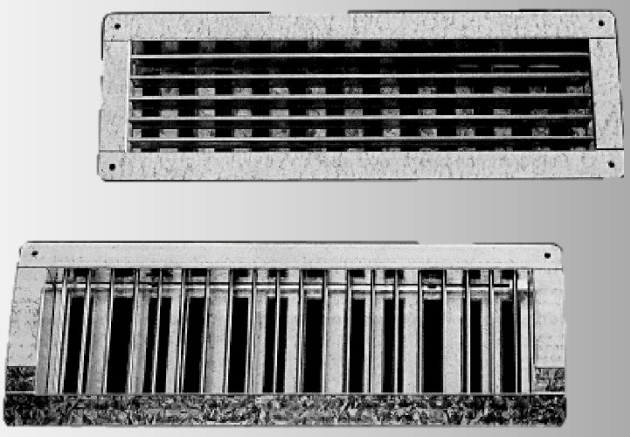
Technical documentation



KG

Compact grille

Contents

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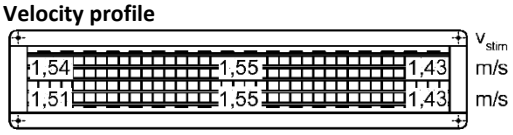
FUNCTION AND USE

The compact grille type KG-... can be used for both supply air and return air systems. Owing to its **compact construction** – the front frame and blades for air distribution and the hit-and-miss damper for air volume control consist of a single component – the compact grille requires only a **small installation depth**. This small installation depth reduces air vortex formation at the hit-and-miss damper, thus ensuring a **uniform inflow of air** over the entire diffuser surface of the grille (see velocity profile). Moreover, the compact construction gives the grille **very high stability and torsional rigidity**. Its special frame shape allows the compact grille to make close contact with the ductwork. Modern production methods allow the grille to be **manufactured free of welding spots**, thus **minimising** the **susceptibility to corrosion** of the compact grille. The stainless steel design of the compact grille allows it to be used in areas containing aggressive air substances. The modern design of the **cover frame** allows concealed mounting of the grille. The stainless steel and aluminium models with H=65 - 315 and sheet steel model with H=165 mm are delivered without raised ends of the hit-and-miss dampers. For the "Hit-and-miss damper without raised ends" design, the diagram values are only achieved with a flow pattern from behind. If the flow pattern is lateral, the values change.
At an extra charge, a plenum box can be mounted. **Unless stated otherwise, the KG grille will be supplied as galvanised sheet steel model!**
The installation of the KG-R-... into spiral ductwork must take place free of stress. Avoid using unround or deformed spiral ducts, in order to protect the grilles from distortion.

Attention!
We would like to point out that for cleaning stainless steel models, only suitable cleaning materials may be used!

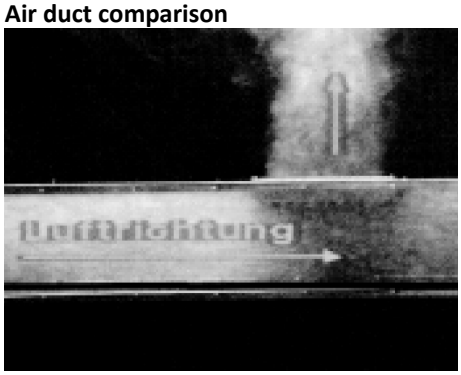
Velocity profile



Compact grille shown: KG-Q-08 615/115

Exit velocities at a supply air volume V_{ZU} of 400 m³/h (corresponding to 111,1 l/s). Grille mounted in flow channel, lateral inflow.

Air duct comparison



The picture in the flow channel proves:
- uniform inflow of air over the entire surface of the grille
- no vortex formation

MODELS

KG-Q-...	for duct and plenum box installation.
KG-R-...	for duct installation
KG-...-08-...	horizontal pivoting air deflection blades on the front side. Frame with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and ductwork regulation.
KG-...-15-...	vertical, pivoting air deflection blades on the front side. Frame with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and ductwork regulation.
KG-...-N-...	single 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 KG-...-15-...)
...-L140-...	blade position 140° diverging (only for KG-...-15-...)
...-LGEG-...	blade position opposite to one another (only for KG-...-15-...)

MOUNTING

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

PROCESSING

Frame and blades

-- Galvanised sheet steel (-SV-0000) (standard).
-- Sheet steel (-SB-...):
  - painted to RAL colour 9010 (-9010, standard).
  - painted to a different RAL colour, freely selectable (-xxxx, at an extra charge).
-- Natural colour anodised aluminium (-AL-ELOX, at an extra charge)
-- Stainless steel 1.4301 (V2A) (-V2-0000, at an extra charge).

ACCESSORIES

Plenum box (-AK-32), only for KG-Q-...

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

-- Length:
  - 315 mm (-00315)
  - 415 mm (-00415)
  - 515 mm (-00515)
  - 615 mm (-00615)
  - 815 mm (-00815)
  - 1015 mm (-01015)
  - 1215 mm (-01215)
-- Height:
  - 65 mm (-065)
  - 115 mm (-115)
  - 165 mm (-165)
  - 215 mm (-215)
  - 315 mm (-315)
-- Single / band design:
  - Single design (-N) (standard).
-- Mounting:
  - Screw mounting (-SM) (standard, screws must be provided on site).
-- Damper:
  - without damper (-DK0) (standard).
-- 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 and -S4 = 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).
  - Spigot front side (-S4).

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

-- without installation frame (-ER0).
-- with installation frame made of galvanised sheet steel (onlyf or KG-Q-...) (only possible without plenum box):
  - without wall anchors (-ER1).
  - with wall anchors (-ER2).

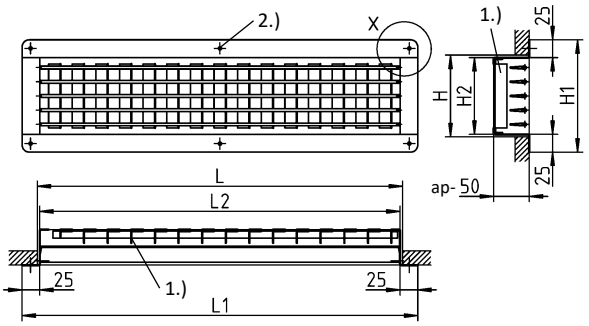
Cover frame (-BN / -BR)

-- without cover frame (-BN).
-- with cover frame (-BR) (only for KG-Q-...) (for concealed mounting):
  - natural colour anodised aluminium (E6/EV1) (standard for -SV and -V2).
  - aluminium painted to the RAL colour of the grille.

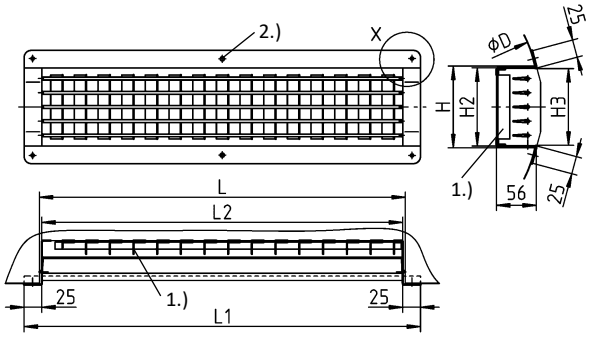
DIMENSIONS

SINGLE DESIGN (-N)

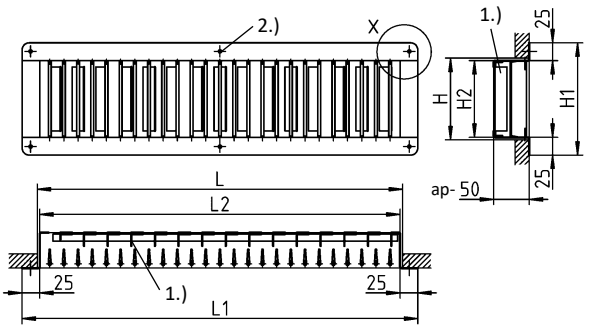
KG-Q-08-...



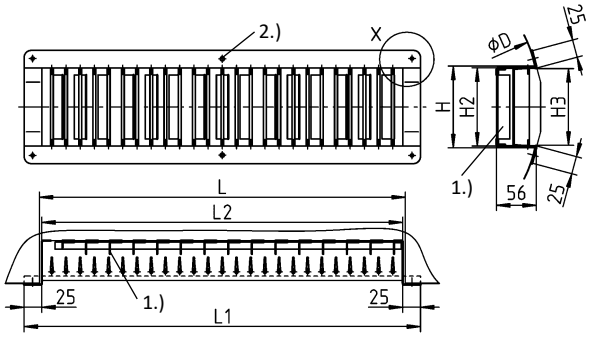
KG-R-08-...



KG-Q-15-...



KG-R-15-...



Available sizes KG-Q-08-... / KG-Q-15-...

L	L1	L2
315	358	310
415	458	410
515	558	510
615	658	610
815	858	810
1015	1058	1010
1215	1258	1210

H	H1	H2
65	108	60
115	158	110
165	208	160
215	258	210
315	358	310

All combined lengths and heights available!
Special dimensions are not possible!

Installation dimensions of the aluminium (-AL) and stainless steel models (-V2):

KG-Q-08-...-AL / -V2:	(L+10) x H
KG-Q-15-...-AL / -V2:	L x (H+10)

1.) The stainless steel and aluminium models with H=65-315 and sheet steel model with H=165 mm are delivered without raised ends of the hit-and-miss dampers.
2.) only for L = 615 to 1215

Available sizes KG-R-08-... / KG-R-15-...

L	L1	L2
315	358	310
415	458	410
515	558	510
615	658	610
815	858	810
1015	1058	1010
1215	1258	1210

H	H2	H3
65	60	58
115	110	108
165	160	158
215	210	208
315	310	308

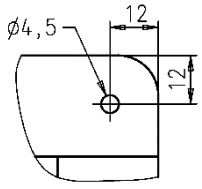
All combined lengths and heights available!
Special dimensions are not possible!

Installation dimensions of the aluminium (-AL) and stainless steel models (-V2):

KG-R-08-...-AL / -V2:	(L+10) x H
KG-R-15-...-AL / -V2:	L x (H+10)

1.) The stainless steel and aluminium models with H=65-315 and sheet steel model with H=165 mm are delivered without raised ends of the hit-and-miss dampers.
2.) only for L = 615 to 1215

Screw mounting (-SM)
Detail X



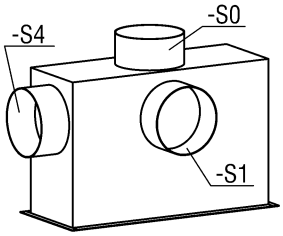
DIMENSIONS OF ACCESSORIES

Plenum box (-AK-32)

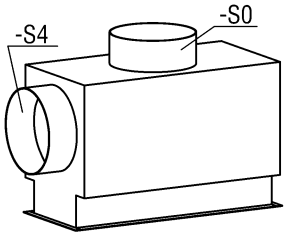
SINGLE DESIGN (-N)

Spigot position

Straight plenum box:



Offset plenum box:

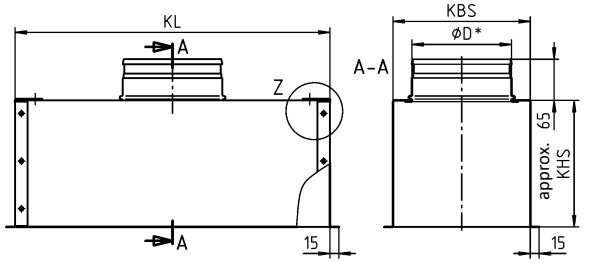


- Lateral spigot on the plenum box (-S1, standard)
- Spigot from above (-S0)
- Front side spigot (-S4, not possible for band design)

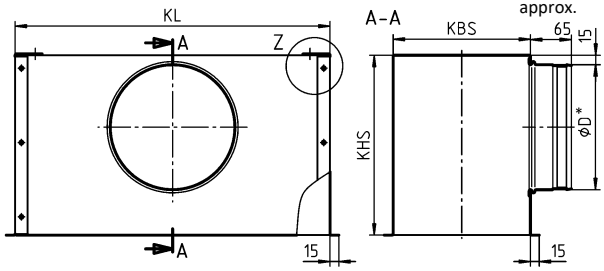
Spigot diameter for spigot position “Spigot front side (-S4)” is **identical** with “Lateral spigot on the box (-S1)”.
Spigot diameter for spigot position “Spigot from above (-S0)” is **in part not identical** with “Lateral spigot on the box (-S1)”.
For the table of available sizes, see page 6.

Straight plenum box:

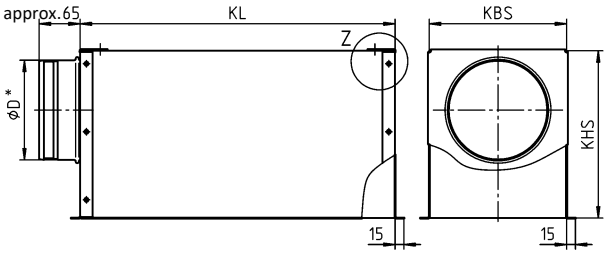
with spigot from above (-S0)



with lateral spigot on the plenum box (-S1)



with spigot front side (-S4)

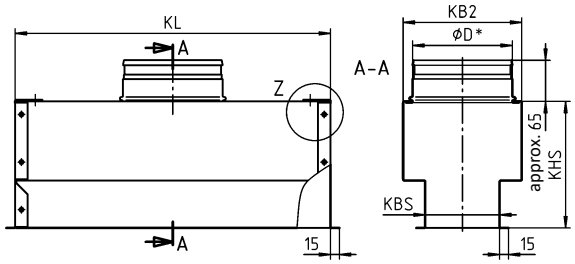


* external

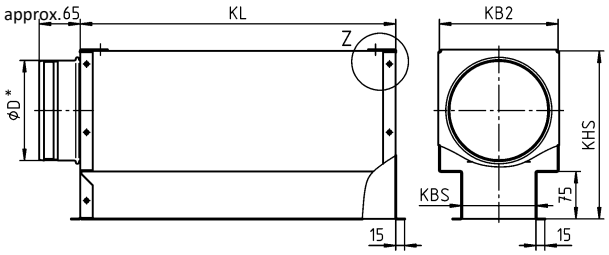
Offset plenum box:

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)



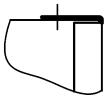
with lateral spigot on the plenum box (-S4)



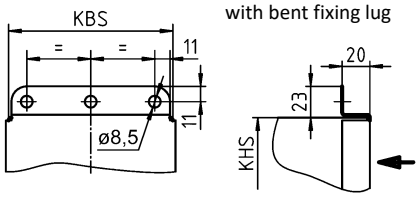
* external

Plenum box mounting:

Detail Z
As-delivered condition with fitted mounting bracket



Detail Z
with bent fixing lug



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.

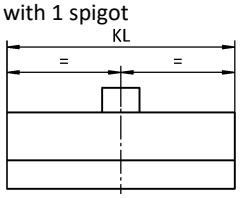
Available sizes for AK-32

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
65	68	315	320	220	--	1x ø123		200*	128*	1x ø98		220	153	1x ø123	
		415	420							2x ø98					
		515	520												
		615	620												
		815	820	265*	--	1x ø158*				4x ø98*		265	188	1x ø158	
		1015	1020												
		1215	1220												
115	118	315	320	265	--	1x ø158		200*	158*	1x ø98		265	188	1x ø158	
		415	420							2x ø98					
		515	520												
		615	620												
		815	820	285*	--	1x ø198*				4x ø98*		285	228	1x ø198	
		1015	1020												
		1215	1220												
165	168	315	320	285*	--	1x ø198*		200*	228*	1x ø198*		285	228	1x ø198	
		415	420												
		515	520												
		615	620												
		815	820												
		1015	1020												
		1215	1220												
215	218	315	320	285	--	1x ø198		200*	258	1x ø198		285	258	1x ø198	
		415	420												
		515	520												
		615	620	335*	--	1x ø248*			--	2x ø178*		335	278	1x ø248	
		815	820												
		1015	1020												
		1215	1220												
315	318	315	320	335	--	1x ø248		200*	--	1x ø248		335	--	1x ø248	
		415	420												
		515	520												
		615	620	400*	--	1x ø313*			--	2x ø222*		400	358	1x ø313	
		815	820												
		1015	1020												
		1215	1220												

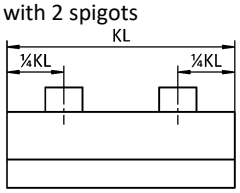
* dimensions for band design / n = number of spigots

Number of spigots:

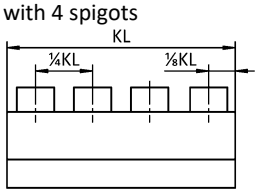
Spigot from above (-S0)
with 1 spigot



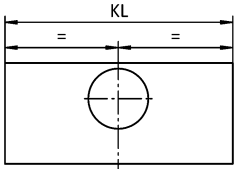
with 2 spigots



with 4 spigots



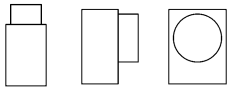
Lateral spigot (-S1)
(standard)
with 1 spigot



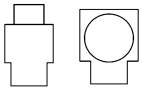
Spigot front side (-S4)
Band design not possible.
with 1 spigot

Plenum box shape

Straight:
-S0 **-S1** **-S4**



Offset:
-S0 **-S4**



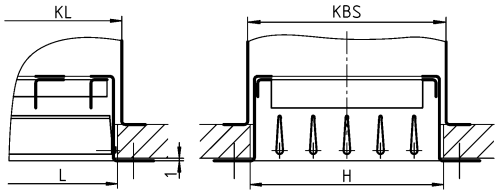
Minimum height KHS with spigot position -S1 / -S4:
KHS $_{min.}$ = øD +87 mm, but at least 200 mm

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

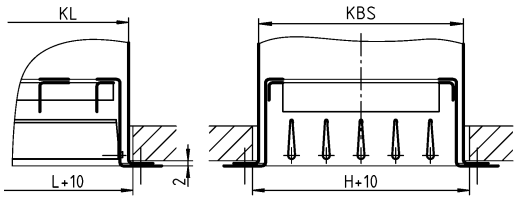
The dimension KBS cannot be changed.With spigot positions -S0 and -S4, if the spigot diameter is increased, only the offset plenum box shape is available.

Installation position

with plenum box above the ceiling / behind the wall



with plenum box below the ceiling / in front of the wall



Attention: **Change of installation opening for installation under the ceiling / in front of the wall!**

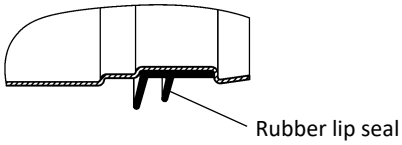
Damper (-DK0)

-- without damper (-DK0) (standard).

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

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

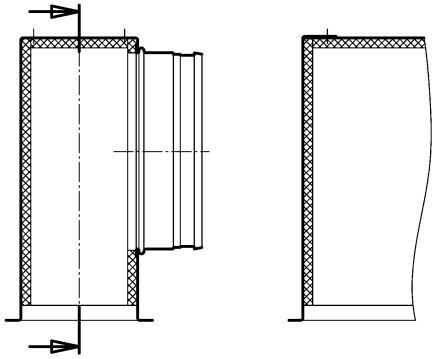
Detail Y



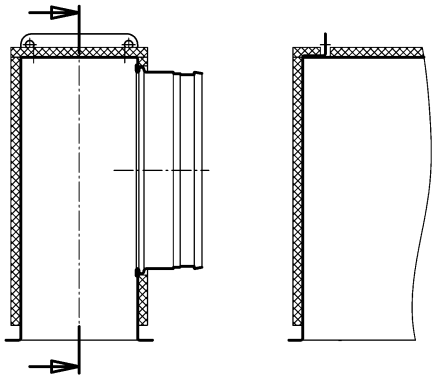
Insulation (-I0 / -Ii / -Ia), for AK-...

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

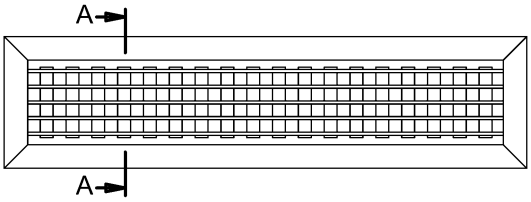
Internal insulation (-Ii)



External insulation (-Ia)

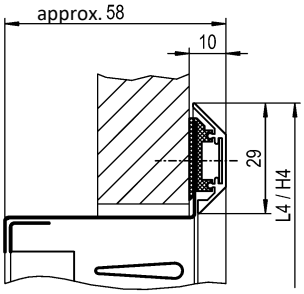


Cover frame (-BR) (only for KG-Q-...)



The cover frame is only available for type KG-Q-...!
A cover frame has been developed to allow concealed mounting, which can be attached easily, after sliding two plastic parts onto the longitudinal side of the grille. This can also easily be done on grilles which have already been installed.

Section A-A



Available sizes

L	L4
315	368
415	468
515	568
615	668
815	868
1015	1068
1215	1268

H	H4
65	116
115	168
165	218
215	268
315	368

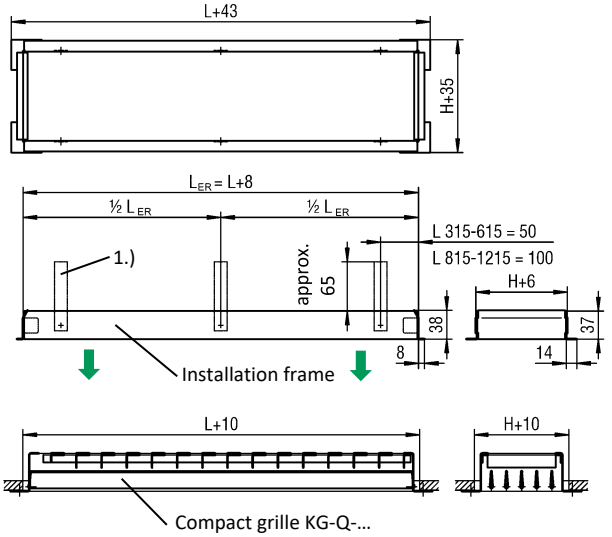
All combined lengths and heights available!
Other sizes available on request.

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.

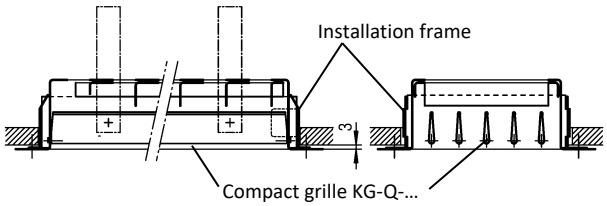
SINGLE DESIGN (-N)



Attention: Change of installation opening for installation with installation frame!
EÖL = L+10 / EÖH = H+10

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).

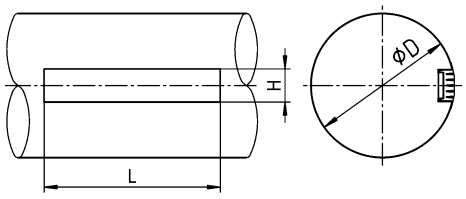
Installation detail:



EÖL = installation opening in the length section
EÖH = installation opening in the height section

Installation

Installation situation KG-R-...



Duct diameter

KG-R-...		øD		
		min.	ideal	max.
Height H	65	140	250	400
	115	300	500	800
	165	450	625	1025
	215	600	750	1250
	315	900	1000	1250

Installation opening:
- made of sheet steel: L x H
- made of aluminium / stainless steel:
  KG-R-08-...-AL / -V2: (L+10) x H
  KG-R-15-...-AL / -V2: L x (H+10)

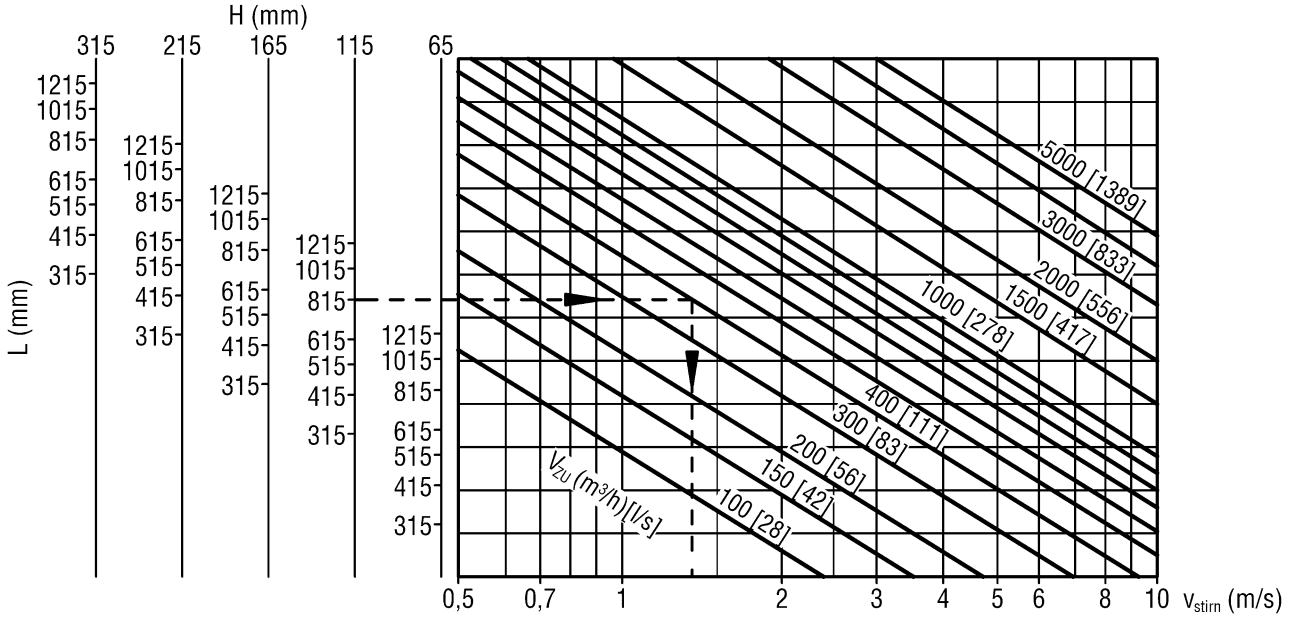
The curved flange and the five height dimensions, apart from providing high stability and torsional rigidity, allow optimum adaptation of the compact grille type KG-R-... to sheet metal and spiral ductwork. The selection of the grille height depends on the duct measures shown in the table. The grille frames only make optimum contact when the ideal duct diameter is used.

The installation of the KG-R-... into spiral ductwork must take place free of stress. Avoid using unround or deformed spiral ducts, in order to protect the grilles from distortion.

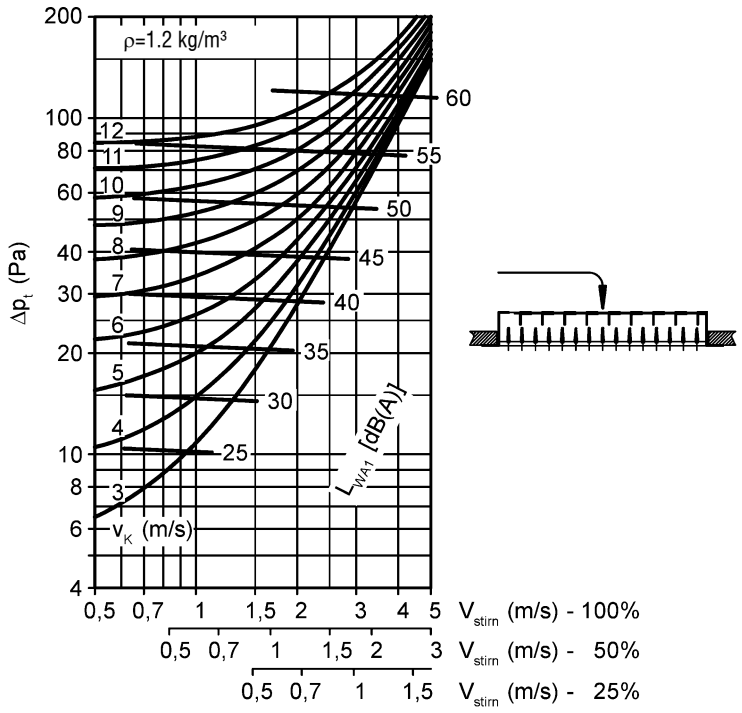
TECHNICAL DATA

Pressure loss and noise level

Supply air face velocity



Supply air



Hit-and-miss damper position OPEN in %

Zeta values (ζ)

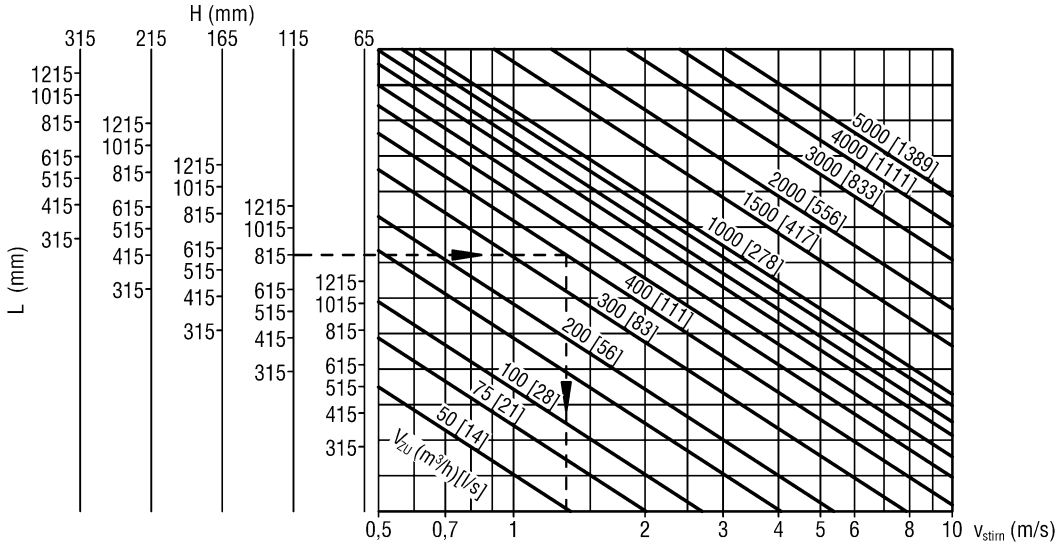
Position of hit-and-miss damper			
100%	**75%**	**50%**	**25%**
1,4	1,76	2,5	4,0

Applies to the standard KG grille **of heights 65, 115, 215 and 315 mm in all widths with lateral flow pattern!**

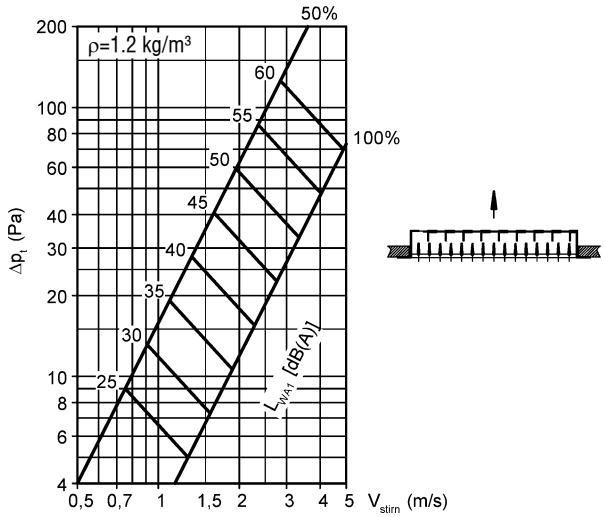
Position of hit-and-miss damper			
100%	**75%**	**50%**	**25%**
2,0	3,4	5,2	11,9

Only applies to KG grilles **of height 165 mm or stainless steel or aluminium model (all sizes) with direct flow pattern from behind!**

Return air face velocity



Return air



Hit-and-miss damper position OPEN in %

Correction factor (supply air and return air)

A_{Stirn} (m²)	0,01	0,02	0,04	0,08	0,16	0,32	0,40
KF (-)	-9	-6	-3	0	+3	+6	+7

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

FQ in m² at the hit-and-miss damper

Height (H) \ Length (L)	325	425	525	625	825	1025	1225
65	0,0067	0,0090	0,0120	0,0135	0,0180	0,0225	0,0270
115	0,0135	0,0180	0,0240	0,0270	0,0360	0,0450	0,0540
165	0,0201	0,0268	0,0358	0,0403	0,0537	0,0671	0,0805
215	0,0270	0,0360	0,0480	0,0540	0,0720	0,0900	0,1080
315	0,0405	0,0540	0,0720	0,0810	0,1080	0,1349	0,1619

FQ (m²)

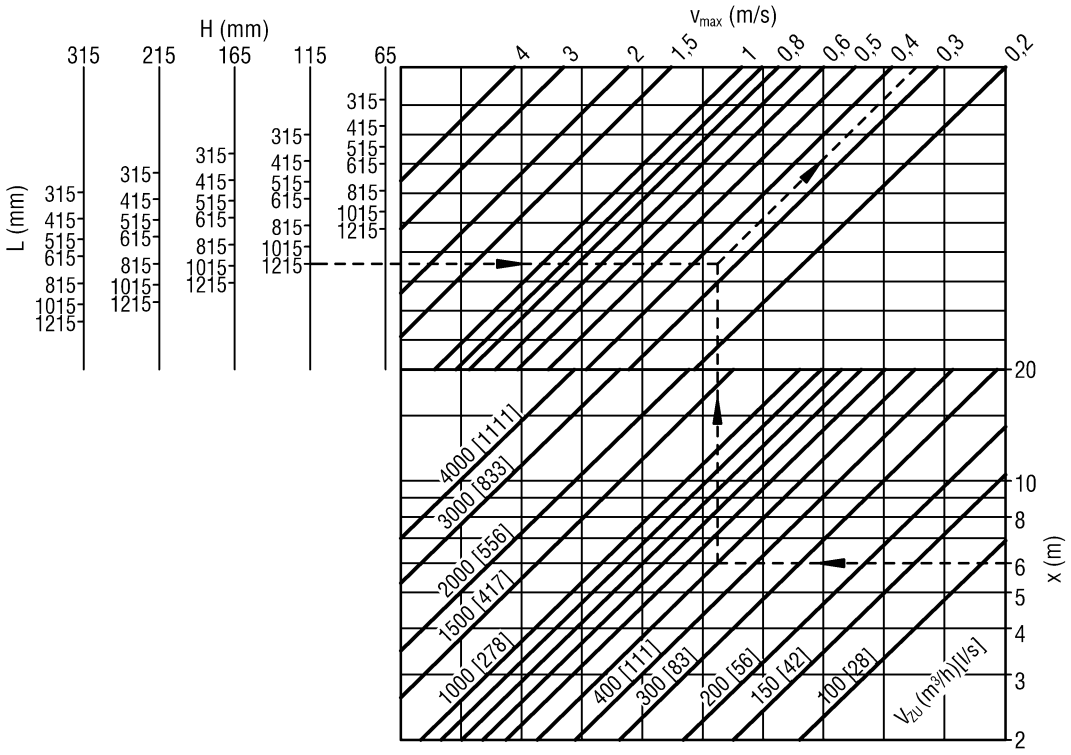
Face area (m²)

Height (H) \ Length (L)	325	425	525	625	825	1025	1225
65	0,018	0,024	0,029	0,035	0,047	0,058	0,070
115	0,033	0,044	0,055	0,066	0,087	0,109	0,130
165	0,049	0,064	0,080	0,096	0,128	0,159	0,191
215	0,064	0,085	0,106	0,126	0,168	0,210	0,251
315	0,095	0,126	0,156	0,187	0,248	0,310	0,372

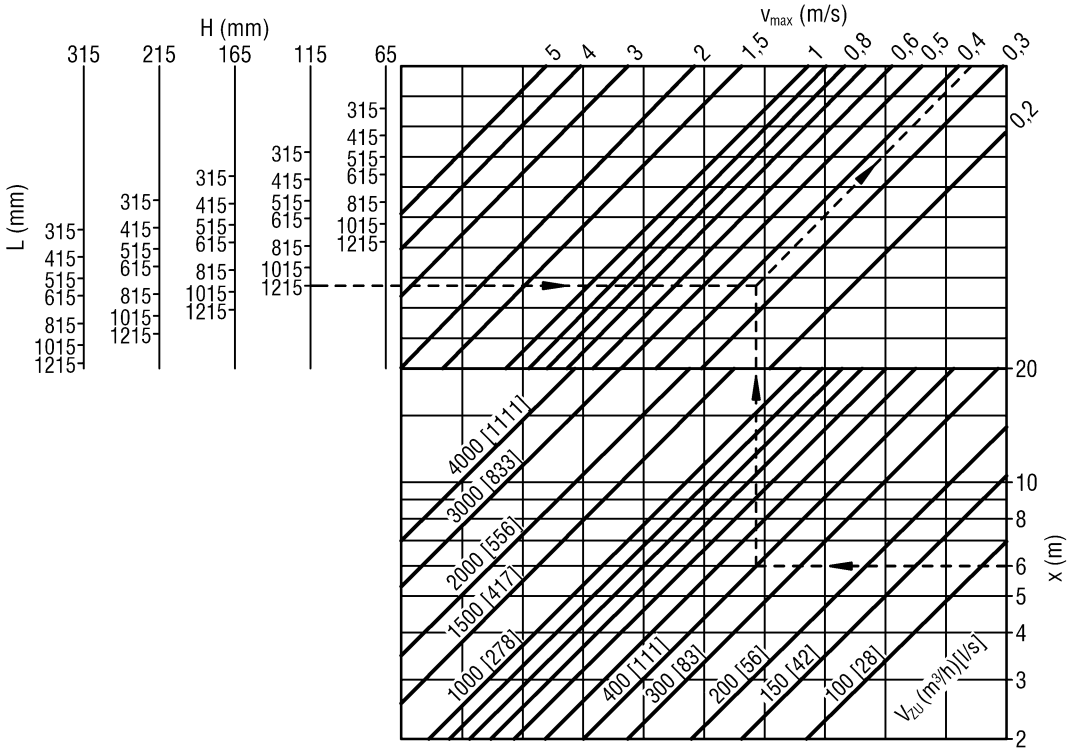
A_{stirn} (m²)

Maximum end velocity of jet

Supply air without coanda effect

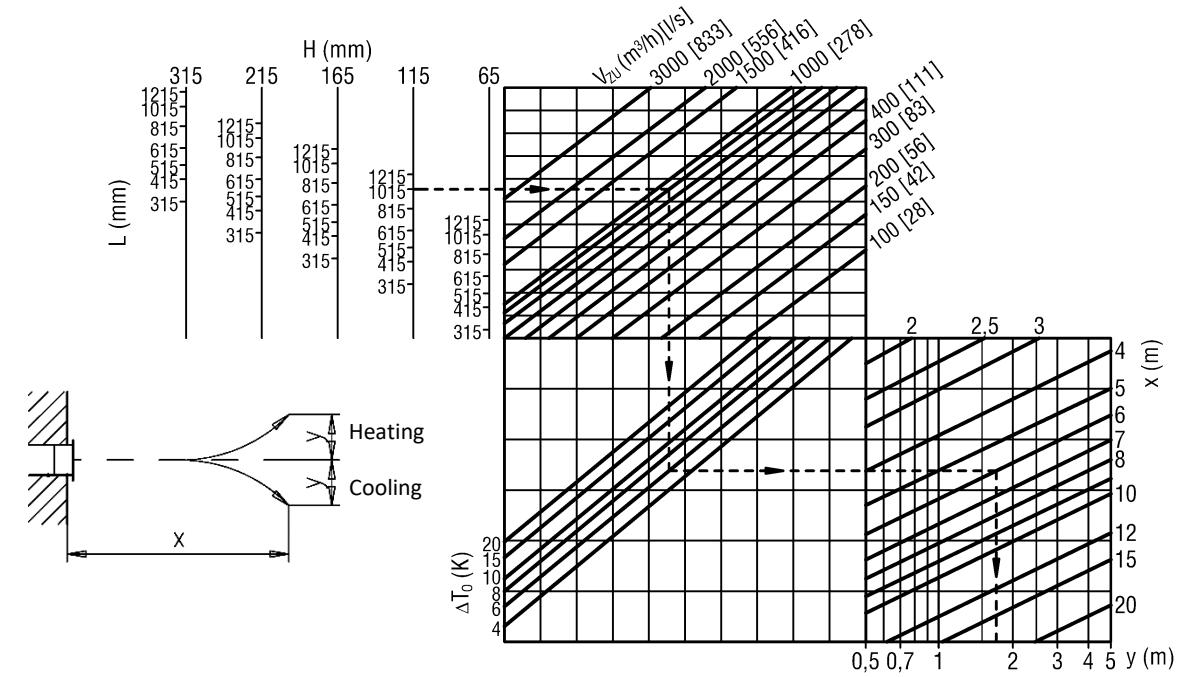


Supply air with coanda effect



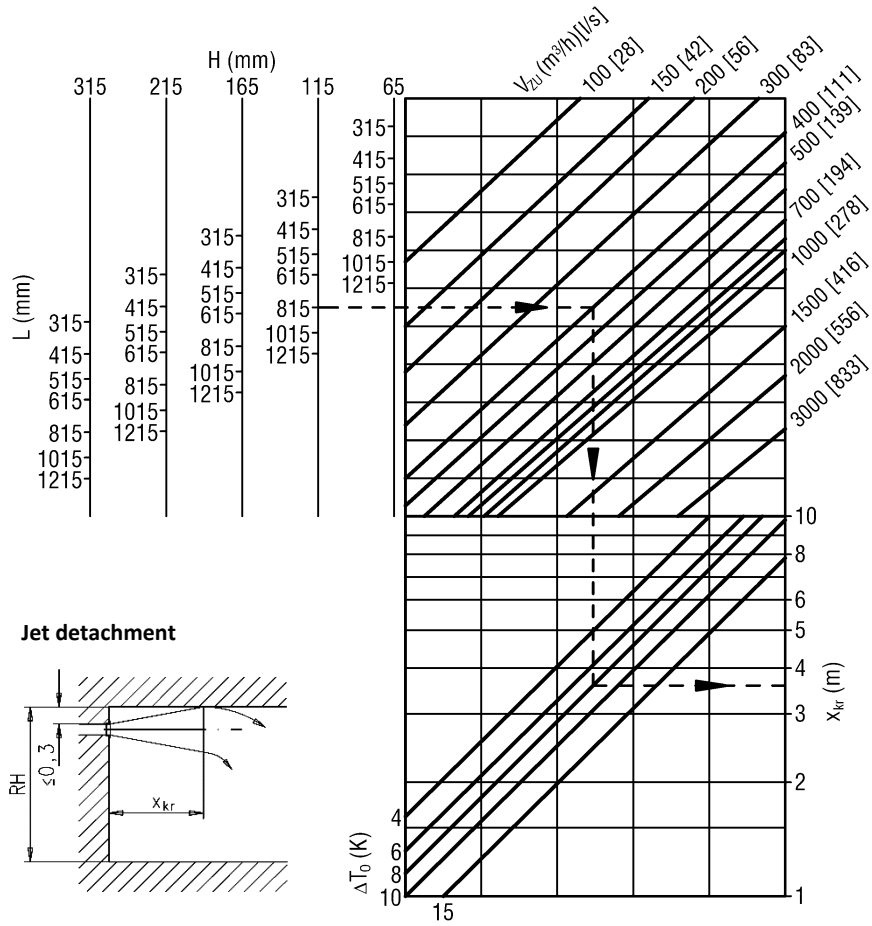
Jet path

Supply air without coanda effect



Critical throw

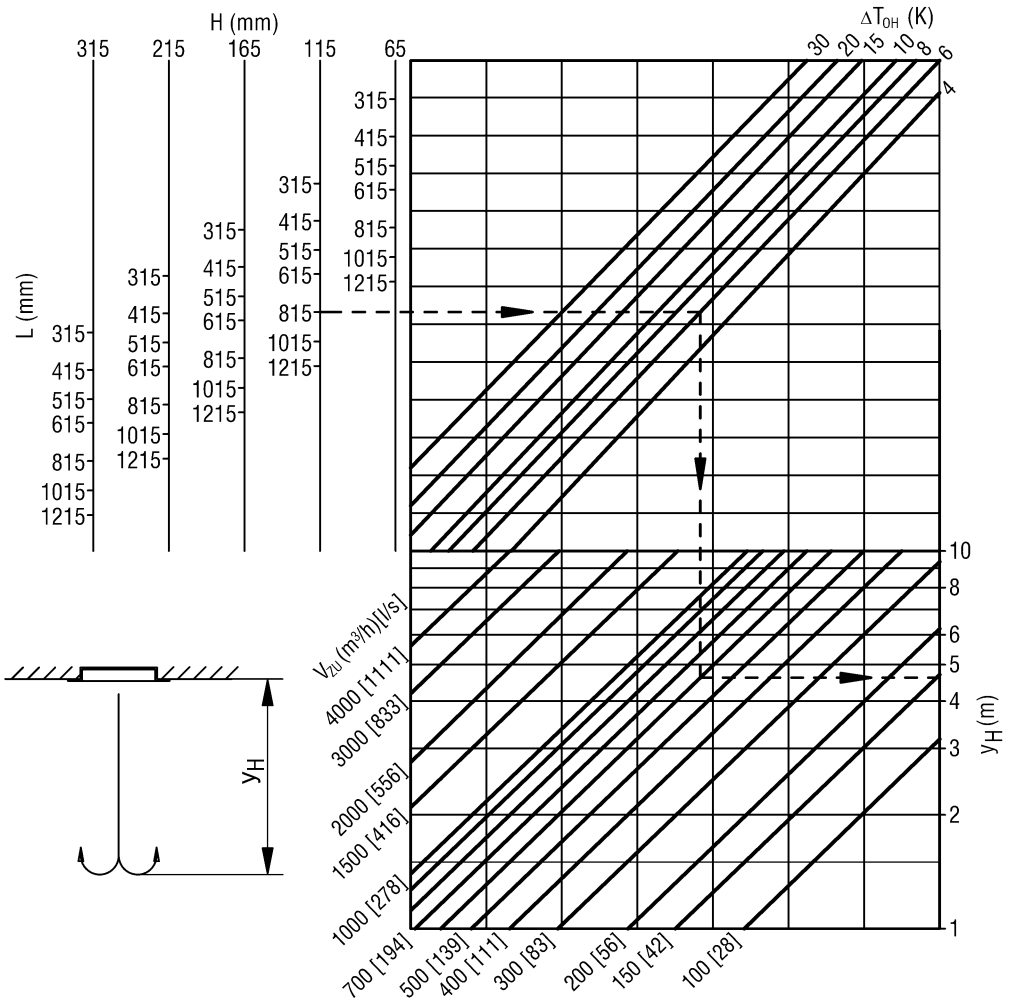
Supply air with coanda effect



Jet detachment

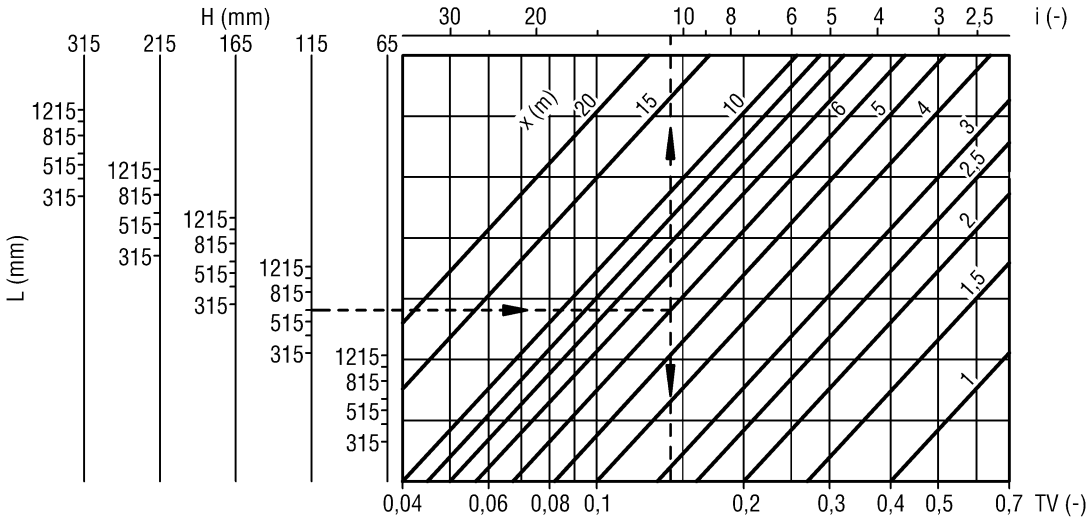
Maximum penetration

Max. vertical penetration depth (in heating mode)

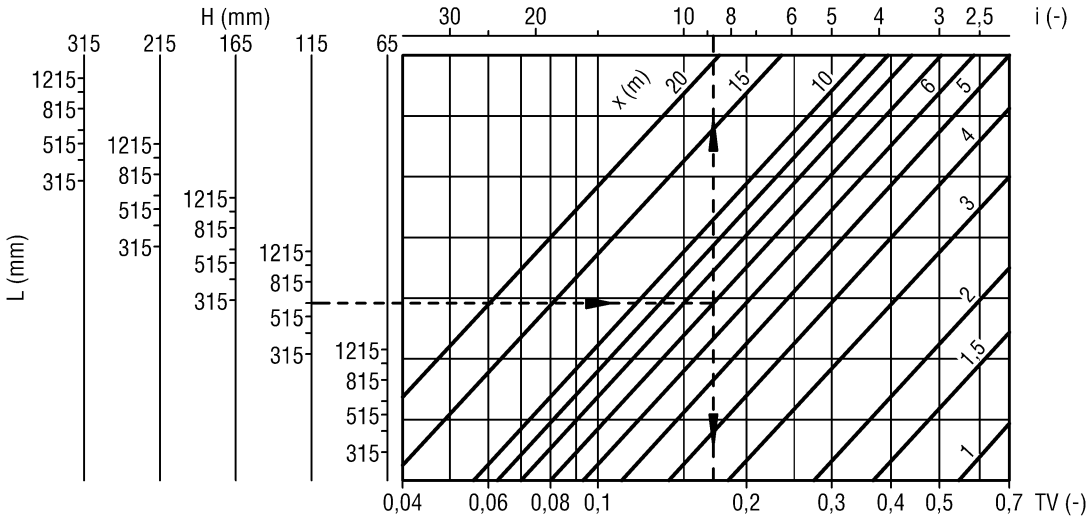


Temperature and induction ratios

Supply air without coanda effect

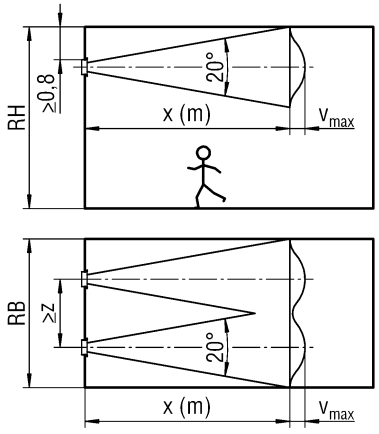


Supply air with coanda effect



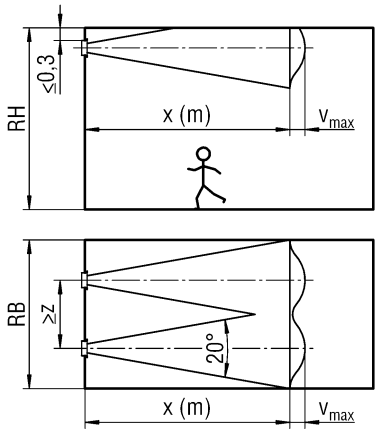
Minimum distances

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

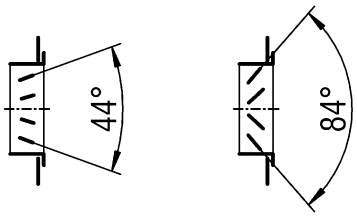


For the diagrams to be correct, the distance z between two grilles must be ≥ x (m) x 0,2.

Correction factor

(for scattered air jet)

with or without coanda effect



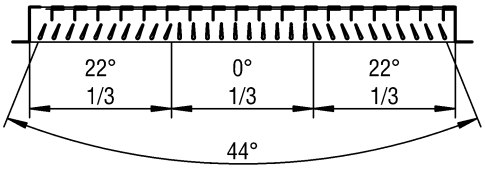
Blade position	44°	84°
End velocity of jet	v_{max} (m/s) × 0,65	v_{max} (m/s) × 0,5
Critical throw x_{kr}	× 0,77	× 0,6
TV = ΔT_x / ΔT_0	× 0,65	× 0,5
Induction ratio	i × 1,3	i × 2
Jet drop - Jet rise	y × 1,3	y × 2
Grille spacing z(m)	x × 0,20	x × 0,25

Blade position

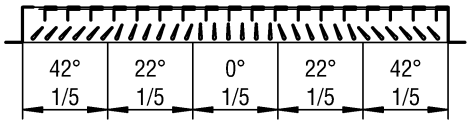
Blade position straight (-L000, standard)

Blade position opposite to one another (-LGEG)
(only KG-…-15-…)

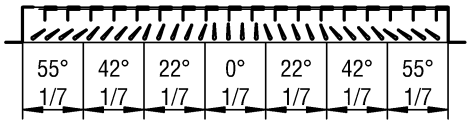
Blade position 44° diverging (-L044)



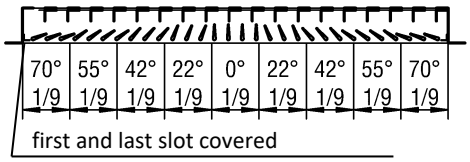
Blade position 84° diverging (-L084)



Blade position 110° diverging (-L110)
(only KG-…-15-…)

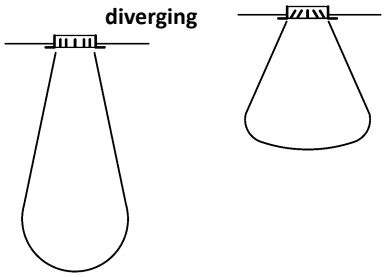


Blade position 140° diverging (-L140)
(only KG-…-15-…)



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



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
y_H	(m)	=	maximum penetration depth in heating mode
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
FQ	(m²)	=	free cross-section in m²
approx.	(-)	=	approximately

ORDER CODE KG

01	02	03	04	05	06
Type	Model	Blades	Length	Height	Single / band design
Example					
KG	-Q	08	-00615	-115	-N

07	08	09	10	11	12
Air throw pattern	Material	Paint	Mounting	Installation frame	Cover frame
-L000	-SV	-0000	-SM	-ER0	-BR

All fields must be filled when ordering.

Sample
KG-Q-08-00615-115-N-L000-SV-0000-SM-ER0-BR

Compact grille KG | for duct and plenum box installation | horizontal pivoting air deflection blades on the front side with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and ductwork regulation | grille length 615 mm | grille height 115 mm | single design | blade position straight | galvanised sheet steel | without paint | screw mounting | without installation frame | with cover frame

ORDER DETAILS

01 - Type
KG = compact grille KG

02 - Model
Q = for duct and plenum box installation
R = for duct installation

03 – Blades
08 = horizontal pivoting air deflection blades on the front side. Frame with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and ductwork regulation.
15 = vertical, pivoting air deflection blades on the front side Frame with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and ductwork regulation.

04 - Length
00315 = grille length 315 mm
00415 = grille length 415 mm
00515 = grille length 515 mm
00615 = grille length 615 mm
00815 = grille length 815 mm
01015 = grille length 1015 mm
01215 = grille length 1215 mm

05 - Height
065 = grille height 65 mm
115 = grille height 115 mm
165 = grille height 165 mm
215 = grille height 215 mm
315 = grille height 315 mm

06 - Single / band design
N = single design (standard)

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 KG-…-15-…)
L140 = blade position 140 diverging (only for KG-…-15-…)
LGEG = blade position opposite to one another (only for KG-…-15-…)

08 - Material
SV = galvanised sheet steel (standard)
SB = sheet steel
AL = aluminium
V2 = stainless steel 1.4301 (V2A)

09 - Paint
0000 = without paint (standard, possible only for -SV and -V2).
9010 = painted to RAL colour 9010 (white) (standard for -SB).
xxxx = painted to a different RAL colour, freely selectable (always with 4 digits).
ELOX = natural colour anodised (E6/EV1) (only -AL possible).

10 - Mounting
SM = screw mounting (standard).

11 - Installation frame
ER0 = without installation frame (standard)
ER1 = with installation frame without wall anchors (only for KG-Q-…)
ER2 = with installation frame with wall anchors (only for KG-Q-…)
Installation frame only without plenum box possible.

12 - Cover frame
BN = without cover frame (standard)
BR = with cover frame, for concealed mounting, made of aluminium natural colour anodised (E6/EV1, standard for -SV and -V2) or aluminium painted to RAL colour of the grille (only for KG-Q-...).

ORDER CODE AK

01	02	03	04	05	06	07
Type	Air diffuser	Length	Height	Single / band design	Mounting	Material
Example						
AK	-32	-00415	-215	-N	-SM	-SV

08	09	10	11	12	13
Damper	Rubber lip seal	Insulation	Height of plenum box	Spigot diameter	Spigot position
-DK0	-GD1	-I0	-KHS	-SDS	-S1

All fields must be filled when ordering.

Sample
AK-32-00415-215-N-SM-SV-DK0-GD1-I0-KHS-SDS-S1

Plenum box, rectangular design I for compact grille KG I length 415 mm I height 215 mm I single design I with screw mounting I galvanised sheet steel I without damper I with rubber lip seal I without plenum box insulation I standard height of plenum box I standard spigot diameter I lateral spigot on the plenum box

ORDER DETAILS

01 - Type
AK = plenum box, rectangular design

02 - Air diffuser
32 = for compact grille KG-Q

03 - Length
00315 = grille length 315 mm
00415 = grille length 415 mm
00515 = grille length 515 mm
00615 = grille length 615 mm
00815 = grille length 815 mm
01015 = grille length 1015 mm
01215 = grille length 1215 mm

04 - Height
065 = grille height 65 mm
115 = grille height 115 mm
165 = grille height 165 mm
215 = grille height 215 mm
315 = grille height 315 mm

05 - Single / band design
N = single design (standard)

06 - Mounting
SM = screw mounting (standard, screws must be provided on site)

07 - Material
SV = galvanised sheet steel (standard)
V2 = stainless steel (V2A)

08 - Damper
DK0 = without damper (standard)

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 and -S4 = spigot diameter +87 mm, but at least 200 mm) (always with 3 digits).

12 - Spigot diameter
SDS = standard spigot diameter
xxx - Spigot diameter in mm, freely selectable (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 = spigot front side

SPECIFICATION TEXT

Compact grille **type KG-Q-08-...** (supply and return air), **for duct and box installation**. Owing to its compact construction - the housing and hit-and-miss damper consist of a single component - the grilles have very high stability and torsional rigidity and require only a small mounting depth (50 mm). This gives low flow generated noise and a uniform inflow of the supply air over the entire grille surface. Compared with grilles equipped with air dampers, the air flow capacity is more than 20% higher at the same sound power level. The clinch joining technique without producing welding spots gives better anticorrosive protection.
Consisting of front frame with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and duct work regulation. with front side horizontal pivoting air deflection blades.
Product: SCHAKO **type KG-Q-08-...**

- with front side vertical pivoting air deflection blades.
  Product: SCHAKO **type KG-Q-15-...**

Compact grille **Type KG-R-08-...** (for supply and return air), for duct installation. Owing to its compact construction - the housing and hit-and-miss damper consist of a single component - the grilles have very high stability and torsional rigidity and require only a small mounting depth (56 mm). This gives low flow generated noise and a uniform inflow of the supply air over the entire grille surface. Compared with grilles equipped with air dampers, the air flow capacity is more than 20% higher at the same sound power level. The clinch joining technique without producing welding spots gives better anticorrosive protection.
Consisting of front frame with integrated hit-and-miss damper, adjustable on the room side, for simple air volume regulation and duct work regulation. with front side horizontal pivoting air deflection blades.
Product: SCHAKO **type KG-R-08-...**

- with front side vertical pivoting air deflection blades.
  Product: SCHAKO **type KG-R-15-...**

Length:
- 315 mm (**-00315**)
- 415 mm (**-00415**)
- 515 mm (**-00515**)
- 615 mm (**-00615**)
- 815 mm (**-00815**)
- 1015 mm (**-01015**)
- 1215 mm (**-01215**)

Height:
- 65 mm (**-065**)
- 115 mm (**-115**)
- 165 mm (**-165**)
- 215 mm (**-215**)
- 315 mm (**-315**)

Material / paint (front frame and blades)**:**
- Galvanised sheet steel, without paint (**-SV-0000**, standard)
- Sheet steel (**-SB-…**)
  - painted to RAL colour 9010 (**-9010**, standard for -SB)
  - painted to a different RAL colour, freely selectable (**-xxxx,** at an extra charge)
- Aluminium, natural colour anodised E6/EV1 (**-AL-ELOX**)
- Stainless steel 1.4301 (V2A) (**-V2-0000**)

Single / band design:
- Single design (**-N**)

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 KG-…-15-…)
- Blade position 140° diverging (**-L140**) (only for KG-…-15-…)
- Blade position opposite to one another (**-LGEG**) (only for KG-…-15-…)

Mounting:
- Screw mounting (**-SM**, standard)
  - screws must be provided on site.

Accessories:
- Plenum box (AK-32), in rectangular design, housing with round connection spigot and mounting brackets.
  - Length:
    - 315 mm (-00315)
    - 415 mm (-00415)
    - 515 mm (-00515)
    - 615 mm (-00615)
    - 815 mm (-00815)
    - 1015 mm (-01015)
    - 1215 mm (-01215)
  - Height:
    - 65 mm (-065)
    - 115 mm (-115)
    - 165 mm (-165)
    - 215 mm (-215)
    - 315 mm (-315)
  - Single / band design:
    - single design (standard).
  - Mounting:
    - Screw mounting (-SM) (standard, screws must be provided on site).
  - Material:
    - Galvanised sheet steel (-SV) (standard).
    - Stainless steel (V2A) (-V2).
  - Damper:
    - without damper (-DK0) (standard).
  - 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, always 3 digits) (minimum height [KHS] with spigot position -S1 and -S4 = spigot diameter +87 mm, but at least 200 mm).
  - 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).
    - Spigot front side (-S4).

- Installation frame (-ER0 / -ER1 / -ER2)
  - without installation frame (-ER0).
  - with installation frame made of galvanised sheet steel (only for KG-Q-...) (only possible without plenum box):
    - without wall anchor (-ER1).
    - with wall anchor (-ER2).

- Cover frame (-BN / -BR)
  - without cover frame (-BN).
  - with cover frame (-BR) (only for KG-Q-…) (for concealed mounting).
    - natural colour anodised aluminium (E6/EV1) (standard for -SV and -V2).
    - aluminium painted to the RAL colour of the grille.