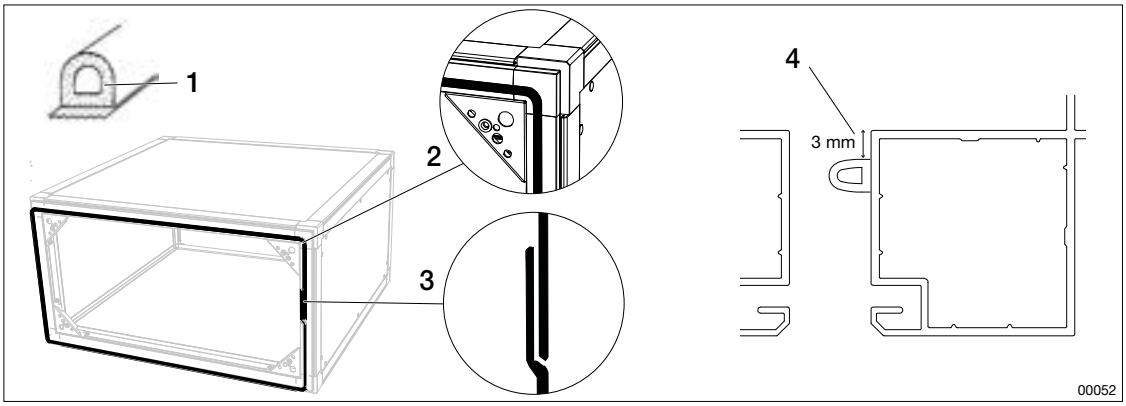


Figure: Sealing strips, location.

1. Sealing strip of type D-profile
2. Sealing strip in corner
3. Sealing strip joint
4. Profile in cross section

1. Divide the strip into two.
2. Fit the strip in the middle surfaces of the unit, about 3 mm from the inner edge. Remove the protective layer over the adhesive after the strip has been fitted. Bend the strip at the corners and splice vertically.

7.4.1 Sealing strip in outdoor version

For outdoor version units, the sealing strip must also be fitted in the outer edges. However, not at the bottom.

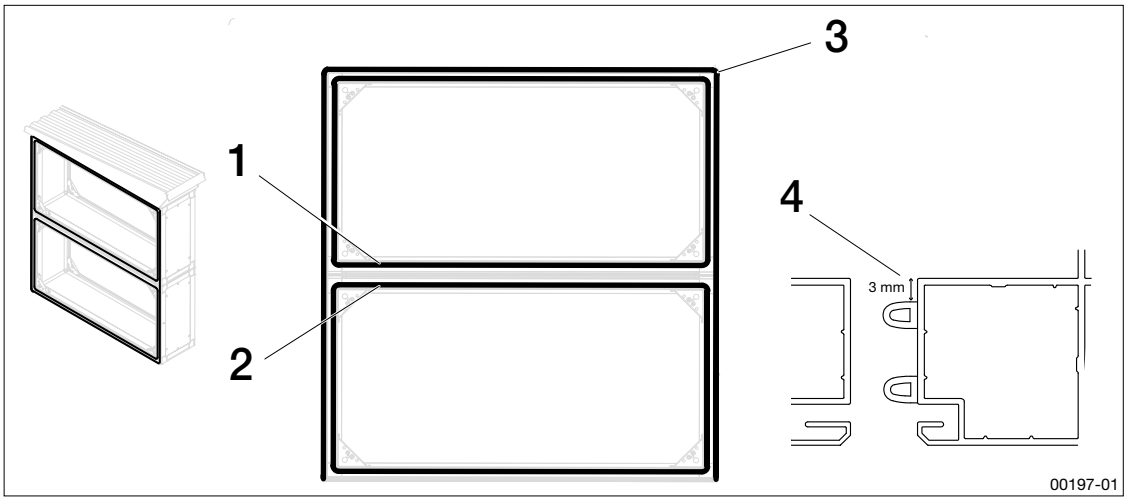


Figure: Location of sealing strips in outdoor version

1. Sealing strip around the top part
2. Sealing strip around the lower part
3. Sealing strip in the outer edge around the entire double stacked section, except at the bottom edge
4. Profile in cross section

7.5 Join the parts

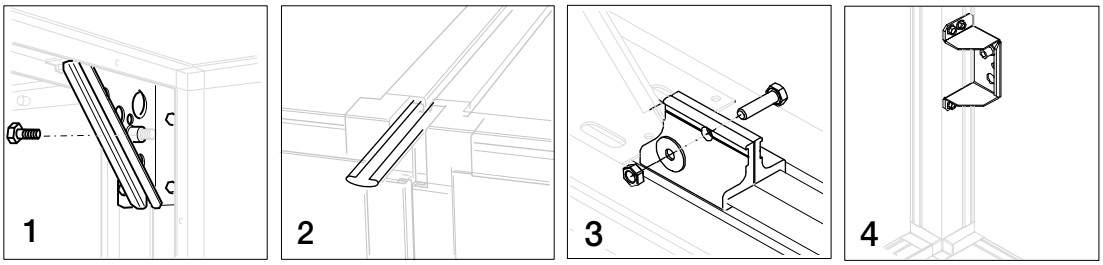
Use the same method of joining everywhere in the same unit joint.

50 profile (unit size 060-980):

- Usually, the functional sections are joined using screw joints.
- Otherwise (where there is a lack of space/ability to screw), the functional sections must be joined with guide pins.

60 profile (unit size 1080-3150):

- On larger units, the functional sections are joined together with tensioning lugs.



1. Screw joint (50-profile)
2. Guide pin (50-profile)
3. Tensioning lug (60-profile)
4. Joining brackets (60-profile)

7.5.1 Join with screw joints

1. Remove any cover plugs to access the screw joints.
2. Screw together the unit parts with bolts through each corner strut.

7.5.2 Join with tensioning lugs

On larger sizes, tensioning lugs are used.

1. Put part of the tensioning lug on each side of the profile.
2. Put in the bolt and screw together with a washer under the nut.
3. The tensioning lugs are located according to the following figure:

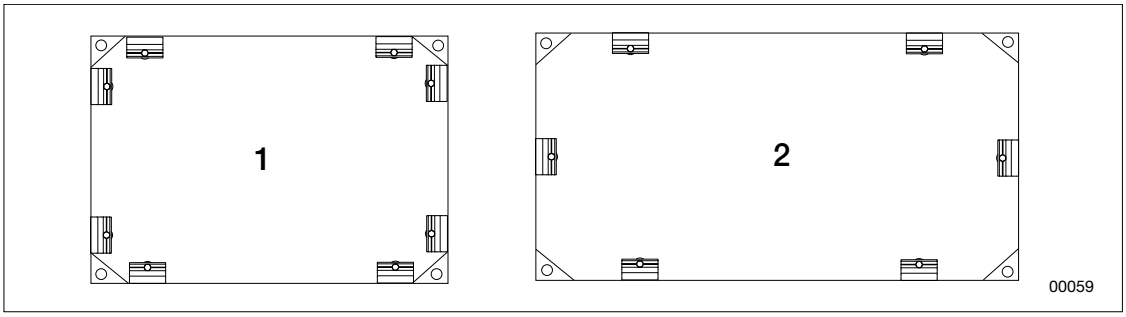


Figure: Assembly of screw joints and tensioning lugs

1. Locating tensioning lugs, 1080-1550. 8 tensioning lugs are fitted next to the screw joints.
2. Locating tensioning lugs, 1950-3150. 6 tensioning lugs are fitted between the screw joints.

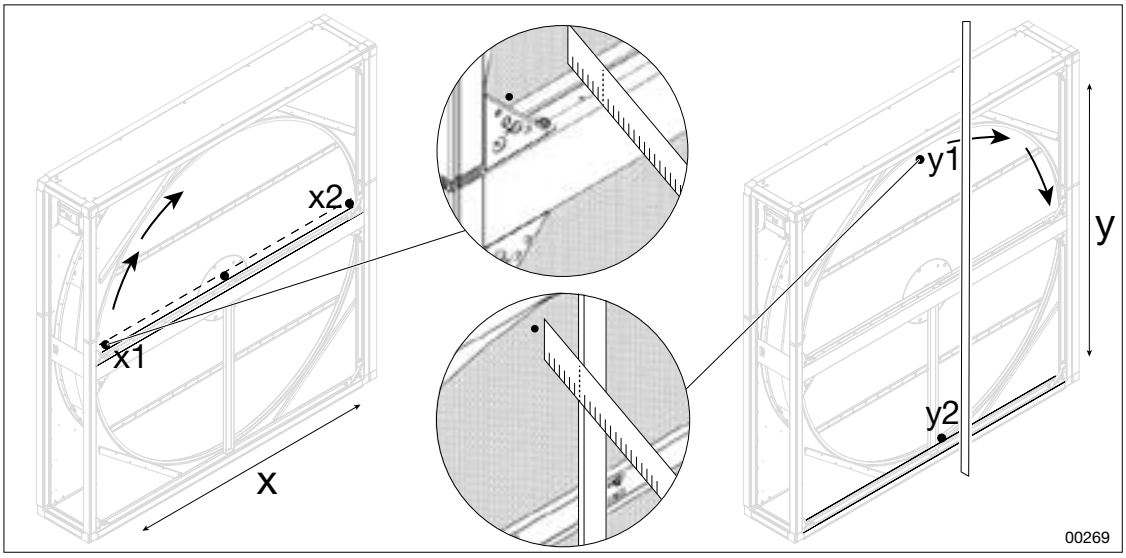
7.5.3 Join with guide pins

- Guide pins must always be set all the way from corner to corner on the functional sections, as well as on the opposite side.
- If two flush parts are assembled vertically with guide pins, the pins must be inserted through both parts (over the division).

Make sure the functional sections are completely pushed together.

1. Pull the parts together with tensioning straps.
2. Push the guide pin into the track of the profile, all the way to the other end of the unit.
3. Do the same on the opposite side of the unit.

7.6 Check and adjust the thermal wheel



The thermal wheel is factory adjusted, but may move out of position when handling and assembling the unit. Make sure the dimensions are correct. For adjustment of the purging sector, see Operation and Maintenance of the unit.

7.6.1 Thermal wheel, sizes 060-980 and 1080-1550 (D1)

Check the thermal wheel position horizontally and vertically

1. At x1, make a light pencil marking on the surface of the thermal wheel.
2. Measure with the mark at x1, from the outer edge of the strip to the thermal wheel surface.
3. Spin around the thermal wheel and stop when the marking is at x2, then measure.
4. Compare the two measured values. They should be the same (+/- 1 mm). If the distances are different, adjust the thermal wheel. See *"Adjusting the thermal wheel", page 32*.
5. Repeat steps 2 and 3 with the marking at y1 and y2.

Check the position of the thermal wheel on the shaft

1. In the middle on both sides, measure from the outer edge of the strip to the surface of the thermal wheel.
2. Compare the two measured values. They should be the same (+/- 1 mm). If the distances are different, adjust the thermal wheel.

Adjusting the thermal wheel

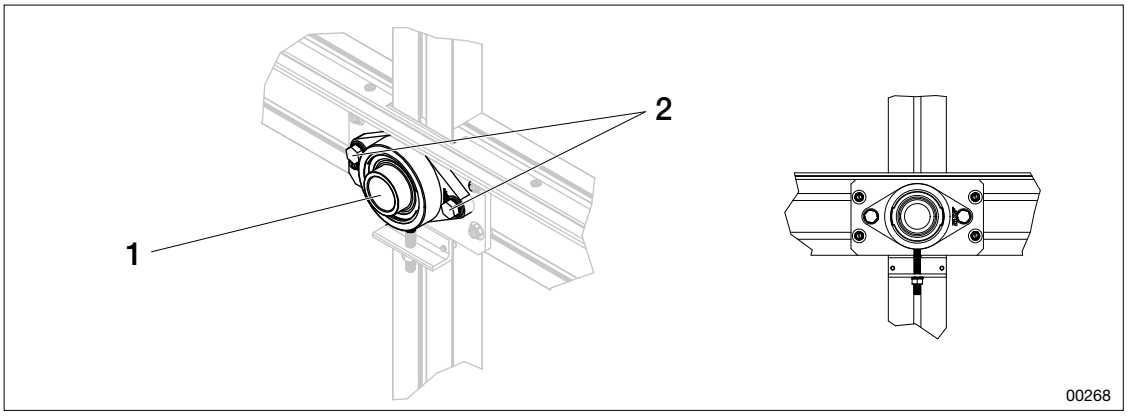


Figure: Shaft retainers on the thermal wheel

1. Shaft retainers
2. Adjustment bolts

1. Loosen the adjustment bolts on the shaft retainers on both sides of the thermal wheel.
2. Tilt the thermal wheel to the correct position. See *"7.6 Check and adjust the thermal wheel", page 31*.
3. Tighten all the adjustment bolts of the shaft retainers.
   Size < 600 – Torque 40 Nm
   Size ≥ 740 – Torque 50 nm

7.6.2 Thermal wheel and frame, sizes 1150-1550 (D2), 1950-3150 (D1/D2)

The thermal wheel and frame are delivered in block form. Final assembly at the customer may only be carried out by personnel with the required knowledge. Assembly can be ordered as an optional extra from IV Produkt's service department. Before assembling, read and follow the chapter *"1 SAFETY", page 7* and pay attention to the warnings in the section*"1.5 General warning notices", page 8*.

Standard delivery, with three packages:

Package 1	2550 (D2) 3150 (D1/D2) Other sizes	The package contains the lower part of the thermal wheel frame with half of the thermal wheel pre-assembled. Contains the lower part of the thermal wheel frame with half of the thermal wheel pre-assembled.
Package 2	All sizes	The package contains the upper part of the thermal wheel frame.
Package 3	All sizes	The package contains the remaining thermal wheel sections.

7.7 Removing/fitting the fan

For better access to the inner corner struts when joining adjacent functional sections, the fan can be removed. For refitting and post-delivery of fan, see "7.7.2 Refitting the fan", page 34.

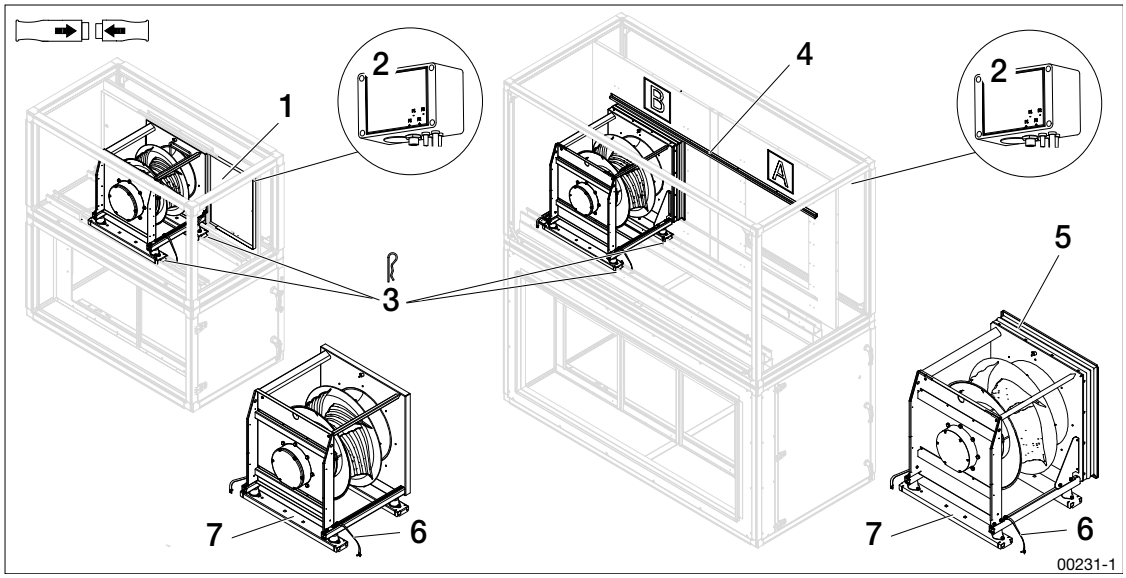


Figure: Remove the fan and reassemble

1. Cover plate
2. Pressure sensor module
3. Pins/screws
4. Sleeve rail
5. Sleeve
6. Earthing braid
7. Top sliding rail

7.7.1 Removing the fan

1. Fan without sleeve: Unscrew the cover plate and lift it out (including the screws).
2. Unscrew the earthing braid from the rail on the functional section.
3. Loosen other cabling, as well as sensor hoses between the fan and unit.
4. Pull the pins/screws out of the rails (two per fan) and pull the fan out.

7.7.2 Refitting the fan

- Make sure that each fan is fitted in the correct place (supply air/extract air, and placement order).
- Motors must be connected with flexible cables through cable relief glands.
- The cable length must be adapted so that the fan unit can be pulled out without obstruction.
- Ensure that hoses hang freely (not pinched).
- Ensure that hoses cannot be sucked into the fan.

1. Lift the fan onto the unit's rails and slide it to the far end of the functional section. If the fan has a sleeve, this must also be inserted into the sleeve rail.
2. Fan without sleeve: Screw on the cover plate.
3. Screw the earthing braid to the unit's rail. If the fan is refitted, use the supplied self-tapping screw.
4. Insert the pins or self-tapping screw through the holes in the rails.
5. Attach cabling.
6. Attach sensor hoses according to the unit's dimension drawing. See also *"7.7.3 Connect hoses for air flow control", page 34*.
7. Ensure that cables and hoses are not pinched when the inspection door closes.

7.7.3 Connect hoses for air flow control

- The image shows the location of the hoses for standard assembly. For custom installation, see the unit's dimension drawings.

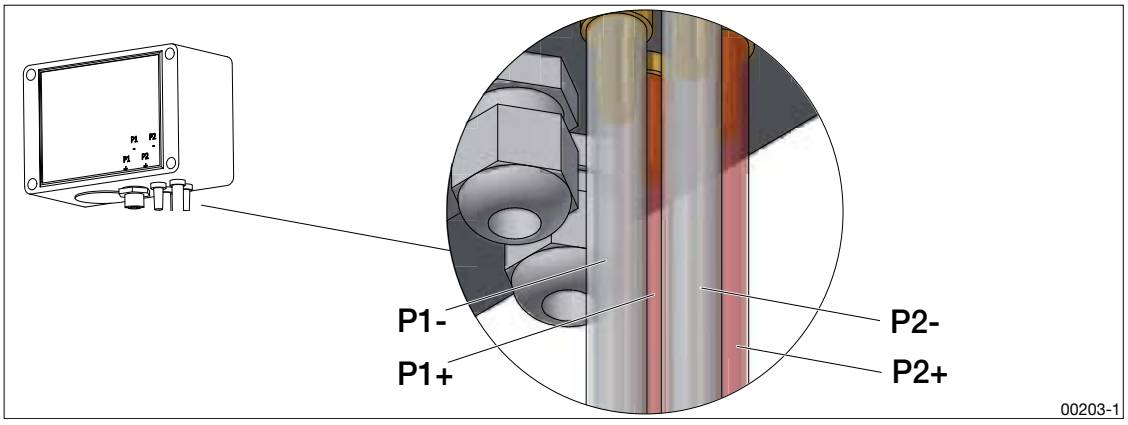


Figure: Hoses for air flow control

P1- Fan cone - Transparent hose

P1+ Fan suction side - Red hose

P2- Filter to fan - Transparent hose

P2+ Filter at intake - Red hose

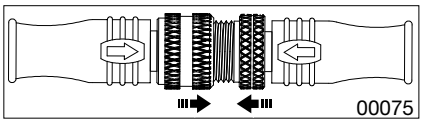
7.8 Quick connectors

- Flexomix in standard version is delivered without control equipment.
- For special configurations, some control equipment may be included.
- Quick connectors are used in some functional sections for configurations in sections.

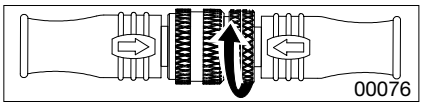
Quick connectors to be joined are marked with the same designation.

7.8.1 Quick connector, signal feed

1. Press together quick connectors according to marking (arrows or other).

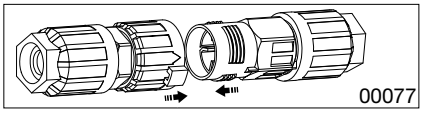


2. Screw together as hard as possible by hand.

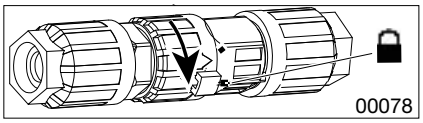


7.8.2 Quick connector, power supply

1. Press together quick connectors according to marking (arrows, dashes or similar).

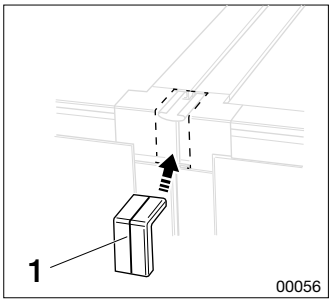


2. Turn the arrow on the white cuff to the mark for closed (padlock).



7.9 Fit cover detail on join

1. When the functional sections are joined together, place the cover detail (1) over the join.



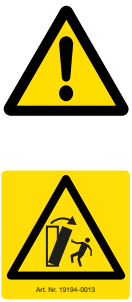
2. Make sure it is properly secured.

8 ASSEMBLE FUNCTIONAL SECTIONS DELIVERED IN SECTIONS

This section's instructions are complementary to the general instructions in "7 ASSEMBLY, GENERAL", page 26. Follow the instructions in both sections.

For the parts to be equipped with drainage, see "12 CONNECT DRAINAGE, WATER TRAP", page 50.

For the parts that have electrical connection, see "11 ASSEMBLE CONTROL EQUIPMENT", page 48.



WARNING!
Risk of life-threatening or serious crushing or compression injury.
High unit parts, as well as unit parts with a high or offset centre of gravity, mean a greater risk of tipping.

- Follow the lifting and assembly instructions in this manual.
- Use lifting equipment where available.
- Use appropriate protective equipment.
- Exercise caution when working between unit parts.
- Exercise caution when placing unit parts on the support.
- Use the support to secure the parts against possible tipping risk.

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8.1 Assemble rotary heat exchanger (EXR)

WARNING!
Risk of cuts and crushing injuries
Sharp edges on the thermal wheel casing can cause hand injuries.

- Wear appropriate protective equipment, such as gloves.
- Be careful when handling the thermal wheel casing and make sure that no hands or fingers get stuck between the parts.
- Lift and hold by the framework, not any other parts.

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For general directions, see also "7 ASSEMBLY, GENERAL", page 26.

- Use attached self-tapping screws and pop rivets when joining together.

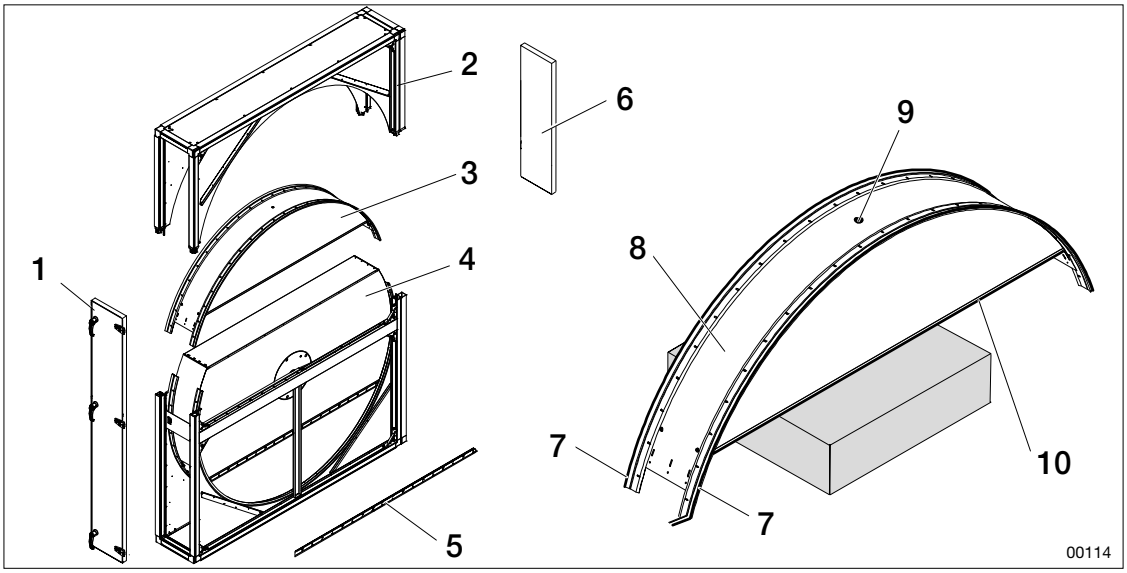


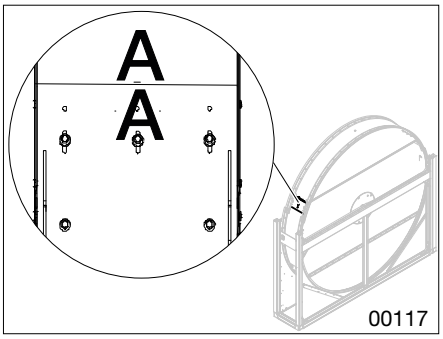
Figure: The parts of the thermal wheel

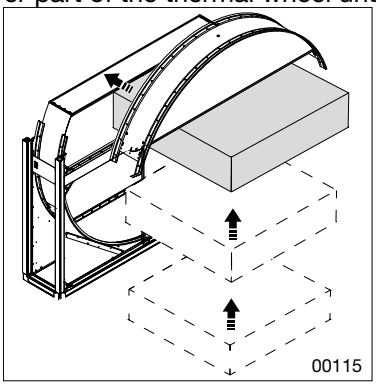
1. Inspection door
2. Upper part of casing
3. Upper part of thermal wheel
4. Lower part of thermal wheel
5. Jointing strip
6. Cover hatch back
7. Brush strip
8. Shell
9. Hole for mounting lifting lug
10. Straight sheet underneath

The rotary heat exchanger is assembled together completely before being put on the support.

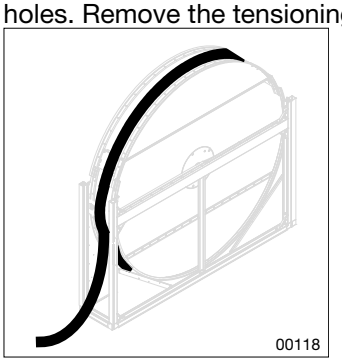
- The top of the thermal wheel must not be lifted into or put onto the shell.
- Remove the lifting lug immediately after use.

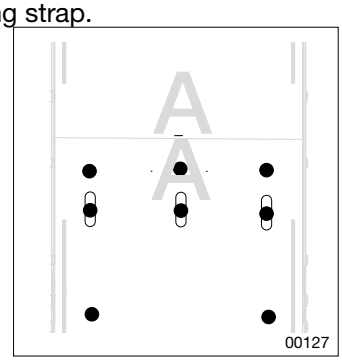
1. Place the upper part of the thermal wheel on the pallet, so that it rests on the lower, straight sheet. Before lifting, make sure the A mark is in the same direction as the A mark on the lower part of the thermal wheel. Lift with forklift truck under the straight plate or use mounted lifting lug. Lift up the upper part of the thermal wheel and make sure it is level with the flat surface on top of the lower part of the thermal wheel, then slide the upper part of the thermal wheel onto the lower part of the thermal wheel until it is in the middle.



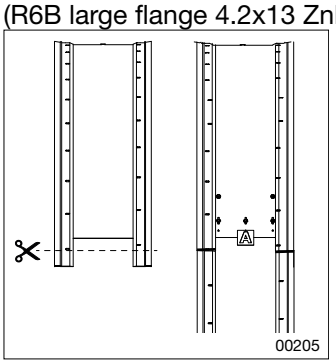


2. Place a tensioning strap around the thermal wheel and tighten. Assemble the shell at the joints (letter markings) with self-tapping screws (JT2 5.5x35) in both oval holes and round holes. Remove the tensioning strap.

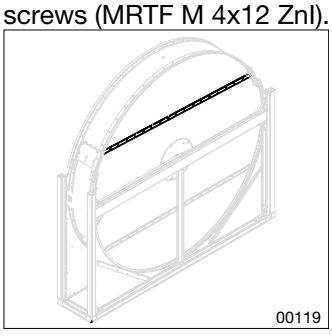




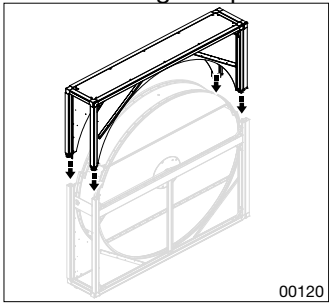
3. Cut off the bristle strip on the top of the thermal wheel so that the edges are tight against the edge of the lower part. Screw on the bristle strip at the joint using self-tapping screw (R6B large flange 4.2x13 ZnNi).



4. Place the motor belt around the thermal wheel.
5. Screw on the jointing strips, one on each side of the thermal wheel, with self-tapping screws (MRTF M 4x12 Znl). When reassembling, all screw holes must be used.



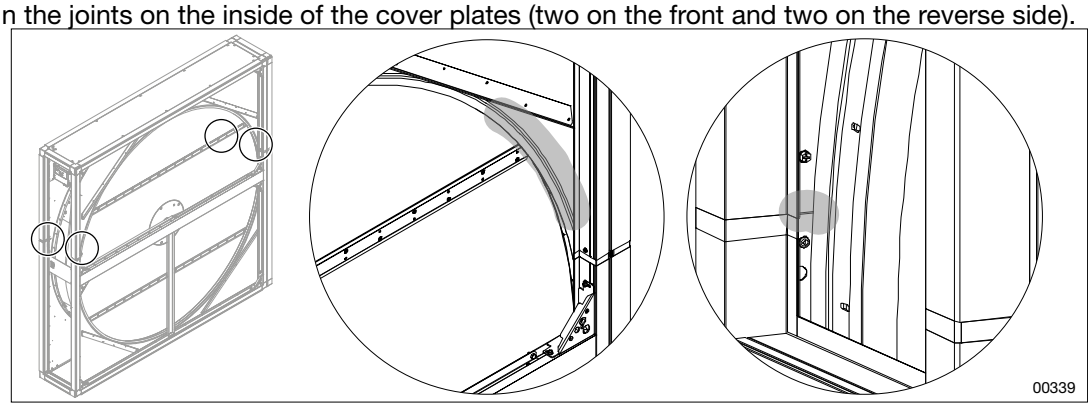
6. Lift the casing into place over the thermal wheel and down into the bottom frame.



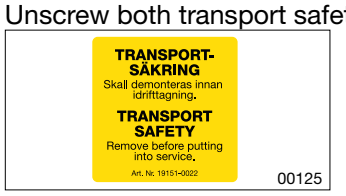
7. On the inspection side, cut off the sealing strip on the upper part of the thermal wheel so that the cut edge meets the edge of the sealing strip of the lower part. Attach the strip.

8. Apply sealant:

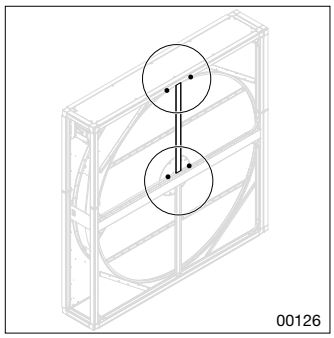
- in the joint on the inside of the thermal wheel, between the bristle strip and the thermal wheel (two at the front and two on the reverse side).
- in the joints on the inside of the cover plates (two on the front and two on the reverse side).



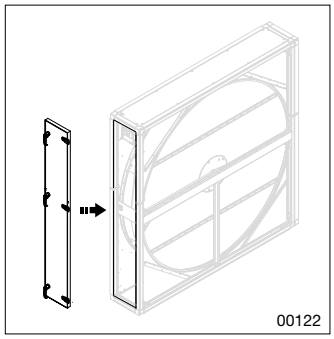
9. Unscrew both transport safety devices, marked with yellow stickers.



10. Screw the cover hatch onto the reverse side of the thermal wheel using self-tapping screws (DK 4.2x14 PH2 Znl).
11. Size 740: Also mount a cover hatch to the inspection side of the thermal wheel.
12. Fit cover plugs over the screw holes.
13. Size 740 and larger: Assemble a centre post in the upper part of the thermal wheel, on both sides of the thermal wheel. Screw the centre post into in the pre-drilled holes using self-tapping screws (DK 4.2x14 PH2 Znl).



14. Sizes 150-600: Screw the inspection door onto the hinges, on the inspection side of the thermal wheel.



15. Slide the thermal wheel onto the support and slide together with the connecting part.
16. Check the position of the thermal wheel. See "7.6 Check and adjust the thermal wheel", page 31.

8.2 Assemble counter-flow heat exchanger (EXM)

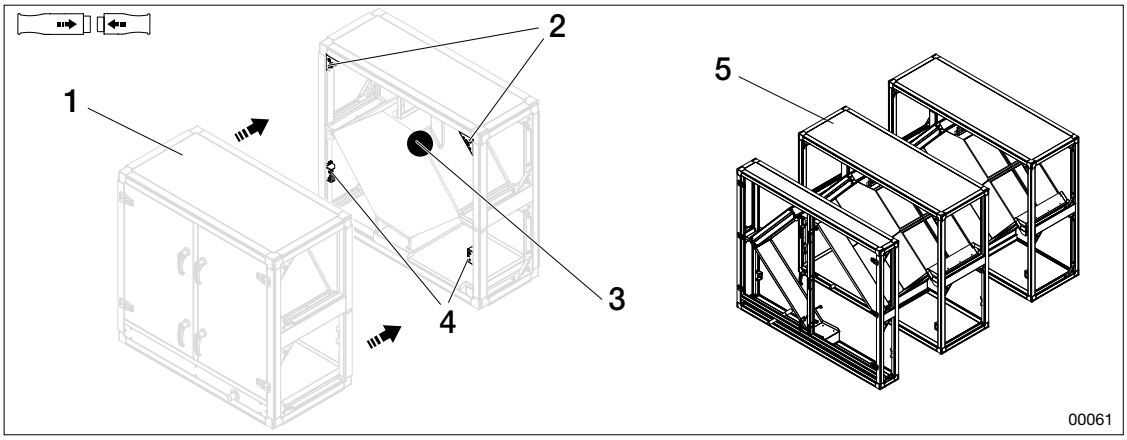


Figure: Counter-flow heat exchanger, sectioned configuration

1. Two-part counter-flow heat exchanger
2. Corner strut
3. Approximate location of quick connector
4. Joint fixings
5. Three-part counter-flow heat exchanger

Disassemble counter-flow exchanger

1. Separate quick connectors for damper motors (one on two-part version and two on the three-part version). See *"7.8 Quick connectors", page 35.*
2. Loosen hoses.
3. Loosen and remove bolts and screws in corner struts and joint fixings.
4. For the three-part version: Cut away the putty in the joints that is affected by the dismantling.
5. Pull the parts apart without damaging the sealing strip between the parts.

Assemble counter-flow exchanger.

1. Slide the parts together without damaging the sealing strip.
2. Screw the parts together on the corner struts and joint fixings.
3. For the three-part version: Add new putty in those joints where the putty was cut away during disassembly.
4. Refit the hoses.
5. Put together quick connectors for damper motors. See *"7.8 Quick connectors", page 35.*
6. Ensure that drip trays are properly mounted. The inner drip tray must be a little higher up and overlap the outer drip tray, so that there is a slope towards the drainage pipes.
7. Connect drainage. See *"12 CONNECT DRAINAGE, WATER TRAP", page 50*.

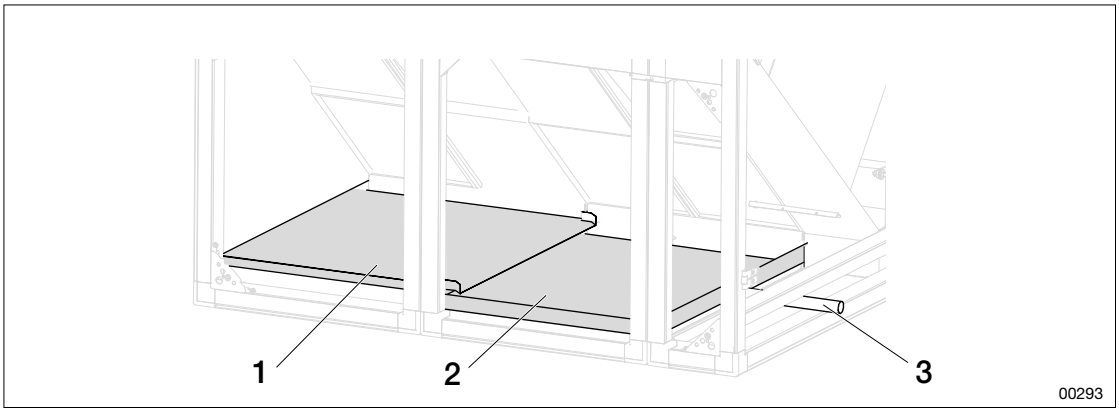


Figure: Counter-flow heat exchanger, drip trays

1. Inner drip tray
2. Outer drip tray
3. Drainage pipe

8.3 Assemble cooling unit EcoCooler (ECO/ECX)

For general instructions, see also ."7 ASSEMBLY, GENERAL", page 26

- On the part on the thermal wheel, sealing strips must also be fitted on the upper edge of the profile to ensure tightness.

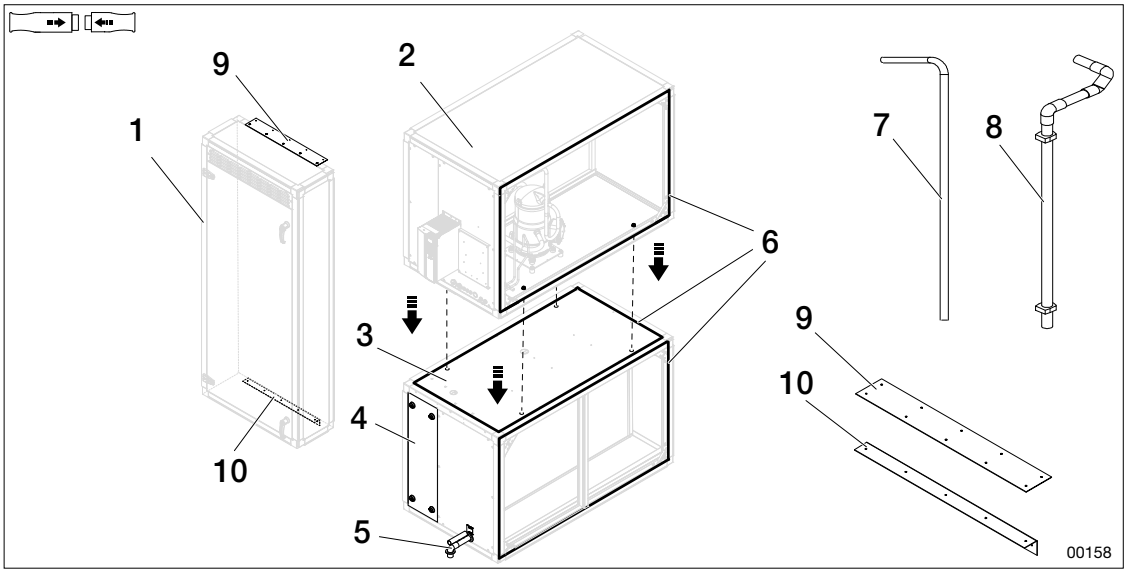
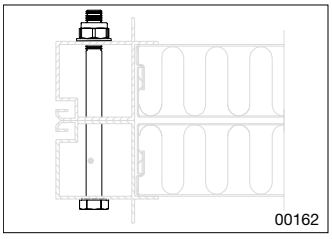


Figure: Cooling unit parts

1. Media part
2. Unit part - compressor/coil
3. Unit part - coil
4. Coil hatch
5. Drainage pipe
6. Sealing strip
7. Joint pipe
8. Drainage pipe
9. Sheet metal strip upper part
10. Sheet metal strip lower part

1. Fit sealing strip on the outer side of the upper and lower functional sections, as well as in the middle section. See "7.4 Fit sealing strip between functional sections", page 29.
2. Push the lower part up onto the support.
3. Lift and place the upper part on top of the lower part.
4. Join the upper and lower parts using the included screws M6S 10x120 FZB, washers SRB 11x22x2 FZ and lock nuts M10 FZ.



5. Slide the parts together with the thermal wheel.
6. Join the functional sections using screw joints or guide pins. See "7.5 Join the parts", page 30. If screw joints are used, the trim heater (coil) must be lifted out to make room to screw inside. See "8.4.1 Remove the trim heater", page 43.

7. Unscrew the transport safety devices from the compressor part (marked with stickers).

8. Screw the media cabinet's sheet metal strips onto the functional sections using self-tapping screws in the connecting profile. If the strips are not pre-assembled, see *"8.3.1 Assemble the media cabinet sheet metal strips", page 43.*

8.3.1 Assemble the media cabinet sheet metal strips

1. Mount the upper sheet metal strip on the upper side of the media cabinet, using self-tapping screws.
2. Mount the lower sheet metal strip on the lower side of the media cabinet, using self-tapping screws.

8.4 Remove/fit the trim heater

It may sometimes be necessary to remove the trim heater to be able to screw the functional sections together.

8.4.1 Remove the trim heater

1. Open the hatch in front of the coil with the four levers on the hatch.
2. Disconnect the two quick connectors under the coil (inside the functional section), without disconnecting any cables from the coil. See *"7.8 Quick connectors", page 35.*
3. Pull away the two pins on the rails that the coil hangs in.
4. Carefully pull out the coil without letting it fall at the end of the rails. This is easier to do with two people.

8.4.2 Refit the trim heater

1. Open the hatch in front of the coil with the four levers on the hatch.
2. Hang up the coil on the rails and slide it back into the functional section.
3. Reinsert the pins.
4. Connect the quick connectors. See *"7.8 Quick connectors", page 35.*
5. Close the hatch.

9 CONNECT AIR HEATER/AIR COOLER, LIQUID

- In order not to damage the air heater, always use a counterhold when connecting.
- Ensure that connecting pipes (including insulation) do not block inspection hatches.

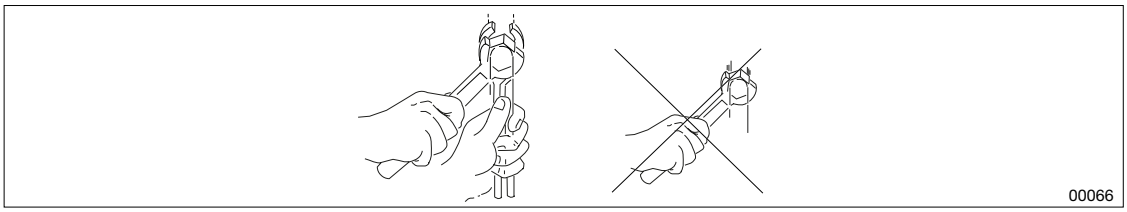


Figure: Pipe connection counterhold

1. Connect air heater/air cooler to pipes.
2. **Air heater:** Connect frost protection. See *"9.3 Connect frost protection sensor", page 45*.
   Air cooler: Connect drainage. See *"12 CONNECT DRAINAGE, WATER TRAP", page 50.*
3. Connect pipes for exhaust air and drainage. See *"9.4 Connect pipes for exhaust air and drainage", page 46*.

9.1 Connect air heater in unit (STUDENT), in duct (EMT-VV)

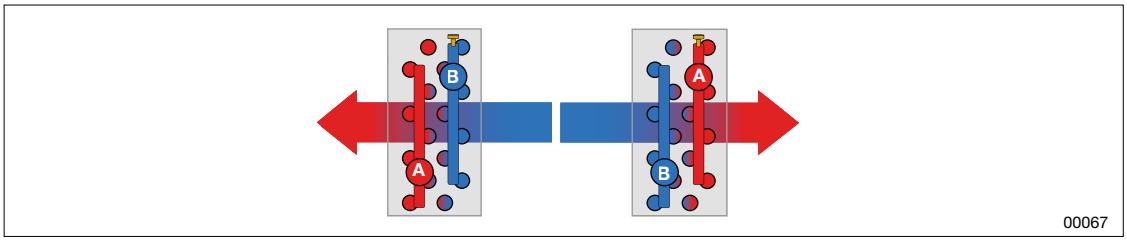


Figure: Connection pipes, air heater

A. Fluid in
B. Fluid out

The air heater must be fitted with frost protection – contact sensor or immersion sensor type.

The air heater is reversible to correspond with the air direction (right or left). Ensure that the coil is turned so that there is a counter-flow direction between air and liquid flow.

Thermoguard coils:
- marked with inlet and outlet on the fluid side, as well as air direction.
- delivered, as standard, for vertical assembly (horizontal air stream).
- must always have options for pressure relief via the coil return line out to the expansion vessel, for example, regardless of whether the control valve is open or closed. This applies to all kinds of control valves, shunt couplings, and the like.

9.2 Connect air coolers in unit (ELBC), in duct (ESET-VK)

The air cooler must be connected for horizontal air stream. For duct assembly, see *"13 DUCT ACCESSORIES, DUCT CONNECTION", page 51.*

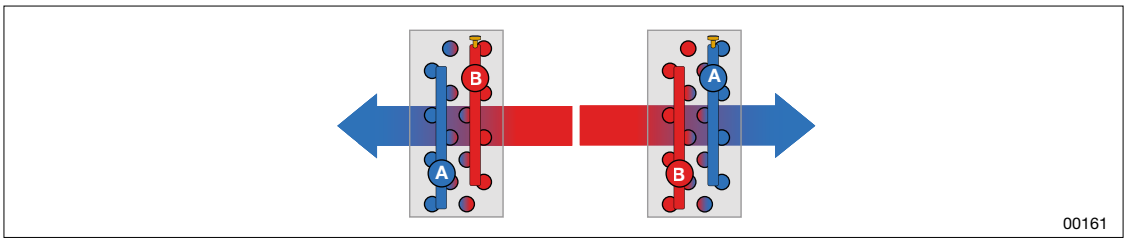


Figure: Connection pipes, air cooler

A. Fluid in
B. Fluid out

9.3 Connect frost protection sensor

The frost protection sensor must be placed at the coldest point of the air heater, i.e. on the outgoing fluid assembly tubes.

The frost protection sensor must be connected to prevent ice from forming in the coil pipe lines.

The air heater must be turned so that the immersion sensor socket/contact sensor for frost protection ends up on the outgoing fluid side.

9.3.1 Connect immersion sensor

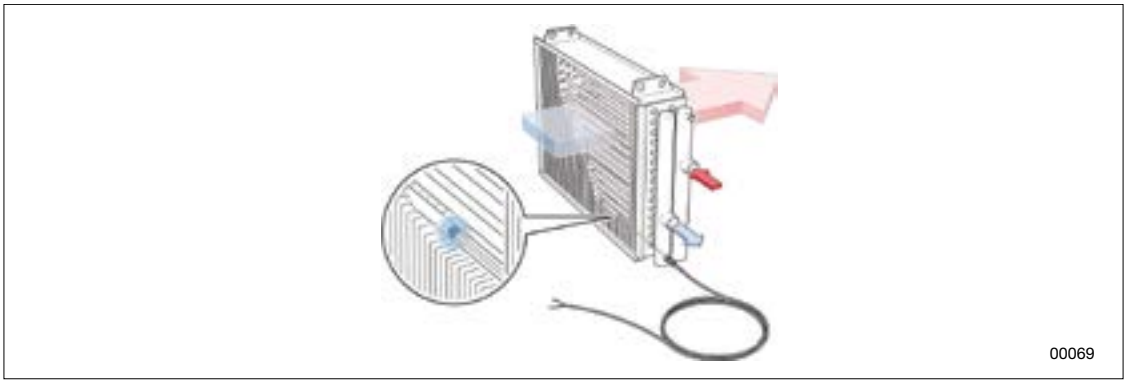


Figure: Immersion sensor mounted in drainage nipple.

Immersion sensor dimensions: diameter 4 mm, insert length maximum 240 mm.

The immersion sensor must placed in the bleed nipple or in the drainage nipple. T-pipes can be used to retain options for exhaust air.

9.3.2 Connect contact sensor

- The contact sensor must always be placed after duct-mounted air heaters/air coolers.
- The contact sensor must not be placed in a sound attenuator.
- Location of measuring sockets for pressure control should be at least 1 m from duct connections, so as to avoid disruptive turbulence.

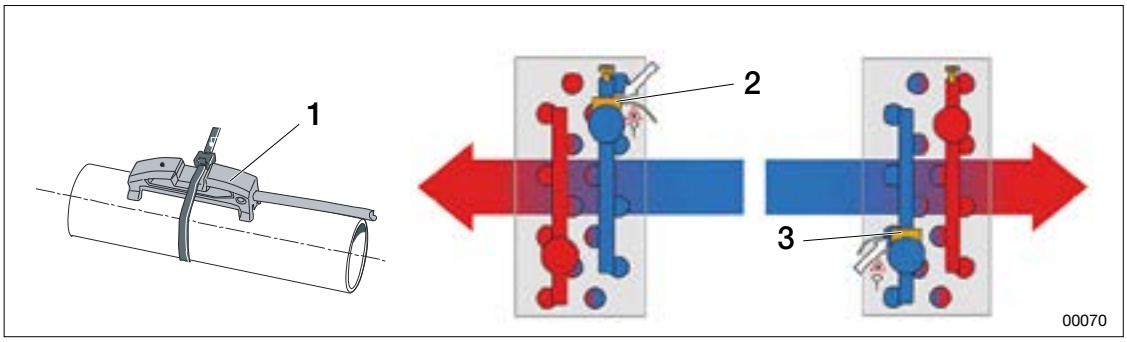


Figure: Clamp on detector

1. Clamp on detector placed on pipe
2. Outgoing fluid at top, clamp on sensor up
3. Outgoing fluid at bottom, contact sensor down

9.4 Connect pipes for exhaust air and drainage

The connection pipe must be equipped with exhaust air at the highest point and drainage at the lowest point.

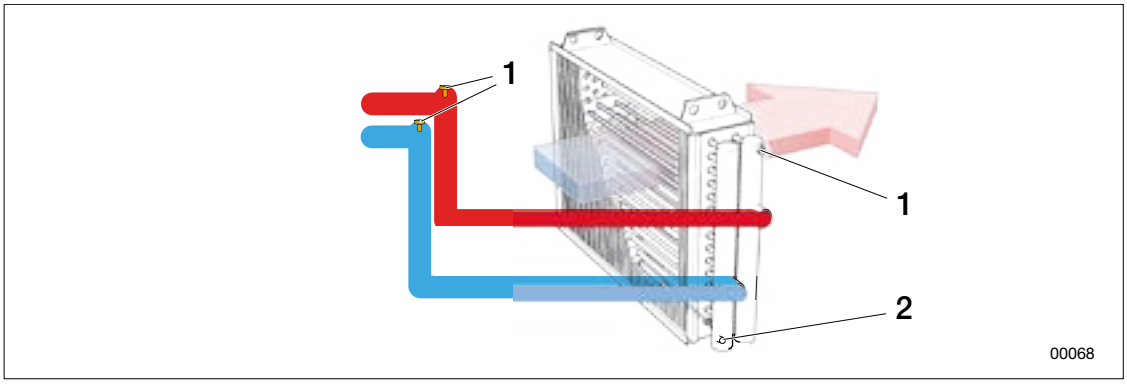


Figure: Bleeding and drainage

1. Nipple for bleeding
2. Nipple for drainage

9.5 Assemble valve actuator

Assembly must be carried out according to the accompanying instructions from IV Produkt's supplier. The instructions are also available in the Order Portal.

9.6 Assemble pump, pipework package

The pump is only included in IV Produkt Accessories: Pipework package. For information and installation, refer to the separate product sheet "Pipework package STD-05" in the Order Portal. Other pumps are provided by the customer, and their installation is the customer's responsibility.

10 ASSEMBLE AIR HEATER/TRIM HEATER, ELECTRICAL

WARNING!
Risk of life-threatening or serious personal injury.
Electrical voltage can cause electric shock, burns and death. The product must not be energised during assembly.

- Electrical connection and electrical work may only be carried out by a qualified electrician.
- For initial start-up of the unit, see Operation and Maintenance of the unit on IV Produkt's order portal.

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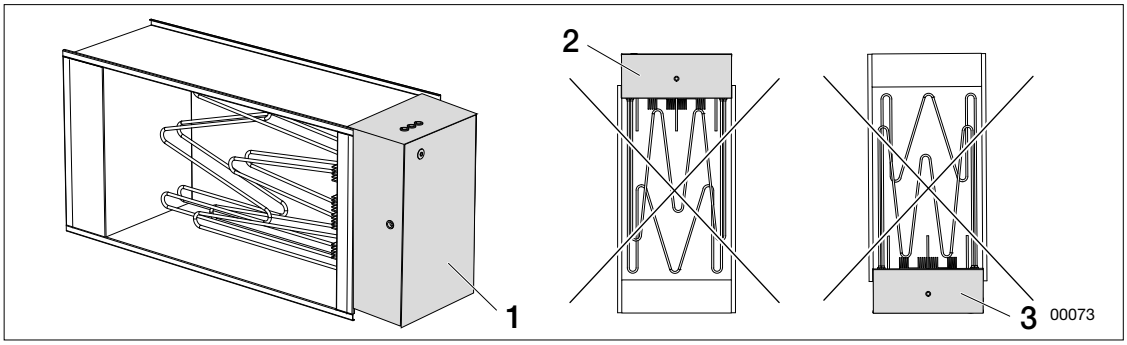

Figure: Air heater electric

1. Cover for connection box
2. Connection box - incorrectly mounted upwards
3. Connection box - incorrectly mounted downwards

The distance from the sheet metal casing of the air heater to wood or other combustible material must be 100 mm or more.

10.1 Connect air heater in duct (ELEE)

The air heater is adapted for assembly in duct systems and requires separate connection. The air flow direction must correspond to the direction arrow on the air heater.

The air heater can be assembled in horizontal or vertical ducts with the connection box easily accessible for connection.

The distance from the air heater to duct elbows, dampers, filters or the like, should be at least the distance corresponding to the diagonal measurement of the heater (from corner to corner in the heater's duct section). If the distance is smaller, the air stream through the heater can become uneven and the overheat protection can be tripped.

The air heater is insulated according to the applicable rules for ventilation ducts/ventilation units and with non-combustible insulating material. The type plate and warning plate must be fully visible and the cover must be possible to open. The air heater must be accessible for replacement and servicing.

10.2 Connect trim heaters in EcoCooler (ECXT-EV)

The trim heater (optional extra) is integrated into EcoCooler and is normally already fitted on delivery. It can be lifted out to facilitate cleaning and maintenance. See instruction in "*8.4.1 Remove the trim heater", page 43*.

11 ASSEMBLE CONTROL EQUIPMENT

WARNING!
Risk of life-threatening or serious personal injury.
Electrical voltage can cause electric shock, burns and death. The product must not be energised during assembly.

- Electrical connection and electrical work may only be carried out by a qualified electrician.
- For initial start-up of the unit, see Operation and Maintenance of the unit on IV Produkt's order portal.

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- Flexomix in standard version is delivered without control equipment.
- For special configurations, some control equipment may be included.

If the unit is supplied with control equipment, obtain order-specific dimension drawings from the Order Portal. Connection of control equipment (power supply, fuse protection other components, fans etc.) not specified in this section is done by a competent technician as instructed in Operation and Maintenance for the unit.

11.1 Connect quick connectors between functional sections

If quick connectors are located between the functional sections, connect them together. See *"7.8 Quick connectors", page 35*, *"7 ASSEMBLY, GENERAL", page 26* and *"8 ASSEMBLE FUNCTIONAL SECTIONS DELIVERED IN SECTIONS", page 36*.

11.2 Connect hoses for pressure control

- Location of measuring sockets for pressure control should be at least 1 m from duct connections, so as to avoid disruptive turbulence.
- The image shows the location of the hoses for standard assembly. For custom installation, see the unit's dimension drawings.

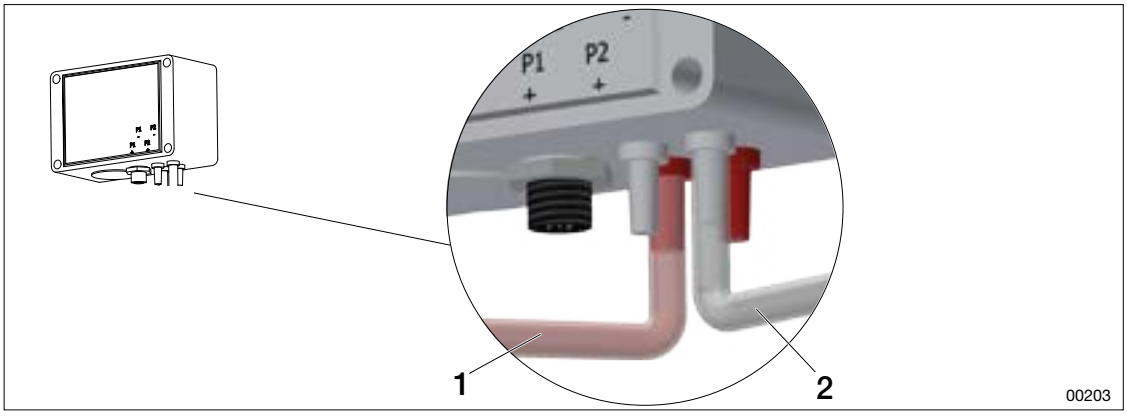


Figure: Hoses for pressure control connected to pressure sensors

- Connect the red hose (1) from the pressure sensor to the supply air duct (red connector).
- Connect the transparent hose (2) from the pressure sensor to the extract air duct (white connector).

11.3 Connect the supply air temperature sensor

- The supply air temperature sensor must always be placed after any duct coils (heating/cooling).
- The supply air temperature sensor must not be placed in a sound attenuator.

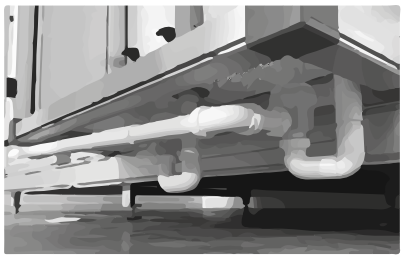
The sensor is connected to the control cabinet before delivery and hangs twisted under the cabinet.

1. After the unit is fitted together: pull the sensor to an appropriate point in the supply air duct.
2. Screw the holder to the sensor, in the duct.
3. Assemble the sensor in the holder.

12 CONNECT DRAINAGE, WATER TRAP

- All drainages must be connected to separate water traps, which after these can be connected to a common drain.
- Use separate drainage and water traps for negative pressure and positive pressure.

.Instructional videos can be found on the Order Portal; *Water trap site-built assembly, Water trap prefabricated MIET-CL-04 assembly.*



On EcoCooler size 100-1280, drainage is connected underneath.

12.1 Connect water trap MIET-CL-04 (accessories)

MIET-CL-04 must not be used with outdoor version, in case of under-pressure. Heating cable pulled through drainage lines and water trap causes the ball not to seal.

Underpressure (P-) **Overpressure (P+)**

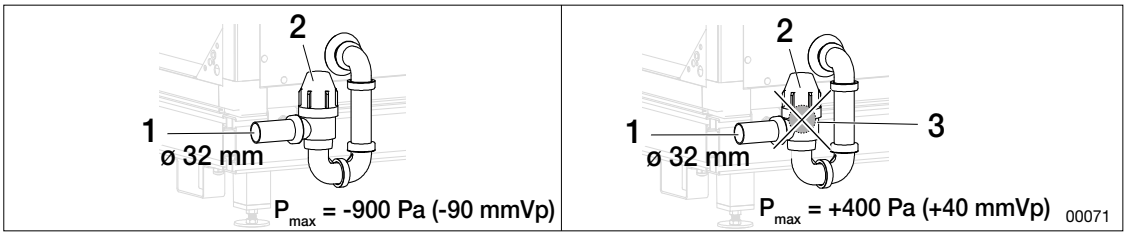


Figure: Water trap (accessory)

1. Outlet (connected to drain)
2. Cup (always mounted upwards)
3. Ball (inside pipe) is removed with overpressure

12.2 Connect water trap (site built)

- Fill the water trap with water before starting the unit.
- For each additional 100 Pa (over 1,000 Pa), H_1 och H_2 must be increased by 10 mm.

Negative pressure (P-) **Overpressure (P+)**

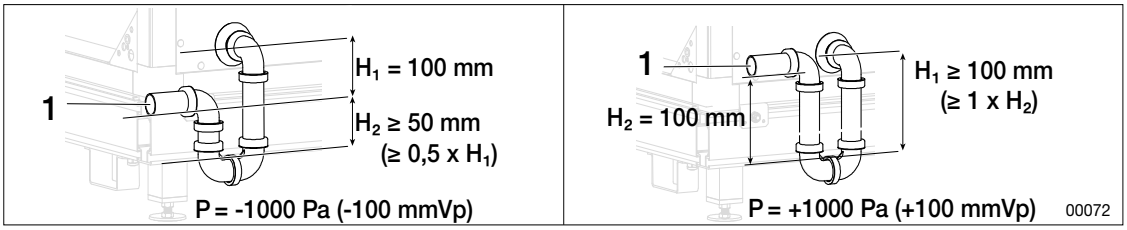


Figure: Water trap (site-built)

1. Outlet (connected to drain)

13 DUCT ACCESSORIES, DUCT CONNECTION

Protruding functional sections and ducts mounted in the upper section must be supported by support legs if the overhang is longer than 300 mm. Ducts can also be suspended. See "6.3 Support pillars at overhang (protruding section)", page 25.

Duct accessories must be placed according to the layout drawing (Technical data), which is available on the Order Portal. See "Documentation for your unit:", page 2 and "2.3 Spare parts", page 11.

Sealing strips for duct connection
Sealing strips for duct connection are not supplied with the unit. The customer is responsible for ensuring proper sealing against the ductwork.

13.1 Connect to ducts

13.1.1 Connect to rectangular duct

The unit is supplied, as standard, with rectangular connection sleeves. Connection sleeves on rectangular duct connections must be supplemented with sealing strips and connected with guide strips.

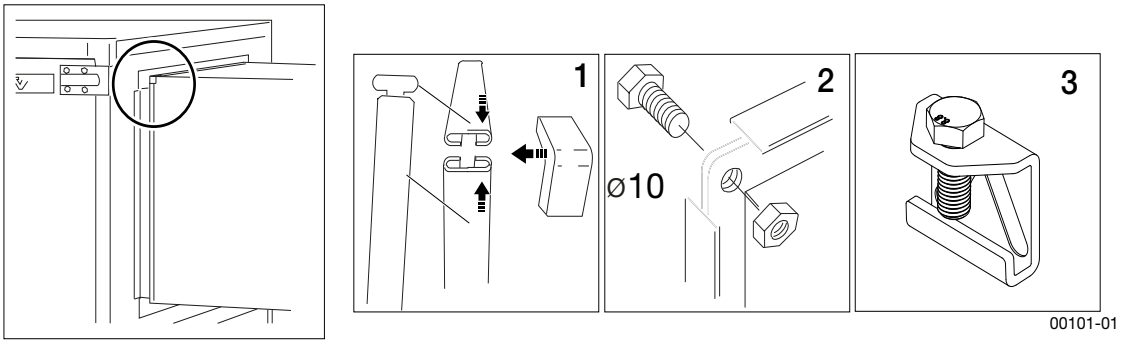


Figure: Rectangular connection sleeve

1. Gasket, guide pin and outer corner.
2. Screw joints (screws in the corners of the frame).
3. Supplementary clamp.

Supplement screw joints with clamp
The screw joints in the corners can be supplemented with clamps to further press the studs together against the duct connection.

1. Place the clamp over the edges and tighten the screw as firmly as possible.

13.1.2 Connect to circular duct

Sleeve couplings on circular duct connections are equipped with rubber ring sealing.

13.1.3 Connect sleeve (accessories)

If the duct sleeves are connected for dampening vibrations, the duct insulation must be fitted over the entire connection.

13.2 Fit air heater in duct

The distance after a duct elbow, damper or similar must be at least three times the duct dimensions to obtain even air distribution.

See *"9 CONNECT AIR HEATER/AIR COOLER, LIQUID", page 44* and *"10 ASSEMBLE AIR HEATER/TRIM HEATER, ELECTRICAL", page 47*. The air heater has a rectangular connector for the guide system.

13.3 Fit sound attenuator (EMT-02)

The sound attenuator is either a rectangular or circular depending on the size of unit and duct connections.

13.4 Fit shut-off damper (EMT-01), trim damper (ESET-TR)

The damper can be mounted for horizontal or vertical air streams.

14 AFTER ASSEMBLY

14.1 Check

CAUTION!
Risk of damage to the product.
Swarf from drilling left behind after assembly can lead to corrosion in the surface layer of the unit.

- Make sure that the surfaces of the unit are clean of swarf.

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CAUTION!
Risk of damage to the product.
Corrosive substances and strong cleaning agents can damage the surface layer.

- Never use strong cleaning agents or corrosive substances when cleaning the unit.

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Area	Inspection	Actions if incorrect
Covers	Ensure that inspection hatches do not jam when opening.	1. Adjust the hinges of the hatch. 2. Adjust the support feet. See "7.3 Assemble fan compartment support (EMMT-05)", page 28.
Covers	Ensure that all covers are closed before commissioning.	Close open covers.
Unit tilt	Ensure that the unit is correctly tilted for draining.	See "7.3 Assemble fan compartment support (EMMT-05)", page 28.
Unit surfaces	Ensure that the unit is clean and free of dirt and debris, such as residual swarf from drilling.	1. Vacuum or brush the surfaces. 2. Wipe with a damp cloth. Detergents such as soap and light alkaline agents can be used for stubborn dirt.
Thermal wheel	Ensure that the thermal wheel is straight and balanced.	See "7.6 Check and adjust the thermal wheel", page 31.
Seals	Visually ensure that all strips and seals are intact. For example, shine a torch from the inside in all joints.	Replace any damaged strips.

You are welcome to contact us

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