



NORDsmoke

Rectangular smoke extraction ducts

Installation instruction

General

NORDsmoke smoke control system ducts are designed for exhausting smoke and hot gasses from buildings. NORDsmoke ducts are in accordance with EN 12101-7 standard.

The steel duct is constructed in sections of galvanised steel sheet. Segments of rectangular ducts connected by flanges height 30 mm.

Use a heat proof mastic sealant or heat-resistant tape between the flanges to seal the duct joints. Flanges of the rectangular duct have to be fastened together with M8 bolt steel clamps and with M10 bolts in the duct corners.

Declaration of performance:

The system is CE marked with the Certificate of Constancy of Performance Rectangular single compartment smoke extraction duct with No. 1391-CPR-2015/0096.

Installation shall meet or exceed all applicable federal and local requirements, referenced standards and conform to codes and ordinances of authorities having jurisdiction.

1. Preparation

- Before you start installation, check and make sure that the ducts can be installed according to the drawings.
- Use undamaged parts only.
- Follow the installation instructions.
- Installing the fastening clamps requires space on each side of the duct.

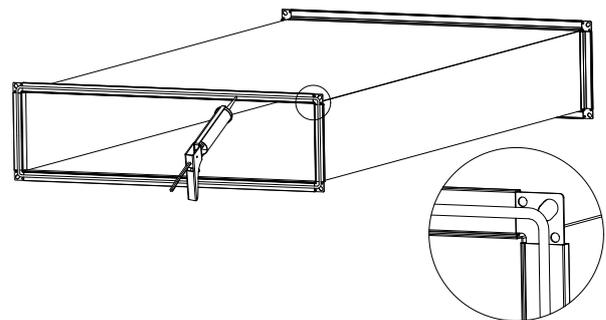
2. Assembly of ducts and parts

4-bolt connection system with an external bead for the easy installation of clamps.

2.1 For tightening between different parts there is two options:

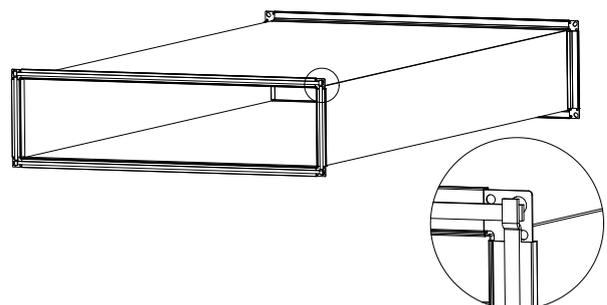
Tightening with Firestop silicone

The profile surface must be clean and dry. Sealant has to be applied along the entire length of the inner edge of the connection profile. Special caution is necessary in the corner piece areas.



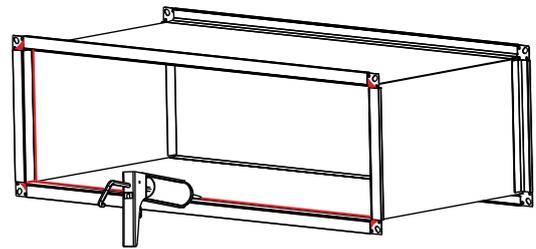
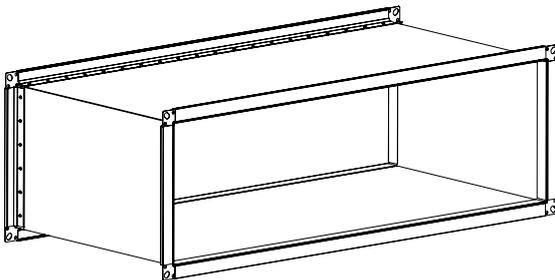
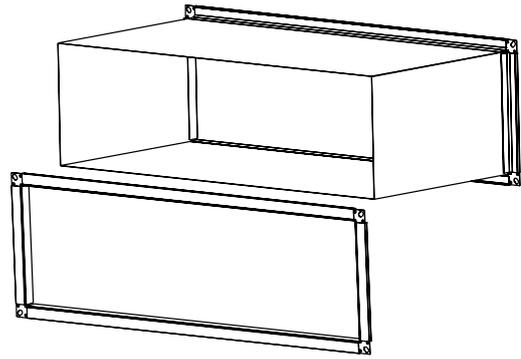
Tightening with ceramic gasket:

First make sure that the profile surface is clean and dry. Apply the ceramic gasket (15x4) to the inner edge of the connection profile. The gaskets must cross over each other. The gasket is to be applied both surfaces joined together.

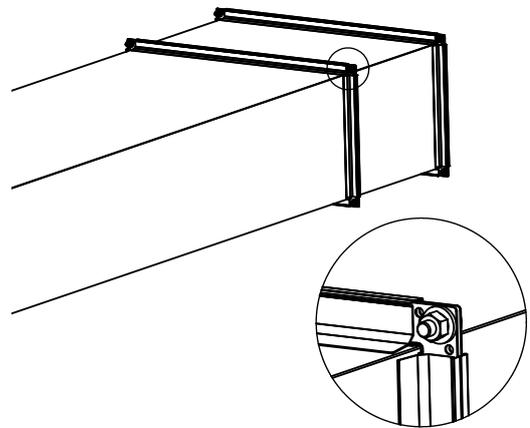


2.2 Cutting the duct to the required length on the job site.

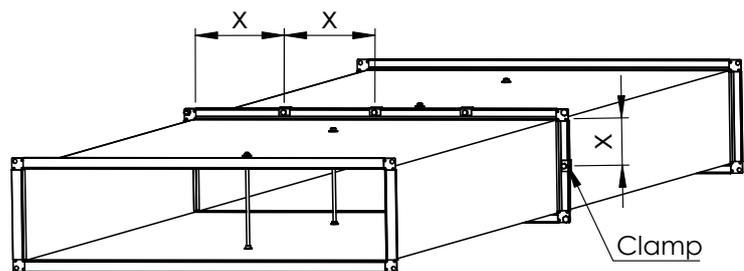
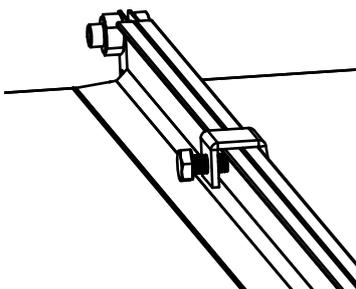
- Cut the duct to the required length.
- Install the loose frame to the duct..
- Fasten the frame tightly using closing blind rivets or screws.
- Distance between fasteners is maximum 50 mm.
- Apply the Firestop silicone on the entire perimeter of the connecting flange and on the corners.
- Seal the corner area and entire perimeter of the profile frame on the inside carefully with Firestop Silicone.



2.3 Press the ends together and fix the corners with the M10 bolt and nut.



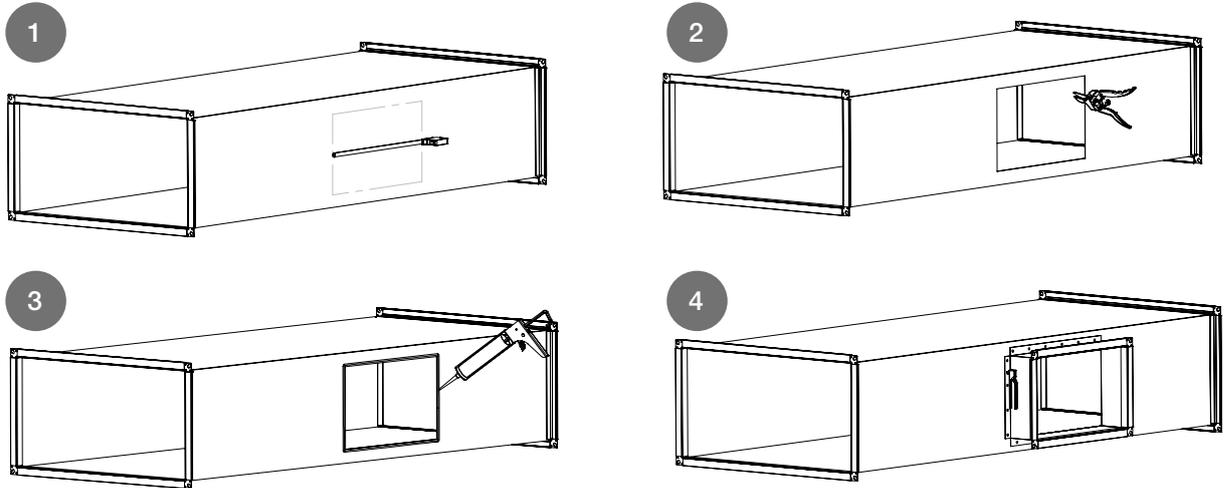
2.4 Assemble the CM fixing clamp over the profile bead and tighten the bolt. Avoid over-tightening the bolt, since this could deform either the profile or the clamp. To reach air tightness a maximum distance 200 mm between the clamps is allowed but at least one clamp per duct side. If the side length is less than 400 mm, at least one clamp must be use.



X = max 200 mm

2.5 If additional components on the side of the ducts are used.

1. Measure and mark the opening dimensions
2. Cut the opening
3. Seal the entire perimeter of the opening with Firestop Silicone.
4. Fix the part onto the duct with blind steel rivets (3,2x8 mm). The distance between rivets must not exceed 100 mm.

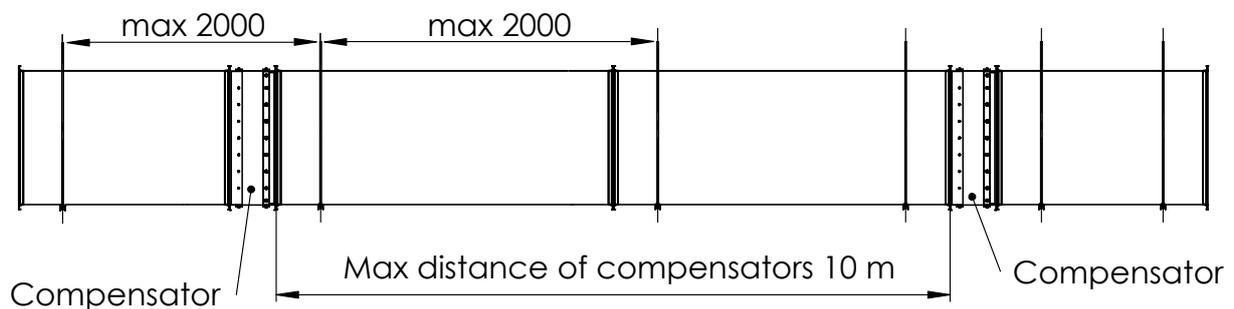


3. Duct hangers and supports

The duct supports shall be able to carry ducts as well as additional external loads, especially those that arise at the time of the maintenance, repair and construction work.

For the support and fastening of rectangular horizontal duct you have to use steel hangers, threaded rods M8, a hanger U-profile or L-profile and hexagonal nuts and washers.

- Install supports as close to the duct connections as possible. Between the two supports can be only one duct connection.
- Place the ducts on the hangers and adjust mounting height correctly.



Vertical installation

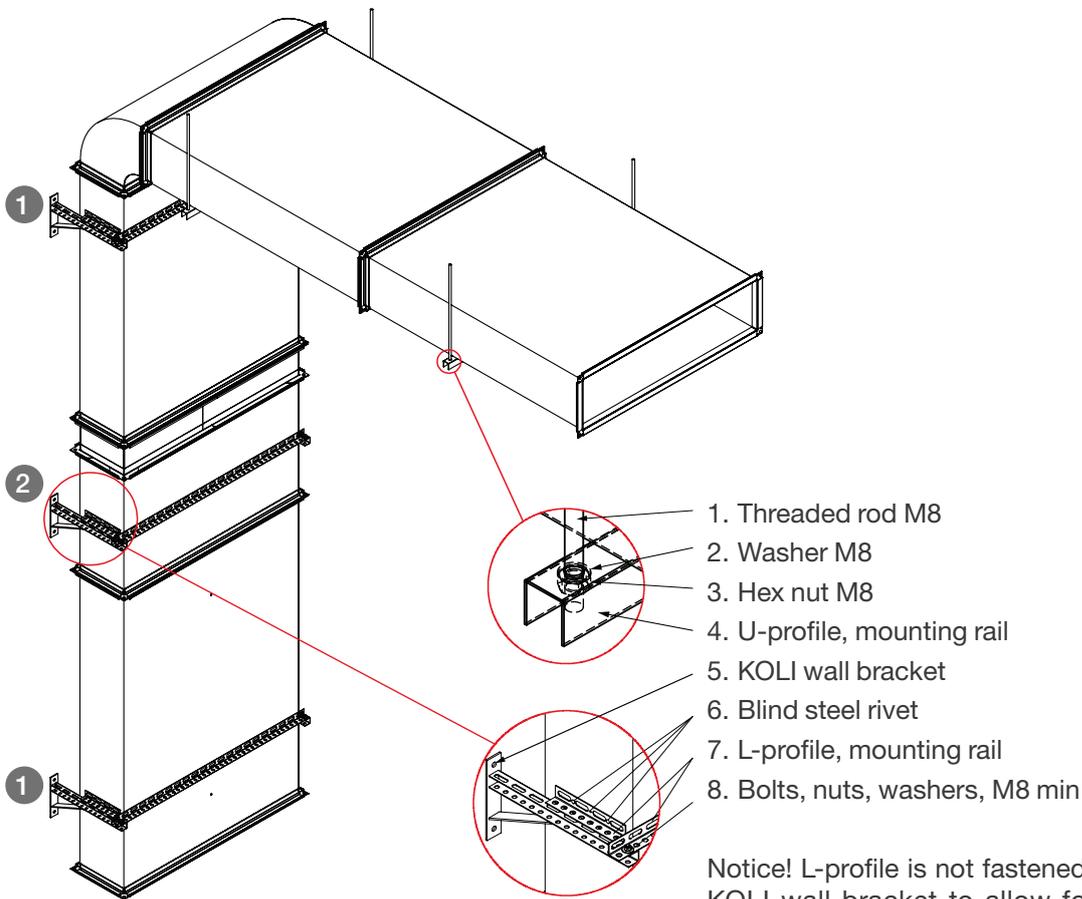
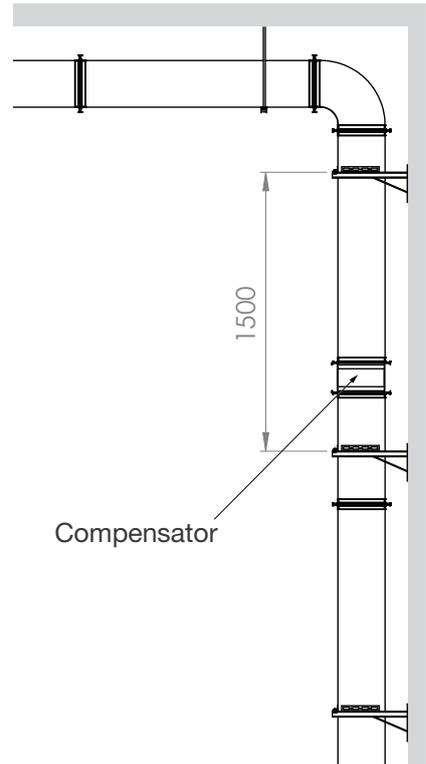
The vertical ventilation duct system shall be suspended with recommended hinge material according to construction conditions, corrosion and fire resistance requirements and a particular system weight.

In the vertical installation used supporting materials:

1. wall bracket KOLI
2. mounting rail, L-profile
3. fixing bracket
4. bolts, nuts, washers, M8 min

Before the installation of compensator remove for the transport pre-installed threaded rods.

The compensator must be installed so that it is fully elongated and distance between two compensator is to be maximum of 10 m.



Notice! L-profile is not fastened to the KOLI wall bracket to allow for duct movement during heat expansion.

The ducts have to be fixed with an L-profile at the lowest point and at the support point following each compensator, in addition to the duct, also to the wall brackets (fixed support ①). The duct is not fixed to the wall brackets between designated fixed support points ①. L-profiles lie freely on these support brackets (unfixed support ②), allowing the duct to move as a result of thermal expansion.

Drill holes for the rivets in the L-profile in one line and fix with steel rivets (Blind Rivet ST/ST DOME CLOSED FBZD3,2x8Z) to the duct. In case of fixed support ①, fix the L-profile to the wall bracket with bolts and nuts.

To prevent the entire weight from being temporarily borne by the very first support point, the L-profiles must be attached to the duct at the same time as the brackets are installed, according to the increase in duct height.

Maintenance

Ventilation systems should be cleaned regularly from dust and residues accumulated in the the ductwork. Cleaning has to be done on a regular basis and is the responsibility of the property owner. The interval of the cleanings is determined by national regulations and fire safety requirements.

To clean the ventilation ducts there must be maintenance doors in appropriate locations. Locations of maintenance doors must be chosen so that the cleaning work can be done easily and safely.



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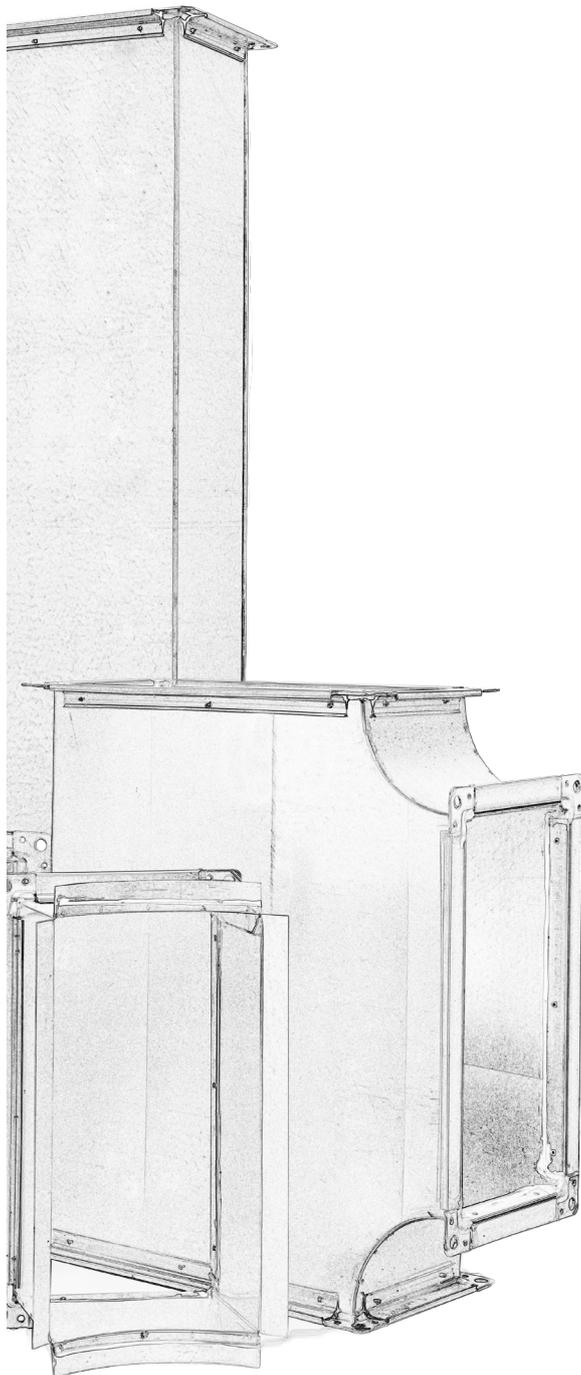
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Let's move the air together!