Technical documentation

IB-Q

Ventilation grille

Contents

SCHAKO | Ferdinand Schad KG
Steigstrasse 25-27
D-78600 Kolbingen

Phone +49 (0) 7463-980-0
Fax +49 (0) 7463-980-200
schako.com | info@schako.de

FUNCTION AND USE

Ventilation grille type IB-Q-... for supply and return air, for **installation in ducts and plenum boxes**, with **horizontal or vertical, pivoting, individually adjustable air deflection blades on the front side**. For air volume regulation with hit-and-miss damper made of electrolytically galvanised sheet steel.
Frame and blades made of electrolytically galvanised sheet steel
(-SV-0000) or made of sheet steel painted to RAL 9010 (white) (-SB-9010, standard) or painted to a RAL colour of your choice (-SB-xxxx).
As standard, screw mounting is used for fastening the ventilation grille. Concealed mounting (-VM) only possible in combination with an installation frame or a plenum box. Clamp mounting (-KB) is only possible without plenum box or installation frame.
At an extra charge, a plenum box (-AK-31) with or without inserted damper (for an easy air volume regulation) can be mounted.

MODELS

IB-Q-...	for duct and plenum box installation.
IB-Q-01-...	horizontal pivoting air deflection blades on the front side.
IB-Q-02-...	same as IB-Q-01-..., additionally with vertical air deflection blades.
IB-Q-08-...	same as IB-Q-01-..., additionally with hit-and-miss damper.
IB-Q-8c-...	same as IB-Q-01-..., additionally with vertical pivoting air deflection blades and hit-and-miss damper.
IB-Q-10-...	pivoting vertical air deflection blades on the front side.
IB-Q-11-...	same as IB-Q-10-..., additionally with horizontal, pivoting air deflection blades.
IB-Q-15-...	same as IB-Q-10-..., additionally with hit-and-miss damper.
IB-Q-16-...	same as IB-Q-10-..., additionally with horizontal, pivoting air deflection blades and hit-and-miss damper.
IB-Q-...-N-...	single design
IB-Q-...-B-...	band design (only possible for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16, for a grille length BL > 1225 mm, available lengths according to SCHAKO standard for band design)

Air throw pattern:

...-L000-...	blade position straight (standard)
...-L044-...	blade position 44 diverging
...-L084-...	blade position 84 diverging
...-L110-...	blade position 110° diverging (only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)
...-L140-...	blade position 140° diverging (only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)
...-LGEG-...	blade position opposite to one another

MOUNTING

-- Screw mounting (-SM, standard)
  - screws must be provided on site.
  - band design with screw mounting only.
-- Concealed mounting (-VM)
  - only possible in connection with an installation frame or a plenum box.
-- Clamp mounting (-KB)
  - only possible without plenum box or installation frame.

PROCESSING

Frame and blades

-- Galvanised sheet steel (-SV-0000).
-- Sheet steel (-SB):
  - Painted to RAL colour 9010 (white) (-9010, standard).
  - Painted to a different RAL colour, freely selectable (-xxxx, at an extra charge).

Hit-and-miss damper

-- Electrolytically galvanised sheet steel (only IB-Q-08 / IB-Q-8c / IB-Q-15 / IB-Q-16).

ACCESSORIES

Plenum box (-AK-31)

Rectangular design, made of galvanised sheet steel (-SV, standard), housing with round connection spigot and mounting brackets.

-- Length:
  - 325 mm (-00325)
  - 425 mm (-00425)
  - 525 mm (-00525)
  - 625 mm (-00625)
  - 825 mm (-00825)
  - 1025 mm (-01025)
  - 1225 mm (-01225)
  - Length in mm, freely selectable, for band design (for a grille length BL > 1225 mm: 2-part for a length of band BL ≤ 2425 mm, multi-part for a length of band BL > 2425 mm) (-xxxxx, always with 5 digits).
-- Height:
  - 75 mm (-075)
  - 125 mm (-125)
  - 175 mm (-175)
  - 225 mm (-225)
  - 325 mm (-325)
-- Single / band design:
  - Single design (-N) (standard)
  - Band design (-B) (only possible for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16, for a grille length BL > 1225 mm, available lengths according to SCHAKO standard for band design).
-- Mounting:
  - screw mounting (-SM) (standard, screws must be provided on site, band design with screw mounting only)
  - concealed mounting (-VM) (only possible in combination with a plenum box or an installation frame)
-- Damper:
  - without damper (-DK0) (standard).
  - with damper (-DK1), made of galvanised sheet steel, in the plenum box housing, adjustable, for simple air volume regulation.
  - with damper (-DK2), same as DK1, but with cable-operated adjustment, only with spigot position from above (-S0) and front side spigot position (-S4).
-- Rubber lip seal:
  - without rubber lip seal (-GD0) (standard).
  - with rubber lip seal (-GD1) made of special rubber, at the connection spigot.
-- Insulation:
  - without insulation (-I0) (standard).
  - with internal insulation (-Ii), thermal insulation inside the plenum box.
  - with external insulation (-Ia), thermal insulation at the outside of the plenum box.
-- Height of plenum box:
  - Standard height of plenum box (-KHS).
  - Height of plenum box in mm, freely selectable (-xxx) (minimum height [KHS] with spigot position S1+S2 = spigot diameter +87 mm, but at least 200 mm) (always with 3 digits).
-- Spigot diameter:
  - Standard spigot diameter (-SDS).
  - Spigot diameter in mm, freely selectable (-xxx, always with 3 digits). (with spigot positions -S0 and -S4, if the spigot diameter is increased, only the offset plenum box shape is available)
-- Spigot position:
  - Spigot from above (-S0).
  - Lateral spigot on the plenum box (-S1) (standard).
  - Front side spigot (-S4, not possible for band design).

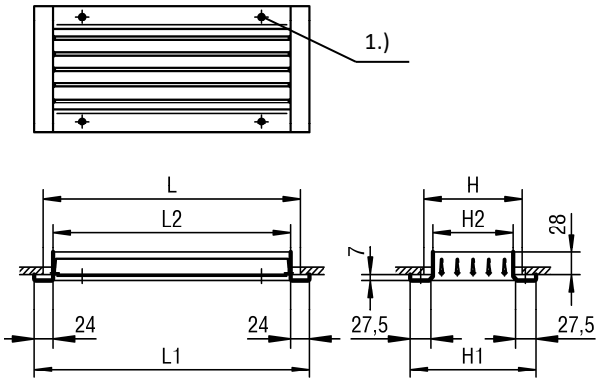
Installation frame (-ER0 / -ER1 / -ER2)

-- without installation frame (-ER0).
-- with installation frame made of galvanised sheet steel (only possible in the absence of a plenum box):
  - without wall anchors (-ER1).
  - with wall anchors (-ER2).

DIMENSIONS

SINGLE DESIGN (-N)

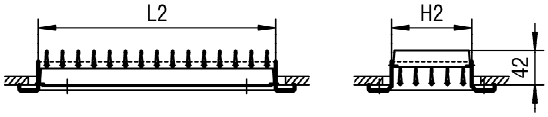
IB-Q-01-…



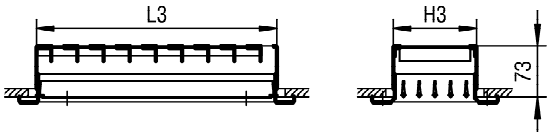
IB-Q-01 / IB-Q-02 / IB-Q-08 / IB-Q-8c
with intermediate web for lengths from 825 (see page 10)

All models consist of basic type IB-Q-01-…:

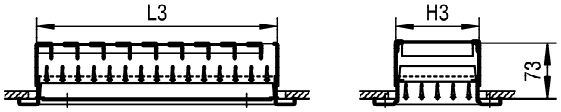
IB-Q-02-…



IB-Q-08-…



IB-Q-8c-…



Available sizes IB-Q-01 / IB-Q-02 / IB-Q-08 / IB-Q-8c

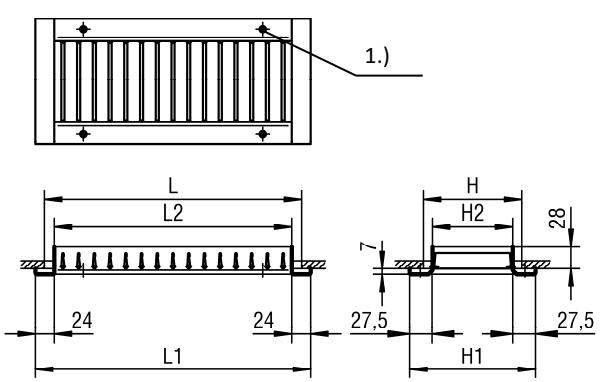
L	L1	L2	L3
325	350	306	310
425	450	406	410
525	550	506	510
625	650	606	610
825	850	806	810
1025	1050	1006	1010
1225	1250	1206	1210

H	H1	H2	H3
75	110	57	60
125	160	107	110
175	210	157	160
225	260	207	210
325	360	307	310

All combined lengths and heights available!
Other sizes available on request.

1.) Indentation for slotted shallow-raised countersunk-head tapping screw DIN ISO 7051 pitch 3.9 (on site).

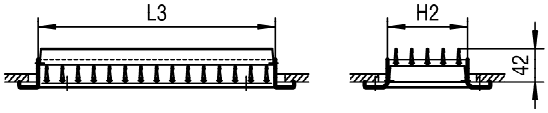
IB-Q-10-…



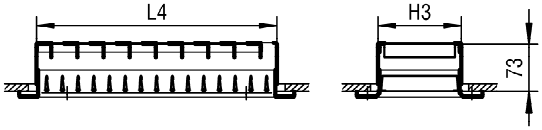
IB-Q-11 / IB-Q-16
with intermediate web for lengths from 825 (see page 10)

All models consist of basic type IB-Q-10-…:

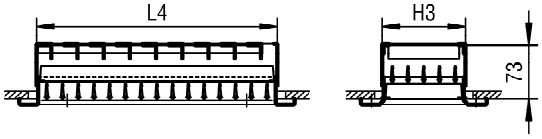
IB-Q-11-…



IB-Q-15-…



IB-Q-16-…



Available sizes IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16

L	L1	L2	L3	L4
325	350	306	309	310
425	450	406	409	410
525	550	506	509	510
625	650	606	609	610
825	850	806	809	810
1025	1050	1006	1009	1010
1225	1250	1206	1209	1210

H	H1	H2	H3
75	110	56	60
125	160	106	110
175	210	156	160
225	260	206	210
325	360	306	310

All combined lengths and heights available!
Other sizes available on request.

1.) Indentation for slotted shallow-raised countersunk-head tapping screw DIN ISO 7051 pitch 3.9 (on site).

BAND DESIGN (-B)

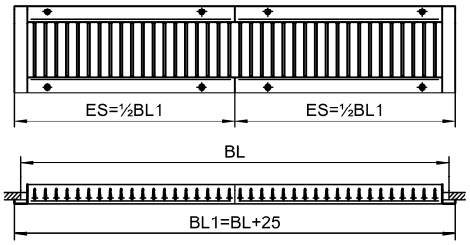
Band design is only possible with screw mounting (-SM).

Available lengths according to SCHAKO standard:
In the band design of the ventilation grille IB-Q, the total length BL is assembled from two end pieces in the 2-part model and from sections (TS) of 1020 mm and end pieces (ES) in the multi-part model.

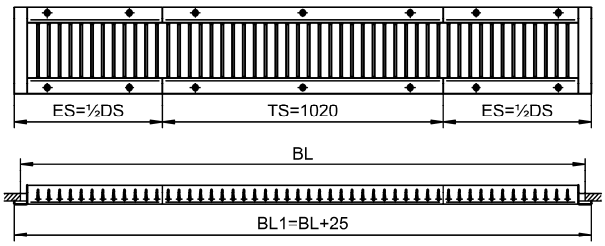
Without plenum box

only for: IB-Q-10-…-B-…-SM / IB-Q-11-…-B-…-SM / IB-Q-15-…-B-…-SM / IB-Q-16-…-B-…-SM

2-part for a length of band BL > 1225 mm to ≤ 2425 mm



multi-part for a length of band BL > 2425 mm

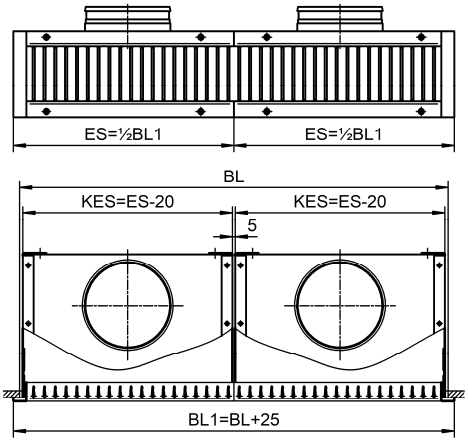


Max. length end piece (ES):
ES_{max} = 1225 mm

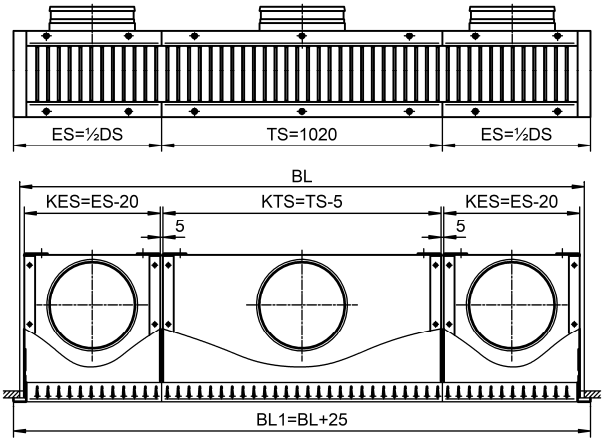
with plenum box

only for: IB-Q-10-…-B-…-SM / IB-Q-11-…-B-…-SM / IB-Q-15-…-B-…-SM / IB-Q-16-…-B-…-SM

2-part for a length of band BL > 1225 mm to ≤ 2425 mm



multi-part for a length of band BL > 2425 mm



Max. length plenum box end piece (KES):
KES_{max} = 1205 mm

Minimum distance spigot in the plenum box
with lateral spigot (-S1): **with spigot from above (-S0):**

As standard, the plenum box end pieces (KES) have the same dimensions KHS / KB2 / øD as the plenum box section (KTS) (for dimensions see the table of available sizes, page 7, marking *).

ES = end piece
KES = plenum box end piece (KES = ES-20)
TS = section
KTS = plenum box section
DS = difference piece (DS = BL1 - [n x TS])
n = number of sections
BL = band length

For spigot position / plenum box shape, see pages 6+7
For mounting options, see page 10

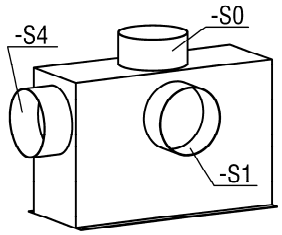
DIMENSIONS OF ACCESSORIES

Plenum box (-AK-31)

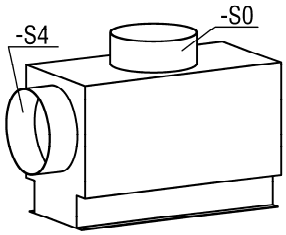
SINGLE DESIGN (-N)

Spigot position

Straight plenum box:



Offset plenum box:

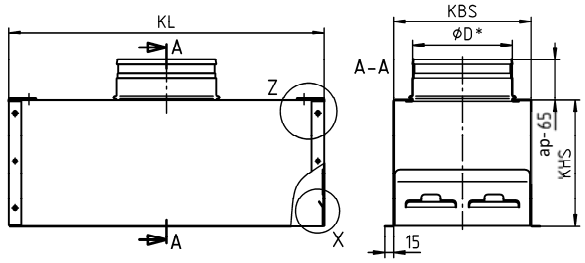


- Lateral spigot on the plenum box (-S1, standard)
- Spigot from above (-S0)
- Front side spigot (-S4, not possible for band design)

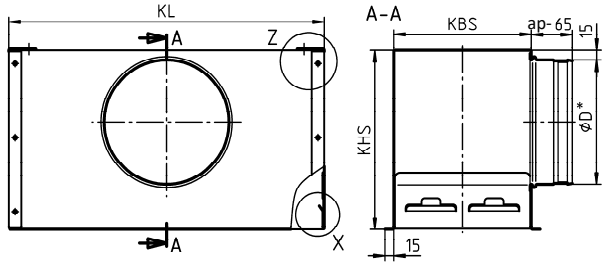
Spigot diameter for spigot position “Spigot front side (-S4)” is **identical** with “Lateral spigot on the box (-S1)”.
Spigot diameter for spigot position “Spigot from above (-S0)” is **in part not identical** with “Lateral spigot on the box (-S1)”.
For the table of available sizes, see page 7.

Straight plenum box:

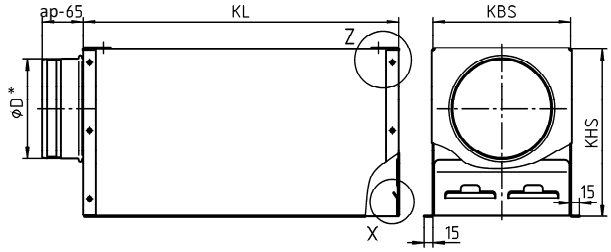
with spigot from above (-S0)



with lateral spigot on the plenum box (-S1)



with spigot front side (-S4)



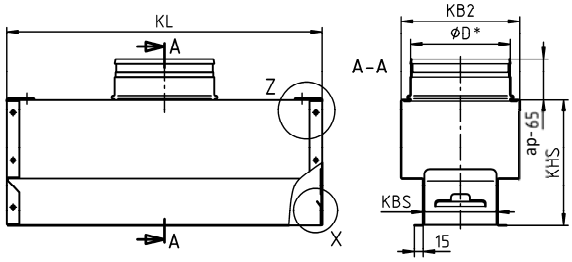
* external

For plenum box in band design, see page 5.

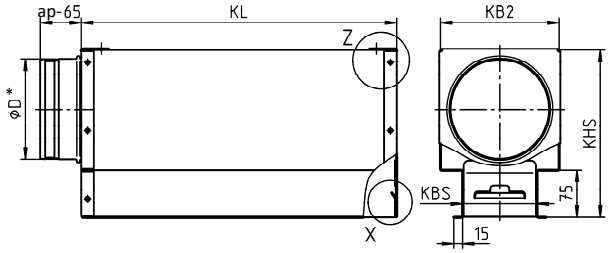
Offset plenum box:

If KBS is < (øD+30), an offset plenum box will be manufactured.
For model -S0: KB2 = øD+30
Minimum difference between KBS and KB2 = 40 mm.

with spigot from above (-S0)



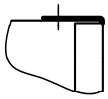
with lateral spigot on the plenum box (-S4)



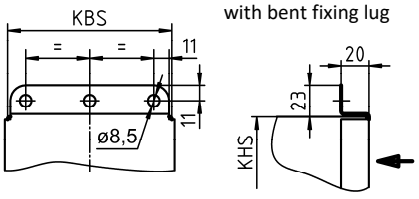
* external

Plenum box mounting:

Detail Z
as-delivered condition with fitted fixing lug

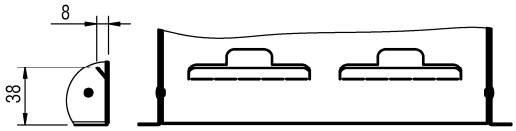


Detail Z
with bent fixing lug



Concealed mounting:

Detail X



Concealed plates can be bent outwards, if necessary.

Minimum height KHS with spigot position -S1 / -S4:
KHS $_{min.}$ = øD +87 mm, but at least 200 mm

Minimum width KB2 with spigot position -S0 / -S4:
KB2 $_{min.}$ = øD +30 mm
Minimum difference between KBS and KB2 = 40 mm.

The dimension KBS cannot be changed.
With spigot positions -S0 and -S4, if the spigot diameter is increased, only the offset plenum box shape is available.

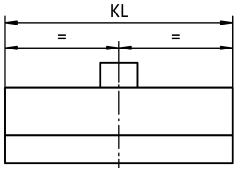
Available sizes for AK-31

H	KBS	L	KL	Spigot position -S1 (standard)				Spigot position -S0				Spigot position -S4			
				KHS	KB2	n x øD	Plenum box shape	KHS	KB2	n x øD	Plenum box shape	KHS	KB2	n x øD	Plenum box shape
75	68	325	320	220	--	1x ø123		200*	128*	1x ø98		220	153	1x ø123	
		425	420												
		525	520							2x ø98					
		625	620												
		825	820	265*	--	1x ø158*				4x ø98*		265	188	1x ø158	
		1025	1020												
		1225	1220												
125	118	325	320	265	--	1x ø158		200*	158*	1x ø98		265	188	1x ø158	
		425	420												
		525	520							2x ø98					
		625	620												
		825	820	285*	--	1x ø198*				4x ø98*		285	228	1x ø198	
		1025	1020												
		1225	1220												
175	168	325	320	285*	--	1x ø198*		200*	228*	1x ø198*		285	228	1x ø198	
		425	420												
		525	520												
		625	620												
		825	820												
		1025	1020												
		1225	1220												
225	218	325	320	285	--	1x ø198		200*	258	1x ø198		285	258	1x ø198	
		425	420												
		525	520												
		625	620	335*	--	1x ø248*			--	2x ø178*		335	278	1x ø248	
		825	820												
		1025	1020												
		1225	1220												
325	318	325	320	335	--	1x ø248		200*	--	1x ø248		335	--	1x ø248	
		425	420												
		525	520												
		625	620	400*	--	1x ø313*			--	2x ø222*		400	358	1x ø313	
		825	820												
		1025	1020												
		1225	1220												

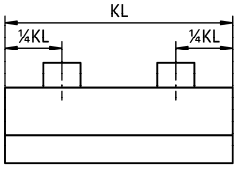
* dimensions for band design / n = number of spigots

Number of spigots:

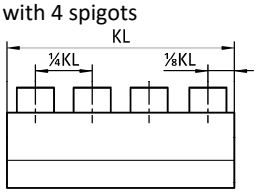
Spigot from above (-S0)
with 1 spigot



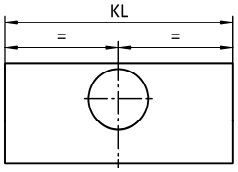
with 2 spigots



with 4 spigots



Lateral spigot (-S1)
(standard)
with 1 spigot

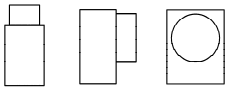


Spigot front side (-S4)
Band design not possible.
with 1 spigot

Plenum box shape

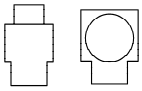
Straight:

-S0 **-S1** **-S4**



Offset:

-S0 **-S4**



Minimum height KHS with spigot position -S1 / -S4:
KHS $_{min.}$ = øD +87 mm, but at least 200 mm

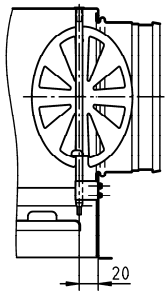
Minimum width KB2 with spigot position -S0 / -S4:
KB2 $_{min.}$ = øD +30 mm
Minimum difference between KBS and KB2 = 40 mm.

The dimension KBS cannot be changed.
With spigot positions -S0 and -S4, if the spigot diameter is increased, only the offset plenum box shape is available.

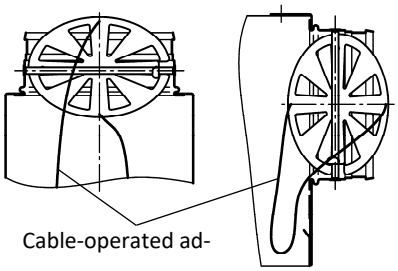
Damper (-DK0 / -DK1 / -DK2), for AK-…

-- without damper (-DK0) (standard).
-- with damper (-DK1) (standard for spigot position -S1).
-- with damper and cable-operated adjustment (-DK2) (standard for spigot position -S0/-S4).

-DK1:
Lateral spigot -S1



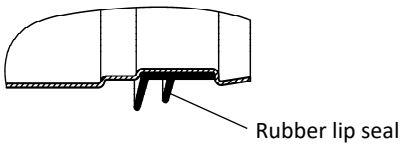
-DK2 (with cable-operated adjustment):
Spigot from above -S0 Spigot front side -S4



Rubber lip seal (-GD0 / -GD1), for AK-…

-- without rubber lip seal (-GD0) (standard).
-- with rubber lip seal (-GD1), made of special rubber.

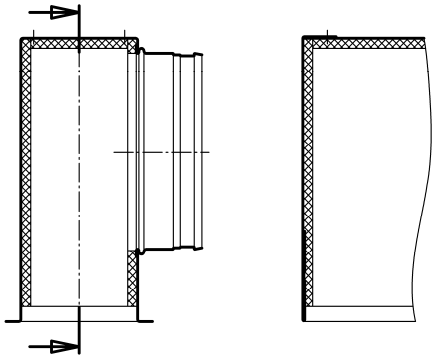
Detail Y



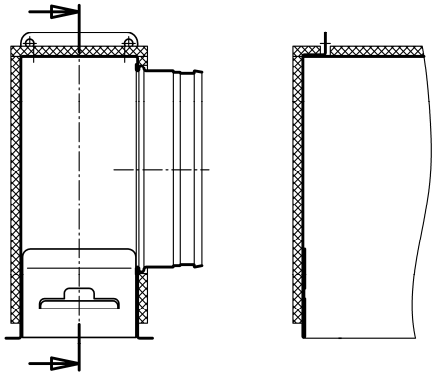
Insulation (-I0 / -Ii / -Ia), for AK-…

-- without insulation (-I0) (standard).
-- with internal insulation (-Ii).
-- with external insulation (-Ia).

Internal insulation (-Ii)



External insulation (-Ia)

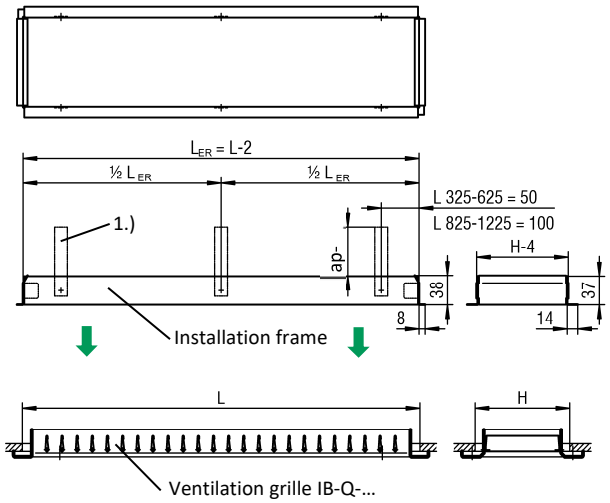


Installation frame (-ER0 / -ER1 / -ER2)

-- without installation frame (-ER0) (standard).
-- with installation frame without wall anchors (-ER1).
-- with installation frame with wall anchors (-ER2).

The installation frame is only possible in the absence of a plenum box.

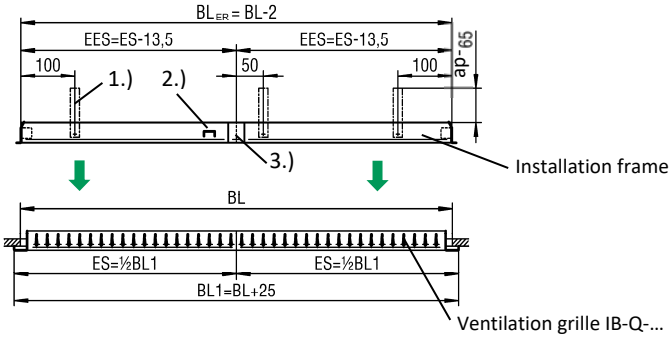
SINGLE DESIGN (-N)



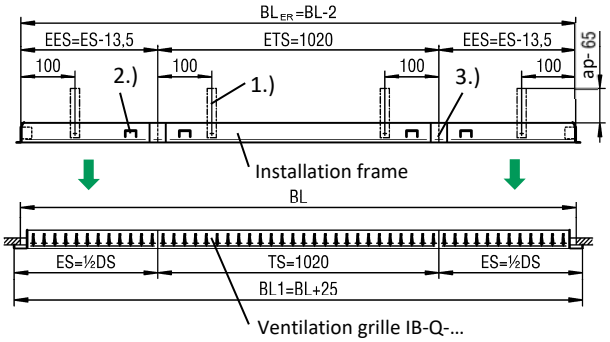
Length L ≤ 825 mm = 4 wall anchors
Length L > 825 mm = 6 wall anchors
Installation frame E1 made of electrolytic galvanised sheet steel.
The installation frame is only delivered with wall anchors on special request (-ER2, at an extra charge).

BAND DESIGN (-B)

2-part for a length of band BL > 1225 mm to ≤ 2425 mm



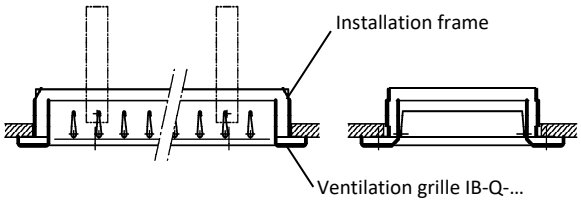
multi-part for a band length BL > 2425 mm



Max. length installation frame end piece (EES / ES):
EES_{max} = 1211.5 mm / ES_{max} = 1225 mm (see page 5)

Mounting frames for grille bands are supplied with plug-in connections. Assembly webs are additionally attached, they can easily be removed with a turn, once the grille is walled in. All mounting frames are supplied without wall anchors as standard. Wall anchors available at extra cost.

Installation detail:



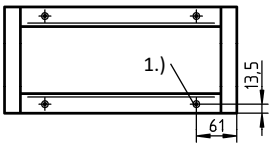
L = length
BL = band length
L_{ER} = installation frame length (L_{ER} = L-2)
BL_{ER} = installation frame band length (BL_{ER} = BL-2)
EES = installation frame end piece (EES = ES - 13.5)
ETS = installation frame section
ES = end piece
TS = section
DS = difference piece (DS = BL_{ER} - [n x TS])
n = number of sections
1.) Wall anchor
2.) Assembly rail
3.) Plug-in connection

MOUNTING OPTIONS

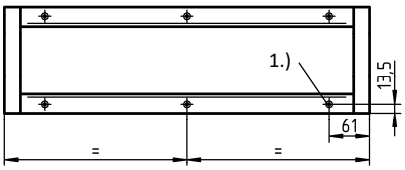
Screw mounting (-SM, standard)

SINGLE DESIGN (-N)

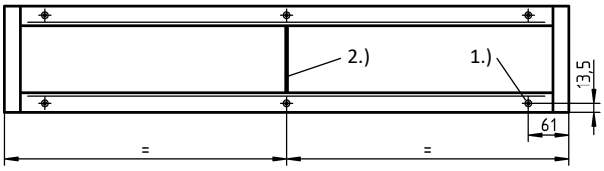
L=325-525



L= 625

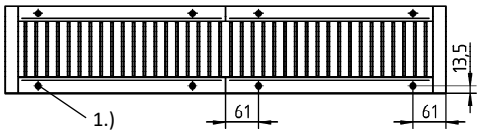


L=825-1225

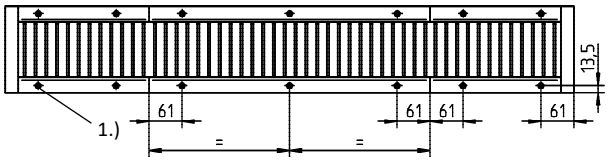


BAND DESIGN (-B)

2-part for a length of band BL > 1225 mm to ≤ 2425 mm



multi-part for a band length BL > 2425 mm

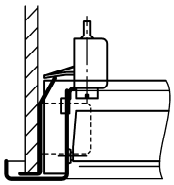


1.) With 4 or 6 indentations (from L=625) for slotted shallow-raised countersunk-head tapping screw DIN ISO 7051 pitch 3.9 (on site).
2.) Intermediate rail (only for IB-Q with horizontal blades).

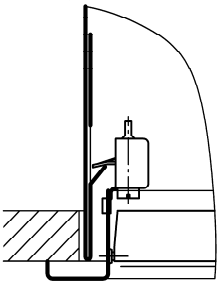
Concealed mounting (-VM)

The IB-Q ventilation grilles are delivered at an extra charge with concealed mounting (-VM). **The concealed mounting is only possible with an installation frame or a plenum box.**

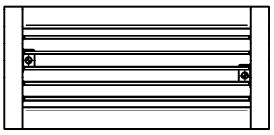
With installation frame



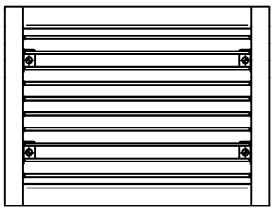
With plenum box



One mounting point:
H = 75 / 125 / 175

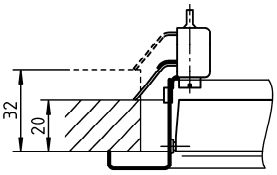


Two mounting points:
H = 225 / 325

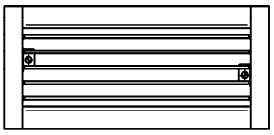


Clamp mounting (-KB)

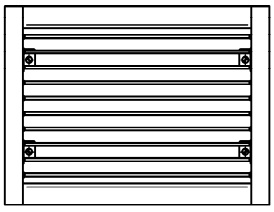
Clamp mounting KB is possible without installation frame or plenum box.



One mounting point:
H = 75 / 125 / 175



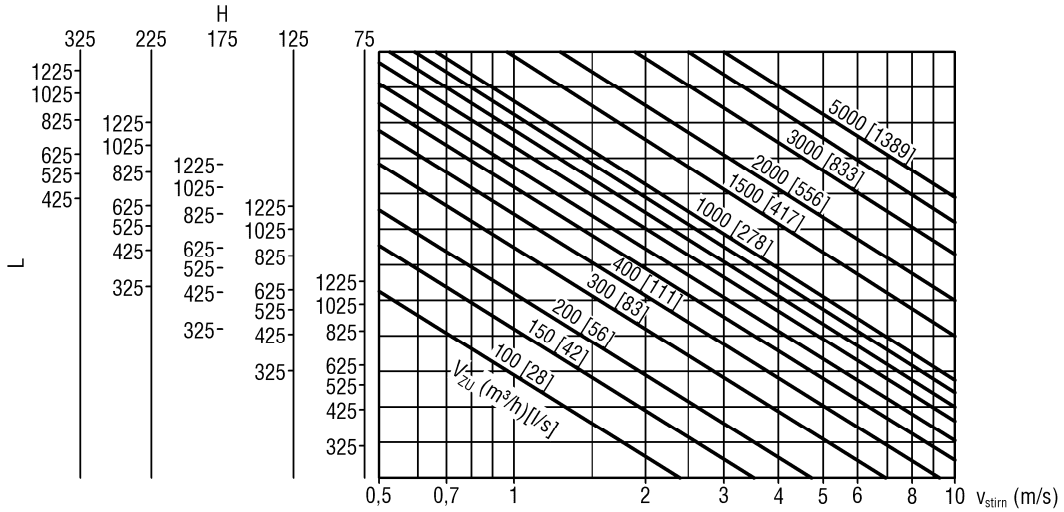
Two mounting points:
H = 225 / 325



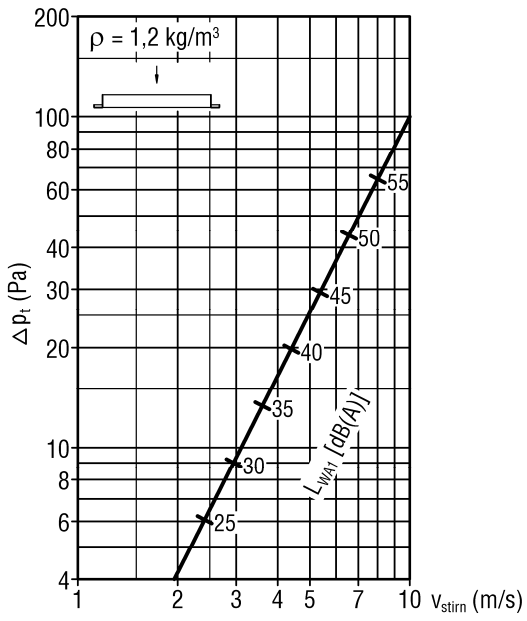
TECHNICAL DATA

Pressure loss and noise level

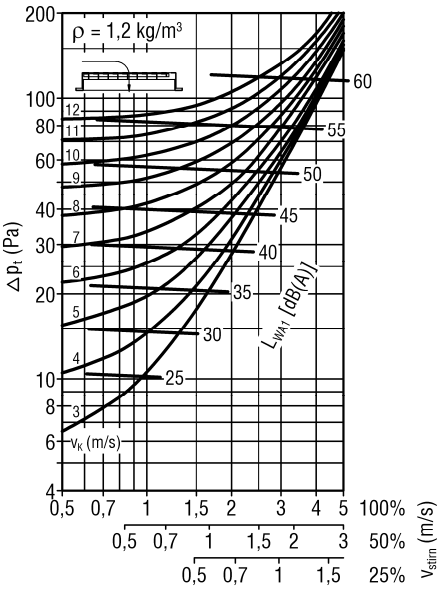
Supply air face velocity



IB-Q-... (supply air)



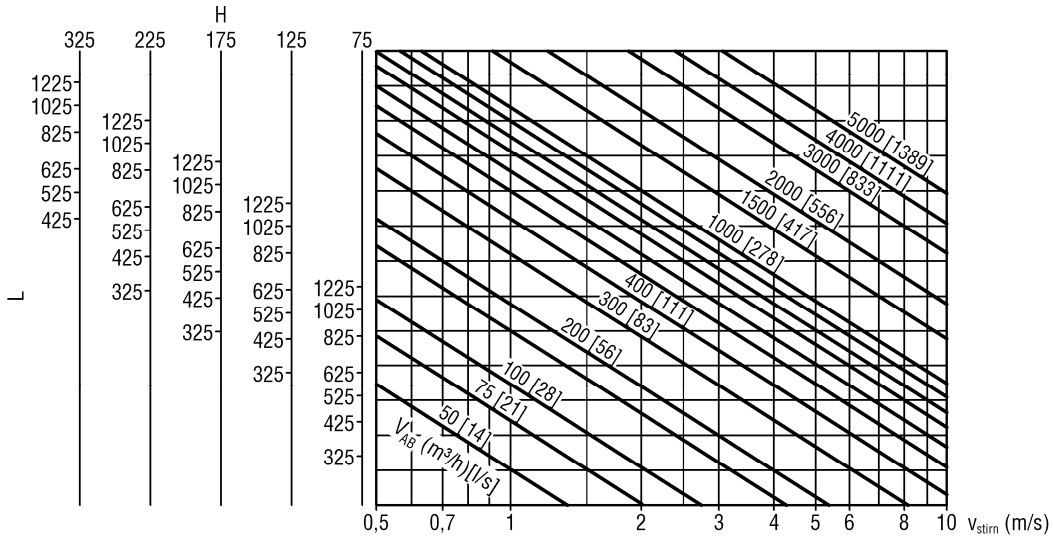
IB-Q-... with hit-and-miss damper (supply air)



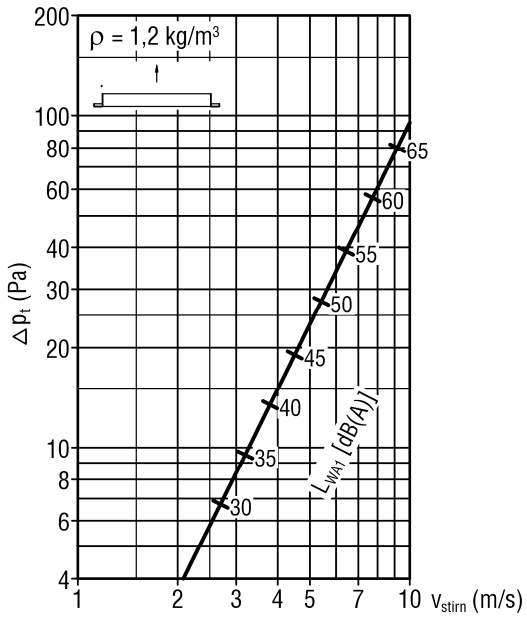
Hit-and-miss damper position OPEN in %

Pressure loss and noise level

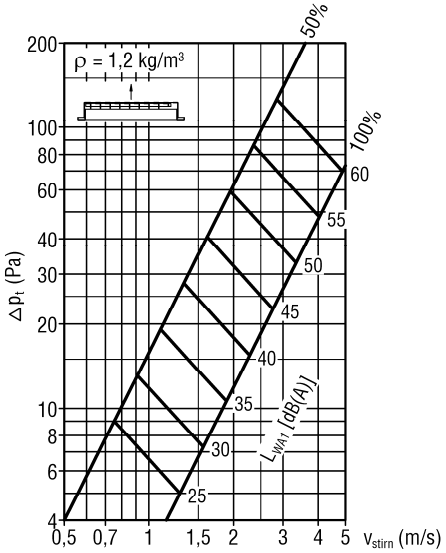
Return air face velocity



IB-Q-... (return air)



IB-Q-... with hit-and-miss damper (return air)



Hit-and-miss damper position OPEN in %

Face area

Supply and return air (m²)

Height H	Length L (mm) 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
175	0.046	0.061	0.076	0.092	0.122	0.152	0.183
225	0.061	0.081	0.101	0.122	0.162	0.202	0.243
325	-	0.121	0.151	0.182	0.242	0.313	0.363

A_{Stirn} (m²)

Supply air correction factor

A_{Stirn} (m²)	0.012	0.025	0.05	0.1	0.16	0.2	0.4
KF (-)	-9	-6	-3	0	+2	+3	+6

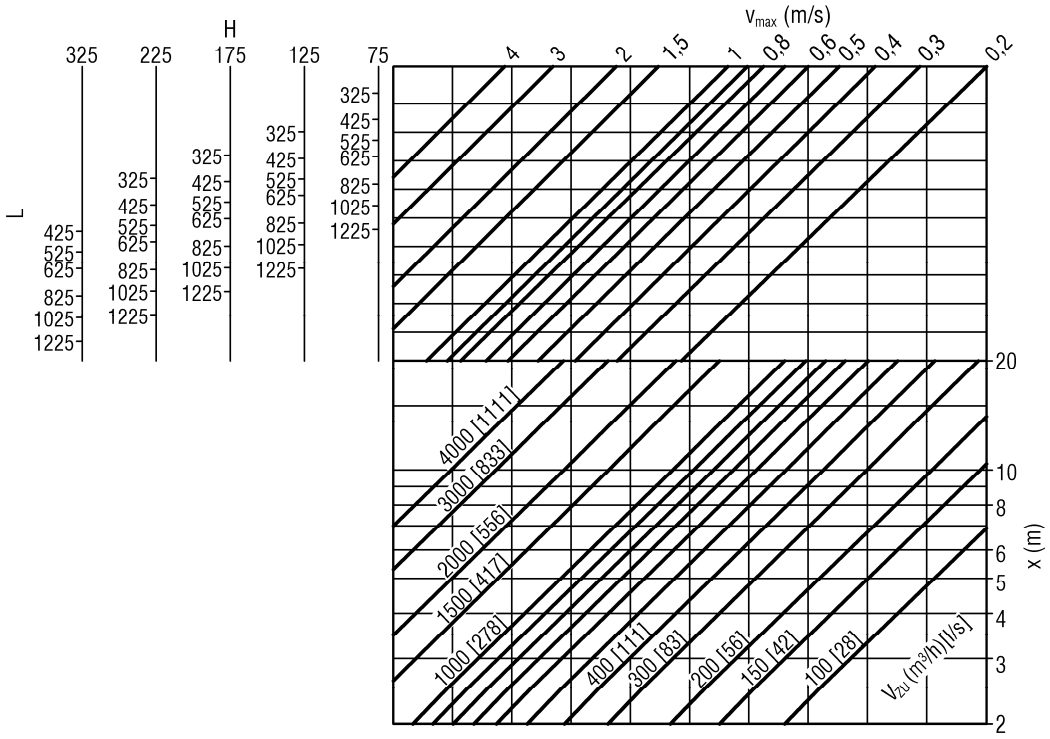
Return air correction factor

A_{Stirn} (m²)	0.01	0.02	0.04	0.08	0.16	0.32	0.4
KF (-)	-9	-6	-3	0	+3	+6	+7

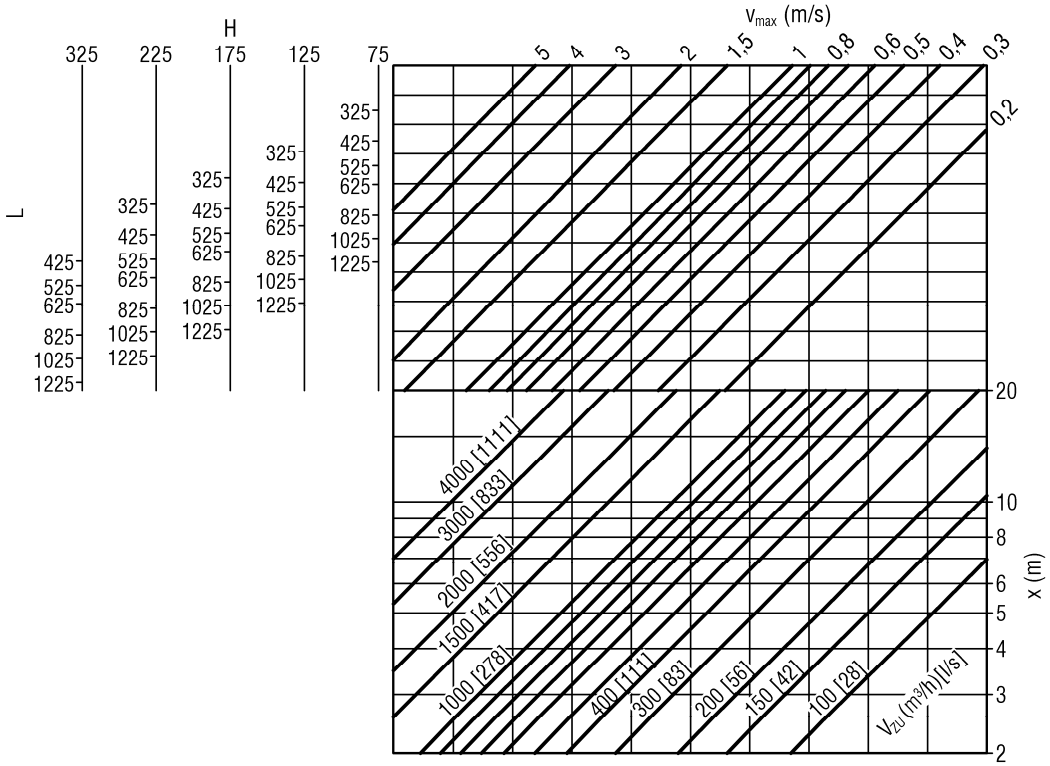
$L_{WA} = L_{WA1} + KF$

Maximum end velocity of jet

Supply air without coanda effect

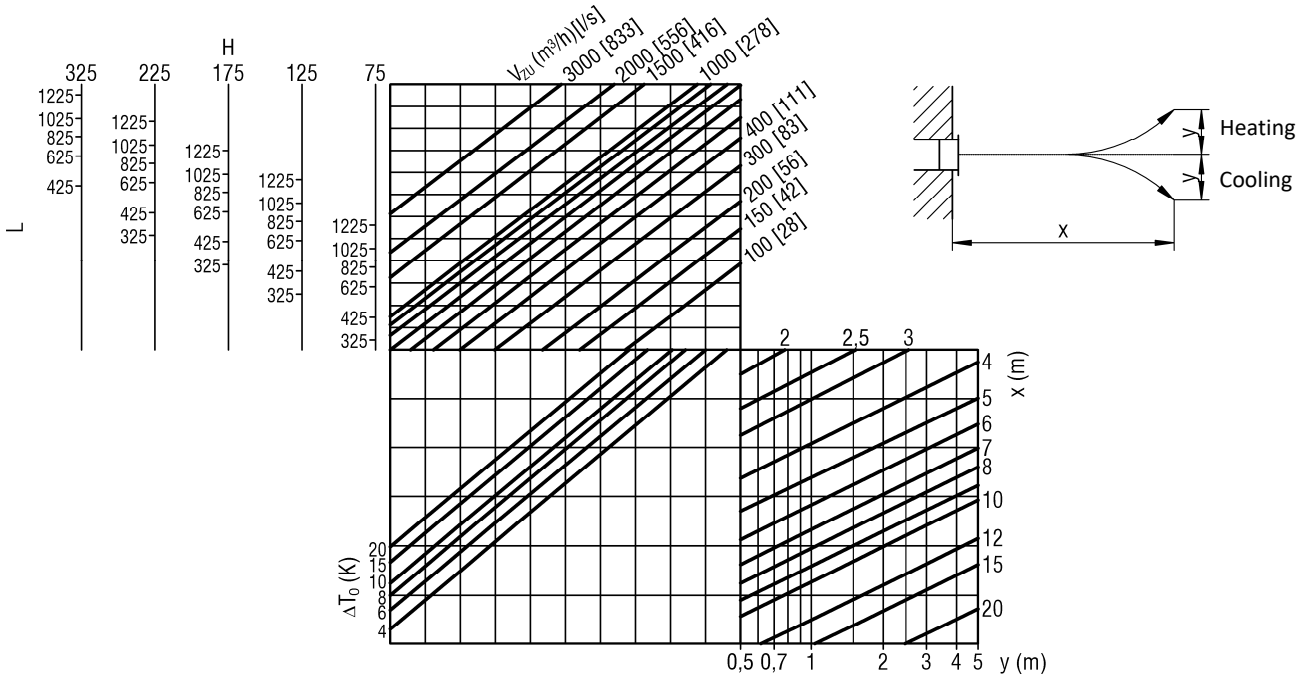


Supply air with coanda effect



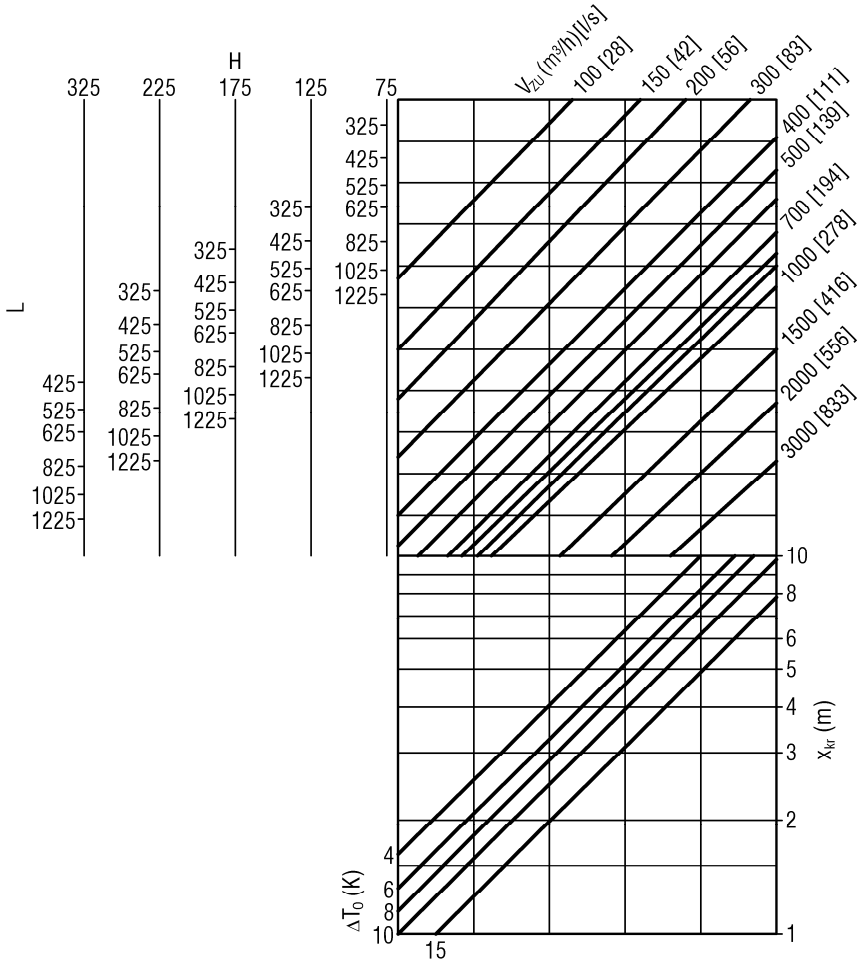
Jet path

Supply air without coanda effect

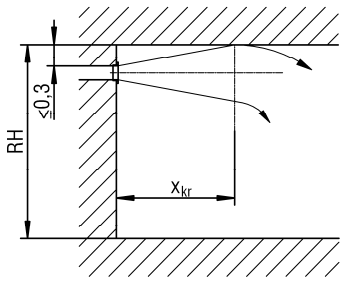


Critical throw

Supply air with coanda effect

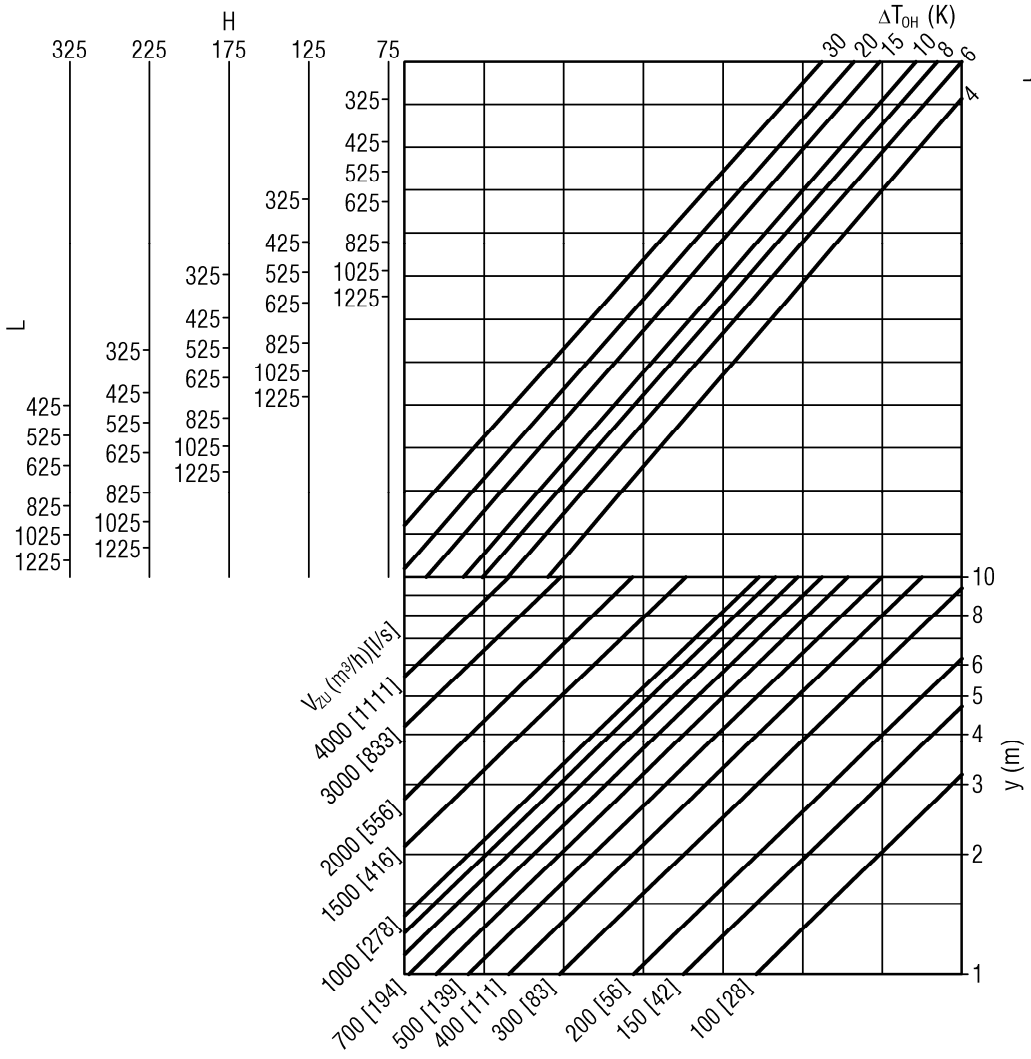


Jet detachment



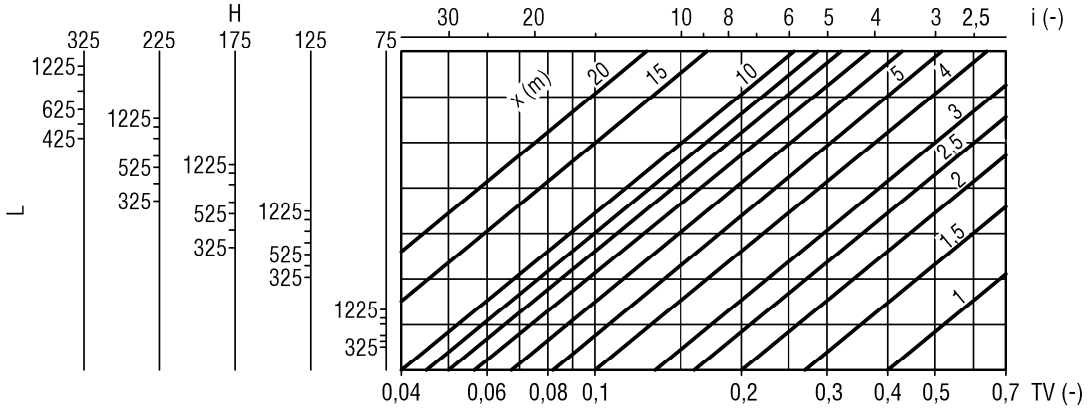
Maximum penetration

Maximum vertical penetration depth (in heating mode)

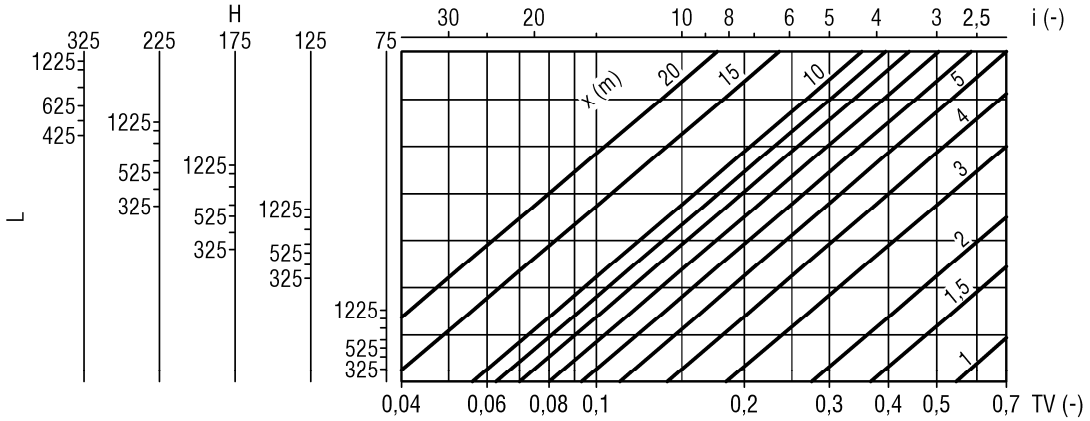


Temperature and induction ratios

Supply air without coanda effect

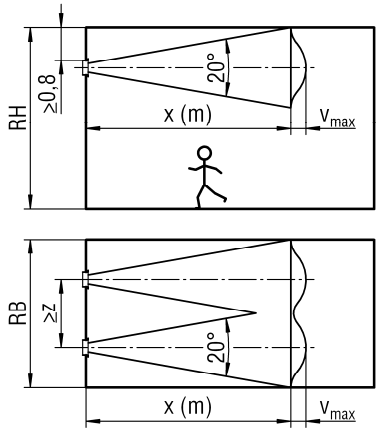


Supply air with coanda effect



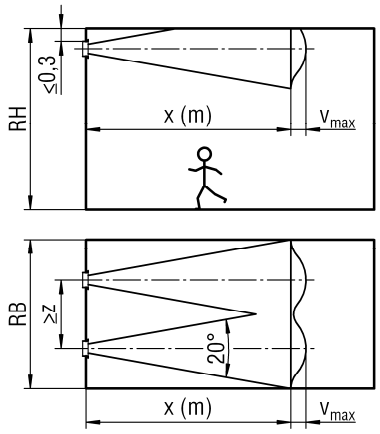
Minimum distances

Supply air without coanda effect



For the diagrams to be correct, the distance z between two grilles must be ≥ x (m) x 0.2.

Supply air with coanda effect

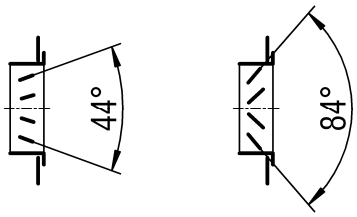


For the diagrams to be correct, the distance z between two grilles must be ≥ x (m) x 0.2.

Correction factor

(for scattered air jet)

with or without coanda effect



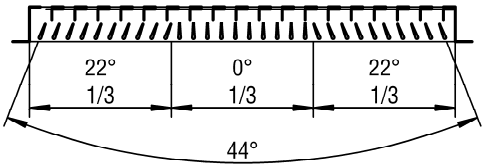
Blade position	44°	84°
End velocity of jet	v_{max} (m/s) × 0.65	v_{max} (m/s) × 0.5
Critical throw x_{kr}	× 0.77	× 0.6
TV = ΔT_x / ΔT_0	× 0.65	× 0.5
Induction ratio	i × 1.3	i × 2
Jet drop - Jet rise	y × 1.3	y × 2
Grille spacing z(m)	x × 0.20	x × 0.25

Blade position

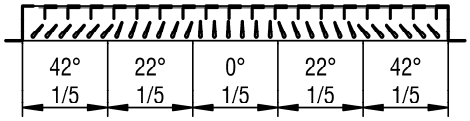
Blade position straight (-L000)

Blade position opposite to one another (-LGEG)

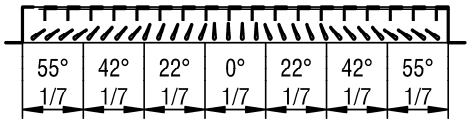
Blade position 44° diverging (-L044)



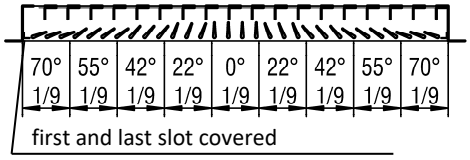
Blade position 84° diverging (-L084)



Blade position 110° diverging (-L110)
(only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)



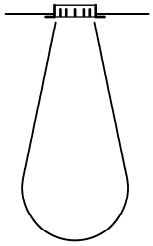
Blade position 140° diverging (-L140)
(only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)



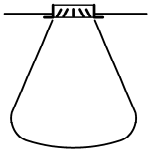
The angle of propagation of the air jet and thus the length of throw can be affected by adjusting the vertical air deflection blades.

Blade position:

straight



diverging



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)	=	max. End velocity of jet
v_K	(m/s)	=	duct velocity
v_{stirn}	(m/s)	=	intake velocity, blower stream velocity, outflow velocity, relative to A_{stirn}
A_{stirn}	(m²)	=	face area
x	(m)	=	horizontal throw
y	(m)	=	vertical throw
x_{kr}	(m)	=	critical throw
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 m²
KF	(-)	=	Correction factor
ΔT_O	(K)	=	Temperature difference between supply air and room temperature ($\Delta T_O = t_{ZU} - t_R$)
ΔT_{OH}	(K)	=	Temperature difference between air supply and ambient temperature in heating mode ($\Delta T_{OH} = t_{ZU} - t_{RH}$)
ΔT_X	(K)	=	Temperature difference at point x
t_{ZU}	(°C)	=	supply air temperature
t_R	(°C)	=	room temperature
i	(-)	=	induction ratio ($i = V_X / V_{ZU}$)
TV	(-)	=	Temperature ratio ($TV = \Delta T_X / \Delta T_O$)
z	(m)	=	minimum clearance between two grilles x (m) × 0.2
RH	(mm)	=	room height
RB	(mm)	=	room width
L	(mm)	=	length
H	(mm)	=	Height

ORDER CODE IB

01	02	03	04	05	06
Type	Model	Blades	Length	Height	Single / band design
Example					
IB	-Q	-01	-00625	-125	-N

07	08	09	10	11
Air throw pattern	Material	Paint	Mounting	Installation frame
-L000	-SB	-9010	-SM	-ER0

All fields must be filled when ordering.

Sample
IB-Q-01-00625-125-N-L000-SB-9010-SM-ER0

Ventilation grille IB | for duct and plenum box installation | horizontal, pivoting air deflection blades on the front side | grille length 625 mm | grille height 125 mm | single design | blade position straight | sheet steel | painted to RAL 9010 (white) | screw mounting | without installation frame

ORDER DETAILS

01 - Type
IB = ventilation grille IB

02 - Model
Q = for duct and plenum box installation

03 – Blades
01 = horizontal pivoting air deflection blades on the front side
02 = same as IB-Q-01, additionally with vertical, pivoting air deflection blades
08 = same as IB-Q-01, additionally with hit-and-miss damper
8c = same as IB-Q-01, additionally with vertical pivoting air deflection blades and hit-and-miss damper
10 = vertical, pivoting air deflection blades on the front side
11 = same as IB-Q-10, additionally with horizontal, pivoting air deflection blades
15 = same as IB-Q-10, additionally with hit-and-miss damper
16 = same as IB-Q-10, additionally with horizontal pivoting air deflection blades and hit-and-miss damper

04 - Length
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 (for a grille length BL > 1225 mm: 2-part for a length of band BL ≤ 2425 mm, multi-part for a length of band > 2425 mm) (always with 5 digits).

05 - Height
075 = grille height 75 mm
125 = grille height 125 mm
175 = grille height 175 mm
225 = grille height 225 mm
325 = grille height 325 mm

06 - Single / band design
N = single design
B = band design (only possible for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16, for a grille length BL > 1225 mm, module length max. 1225 mm, available lengths according to SCHAKO standard for band design)

07 - Air throw pattern
L000 = blade position straight (standard)
L044 = blade position 44° diverging
L084 = blade position 84° diverging
L110 = blade position 110° diverging (only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)
L140 = blade position 140° diverging (only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)
LGEG = blade position opposite to one another

08 - Material
SV = galvanised sheet steel
SB = sheet steel (standard) (only available with paint)

09 – Paint
0000 = without paint (only -SV possible).
9010 = Painted to RAL colour 9010 (white, standard).
xxxx = painted to a different RAL colour, freely selectable (always with 4 digits).

10 - Mounting
SM = screw mounting (standard, with band design only SM possible).
VM = concealed mounting (only possible with a plenum box or an installation frame).
KB = clamp mounting (only possible without plenum box or installation frame).

11 - Installation frame
ER0 = without installation frame (standard)
ER1 = with installation frame without wall anchors
ER2 = with installation frame with wall anchors
Installation frame only possible in the absence of a plenum box.

ORDER CODE AK

01	02	03	04	05	06	07
Type	Air diffuser	Length	Height	Single / band design	Mounting	Material
Example						
AK	-31	-00325	-075	-N	-SM	-SV

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

Sample
AK-31-00325-075-N-SM-SV-DK1-GD1-I0-KHS-SDS-S1

Plenum box, rectangular design I for ventilation grille IB-Q I length 325 mm I height 75 mm I single design I screw mounting I galvanised sheet steel I with damper | with rubber lip seal | without insulation | standard height of plenum box I standard spigot diameter | lateral spigot

ORDER DETAILS

01 - Type
AK = plenum box, rectangular design

02 - Air diffuser
31 = for ventilation grille IB-Q-…

03 - Length
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, freely selectable, for band design (for a grille length BL > 1225 mm: 2-part for a length of band BL ≤ 2425 mm, multi-part for a length of band > 2425 mm) (only possible for IB-Q-10 / IB-Q-11, always with 5 digits)

04 - Height
075 = grille height 75 mm
125 = grille height 125 mm
175 = grille height 175 mm
225 = grille height 225 mm
325 = grille height 325 mm

05 - Single / band design
N = single design (standard)
B = band design (only possible for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16, for a grille length BL > 1225 mm, available lengths according to SCHAKO standard for band design)

06 - Mounting
SM = screw mounting (standard, screws must be provided on site, with band design only SM possible).
VM = concealed mounting.

07 - Material
SV = galvanised sheet steel (standard).

08 - Damper
DK0 = without damper (standard).
DK1 = with damper (standard for spigot position -S1).
DK2 = with damper and cable-operated adjustment (standard for spigot position -S0 / -S4).

09 - Rubber lip seal
GD0 = without rubber lip seal (standard).
GD1 = with rubber lip seal.

10 - Insulation
I0 = without insulation (standard).
Ii = with internal insulation.
Ia = with external insulation.

11 - Height of plenum box
KHS = standard height of plenum box.
xxx = height of plenum box in mm, freely selectable (minimum height [KHS] with spigot position S1+S2 = spigot diameter +87 mm, but at least 200 mm) (always with 3 digits).

12 - Spigot diameter
SDS = spigot diameter standard.
xxx = spigot diameter in mm, can be freely selected (always with 3 digits).
(with spigot positions -S0 and -S4, if the spigot diameter is increased, only the offset plenum box shape is available)

13 - Spigot position
S0 = spigot from above.
S1 = lateral spigot on the plenum box (standard).
S4 = front side spigot (not possible for band design).

SPECIFICATION TEXT

Ventilation grille **type IB-Q-...** for supply and return air, for installation in ducts and plenum boxes, with horizontal or vertical, pivoting, individually adjustable air deflection blades on the front side. For description of frames and blades, see “Material / paint”. Assembly parts made of electrolytically galvanised sheet steel.
Product: SCHAKO **type IB-Q-...**

Model:
- horizontal pivoting air deflection blades on the front side (**-IB-Q-01-…).**
- same as IB-Q-01, additionally with vertical, pivoting air deflection blades (**-IB-Q-02-…**).
- same as IB-Q-01-…, additionally with hit-and-miss damper (**-IB-Q-08-…**).
- same as IB-Q-01-…, additionally with vertical, pivoting air deflection blades and hit-and-miss damper (**-IB-Q-8c-…**).
- vertical, pivoting air deflection blades on the front side (**-IB-Q-10-…**).
- same as IB-Q-10-…, additionally with horizontal, pivoting air deflection blades (**-IB-Q-11-…**).
- same as IB-Q-10-…, additionally with hit-and-miss damper (**-IB-Q-15-…**).
- same as IB-Q-10-…, additionally with horizontal, pivoting air deflection blades and hit-and-miss damper (**-IB-Q-16-…**).

Length:
- 325 mm (-**00325**)
- 425 mm (-**00425**)
- 525 mm (-**00525**)
- 625 mm (-**00625**)
- 825 mm (-**00825**)
- 1025 mm (-**01025**)
- 1225 mm (-**01225**)
- length in mm, freely selectable, for band design (for a grille length BL > 1225 mm: 2-part for a length of band BL ≤ 2425 mm, multi-part for a length of band > 2425 mm) (-xxxxx, always with 5 digits).

Height:
- 75 mm (**-075**)
- 125 mm (**-125**)
- 175 mm (**-175**)
- 225 mm (**-225**)
- 325 mm (**-325**)

Material / paint (frames and blades)**:**
- Galvanised sheet steel (-**SV**)
- Sheet steel (-**SB**, standard)
  - Painted to RAL colour 9010 (white) (**-9010**, standard)
  - Painted to a different RAL colour, freely selectable (**-xxxx,** at an extra charge, always with 4 digits)

Single / band design:
- Single design (**-N**)
- band design (**-B**) (only possible for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16, for a grille length BL > 1225 mm, module length max. 1225 mm, available lengths according to SCHAKO standard for band design).

Air throw pattern:
- blade position straight (**-L000**) (standard)
- Blade position 44° diverging (**-L044**)
- blade position 84° diverging (**-L084**)
- Blade position 110° diverging (**-L110**) (only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)
- Blade position 140° diverging (**-L140**) (only for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16)
- Blade position opposite to one another (**-LGEG**)

Mounting:
- Screw mounting (**-SM**, standard)
  - screws must be provided on site
  - band design with screw mounting only
- Concealed mounting (-**VM**)
  - only available in combination with an installation frame or a plenum box
- Clamp mounting (-**KB**)
  - only available without installation frame or plenum box

Accessories:
- Plenum box (AK-31), in rectangular design, made of galvanised sheet steel (-SV, standard), housing with round connection spigot and mounting brackets.
  - Length:
    - 325 mm (-00325)
    - 425 mm (-00425)
    - 525 mm (-00525)
    - 625 mm (-00625)
    - 825 mm (-00825)
    - 1025 mm (-01025)
    - 1225 mm (-01225)
    - length in mm, freely selectable, for band design (for a grille length BL > 1225 mm: 2-part for a length of band BL ≤ 2425 mm, multi-part for a length of band > 2425 mm) (-xxxxx, always with 5 digits).
  - Height:
    - 75 mm (-075)
    - 125 mm (-125)
    - 175 mm (-175)
    - 225 mm (-225)
    - 325 mm (-325)
  - Single / band design:
    - single design (standard)
    - band design (only possible for IB-Q-10 / IB-Q-11 / IB-Q-15 / IB-Q-16, for a grille length BL > 1225 mm, module length max. 1225 mm, available lengths according to SCHAKO standard for band design).
  - Mounting:
    - screw mounting (-SM) (standard, screws must be provided on site, band design with screw mounting only)
    - Concealed mounting (-VM)
  - Damper:
    - without damper (-DK0) (standard).
    - with damper (-DK1), made of galvanised sheet steel, in the plenum box housing, adjustable, for simple air volume regulation.
    - with damper (-DK2), same as DK1, but with cable-operated adjustment, only with spigot position from above (-S0) and front side spigot position (-S4).

- Rubber lip seal:
  - without rubber lip seal (-GD0) (standard).
  - with rubber lip seal (-GD1) made of special rubber, at the connection spigot.
- Insulation:
  - without insulation (-I0) (standard).
  - with internal insulation (-Ii), thermal insulation inside the plenum box.
  - with external insulation (-Ia), thermal insulation at the outside of the plenum box.
- Height of plenum box:
  - Standard height of plenum box (-KHS).
  - Height of plenum box in mm, freely selectable (minimum height [KHS] with spigot position S1+S2 = spigot diameter +87 mm, but at least 200 mm) (always with 3 digits).
- Spigot diameter:
  - Standard spigot diameter (-SDS).
  - Spigot diameter in mm, freely selectable (-xxx, always with 3 digits).
    (With spigot positions -S0 and -S4, if the spigot diameter is increased, only the offset plenum box shape is available)
- Spigot position:
  - Spigot from above (-S0).
  - Lateral spigot on the plenum box (-S1) (standard).
  - Front side spigot (-S4, not possible for band design).

- Installation frame (-ER0 / -ER1 / -ER2)
  - without installation frame (-ER0)
  - with installation frame made of galvanised sheet steel (only possible in the absence of a plenum box):
    - without wall anchor (-ER1)
    - with wall anchor (-ER2)