
Duct grille



Duct grille

Aluminium, steel

PRODUCT DESCRIPTION

Air inlet and outlet grilles for installation in ducts are optionally equipped with horizontal or vertical front blades, as well as a second, opposite set of blades behind them (single or double row). Available in galvanised steel, aluminium or sheet steel, painted white in RAL 9010.

If required, the grilles can be fixed in the mounting frame (EBR) with concealed clamp fixing. The visible screw fixing (SIBE) is supplied as standard.

An opposed blade volume control damper made of galvanised sheet steel is available as an attachment. It can be used in both steel and aluminium grilles. On request, the volume control damper can be supplied in black or other RAL colours.

The volume control damper can be adjusted in front using a screwdriver, without dismantling the front grille.

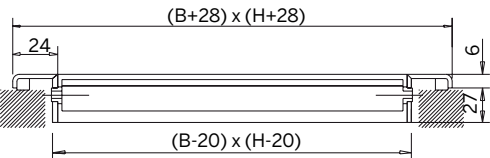
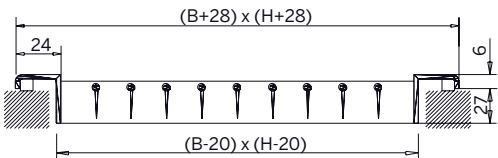
Note: For ceiling installation (overhead) only use visible screw fixing (SIBE).
We reserve the right to make technical modifications.

Cut-out dimensions for the types of fixing

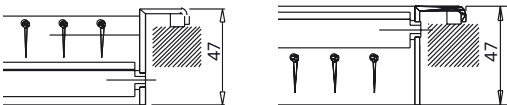
1. Concealed clamp fixing with EBR:
Cut-out dimension = nominal dimension (e.g. 425 x 125).
2. Visible screw fixing:
Cut-out dimension = nominal dimension minus 5 mm
(e.g. 425 - 5 x 125 - 5; cut-out dimension = 420 x 120 mm)

DIMENSIONS

Single row grille



Double row grille



- 1 | ST-W, SIBE, RAL 9010
- 2 | ST-S, SIBE, RAL 9010
- 3 | ST-WG, SIBE, RAL 9010, G galvanised
- 4 | AL-W-SIBE

Duct grille

Stainless steel (1.4301)

PRODUCT DESCRIPTION

Air inlet and outlet grilles for installation in ducts made of stainless steel 1.4301, surface finish 2B according to EN 10088. The air grilles can be manufactured optionally with horizontal or vertical front blades, as well as a second, opposite set of blades behind them (single or double row design possible). The grilles are fixed with a concealed clamp or visible screw fixing.

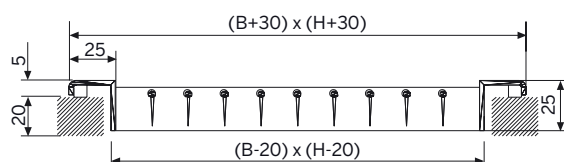
For the clamp fixing, a mounting frame with a spring clamp is used. Only the visible screw fixing (SIBE) is suitable for ceiling installation.

In order to control air volume, straight hit and miss dampers, opposed blade volume control dampers or airflow adjusters are optionally available as attachments. Adjustments can be made in front using a screwdriver, without dismantling the front grille.

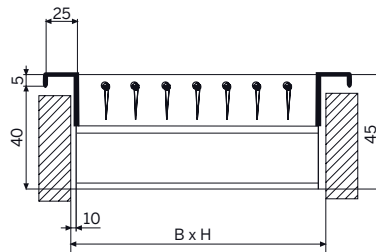
Technical modifications reserved

DIMENSIONS

Single row grille



Double row grille



- 1 | VA-W/S SIBE with airflow adjuster SZ
- 2 | Opposed blade volume control damper G
- 3 | Straight hit and miss dampers SS

Note: Front grilles can be optionally combined with any volume control damper and can also be supplied separately.

Duct grille

Aluminium, steel

DELIVERY SIZES

Width [mm] W	Height [mm] H	Actual clear area of passage A _{eff} [m²]	Width [mm] W	Height [mm] H	Actual clear area of passage A _{eff} [m²]
225 325 425 525 625 825 1025 1225	75 x	0.008 0.012 0.016 0.019 0.023 0.030 0.037 0.045	825 1025 1225	225 x	0.120 0.150 0.180
225 325 425 525 625 825 1025 1225	125 x	0.016 0.023 0.030 0.037 0.045 0.060 0.075 0.090	325 425 525 625 825 1025 1225	325 x	0.068 0.090 0.113 0.135 0.180 0.225 0.270
225 325 425 525 625	225 x	0.030 0.045 0.060 0.075 0.090	425 625 825 1025 1225	425 x	0.113 0.180 0.240 0.299 0.359
			525 625 825 1025 1225	525 x	0.203 0.240 0.299 0.359 0.448

ACCESSORIES

- Grille plenum box with connectors at the side or top
- Opposed blade volume control damper “G” made of steel

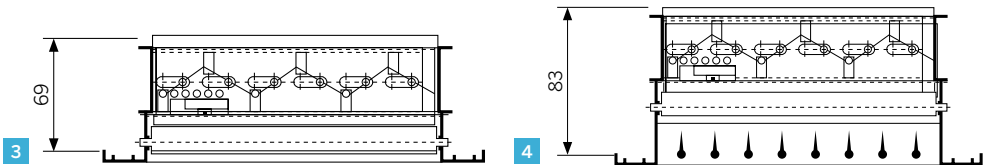
SPECIAL VERSIONS

- Special dimensions on request
- RAL colour of your choice

VOLUME CONTROL



DIMENSIONS



- 1 | Opposed blade volume control damper G
- 2 | Grille with opposed blade volume control damper G
- 3 | Single-row grille with opposed blade volume control damper G
- 4 | Double-row grille with opposed blade volume control damper G

Duct grille

Stainless steel (1.4301)

DELIVERY SIZES

Width [mm] W	Height [mm] H	Actual clear area of passage A _{eff} [m²]
225	75 x	0.008
325		0.012
425		0.016
525		0.019
625		0.023
825		0.030
1025		0.037
1225		0.045
225	125 x	0.016
325		0.023
425		0.030
525		0.037
625		0.045
825		0.060
1025		0.075
1225		0.090
225	225 x	0.030
325		0.045
425		0.060
525		0.075
625		0.090

Width [mm] W	Height [mm] H	Actual clear area of passage A _{eff} [m²]
825	225 x	0.120
1025		0.150
1225		0.180
325	325 x	0.068
425		0.090
525		0.113
625		0.135
825		0.180
1025		0.225
1225		0.270
425	425 x	0.113
625		0.180
825		0.240
1025		0.299
1225		0.359
525	525 x	0.203
625		0.240
825		0.299
1025		0.359
1225		0.448

ACCESSORIES

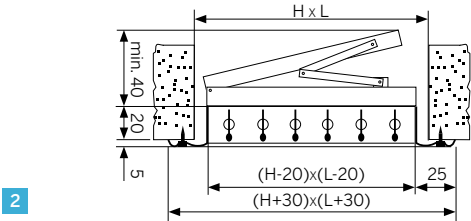
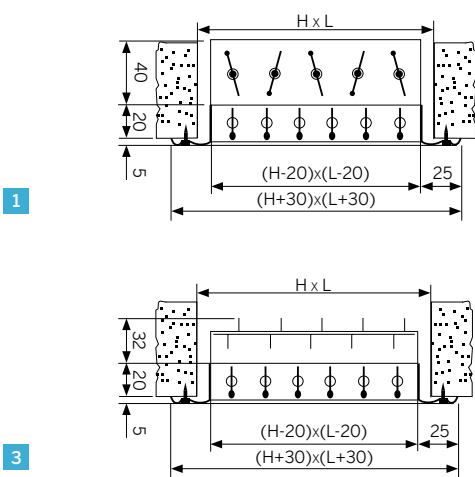
Mounting frame for concealed fixing
(not suitable for ceiling installation)

Volume control (1-3)

SPECIAL VERSIONS

Special dimensions on request

RAL colour of your choice



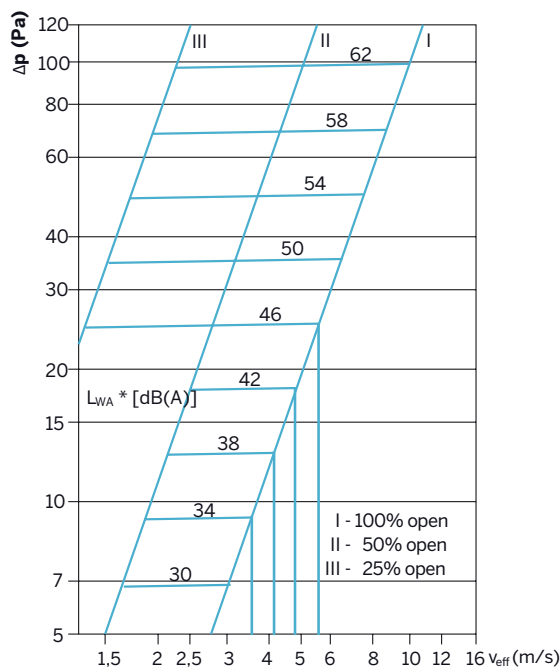
- 1 | Duct grille made of V2A, 1.4301 with opposed blade volume control damper; VA-W/G
- 2 | Duct grille made of V2A with airflow adjuster as volume control damper; VA-W/SZ
- 3 | Duct grille made of V2A with straight hit and miss dampers as volume control damper; VA-W/SS

Duct grille

Aluminium, steel, stainless steel

PRESSURE DROP AND SOUND PRESSURE LEVEL FOR GRILLES WITH VOLUME CONTROL G

Acoustic values for a grille 525 x 225



Acoustic correction factors for other grille sizes	
A_{eff} [m ²]	K [dB(A)] (correction)
0.008	-10
0.016	-7
0.024	-5
0.048	-2
0.076	0
0.092	+1
0.124	+2
0.156	+3
0.188	+4
0.272	+5
0.362	+6

Formula for calculating the A-weighted sound pressure level

$$L_{WA} = L_{WA}^* + K$$

- Δp = pressure drop (Pa)
 v_{eff} = actual flow-through speed
in the clear cross-section (m/s)
 L_{WA}^* = A-weighted sound pressure level
in terms of $A_{eff} = 0.076 \text{ m}^2$

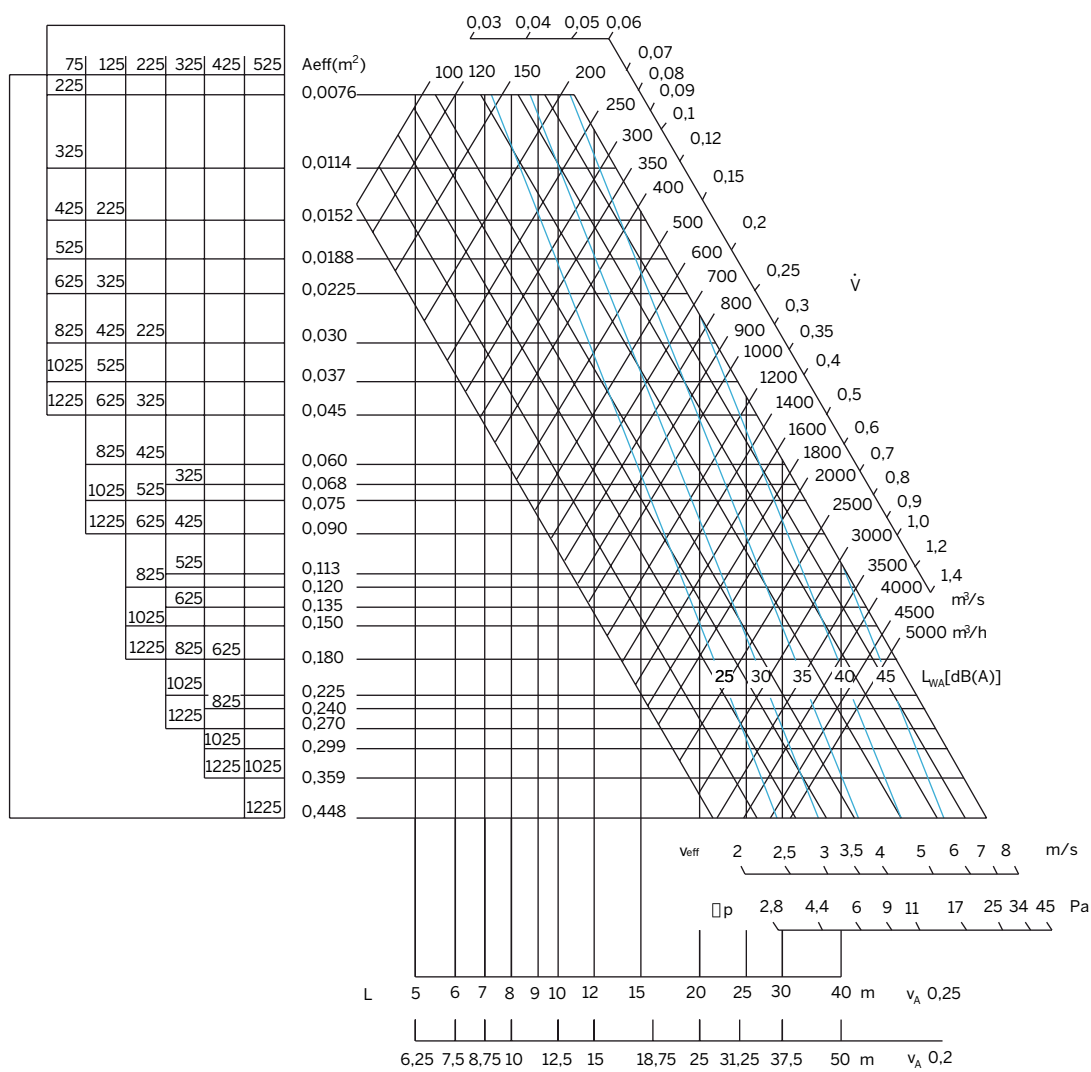
QUICK SELECTION OF GRILLES FOR INSTALLATION IN DUCTS, SERIES VA-W, VA-S; AL-W, AL-S; ST-W, ST-S

Height [mm] H	Volume flow in m ³ /h	Width in [mm]							
		225	325	425	525	625	825	1025	1225
75	V_{min}/V_{max}	45/90	70/140	90/180	120/240	140/280	190/380	230/460	260/560
125	V_{min}/V_{max}	90/180	140/280	190/380	230/460	280/560	370/740	470/940	560/1120
225	V_{min}/V_{max}	190/380	240/560	370/740	470/940	560/1120	740/1480	920/1840	1110/2220
325	V_{min}/V_{max}		410/820	560/1120	700/1400	840/1680	1110/2220	1390/2780	1650/3320
425	V_{min}/V_{max}					1110/2220	1480/2960	1850/3700	2220/4440
525	V_{min}/V_{max}							2300/4600	2770/5440

Duct grille

Aluminium, steel, stainless steel

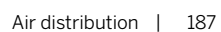
SELECTION DIAGRAM (SUPPLY AIR)



The actual flow-through speed, v_{eff} , and the associated pressure drop can be obtained from the actual clear area of passage, A_{eff} , and the applied air flow rate $\dot{V}$ by extending the diagonal downwards. The throw range of the grilles is determined by the intersection of the vertical lines.

- KEY**
- v_{eff} – actual flow-through speed (m/s)
 - v_A – air speed in the common area (m/s)
 - L – throw range (m)
 - $\dot{V}$ – flow rate ($m^3/h/m^3/s$)
 - Δp – pressure drop (Pa)

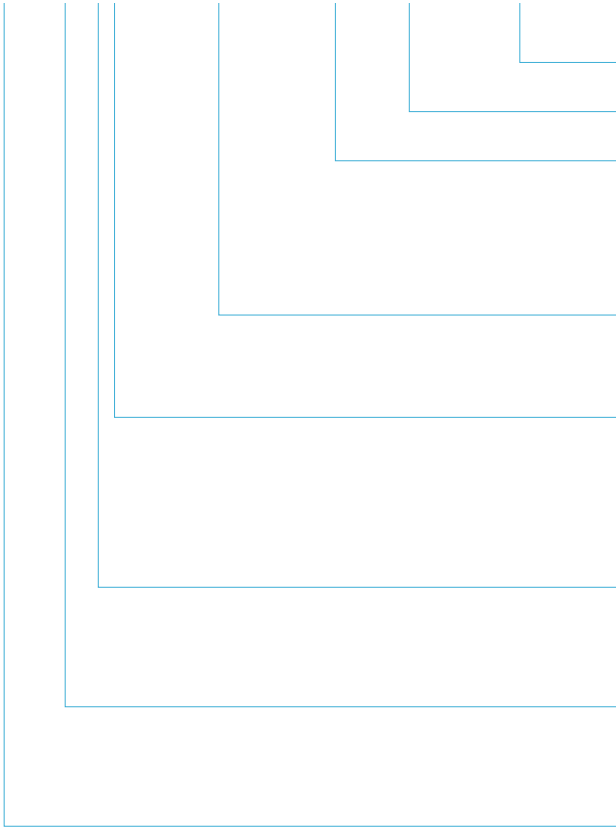
Berliner Luft.



Duct grille

TYPE KEY

ST – S/WG – 625 x 125 – EBR – AK – RAL xxxx



Optional RAL colour, (for steel grilles standard RAL 9010)

Plenum box (according to customer's specifications)

Fixing

- SIBE – visible screw fixing
- EBR – mounting frame with spring clamp

Dimensions

width x height

Regulation

- G – opposed blade volume control (galvanised and STAINLESS STEEL)
- SS – straight hit and miss dampers (stainless steel)
- SZ – airflow adjuster (stainless steel)

Deflector assembly

- W – horizontal
- S – vertical

Front blades

- S – vertical
- W – horizontal

Material

- ST – steel
- AL – aluminium
- VA – stainless steel (1.4301)

EXAMPLE ORDER

Steel grilles with vertical front blades of standard size 825 x 225 mm (standard galvanized or RAL 9010, without specification always galvanized)

Horizontal deflector assembly

Opposed blade volume control damper

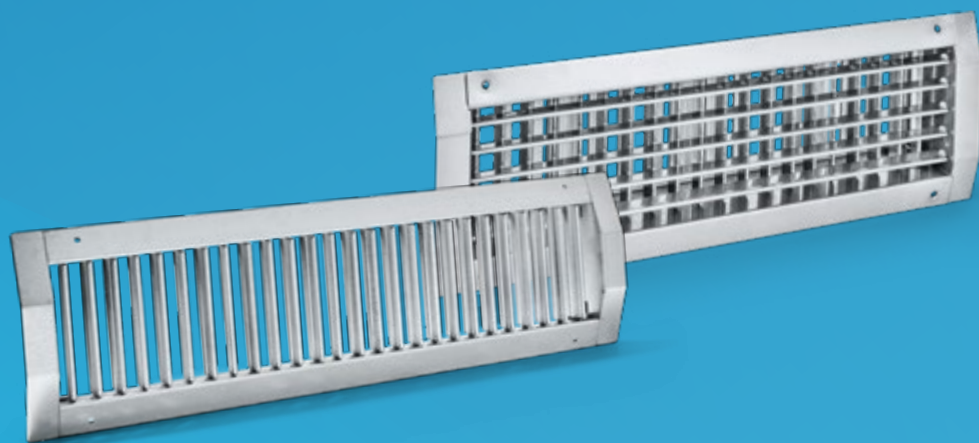
Mounting frame with spring clamp

Special RAL colour of your choice, available at an extra charge

Order code

ST-S/WG-825 x 225-EBR-RAL 9010

Tube grille



Tube grille

Galvanized steel

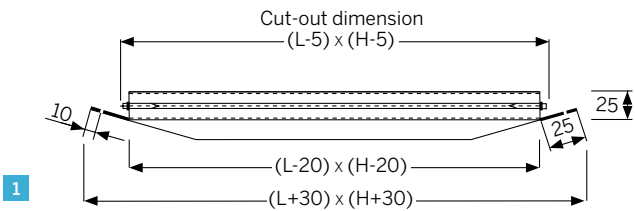
PRODUCT DESCRIPTION

Air inlet and outlet grilles for installation in round ducting systems. Tube grilles are equipped with vertical, individually pivoting air deflection blades in front (single row). To optimise the air distribution, the air grilles can be equipped with an additional, individually pivoting, horizontal deflector assembly (double row).

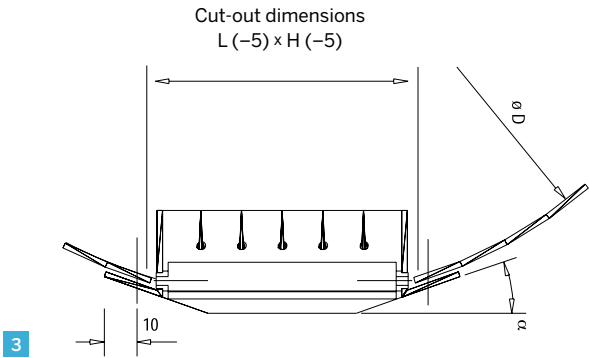
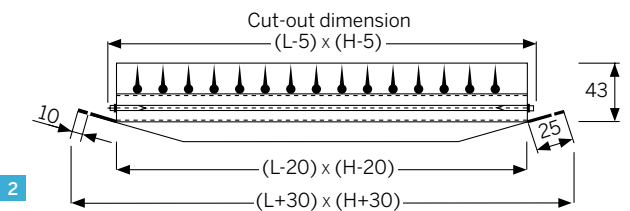
For air volume adjustment, a hit and miss damper is offered as an attachment. The design of the hit and miss damper on the grille differs according to the application (air inlet and outlet; angled/straight).
We reserve the right to make technical modifications.

Dimensions L x H (mm)	Dimensions						Tube diameter	
	A	W	C	D	E	F	MIN.	MAX.
425 x 75	25	43	50	95	70	105	160	400
525 x 75	25	43	50	105	70	115	160	400
625 x 75	25	43	50	115	70	125	160	400
425 x 125	34	52	60	105	80	115	315	900
525 x 125	34	52	60	115	80	125	315	900
625 x 125	34	52	60	125	80	135	315	900
425 x 225	43	61	70	115	90	125	630	1400
525 x 225	43	61	70	125	90	135	630	1400
625 x 225	43	61	70	130	90	140	630	1400
825 x 225	43	61	70	130	90	140	630	1400
1025 x 225	43	61	70	130	90	140	630	1400

Single row grille



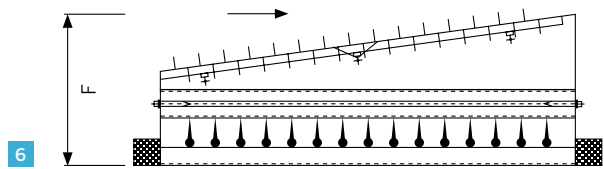
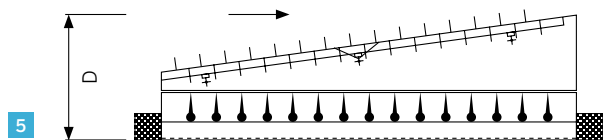
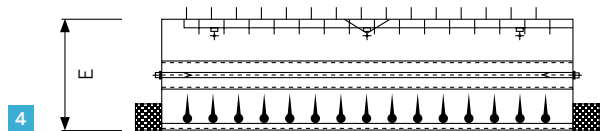
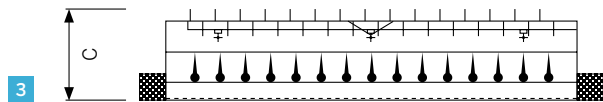
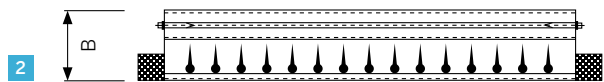
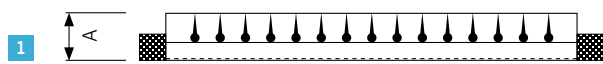
Double row grille



- 1 | Single row grille
- 2 | Double row grille
- 3 | ST-RS/W

DIMENSIONS

Mounting depths

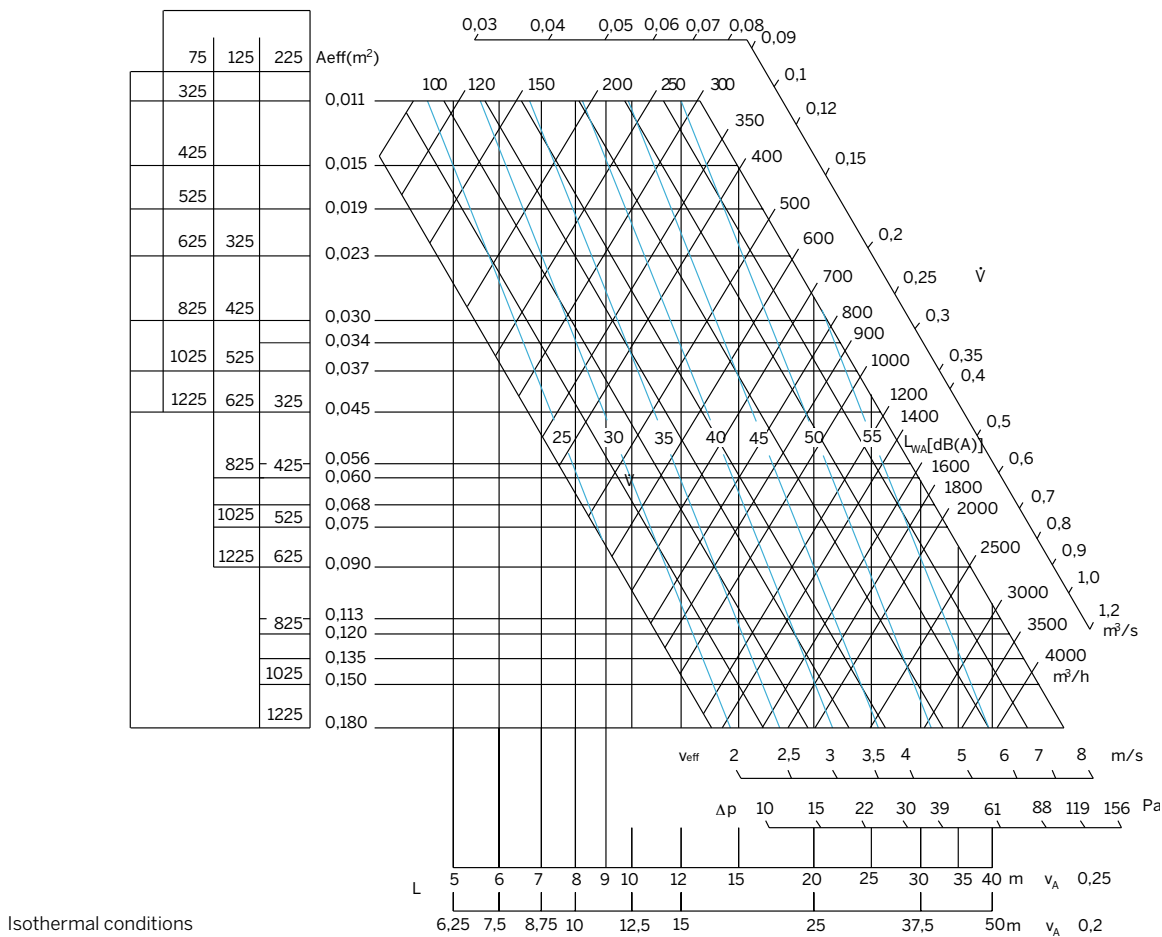


- 1 | Single-row tube grille
- 2 | Double-row tube grille
- 3 | Single-row tube grille with straight hit and miss damper
- 4 | Double-row tube grille with straight hit and miss damper
- 5 | Single-row tube grille with angled hit and miss damper
- 6 | Double-row tube grille with angled hit and miss damper
- 7 | Single-row tube grille with horizontal blades,
as shown in illustration 1

Tube grille

Galvanized steel

SELECTION DIAGRAM (SUPPLY AIR)



The actual flow-through speed, v_{eff} , and the associated pressure drop can be obtained from the actual clear area of passage, A_{eff} , and the applied air flow rate $\dot{V}$ by extending the diagonal downwards. The throw range of the grilles is determined by the intersection of the vertical lines.

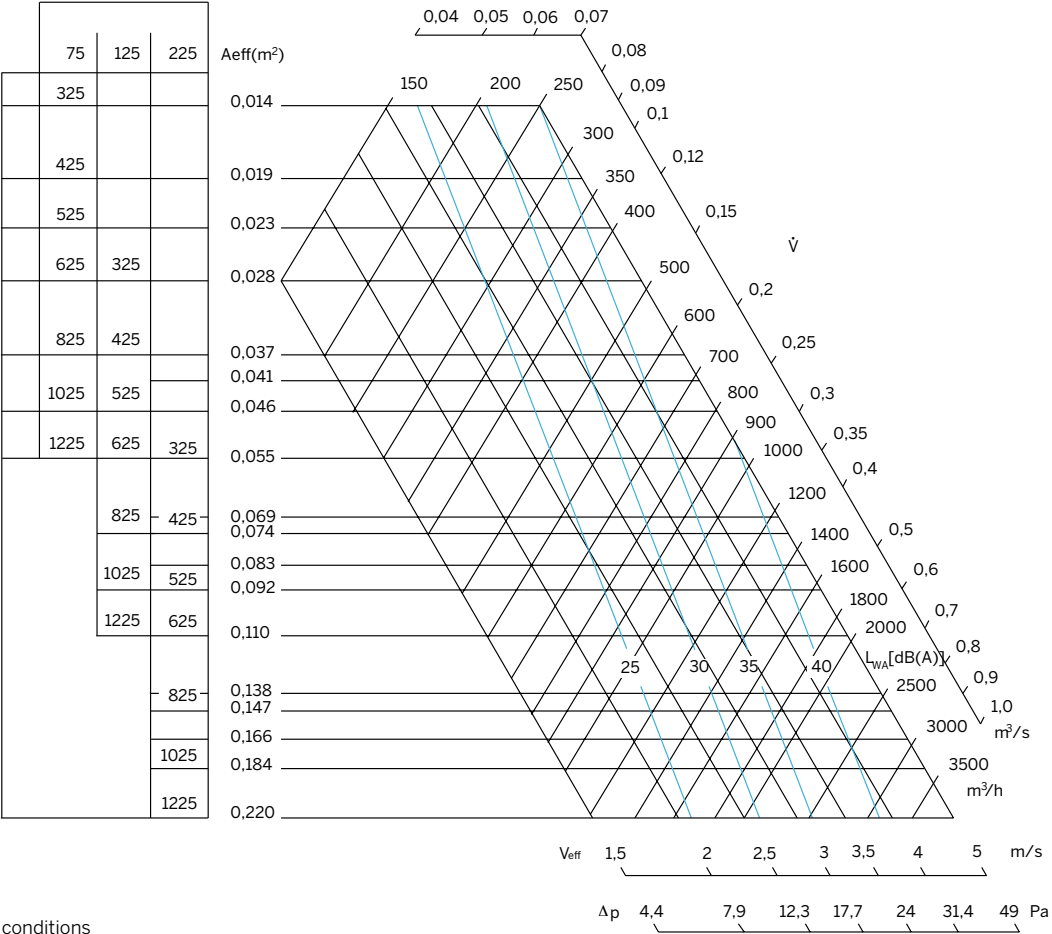
CORRECTION FACTOR WITHOUT VOLUME CONTROL

$$\frac{\Delta p}{L_{WA}} \times 0.5 = -4$$

KEY

- v_{eff} – actual flow-through speed(m/s)
- v_A – air speed in the common area (m/s)
- L – throw range (m)
- $\dot{V}$ – flow rate (m³/h)
- Δp – pressure drop (Pa)

SELECTION DIAGRAM (EXTRACT AIR)



Isothermal conditions

CORRECTION FACTOR WITHOUT VOLUME CONTROL

Δp

$\times 0.45$

L_{WA}

-6

Tube grille

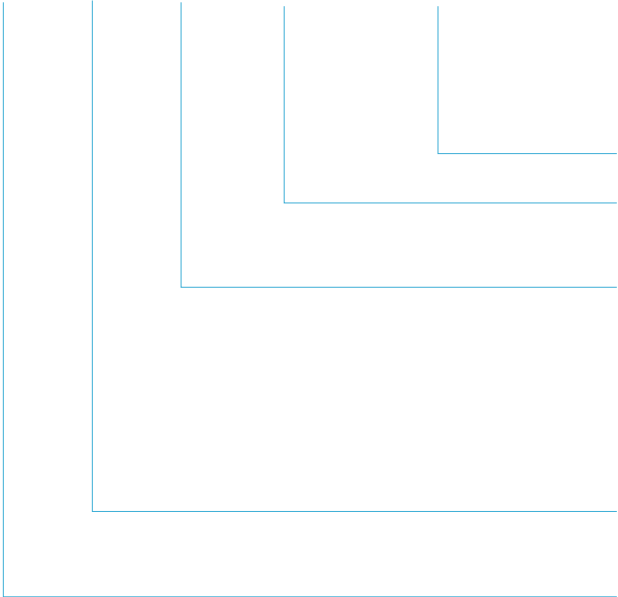
Galvanized steel

DELIVERY SIZES

ST-RS, ST-RS/W			
Width [mm] W	Height [mm] H	Actual clear area of passage A _{eff} [m²]	Tube diameter in mm ø
325	75 x	0.011	150
425		0.015	↓
525		0.019	
625		0.023	
825		0.030	
1025		0.034	
1225		0.037	400
325	125 x	0.023	315
425		0.032	↓
525		0.040	
625		0.048	
825		0.064	
1025		0.080	
1225		0.096	900
225	225 x	0.030	630
325		0.047	↓
425		0.064	
525		0.076	
625		0.090	
825		0.113	
1025		0.150	
1225		0.180	1250

TYPE CODES

ST – R S/W – 1 – 625 x 125 – RAL xxxx



Optional RAL colour

Dimensions

standard size W x H

Regulation

- 1 – angled hit and miss dampers, for supply air
- 2 – straight hit and miss dampers, for extract air

Type

- RS – single-row tube grille with vertical front blades
- RS/W – double-row tube grille with vertical front blades and horizontal air deflection blades

Material

- ST – galvanised steel (standard)

EXAMPLE ORDER

Tube grille

Galvanised sheet steel, with vertical front blades, horizontal air deflection blades

Individually adjustable, with straight hit and miss damper for extract air

Order code

ST-RS/W-2-625 x 225

Tube grille

Stainless steel 1.4301

PRODUCT DESCRIPTION

Tube grille made of stainless steel 1.4301, surface 2B according to EN 10088, suitable for installation in tube systems. Tube grilles are equipped with either vertical or horizontal individually pivoting blades in front.

In order to optimise the air distribution, an additional set of individually pivoting horizontal or vertical blades can be mounted behind the air grille. The grille frame fits flush with the diameter of the tube.

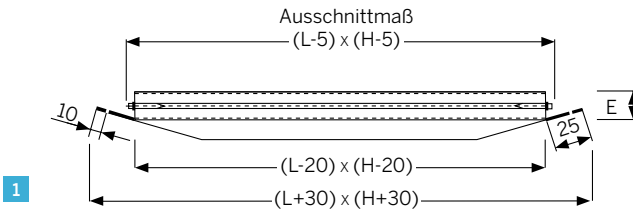
We reserve the right to make technical modifications.

DIMENSIONS

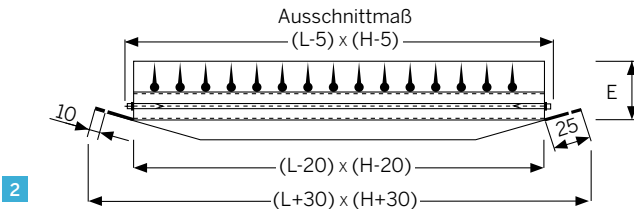
Grille height H	Projection in the tube E (mm)		Tube diameter D (mm)	
	single row	double row	min.	max.
75	32	54	150	400
125	32	54	315	900
225	45	67	500	1000

DIMENSIONS

Single row grille

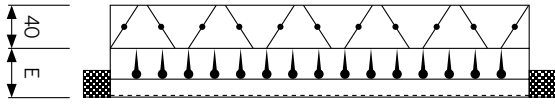


Double row grille

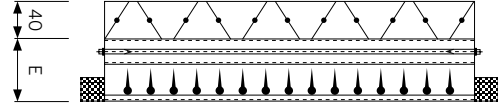


- 1 | Single-row tube grille
- 2 | Double-row tube grille
- 3 | Double-row tube grille VA-RW/S
- 4 | Single-row tube grille VA-RS
- 5 | Double-row tube grille with airflow adjuster VA-RW/S-SZ
- 6 | Double-row tube grille with straight hit and miss damper VA-RW/S-2

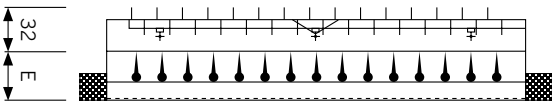
DIMENSIONS



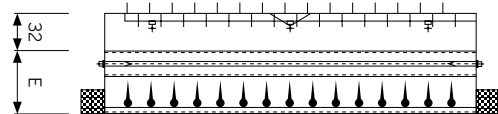
Single-row tube grille with volume control damper "G"



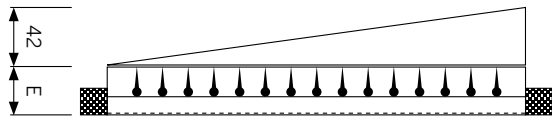
Double-row tube grille with volume control damper "G"



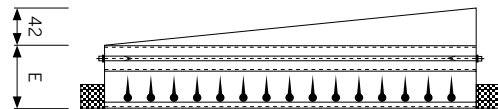
Single-row tube grille with straight hit and miss damper



Double-row tube grille with straight hit and miss damper



Single-row tube grille with airflow adjuster



Double-row tube grille with airflow adjuster

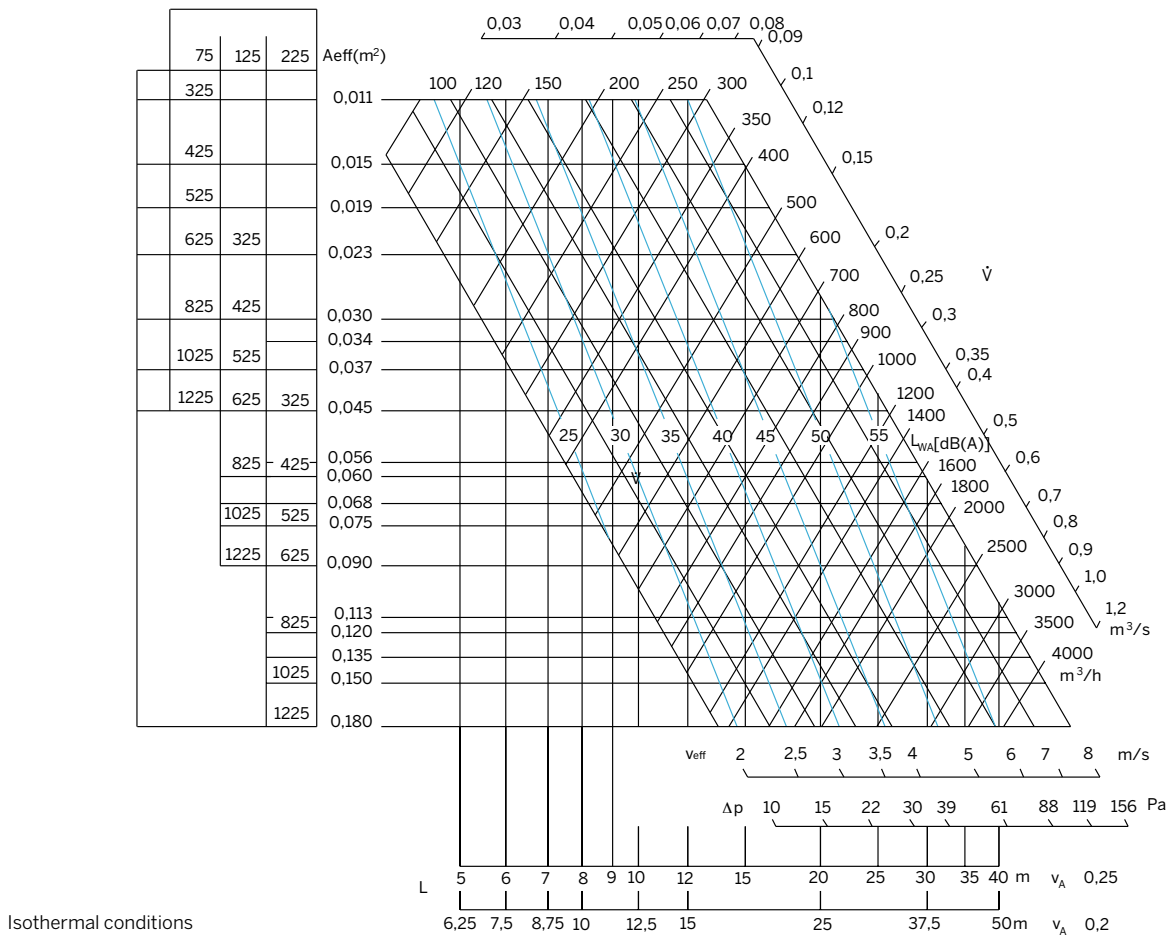
DIMENSIONS TABLE AND DELIVERY SIZES

VA-RS, VA-RS/W				
Height [mm] H	Width [mm] W	Actual clear area of passage A_{eff} [m ²]	Tube diameter [mm]	Weight [kg]
325	75 x	0.017	150 ↓ 400	1.10
425		0.023		1.40
525		0.028		1.70
625		0.034		1.90
825		0.045		2.40
1025		0.056		2.80
1225		0.068		3.20
325	125 x	0.028	315 ↓ 900	1.30
425		0.037		1.80
525		0.047		2.00
625		0.056		2.40
825		0.074		3.10
1025		0.093		3.40
1225		0.112		4.00
325	225 x	0.056	500 ↓ 1000	2.20
425		0.074		3.00
525		0.093		3.40
625		0.112		3.70
825		0.148		5.10
1025		0.186		5.80
1225		0.224		6.30

Tube grille

Stainless steel 1.4301

SELECTION DIAGRAM (SUPPLY AIR)



The actual flow-through speed, v_{eff} , and the associated pressure drop can be obtained from the actual clear area of passage, A_{eff} , and the applied air flow rate $\dot{V}$ by extending the diagonal downwards. The throw range of the grilles is determined by the intersection of the vertical lines.

- KEY**
- v_{eff} – actual flow-through speed (m/s)
 - v_A – air speed in the common area (m/s)
 - L – throw range (m)
 - $\dot{V}$ – flow rate (m³/h, m³/s)
 - Δp – pressure drop (Pa)

CORRECTION FACTOR WITHOUT VOLUME CONTROL

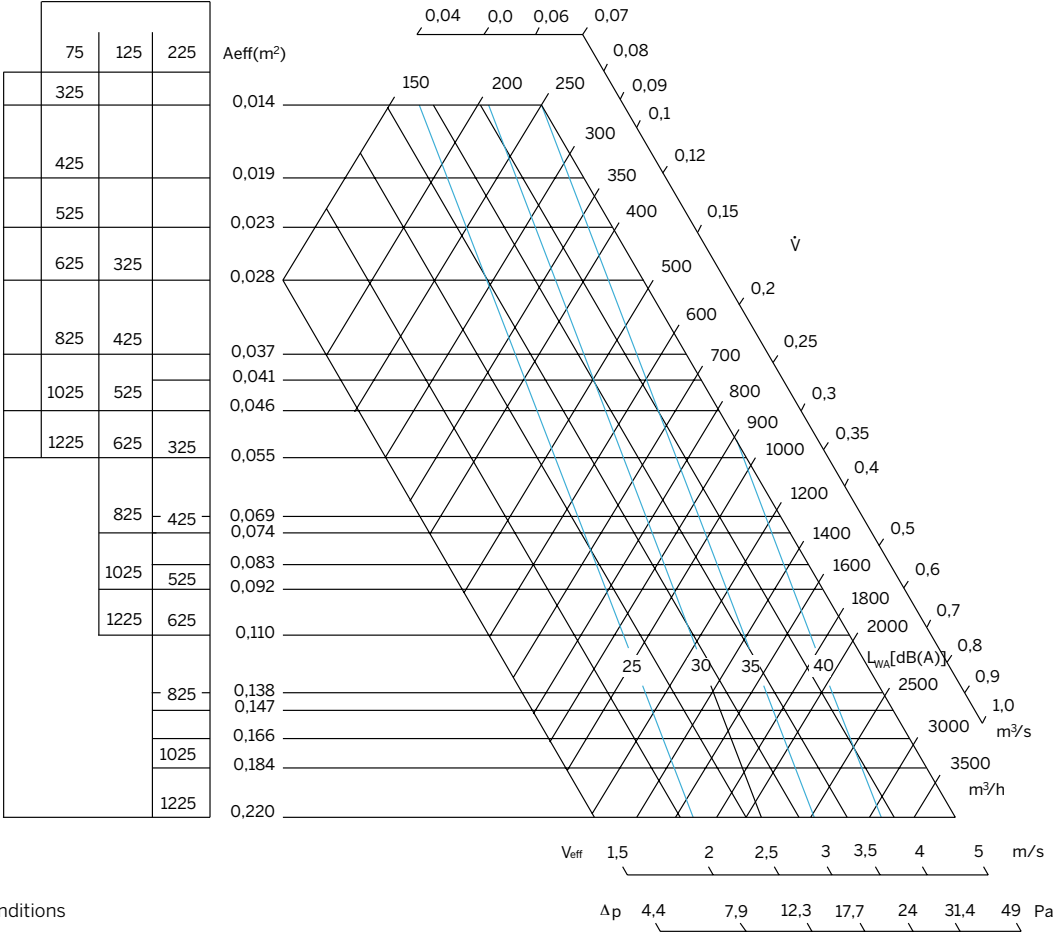
Δp

$\times 0.5$

L_{WA}

-4

SELECTION DIAGRAM (EXTRACT AIR)



Isothermal conditions

CORRECTION FACTOR WITHOUT VOLUME CONTROL

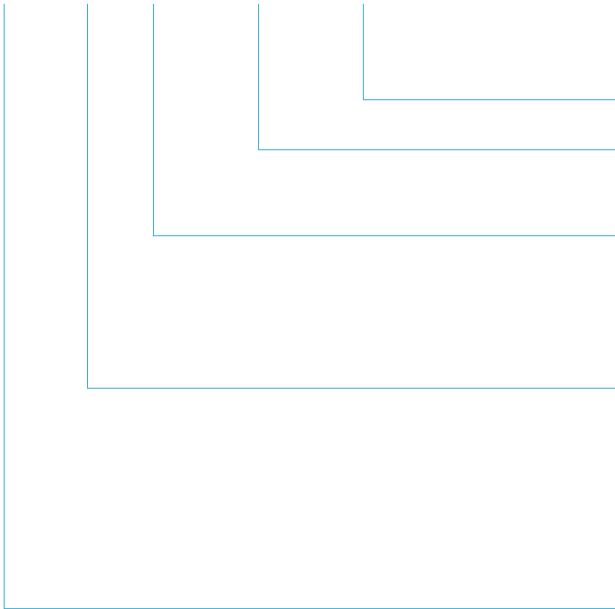
$$\frac{\Delta p}{L_{WA}} \times 0.45$$
$$-6$$

Tube grille

Stainless steel 1.4301

TYPE CODES

VA – RS/W – SS – 625 x 125 – DN...



Tube diameter

Dimension

standard size W x H

Regulation

- G – opposed blade regulation for supply and extract air
- SZ – airflow adjuster for supply air
- SS – straight hit and miss damper for extract air

Type

- RS – single-row tube grille with vertical front blades
- RS/W – double-row tube grille with vertical front blades and horizontal air deflection blades or vice versa

Material

- VA – Stainless steel 1.4301, surface 2B as per EN 10088

EXAMPLE ORDER

Stainless steel grille with vertical front blades and horizontal air deflection blades in delivery size 625 x 125 mm with straight hit and miss damper for extract air, for installation in tubes. Diameter 630.

Order code

VA-RS/W-SS-625 x 125-DN 630