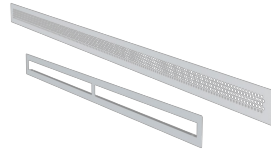
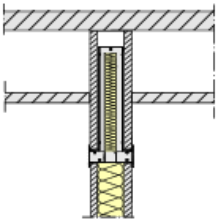




CFE-T-PP

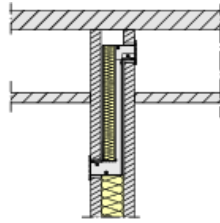


Design options  
with perforated sheet cover or  
slot diffuser face

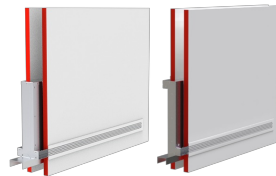


<STRONG>CFE-T-PP/SC,  
INSTALLATION IN  
LIGHTWEIGHT PARTITION  
WALL</STRONG>

T-style construction, for  
lightweight partition walls



Z-style construction, for  
lightweight partition walls



Installation in lightweight  
partition walls  
with metal support structure

## CFE

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### FREE DESIGN OPTIONS FOR BUILDERS AND ARCHITECTS WITH HIGH AESTHETIC DEMANDS

Crossflow element in different variants

- With recess for air diffusers – with fronts with different optics
- Without recess for air diffusers – for free design options in the choice of wall opening
- With integrated cross talk silencer and sealing strips for sound insulation
- Nominal lengths from 550 - 1175 mm in mm steps
- Nominal heights from 290 - 440 mm in mm steps
- The wide range of dimensions allows a large selection of different installation situations, with low pressure loss and high sound insulation values
- Installation in lightweight partition walls with a thickness of 100 mm or 125 mm and with 50 mm or 75 mm wide metal frame

#### Optional equipment

- Diffuser face powder-coated in RAL CLASSIC colours

## General information

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#### Application

- Crossflow elements are suitable as cross talk silencers for air transfer flows in comfort zones
- Due to their diversity of variants and high flexibility, they can be used for many applications

#### Special features

- Different construction styles allow individual adaptation to local conditions
- Low differential pressure
- Crossflow elements in T- and Z-design without recess for an air diffuser are suitable for (system) partition walls
- Cross talk silencers reduce noise transmission to adjacent rooms
- To prevent sound transmission via the casing, insulation strips are attached to the crossflow element
- Tool-free assembly of the diffuser face enables quick installation after completion of the drywall work
- High-quality appearance of diffuser face due to powder coating according to RAL-CLASSIC colour scale
- Crossflow elements without recess: free design options of the wall openings for builders and architects while maintaining the free cross-section  $\geq 51$  %
- Nominal length and nominal heights selectable in mm steps

#### Nominal sizes

##### Nominal length $L_N$ :

- 550 - 1175 mm in mm steps

##### Nominal height $H_N$ :

- 290 - 440 mm in mm steps

#### Variants

##### CFE-...:

- -\*: in Z or T design
- -\*: with or without recess for diffuser face
- -PP: Perforated sheet cover
- -SC: Slot diffuser face

#### Construction

##### Surface finish of diffuser faces:

- Powder-coated RAL 9010, pure white, GE 50
- P1: powder-coated RAL 9006, white aluminium, GE 30
- P1: powder-coated in other RAL CLASSIC colours, GE 70

#### Construction features

- With or without recess for diffuser face
- A diffuser face requires a construction with recess for the diffuser face
- Nominal lengths from 550 - 1175 mm and nominal heights from 290 - 440 mm available in mm steps
- The perforated sheet cover PP has a free cross-section of approx. 51 %, the hole diameter is 6 mm, and the rows of holes are arranged offset to each other
- The slot diffuser face SC offers the largest possible free cross-section for very low pressure loss

#### Materials and surfaces

- Casings and diffuser faces made of galvanised sheet steel
- Acoustic lining made of mineral wool
- Insulation strips on the casing made of closed cell PE foam
- Diffuser faces powder-coated RAL9010, GE 50
- P1: powder-coated colour according to RAL CLASSIC

#### Mineral wool:

- Mineral wool on surfaces in contact with air are laminated with glass fibre fabric, abrasion-resistant up to 20 m/s
- Acc. to EN 13501, fire rating class A1, non-combustible
- RAL quality mark RAL-GZ 388
- Non-hazardous thanks to high biosolubility according to the German Ordinance on Hazardous Substances and Note Q of the European Regulation (EC) No 1272/2008
- Inert to fungal and bacterial growth

#### Standards and guidelines

- Sound power level of air-regenerated noise measured according to DIN EN ISO 5135
- Conforms to VDI 6022
- Sound reduction index according to DIN EN ISO 10140 and DIN EN ISO 717-1

#### Maintenance

- Low maintenance, as there is no wear and tear due to design and materials used
- Inspection and cleaning according to VDI 6022

## TECHNICAL INFORMATION

Function, Technical data, Quick sizing, Specification text, Order code

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Type CFE crossflow elements can be installed in lightweight partition walls. Due to the pressure difference, the air flows e.g. from the office area as exhaust air into the hallway, into indoor zones or neighbouring areas with suspended ceilings. A central exhaust air system can be used there. Integrated acoustic lining reduces noise transmission into adjacent rooms. To avoid sound transmission on lightweight walls, insulation strips are attached to the casing for sound decoupling.

Schematic illustration, CFE-Z-PP



- 1 Casing
- 2 Perforated sheet metal diffuser face
- 3 Sound insulation material made of mineral wool
- 4 Sealing strips

Nominal lengths	550 - 1175 in mm increments
Nominal height	290 - 440 in mm increments
maximum volume flow at $\Delta p_t = 5 \text{ Pa}$ , T-style construction, with slot cover	124 m³/h
maximum volume flow at $\Delta p_t = 5 \text{ Pa}$ , Z-style construction, with slot cover	120 m³/h
maximum volume flow at $\Delta p_t = 10 \text{ Pa}$ , T-style construction, with slot cover	175 m³/h
maximum volume flow at $\Delta p_t = 10 \text{ Pa}$ , Z-style construction, with slot cover	169 m³/h

Quick sizing tables provide a good overview of the volume flow rates and corresponding sound power levels and differential pressures. Exact values for all parameters can be determined with our Easy Product Finder design program.

Weighted sound reduction index, standard sound pressure level and sound power level,  $L_N = 550$ ,  $S = 0.019 \text{ m}^2$

Variant	H <sub>N</sub>	R <sub>w</sub> [dB]	D <sub>n,e,w</sub> [dB]	Δp <sub>t</sub> = 5 Pa		Δp <sub>t</sub> = 10 Pa	
				q <sub>v</sub> [m³/h]	L <sub>wa</sub> [dB(A)]	q <sub>v</sub> [m³/h]	L <sub>wa</sub> [dB(A)]
CFE-T-SC	290	13.5	40.7	58	<15	82	16
CFE-T-SC	340	16	43.2	57	<15	80	15
CFE-T-SC	440	19.2	46.4	54	<15	77	<15
CFE-T-PP	290	13.5	40.7	49	<15	70	<15
CFE-T-PP	340	16.5	43.7	48	<15	68	<15
CFE-T-PP	440	19.4	46.6	47	<15	66	<15
CFE-Z-SC	290	13.4	40.6	56	<15	79	19
CFE-Z-SC	340	14.8	42	55	<15	78	19
CFE-Z-SC	440	20.8	48	53	<15	75	18
CFE-Z-PP	290	13.3	40.5	47	<15	66	17
CFE-Z-PP	340	15	42.2	46	<15	65	17
CFE-Z-PP	440	20.8	48	45	<15	63	16

Weighted sound reduction index, standard sound pressure level and sound power level, L<sub>N</sub> = 850, S = 0.030 m²

Variant	H <sub>N</sub>	R <sub>w</sub> [dB]	D <sub>n,e,w</sub> [dB]	Δp <sub>t</sub> = 5 Pa		Δp <sub>t</sub> = 10 Pa	
				q <sub>v</sub> [m³/h]	L <sub>wa</sub> [dB(A)]	q <sub>v</sub> [m³/h]	L <sub>wa</sub> [dB(A)]
CFE-T-SC	290	13.5	38.8	90	<15	127	18
CFE-T-SC	340	16	41.3	88	<15	124	17
CFE-T-SC	440	19.2	44.5	84	<15	119	16
CFE-T-PP	290	13.5	38.8	76	<15	108	<15
CFE-T-PP	340	16.5	41.8	74	<15	105	<15
CFE-T-PP	440	19.4	44.7	73	<15	103	<15
CFE-Z-SC	290	13.4	38.7	87	<15	123	21
CFE-Z-SC	340	14.8	40.1	85	<15	121	21
CFE-Z-SC	440	20.8	46.1	82	<15	116	19
CFE-Z-PP	290	13.3	38.6	72	<15	102	19
CFE-Z-PP	340	15	40.3	71	<15	100	19
CFE-Z-PP	440	20.8	46.1	69	<15	98	18

Weighted sound reduction index, standard sound pressure level and sound power level,  $L_N = 1000$ ,  $S = 0.035 \text{ m}^2$

Variant	$H_N$	$R_w$ [dB]	$D_{n,e,w}$ [dB]	$\Delta p_t = 5 \text{ Pa}$		$\Delta p_t = 10 \text{ Pa}$	
				$q_v$ [m³/h]	$L_{wa}$ [dB(A)]	$q_v$ [m³/h]	$L_{wa}$ [dB(A)]
CFE-T-SC	290	13.5	38.1	105	<15	149	18
CFE-T-SC	340	16	40.6	103	<15	146	18
CFE-T-SC	440	19.2	43.8	99	<15	140	17
CFE-T-PP	290	13.5	38.1	90	<15	127	15
CFE-T-PP	340	16.5	41.1	87	<15	124	<15
CFE-T-PP	440	19.4	44	85	<15	121	<15
CFE-Z-SC	290	13.4	38	102	<15	144	22
CFE-Z-SC	340	14.8	39.4	100	<15	142	21
CFE-Z-SC	440	20.8	45.4	96	<15	136	20
CFE-Z-PP	290	13.3	37.9	85	<15	120	20
CFE-Z-PP	340	15	39.6	83	<15	117	19
CFE-Z-PP	440	20.8	45.4	81	<15	115	19

Weighted sound reduction index, standard sound pressure level and sound power level,  $L_N = 1175$ ,  $S = 0.041 \text{ m}^2$

Variant	$H_N$	$R_w$ [dB]	$D_{n,e,w}$ [dB]	$\Delta p_t = 5 \text{ Pa}$		$\Delta p_t = 10 \text{ Pa}$	
				$q_v$ [m³/h]	$L_{wa}$ [dB(A)]	$q_v$ [m³/h]	$L_{wa}$ [dB(A)]
CFE-T-SC	290	13.5	37.4	124	<15	175	19
CFE-T-SC	340	16	39.9	121	<15	171	18
CFE-T-SC	440	19.2	43.1	116	<15	164	17
CFE-T-PP	290	13.5	37.4	105	<15	149	16
CFE-T-PP	340	16.5	40.4	103	<15	145	15
CFE-T-PP	440	19.4	43.3	100	<15	142	<15
CFE-Z-SC	290	13.4	37.3	120	<15	169	22
CFE-Z-SC	340	14.8	38.7	118	<15	167	22
CFE-Z-SC	440	20.8	44.7	113	<15	160	21
CFE-Z-PP	290	13.3	37.2	100	<15	141	21
CFE-Z-PP	340	15	38.9	98	<15	138	20
CFE-Z-PP	440	20.8	44.7	95	<15	135	19

#### Specification text

Crossflow elements with cross talk silencers are used for air transfer flow into adjacent rooms and are suitable for comfort areas.

The crossflow element is available in rectangular Z or T design. The nominal height and nominal length are variable within the limits in mm steps. Therefore, the crossflow element can be optimally adapted to project-specific requirements.

The design without recess for an air diffuser offers builders and architects, in compliance with the free cross section of  $\geq 51\%$ , various design options. For the version with recess for an air diffuser, a choice can be made between different diffuser fronts. The perforated diffuser face -PP has a free area of approx. 51%. The hole diameter is 6 mm, staggered pitch.

Fixing a diffuser face to the crossflow element after the drywalling has been completed is quick and easy.

The crossflow element includes a cross talk silencer with acoustic lining that reduces noise transmission to adjacent rooms. To prevent sound transmission via the casing, sealing strips are attached to the crossflow element.

Suitable for the space saving or concealed installation in lightweight partition walls with different stand widths.

Sound power level of the air-regenerated noise measured according to EN ISO 5135.

Sound reduction index according to DIN EN ISO 10140 and DIN EN ISO 717-1.

Crossflow element and diffuser face made of galvanised sheet steel.

Sound insulation material made of mineral wool.

Mineral wool:

- Mineral wool on surfaces in contact with air are laminated with glass fibre fabric, abrasion-resistant up to 20 m/s
- Acc. to EN 13501, fire rating class A1, non-combustible
- RAL quality mark RAL-GZ 388
- Non-hazardous thanks to high biosolubility according to the German Ordinance on Hazardous Substances and Note Q of the European Regulation (EC) No 1272/2008
- Inert to fungal and bacterial growth

#### Equivalence criteria

- Different construction styles and sizes allow for meeting local and project-specific requirements
- Low differential pressure
- The crossflow element in Z-style construction without a recess for the diffuser face is suitable for thin lightweight partition walls with metal support structure
- An integrated cross talk silencer reduces noise transmission into adjacent rooms.
- Sealing strips on the casing minimise noise transmission
- Diffuser face powder-coated in a RAL CLASSIC colour scale

#### Variants

Surface finish of diffuser faces:

- Powder-coated RAL 9010, pure white, GU 50
- P1: powder-coated RAL 9006, white aluminium, GU30
- P1: powder-coated in other RAL CLASSIC colours, GU 70

#### Technical data

- Nominal length: 550 to 1175 mm (in increments of 1 mm)
- Nominal height: 290 to 440 mm (in increments of 1 mm)
- Maximum volume flow rate  $\Delta p_t = 5 \text{ Pa}$ : 124 m<sup>3</sup>/h
- Maximum volume flow rate  $\Delta p_t = 10 \text{ Pa}$ : 175 m<sup>3</sup>/h

#### Sizing data

- $L_{WA} [\text{dB(A)}]$

- $q_v [\text{m}^3/\text{h}]$
- $\Delta p_t [\text{Pa}]$
- $D_{n, e, w} [\text{dB}]$
- $R_w [\text{dB}]$

CFE	—	T	—	SC	/	850 × 340	/	P1 - RAL 9016
1		2		3		4		5

1 Type  
CFE Crossflow element

2 Construction  
Z Z-style  
T T-style

3 Air terminal device  
No entry: without recess for diffuser face

With recess for diffuser face  
PP Perforated metal diffuser faces  
SC Slot diffuser faces

4 Nominal size [mm]  
Nominal length × nominal height

Nominal length  
550 – 1175

Nominal height  
290 – 440 (standard height 340)

5 Diffuser face surface  
No entry: powder-coated RAL 9010 (pure white)  
P1 Powder-coated, specify RAL CLASSIC colour

Gloss level  
RAL 9010 GU50  
RAL 9006 GU30  
All other RAL colours GU70

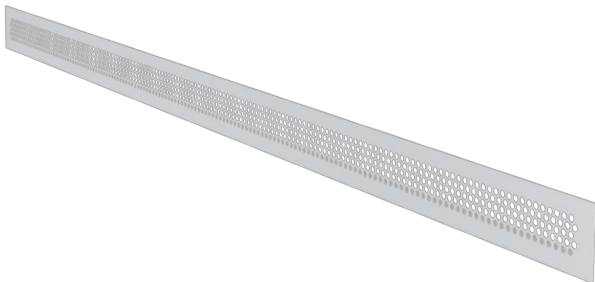
Order example: CFE-T-SC/850×300/P1-RAL9016

Type	CFE
Construction	T-style
Air terminal device	Slot diffuser faces
Nominal size [mm]	Nominal length 850, nominal height 300
Diffuser face surface	Powder-coated RAL 9016 (traffic white)

## Variants

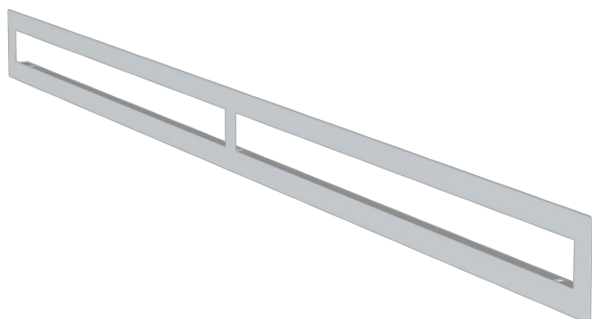


### Perforated sheet cover PP





Slot diffuser face SC



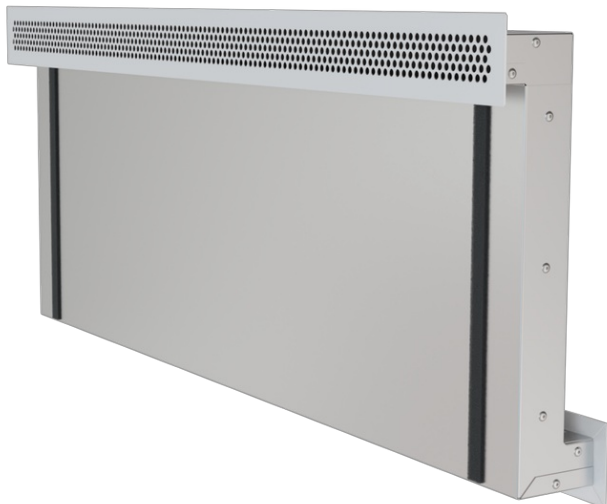
CFE-T-PP



CFE-T-SC



CFE-Z-PP



CFE-Z-SC



CFE-T



CFE-Z

