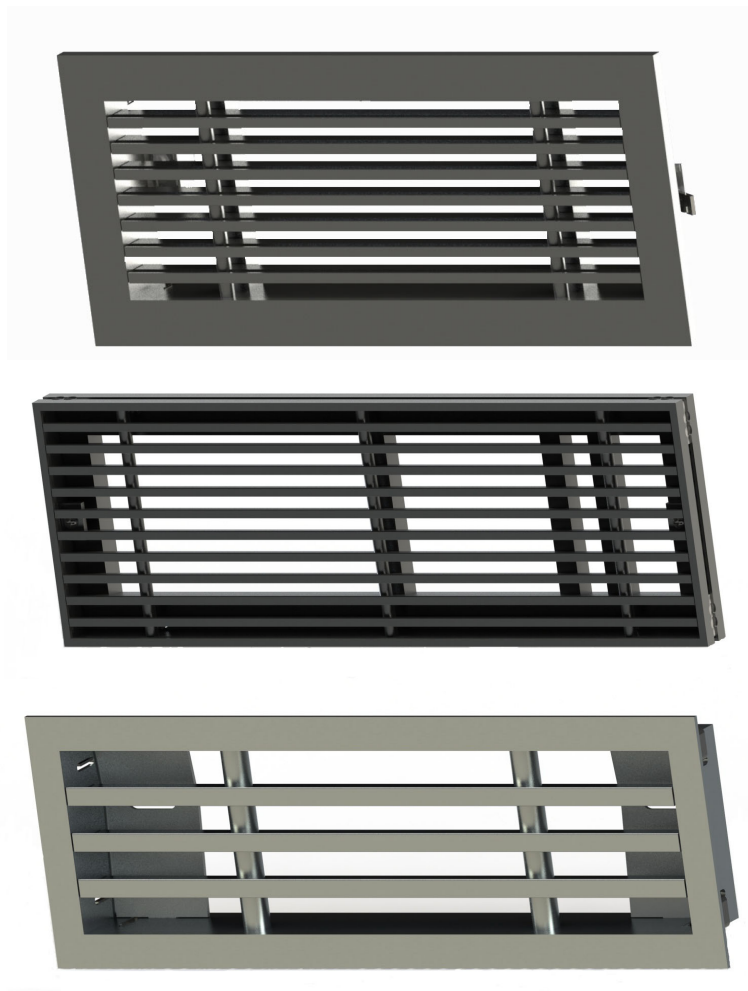




Ventilation grille

PA



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Ventilation Grille PA

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Ventilation Grille PA

Description

The ventilation grille PA is suitable for use in supply and return air installations and for installation in walls, ceilings, floors and ventilation ducts. For air deflection, **horizontal or vertical** (for floors only), **fixed blade profiles are attached at the front side**.

For **wall mounting**, **basic type PA...-01** with concealed mounting (-VM, standard) or screw mounting (-SM) is suitable. The **basic type PA...-03** with concealed mounting (-VM) is suitable for **floor installation**. It can also be used for wall mounting.

According to the required air throw pattern, the blade profile of the basic types PA...-01 and PA...-03 can be selected from three different blade profiles (**PA...-Z standard**, PA...-G and PA...-S).

The blade spacing of basic types PA...-01 and PA...-03 for **non-walk-on** and **non-ball-impact-resistant use** is **13mm (standard)**, while for **walk-on** (only PA...-03) and **ball-impact-resistant use** (acc. to DIN 18032, Part 3) it is **8mm**.

The blade insert can be removed for cleaning purposes (PA...-03).

The basic type PA...-10 consists of a narrow front frame and blades made of aluminium extrusion profiles anodized in natural colour. The standard blade spacing is 13 mm, optionally 8 mm. This grille type is generally neither walk-on nor ball-impact-resistant.

At an extra charge, a plenum box (for PA...-01 / PA...-2a only) can be mounted (only available without hit-and-miss damper). The damper in the connection piece of the plenum box (by additional charge) serves for easy air volume regulation.

The technical data apply to all models.

Construction

Louvre grid

- Blades made of extruded aluminium profile, natural colour anodised (E6/EV1), at an extra charge specially anodised or painted.

Frame

- Extruded aluminium profile, natural colour anodised (E6/EV1), at an extra charge specially anodised or painted.

Hit-and-miss damper

- Made of electrolytically galvanised sheet steel

Droplet-forming blade

- Made of extruded aluminium profile, natural colour anodised (E6/EV1), at an extra charge specially anodised or painted.

Model

- PA...-01 - Front-side horizontal fixed blade profiles for wall and ceiling mounting and installation in ventilation ducts
- PA...-2a - Same as PA...-01, additionally with individually adjustable vertical droplet-forming blades
- PA...-2b - Same as PA...-01, additionally with hit-and-miss damper
- PA...-2c - Same as PA...-01, additionally with individually adjustable vertical droplet-forming blades and hit-and-miss damper
- PA...-10 - Supply air and return air grilles, front-side horizontal fixed blade profiles, with narrow frame profile, for wall and ceiling mounting and installation in ventilation ducts
- PA...-03 - Removable blade insert consisting of horizontal, fixed blade profiles for floor installation and wall mounting
- PA...-05 - Same as PA...-03, additionally with individually adjustable vertical droplet-forming blades
- PA...-06 - Same as PA...-03, additionally with individually adjustable vertical droplet-forming blades and hit-and-miss damper
- PA...-07 - Same as PA...-03, additionally with hit-and-miss damper
- PA...-Z - Blade profile lightweight model, diagonal throw (standard)
- PA...-G - Blade profile compact model, straight throw
- PA...-S - Blade profile compact model, diagonal throw
- ...-13 - Blade spacing 13 mm (standard)
not safe to step on, not ball-impact-resistant
- ...-08 - Blade spacing 8 mm
 - PA...-01 to PA...-2c with concealed mounting (-VM, standard), not ball-impact-resistant according to DIN 18032 Part 3
 - PA...-01 to PA...-2c with screw mounting (-SM), ball-impact-resistant according to DIN 18032 Part 3
 - PA-03 to PA-07 with concealed mounting (-VM), walk-on and ball-impact-resistant according to DIN 18032 Part 3

Ventilation Grille PA

Accessories

Plenum box (-AK) (only for PA-...-01 / PA-...-2a / PA-...-10)

- Galvanised sheet steel
- With connection spigot:
 - lateral (-S1, standard)
 - from above (-S0)
 - front side (-S4)

Damper (-DK1, for AK-S1)

- In plenum box
- Damper made of galvanised sheet steel
- Damper fastening made of plastic

Rubber lip seal (-GD1)

- Special rubber, on plenum box adapter

Corner angle 90° (-EW)

- With dummy plate made of galvanised sheet steel painted to RAL 9005 (black) (only for PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07)
- With dummy plate made of Zincor painted to RAL 9005 (black) (only for PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c / PA-...-10)

Installation frame (-ER1 / -ER2)

- Galvanised sheet steel (only for PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c)

Insulation

- inside (-li), thermal insulation at the inside of the plenum box
- outside (-la), thermal insulation at the outside of the plenum box

Fastening

Screw mounting (-SM)

- PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c
 - Band design
- Screws must be provided on-site

Concealed screw mounting (-VS)

- PA-...-10

Clamp fastening (-KB)

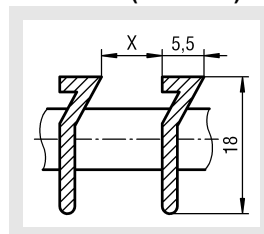
- PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c (standard)

Concealed mounting (-VM)

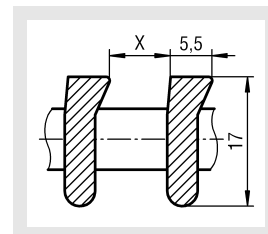
- PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c (-VM + ER1/ER2 at an extra charge)
- PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07
 - Band design

Profiled blade design and spacing

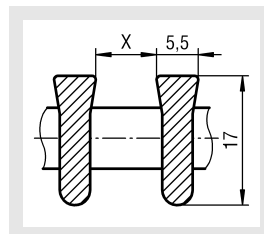
PA-...-Z-... (standard)



PA-...-S-...



PA-...-G-...



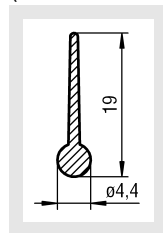
Mounting type	x
Standard: non-walk-on non-ball-impact-resistant	13 mm
ball-impact-resistant (only with SM)	8 mm

When ordering, the X dimension must be specified!

Unless stated otherwise, the blade profile PA-...-Z-... will be delivered.

Droplet-forming blade adjustable

(for PA-...-2a / PA-...-2c / PA-...-05 / PA-...-06)



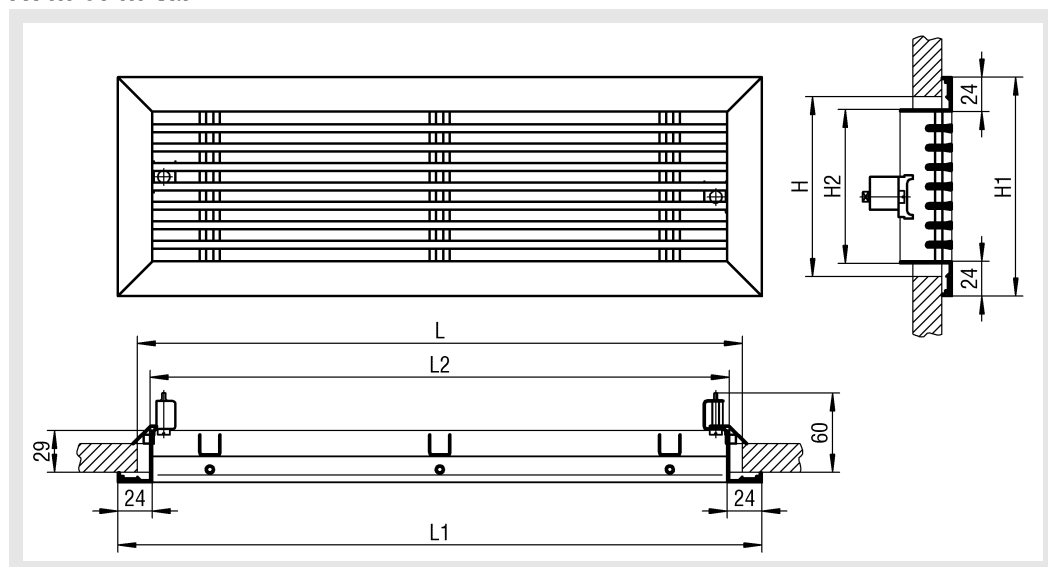
Ventilation Grille PA

Models and dimensions

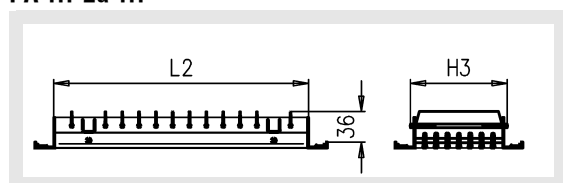
For wall and ceiling mounting and installation in ventilation ducts

Dimensions

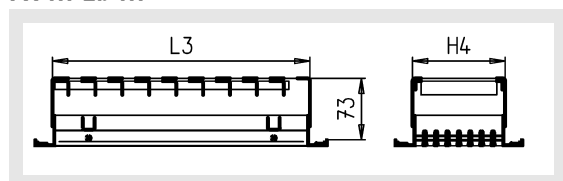
PA-...-01-...-VM



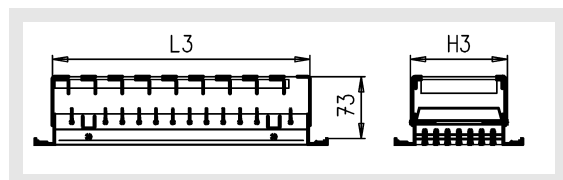
All models consist of basic type PA-...-01
PA-...-2a-...



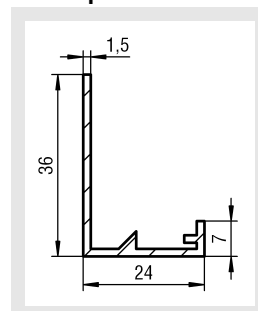
PA-...-2b-...



PA-...-2c-...



Frame profile PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c



Available sizes

L	L1	L2	L3
325	348	304	310
425	448	404	410
525	548	504	510
625	648	604	610
825	848	804	810
1025	1048	1004	1010
1225	1248	1204	1210

H	H1	H2	H3	H4	PLA	
					8 mm	13 mm
75	102	58	65	60	3	2
125	152	108	115	110	7	5
225	252	208	215	210	14	10
325	352	308	315	310	21	16

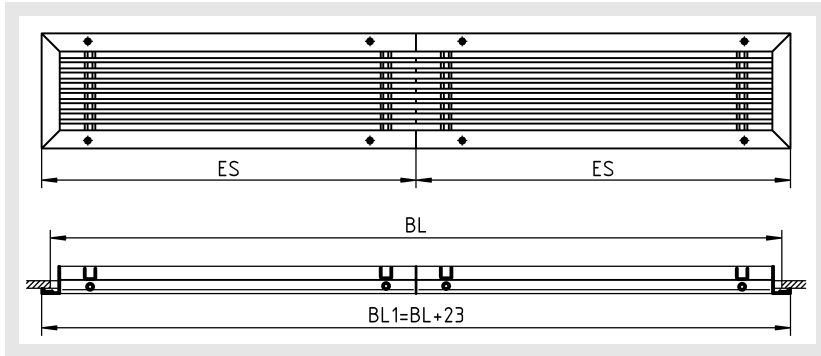
All combined lengths and heights available.

Other sizes available on request.

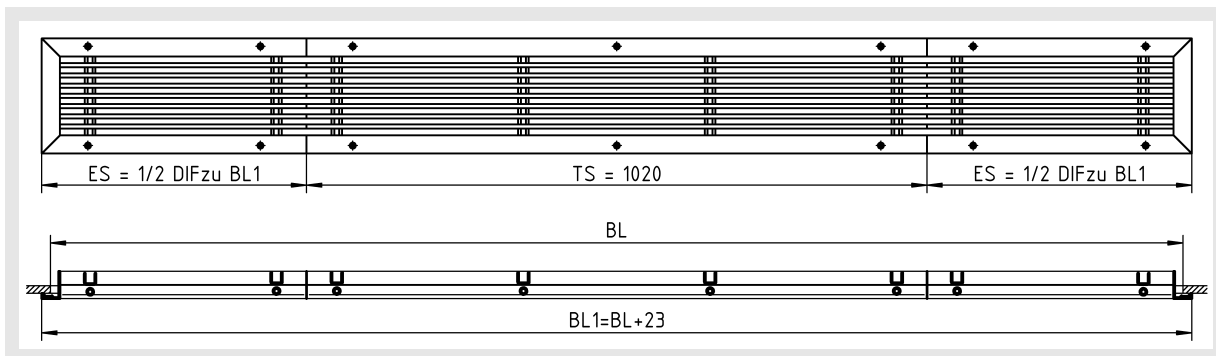
PLA = number of profiled blades

Ventilation Grille PA

Ventilation grille PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c, as band
2-part if length of band $BL \leq 2025$ mm



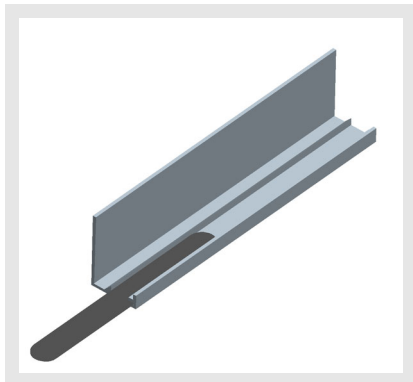
multi-part for a length of band $BL > 2025$ mm



Ventilation grille bands can be supplied only with screw mounting (SM).

Fishplate (VL)

Standard for band design

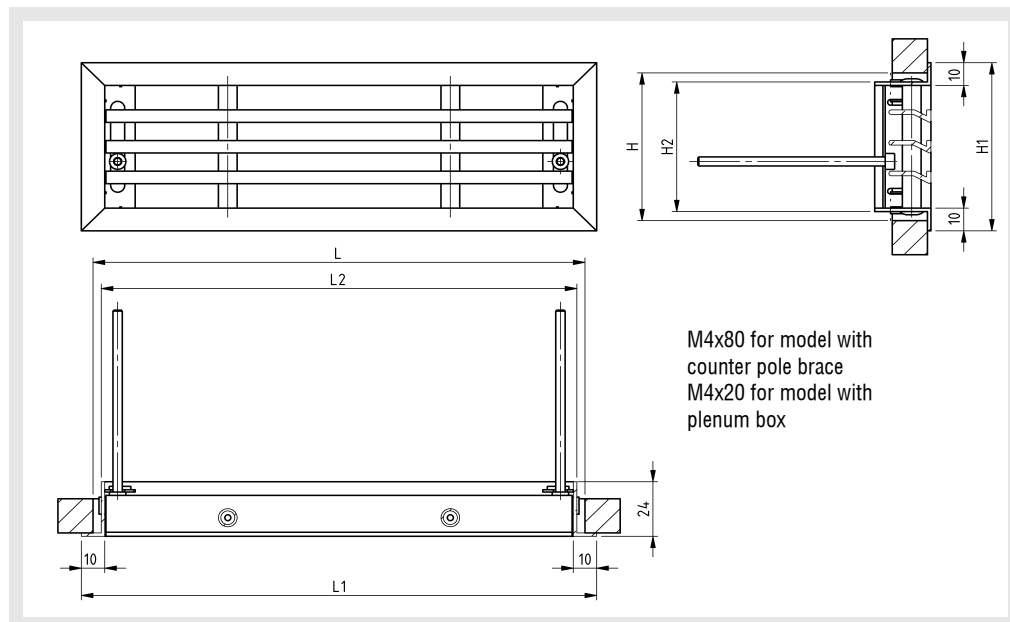


- ES = End piece
- DIF = Difference
- TS = Section(s)
- BL = Length of band
- BL1 = Total length

Ventilation Grille PA

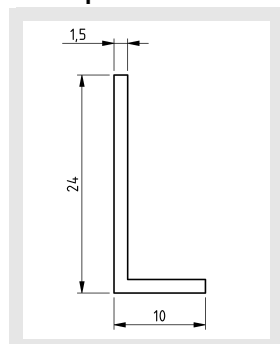
Dimensions

PA-...-10-...-VS-...



Counter pole brace on-site

Frame profile PA-...-10



Available sizes

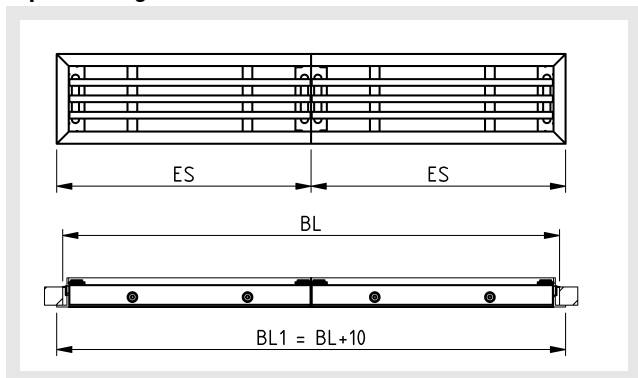
L	L1	L2	L3
00225	220	205	210
00325	320	305	310
00425	420	405	410
00525	520	505	510
00625	620	605	610
00825	820	805	810
01025	1020	1005	1010
01225	1220	1205	1210

H	H1	H2	H3	PLA	
				8 mm	13 mm
075	74	57	65	3	2
125	124	107	115	7	5
225	224	207	215	14	10
325	324	307	315	21	16

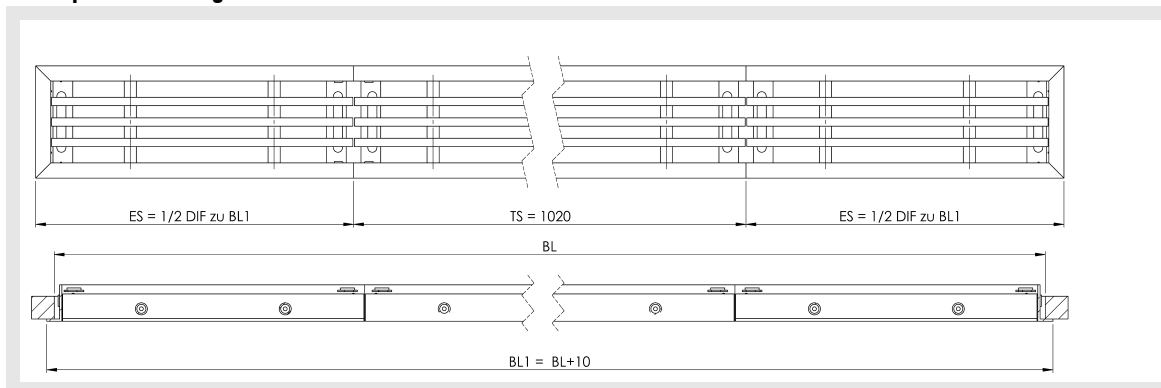
All combined lengths and heights available.
Other sizes available on request.
Hit-and-miss damper not possible.
PLA = number of profiled blades

Ventilation Grille PA

Ventilation grille PA-...-10, as band
2-part if length of band $BL \leq 2025$ mm



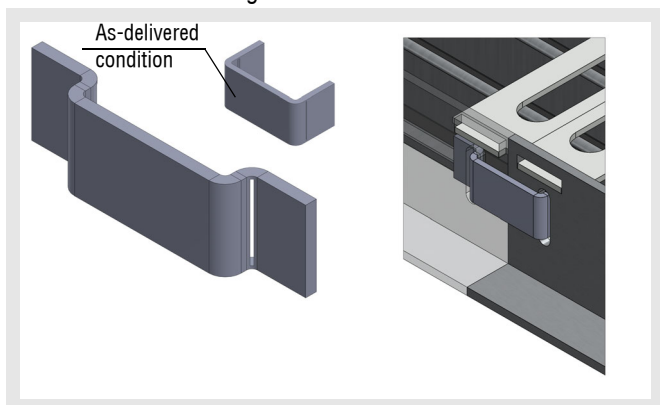
multi-part for a length of band $BL > 2025$ mm



Ventilation grille bands can be supplied only with concealed mounting (-VS).

Connecting piece

Standard for band design



Note: The connecting piece is folded down manually on-site.

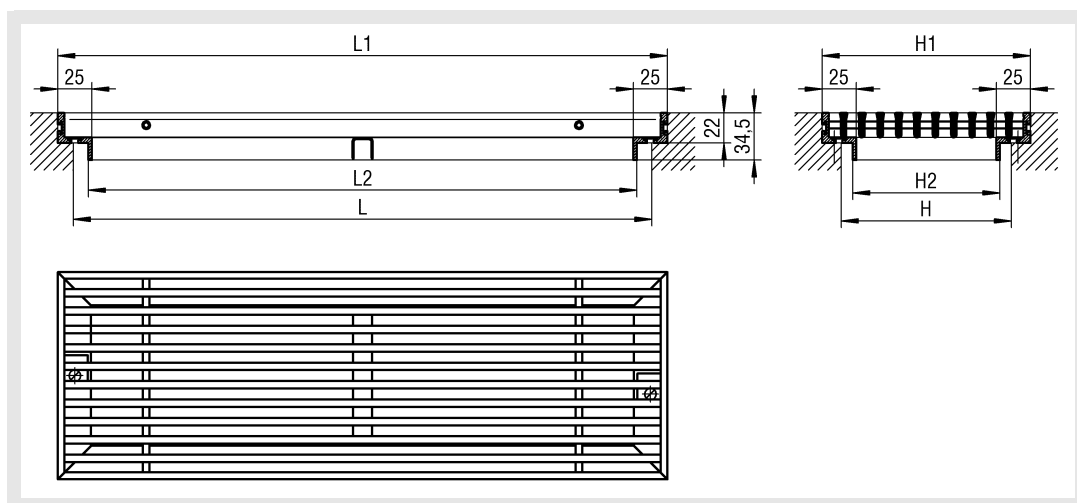
- ES = End piece
- DIF = Difference
- TS = Section(s)
- BL = Length of band
- BL1 = Total length

Ventilation Grille PA

For floor mounting

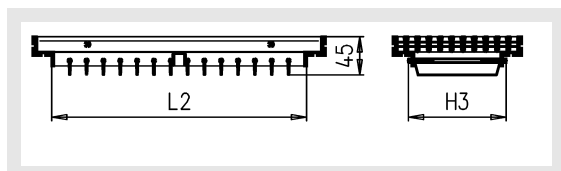
Dimension

PA-...-03-...-VM-...

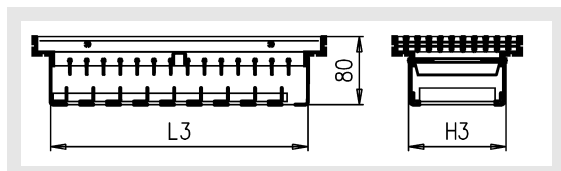


All models consist of basic type PA...-3

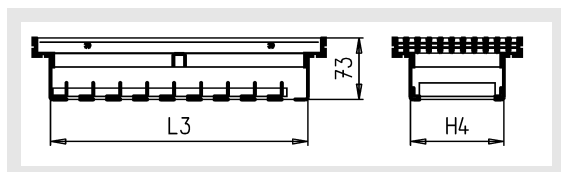
PA-...-05-...



PA-...-06-...

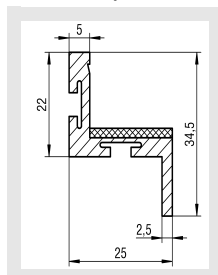


PA-...-07-...



Frame profile

PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07



Available sizes

L	L1	L2	L3
325	348	304	310
425	448	404	410
525	548	504	510
625	648	604	610
825	848	804	810
1025	1048	1004	1010
1225	1248	1204	1210

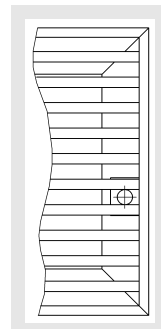
H	H1	H2	H3	H4	PLA	
					8 mm	13 mm
75	102	58	65	60	6	4
125	152	108	115	110	10	7
225	252	208	215	210	17	12
325	352	308	315	310	25	18

All combined lengths and heights available.

Other sizes available on request.

PLA = number of profiled blades

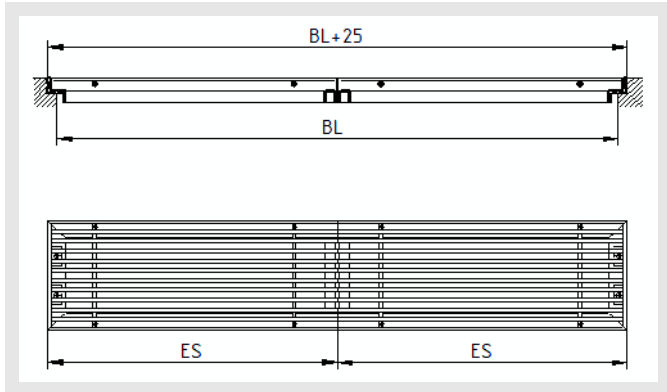
Grille insert fastening (standard model)



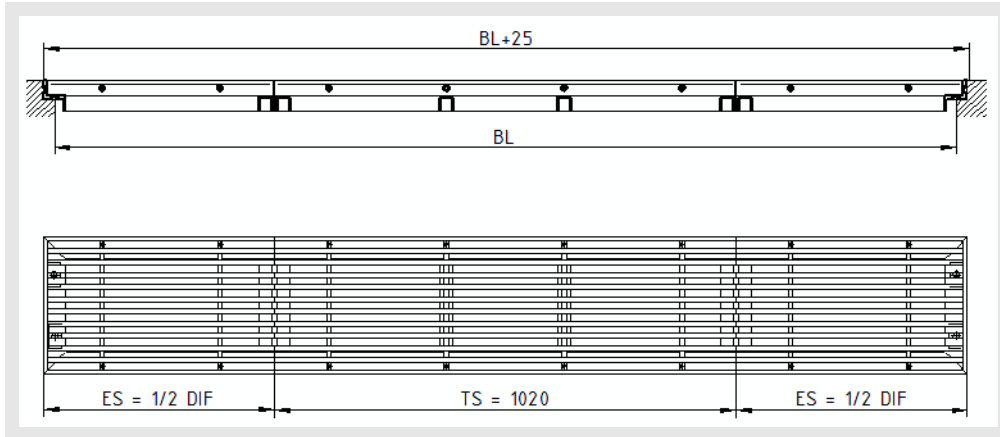
The PA-...-03 basic type is also suitable for wall mounting.

Ventilation Grille PA

Ventilation grille PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07, as band
2-part if length of band $BL \leq 2025$ mm



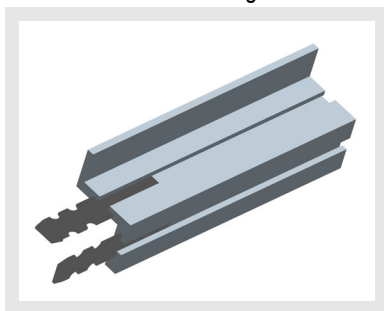
multi-part for a length of band $BL > 2025$ mm



Ventilation grille bands can be supplied only with concealed mounting (-VM).

Fishplate (VL)

Standard for band design



- ES = End piece
- DIF = Difference
- TS = Section(s)
- BL = Length of band

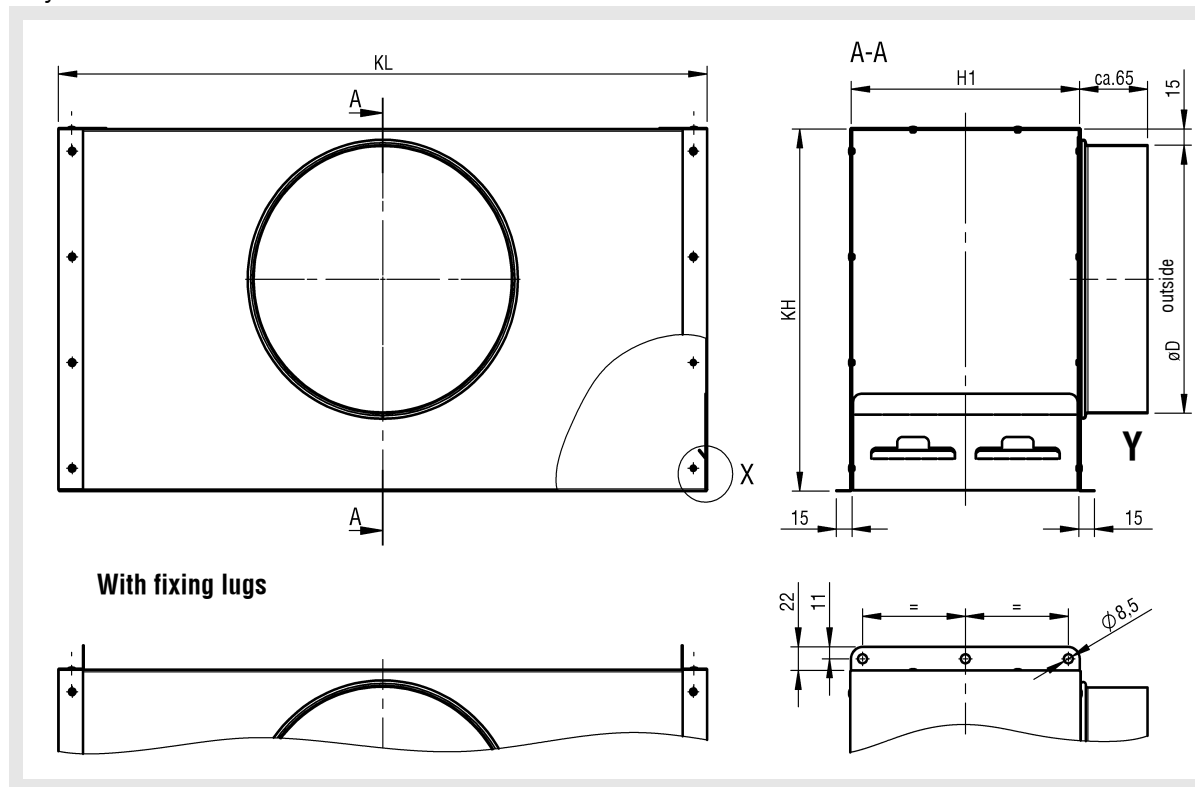
Ventilation Grille PA

Dimensions of accessories

For wall and ceiling mounting and installation in ventilation ducts

Plenum box (-AK-34-...) with lateral spigot (-S1)

Only for PA-...-01 / PA-...-2a



Grilles cannot be fitted with a hit-and-miss damper if a plenum box is attached, i.e., it can either be fitted with a hit-and-miss damper or a plenum box.

Available sizes AK-34-...-S1

L	H	KL	KBS	KHS	ød
00325	075	320	68	210	123
00425		420		210	123
00525		520		210	123
00625		620		210	123
00825		820		245	158
01025		1020		245	158
01225		1220		245	158

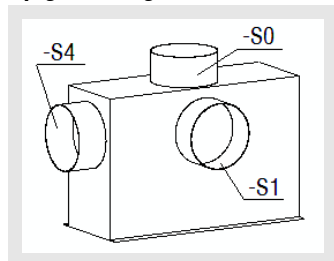
L	H	KL	KBS	KHS	ød
00325	225	320	218	285	198
00425		420		285	198
00525		520		285	198
00625		620		335	248
00825		820		335	248
01025		1020		335	248
01225		1220		335	248

L	H	KL	KBS	KHS	ød
00325	125	320	118	245	158
00425		420		245	158
00525		520		245	158
00625		620		245	158
00825		820		285	198
01025		1020		285	198
01225		1220		285	198

L	H	KL	KBS	KHS	ød
00325	325	320	318	335	248
00425		420		335	248
00525		520		335	248
00625		620		400	313
00825		820		400	313
01025		1020		400	313
01225		1220		400	313

Ventilation Grille PA

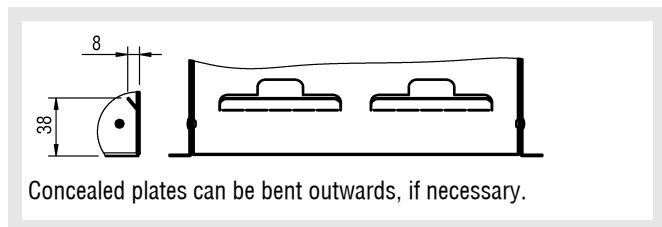
Spigot arrangement



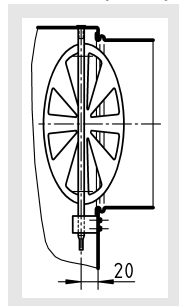
- Lateral spigot (-S1, standard)
- Spigot from above (-S0)
- Spigot front side (-S4)

Dimensions and prices for spigot from above (-S0) and spigot front side (-S4) upon request.

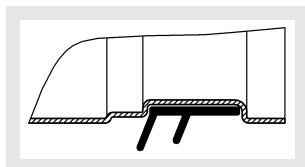
Detail X



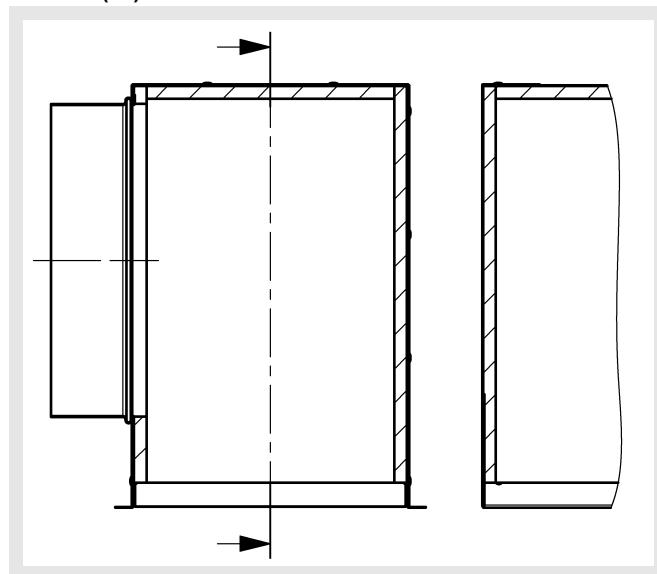
Damper (-DK1)



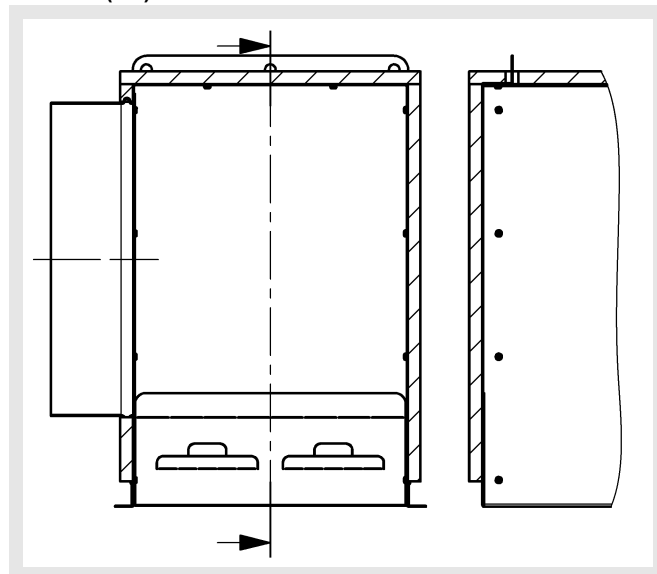
Rubber lip seal (-GD1) Detail Y



Insulation for AK-34-... internal (-li)



external (-la)

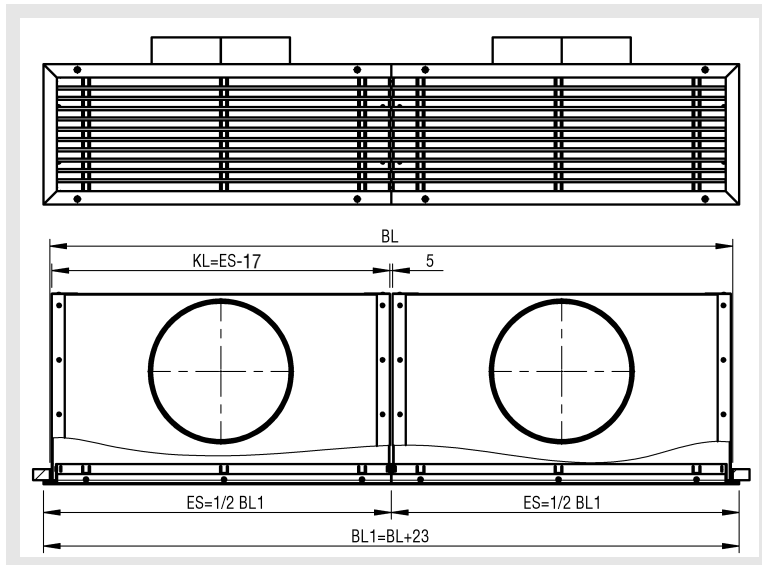


Ventilation Grille PA

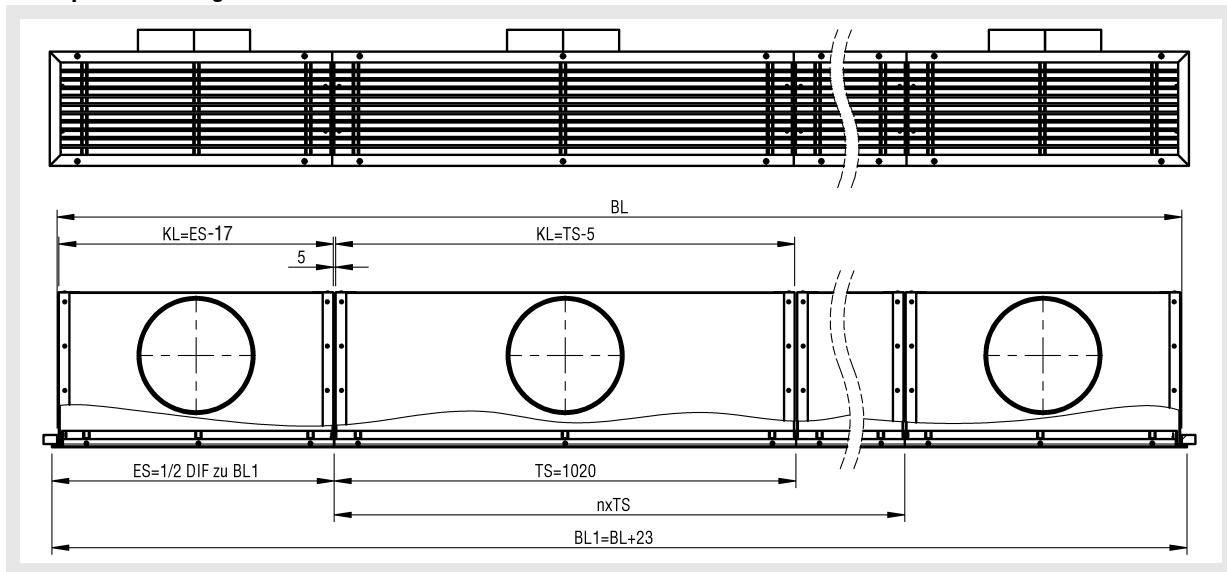
Plenum box (-AK-34-...) with lateral spigot (-S1) as band

Only for PA-...-01 / PA-...-2a

2-part if length of band $BL \leq 2025$ mm



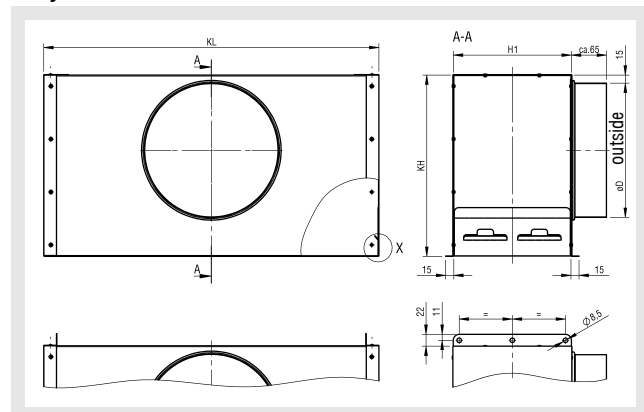
multi-part for a length of band $BL > 2025$ mm



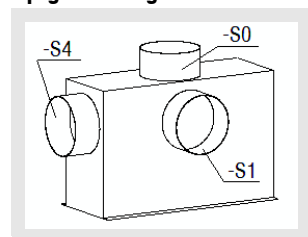
- ES = End piece
- DIF = Difference
- TS = Section(s)
- BL = Length of band
- BL1 = Total length of grille ($BL1 = BL + 23$)
- KL = Length of box
- KL1 = Length of box end piece ($KL1 = ES - 17$)
- n = Number

Ventilation Grille PA

Plenum box (-AK-35-...) with lateral spigot (-S1)
Only for PA-...-10



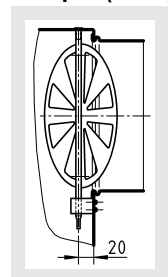
Spigot arrangement



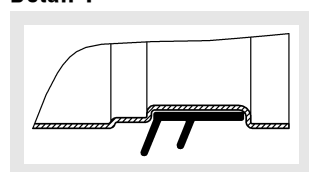
- Lateral spigot (-S1, standard)
- Spigot from above (-S0)
- Spigot front side (-S4)

Dimensions and prices for spigot from above (-S0) and spigot front side (-S4) upon request.

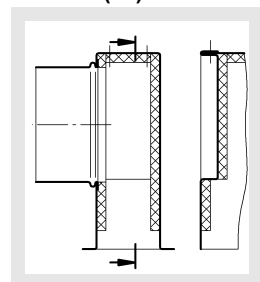
Damper (-DK1)



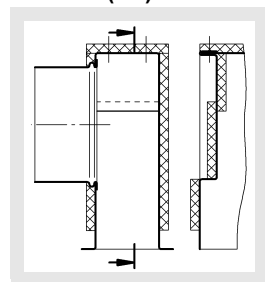
Rubber lip seal (-GD1) Detail Y



Insulation for AK-35-... internal (-li)



external (-la)



Available sizes AK-35-...-S1 only for PA-...-10

L	H	KL	KBS	KHS	ød	a
00225	075	208	63	210	123	106
00325		308		210	123	
00425		408		210	123	
00525		508		210	123	
00625		608		245	158	
00825		808		245	158	
01025		1008		245	158	
01225		1208		245	158	

L	H	KL	KBS	KHS	ød	a
00225	125	208	113	245	158	138
00325		308		245	158	
00425		408		245	158	
00525		508		245	158	
00625		608		245	158	
00825		808		285	198	
01025		1008		285	198	
01225		1208		285	198	

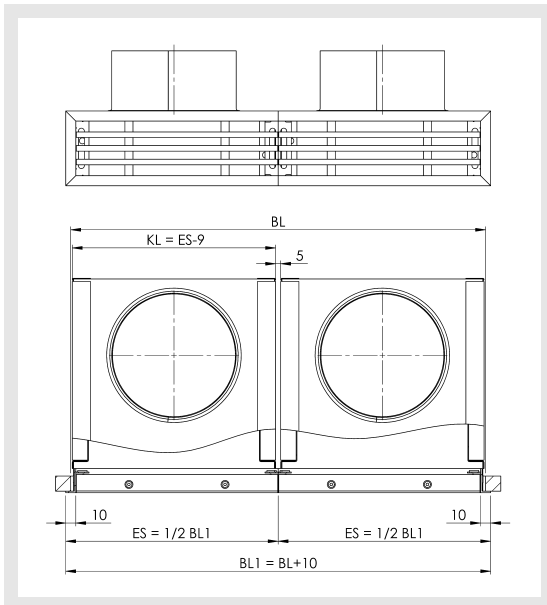
L	H	KL	KBS	KHS	ød	a
00225	225	208	213	285	198	180
00325		308		285	198	
00425		408		285	198	
00525		508		285	198	
00625		608		335	248	
00825		808		335	248	
01025		1008		335	248	
01225		1208		335	248	

L	H	KL	KBS	KHS	ød	a
00225	325	208	313	335	248	230
00325		308		335	248	
00425		408		335	248	
00525		508		335	248	
00625		608		400	313	
00825		808		400	313	
01025		1008		400	313	
01225		1208		400	313	

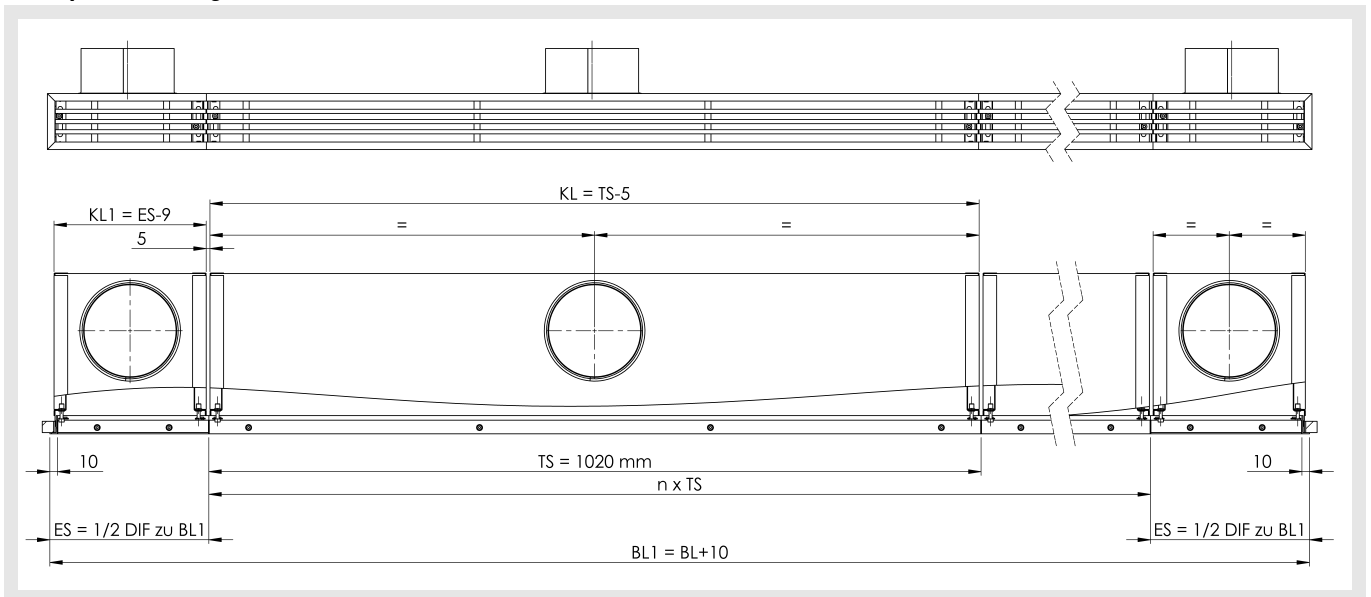
Ventilation Grille PA

Plenum box (AK-35-...) with lateral spigot (-S1) as band
for PA-...-10

2-part if length of band $BL \leq 2025$ mm



multi-part for a length of band $BL > 2025$ mm



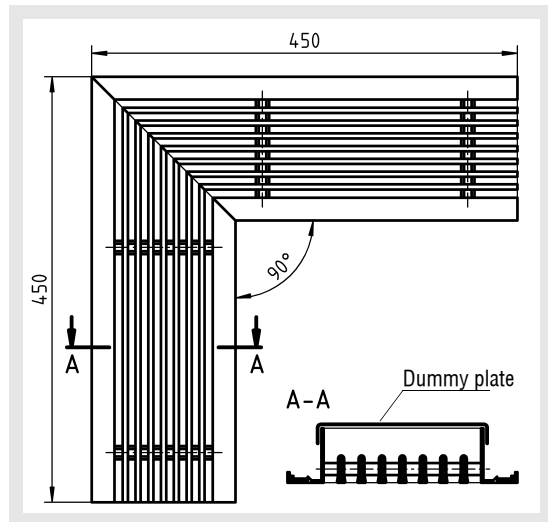
- ES = End piece
- DIF = Difference
- TS = Section(s)
- BL = Length of band
- BL1 = Total length of grille ($BL1 = BL + 10$)
- KL = Length of box
- KL1 = Length of box end piece ($KL1 = ES - 9$)
- n = Number

Ventilation Grille PA

For wall and ceiling mounting and installation in ventilation ducts

Corner angle (-EW-...-01...)

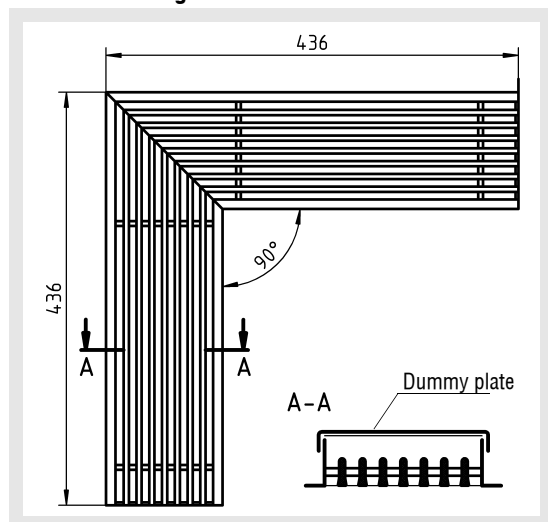
For ventilation grille band PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c



Corner angles can only be manufactured as dummy plates, i.e., without a plenum box. The corner angle is angled by 90° and has a flange length of 450 mm. The dummy plate used is made of Zincor and painted to RAL 9005 (black).

Corner angle (-EW-...-10...)

For ventilation grille band PA-...-10

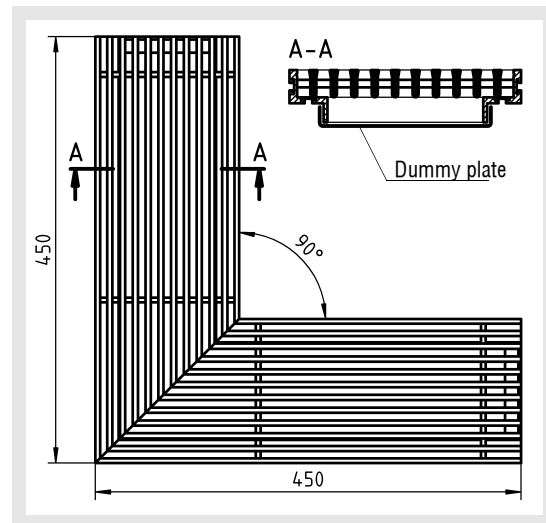


Corner angles can only be manufactured as dummy plates, i.e., without a plenum box. The corner angle is angled by 90° and has a flange length of 436 mm. The dummy plate used is made of Zincor and painted to RAL 9005 (black).

For floor mounting

Corner angle (-EW-...-03...)

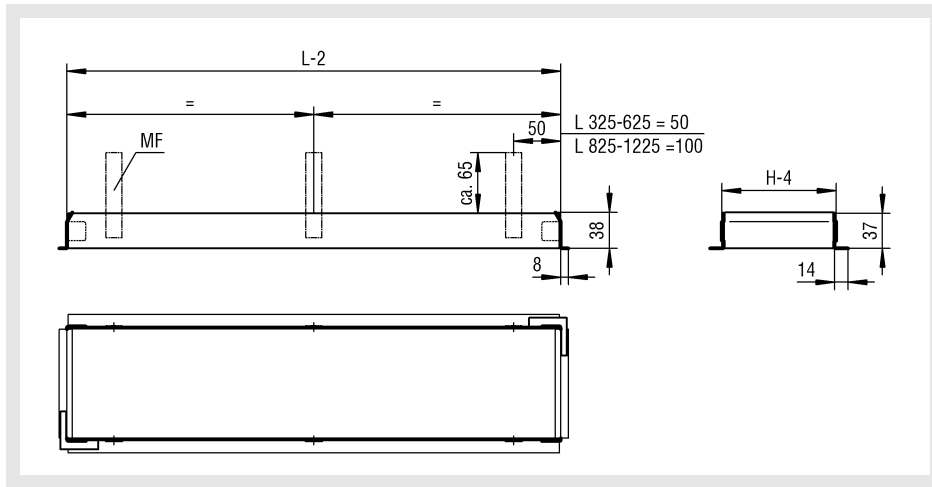
For ventilation grille band PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07



Corner angles can only be manufactured as dummy plates, i.e., without a plenum box. The corner angle is angled by 90° and has a flange length of 450 mm. The dummy plate used is made of galvanised sheet steel and painted to RAL 9005 (black).

Ventilation Grille PA

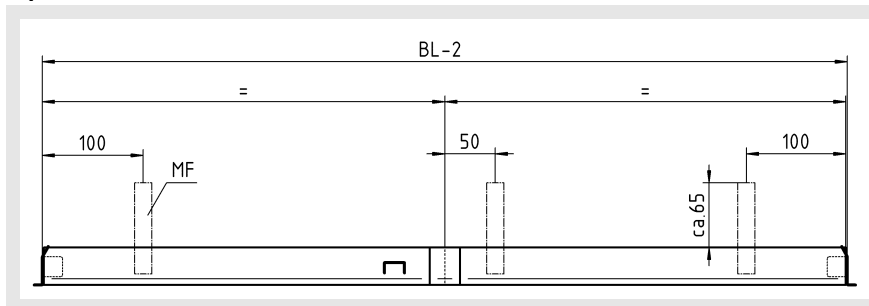
Installation frame (-ER1/-ER2) for ventilation grilles for wall and ceiling mounting and installation in ventilation ducts
PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c



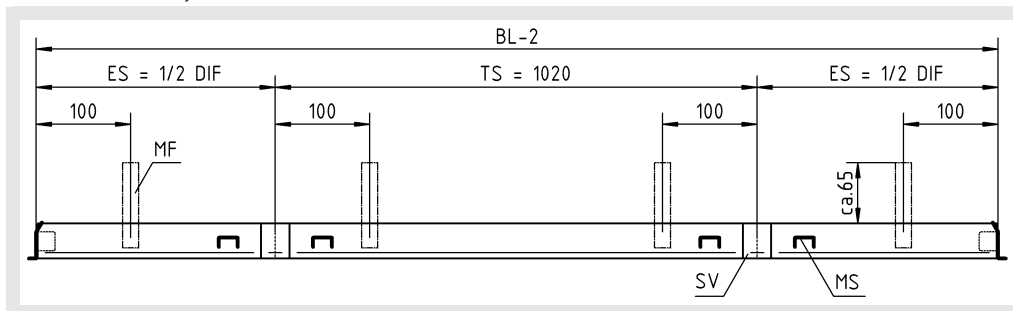
Length $L \leq 825 \text{ mm}$ = 4 wall anchors

Length $L > 825 \text{ mm}$ = 6 wall anchors

Installation frame (-ER1/-ER2) for ventilation grille band PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c
2-part, $BL \leq 2025 \text{ mm}$ - 6 wall anchors



several sections, $BL > 2025 \text{ mm}$ - 8 wall anchors



- BL = Length of band
- MF = Wall anchor
- SV = Plug-in connection
- MS = Assembly rail
- ES = End piece
- DIF = Difference
- TS = Section(s)

Installation frames for grille bands are supplied with plug-in connections. Assembly rails are additionally attached, they can be easily removed by turning, once the grille has been mounted in the wall.

All installation frames are supplied without wall anchors. Wall anchors available at an extra charge only.

Ventilation Grille PA

Fastening methods

For wall and ceiling mounting and installation in ventilation ducts

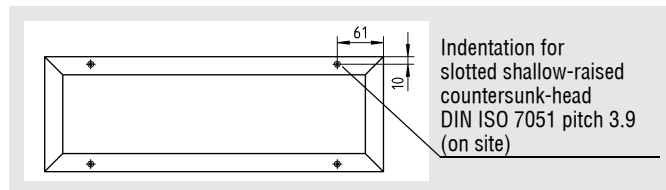
PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c

Screw mounting (-SM)

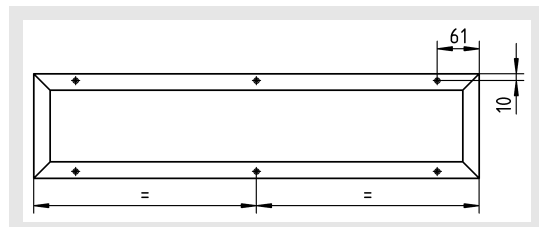
(drawn without grille insert)

The ventilation grille types PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c are only supplied with screw mounting (-SM) on special request. Only this model is ball-impact-resistant (to DIN 18032, Part 3).

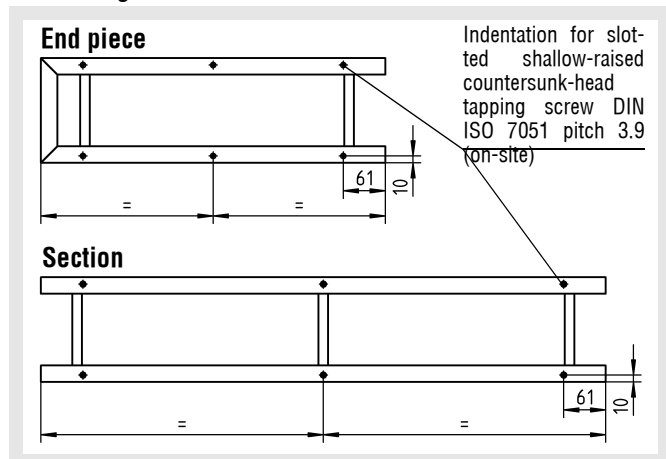
L < 625



L ≥ 625



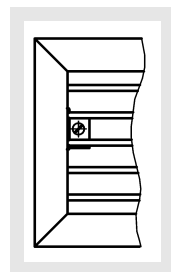
Band design



End piece < 625 mm	=	4 raised countersunk head tapping screws
End piece ≥ 625 mm	=	6 raised countersunk head tapping screws
Section	=	6 raised countersunk head tapping screws

PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c / PA-...-10

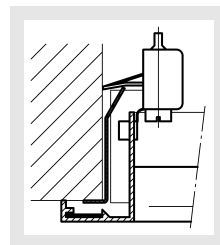
Concealed mounting



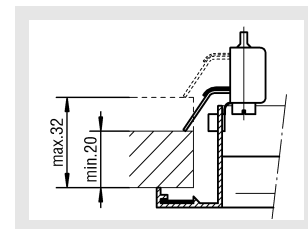
Unless stated otherwise, the ventilation grille types PA-...-01 / PA-...-2a / PA-...-2b / PA-...-2c are delivered with concealed mounting (-KB).

Starting from height 225/210 2 attachments per side.

VM



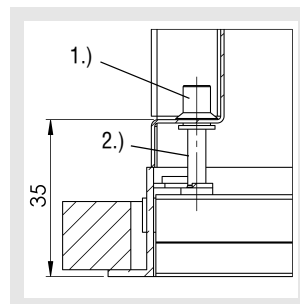
KB



The concealed mounting VM is only available with an installation frame or a plenum box.

The installation frame must be ordered separately.

VS



The ventilation grille type PA-...-10 can only be delivered with concealed screw mounting (-VS).

Concealed screw mounting (-VS) is possible only for the ventilation grille type PA-...-10 with plenum box or counter pole brace (on site).

- 1.) M4 riveting nut
- 2.) M4x20 for plenum box
M4x80 with counter pole brace

Ventilation Grille PA

For floor mounting

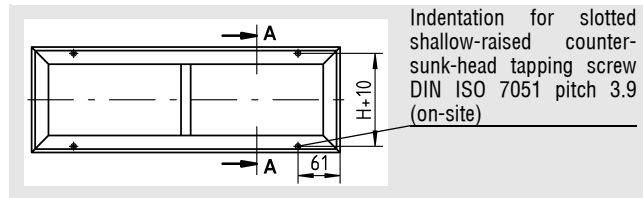
PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07

Frame fixed by concealed mounting (-VM)

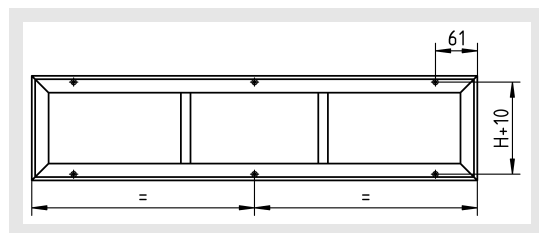
(drawn without grille insert)

PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07

L = 325 - 525

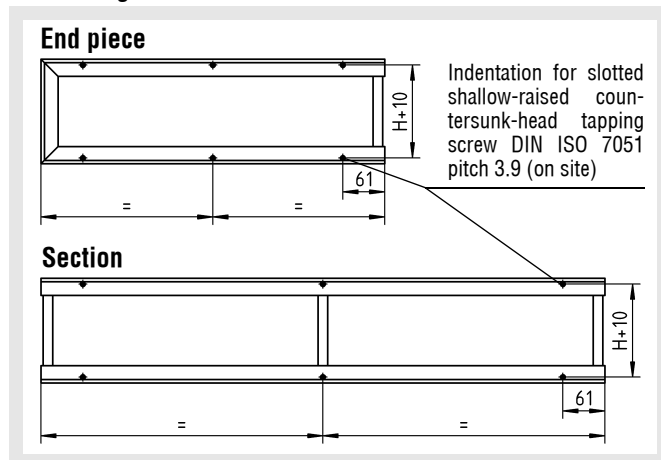


L = 625 - 1225



PA-...-03 / PA-...-05 / PA-...-06 / PA-...-07

Band design



End piece ≤ 425 mm = 4 raised countersunk head tapping screws

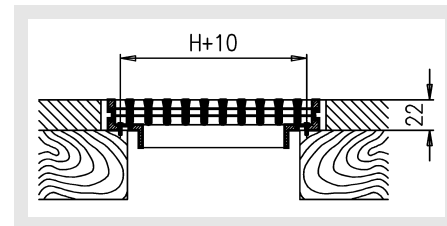
End piece > 425 mm = 6 raised countersunk head tapping screws

Section = 6 raised countersunk head tapping screws

The PA-...-03 basic type is also suitable for wall mounting.

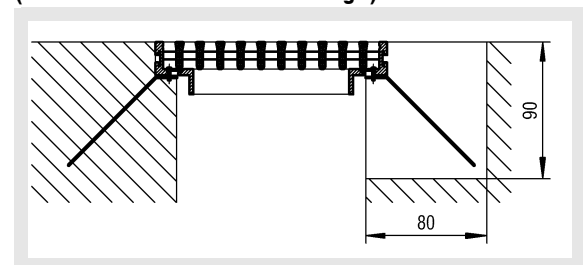
Section A-A (drawn rotated by 90°)

Fixed without wall anchors



Fixed with wall anchors

(Wall anchors at an extra charge)



Length L ≤ 825 mm = 4 wall anchors

Length L > 825 mm = 6 wall anchors

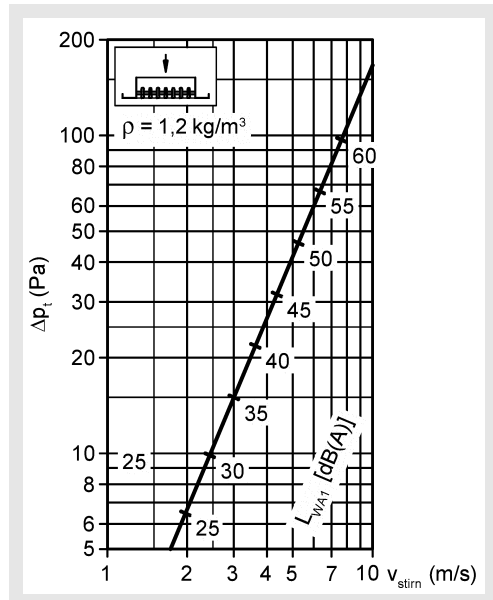
Ventilation Grille PA

Technical data

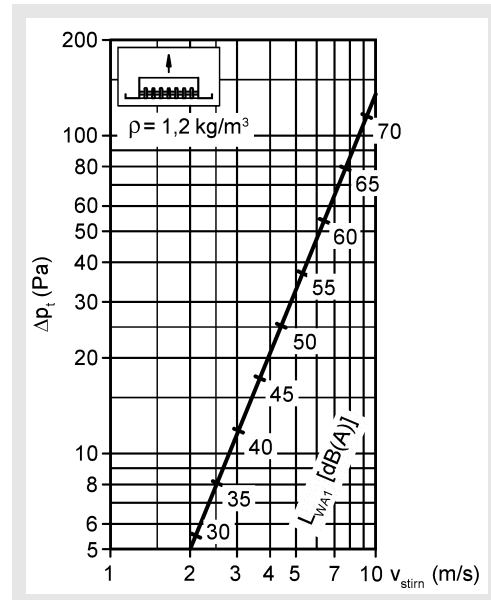
The technical data apply to all models.

Pressure loss and noise level

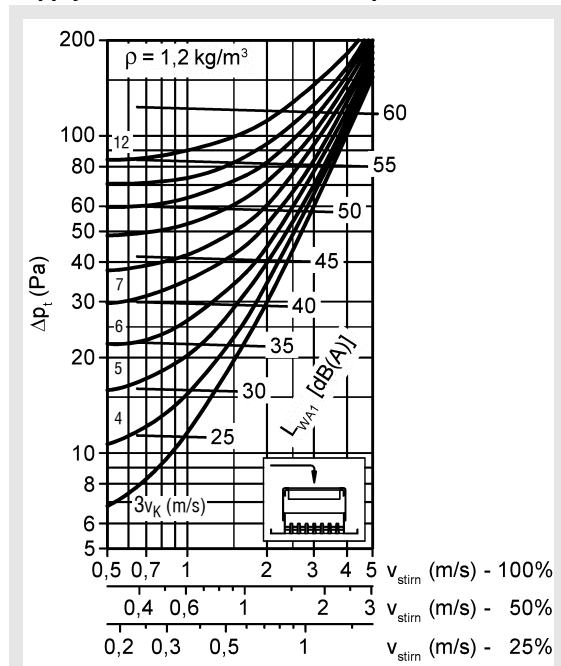
Supply air without hit-and-miss damper



Return air without hit-and-miss damper

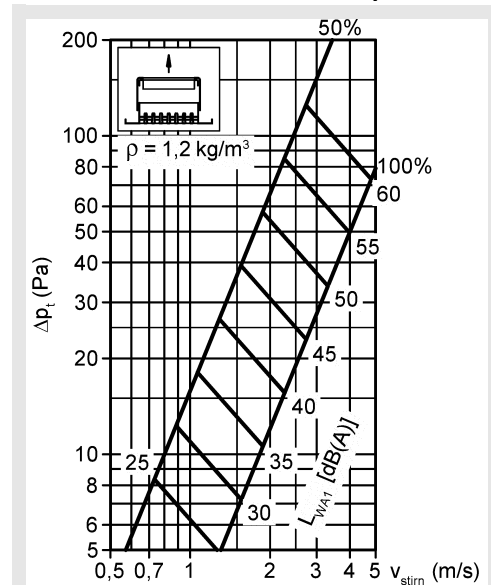


Supply air with hit-and-miss damper



Hit-and-miss damper position OPEN in %

Return air with hit-and-miss damper



Hit-and-miss damper position OPEN in %

Correction factor

Supply and return air

A_{stirn} (m ²)	0,01	0,02	0,04	0,08	0,16	0,32
KF (-)	-9	-6	-3	0	+3	+6

$$L_{WA} = L_{WA1} + KF$$

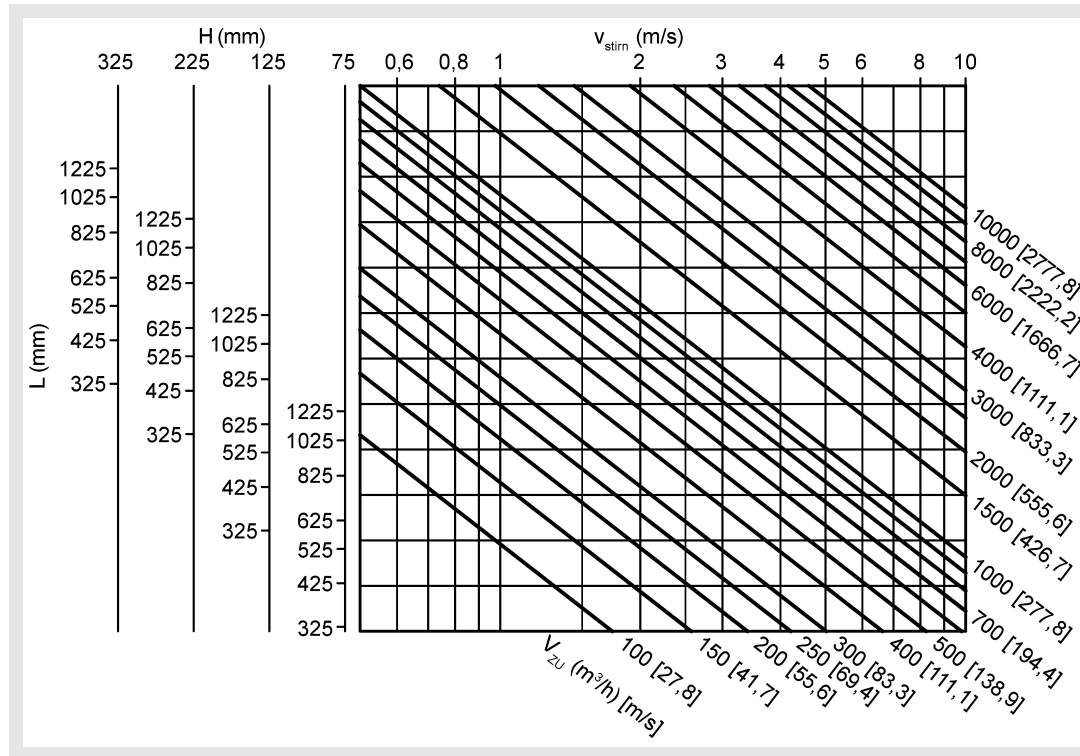
Face area

Supply and return air

H	L						
	325	425	525	625	825	1025	1225
75	0,016	0,021	0,026	0,031	0,042	0,052	0,062
125	0,031	0,041	0,051	0,061	0,082	0,102	0,123
225	0,061	0,081	0,101	0,122	0,162	0,202	0,243
325	0,091	0,121	0,151	0,182	0,242	0,303	0,363
A_{stirn} (m ²)							

Ventilation Grille PA

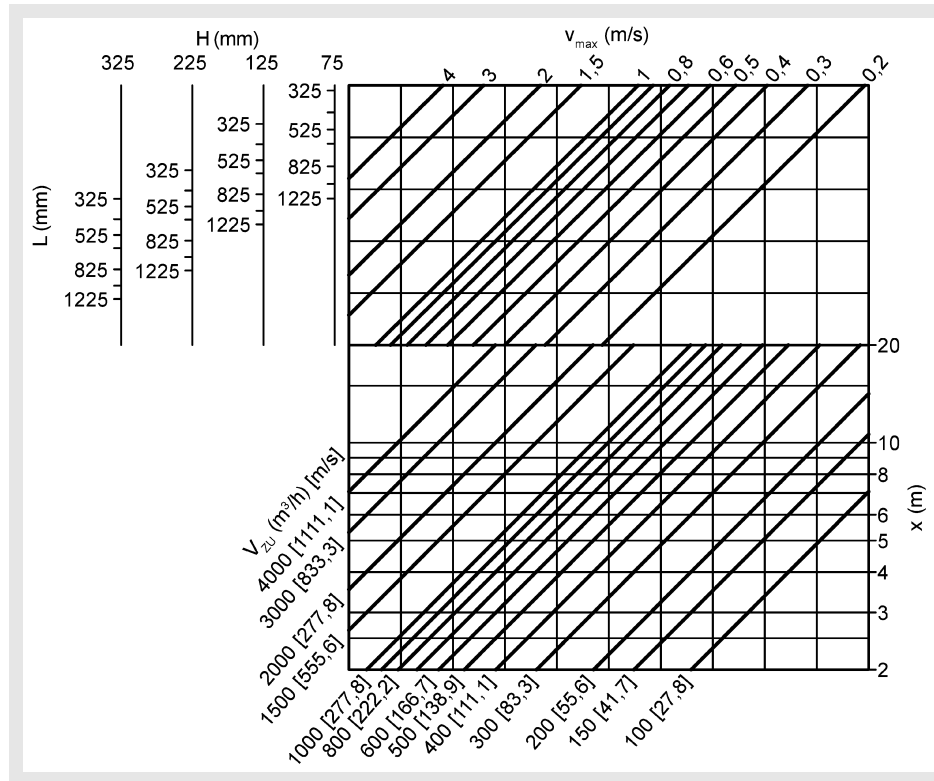
Front side velocity



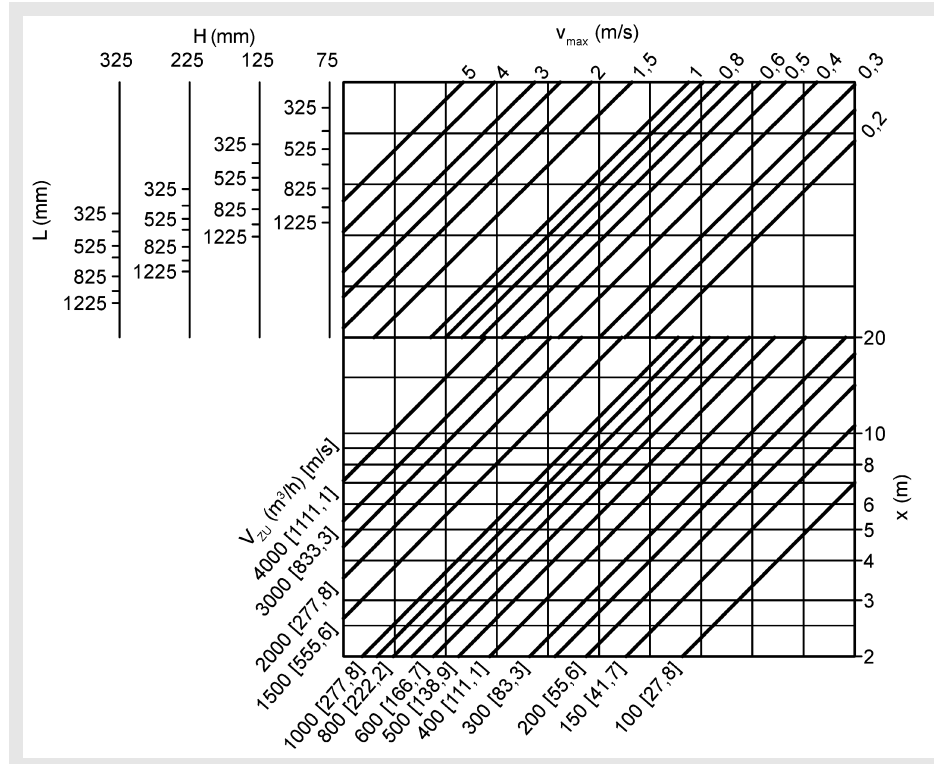
Ventilation Grille PA

Maximum end velocity of jet

Supply air without coanda effect



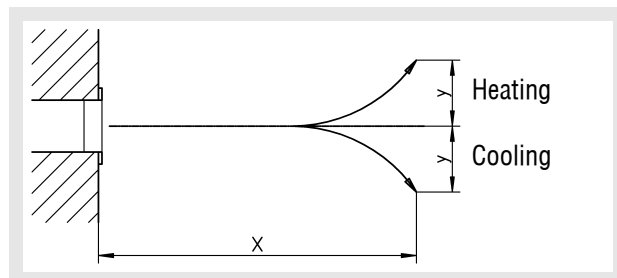
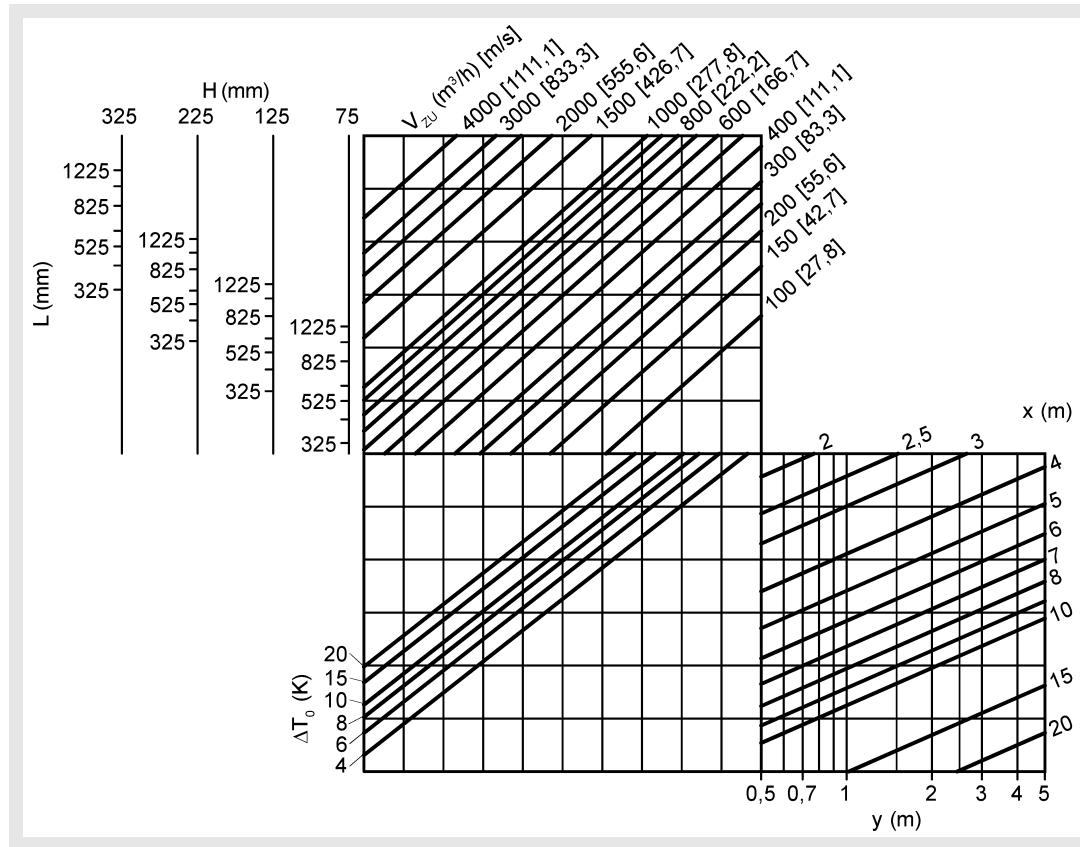
Supply air with coanda effect



Ventilation Grille PA

Jet path

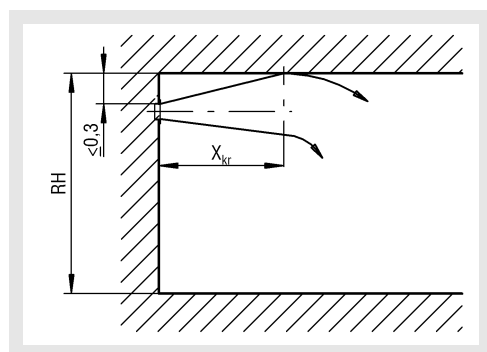
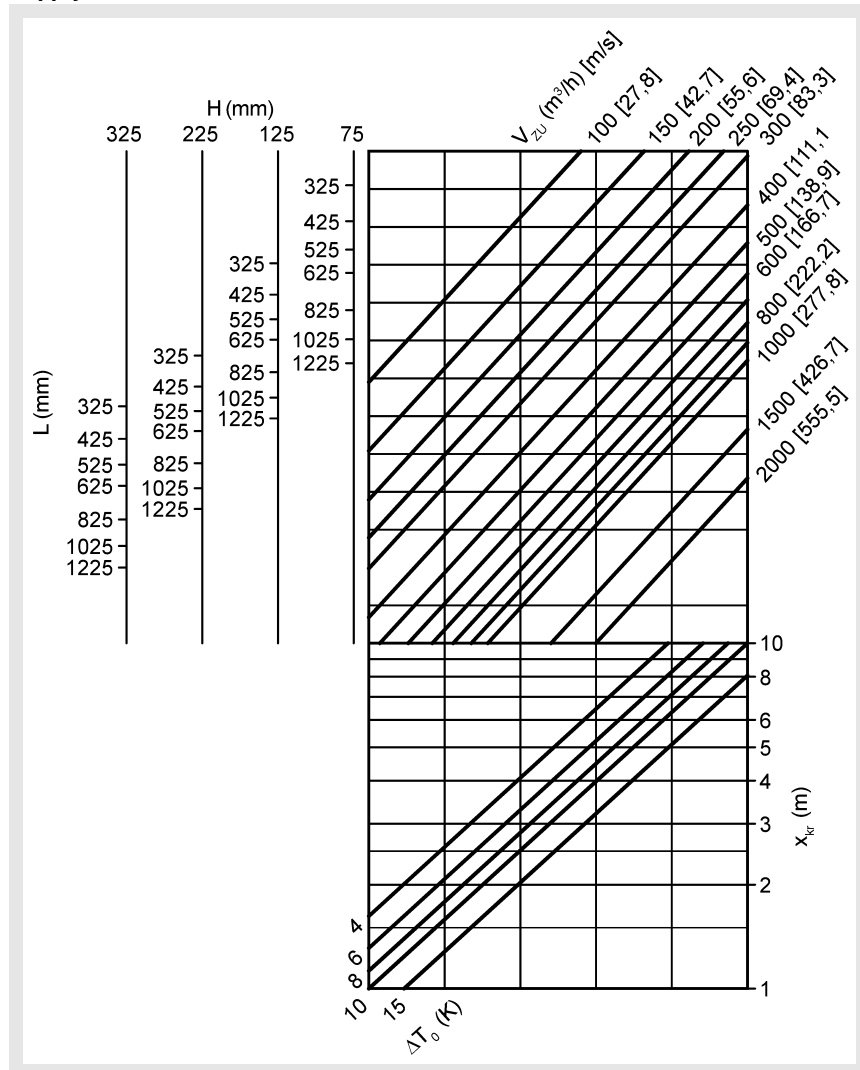
Supply air without coanda effect



Ventilation Grille PA

Critical jet path

Supply air with coanda effect

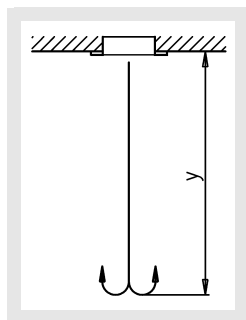
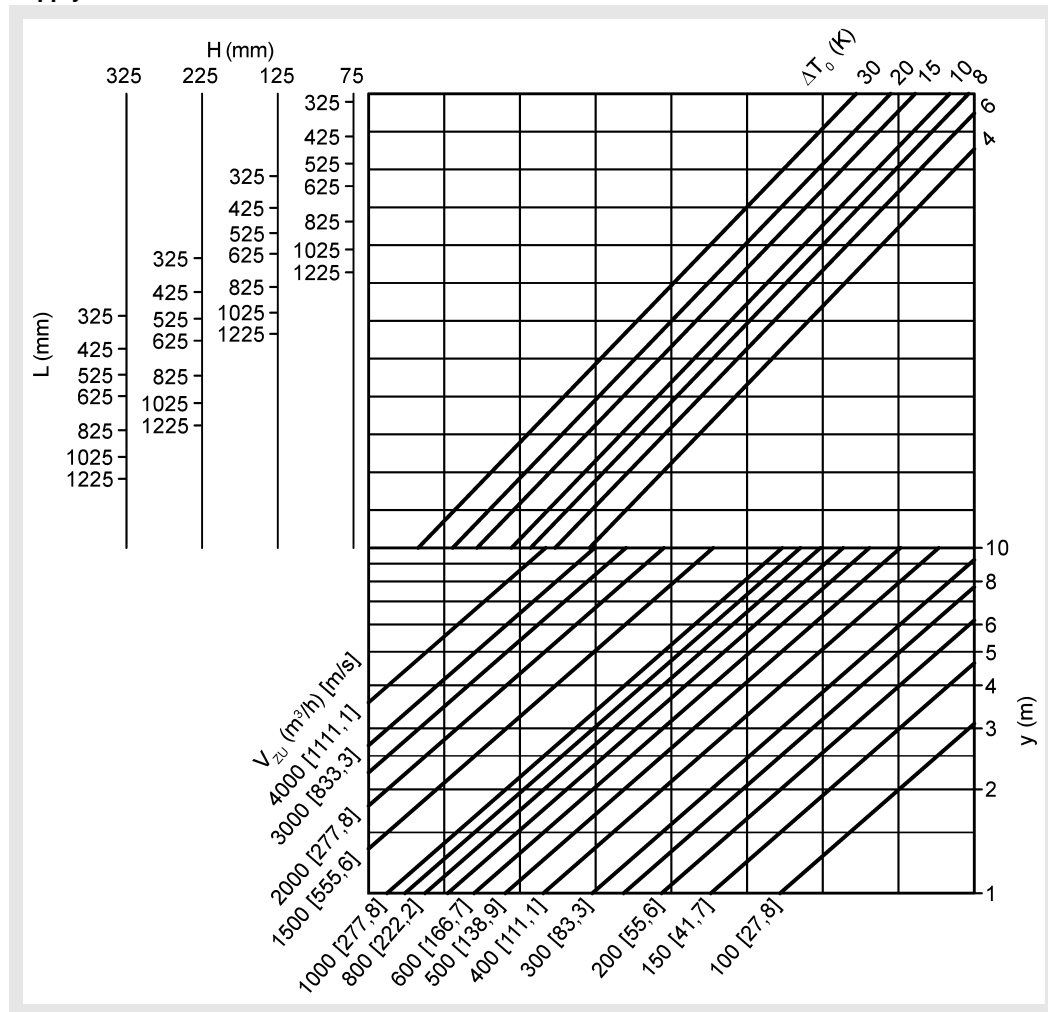


Ventilation Grille PA

Maximum penetration

In heating mode

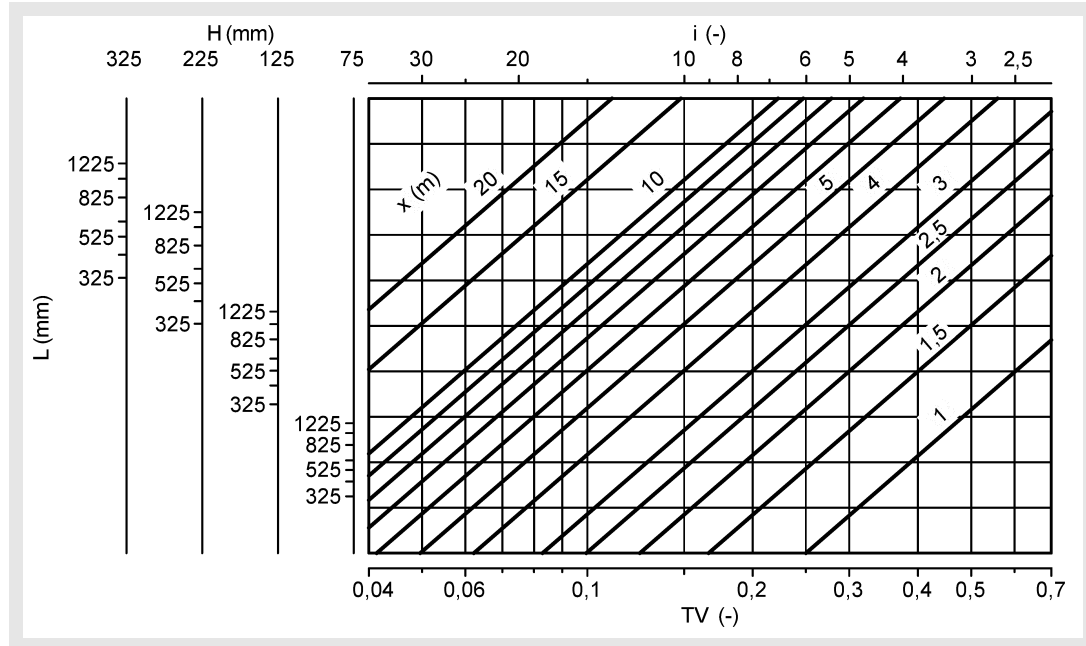
Supply air without coanda effect



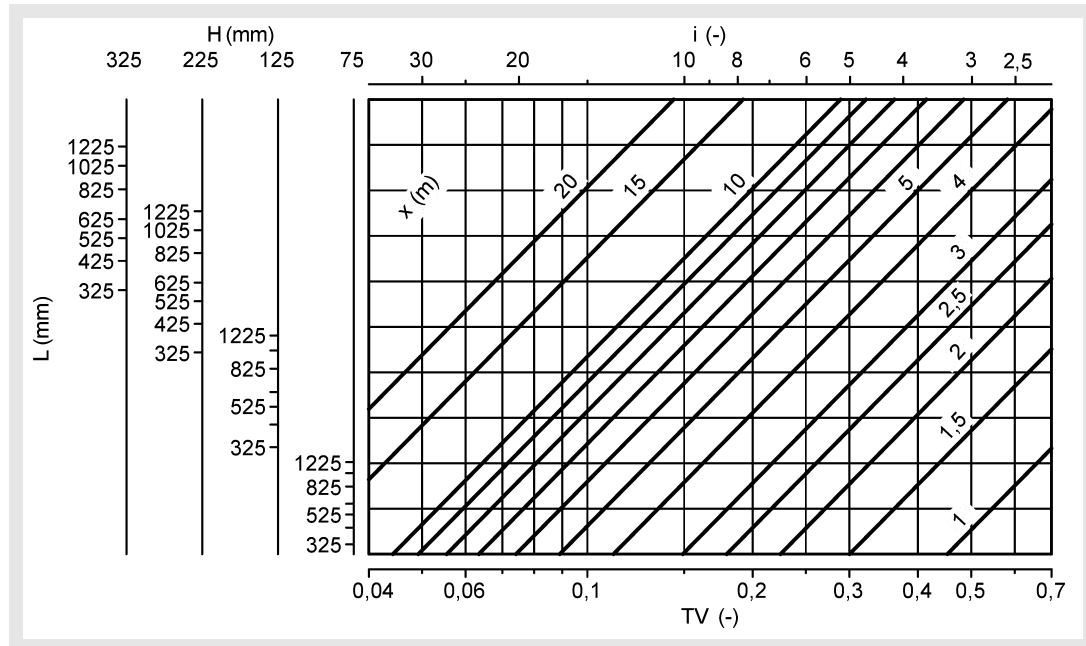
Ventilation Grille PA

Induction ratios and temperature ratios

Supply air without coanda effect



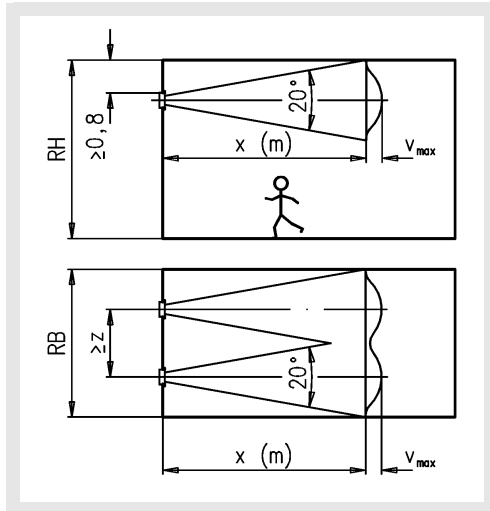
Supply air with coanda effect



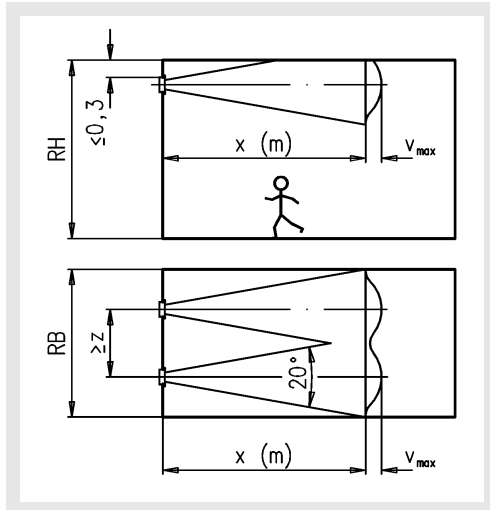
Ventilation Grille PA

Minimum distances

Supply air without coanda effect



Supply air with coanda effect



For the diagrams to be correct, the distance z between two grilles must be $x \text{ (m)} \times 0.2$

Legend

V_{ZU} (m³/h) [l/s]	= Supply air volume
V_{AB} (m³/h) [l/s]	= Return air volume
V_X (m³/h) [l/s]	= Total air jet volume at point x
v_{max} (m/s)	= Maximum end velocity of jet
v_K (m/s)	= Duct velocity
v_{stirn} (m/s)	= Intake velocity, blower stream velocity, out-flow velocity, relative to A_{stirn}
A_{stirn} (m²)	= Face area
x (m)	= horizontal throw
y (m)	= vertical throw
x_{kr} (m)	= Critical jet path
ρ (kg/m³)	= Density
Δp_t (Pa)	= Pressure loss
L_{WA} [dB(A)]	= A-weighted sound power level [$L_{WA} = L_{WA1} + KF$]
L_{WA1} [dB(A)]	= A-weighted sound power level, relative to A_{stirn} , $= 0.08 \text{ m}^2$
KF (-)	= Correction factor
ΔT_0 (K)	= Temperature difference between supply air temperature and room temperature ($\Delta T_0 = t_{ZU} - t_R$)
ΔT_{OH} (K)	= Temperature difference between air supply and room temperature in heating mode ($\Delta T_{OH} = t_{ZUH} - t_{RH}$)
ΔT_X (K)	= Temperature ratio at position x
t_{ZUH} (°C)	= Supply air temperature
t_{RH} (°C)	= Room temperature
t_{ZU} (°C)	= Supply air temperature
t_R (°C)	= Room temperature
i (-)	= Induction ratio ($i = V_X / V_{ZU}$)
TV (-)	= Temperature ratio ($TV = \Delta T_X / \Delta T_0$)
z (m)	= Minimum clearance between two grilles $x \text{ (m)} \times 0.2$
RH (mm)	= Room height
RB (mm)	= Room width
H (mm)	= Height
L (mm)	= Length

Ventilation Grille PA

Order code PA

01	02	03	04	05
Type	Blade profile	Blades	Blade spacing	Length
Example				
PA	-Z	-01	-08	-00325

06	07	08	09	10
Height	Single / band design	Paint	Mounting	Installation frame
-075	-N	-9010	-KB	-ER0

All fields must be filled when ordering

Sample

PA-Z-01-08-00325-075-N-9010-KB-ER0

Ventilation grille type PA | blade profile Z | horizontal fixed air deflection blades on the front side | 8 mm | grille length 325 mm | grille height 75 mm | individual length | painted to RAL9010 | with clamp fastening | without installation frame

ORDER DETAILS

01 - Type

PA = Ventilation grille type PA

02 - Blade profile

Z = Blade profile, lightweight model, diagonal throw

G = Blade profile, compact model, straight throw

S = Blade profile, compact model, diagonal throw

03 - Blades

01 = Front-side horizontal fixed blade profiles for wall and ceiling mounting and installation in ventilation ducts

2a = Same as PA-...-01, additionally with individually adjustable vertical droplet-forming blades

2b = Same as PA-...-01, additionally with hit-and-miss damper

2c = Same as PA-...-01, additionally with individually adjustable vertical droplet-forming blades and hit-and-miss damper

10 = Supply air and return air grilles, front-side horizontal fixed blade profiles, with narrow frame profile, for wall and ceiling mounting and installation in ventilation ducts

03 = Removable blade insert consisting of horizontal, fixed blade profiles for floor installation and wall mounting

05 = Same as PA-...-03, additionally with individually adjustable vertical droplet-forming blades

06 = Same as PA-...-03, additionally with individually adjustable vertical droplet-forming blades and hit-and-miss damper

07 = Same as PA-...-03, additionally with hit-and-miss damper

04 - Blade spacing

08 = 8 mm

13 = 13 mm

05 - Length

00225 = Grille length 225 mm (only PA-...-10)

00325 = Grille length 325 mm

00425 = Grille length 425 mm

00525 = Grille length 525 mm

00625 = Grille length 625 mm

00825 = Grille length 825 mm

01025 = Grille length 1025 mm

01225 = Grille length 1225 mm

xxxxx = Length in mm for band design > 1225 mm

06 - Height

075 = Grille height 75 mm

125 = Grille height 125 mm

225 = Grille height 225 mm

325 = Grille height 325 mm

xxx = Height in mm (always with 3 digits)

07 - Single / band design

N = Single length

B = Band design

08 - Paint

ELOX = Natural colour anodised (E6/EV1), standard

9010 = RAL9010 (white)

xxxx = RAL colour can be freely selected (always with 4 digits)

09 - Mounting

SM = Screw mounting

VM = Concealed mounting (only in connection with an installation frame or a plenum box)

VS = Concealed screw mounting (standard for PA-...-10-...)

KB = Clamp fastening (standard for PA-...-01/PA-...-2a/PA-...-2b/PA-...-2c)

10 - Installation frame

ER0 = Without installation frame (standard)

ER1 = With installation frame (not available in connection with plenum box AK)

ER2 = With installation frame with wall anchors (not available in connection with plenum box AK)

Ventilation Grille PA

Order code AK PA

01	02	03	04	05	06	07
Type	Air diffuser	Length	Height	Single / band design	Fastening	Material
Example						
AK	-34	-00325	-075	-N	-SM	-SV

08	09	10	11	12	13	14
Damper	Rubber lip seal	Insulation	Height of plenum box	Width of box	Spigot diameter	Spigot position
-DK1	-GD1	-I0	-KHS	-KBS	-SDS	-S1

All fields must be filled when ordering

Sample

AK-34-00325-075-N-SM-SV-DK1-GD1-I0-KHS-KBS-SDS-S1

Plenum box, rectangular design | suitable for diffuser type PA-...-(except for PA-...-10-...) | length 325 mm | height 75 mm | single length | with screw mounting | galvanised sheet steel | with damper | with rubber lip seal | without box insulation | standard height of box | standard width of box | standard spigot diameter | lateral spigot

ORDER DETAILS

01 - Type

AK = Plenum box, rectangular design

02 - Air diffuser

34 = For ventilation grille type PA-...-(except for PA-...-10-...)

35 = For ventilation grille type PA-...-10

03 - Length

00225 = Grille length 225 mm (only PA-...-10-...)

00325 = Grille length 325 mm

00425 = Grille length 425 mm

00525 = Grille length 525 mm

00625 = Grille length 625 mm

00825 = Grille length 825 mm

01025 = Grille length 1025 mm

01225 = Grille length 1225 mm

xxxxx = Length in mm for band design, > 1225 mm (always with 5 digits)

04 - Height

075 = Grille height 75 mm

125 = Grille height 125 mm

225 = Grille height 225 mm

325 = Grille height 325 mm

xxx = Grille height 825 mm

05 - Single / band design

N = Single length (standard)

B = Band design (module length max. 1225 mm)

06 - Fastening

SM = Screw mounting (standard, screws must be provided on site)

VM = Concealed mounting

VS = Concealed screw mounting (standard for PA-...-10-...)

07 - Material

SV = Galvanised sheet steel (standard)

08 - Damper

DK0 = Without damper (standard)

DK1 = with damper

09 - Rubber lip seal

GD0 = Without rubber lip seal (standard)

GD1 = With rubber lip seal

10 - Insulation

I0 = Without insulation (standard)

Ii = With box insulation inside

Ia = With box insulation outside

11 - Height of plenum box

KHS = Height of plenum box standard

xxx = Height of box in mm (minimum height = spigot diameter + 72 mm, always with 3 digits)

12 - Width of box

KBS = Standard width of box

xxx = width of box in mm (minimum width = spigot diameter + 30 mm, always with 3 digits)

13 - Spigot diameter

SDS = Standard spigot diameter

xxx = Spigot diameter in mm (always with 3 digits)

14 - Spigot position

S0 = Spigot from above

S1 = Lateral spigot on the box (standard)

S4 = Spigot front side (not possible with band design)

Ventilation Grille PA

Order code corner angle

01	02	03	04	05	06	07
Type	Blade profile	Blades	Blade spacing	Height	Paint	Mounting
Example						
EWPA	-Z	-01	-08	-075	-ELOX	-SM

Sample

EWPA-Z-01-08-075-ELOX-SM

Corner angle for ventilation grille type PA | blade profile Z, lightweight model, diagonal throw | for ventilation grille band PA-...-01/2a/2b/2c-... | blade spacing 8 mm | height 75 mm | natural colour anodised | screw mounting

ORDER DETAILS

01 - Type

EWPA= Corner angle for ventilation grille type PA

02 - Blade profile

Z = Blade profile, lightweight model, diagonal throw

G = Blade profile, compact model, straight throw

S = Blade profile, compact model, diagonal throw

03 - Blades

01 = For ventilation grille band PA-...-01/2a/2b/2c-...

03 = For ventilation grille band PA-...-03/05/06/07-...

10 = For ventilation grille band PA-...-10-...

04 - Blade spacing

08 = Blade spacing 8 mm

13 = Blade spacing 13 mm (standard)

05 - Height

075 = 75 mm

125 = 125 mm

225 = 225 mm

325 = 325 mm

xxx = Height can be freely selected in mm (always with 3 digits)

06 - Paint

ELOX = Natural colour anodised aluminium (standard)

9010 = Painted to RAL colour 9010 (white)

xxxx = RAL colour can be freely selected

07 - Mounting

SM = Screw mounting

KB = Clamp fastening

VM = Concealed mounting

Ventilation Grille PA

Specification texts

Supply air and return air grilles for wall and ceiling mounting and installation in ventilation ducts, consisting of front frame and blades made of extruded aluminium profiles anodised in natural colour (E6/EV1) or specially anodised or painted at an extra charge. With front-side horizontal fixed blade profiles, PA-Z, lightweight model, diagonal throw. with blade spacing 13 mm (non-ball-impact-resistant). Fastened with clamp fastening (-KB)

Product: SCHAKO type **PA-Z-01-13-...-N-...-KB**

Dimensions:

Length _____ mm

Height _____ mm

Blade profile:

- PA-G-..., compact model, straight throw.
- PA-S-..., compact model, diagonal throw.
- additionally with vertical, individually adjustable droplet-forming blades
Product: SCHAKO type **PA-...-2a**
- With hit-and-miss damper for air volume regulation, made of electrolytically galvanised sheet steel.
Product: SCHAKO type **PA-...-2b**
- additionally with individually adjustable vertical droplet-forming blades and hit-and-miss damper, for air volume regulation, made of electrolytically galvanised sheet steel.
Product: SCHAKO type **PA-...-2c**

Blade spacing

- 8 mm (-08)
 - non-ball-impact-resistant (standard) with concealed mounting (-VM)
 - ball-impact-resistant according to DIN 18032 Part 3 only with screw mounting (-SM)
- as band (-B):
 - 2-part (BL ≤ 2025mm)
 - multi-part (BL > 2025mm)
- with concealed mounting (-VM) (only available in connection with installation frame ER1/ER2 or plenum box)
- with screw mounting (-SM)
- With concealed screw mounting (-VS)

Accessories:

- with plenum box (-AK-34-...), made of galvanised sheet steel (only possible without hit-and-miss damper) (for PA-...-01 / PA-...-2a only)
- With connection spigot:
 - lateral (-S1, standard)
 - from above (-S0)
 - front side (-S4)
- with damper (-DK1, for -S1) in plenum box, adjustable, for simple air volume regulation
- With rubber lip seal (-GD1) made of special rubber, at the connection spigot
- with thermal insulation
 - internal (-li)
 - external (-la)
- With installation frame without wall anchors (-ER1) / installation frame, with wall anchors (-ER2)
 - 1-part
 - 2-part (BL ≤ 2025mm)
 - multi-part (BL > 2025mm)
- Corner angle 90° (-EW-...)

Ventilation Grille PA

Supply air and return air grilles for wall and ceiling mounting and installation in ventilation ducts, consisting of a narrow front frame and blades made of extruded aluminium profiles anodised in natural colour (E6/EV1) or specially anodised or painted at an extra charge. With front-side horizontal fixed profiled blades, PA-Z, diagonal throw. With blade spacing 13 mm (non-ball-impact-resistant, non-walk-on). Fastened with concealed screw mounting (VS).

Product: SCHAKO type **PA-Z-10-13-...-N-...-VS**

Dimensions:

Length _____ mm

Height _____ mm

Blade profile:

- PA-G-..., compact model, straight throw.
- PA-S-..., compact model, diagonal throw.

Blade spacing:

- 8 mm (-08) (non-ball-resistant according to DIN 18032 Part 3)
- as band (-B):
 - 2-part (BL ≤ 2025mm)
 - multi-part (BL > 2025mm)

Accessories:

- with plenum box (-AK-35), made of galvanised sheet steel (only for PA-...-10)
 - With connection spigot:
 - lateral (-S1, standard)
 - from above (-S0)
 - front side (-S4)
 - with damper (DK1 for -S1) in plenum box, adjustable, for simple air volume regulation
 - With rubber lip seal (-GD1) made of special rubber, at the connection spigot
 - with thermal insulation
 - internal (-li)
 - external (-la)
- Corner angle 90° (-EW-...-10-...)

Supply and return air grilles, especially for floor installation, consisting of front frame and blades made of extruded aluminium profiles anodised in natural colour (E6/EV1) or specially anodised or painted at an extra charge, with removable blade insert made of horizontal fixed profiled blades PA-Z, lightweight model, diagonal throw. With blade spacing 13 mm (non-ball-impact-resistant, non-walk-on). Fastened with concealed mounting (-VM). The grilles are also suitable for installation in walls.

Product: SCHAKO type **PA-Z-03-13-...-N-...-VM**

Dimensions:

Length _____ mm

Height _____ mm

Blade profile:

- PA-G-..., compact model, straight throw.
- PA-S-..., compact model, diagonal throw.

- Additionally with individually adjustable vertical droplet-forming blades.

Product: SCHAKO type **PA-...-05-...**

- Additionally with individually adjustable vertical droplet-forming blades and hit-and-miss damper, for air volume regulation, made of electrolytically galvanised sheet steel.

Product: SCHAKO type **PA-...-06-...**

- With hit-and-miss damper for air volume regulation, made of electrolytically galvanised sheet steel.

Product: SCHAKO type **PA-...-07-...**

Blade spacing:

- 8 mm (-08) (walk-on/ball-impact-resistant according to DIN 18032 Part 3), with concealed mounting (-VM) only
- as band (-B):
 - 2-part (BL ≤ 2025 mm)
 - multi-part (BL > 2025 mm)

Accessories:

- Corner angle 90° (-EW-...-03-...)