



## Air diffusers

### Crossflow element

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#### Product overview

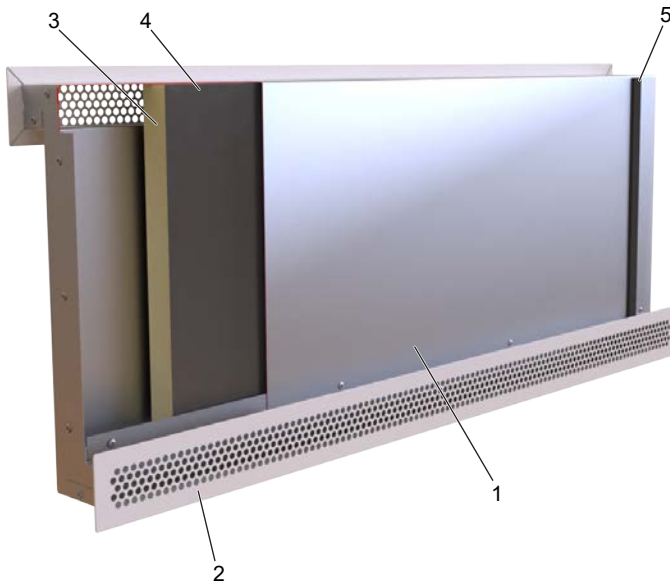


Fig. 1: Schematic diagram, example CFE-Z-PP

- |   |                        |   |                    |
|---|------------------------|---|--------------------|
| 1 | Casing                 | 4 | Glass fibre fabric |
| 2 | Perforated sheet cover | 5 | Sealing strips     |
| 3 | Mineral wool           |   |                    |

## 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.

### Other applicable documentation

In addition to these instructions, the following documents must be observed:

- Product data sheets

### 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 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

### Correct use

Crossflow elements are used to ventilate rooms in industrial and comfort areas. Local pressure gradients 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 room air conditioning concept, but are not connected to any air duct system.

Air diffusers are used to supply cooled or heated air to rooms (within the specified supply air temperature differences).

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

Possible installation in humid rooms, areas with potentially explosive atmospheres or rooms with dusty or aggressive air must be assessed beforehand, depending on the actual site conditions.

## Staff

### 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 must 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**

*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.*

### 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.

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.

## Assembly

### General installation information

Installation note:

- For room heights up to 4 m (lower edge of ceiling)
- Wall installation in lightweight partition wall
- After installation, all devices must be easily accessible for cleaning purposes.
- Fixing material provided by the manufacturer and additional material for sound decoupling.



### Protect the product from dust and contamination

Before you install the product, take suitable precautions to protect air distribution components from contamination during installation (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 unit is not in operation. 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.

## Assembly in lightweight partition walls

### Installation in lightweight partition walls

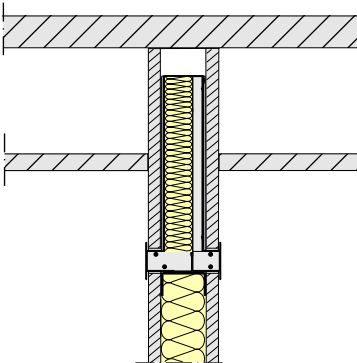


Fig. 2: Installation T-form in lightweight walls

### Installation in lightweight partition walls

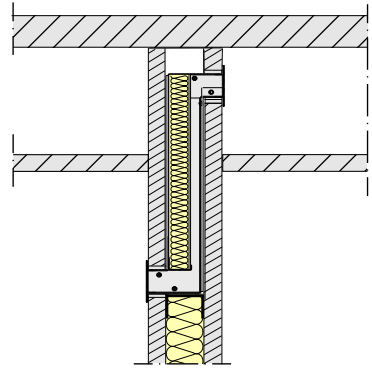


Fig. 3: Installation Z-form in lightweight walls

### Installation opening in lightweight walls

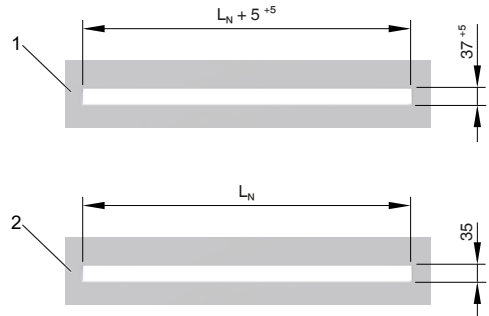


Fig. 4: Wall opening

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

## Installation of crossflow element

### Install crossflow element

#### Personnel:

- Trained personnel

#### Protective equipment:

- Industrial safety helmet
- Protective gloves
- Safety shoes

Wall installation in light partition wall.

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

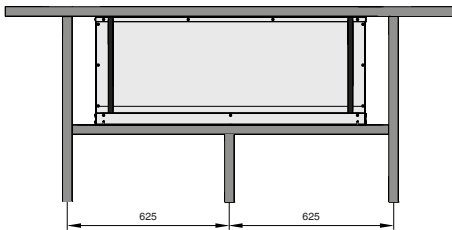


Fig. 5: Change CW sections

Use suitable fixing material and additional material for sound decoupling (not included in delivery). Consider weights ↪ *Chapter 7.1 'Dimensions and weight' on page 7.*

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

1. ▶ Mounting on C-profile.

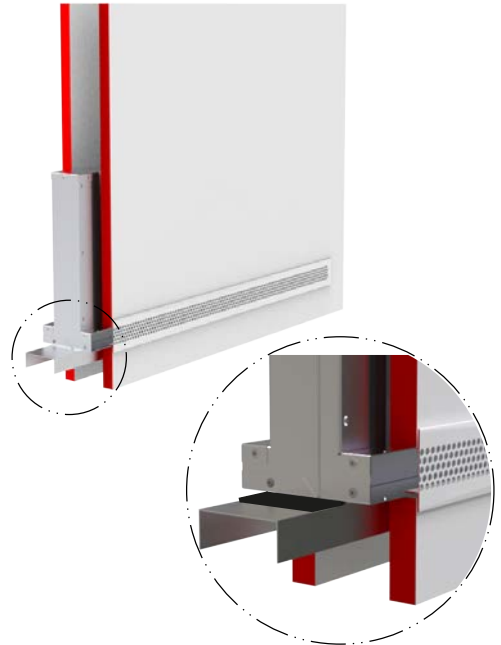
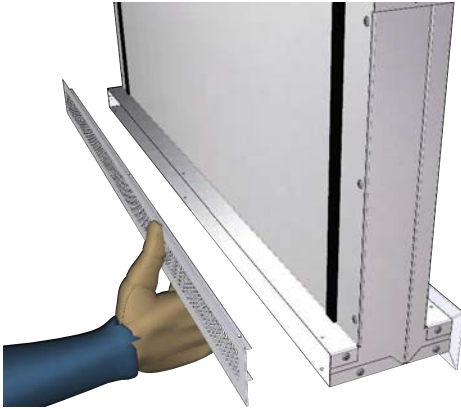


Fig. 6: Plenum box

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

Sound insulation between C-profile and crossflow element.

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



- 5. ▶ Mounting the diffuser face - First, carefully compress the diffuser case a little on one side and insert it into the opening of the unit. Then, starting from this point, carefully push the diffuser face over the entire length of the unit into the opening.
- 6. ▶ The diffuser face has to lock into the indentations.

3. ▶ Fitting of the diffuser face

After completion of the drywall and paint work, the protective foil is removed, e.g. by cutting out the unit opening with the help of a carpet knife.

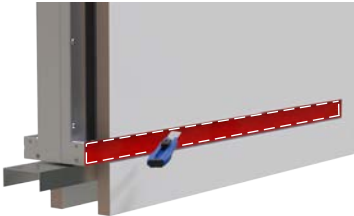
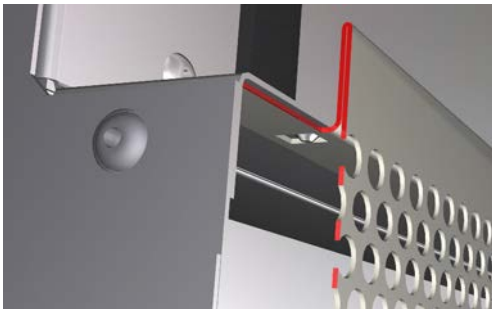


Fig. 7: Protective foil

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



Technical data  
Dimensions and weight

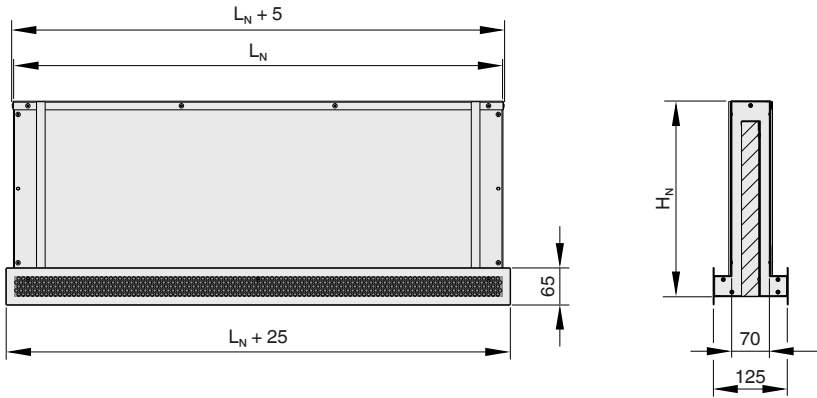


Fig. 8: CFE-T-PP/SC, with recess and diffuser face

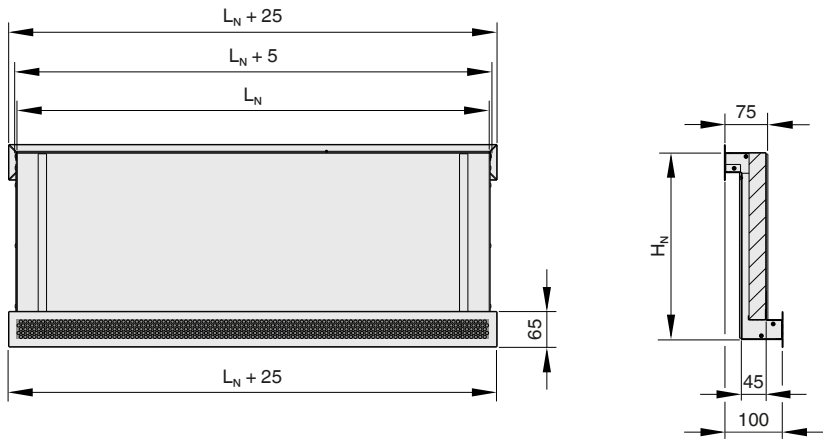


Fig. 9: CFE-Z-PP/SC, with recess and diffuser face

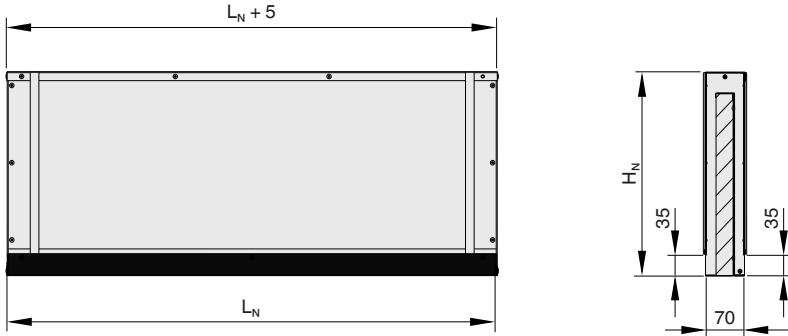


Fig. 10: CFE-T, without recess

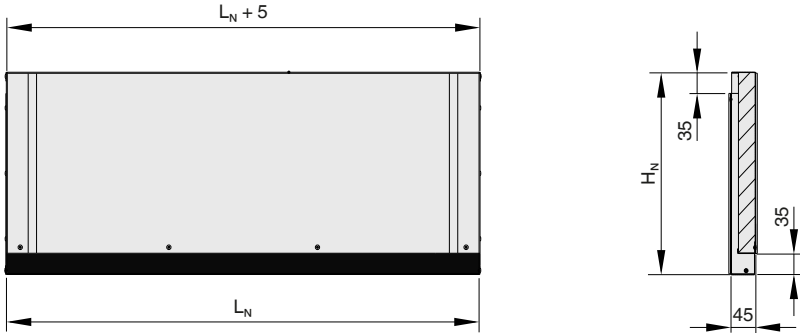


Fig. 11: CFE-Z, without recess



L <sub>N</sub>	H <sub>N</sub> [mm]	H <sub>N</sub> [mm]	H <sub>N</sub> [mm]
550	290	340	440
850			
1000			
1175			

L <sub>N</sub>	Dif-fuser face PP/SC	T-style casing						Z-style casing					
		without recess for dif-fuser face			with recess for diffuser face			without recess for dif-fuser face			with recess for diffuser face		
		H <sub>N</sub> =290	H <sub>N</sub> =340	H <sub>N</sub> =440	H <sub>N</sub> =290	H <sub>N</sub> =340	H <sub>N</sub> =440	H <sub>N</sub> =290	H <sub>N</sub> =340	H <sub>N</sub> =440	H <sub>N</sub> =290	H <sub>N</sub> =340	H <sub>N</sub> =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 that the air diffusers are fitted correctly.
- Remove protective foils, if any.
- Make sure that all air diffusers are clean and free from residues and foreign bodies.

For commissioning, see also VDI 6022, part 1 – Hygiene requirements for ventilation and air-conditioning systems.

**Maintenance and cleaning**

Please note:

- 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.

