

Ventilation grilles for floor installation

Type AF



Ventilation grilles, made of aluminium, with fixed longitudinal blades, for floor installation – also for horizontal runs

Single ventilation grilles and horizontal run sections with special profiled blades

- Nominal sizes 225 × 75 – 1225 × 425 mm and horizontal run sections
- Volume flow rate range 10 – 1235 l/s or 36 – 4446 m³/h
- Grille face made of aluminium with anodised finish
- Front border suitable for floor installation without an installation subframe
- Removable grille core with special spring clip fixing

Optional equipment and accessories

- Grille face in RAL CLASSIC colours
- Attachments for volume flow rate balancing and air direction control

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Application

Application

- Ventilation grille of Type AF as supply air or extract air variant for comfort zones and industrial zones
- Directed supply air discharge for mixed flow ventilation
- Blades for straight (0°) or angled (15°) air discharge to meet different local requirements
- For variable and constant volume flows
- For supply air to room air temperature differences from –12 to +4 K
- Preferably for floor installation

Special characteristics

- Blades for straight (0°) or angled (15°) air

- discharge to meet different local requirements
- Spring clip fixing

Nominal sizes

Single grille

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

Horizontal run section

- Nominal length of end section: 1010, 1190, 1370, 1550, 1730, 1910 mm
- Nominal length of middle section: 2000 mm
- Nominal height: 75, 125, 225, 325 mm

Description

Variants

- AF: Single grille
- E-AF, M-AF: Horizontal run section

Blade construction style

- 0: 0° discharge
- 15: 15° discharge

Parts and characteristics

- Front border
- Fixed longitudinal blades
- Factory fitted perimeter seal
- Centre mullion for nominal sizes over 625 mm

Attachments

- AG, AS, D, DG: For volume flow rate balancing and for air direction control

Construction features

- Transverse bars for clip-fixing the grille (bars snap into clips)

- Blades for straight (0°) or angled (15°) air discharge

Materials and surfaces

- Border and blades made of aluminium
- Border and blades anodised, E6-C-0, natural colour
- P1: Border and blades powder-coated, RAL CLASSIC colour

Standards and guidelines

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

Maintenance

- Maintenance-free as construction and materials are not subject to wear
- Inspection and cleaning to VDI 6022

Nominal sizes	225 × 75 to 1225 × 425 mm
Horizontal run section	H: 75, 125, 225, 325 mm
Minimum volume flow rate	10 – 410 l/s or 36 – 1476 m ³ /h
Maximum volume flow rate, at L _{WA} max. 40 dB(A) without attachments	55 – 1235 l/s or 198 – 4446 m ³ /h
Supply air to room air temperature difference	-12 to +4 K

Volumen flow rates for single grille for supply air.

Geometric free area

H	L [mm]							
	225	325	425	525	625	825	1025	1225
mm	A_{geo} m ²							
75	0.006	0.009	0.011	0.014	0.017	0.022	0.028	0.033
125	0.016	0.024	0.032	0.039	0.047	0.063	0.078	0.094
225		0.054	0.072	0.090	0.108	0.143	0.179	0.214
325			0.113	0.140	0.168	0.224	0.279	0.335
425					0.229	0.304	0.380	0.455

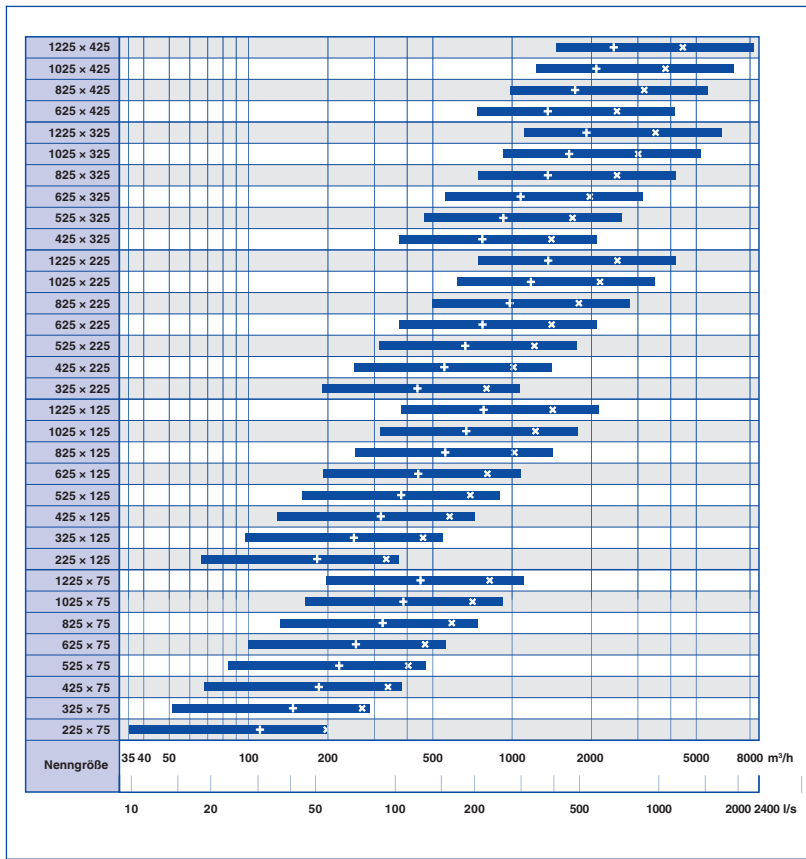
Effective air discharge area (supply air)

H	L [mm]							
	225	325	425	525	625	825	1025	1225
mm	A_{eff} m ²							
75	0.006	0.009	0.011	0.014	0.017	0.022	0.028	0.034
125	0.011	0.017	0.022	0.028	0.034	0.044	0.055	0.066
225		0.034	0.044	0.055	0.066	0.087	0.108	0.129
325			0.066	0.081	0.096	0.129	0.169	0.193
425					0.129	0.169	0.214	0.256

Effective air inflow area (extract air)

H	L [mm]							
	225	325	425	525	625	825	1025	1225
mm	A_{eff} m ²							
75	0.004	0.006	0.009	0.011	0.013	0.017	0.021	0.026
125	0.009	0.013	0.017	0.021	0.026	0.033	0.041	0.049
225		0.026	0.033	0.041	0.049	0.066	0.082	0.090
325			0.049	0.060	0.072	0.095	0.120	0.140
425					0.095	0.122	0.155	0.185

AF, volume flow rate ranges



× $L_{WA} = 40$ dB(A) with unrestricted airflow + $L_{WA} = 40$ dB(A) with airflow restricted by 50 %

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

Ventilation grilles, rectangular, made of aluminium, for supply and extract air. Preferably for floor installation.

Ready-to-install component which consists of the installation subframe and fixed longitudinal blades.

Spring clip fixing for installation into an installation subframe.

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

Special characteristics

- Blades for straight (0°) or angled (15°) air discharge to meet different local requirements
- Spring clip fixing

Materials and surfaces

- Border and blades made of aluminium
- Border and blades anodised, E6-C-0, natural colour
- P1: Border and blades powder-coated, RAL

CLASSIC colour

Technical data

- Nominal sizes: 225 × 75 to 1225 × 325 mm
- Horizontal run section, height: 75 – 325 mm
- Minimum volume flow rate (supply air): 10 – 410 l/s or 36 – 1476 m³/h
- Maximum supply air flow rate, at L_{WA} max. 40 dB(A) without attachments: 55 – 1235 l/s or 198 – 4446 m³/h
- Supply air to room air temperature difference: -12 to +4 K

Sizing data

- \dot{V} _____
[m³/h]
 - Δp_i _____
[Pa]
- Air-regenerated noise
- L_{WA} _____
[dB(A)]

AF as a single grille

AF – 0 – AG / 825×225 / P1 – RAL ...				
1	2	3	4	5

1 Type

AF Single grille

4 Nominal size [mm]

L × H

2 Blade construction style

0 0° blades (straight)
15 15° blades (angled)

5 Exposed surface

No entry: anodised, E6-C-0, natural colour
P1 Powder-coated, specify RAL CLASSIC colour

3 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 DG D combined with AG

Gloss level
RAL 9010 50 %
RAL 9006 30 %
All other RAL colours 70 %

Order example: AF-15-AG/825×225

Blade construction style	15°
Attachments	Damper unit, opposed action blades
Nominal size	825 × 225 mm
Exposed surface	Anodised, E6-C-0, natural colour

AF, horizontal run section

E – AF – 15 – AG / 950×225 / P1 – RAL ...					
2	1	3	4	5	6

1 Type

AF Horizontal run section

5 Nominal size

E (end section) × height H
M (middle section) × height H

2 Section

E End section
EL Left end section, blade construction style 15
ER Right end section, blade construction style 15
M Middle section

6 Exposed surface

No entry: anodised, E6-C-0, natural colour
P1 Powder-coated, specify RAL CLASSIC colour

3 Blade construction style

0 0° blades (straight)
15 15° blades (angled)

Gloss level
RAL 9010 50 %
RAL 9006 30 %
All other RAL colours 70 %

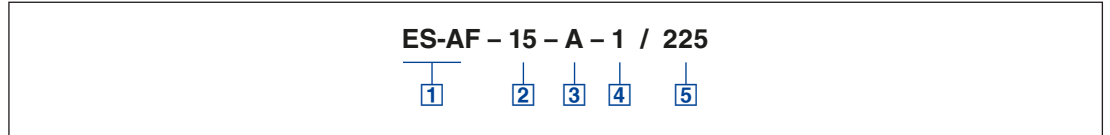
4 Attachments

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 DG D combined with AG

Order example: E-AF-0/1310x225

Section	End section
Blade construction style	0°
Attachments	None
Nominal size	1310 × 225 mm
Exposed surface	Anodised, E6-C-0, natural colour

ES-AF corner section



1 Type

ES-AF 90° corner section

2 Blade construction style

- 0** 0° blades (straight)
- 15** 15° blades (angled)

3 Attachments

- A** Without (grille face only)

4 Airflow direction

- Only for 15° blades
- 1** Outward
- 2** Inward

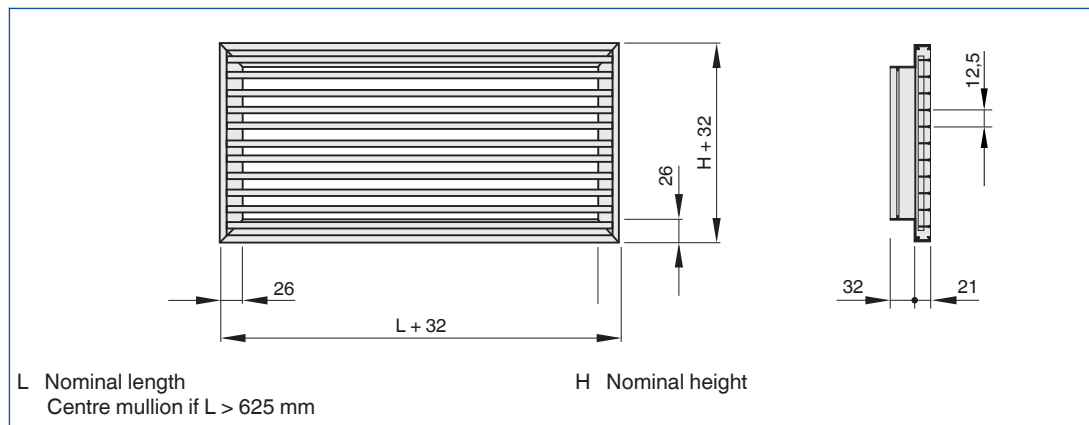
5 Nominal size [mm]

Nominal height H

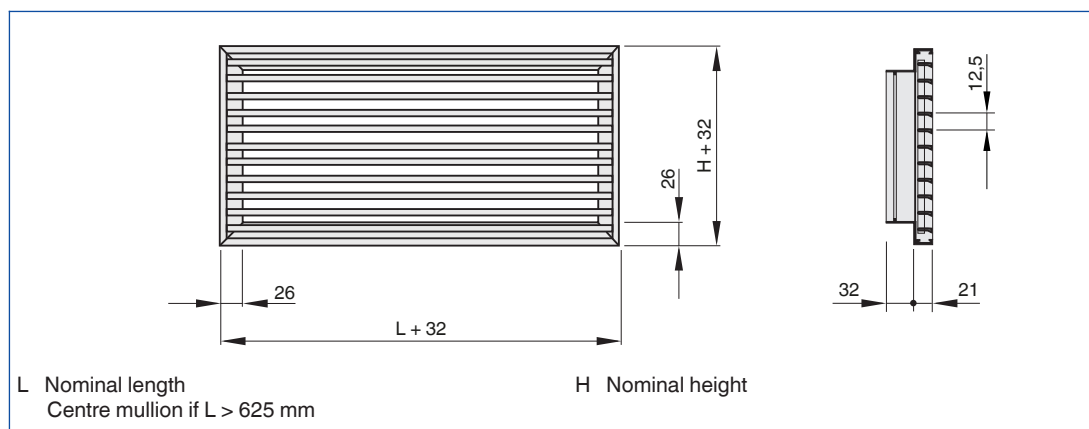
- 75**
- 125**
- 225**
- 325**

The weight table shows the available nominal sizes

AF0



AF-15

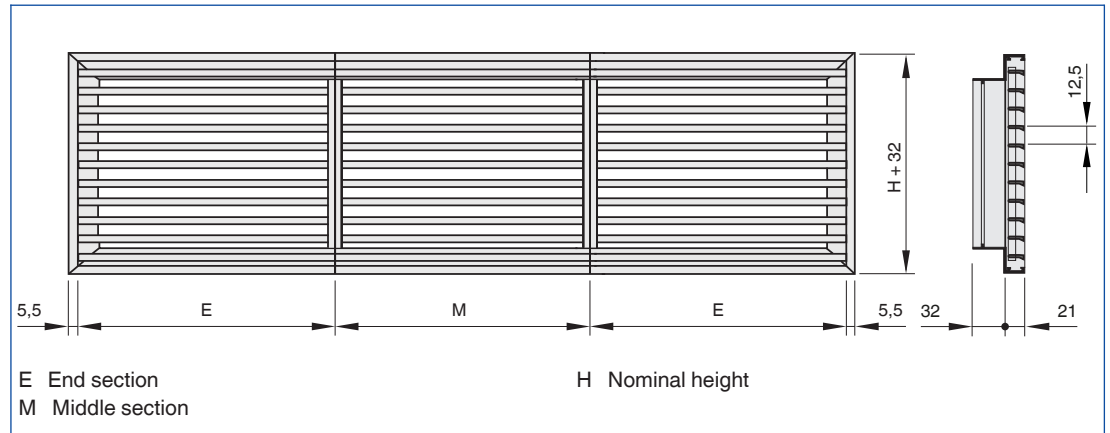


AF, single grille

H	L [mm]							
	225	325	425	525	625	825	1025	1225
	m							
mm	kg							
75	0.8	1.1	1.4	1.7	2.0	2.6	3.2	3.8
125	1.1	1.5	1.9	2.3	2.7	3.4	4.2	5.0
225		2.2	2.8	3.4	4.0	5.1	6.3	7.5
325			3.7	4.5	5.3	6.9	8.4	10.0
425					6.6	8.6	10.5	12.5

Weights apply to ventilation grilles without attachments

AF, Horizontal run section

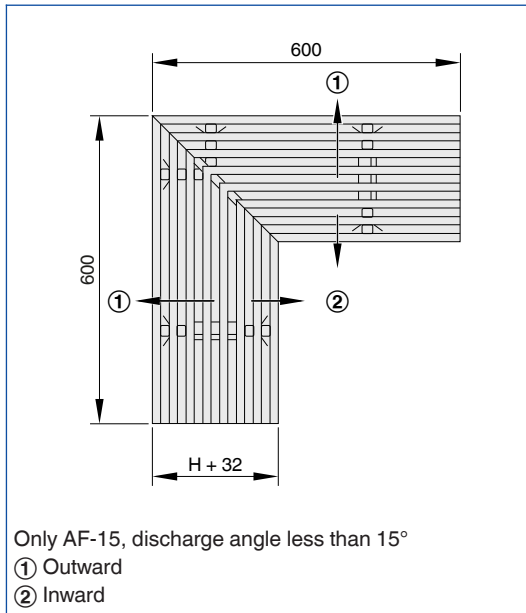


AF, Horizontal run section

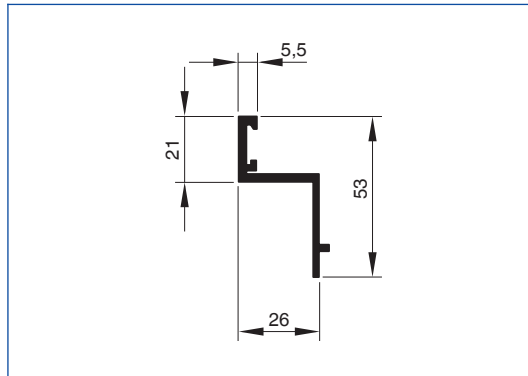
Section	L [mm]	H [mm]			
		75	125	225	325
M	2000	6.4	8.4	12.6	16.8
E	950	3.0	4.0	6.0	8.0
E	1010	3.2	4.2	6.4	8.5
E	1070	3.4	4.5	6.7	9.0
E	1130	3.6	4.7	7.1	9.5
E	1190	3.8	5.0	7.5	10.0
E	1250	4.0	5.3	7.9	10.5
E	1310	4.2	5.5	8.3	11.0
E	1370	4.4	5.8	8.6	11.5
E	1430	4.6	6.0	9.0	12.0
E	1490	4.8	6.3	9.4	12.5
E	1550	5.0	6.5	9.8	13.0
E	1610	5.2	6.8	10.1	13.5
E	1670	5.3	7.0	10.5	14.0
E	1730	5.5	7.3	10.9	14.5
E	1790	5.7	7.5	11.3	15.0
E	1850	5.9	7.8	11.7	15.5
E	1910	6.1	8.0	12.0	16.0
E	1970	6.3	8.3	12.4	16.5

Weights apply to sections without attachments

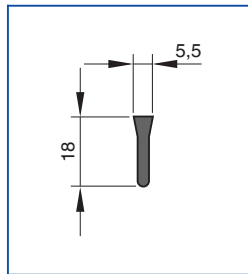
90° corner section



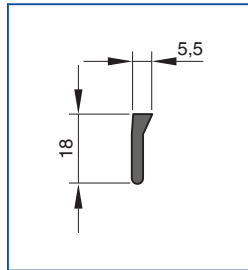
Front border, 26 mm



Blade +0



Blade +15



Installation and commissioning

- Preferably for floor installation
- Installation subframe to be mortared in with fixing tabs

These are only schematic diagrams to illustrate installation details.

Volume flow rate balancing

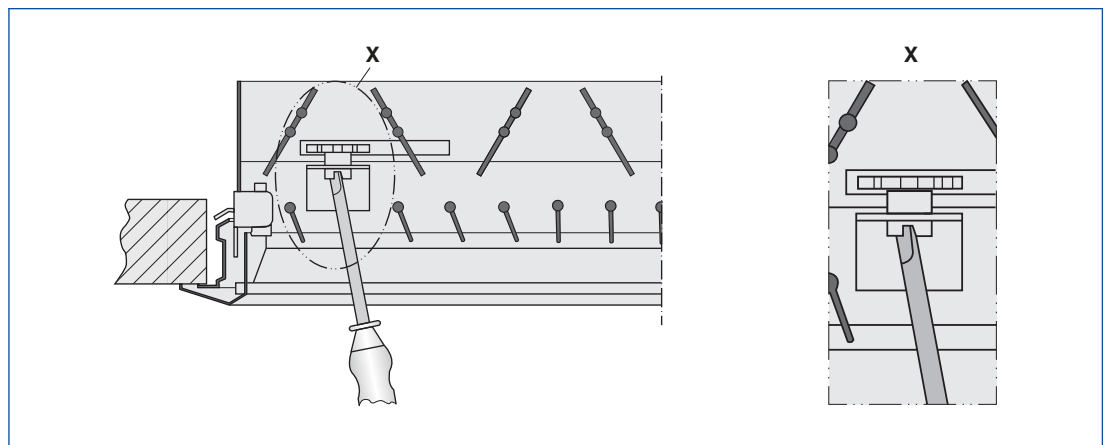
When several ventilation grilles are installed on the same duct, it may be necessary to balance the volume flow rates.

- 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

Volume flow rate balancing -*G



Attachments -AG, -DG and Types AGW, DGW

Principal dimensions

L [mm]

Nominal length of the ventilation grille

H [mm]

Nominal height of the ventilation grille

m [kg]

Weight

Nomenclature

L_{WA} [dB(A)]

Sound power level of the air-regenerated noise

\dot{V} [m³/h] and [l/s]

Volume flow rate

Δp_t [Pa]

Total differential pressure

l_s [m]

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