Assembly instructions

Rotary heat exchanger

Switch from Emotron/IBC to OJ thermal wheel drive

Documentation for your unit

1. Scan QR code or enter docs.ivprodukt.com in your web browser.
2. Enter your order number.
3. Press ENTER or click search.
4. Select your order.

Is documentation missing?

See information in section

"2.1 Documentation and support", page 8.

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Rotary heat exchanger

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1 SAFETY

This section addresses important safety aspects during assembly, with the aim of increasing safety awareness and avoiding injury to people or damage to the environment and the unit.

- 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.

00177

1.1 Intended application

Intended User

The content of these instructions is intended for technicians with advanced qualifications and/or training for this task. Installation of electrical and control equipment and electrical connection of the AHU must be carried out only by a qualified electrician.

Intended use

OJ drives purchased from IV Produkt may only be used in IV Produkt's AHU (air handling unit).

1.2 General safety

Failure to follow the safety instructions may result in personal injury or damage to the air handling unit. To avoid injury to persons, or damage to surroundings or equipment:

- Follow national and local laws/regulations for safe work, e.g. fall protection when working at height.
- Do not wear loose-fitting clothing or jewellery that could get caught.
- Do not step or climb on the unit.
- Use appropriate tools.
- Use appropriate personal protective equipment.
- Observe the unit's markings; product labels, information and warning stickers.

Personal protective equipment

Personal protective equipment should always be used based on the risks that occur in the workplace. For example, use safety shoes with steel toecaps, hearing protection, a hard hat, gloves, safety glasses, covering clothing, protective overalls, a face mask/protective mask and/or fall protection where the work and work environment require it.

1.3 Structure of warning messages

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

The warning symbol  indicates that a risk exists.

WARNING! indicates a potential hazard which, if not avoided, could result in death or **serious** injury.

CAUTION! indicates a potential hazard which, if not avoided, could result in **material damage** to the product or its surroundings, as well as impaired product function.

"Risk for xxxxxx." indicates the risk in a short risk title.

Descriptions in italics provide more detailed information about what the risk entails.

- The points indicate how the user can avoid harm.

1.4 General warning messages

WARNING!
Risk of personal injury.
During operation, an overpressure can be created inside the unit.
- Allow the pressure to drop before you open the inspection doors.

00187

WARNING!
Risk of serious injury; shock or burns.
Applies to installed lighting EMMT-07: The lighting is supplied externally and does not switch off when power is cut through the unit's safety switch.
- Before maintenance or servicing, ensure that there is no power supply to the lamp.

00326

WARNING!
Risk of life-threatening or serious personal injury.
Electrical voltage can cause electric shock, burns and death. The unit must be turned off during maintenance.
- Shut down the unit at the service switch in the control equipment.
- Turn all safety switches to the 0 position. Note that the unit's parts may have separate safety switches.

00327

WARNING!
Risk of pinch injury, crush injury or cutting injury due to moving parts.
The device may start unexpectedly during remote control or demand-driven start-up.
- Control parameters may only be changed by personnel with extended privileges.
- The device must be turned off with all safety switches before covers can be opened.

00257

WARNING!
Risk of crushing, compression injury or cuts.
There is no contact guard on moving parts, such as rotating fan impellers, rotary heat exchangers and opening/closing dampers.
- The unit must not be powered until all ducts are connected.
- When the unit is in operation, inspection doors must be closed and
- locked.
- During service or other procedures, the unit must be switched off.
- Ensure power is off before placing hands in moving parts.
  Fan inspection door: Wait at least 3 minutes after shutting down the unit before opening the door.
- Rotary heat exchanger inspection door: Wait at least 3 minutes after shutting down the unit before opening the door.
- Damper inspection door: Wait at least 3 minutes after shutdown before opening the hatch.
- Make sure that hands do not get caught in dampers that have a spring return (which can be closed even when not powered).

00185

WARNING!
Risk of burns.
The parts, pipes and components of the unit may be hot during and after operation of the unit.

- When the unit is in operation, inspection hatches must be closed and locked.
- During service or other interventions, the unit must be switched off.
- Inspection hatch for cooling unit/reversible heat pump: Wait at least 30 minutes after shutting down the unit before opening the compressor door.
- Inspection hatch for heating coil: Wait at least 5 minutes after shutting down the unit before opening the compressor door.

00184

1.5 Safe shutdown of the unit

The safety switch is not designed for starting and/or stopping the unit.

Before and during maintenance and service, follow instructions and read warnings in Operation and maintenance for the AHU

The unit should always be switched off before starting any inspection or maintenance.

1. Read "*1 SAFETY*", *page 5*.
2. Read the warnings at the beginning of this chapter.
3. Switch off the unit via the service switch in the control equipment.
4. Lock all safety switches in the 0 position. Please note that different parts may have separate safety switches.
5. Before opening doors, wait until all fans have stopped.

1.6 Product liability

CE marking

The air handling unit is CE marked and meets the applicable requirements according to specified directives and standards in the Declaration of Conformity. The marking covers the unit in the version in which it was delivered and provided that it has been assembled and put into operation according to IV Produkt's instructions. This does not cover units that have been modified, components that have been added later, or other systems in which the unit may be included. The unit may not be put into service until the system in which it is included complies with the requirements for CE marking.

The replacement of this spare part does not affect the conformity of the product with the applicable CE-marking requirements.

The Declaration of Conformity can be downloaded from IV Produkt's order portal, "*2.1 Documentation and support*", *page 8*.

Manufacturer

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

Warranty

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

Disclaimer

Ongoing product development may result in changes without prior notice.

2 GENERAL INFORMATION

The drive system that has been part of IV Produkt's rotary heat exchangers has been discontinued and replaced by the OJ-DRHX thermal wheel drive

2.1 Documentation and support

To perform all the steps of these instructions, the following AHU documentation is also recommended:

- Assembly instructions
- Operation and maintenance
- Connection instructions

The documentation for your unit is available at IV Produkt's order portal. See *"Documentation for your unit", page 2*.

2.2 Terms and abbreviations in the document

Term	Explanation
Thermal wheel drive	Drive system for thermal wheel
Thermal wheel	Rotary heat exchanger
Console	Motor Console

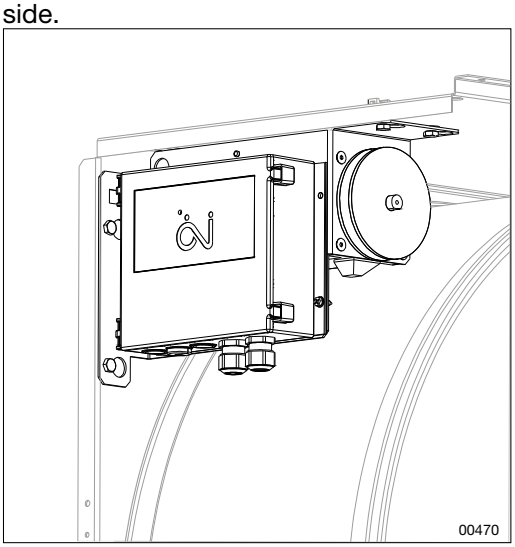
3 ASSEMBLE

3.1 OJ thermal wheel drive for Envistar Top and Compact

1. Remove the old thermal wheel drive.
2. Make sure the thermal wheel compartment is clean.
3. Mark the mounting position of the motor bracket, The location varies depending on the previous variant of thermal wheel.

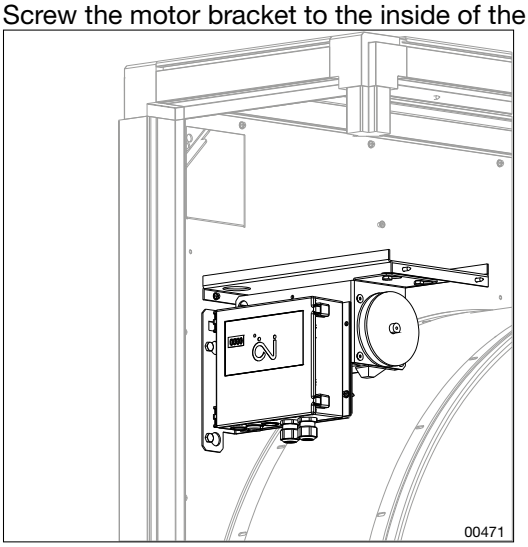
   Top and Compact with sheet metal housing

   Screw the bracket up against the roof and to the inside of the gable plate, as close as possible to the inspection side. The bracket is supplied for installation on the left or right side.



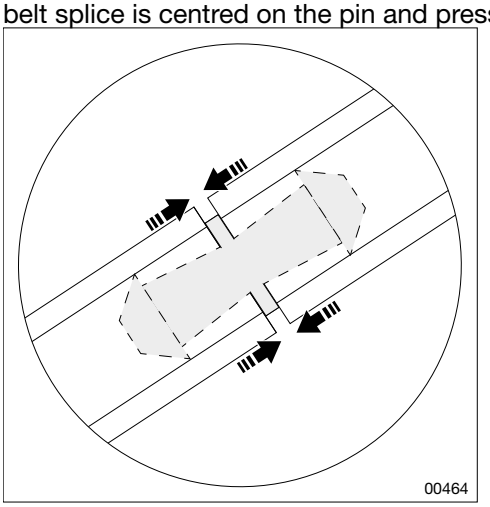
   Top and Compact with aluminium housing

   Place the bracket between the gable plates, as close to the inspection side as possible. Screw the motor bracket to the inside of the gable plate.



4. Measure the length of the supplied round belt according to the instructions in section *"4 CALCULATE THE LENGTH OF THE THERMAL WHEEL BELT", page 14*

5. Install the belt: Press the round belt over the cones on the supplied pin. Make sure the belt splice is centred on the pin and pressed together as firmly as possible.

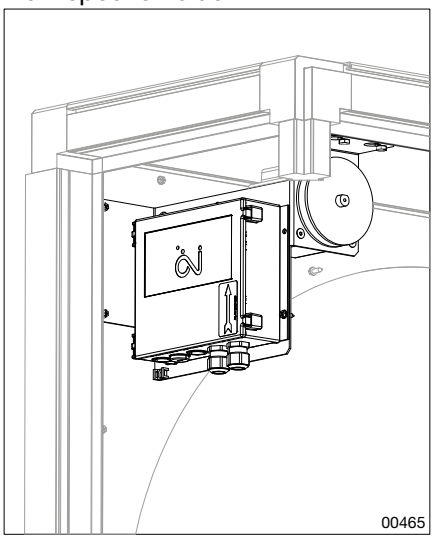


6. Connect power supply and control functions according to connection instructions.

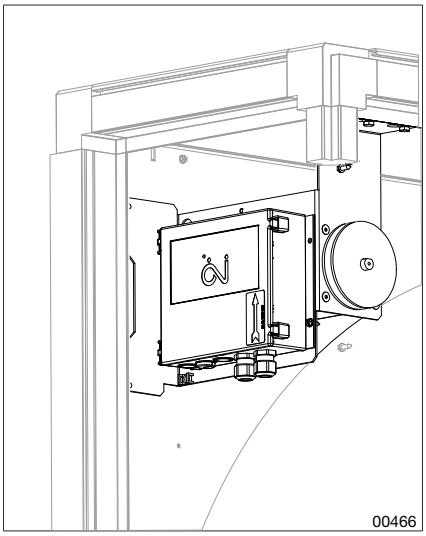
3.2 OJ thermal wheel drive for Envistar Flex and Flexomix

1. Remove the old thermal wheel drive.
2. Make sure the thermal wheel compartment is clean.
3. Mark the mounting position of the motor bracket and remove any obstructing screws. Dimensions and placement vary depending on the size of the thermal wheel.

EXR 060-360
Screw the bracket to the roof and the gable plate, as close as possible to the profiles on the inspection side.



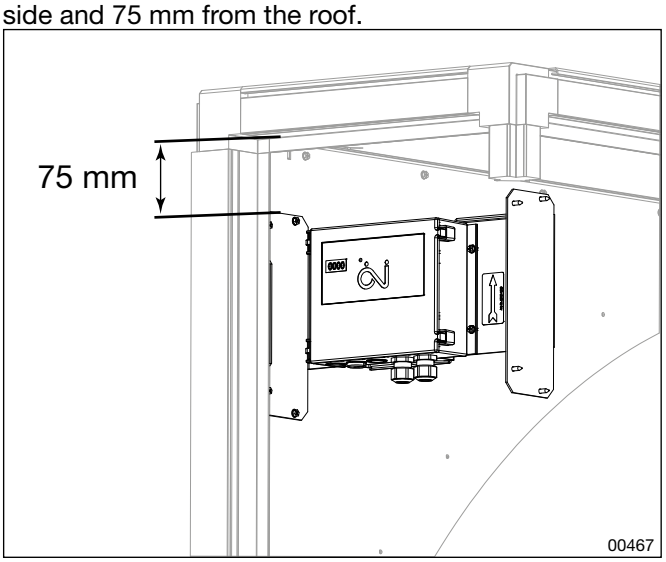
Assembly for EXR 060-100



Assembly for EXR 150-360

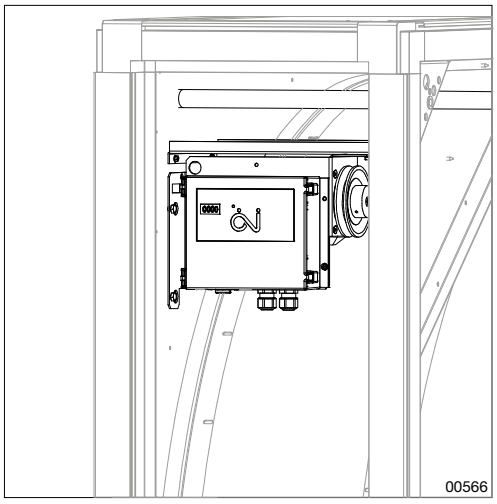
EXR 400-600

Screw the bracket to the gable plate, as close as possible to the profiles on the inspection side and 75 mm from the roof.

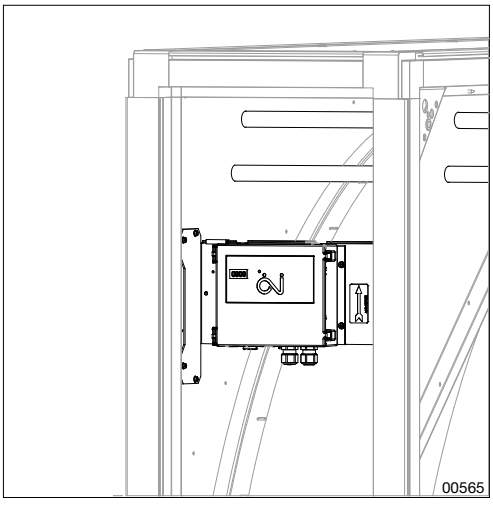


ECR/ACR 100-600

Position the bracket in an appropriate place between the gable plates, as close as possible to the inspection side. Make sure there is a space between pulley/mounted belt and roof/pipe.

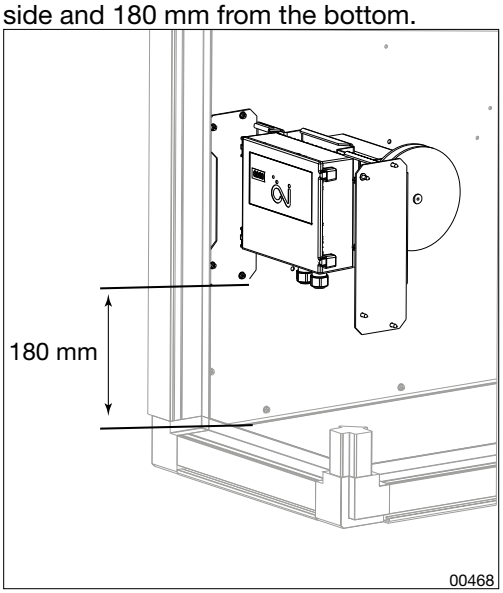


Assembly for ECR/ACR 100-360

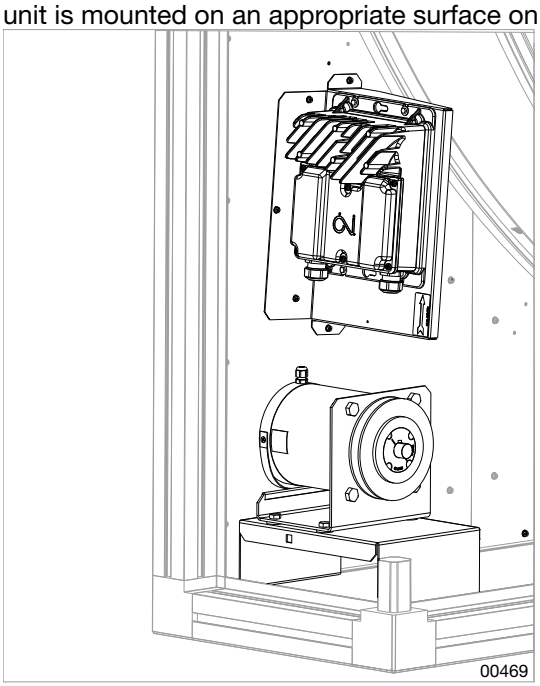


Assembly for ECR/ACR 480-600

EXR 740-980
Screw the bracket to the gable plate, as close as possible to the profiles on the inspection side and 180 mm from the bottom.

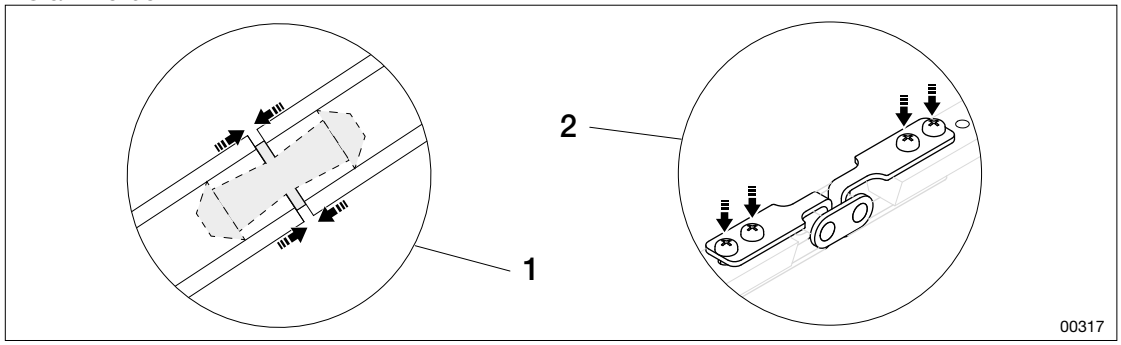


EXR 1080-1580
Screw the bracket onto the bottom, facing the inspection side. The bracket with control unit is mounted on an appropriate surface on the left side.



4. Measure the length of the supplied round belt according to the instructions in section. *"4 CALCULATE THE LENGTH OF THE THERMAL WHEEL BELT", page 14*

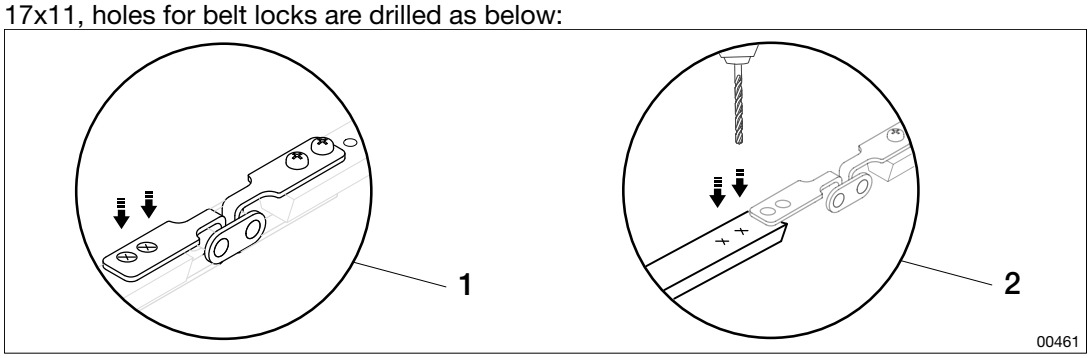
5. Install the belt:



1. Cross-section of round belt with pin

2. V-belt with v-belt lock

- **Round belt:** Press the round belt over the cones on the supplied pin. Make sure the belt splice is aligned with the centre of the pin and compressed as tightly as possible.
- **V-belt:** Screw the supplied V-belt lock onto the new V-belt. For V-belt 13x8 and 17x11, holes for belt locks are drilled as below:



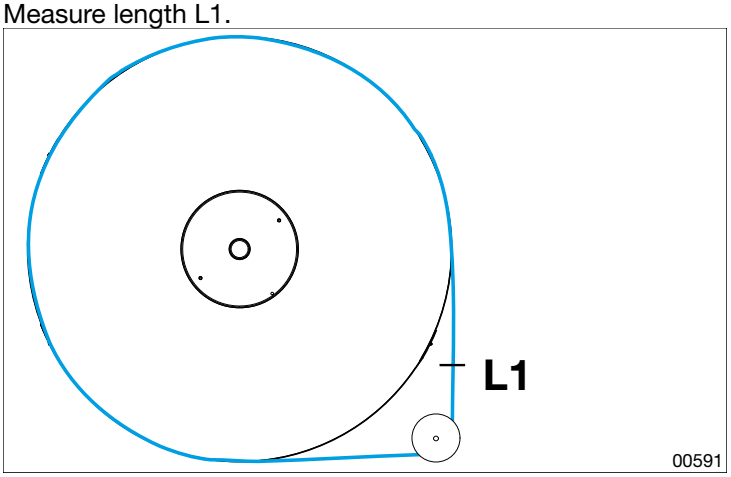
1. Mark location for drilling

2. Drill with 2,5 mm drill for 13x8
Drill with 3 mm drill for 17x11

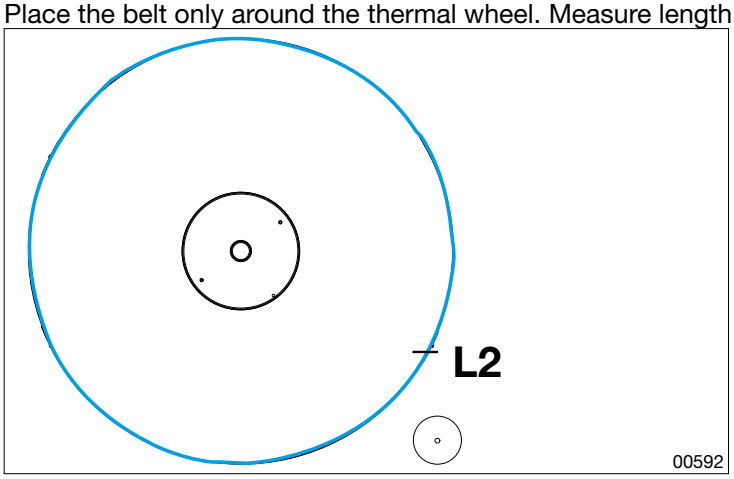
6. Connect power supply and control functions according to connection instructions.

4 CALCULATE THE LENGTH OF THE THERMAL WHEEL BELT

1. Place the belt around the thermal wheel and thermal wheel drive.
2. Measure length L1.

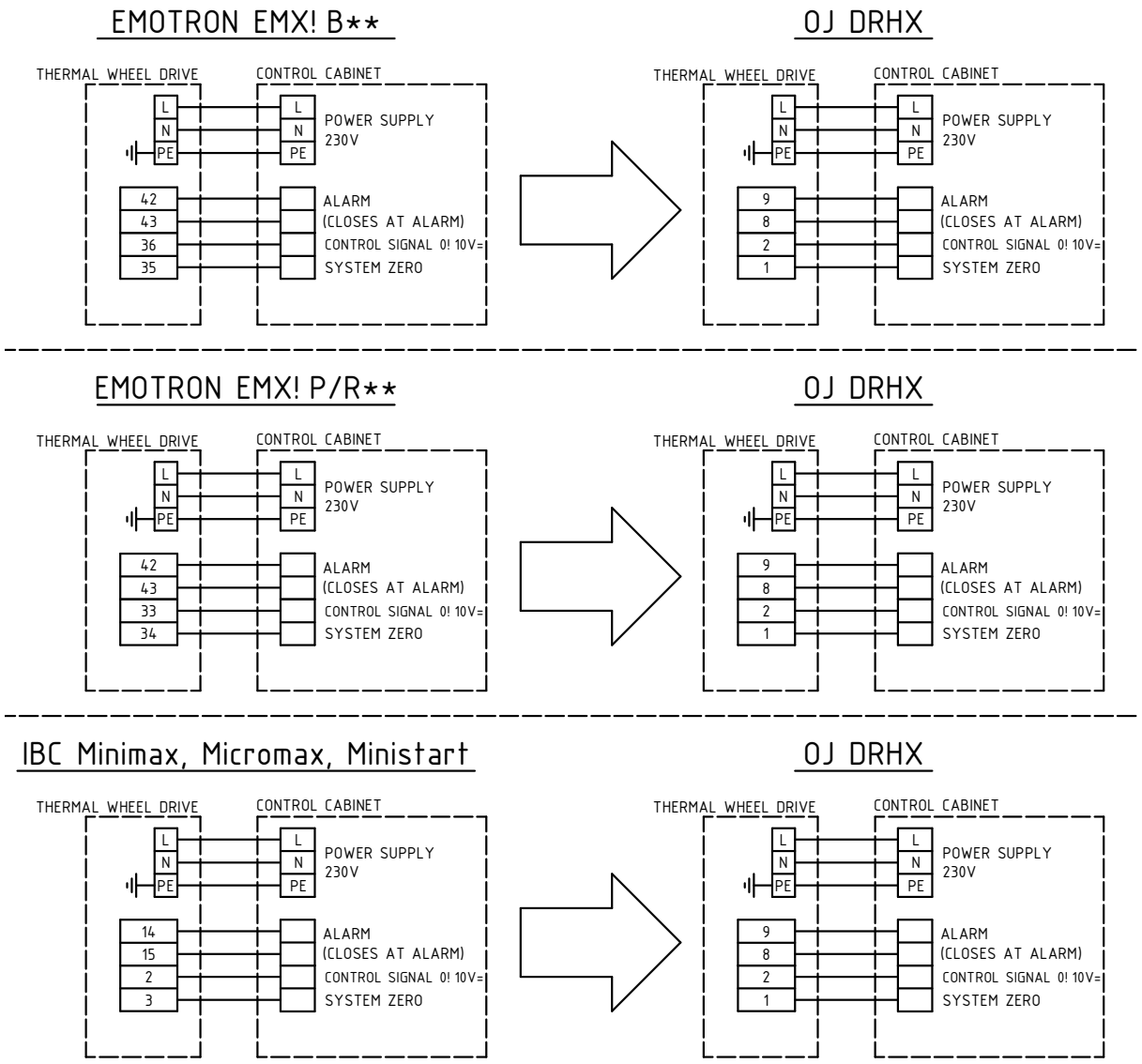


3. Place the belt only around the thermal wheel. Measure length L2.



4. Calculate the length to be cut according to: L1 x 0.97. **NB!** The calculated length must be greater than L2. Otherwise, the cutting length should be the same as L2.
5. Cut the belt to the estimated length.

5 CONNECTION INSTRUCTIONS FOR OJ THERMAL WHEEL DRIVE



Feel free to contact us

IV Produkt AB, Sjöuddevägen 7, S-350 43 VÄXJÖ
+46 470 – 75 88 00
www.ivprodukt.se, www.ivprodukt.com
www.ivprodukt.no, www.ivprodukt.dk, www.ivprodukt.de

Support:

Control: +46 470 – 75 89 00, styr@ivprodukt.se
Service: +46 470 – 75 89 99, service@ivprodukt.se
Spare parts: +46 470 – 75 86 00, reservdelar@ivprodukt.se
DU/Documentation: +46 470 – 75 88 00, du@ivprodukt.se

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