VENT installation instructions

Type approval no.: 1666/78

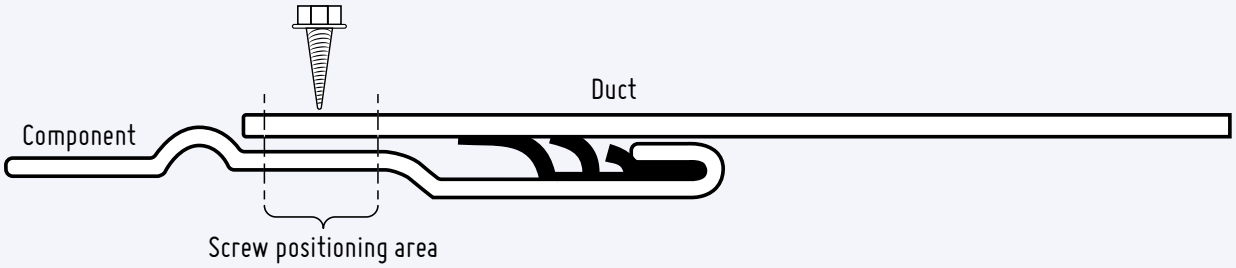
The VENT duct system is approved to airtightness class D when installed in accordance with these instructions. For the approval to remain valid, all components must be manufactured in accordance with type approval certificate 1666/78 and must be marked. The marking must include the logo, locality/county, type approval symbol (fork mark), certification body and control number.

Components without approval markings may only be used to a limited extent and must be installed under special supervision by the site supervisor. Exemptions from the requirement for a control mark are normally permitted for connection components for supply and extract air terminals, terminal units and components used to accommodate the building structure. Note that such components should normally be excluded from any pressure testing of the duct system.



Installation

- Check that the material has no damage that could affect the airtightness of the completed duct system. Damaged components must not be used. Pay particular attention to the sealing ring and the roundness of each component.
- Cut the duct square. Preferably use a stationary cutting machine to ensure a square cut. Thoroughly remove any burrs left by cutting.
- Where possible, assemble suitable sections on the floor. Ducts and components are most easily joined by slightly twisting the component during insertion. Insert components up to the stop bead. During assembly, check that the sealing lips project straight outwards. If assembly on the floor is not possible, use the same procedure directly at the installation location.



Then secure the joints using approved fasteners in accordance with the table on the right to achieve sufficient airtightness. More fasteners than specified are often required to achieve sufficient strength. Use sharp-pointed sheet metal screws, screws with a reduced drill point, or pressure-tight blind rivets. Note that local authorities may specify which type of fastener must be used.

Diameter Ø	Minimum number of fasteners per joint
63 – 160	3
200 – 315	4
400 – 500	5
630	6
800 – 1000	8
1250	10

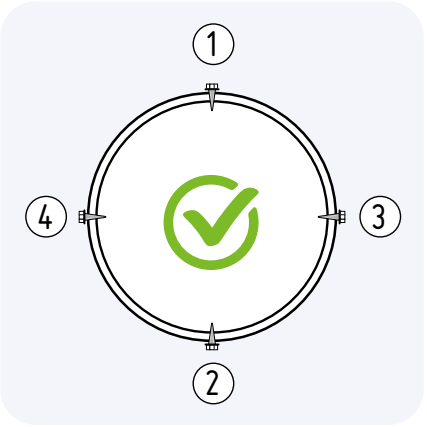
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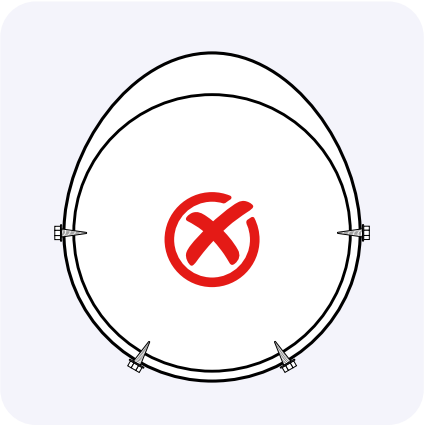
Securing the joints

Space the fasteners evenly around the duct. Take particular care to keep the gap between the duct and the component as uniform and as small as possible by inserting the screws in the 12-6-3-9 o'clock sequence. Failure to follow this "clock-face sequence" may result in an out-of-round joint and significant air leakage. See the illustrations on the right.

Take particular care not to position fasteners so close to the sealing ring that it could be damaged. On components that will be reused, thoroughly seal all holes left by measurements and by removed screws or blind rivets.



"Clock-face sequence"



"Out-of-round joint"

Important

The ventilation duct system must be installed correctly so that it remains securely in place and can withstand its weight and any exposure to fire. Correct installation is also essential to prevent leakage from the system.

We comply with the applicable requirements of Swedish building legislation and relevant regulations issued by Boverket, the Swedish National Board of Housing, Building and Planning. The system must be installed in accordance with SS-EN 12236:2002, Ventilation for buildings – Ductwork hangers and supports – Requirements for strength. Air handling installations must be positioned, designed, anchored and suspended so that the building's required load-bearing capacity, stability, fire protection and protection against the spread of fire and fire gases are not compromised. The specified fire safety functions must be maintained after installation.

Suspension

The suspension system must allow components such as silencers to be removed for cleaning or replacement without damaging either the components or the ducts.

Suspension systems for circular ducts – Fixing spacing for uninsulated and thermally insulated ducts must be determined based on the strength of the suspension system in accordance with SS-EN 12236:2002* (the standard does not cover fire protection or fire safety requirements). For ventilation ducts that do not form part of the building's protection against the spread of fire and fire gases, the suspension system must provide a load-bearing capacity of at least R = 10 min. at 300 °C.

The suspension system must have a safety factor of at least 3 in accordance with SS-EN 12236:2002.

Installation must comply with applicable legal requirements, regulations issued by the authorities, project-specific documentation and relevant standards. Particular consideration must be given to the building's fire safety requirements. Fixings, suspension systems and other installation components must be designed and installed so that the installation's function, load-bearing capacity and fire performance are maintained throughout its intended service life.

**Read more about SS-EN 12236:2002 in Praktiska lösningar Brandskydd 2014, available to download from Svensk Ventilation at https://www.svenskventilation.se/publikation/brandboken-2014/*

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