

NORDroof

Installation, use and maintenance

Installation, user and maintenance manual

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1. General information

The detailed product information like dimensions and function is described in a product sheet of each specific roof hood or transition model. In this document we present illustrative images as examples of the installation process of these devices. Because each installation scenario is unique, ETS NORD cannot accept responsibility for any errors in the installation process or any subsequent damage.

1.1 Responsibilities of the parties

Following is an example for defining responsibilities in contract documents when installing NORDroof products. HVAC contractor is responsible for installation of the roof hoods and transitions as well as on-site implementation of the penetrating duct according to the ventilation plan.

Building contractor is responsible for the construction of the supporting structures as these are part of structural design and ventilation plan. It also includes making required holes in the structures as well as enclosing the penetration in a "flue" made of building materials. All the structural and penetration pieces need to be water-proofed before the surfaces are finished.

Structural designer is responsible for the design of the supporting structure constructions, attachment of these structures as well as surface finishes and waterproofing solutions. Designer must provide all related drawings.

HVAC designer is responsible for selecting and implementing the penetration elements, with a correct size, joints and distance from the roof surface. Solutions must take into account thermal, sound or fire insulation and mechanical strength requirements as well as removal of the water that might enter the system.

1.2 Recommendations for product installation

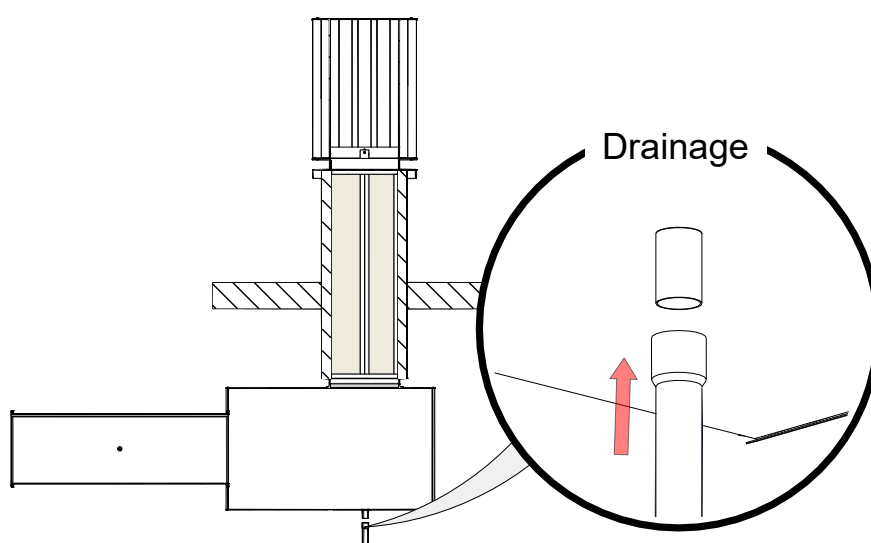
ETS NORD recommends to use rain-plate joint (KL) as a roof hood connection. In each case the size and weight of the product must be observed when determining the method of installation.

Standard joint solutions for NORDroof products are described in each product sheet.

In extreme conditions it is recommended to attach the roof hood with extra cables.

It is important to add a waterproof chamber to the ductwork below transition for collecting any water that may enter the duct. From the bottom of the chamber, the water must be drained into the sewer.

The roof covering (Metal sheet / Bitumen etc) must be installed in accordance with the roof covering manufacturer's instructions.

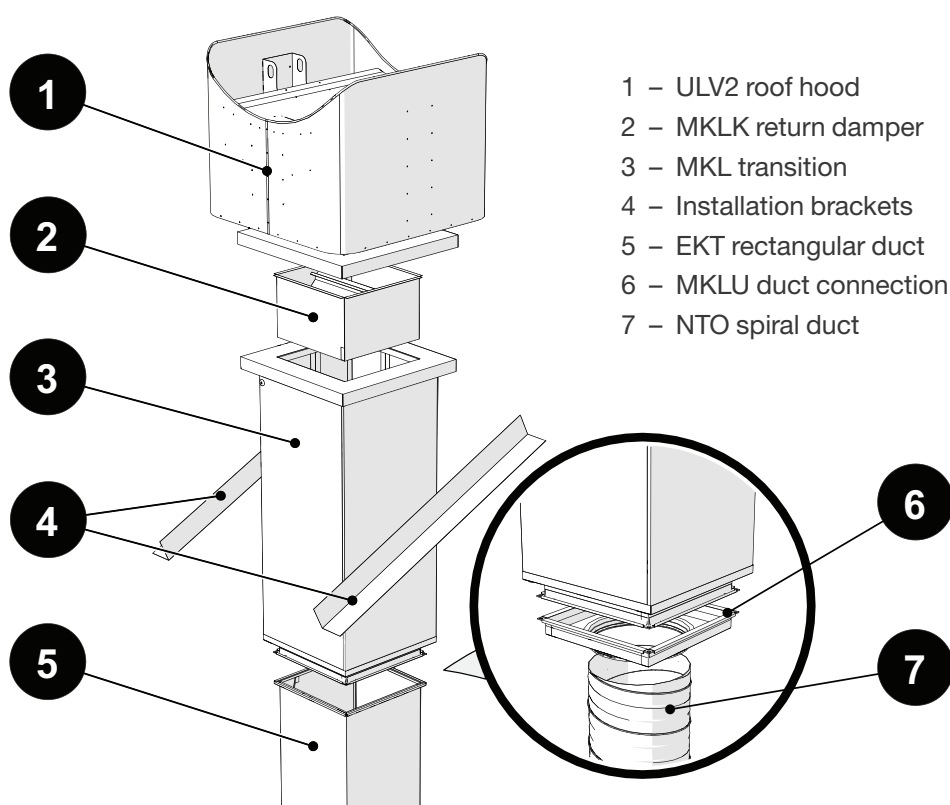


2. Following must be considered with all installation methods

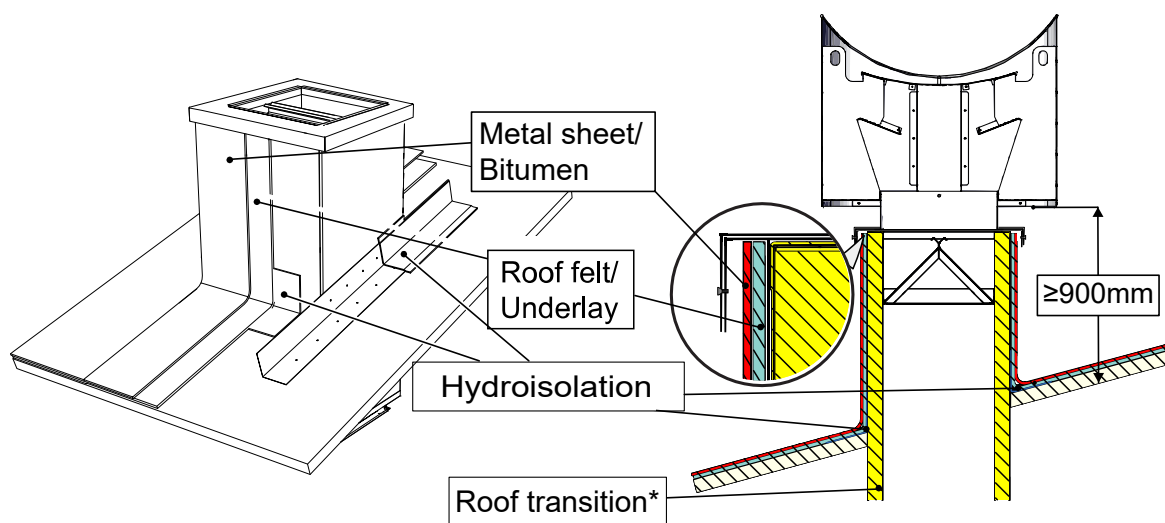
NB! For correct installation, consult local building regulations.

- The space between the roof hood and roof surface is usually determined by the local building regulations. For example in Finland it has to be at least 900mm above the roof surface. This means that MKL roof transition has to extend min 700mm above the surface to use NORDroof hoods.
- Fireproofing requirements are also determined by the local building regulations. For example in Finland the fire insulation must extend at least 300mm above the roof surface.
- When using rubber seals, an extra sealant must be used on duct joints.
- All fasteners used during the installation of roof transition and hoods must comply to environmental class C4.
- Resistance for diffusion must be ensured.
- For watertight duct joints, joint sealant must be used.

3. MKL Roof transition installation examples



3.1 Pitched-roof installation as an example



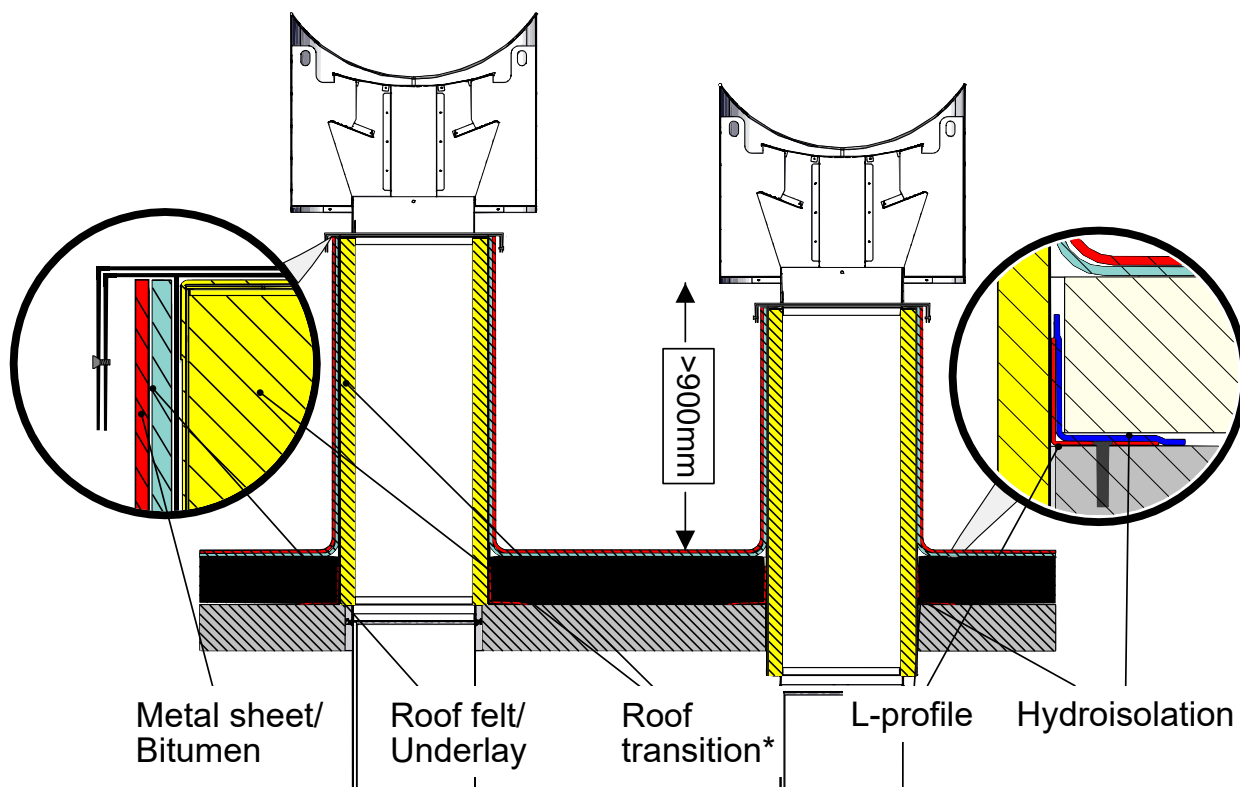
* Roof transitions are produced with 50 or 100mm insulation, depending on the product order.

3.2 Example placement on a flat roof

The roof covering (Metal sheet / Bitumen etc.) must be installed in accordance with the roof covering manufacturer's instructions.

The minimum height turned up edge of the rolled roof covering material on flat roofs is 300mm.

Roof covering must be properly secured with additional pressure plates. To ensure the water tightness the roof covering and any additional elements must be properly sealed.



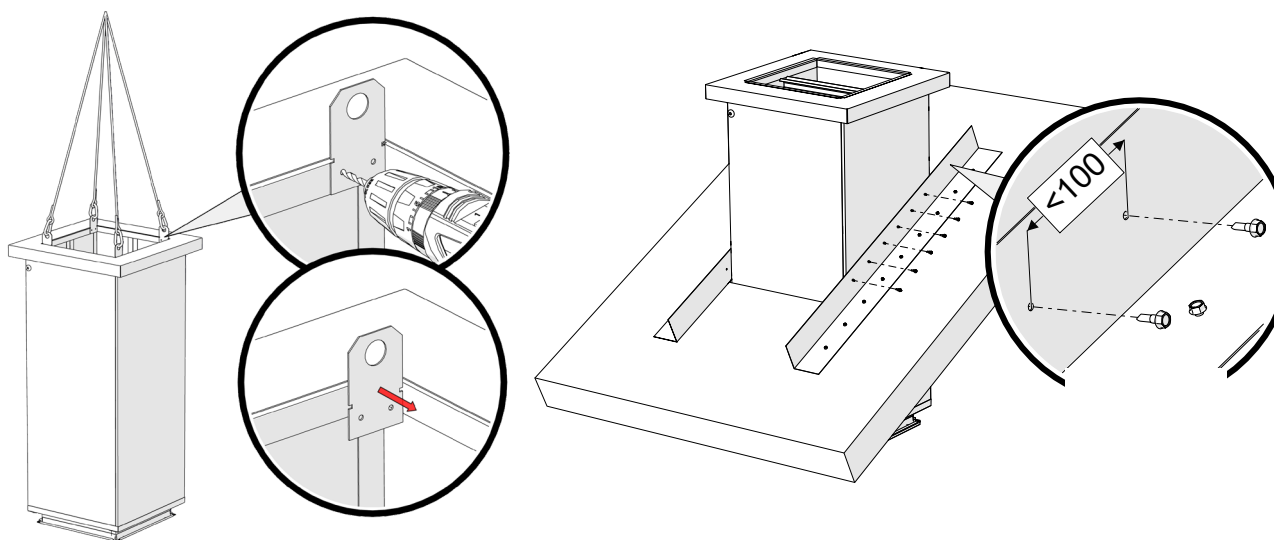
* Roof transitions are produced with 50 or 100mm insulation, depending on the product order.

3.3 MKL handling and installation

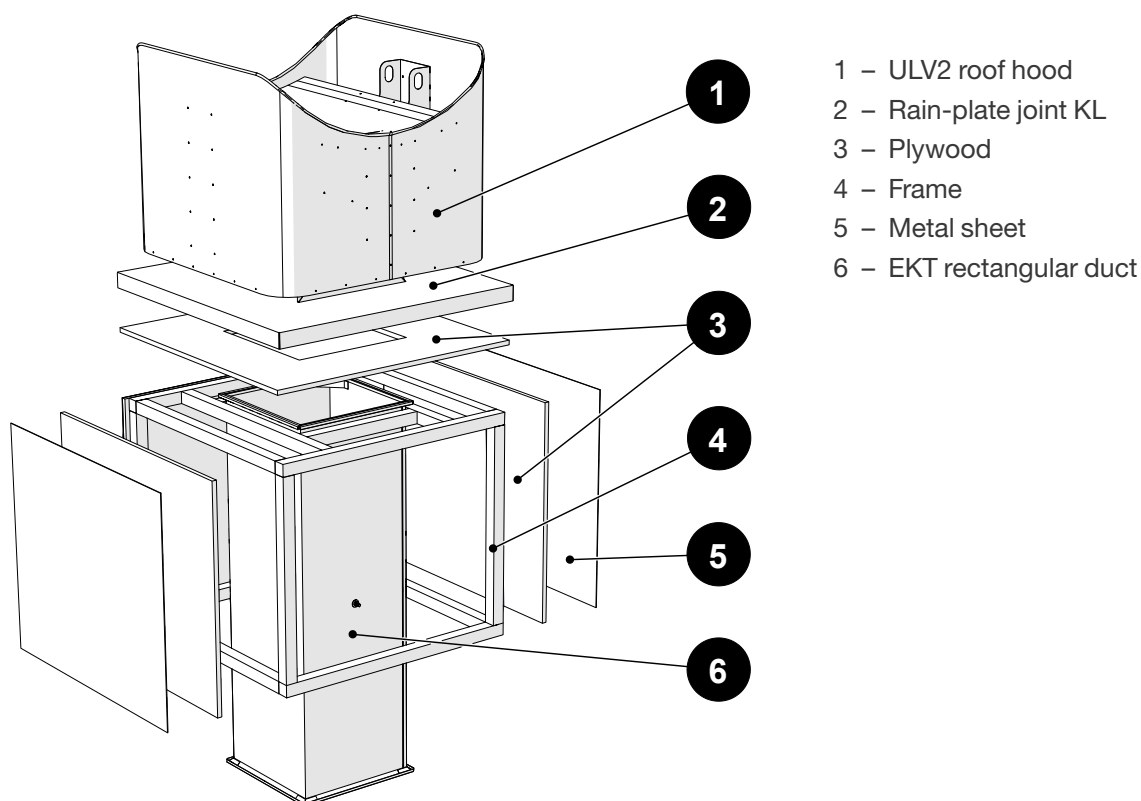
From the size 800×800 mm, the transition is equipped with lifting hooks. These must be removed after lifting and before installing the roof hood.

NB! Lift only one roof transition at time.
Check before lifting that the lifting hooks are well installed.

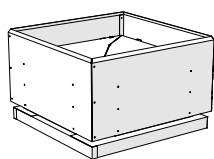
The roof transition is fixed to a load-bearing roof structure with L-profiles. These profiles are supplied with the product. The installation and fastening of the translation is solved by the designer. Building contractor makes the necessary holes in the roof structure and waterproofs the installation.



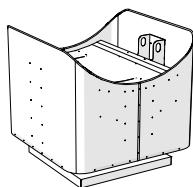
3.4 Example of a custom roof transition design



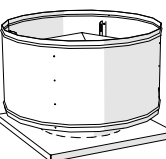
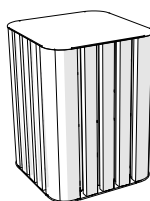
1. Installation roof hoods with rectangular, rain-plate joint (KL) connection



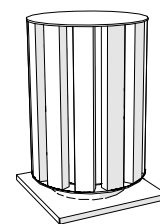
UVK / UVKI



ULV2K / ULV / ULK / ULKI

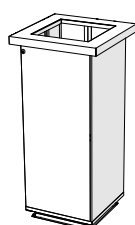


UVE-KL

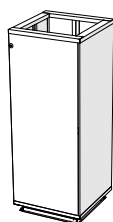


ULS-KL

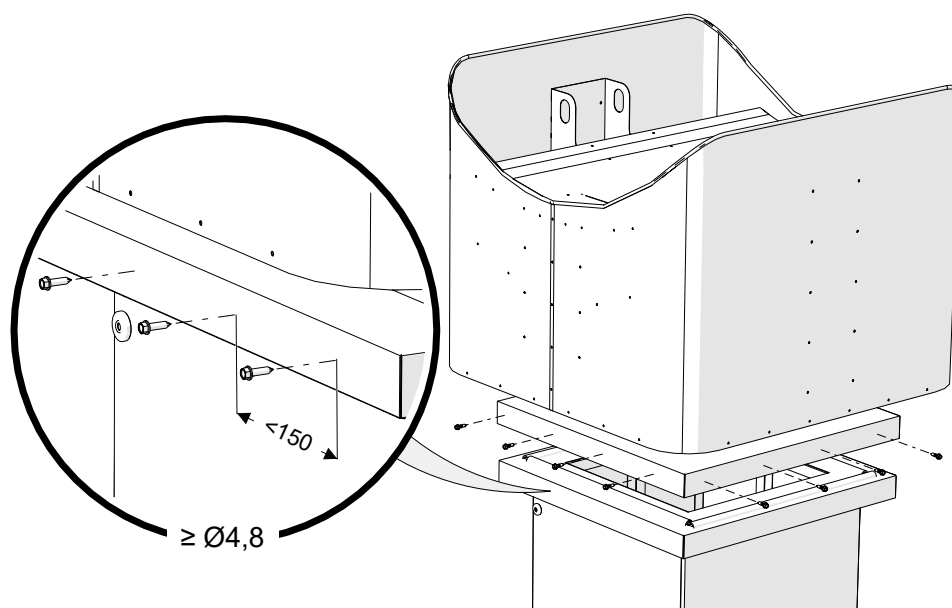
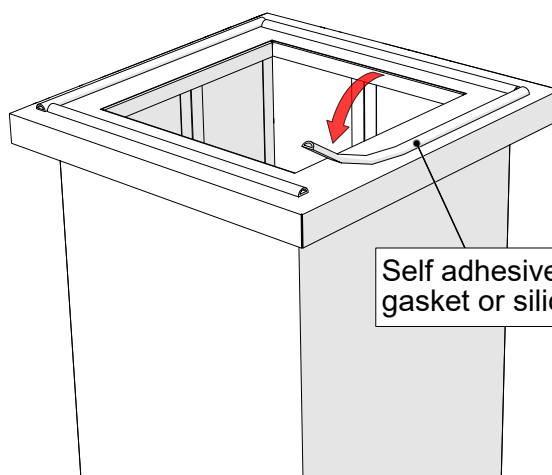
3.5 Installation to the MKL roof transition



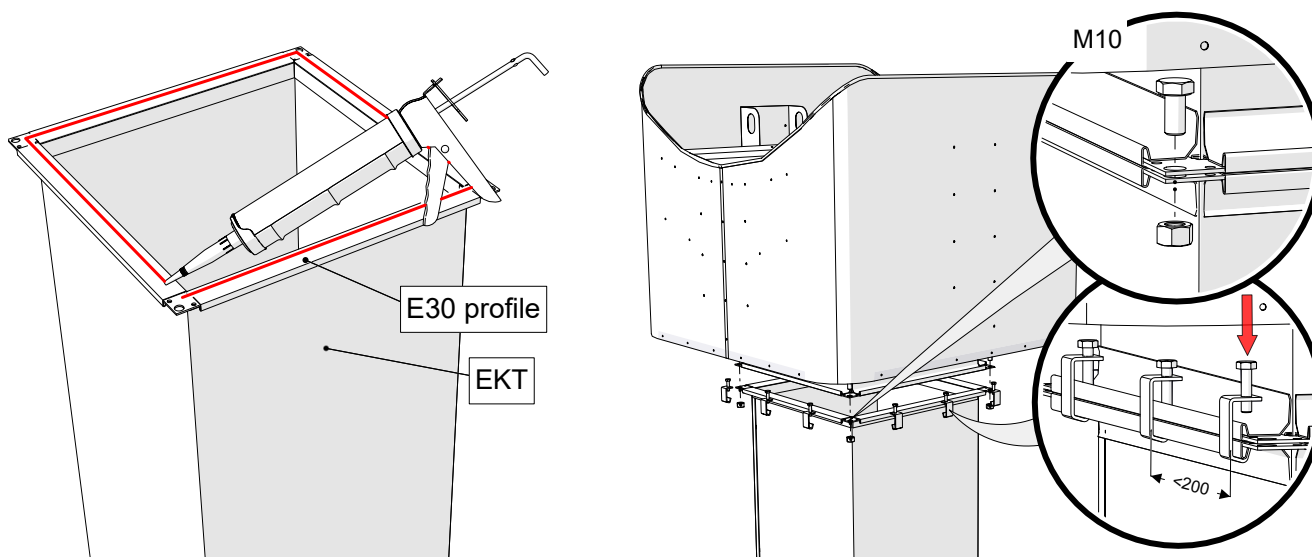
MKL-KL



MKL

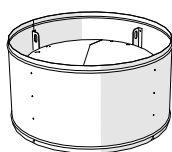


3.6 Installation with E30 flange connection

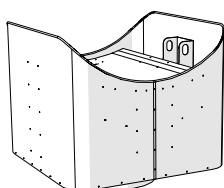


4. Installing roof hoods with round connection

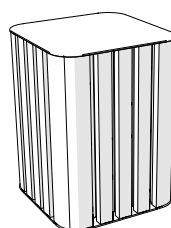
NB! For the best results we recommend to order roof hoods with RAIN-PLATE joint (KL). For this, KL- AxB must be added when ordering.



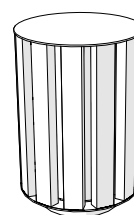
UVE



ULV2

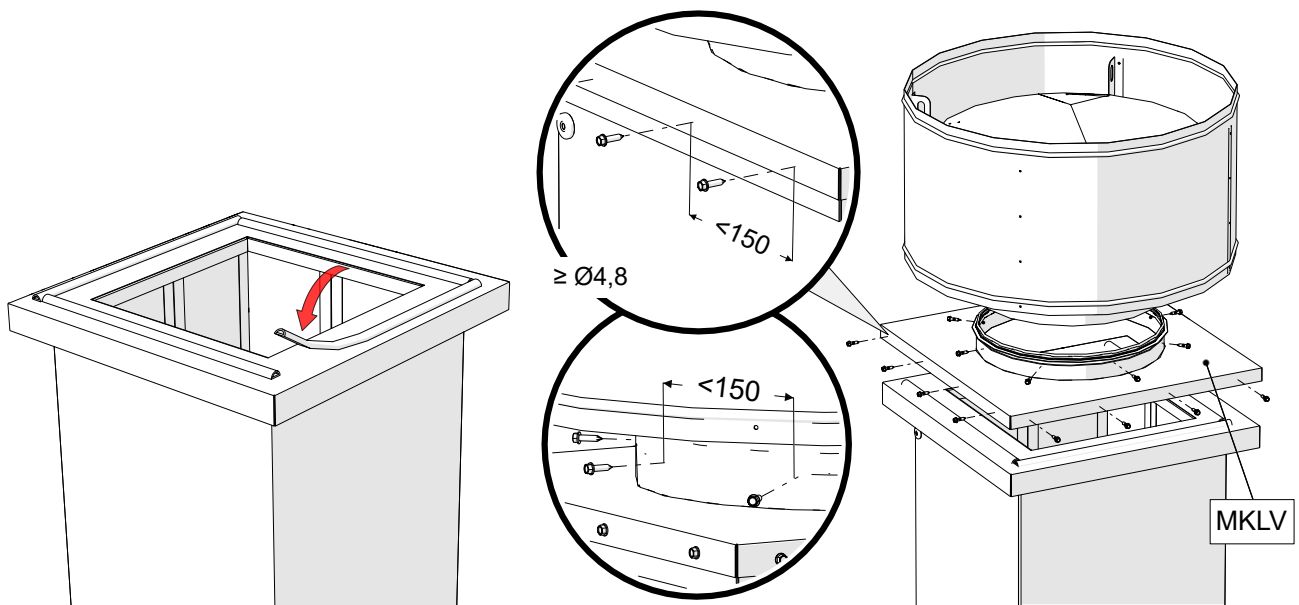


URS



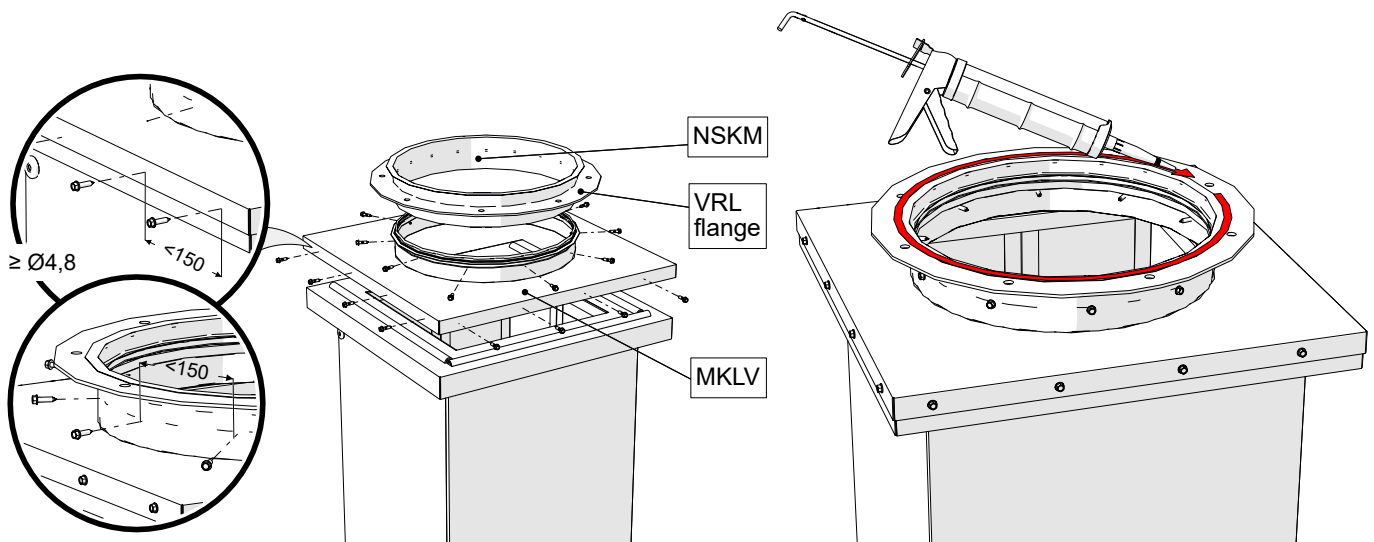
ULS

4.1 Installation with MKLV connection

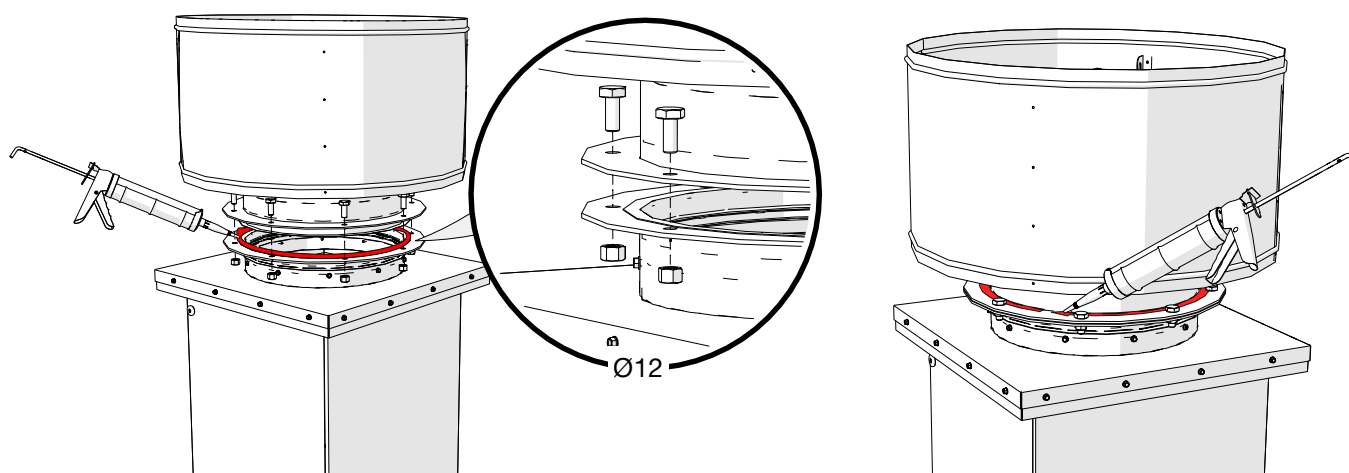


4.2 Round flange connection (from dimension Ø 500 mm)

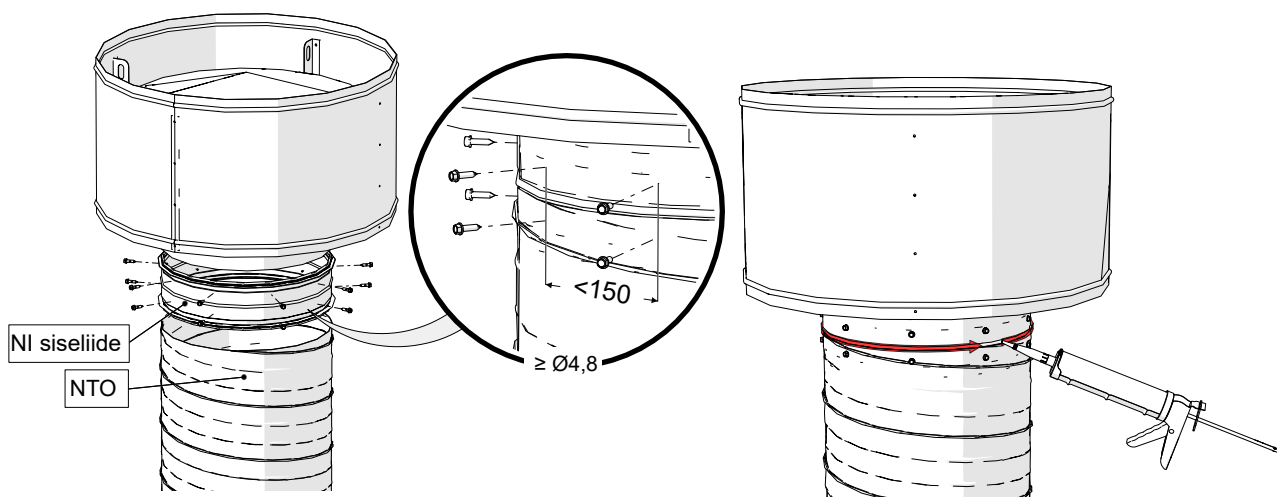
Fitting the MKLV with VRL flange and NSKM take-off



Connecting and waterproofing the VRL flange joint

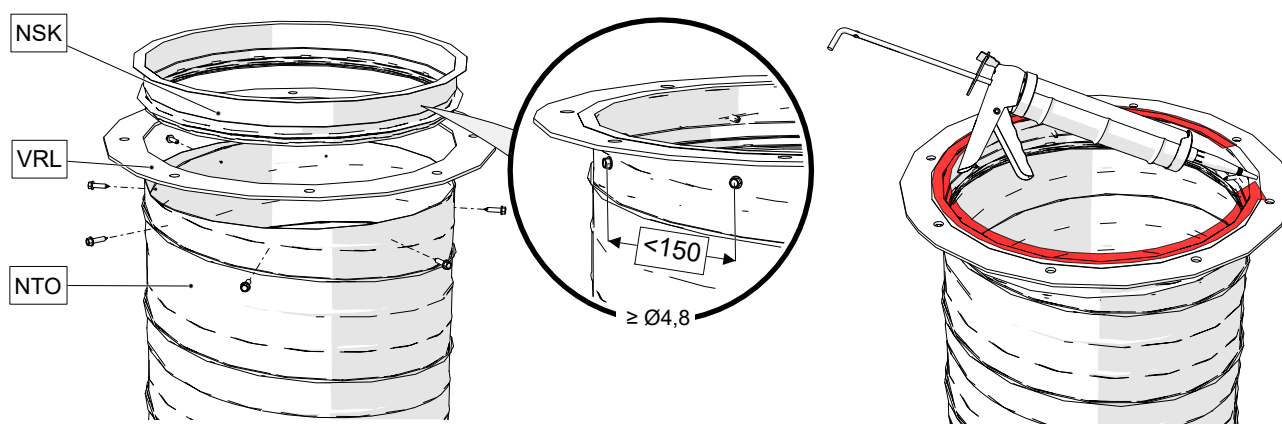


4.3 Round connection with rubber gasket

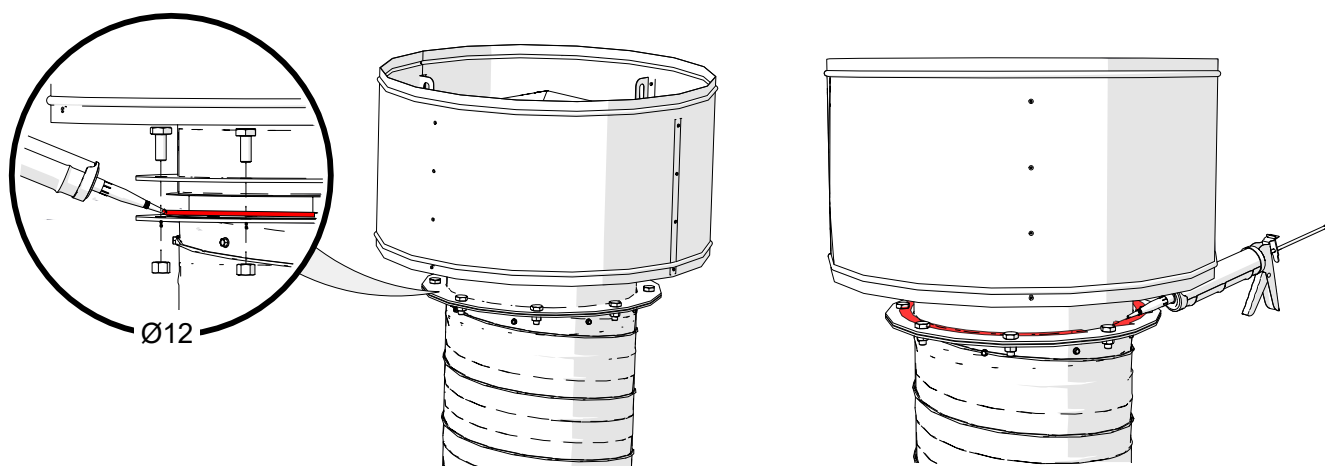


4.4 Round duct connection with VRL flange (from dimensions Ø 500mm)

Fitting VRL flange and NSKM take-off



Connecting and waterproofing the VRL flange joint



5. Maintenance

Check the condition of roof hood once a year and clean if necessary
When cleaning - chemical cleaners, abrasives and steel brush that could damage the material should be avoided.

Maintenance check:

- Check the joints and, if necessary, seal with sealant.
- When rust occurs, remove the visible rust with wire brush until it is smooth and free of defects and paint it with zinc aerosol.
- Ensure that foreign objects do not interfere the outlet openings.

NB! Depending on the weather conditions, there is always a risk that under extreme conditions rainfall can be accessed in the ventilation duct. For best result and extremely difficult conditions there should be a chamber with drainage after the roof hood that slows down air speed. This causes snow to fall to the bottom of the chamber where it will melt and drain away. This prevents the snow from getting into the supply air filters of the AHU.



ETS NORD AS

Address: Peterburi tee 53
11415 Tallinn
Estonia

Phone: +372 680 7360
info@etsnord.ee
www.etsnord.ee

ETS NORD Finland

Address: Pakkasraitti 4
04360 Tuusula
Finland

Phone: +358 401 842 842
info@etsnord.fi
www.etsnord.fi

ETS NORD Sweden

Address: Järsjögatan 7
69235 Kumla
Sweden

Phone: +46 19 554 20 50

Address: Pinjegatan 5
21363 Malmö
Sweden

Phone: +46 40-94 68 70

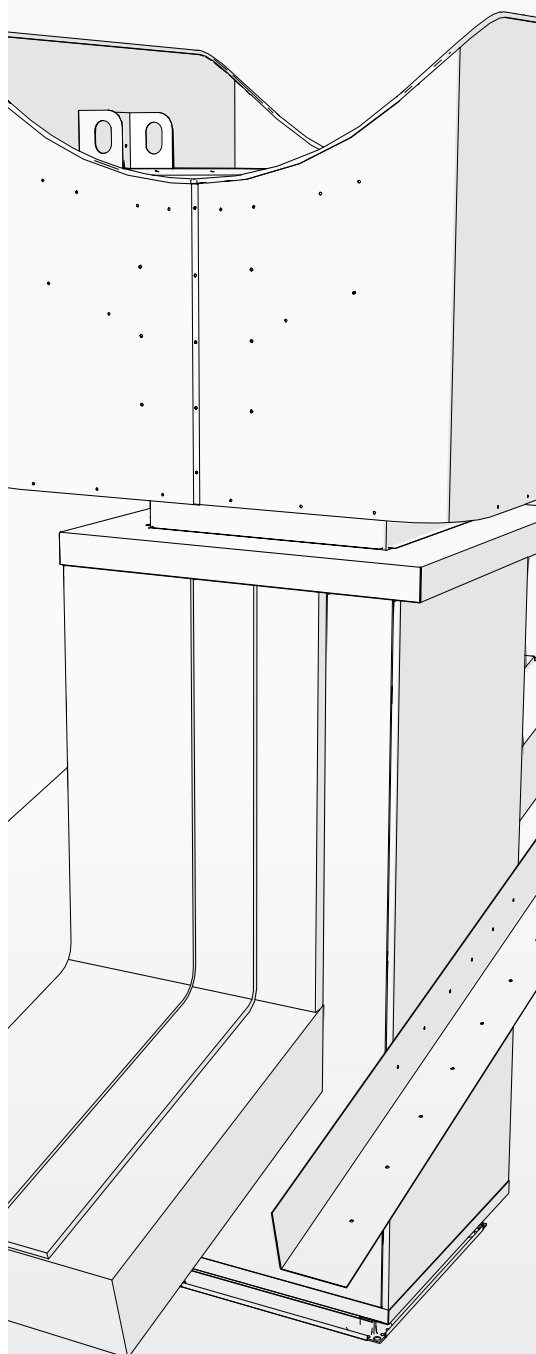
Address: Förrådsvägen 5
151 58 Södertälje
Sweden

Phone: +46 8 550 301 40

info@etsnord.se
www.etsnord.se

ETS NORD International

info@etsnord.com
www.etsnord.com



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