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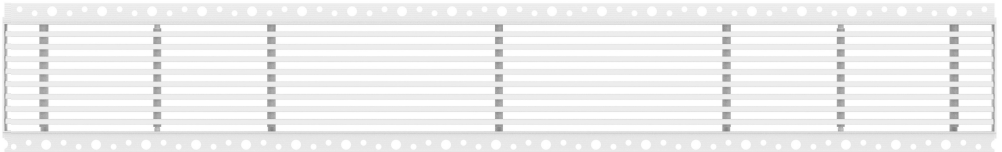
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Air terminal devices

Plaster in grilles



This manual describes the following ventilation grilles:

- **Installation into walls or sills:** AHP, WAPP

Important notes

Information on the installation manual

This manual enables operating or service personnel to correctly install the product described below and to use it safely and efficiently.

It is essential that these individuals read and fully understand this manual before starting any work. The basic prerequisite for safe working is to comply with the safety notes and all instructions in this manual.

The local regulations for health and safety at work and general safety regulations also apply.

Qualified staff

Specialist personnel

Specialist personnel are individuals who have sufficient professional or technical training, knowledge and actual experience to enable them to carry out their assigned duties, understand any potential hazards related to the work under consideration, and recognise and avoid any risks involved.

Limitation of liability

The information in this manual has been compiled with reference to the applicable standards and guidelines, the state of the art, and our expertise and experience of many years.

The manufacturer does not accept any liability for damages resulting from:

- Non-compliance with this manual
- Incorrect use
- Operation or handling by untrained individuals
- Unauthorised modifications

The actual scope of delivery may differ from the information in this manual for special constructions, additional order options or as a result of recent technical changes.

Personal protective equipment

Personal protective equipment must be worn for all work in order to reduce health or safety hazards to the minimum.

The appropriate protective equipment for a job must be worn for as long as the job takes.

Industrial safety helmet



Industrial safety helmets protect the head from falling objects, suspended loads, and the effects of striking the head against stationary objects.

Protective gloves



Protective gloves protect hands from friction, abrasions, punctures, deep cuts, and direct contact with hot surfaces.

Safety shoes



Safety shoes protect the feet against crushing, falling parts, and slipping on slippery ground.

Correct use

Air terminal devices are used for the ventilation of rooms in industrial and comfort areas. The air terminal devices are connected to a supply air or extract air system (by others), which is typically connected to an air handling unit.

Air terminal devices supply cold or warm air to rooms (within the stated supply air to room air temperature differences).

Installation, operation and maintenance may have to meet increased hygiene requirements for certain areas of application.

The installation of air terminal devices in humid rooms, areas with potentially explosive atmospheres or rooms with dust-laden or aggressive air has to be assessed for each individual case.

Transport and storage

Delivery check

Upon delivery, carefully remove the packaging and check the unit for transport damage and completeness. In case of any damage or an incomplete shipment, contact the shipping company and your supplier immediately. Put the product back into its packaging after the delivery check to protect it from dust and contamination.



Fixing and installation material

Fixing and installation material is not part of the supply package (unless stated otherwise), but has to be provided by others; it has to be suitable for the installation situation.

- Always secure the load against tipping and falling.
- Do not move bulky items just by yourself. Get help to prevent injuries and damage.

Storage

Please note:

- Store the unit only in its original packaging
- Protect the unit from the effects of weather
- Protect the unit from humidity, dust and contamination
- Storage temperature: -10 to 50 °C
- Relative humidity: 95 % max., non-condensing

Packaging

Properly dispose of packaging material.

Transport on site



CAUTION!

Danger of injury from sharp edges, sharp corners and thin sheet metal parts!

Sharp edges, sharp corners and thin sheet metal parts may cause cuts or grazes.

- Be careful when carrying out any work.
- Wear protective gloves, safety shoes and a hard hat.

If the grille has to be moved:

- Be careful when unloading or moving the grille, and pay attention to the symbols and information on the packaging.
- If possible, take the grille in its transport packaging up to the installation location.
- Use only lifting and transport gear designed for the required load.

Installation

General information

Personnel:

- Specialist personnel

Protective equipment:

- Industrial safety helmet
- Protective gloves
- Safety shoes

Installation notes:

- Fix the grille only to load-bearing structural elements.
- Load suspension systems only with the weight of the grille. Adjacent components and connecting ducts must be supported separately.
- Use only approved and adequately sized fixing material (fixing material is not included in the supply package).
- The grilles must remain accessible for cleaning even after installation.
- Installation and sealing material which the manufacturer provides is usually supplied in an extra bag.

Before you install the grille, take suitable precautions to protect air distribution components from contamination during installation (VDI 6022). If this is not possible, at least cover the grilles or take other precautions to protect them from contamination. In this case you have to ensure that the grilles cannot be operated. Ensure that all components are clean before you install them. If necessary, clean them thoroughly. If you have to interrupt the installation procedure, protect all openings from the ingress of dust or moisture.

Dimensions and weight

Dimensions, weights and free areas are given in the technical leaflets.

Installation opening for a ventilation grille

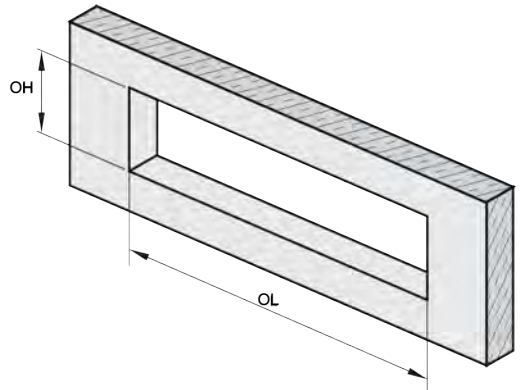


Fig. 1: Installation opening

Installation opening: AHP, WAPP

OL = NOM grille length +6mm

OH = NOM grille height -2mm

Preparing the plasterboard aperture

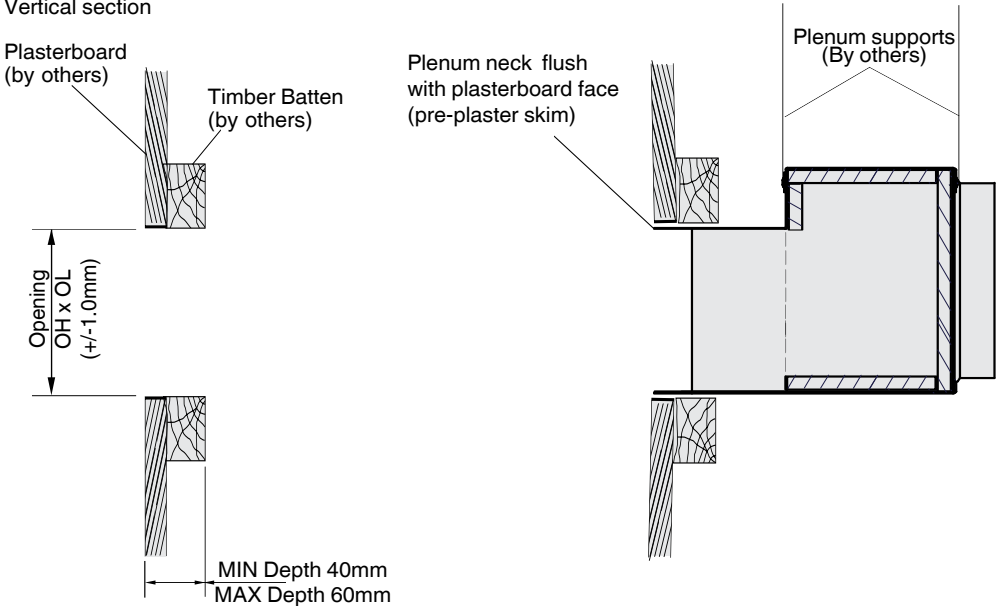
Installation of TROX Plaster-in grilles requires an aperture in the plasterboard to be created large enough for the neck of the grille to clear.

The minimum opening size for the plasterboard aperture should be based on the specified grille type and nominal size (refer to project schedule for unit sizes). Minimum opening sizes relating to the nominal grille size are detailed on page 4 of this installation guide.

Behind the plasterboard, a sturdy timber batten frame should be provided (by others) to match the opening size within the plasterboard. The minimum combined construction depth for plasterboard & batten should be between 40mm up to a maximum of 60mm.

Construction

Vertical section



Installing TROX AK plenum boxes

Provision should be made to suspend the supply or return air plenum boxes (if specified) behind the plaster board / timber frame in such a way that no weight from the plenum is transferred to the grille border.

Each plenum box is to be installed using suitable threaded rod or wire supports (by others) to take the weight of the plenum and provide alignment with the plasterboard opening.

IMPORTANT; To ensure a good seal against the diffuser face, the edge of the plenum should sit square within the opening and flush with the unfinished plasterboard face.

Installing the blanking plate

Where optional blanking plates have been supplied, these must be fitted to the rear of the grille **before** the grille is installed into the builders work opening as it is not possible to install these once the grille is in situ.

To determine the location for the blanking plates, offer up the grille to the builders work opening and mark on the plaster flange using removable tape, the area where supply or return plenums are not installed and where return air through the grille is not required.



Blanking plate alignment

Ensure that the blanking plate installation does not cover any active area of the grille as this will restrict the flow of air through the grille.

Remove the grille from the opening and place face down on a suitable protected work surface, ensuring the area is free from debris to avoid damaging the painted surface. Blanking plates and foam insulation are supplied loose, in lengths for site cutting and installation to the rear of the grille neck.

Cut the blanking plate and foam insulation to the required length(s) to cover the areas marked as non-active, ensuring edges are clean and burr free.

Installation of blanking plate/tray;



AHP, WAPP:

Lay the foam insulation into the grille neck with orange backing facing away from the grille face. Insert the straight edge of the blanking plate into the channel on the rear of the grille neck and gently lever the tabs into the channel on the opposite side to engage the blanking plate.

Installing the grille (FINITE)

The plaster-in grille, complete with core, should be installed into the builders work opening, retaining the plastic film on the front of the grille core to prevent marks during the installation.



Blade orientation

The grille core can only be installed within the border in one orientation. Ensure correct orientation of the air blades before final screw fixing into plasterboard opening.

Ensure the grille border is flat and level before fixing it in place. Secure using counter sunk head 3.5 drywall screws every 300mm.

Screw through the holes in the border, through the plasterboard and into the timber batten behind.

Ensure the screw heads are driven firmly into the border and sit below the top edge of the grille border so they will not be visible when the border is plastered. The border should be firm with no movement. Jointing tape should be applied over the plaster frame to provide a good adhesion surface for the plaster skim.



Border installation

Care should be taken not to stretch the grille border apart during the installation as this may affect core retainment.

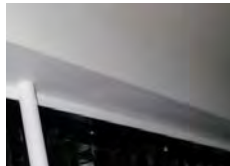
With the grille secured in the plasterboard panel, remove the grille core (refer to page 9 for details on core removal) and store in a safe place, clearly marked with the location reference to avoid accidental damage or disposal.



Border installation

Mitred corners (if supplied), are fitted with non-removable cores therefore suitable site masking of the grille core is required to prevent damage.

The plaster can then be applied using the top edge of the grille border to level the plaster. Excess plaster should be cleaned off the inside of the grille & border before it dries to avoid staining or damage to the paint finish.



Border cleaning

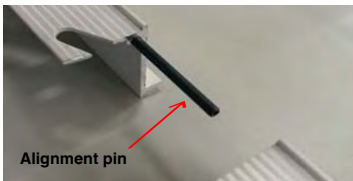
Once dried, any residue, dust etc. MUST be cleaned from the border profiles as this can affect core retainment. Ensure all surfaces are cleaned and are free from dust before final installation of grille core

Installing the grille (LINEAR)

Linear grilles will be supplied with alignment pins.

Before installing the grille border into the builders work opening, arrange the grille sections next to each other on a clean, level surface with the alignment pins to hand to ensure a good fit prior to installation.

Insert the alignment pins halfway into the alignment ports located in the border extrusion on one grille section.



The grille border sections can then be offered up to the plasterboard aperture and installed using counter sunk head 3.5 drywall screws every 300mm.

Screw through the holes in the border, through the plasterboard and into the timber batten behind.

Ensure the screw heads are driven firmly into the border and sit below the top edge of the grille border so they will not be visible when the border is plastered. The border should be firm with no movement. Jointing tape should be applied over the plaster frame to provide a good adhesion surface for the plaster skim, ensuring both alignment pins are correctly installed between each section.

Once the grille border has been secured in place, remove the core (refer to page 9 for details on core removal)

Store the grille core sections in a safe place, clearly marked with the specific location reference to avoid accidental damage or disposal and to ensure correct core is re-installed within the relevant border section.



Core installation

Each core section is specific to an individual border section. Ensure correct installation of cores to border to maintain fitment.

Removing the grille core

Type AHP & WAPP plaster-in grilles are supplied with a removable cores for access to supply or return air plenums or volume control dampers (if specified). The grille core is retained within the border using Spring pins installed at the top of the grille core with fixed pins at the bottom.



To remove the grille core to gently push the bottom blade up at each end of the grille (the pin locations) and tilt away from the border at both ends of the grille* (this can be done by hand or a suitable non-metallic non-abrasive tool). Care should be taken when removing the grille core to avoid damage.



Core removal

When removing the grille core, excessive force can result in damage to the plaster finish surrounding the grille border.

Installing the grille core

Once the plaster/ paint finish is properly dry, unwrap the grille core.

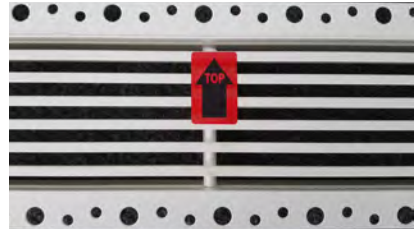
For grilles with 15° angle blades care should be taken when installing the core to ensure correct blade orientation.

*N.B.: Removing the grille core should be considered a 2 man operation.



Core orientation

The grille core must be supported with the spring pin at the top (refer to sticker on grille core) and the fixed pin at the bottom.



The grille core should be lifted upwards until the core is slightly below opening before gently pushing the core upwards at an angle in to the border with the spring pin pushed into the groove at the top of the border. With the spring compressed the grille core should be carefully tilted into the border with the fixed pin slotting into the groove at the bottom.

Each grille section should be visually inspected once installed to ensure the grille core is flush with the border profile and all pins are correctly in place. Any areas where the grille core does not sit flush should be inspected.