



Crossflow element

CFE**TROX SE**

Heinrich-Trox-Platz
47506 Neukirchen-Vluyn
Germany
Phone: +49 (0) 2845 202-0
Fax: +49 (0) 2845 202-265
E-Mail: trox-de@troxgroup.com
<http://www.troxgroup.com>

Product overview

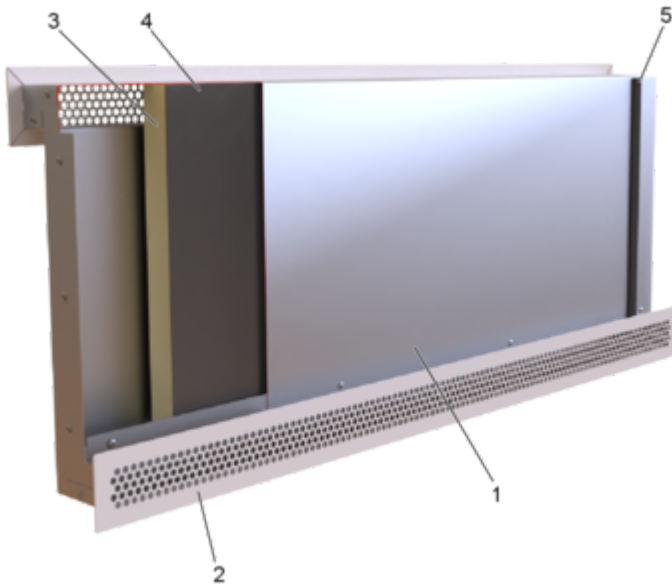


Fig. 1: Schematic illustration, example CFE-Z-PP

- | | | | |
|---|--------------------------|---|--------------------|
| 1 | Casing | 4 | Glass fibre fabric |
| 2 | Perforated diffuser face | 5 | Insulating strips |
| 3 | Acoustic lining | | |

Important notes

Information on the installation manual

These instructions enable correct installation as well as safe and efficient handling.

Personnel must have read and understood these instructions carefully before starting any work. The basic prerequisite for safe working is to comply with all safety notes and instructions in this manual.

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

Other applicable documentation

In addition to this manual, the following documents must be observed:

- Product data sheets

Explanation of symbols

Safety notes

Symbols are used in this manual to alert readers to areas of potential hazard. Signal words express the degree of the hazard.

Comply with all safety instructions and proceed carefully to avoid accidents, injuries and damage to property.



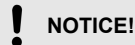
DANGER!
Imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING!
Potentially hazardous situation which, if not avoided, may result in death or serious injury.



CAUTION!
Potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



NOTICE!
Potentially hazardous situation which, if not avoided, may result in property damage.



ENVIRONMENT!
Environmental pollution hazard.

Limitation of liability

All information and instructions in this manual have been compiled taking into account the applicable standards and regulations, the state of the art and our many years of knowledge and experience.

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

- Non-compliance with this manual
- Unintended or improper use

- Operation or handling by untrained individuals
- Unauthorised modifications

The actual scope of delivery may differ from the explanations and illustrations provided in this manual for special versions, the use of additional order options or as a result of recent technical changes.

Safety

Intended use

Crossflow elements are used to ventilate rooms in industrial and comfort areas. Local pressure differences allow the room air to flow through the crossflow element. Integrated sound insulation material reduces sound transmission through the crossflow element. Crossflow elements can be part of a ventilation concept, but are not connected to any air duct system.

Depending on the area of application, special hygiene requirements must be observed during installation, operation, and maintenance.

Possible installation of air diffusers in humid rooms, areas with potentially explosive atmospheres, or rooms with dust-laden or aggressive air must be assessed individually.

Personnel

Qualification

Trained personnel

Trained 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.

Personal protective equipment

Personal protective equipment must be worn for any 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 from crushing, falling parts and prevent slipping on a slippery floor.

Repair and replacement parts

Only qualified personnel may repair the products, and they have to use genuine replacement parts.

Transport and storage

Delivery check

After 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. After inspection of the goods, put the product back into its packaging to protect it from dust and contamination.



Fixing and installation material

Unless otherwise specified, fixing and installation materials are not included in the delivery and must be provided by the client, in accordance with the respective installation situation.

Transport on site



CAUTION!

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

Sharp edges, sharp corners and thin-walled sheet metal parts can cause abrasions and cuts to the skin.

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

Please note during transport:

- Be careful when unloading or moving the product, and pay attention to the symbols and information on the packaging.
- If possible, take the product in its transport packaging to the installation site.
- Use only lifting and transport gear designed for the required load.
- During transport, always secure the load against tipping and falling.
- Bulky equipment should be transported by at least two people to prevent injury and damage.

Storage

Please note for storage:

- Store the product only in its original packaging
- Protect the product from the weather
- Protect the product from humidity, dust and contamination
- Storage temperature: -10 °C to 90 °C.
- Relative humidity: 80 % max., no condensation

Packaging

Properly dispose of packaging material.

Installation

General installation information

Observe during installation:

- For room heights up to 4 m (lower edge of ceiling)
- Wall installation in lightweight partition wall
- For cleaning purposes, the air diffusers must be easily accessible after installation.
- The devices must be installed with sound insulation. Sealing tapes for sound insulation must be provided by the client to suit the installation situation.
- Suitable fixing material must be provided by the client depending on the local conditions.



Protect the device from contamination

Before installation, ensure that the air-ducting components cannot be contaminated by construction activities (VDI 6022). If this is not possible, at least cover the devices or take other precautions to protect them from contamination. In this case, make sure the device is not in operation. Ensure that all components are clean before you install them. Clean thoroughly if necessary. When interrupting the installation procedure, protect all device openings from the ingress of dust or humidity.

Installation in lightweight partition walls
Installation in lightweight partition walls

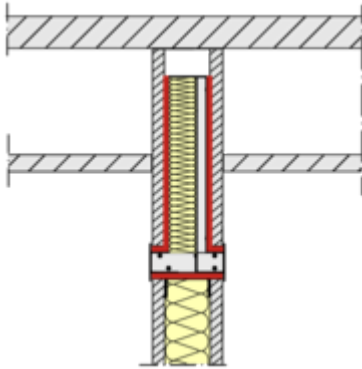


Fig. 2: T-shaped installation in lightweight partition walls, incl. on-site sound insulation, to be provided by the client (thick, red lines)

Installation in lightweight partition walls

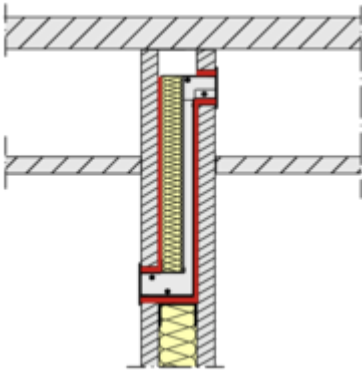


Fig. 3: Z-shaped installation in lightweight partition walls, incl. on-site sound insulation, to be provided by the client (thick, red lines)

Installation opening in lightweight partition walls

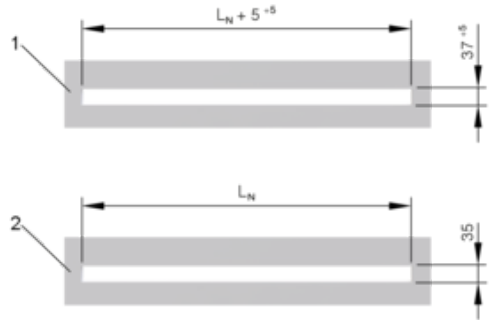


Fig. 4: Wall openings

- 1 With recess for diffuser face
- 2 Without recess for diffuser face, maximum wall opening

Installation of crossflow element

Installing crossflow element

Personnel:

- Trained personnel

Protective equipment:

- Industrial safety helmet
- Protective gloves
- Safety shoes

Wall installation in lightweight partition wall.

Construction lengths suitable for the usual distances of the metal stud frame, some changes might be required for the CW sections.

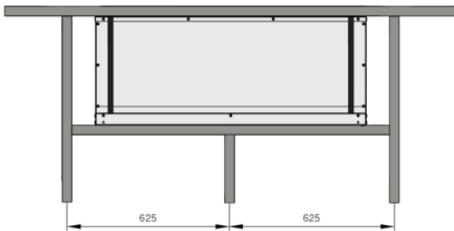


Fig. 5: Change CW sections

Use suitable fixing material and additional material for sound insulation (not included in scope of supply). Consider weights ↗ Chapter 7.1 'Dimensions and weights' on page 8.

For larger dimensions, we recommend that two people carry out the installation.

- 1 ▶ Mounting on C-profile.

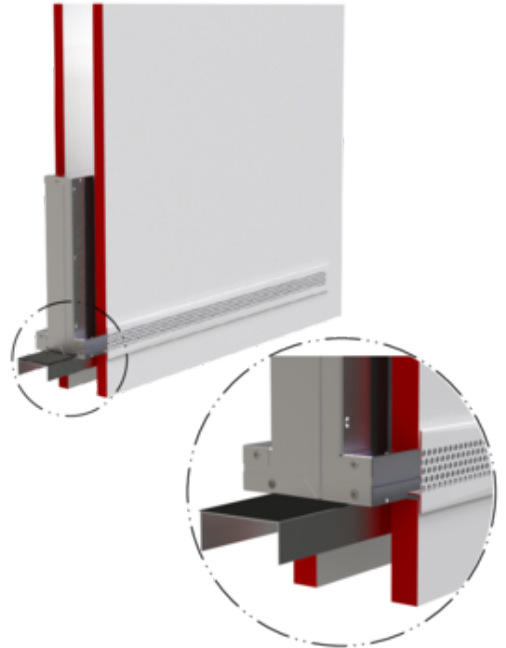


Fig. 6: Plenum box

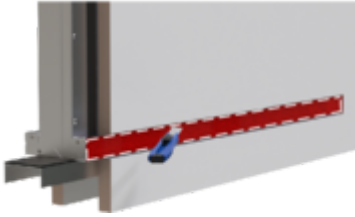
- 2 ▶ The device with protective foil is inserted into the drywall.

Sound insulation between C-profile and crossflow element.

The wall is completed with panels etc. and sanded. The protective foil remains on the unit until the final coating of the wall to prevent soiling.

⇒ 2a

To ensure sound insulation between drywall panels and crossflow element, we recommend that the client apply sealing tape to the outside of the recess for the diffuser face



3 ▶ Fitting of the diffuser face

Once the drywall installation and paintwork has been completed, the protective film is removed, e.g. by cutting out the device opening with a carpet knife.

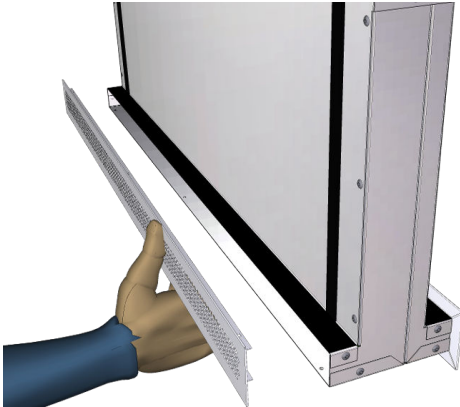
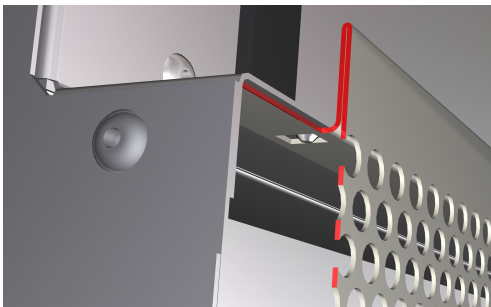


Fig. 7: Protective foil

4 ▶ Use both hands to insert the diffuser face into the slot provided in the crossflow element.



- 5 ▶ Mounting the diffuser face - First, carefully compress the diffuser face a little on one side and insert it into the opening of the unit. Then start at this point and carefully slide the cover along the entire length of the device into the device opening, until the cover clicks into place in the housing embossing.

Technical data

Dimensions and weights

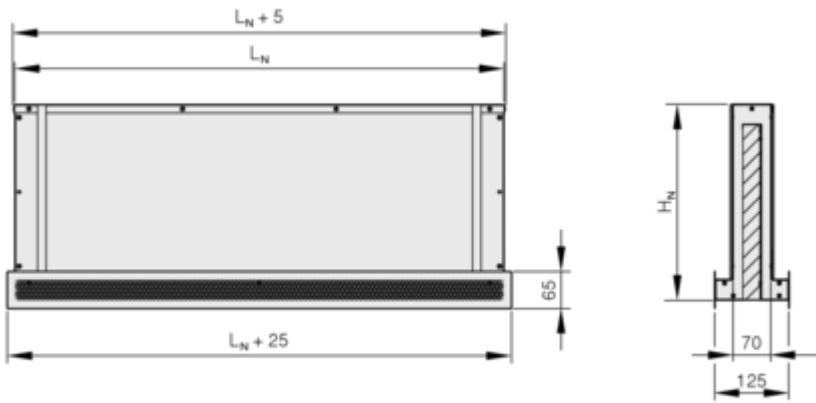


Fig. 8: CFE-T-PP/SC, with recess and diffuser face

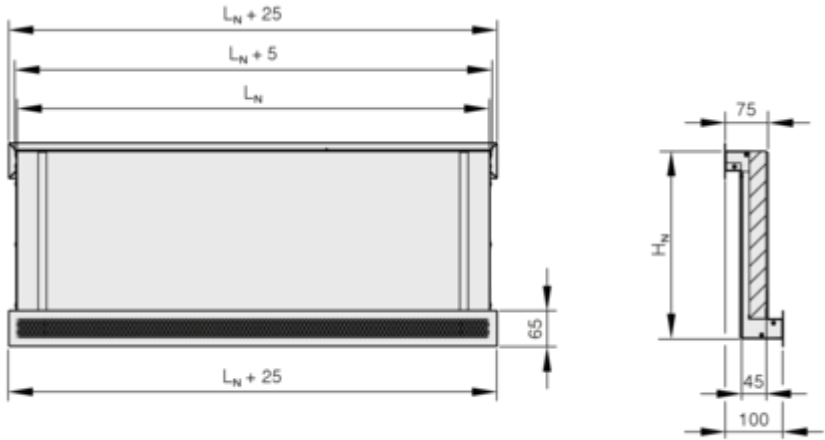


Fig. 9: CFE-Z-PP/SC, with recess and diffuser face

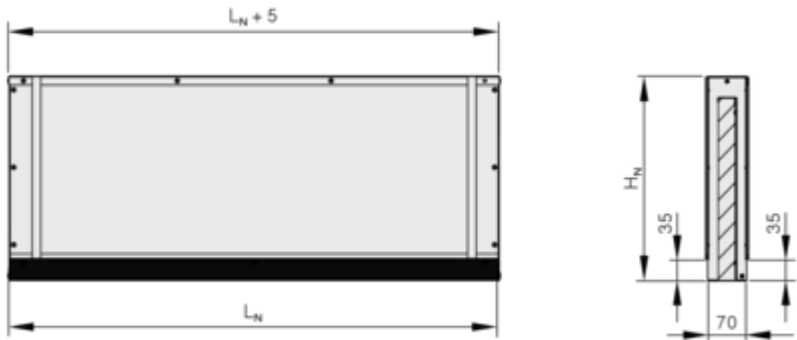


Fig. 10: CFE-T, without recess

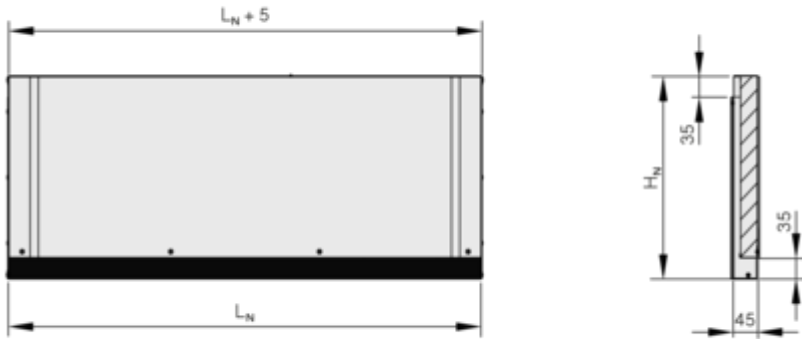


Fig. 11: CFE-Z, without recess

! NOTICE!

Retrofitting of diffuser faces is not possible.

L_N	H_N [mm]	H_N [mm]	H_N [mm]
550	290	340	440
850			
1000			
1175			

Weights [kg]

L _N	Dif- fuser face PP/SC	Casing T-construction						Casing Z-construction					
		without recess for dif- fuser face			with recess for diffuser face			without recess for dif- fuser face			with recess for diffuser face		
		H _N =290	H _N =340	H _N =440	H _N =290	H _N =340	H _N =440	H _N =290	H _N =340	H _N =440	H _N =290	H _N =340	H _N =440
550	0.3	4.6	5.4	6.8	4.9	5.7	7.2	2.6	3.0	4.0	3.0	3.5	4.3
850	0.5	6.9	8.0	10.3	7.4	8.5	10.8	4.0	4.6	5.8	4.5	5.2	6.4
1000	0.6	8.0	9.4	12.0	8.6	10.0	12.6	4.6	5.4	6.8	5.3	6.0	7.5
1175	0.7	9.4	11.0	14.0	10.0	11.6	14.7	5.4	6.2	8.0	6.2	7.0	8.7

Total weight = 2 × diffuser face + casing (with recess for diffuser face) or casing (without recess for diffuser face)
Note: For intermediate sizes, use the weights of the next larger unit size

Initial commissioning**General information**

Before you start commissioning, check the following points:

- Check that the air diffusers are fitted correctly.
- Remove protective foils, if any.
- Ensure that all air diffusers are clean and free from residues and foreign matter.

For commissioning, see also VDI 6022, Sheet 1 - Hygienic requirements for ventilation and air conditioning systems.

Maintenance

System owner's responsibility



WARNING!

Only authorised specialist personnel may perform the described maintenance measures.

The system owner is responsible for maintenance. With their maintenance management, the system owner is responsible for creating a maintenance plan, for defining the maintenance goals, and for the functional reliability of the equipment.

The legal regulations must be observed during maintenance, e.g. the system owner is responsible for hygienic operation in accordance with VDI 6022.

Maintenance and cleaning

During cleaning, the following points must be observed:

- The cleaning intervals given in the VDI 6022 standard apply.
- Clean surfaces with a damp cloth.
- Use only common household cleaners, do not use any aggressive cleaning agents.
- Do not use cleaning agents that contain chlorine.
- Do not use equipment for removing stubborn contamination, e.g., scrubbing sponges or scouring cream, as it may damage the surfaces.

Inspection measures

- 1 ▶ Remove contamination that affects the function of the wall diffuser.
- 2 ▶ Check all screw connections for tightness and retighten them, if necessary.
- 3 ▶ Document the maintenance work.

Repair work

Repair work is only allowed to be carried out by specialist personnel or by the manufacturer. Only genuine replacement parts may be used.

Disposal



ENVIRONMENT!

Risk of harm to the environment due to incorrect disposal!

Incorrect disposal may harm the environment.

- Be sure to comply with the relevant national guidelines and regulations.
- In case of doubt, contact your local authorities or a specialist disposal company.

Note: The wall diffuser must be dismantled for disposal.

If no disposal or return agreements with TROX SE are in place, we recommend disposing of the materials as follows:

Pos.	Component	Material/ waste code	Type of disposal
1	Front rail, end angle	Aluminium EWC 170402	Scrap metal recycling
3	Air control blades	Plastic EWC 170203	according to the EWC
5	Insulating mat	Mineral wool EAK 170603	according to the EWC

EWC European Waste Catalogue