



Sizing with the Easy Product Finder



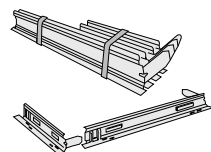
Horizontal or vertical blades and perforated sheet metal inserts



6 different front frame geometries



6 different installation variants



3 different installation frames

Ventilation grilles

X-GRILLE modular



Ventilation grilles, made of aluminium, with modular construction – also for continuous horizontal runs

Individual design and simple configuration with more than 3000 variants

- Various designs allow installation from representative areas to warehouses
- Quick and simple installation under normal structural conditions through 6 mounting variants
- Air diffuser for supply and extract air with extensive dimensional variance
- Mesh band installation possible through special end and middle sections
- Can be combined with familiar TROX attachments
- Simple replacement of existing TROX ventilation grilles due to identical dimensions of the installation openings
- Design programme for technical sizing
- Data sets for BIM-based project processing

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General information

Application

- Ventilation grille to be used for supply air or extract air
- Suitable for comfort and industrial areas
- Attractive design element for building owners and architects with demanding aesthetic requirements
- Mixed flow air distribution with directed supply air discharge
- Fixed or adjustable blades or perforated sheet fronts with different designs allow adaptation to meet different local requirements
- For variable and constant volume flows
- For supply air to room air temperature differences from -12 – +15 K
- For installation in walls, sills and rectangular ducts

Special characteristics

- Energy-efficient and acoustically optimised air discharge
- 6 Front frame options: S, M, L, A, C, H
- Multiple Core options: Horizontal blades, Vertical blades and Pattern designs
- Blades made from extruded aluminium sections – adjustable, fixed straight (0°) or fixed slanted (15°) air outlet
- Perforated sheet construction with the option of circular or rectangular openings
- Easy installation with concealed screw fixing with and without installation subframe, visible screws, terminals or hidden-plaster border
- Aesthetic border construction, almost completely flush with the installation surface
- Linear look, with fixed blades, ideal for continuous horizontal runs
- Use of existing attachments
- Easy replacement of existing TROX grilles due to standard installation dimensions

Nominal sizes

Single grille

- Nominal length: 225, 325, 425, 525, 625, 825, 1025, 1225, 1425, 1625, 1825, 2025 mm
- Nominal height: 75, 125, 225, 325, 425, 525 mm

Horizontal run section

- Nominal length of end section: 950 – 2025 mm
- Nominal length of middle section: 2000 mm
- Nominal height: 75, 125, 225, 325, 425, 525 mm
- Other dimensions upon request

Variants

Single grille

- X-GRILLE modular

Horizontal run section

- X-GRILLE modular-E-R: End section right
- X-GRILLE modular-E-L: End section left
- X-GRILLE modular-M: Middle section

Core design

- H: horizontal blades
- V: vertical blades
- P: Pattern design

Inset construction:

Blade inserts

- F0: fixed blades 0°, blade pitch 12.5 mm
- F15: fixed blades 15°, blade pitch 12.5 mm
- P0: fixed blades 0°, blade pitch 16.7 mm
- P15: fixed blades 15°, blade pitch 16.7 mm
- MO: adjustable blades

Perforated sheet metal inserts

- R: circular holes
- EG: rectangular holes

Border frame

- S: 7 mm wide (flat)
- M: 14 mm wide (flat)
- L: 20 mm wide (flat)
- A: 27 mm wide (angled)
- C: 27 mm wide (curved)
- H: 20 mm wide (hidden, 4.7 mm visible)

Fixing

- No entry: without fixing variant
- VS: concealed screw fixing
- SP: concealed screw fixing without installation subframe
- A11: visible screw fixing
- HS: Hidden screw fixing
- CF: Clamp fixing

Attachments

- A: without attachment, only ventilation grilles
- AG, D, DG: rear assembly with damper unit for volume flow rate balancing and / or second set of blades to control the air direction control of ventilation grilles
- EF: Coarse filter media casing

Accessories

Installation subframe: For the fast and simple installation of ventilation grilles

- No entry: without installation subframe
- A1: Installation subframe with 12.5 mm support (for front frame A, C)
- B1: Installation subframe with 5.5 mm support (for front frame L)
- C1: Installation subframe without support (for front frame M)

Materials and surfaces

- Border and blades made of aluminium
- Perforated sheet inserts of galvanised sheet steel
- Grille core with rectangular openings made of aluminium
- Linkage and end pieces for adjustable blades made of highly temperature resistant special plastic, flame retardant to UL 94, V-0
- Vertical connecting bars made of aluminium
- Installation subframe made of galvanised sheet steel
- Border and blades anodised, E6-C-0, natural colour
- Anodised surround and perforated rectangular hole insert, E6-C-0, natural colour

- Perforated plate inserts powder-coated, RAL9010 GE50
- P1: Border and insets powder-coated, RAL CLASSIC colour

Standards and guidelines

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

Maintenance

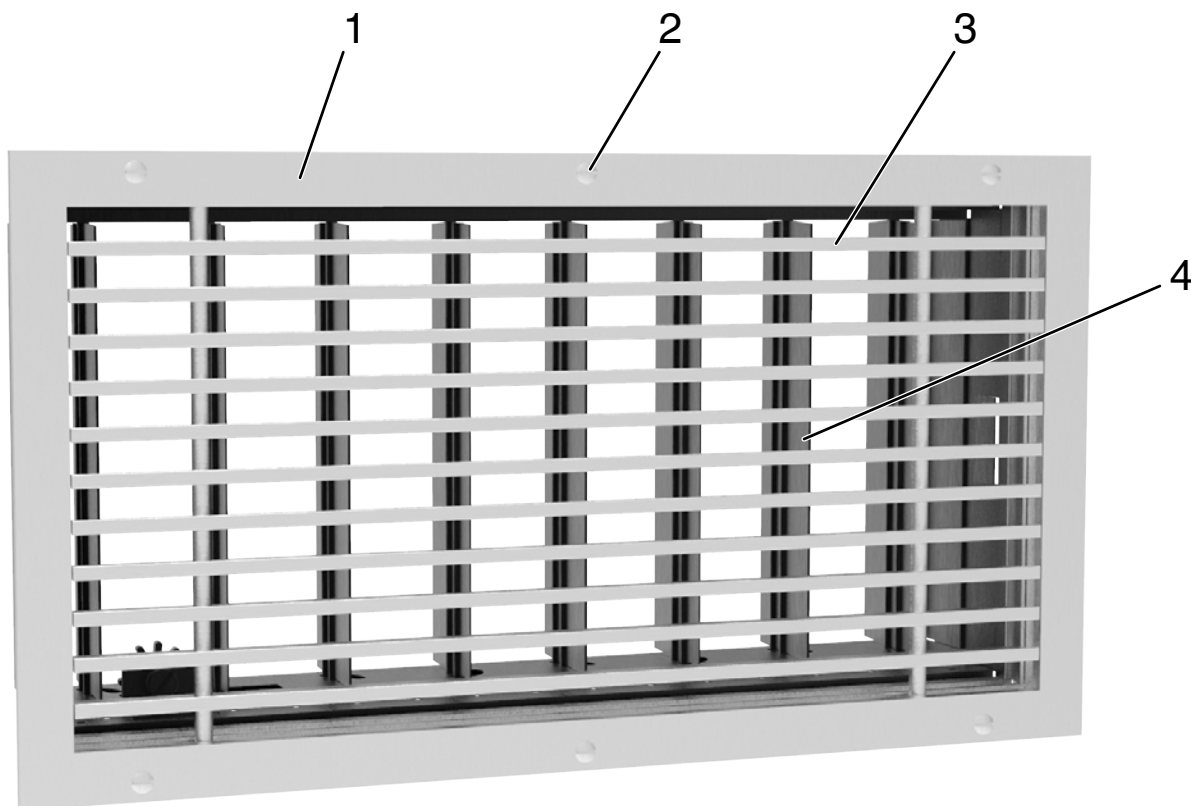
- Low-maintenance as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022

Function

Ventilation grilles are air terminal devices for the supply air and extract air of ventilation and air conditioning systems. They guide the supply air into the room. Ventilation grilles with adjustable blades allow for adapting the discharge direction to the local conditions. The result is a mixed flow ventilation in comfort zones and industrial zones, with good overall room ventilation. Induction slows the airflow down, i.e. the airflow velocity decreases as the distance from the grille increases. The distance at which the airflow velocity has reached a certain value (for example 0.2 m/s) is called the throw distance. The supply air jet from wall grilles arranged close to the ceiling reaches a greater throw distance

than a comparable free jet (without ceiling influence) due to the ceiling influence. Single grilles, groups of grilles and continuous horizontal runs all achieve various throw distances. In cooling mode it is necessary to take account of the jet deflection towards the occupied zone, which increases as the supply air to room air temperature difference increases and the discharge velocity decreases. In heating mode the supply air jet is deflected towards the ceiling. This has no negative effect on the airflow velocity in the occupied zone, but it may affect the complete ventilation of the room.

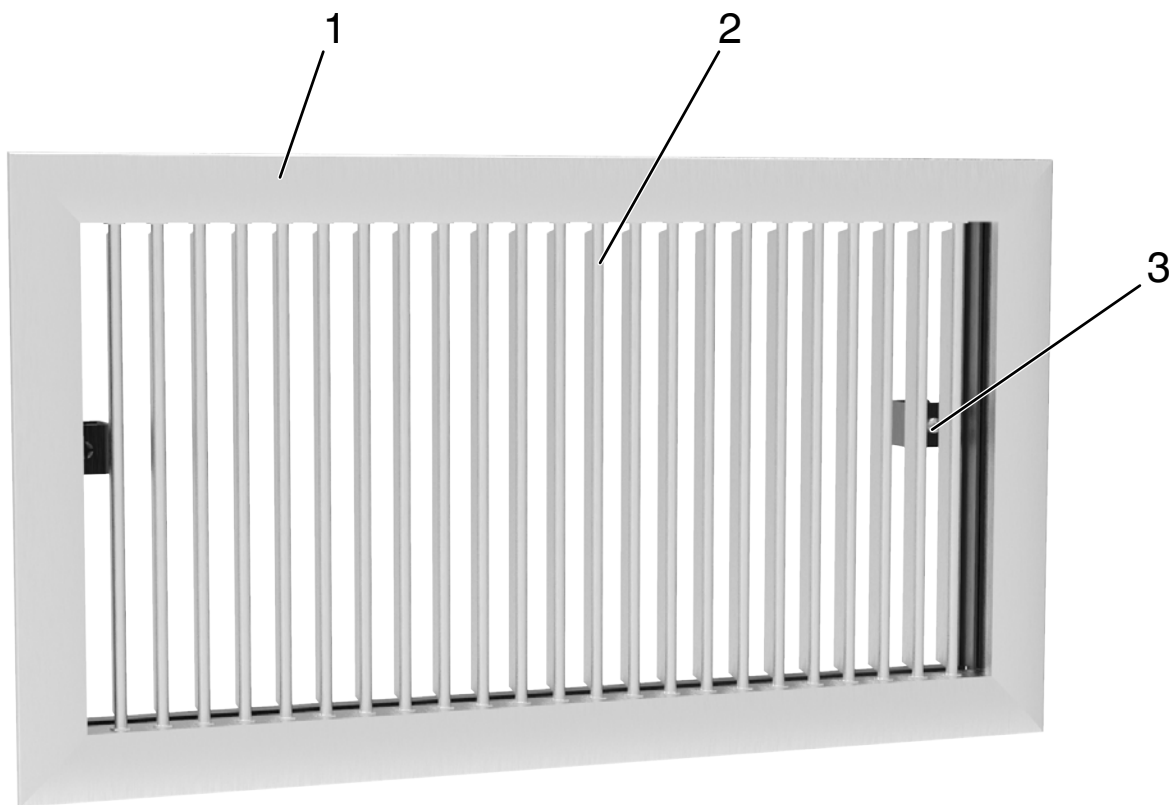
Schematic illustration of a ventilation grille with horizontal blades



1 Front frame L
2 Fixing A11 (by others)

3 Core H-F0
4 Attachment AG

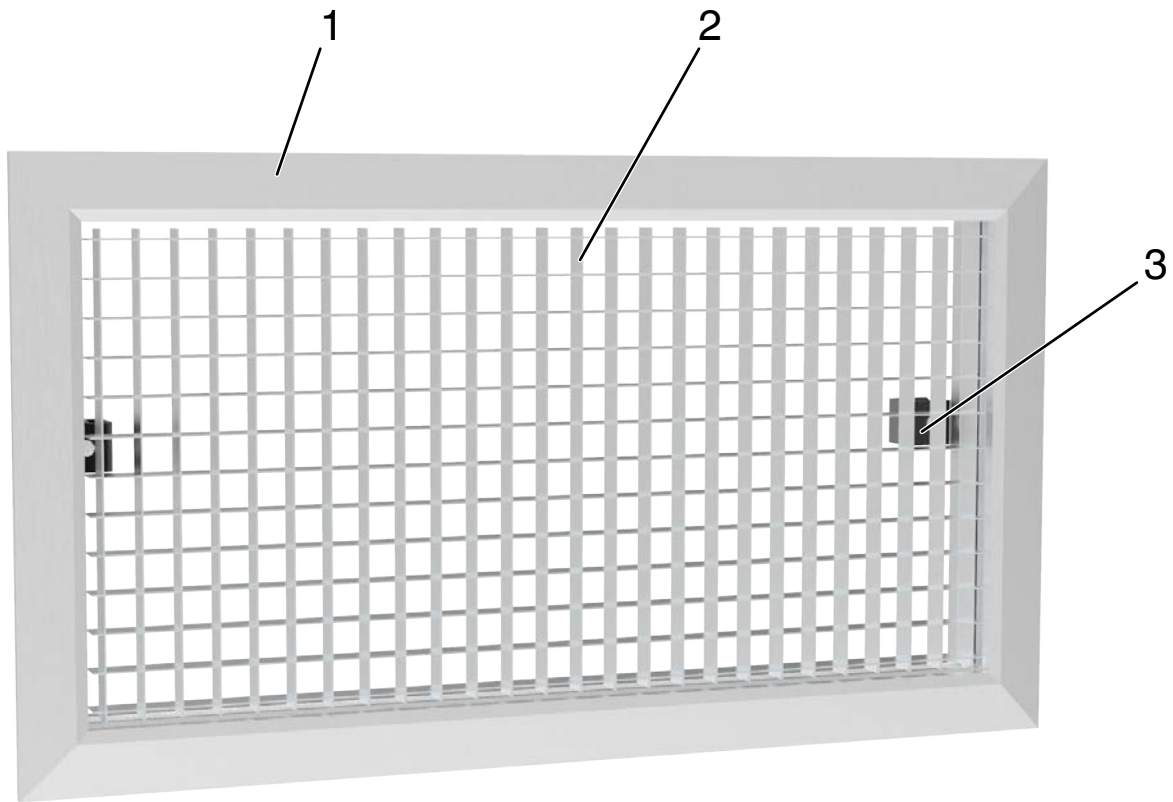
Schematic illustration of a ventilation grille with vertical blades



1 Front frame A
2 Core V-MO

3 Fixing VS

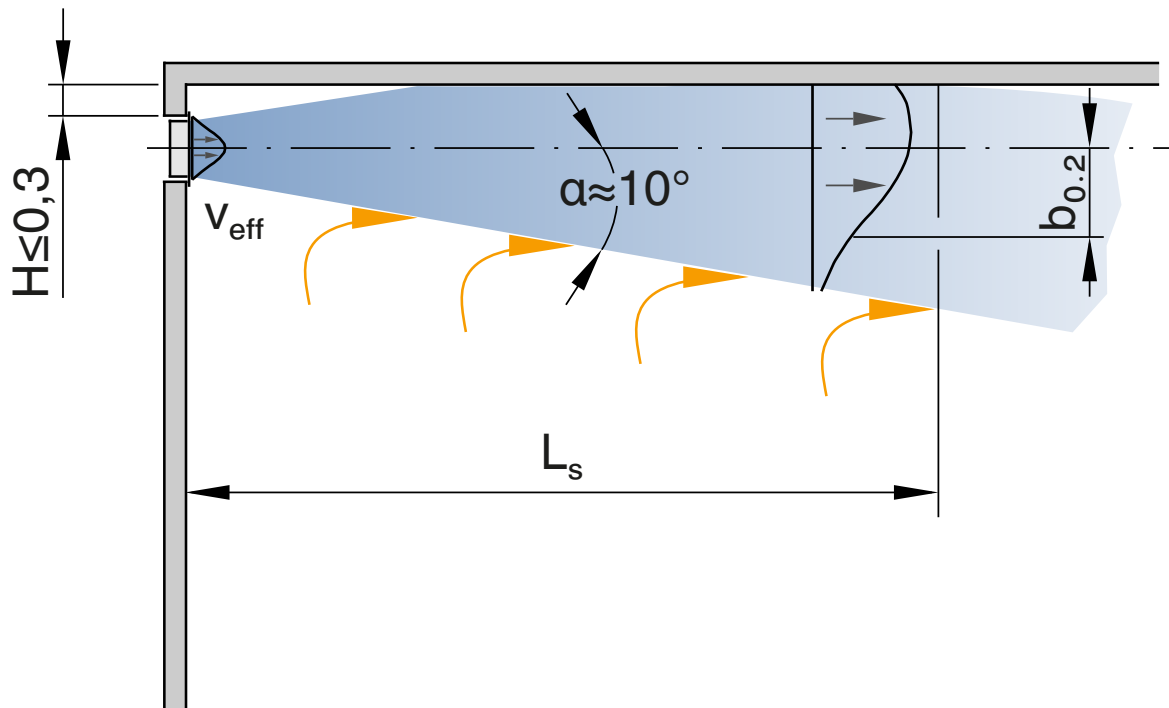
Schematic illustration of a ventilation grille with rectangular holes



1 Front frame A
2 Core P-EG

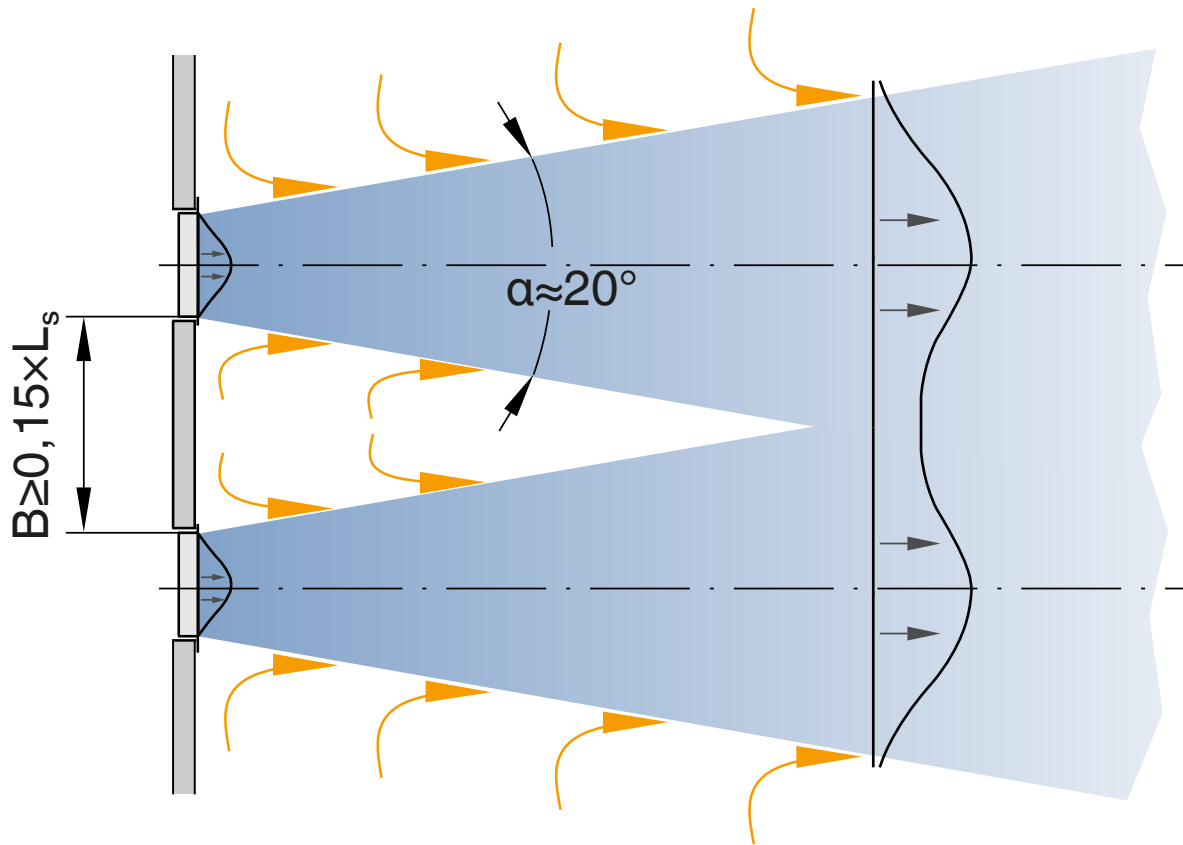
3 Fixing SP

Grille installation with ceiling influence (side view)

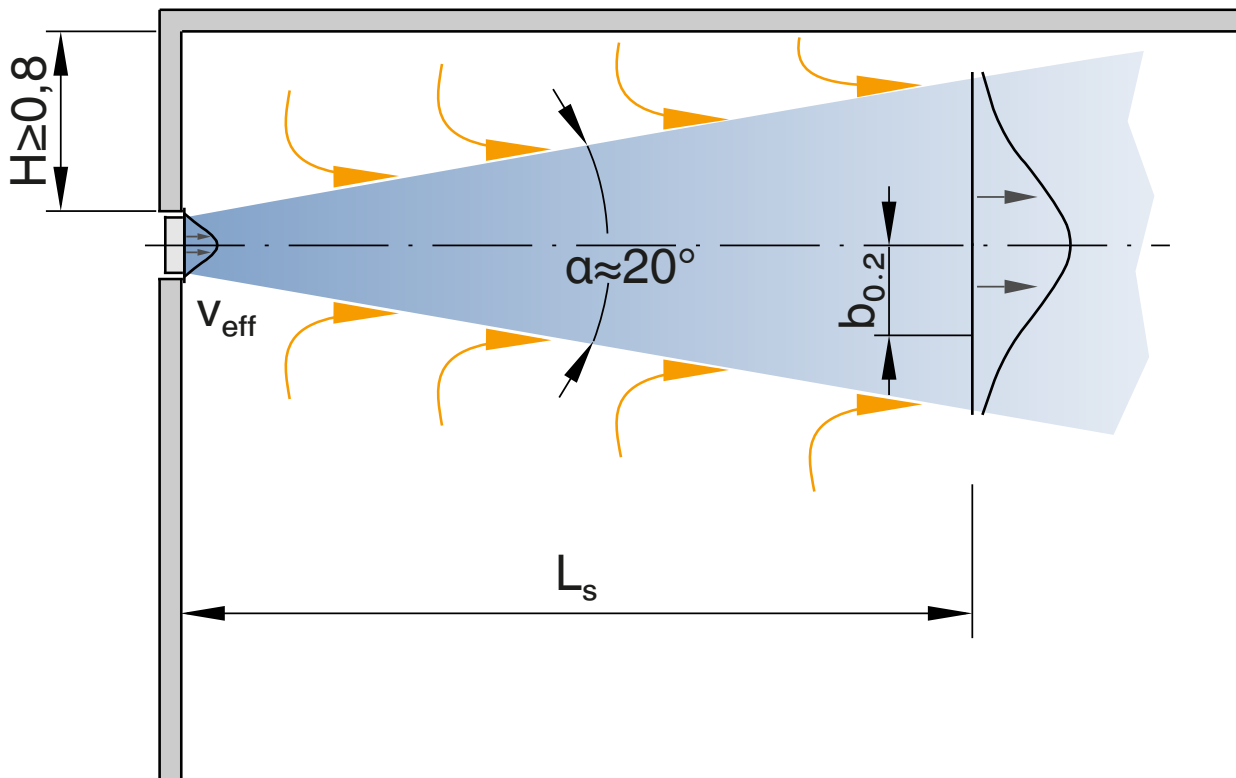


Due to the ceiling effect, the supply air flows into the room with a Coanda effect and achieves a greater throw distance (L_s).

Grille installation with ceiling influence (top view)



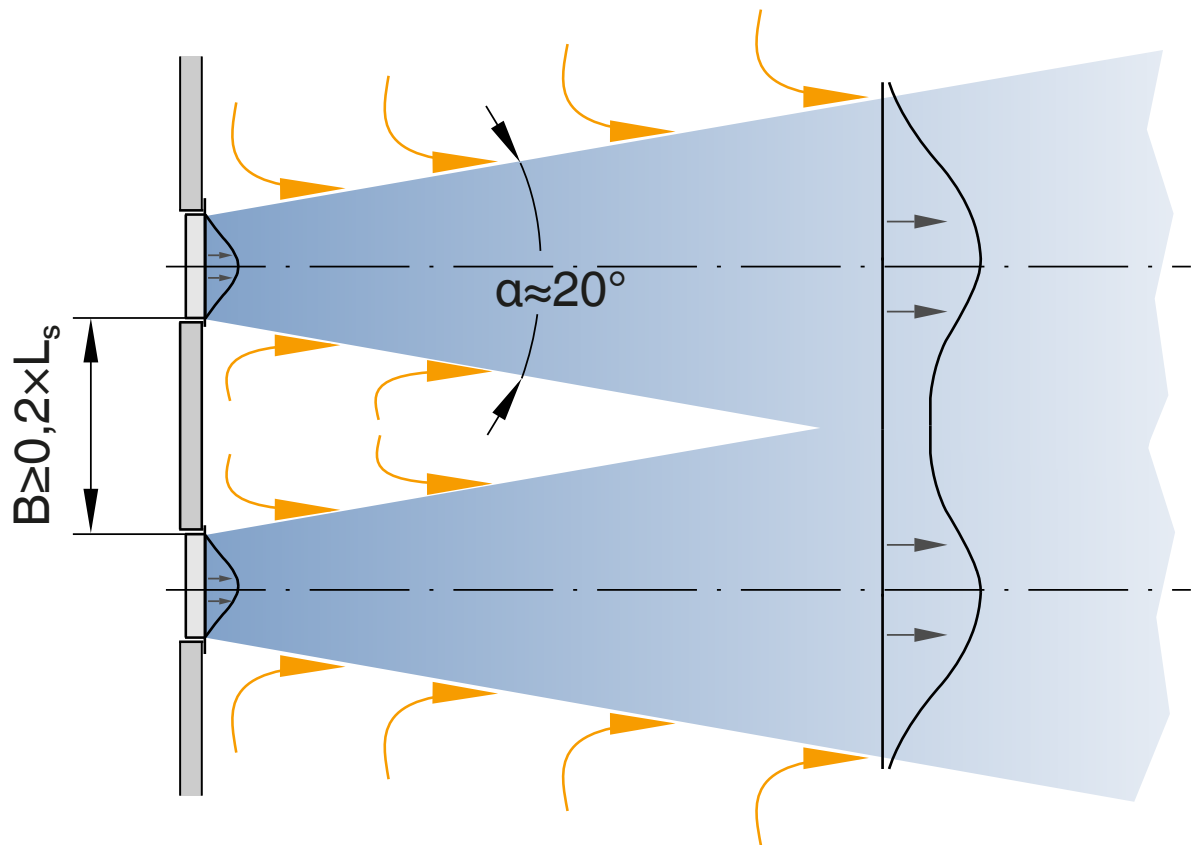
Grille installation without ceiling influence (side view)



With a distance of ≥ 0.8 m between the upper edge of the grille and the lower edge of the ceiling, there is no ceiling influence. The throw distance is thus smaller due to the missing Coanda

effect. With a distance of 0.3 m and 0.8 m between the ceiling and the grille, the resulting flow behaviour depends on various factors - e.g. volume flow rate or discharge velocity.

Grille installation without ceiling influence (top view)



Technical data

Nominal sizes	225 × 75 – 2025 × 525 mm
minimum volume flow rate	11 – 1013 l/s or 40 – 3647 m³/h
maximum volume flow rate	65 – 4370 l/s or 234 – 15732 m³/h
Supply air to room air temperature difference	-12 to 15 K

Volume flow rates indication for single grille (undivided construction) for supply air.

The individual sizing of the ventilation and acoustic data for the different variants is possible with our free design programme Easy Product Finder.

H-F0/F15: horizontal blades – fixed

Geometric free area A_{geo} [m²]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,006	0,009	0,013	0,016	0,019	0,025	0,032	0,038	0,045	0,051	0,058	0,064
125	0,011	0,017	0,023	0,029	0,035	0,047	0,059	0,071	0,083	0,095	0,106	0,118
225	0,022	0,033	0,045	0,056	0,067	0,09	0,113	0,136	0,158	0,181	0,204	0,227
325		0,049	0,066	0,083	0,1	0,133	0,167	0,201	0,234	0,268	0,302	0,335
425					0,132	0,176	0,221	0,266	0,31	0,355	0,399	0,444
525							0,275	0,33	0,386	0,442	0,497	0,553

Effective air discharge area (supply air) A_{eff} [m²]: H-F0

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,008	0,011	0,015	0,019	0,022	0,029	0,036	0,043	0,05	0,058	0,065	0,072
125	0,014	0,021	0,027	0,034	0,04	0,053	0,066	0,079	0,093	0,106	0,119	0,132
225	0,026	0,039	0,051	0,064	0,076	0,101	0,126	0,152	0,177	0,202	0,227	0,252
325		0,057	0,076	0,094	0,113	0,15	0,187	0,224	0,261	0,298	0,334	0,371
425					0,149	0,198	0,247	0,296	0,345	0,393	0,442	0,491
525							0,307	0,368	0,429	0,489	0,55	0,611

Effective air discharge area (supply air) A_{eff} [m²]: H-F15

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,007	0,011	0,014	0,017	0,021	0,027	0,034	0,041	0,047	0,054	0,06	0,067
125	0,013	0,019	0,025	0,031	0,037	0,049	0,061	0,073	0,086	0,098	0,11	0,122
225	0,024	0,036	0,047	0,059	0,07	0,093	0,116	0,139	0,162	0,185	0,208	0,231
325		0,052	0,069	0,086	0,103	0,137	0,171	0,205	0,239	0,273	0,307	0,341
425					0,136	0,181	0,226	0,271	0,316	0,361	0,406	0,45
525							0,281	0,337	0,393	0,448	0,504	0,56

Effective air inflow area (extract air) A_{eff} [m²]: H-F0

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,011	0,015	0,02	0,025	0,03	0,039	0,049	0,059	0,068	0,078	0,087	0,097
125	0,019	0,027	0,036	0,045	0,053	0,07	0,088	0,105	0,122	0,139	0,156	0,174
225	0,035	0,051	0,067	0,084	0,1	0,132	0,165	0,197	0,23	0,262	0,295	0,327
325		0,075	0,099	0,122	0,146	0,194	0,242	0,29	0,337	0,385	0,433	0,481
425					0,193	0,256	0,319	0,382	0,445	0,508	0,571	0,634
525							0,396	0,474	0,553	0,631	0,709	0,788

Effective air inflow area (extract air) A_{eff} [m²]: H-F15

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,011	0,016	0,02	0,025	0,03	0,04	0,05	0,059	0,069	0,079	0,088	0,098
125	0,019	0,027	0,036	0,044	0,053	0,07	0,087	0,105	0,122	0,139	0,156	0,173
225	0,034	0,051	0,067	0,083	0,099	0,131	0,163	0,195	0,228	0,26	0,292	0,324
325		0,074	0,097	0,121	0,145	0,192	0,239	0,286	0,333	0,38	0,428	0,475
425					0,19	0,252	0,315	0,377	0,439	0,501	0,563	0,625
525							0,39	0,468	0,545	0,622	0,699	0,776

H-P0/P15: horizontal blades – fixed

Geometric free area A_{geo} [m²]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,007	0,011	0,015	0,018	0,022	0,03	0,037	0,045	0,052	0,06	0,067	0,075
125	0,013	0,021	0,027	0,035	0,041	0,055	0,069	0,083	0,098	0,112	0,126	0,14
225	0,026	0,04	0,053	0,067	0,08	0,107	0,134	0,161	0,188	0,215	0,242	0,269
325		0,059	0,078	0,099	0,118	0,159	0,199	0,239	0,279	0,319	0,359	0,399
425					0,157	0,21	0,263	0,317	0,37	0,423	0,476	0,529
525							0,328	0,394	0,46	0,527	0,593	0,659

Effective air discharge area (supply air) A_{eff} [m²]: H-P0

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,01	0,014	0,018	0,023	0,027	0,036	0,044	0,053	0,062	0,07	0,079	0,088
125	0,016	0,023	0,031	0,038	0,045	0,06	0,074	0,089	0,104	0,118	0,133	0,148
225	0,028	0,042	0,055	0,068	0,081	0,108	0,135	0,161	0,188	0,214	0,241	0,267
325		0,06	0,079	0,098	0,118	0,156	0,195	0,233	0,272	0,31	0,349	0,387
425					0,154	0,204	0,255	0,305	0,356	0,406	0,456	0,507
525							0,315	0,377	0,44	0,502	0,564	0,627

Effective air discharge area (supply air) A_{eff} [m²]: H-P15

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,01	0,014	0,018	0,022	0,027	0,035	0,044	0,052	0,061	0,07	0,078	0,087
125	0,015	0,023	0,03	0,037	0,044	0,058	0,072	0,086	0,101	0,115	0,129	0,143
225	0,027	0,04	0,053	0,065	0,078	0,103	0,129	0,154	0,18	0,205	0,231	0,256
325		0,057	0,075	0,094	0,112	0,149	0,186	0,222	0,259	0,296	0,333	0,369
425					0,146	0,194	0,242	0,29	0,338	0,386	0,434	0,482
525							0,299	0,358	0,418	0,477	0,536	0,595

Effective air inflow area (extract air) A_{eff} [m²]: H-P0

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,012	0,017	0,023	0,028	0,033	0,044	0,054	0,065	0,076	0,086	0,097	0,108
125	0,02	0,029	0,037	0,046	0,055	0,073	0,091	0,109	0,127	0,145	0,163	0,181
225	0,035	0,051	0,067	0,084	0,1	0,132	0,165	0,197	0,229	0,262	0,294	0,327
325		0,074	0,097	0,121	0,144	0,191	0,238	0,285	0,332	0,379	0,426	0,473
425					0,189	0,25	0,312	0,373	0,434	0,496	0,557	0,619
525							0,385	0,461	0,537	0,613	0,689	0,765

Effective air inflow area (extract air) A_{eff} [m²]: H-P15

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,012	0,018	0,023	0,028	0,034	0,045	0,056	0,066	0,077	0,088	0,099	0,11
125	0,02	0,029	0,038	0,047	0,056	0,074	0,092	0,11	0,128	0,146	0,164	0,182
225	0,035	0,051	0,067	0,083	0,1	0,132	0,164	0,197	0,229	0,261	0,294	0,326
325		0,073	0,097	0,12	0,143	0,19	0,237	0,283	0,33	0,377	0,424	0,47
425					0,187	0,248	0,309	0,37	0,431	0,492	0,553	0,614
525							0,382	0,457	0,532	0,608	0,683	0,759

V-MO: vertical blades – adjustable

 Geometric free area A_{geo} [m²]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,007	0,01	0,014	0,017	0,02	0,027	0,034	0,041	0,048	0,055	0,061	0,068
125	0,014	0,021	0,028	0,034	0,041	0,055	0,069	0,082	0,096	0,11	0,123	0,137
225	0,028	0,041	0,055	0,069	0,083	0,11	0,137	0,165	0,192	0,22	0,247	0,275
325		0,062	0,083	0,103	0,124	0,165	0,206	0,248	0,289	0,33	0,371	0,412
425					0,165	0,22	0,275	0,33	0,385	0,44	0,495	0,55
525							0,341	0,409	0,477	0,545	0,613	0,681

 Effective air discharge area (supply air) A_{eff} [m²]: V-MO

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,01	0,014	0,019	0,023	0,027	0,036	0,045	0,053	0,062	0,071	0,08	0,088
125	0,016	0,024	0,031	0,038	0,046	0,061	0,075	0,09	0,105	0,12	0,135	0,149
225	0,029	0,042	0,056	0,069	0,083	0,11	0,137	0,164	0,191	0,218	0,245	0,272
325		0,061	0,081	0,1	0,12	0,159	0,198	0,237	0,276	0,315	0,354	0,394
425					0,157	0,208	0,259	0,311	0,362	0,413	0,464	0,516
525							0,321	0,384	0,447	0,511	0,574	0,638

 Effective air inflow area (extract air) A_{eff} [m²]: V-MO

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,012	0,017	0,022	0,027	0,032	0,042	0,053	0,063	0,073	0,084	0,094	0,104
125	0,019	0,028	0,037	0,045	0,054	0,071	0,089	0,106	0,124	0,141	0,159	0,176
225	0,034	0,05	0,066	0,082	0,098	0,129	0,161	0,193	0,224	0,256	0,288	0,32
325		0,072	0,095	0,118	0,141	0,187	0,233	0,279	0,325	0,371	0,417	0,463
425					0,185	0,245	0,305	0,365	0,426	0,486	0,546	0,606
525							0,377	0,452	0,526	0,601	0,675	0,75

H-MO: horizontal blades – adjustable

 Geometric free area A_{geo} [m²]

H/L	225	325	425	525	625	825	1025	1225
125	0,014	0,021	0,029	0,035	0,043	0,057	0,071	0,085
225	0,027	0,041	0,055	0,068	0,082	0,109	0,137	0,165
325		0,061	0,082	0,101	0,122	0,162	0,203	0,244
425					0,161	0,214	0,269	0,324
525							0,335	0,403

 Effective air discharge area (supply air) A_{eff} [m²]: H-MO

H/L	225	325	425	525	625	825	1025	1225
125	0,015	0,022	0,029	0,036	0,043	0,057	0,07	0,084
225	0,027	0,04	0,053	0,066	0,079	0,105	0,131	0,157
325		0,059	0,078	0,097	0,116	0,154	0,192	0,23
425					0,152	0,202	0,252	0,302
525							0,313	0,375

 Effective air inflow area (extract air) A_{eff} [m²]: H-MO

H/L	225	325	425	525	625	825	1025	1225
125	0,019	0,028	0,037	0,045	0,054	0,072	0,089	0,107
225	0,035	0,051	0,068	0,084	0,1	0,133	0,165	0,198
325		0,075	0,098	0,122	0,146	0,194	0,241	0,289
425					0,192	0,254	0,317	0,38
525							0,393	0,471

P-R: perforated sheet metal insert – circular holes

 Geometric free area A_{geo} [m²]

H/L	225	325	425	525	625	825	1025	1225
125	0,009	0,014	0,018	0,023	0,027	0,036	0,046	0,055
165	0,013	0,019	0,025	0,032	0,038	0,051	0,064	0,077
225	0,018	0,027	0,036	0,046	0,055	0,073	0,091	0,11
325		0,041	0,055	0,068	0,082	0,11	0,137	0,165
425					0,11	0,146	0,183	0,22
525							0,229	0,275

P-EG: Perforated sheet metal insert – Rectangular holes

 Geometric free area A_{geo} [m²]

H/L	225	325	425	525	625	825	1025	1225
125	0,018	0,027	0,035	0,044	0,053	0,071	0,089	0,107
165	0,025	0,037	0,05	0,062	0,075	0,1	0,125	0,15
225	0,035	0,053	0,071	0,089	0,107	0,143	0,179	0,215
325		0,08	0,107	0,134	0,161	0,215	0,268	0,322
425					0,214	0,286	0,358	0,43
525							0,448	0,538

Specification text

This specification text describes the general characteristics of the product. Texts for variants can be generated with our Easy Product Finder design program.

Ventilation grilles with gently sloped border, rectangular, for supply and extract air. Function combined with an appealing design. Gently sloped border. Preferably for wall and sill installation but also suitable for rectangular ducts.

Ready-to-install component which consists of a border and symmetrically and aerodynamically profiled, horizontal blades with a concealed linkage that allows for adjusting the blades simultaneously.

Special characteristics

- Energy-efficient and acoustically optimised air discharge
- 6 Front frame options: S, M, L, A, C, H
- Multiple Core options: Horizontal blades, Vertical blades and Pattern designs
- Aerodynamic aluminium blades, adjustable, fixed straight (0°) or fixed angled (15°) air discharge
- Perforated sheet construction with the option of circular or rectangular openings
- Easy installation with concealed screw fixing with and without installation subframe, visible screws, terminals or hidden-plaster border
- Aesthetic border construction, almost completely flush with the installation surface
- Linear look – fixed blades ideal for continuous horizontal runs

- Use of existing attachments
- Easy replacement of existing grilles due to standard installation dimensions

Materials and surfaces

- Border and blades made of aluminium
- Border and blades anodised, E6-C-0, natural colour
- Linkage and end pieces for adjustable blades made of highly temperature resistant special plastic, flame retardant to UL 94, V-0
- Vertical lateral mullions made of aluminium
- Patterns made of galvanized metal sheet
- P1: Border, blades and patterns powder-coated, RAL CLASSIC colour

Technical data

- Nominal sizes: 225 × 75 – 2025 × 525 mm
- Horizontal run section, height: 75 – 525 mm
- Minimum volume flow rate (supply air): 11 – 1013 l/s or 40 – 3647 m³/h
- Maximum volume flow rate (supply air), at LWA max. 40 dB(A) without attachments: 65 – 4370 l/s or 234 – 15732 m³/h
- Supply air to room air temperature difference: -12 to +15 K

Order code

X-GRILLE-modular – H – F0 – L – VS / L x H / AG / A1 / P1 – RAL ...

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1 Type

X-GRILLE-modular

2 Inset construction style

H horizontal blades
 V vertical blades
 P Perforated sheet

3 Inset construction

Blades:
 F0 fixed blades 0° pitch 12.5 mm
 F15 fixed blades 15° pitch 12.5 mm
 P0 fixed blades 0° pitch 16.7 mm
 P15 fixed blades 15° pitch 16.7 mm
 MO adjustable blades
 Perforated sheet:
 R rounded holes
 Ground floor rectangular holes

4 Front frame

No entry: none
 S small
 M medium
 L large
 A angled
 C bent
 H concealed

5 Fixing

No entry: none
 VS Concealed screw fixing

SP concealed screw fixing without installation subframe
 A11 visible screw fixing
 HS Concealed screw fixing
 CF Clamp fixing

6 Dimensions

L: 225 – 2025
 H: 75 – 525

7 Attachments

A without (grille face only)
AG Damper unit, opposed action blades
 D Air direction control, blades installed at 90° to the front blades, independently adjustable
 DG D combined with AG
 AS Hit and miss damper
 EF coarse filter media

8 Installation subframe

No entry required: None
 A1 Installation subframe 12.5 mm
B1 Installation subframe 5.5 mm
C1 Flush installation subframe 0 mm

9 Surface

No entry: anodised, E6-C-0, natural colour
 P1 Powder-coated, specify RAL CLASSIC colour
 Gloss level:
 RAL9010 50 %
 RAL 9006 30 %
 all other RAL colours 70 %

Order example: X-GRILLE-Modular -H-F0-L-VS/625x325/AG/A1/P1-RAL 9016

Inset construction	horizontal blades
Inset construction	fixed blades 0° pitch 12.5 mm
Front border	large
Mounting	concealed screw fixing
Nominal size	625 × 325 mm
Attachments	Damper unit, opposed action blades
Installation subframe	12.5 mm
User interface	RAL 9016, traffic white, gloss level 70 %

X-GRILLE-modular – E – R – H – F0 – L – VS / L x H / AG / A1 / P1 – RAL ...
| | | | | | | | | | |
1 2 3 4 5 6 7 8 9 10 11

1 Type

X-GRILLE-modular Horizontal run section

2 Profile

E End section

M Middle section

3 End section

Specify only for end section

R Right end section

L Left end section

4 Inset construction style

H horizontal blades

V vertical blades

P Perforated sheet

5 Inset construction

Blades:

F0 fixed blades 0° pitch 12.5 mm

F15 fixed blades 15° pitch 12.5 mm

P0 fixed blades 0° pitch 16.7 mm

P15 fixed blades 15° pitch 16.7 mm

MO adjustable blades

6 Front frame

S small

M medium

L large

A angled

C bent

H concealed

7 Fixing

No entry required: None

VS concealed screw fixing

SP concealed screw fixing without installation subframe

A11 visible screw fixing

HS Concealed screw fixing

CF Clamp fixing

8 Dimensions

End section

L: 950 – 2025

H: 75 – 525

Middle section

L: 2000

H: 75 – 525

9 Attachments

A without (grille face only)

AG Damper unit, opposed action blades

D Air direction control, blades installed at 90° to the front blades, independently adjustable

DG D combined with AG

AS Hit and miss damper

EF coarse filter media

10 Installation subframe

No entry required: None

A1 Installation subframe 12.5 mm

B1 Installation subframe 5.5 mm

C1 Flush installation subframe 0 mm

11 Surface

No entry: anodised, E6-C-0, natural colour

P1 Powder-coated, specify RAL CLASSIC colour

Gloss level:

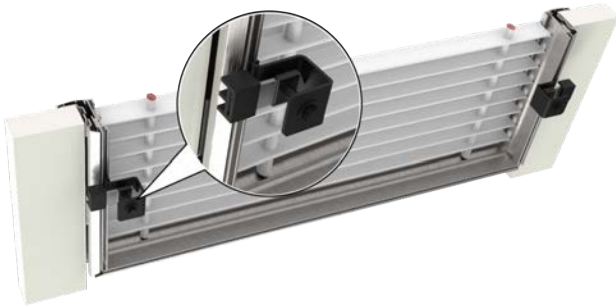
RAL 9010 50 %

RAL 9006 30 %

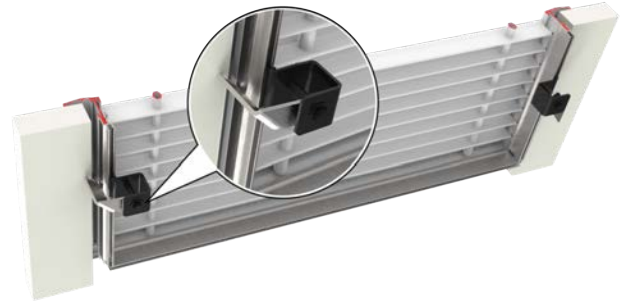
All other RAL colours 70 %

Variants

Fixing -VS



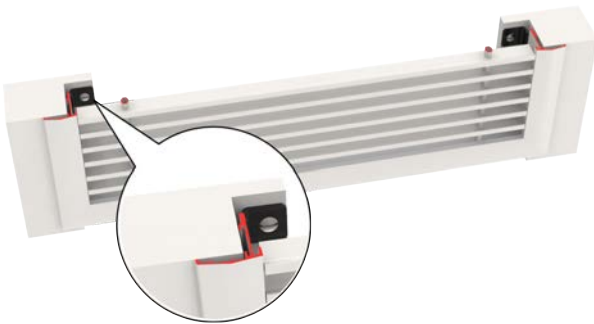
Fixing -SP



Concealed screw fixing (rear view).

Concealed screw fixing without installation subframe (rear view).

Fixing -HS



Fixing -CF



Hidden screw fixing (front view).
Fixing screws are to be provided by others.

Clamp fixing or fixing with fixing tab (front view).

Fixing -A11

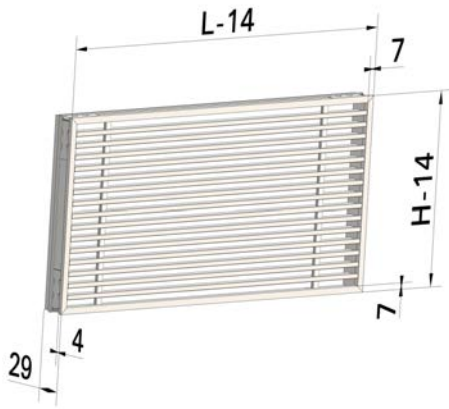


Visible screw fixing (front view).

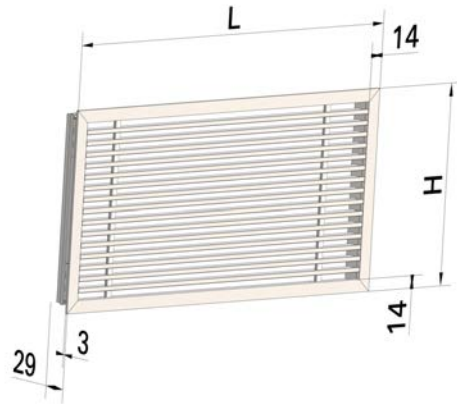
Fixing screws are to be provided by others.

Dimensions

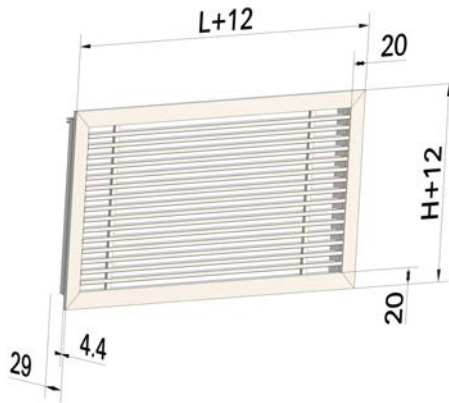
Front frame -S



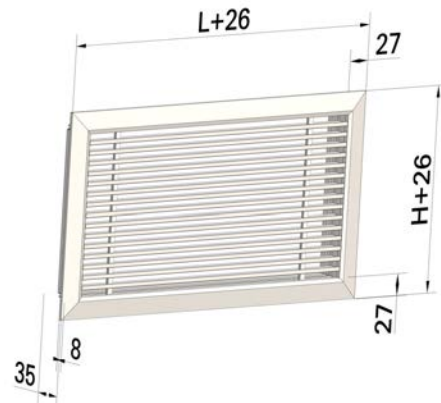
Front frame -M



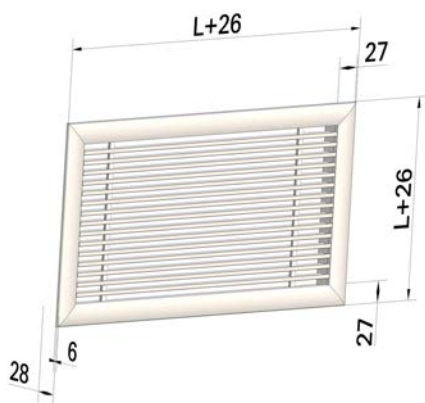
Front frame -L



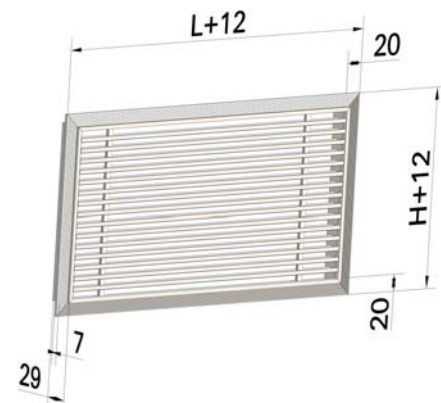
Front frame -A



Front frame -C



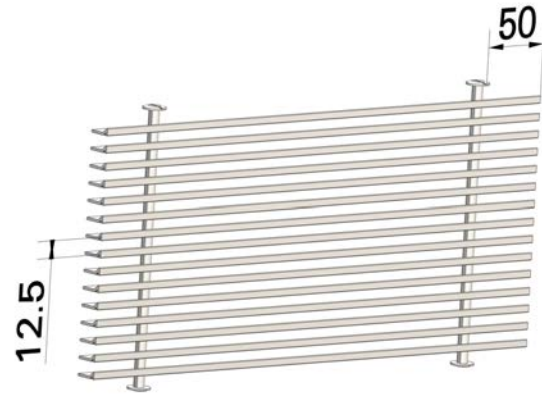
Front frame -H



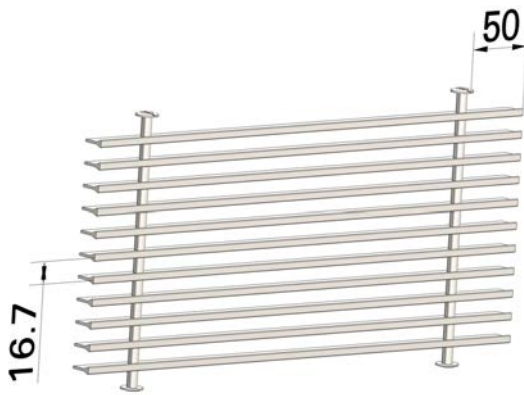
Core -H-F0



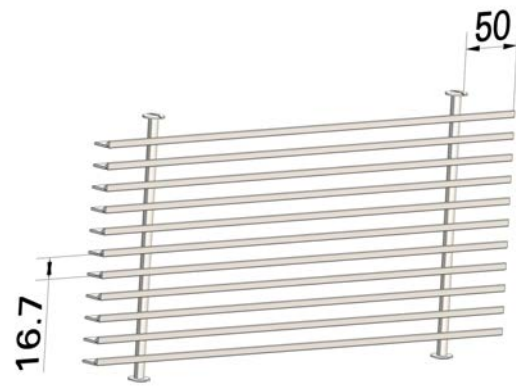
Core -H-F15



Core -H-PO



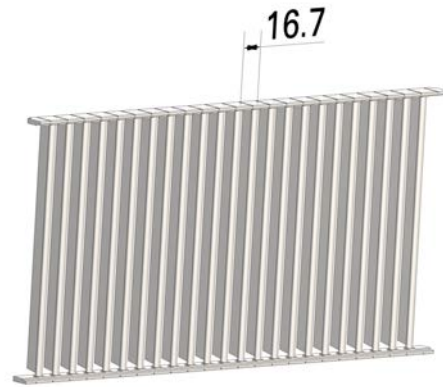
Core -H-P15



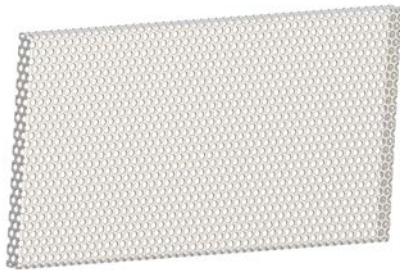
Core -H-MO



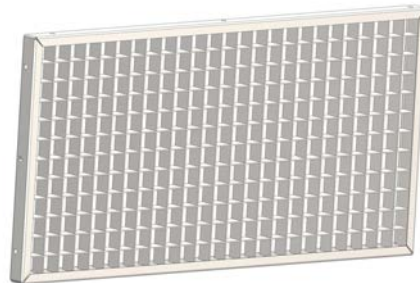
Core -V-MO



Core -P-R



Core -P-EG



Weights

The total weight of the X-GRILLE modular is calculated from the individual weights of the construction kits
 $m_{total} = m_{insert} + m_{front\ frame} + m_{rear\ assembly}$

Weights insert horizontal blades [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,08	0,12	0,16	0,19	0,24	0,31	0,39	0,47	0,55	0,63	0,7	0,78
125	0,18	0,27	0,36	0,45	0,55	0,73	0,91	1,09	1,27	1,45	1,63	1,81
225	0,39	0,58	0,78	0,97	1,17	1,55	1,94	2,33	2,71	3,1	3,49	3,87
325		0,89	1,19	1,48	1,78	2,38	2,97	3,56	4,16	4,75	5,34	5,93
425					2,4	3,2	4	4,8	5,6	6,4	7,2	8
525							5,03	6,04	7,04	8,05	9,05	10,06

Weights inset vertical blades [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,11	0,17	0,23	0,28	0,34	0,46	0,57	0,69	0,8	0,92	1,04	1,15
125	0,2	0,31	0,42	0,53	0,64	0,85	1,07	1,28	1,5	1,71	1,93	2,15
225	0,39	0,6	0,81	1,01	1,22	1,64	2,05	2,47	2,89	3,3	3,72	4,13
325		0,89	1,19	1,5	1,81	2,43	3,04	3,66	4,27	4,89	5,5	6,12
425					2,4	3,21	4,03	4,85	5,66	6,48	7,29	8,11
525							5,08	6,1	7,13	8,16	9,19	10,21

Weights inset perforated sheet metal [kg]

H/L	225	325	425	525	625	825	1025	1225
75	0,08	0,12	0,16	0,19	0,23	0,3	0,38	0,45
125	0,14	0,2	0,26	0,32	0,38	0,5	0,62	0,74
225	0,24	0,35	0,46	0,57	0,67	0,89	1,1	1,32
325		0,51	0,66	0,82	0,97	1,28	1,59	1,9
425					1,27	1,67	2,07	2,48
525							2,56	3,05

Weights front frame S, M [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,14	0,18	0,21	0,25	0,29	0,37	0,45	0,52	0,6	0,68	0,76	0,84
125	0,18	0,21	0,25	0,29	0,33	0,41	0,49	0,56	0,64	0,72	0,8	0,87
225	0,21	0,25	0,29	0,33	0,37	0,45	0,53	0,6	0,68	0,76	0,84	0,91
325		0,29	0,33	0,37	0,41	0,49	0,56	0,64	0,72	0,8	0,87	0,95
425					0,45	0,53	0,6	0,68	0,76	0,84	0,91	0,99
525							0,64	0,72	0,8	0,87	0,95	1,03

Weights front frame L, A, C, H [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,22	0,27	0,32	0,38	0,43	0,54	0,64	0,75	0,86	0,97	1,07	1,18
125	0,26	0,32	0,37	0,42	0,48	0,58	0,69	0,8	0,91	1,01	1,12	1,23
225	0,32	0,37	0,42	0,48	0,53	0,64	0,75	0,85	0,96	1,07	1,17	1,28
325		0,42	0,48	0,53	0,58	0,69	0,8	0,91	1,01	1,12	1,23	1,34
425					0,64	0,75	0,85	0,96	1,07	1,17	1,28	1,39
525							0,91	1,01	1,12	1,23	1,34	1,44

Weights attachment AG [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,4	0,5	0,7	0,8	1,0	1,3	1,6	1,9	2,2	2,5	2,8	3,1
125	0,5	0,6	0,8	1,0	1,2	1,5	1,9	2,3	2,6	2,9	3,2	3,6
225	0,7	0,9	1,1	1,4	1,6	2,1	2,5	3,0	3,5	4,0	4,4	4,8
325		1,2	1,4	1,7	2,0	2,6	3,2	3,8	4,3	4,9	5,5	6,1
425					2,5	3,2	3,9	4,6	5,4	6,1	6,8	7,5
525							4,5	5,3	6,4	7,1	7,8	8,6

Weights attachment DG [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,4	0,6	0,8	0,9	1,1	1,5	1,8	2,1	2,4	2,8	3,2	3,5
125	0,6	0,8	1	1,2	1,5	1,9	2,4	2,8	3,2	3,6	4,1	4,6
225	0,8	1,2	1,5	1,8	2,2	2,8	3,5	4,1	4,7	5,3	6,0	6,7
325		1,6	2	2,4	2,9	3,7	4,6	5,5	6,2	7,0	7,9	8,8
425					3,6	4,6	5,7	6,8	7,7	8,7	9,8	10,9
525							6,8	8,1	9,1	10,1	11,4	12,9

Weights attachment D [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,2	0,3	0,4	0,4	0,5	0,7	0,9	1,0	1,1	1,3	1,5	1,7
125	0,3	0,4	0,5	0,6	0,7	0,9	1,2	1,4	1,5	1,7	2,0	2,3
225	0,4	0,6	0,7	0,9	1	1,4	1,7	2	2,2	2,6	3,0	3,3
325		0,7	0,9	1,2	1,4	1,8	2,2	2,7	3,0	3,4	3,8	4,2
425					1,7	2,3	2,8	3,3	3,7	4,3	4,9	5,4
525							3,3	4,0	4,4	5,1	5,7	6,3



Weights attachment AS [kg]

H/L	225	325	425	525	625	825	1025	1225	1425	1625	1825	2025
75	0,3	0,4	0,5	0,6	0,7	0,9	1,1	1,3	1,5	1,7	1,9	2,1
125	0,4	0,6	0,8	0,9	1,1	1,4	1,8	2,1	2,4	2,7	3,0	3,4
225	0,8	1,0	1,3	1,6	1,9	2,5	3,0	3,6	4,1	4,7	5,3	5,8
325		1,5	1,9	2,3	2,7	3,5	4,3	5,1	5,8	6,6	7,4	8,2
425					3,8	4,9	6,0	7,2	8,2	9,3	10,4	11,5
525							7,3	8,7	10,5	11,8	13,0	14,1

Product details

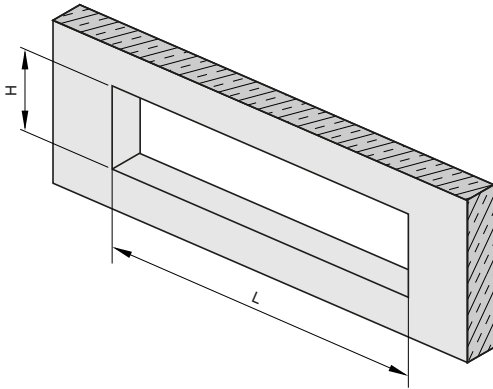
Equivalence criteria

Comparison - current grilles and X-GRILLE Modular								
Type	Construction style grille core	Inset construction	Front border	X-GRILLE type	Construction style grille core	Inset construction	Front border	
ASL	horizontal	adjustable	angled	X-GRIL modular	H	MO	A	
AT					V			
VAT	vertical							
AH	horizontal	fixed, 0° screw hole pitch 12.5 mm	flat		H	F0	L	
		fixed, 15° screw hole pitch 12.5 mm				F15		
		fixed, 0° screw hole pitch 16.7 mm				P0		
		fixed, 15° screw hole pitch 16.7 mm				P15		
	vertical	fixed, 0° screw hole pitch 12.5 mm			V	F0		
		fixed, 15° screw hole pitch 12.5 mm				F15		
		fixed, 0° screw hole pitch 16.7 mm				P0		
		fixed, 15° screw hole pitch 16.7 mm		P15				
AEH11	horizontal	fixed, 0° screw hole pitch 12.5 mm	ohne	H	F0	M		
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
	vertical	fixed, 0° screw hole pitch 12.5 mm		V	F0			
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
AEH	horizontal	fixed, 0° screw hole pitch 12.5 mm	ohne	H	F0	S		
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
	vertical	fixed, 0° screw hole pitch 12.5 mm		V	F0			
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
EF	horizontal	fixed, 0° screw hole pitch 12.5 mm	ohne	H	F0	-		
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
	vertical	fixed, 0° screw hole pitch 12.5 mm		V	F0			
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
ATLF	horizontal	fixed, 45°	angled	H	MO	A		
	vertical	fixed, 45°		V				
AR	horizontal	fixed, 45°		H				
VAR	vertical	fixed, 45°		V				
AE	Perforated sheet	rectangular holes		P	P		EG	
GLB		rounded holes					R	
AEP		rectangular holes	EG					
AHP	horizontal	fixed, 0° screw hole pitch 12.5 mm	small	H	F0	S		
		fixed, 15° screw hole pitch 12.5 mm			F15			
		fixed, 0° screw hole pitch 16.7 mm			P0			
		fixed, 15° screw hole pitch 16.7 mm			P15			
AH		fixed, 0° screw hole pitch 12.5 mm	flat		X-GRIL modular-E/M	H	F0	L
		fixed, 15° screw hole pitch 12.5 mm					F15	
		fixed, 0° screw hole pitch 16.7 mm					P0	
		fixed, 15° screw hole pitch 16.7 mm					P15	
VAT	vertical	adjustable	angled	V		MO	A	
VAR		fixed, 45°						

Installation location

- Installation preferably in walls, sills and rectangular ducts
- Installation with installation subframe is recommended
- For installation without installation subframe, install the front border with concealed screw fixing, visible screws, concealed screws or fixing tabs

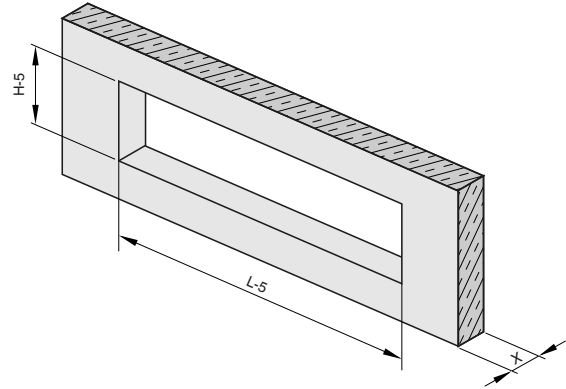
Installation opening for a ventilation grille



Installation opening with installation subframe -A1 and -B1 for fixing -VS:

L = Order length of the ventilation grille L
 H = Order height of the ventilation grille H

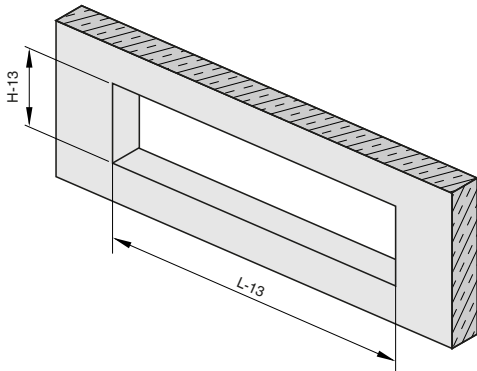
Installation opening for a ventilation grille



Installation opening with installation subframe -C1 for fixing -VS or without installation subframe for fixing -SP

L = Order length of the ventilation grille L - 5 mm
 H = Order height of the ventilation grille H - 5 mm

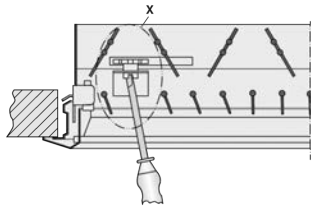
Installation opening for a ventilation grille



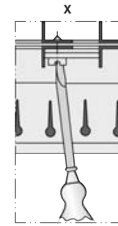
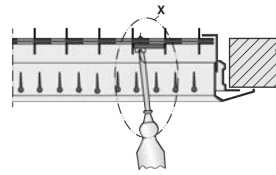
Installation opening without installation subframe for fixing -A11, -HS, -CF:

L = Order length of the ventilation grille L - 13 mm
 H = Order height of the ventilation grille H - 13 mm

Volume flow rate balancing -*G



Volume flow rate balancing -S



Volume flow rate balancing

When several ventilation grilles are installed on the same duct, it may be necessary to balance the volume flow rates.

- AG: Damper unit with opposed action blades, adjustable, secured with a locking screw
- AS: Damper unit with hit and miss damper, adjustable, secured with a locking screw

Air pattern

- Adjustable blades: Set the air control blades individually or together and depending on the local conditions
- D, DG: Air control blades, fitted at 90° to the front blades, can be adapted to the local conditions

Nomenclature

L [mm]

Nominal length of the ventilation grille

H [mm]

Nominal height of the ventilation grille

m [kg]

Weight

L_{WA} [dB(A)]

A-weighted sound power level of air-regenerated noise

q_v [m³/h]; [l/s]

Volume flow rate

Δp_t [Pa]

Total differential pressure

l_s [m]

Distance from single grille or horizontal run section (throw distance)