Nozzle jet diffuser

DSA

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Nozzle Jet Diffuser Model DSA

Contents

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Description

Application

The nozzle jet diffuser type DSA was developed **especially to keep large windows free from condensation**. Its **high penetration depths**, despite **small air volumes,** and **its favourable acoustic behaviour** allow it to be used for a wide range of different applications. The jet nozzle diffuser type DSA is suitable for installation in ceilings and floors. To achieve a flat surface, a cover plate, which conceals the nozzles, can be installed.
The models with adjustable nozzles allow virtually unlimited settings, as the nozzles can be adjusted individually to the desired throw direction. The nozzle jet diffusers are available in one- or two-row versions.

Construction

Nozzles

- Plastic, similar to RAL colour 9010 (-DW, white, standard), similar to RAL 9005 (-DS, black) or similar to RAL 9006 (-DA white aluminium)

Faceplate

- Painted sheet steel RAL 9010 (-SB-9010, white, standard), RAL 9005 (-SB-9005, black) or RAL colour freely selectable (-SB-xxxx)

Model

DSA-F0-... - with fixed nozzles, with faceplate riveted to the plenum box.

DSA-V0-... - with manually individually adjustable nozzles, with faceplate riveted to the plenum box

DSA-D0-... - with fixed nozzles, with dismountable faceplate.

DSA-VD-... - with manually individually adjustable nozzles, with dismountable faceplate.

DSA-...-1-... - Nozzles, one row

DSA-...-2-... - Nozzles, two rows

DSA-...-N-... - Single length

DSA-...-B-... - Band design
  - for DSA-F0-... / DSA-V0-... available from BL >1200 mm
  - for DSA-D0-... / DSA-VD-... available from BL >1225 mm

Accessories

Plenum box (-AK-30)

- Rectangular design. Housing with round connection spigot and fixing lugs.
- Fastening:
  - Permanent connection (-FV) (standard for DSA-F0-... / DSA-V0-..., not possible for DSA-D0-... / DSA-VD-...)
  - Screw mounting (-SM, standard, screws must be provided on site, not possible for DSA-F0-... / DSA-V0-...)
  - Concealed mounting (-VM, not possible for DSA-F0-... / DSA-V0-...)
- Made of galvanised sheet steel (-SV)
- Height of plenum box:
  - Standard (-KHS)
  - Can be freely selected (-xxx, in mm) (minimum height with spigot position -S0 / -S1 = spigot diameter + 42 mm, minimum height at spigot position -S4 = spigot diameter + 67 mm)
- Width of plenum box:
  - Standard (-KBS)
  - Can be freely selected (-xxx in mm) (minimum width with spigot position -S0 = spigot diameter + 30 mm)
- Spigot diameter:
  - Standard (-SDS)
  - Can be freely selected (-xxx, in mm)
- Spigot position:
  - 1 spigot from above (-S0)
  - 1 lateral spigot on the box (-S1, standard)
  - 1 spigot front side (-S4)

Damper (-DK1), for AK-...

- made of galvanised sheet steel
- Adjustable at the front, for air volume regulation.

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

- Special rubber, on plenum box connection spigot

Thermal insulation (-Ii / -Ia), for AK-...

- internal (-Ii), inside the plenum box
- external (-Ia), on the outside of the plenum box (only available with already bent fixing lugs)

Hit-and-miss damper (-SS)

- Made of galvanised sheet steel (only possible for DSA-D0-... / DSA-VD-...)

Cover plate (-AB)

- Made of galvanised sheet steel painted to the colour of the faceplate (only possible for DSA-F0).

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Fastening

Permanent connection (-FV)

- Faceplate riveted to the plenum box (standard for DSA-F0-...) / DSA-V0-..., not possible for DSA-D0-... / DSA-VD-...)

Screw mounting (-SM)

- Standard for DSA-D0-... / DSA-VD-..., with indentation for slotted shallow-raised countersunk-head tapping screw DIN ISO 7051 ST3.9 (on site) (not possible for DSA-F0-... / DSA-V0-...)

Concealed mounting (-VM)

- Pole brace fastening (possible for DSA-D0-... / DSA-VD-..., at an extra charge) only available in connection with a plenum box. (not possible for DSA-F0-... / DSA-V0-...)

Attention:
Please note the adjustable nozzles may only be cleaned by wiping the nozzle with little pressure.

The nozzle jet diffuser DSA can be used up to a room temperature of +50 °C.

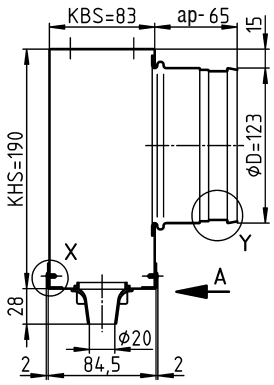
Nozzle Jet Diffuser Model DSA

Models and dimensions

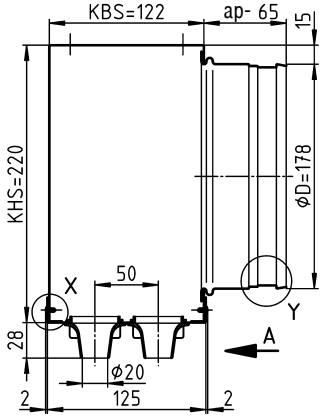
Dimensions DSA-F0 / V0 (single length)

DSA-F0-...-N-...-FV with AK-30-...-N-FV-...-S1
(with fixed nozzles, with faceplate riveted to the plenum box, lateral spigot position)

DSA-F0-...-1-...

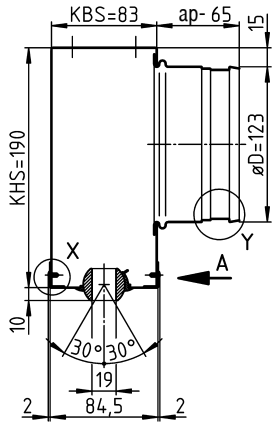


DSA-F0-...-2-...

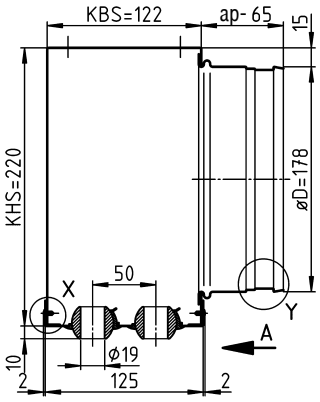


DSA-V0-...-N-...-FV with AK-30-...-N-FV-...-S1
(with manually individually adjustable nozzles, with faceplate riveted to the plenum box, lateral spigot position)

DSA-V0-...-1-...



DSA-V0-...-2-...



Available sizes DSA-F0 / V0-...

L	DSA-F0 / V0-...-1-...		DSA-F0 / V0-...-2-...	
	Number of nozzles	øD	Number of nozzles	øD
600	12	123	24	178
800	16	123	32	178
1000	20	123	40	178
1200	24	2 x 123	48	2 x 178

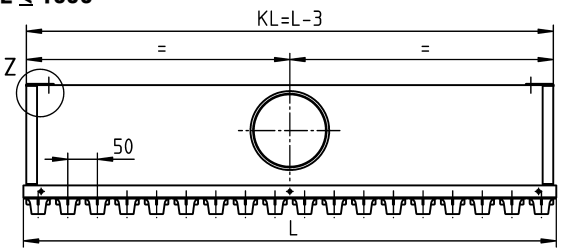
Minimum dimension KHS:
with spigot position S0 /S1 = spigot diameter øD + 42 mm
with spigot position S4 = spigot diameter øD + 67 mm

Minimum dimension KBS:
with spigot position S0 = spigot diameter øD + 30 mm

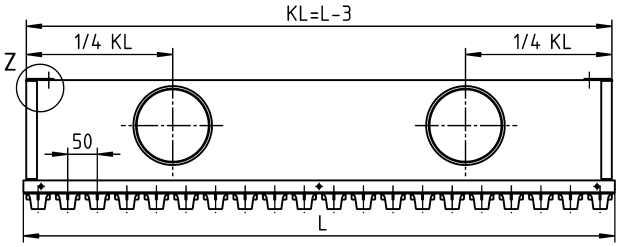
For detail X, see page 9. For detail Y see page 8.

Spigot arrangement AK
View A (DSA-F0 is shown, also valid for DSA-V0)

L ≤ 1000



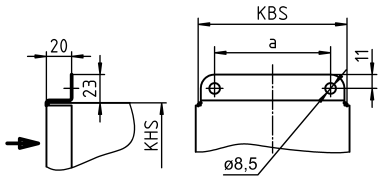
L > 1000



Plenum box mounting
Detail Z

as-delivered condition with fitted fixing lug

with bent fixing lug

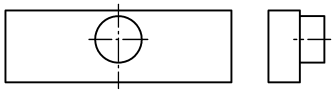


DSA-F0 / V0

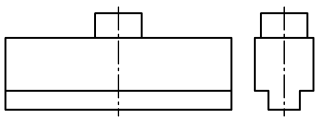
	a
DSA-...-1-...	57
DSA-...-2-...	96

Spigot position AK

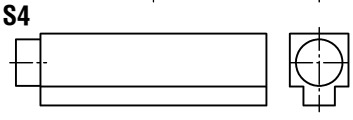
S1 (standard)



S0



S4



S0 = Spigot from above
S1 = Lateral spigot on the box (standard)
S4 = Spigot front side (not possible with band design)

Dimension AK-... for spigot position S0 and S4 on request.

Fastening (see page 9)
Permanent connection standard.
Screw mounting and concealed mounting not possible.

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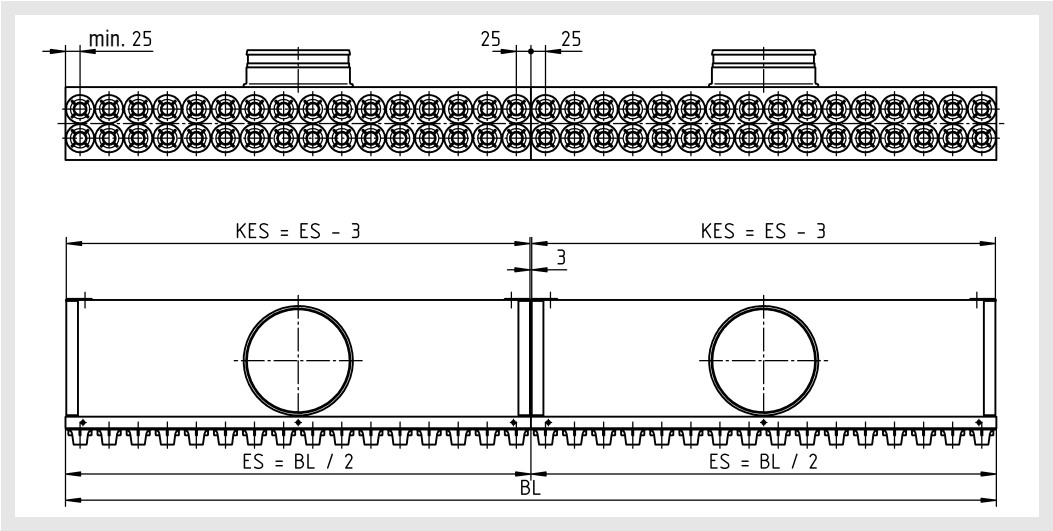
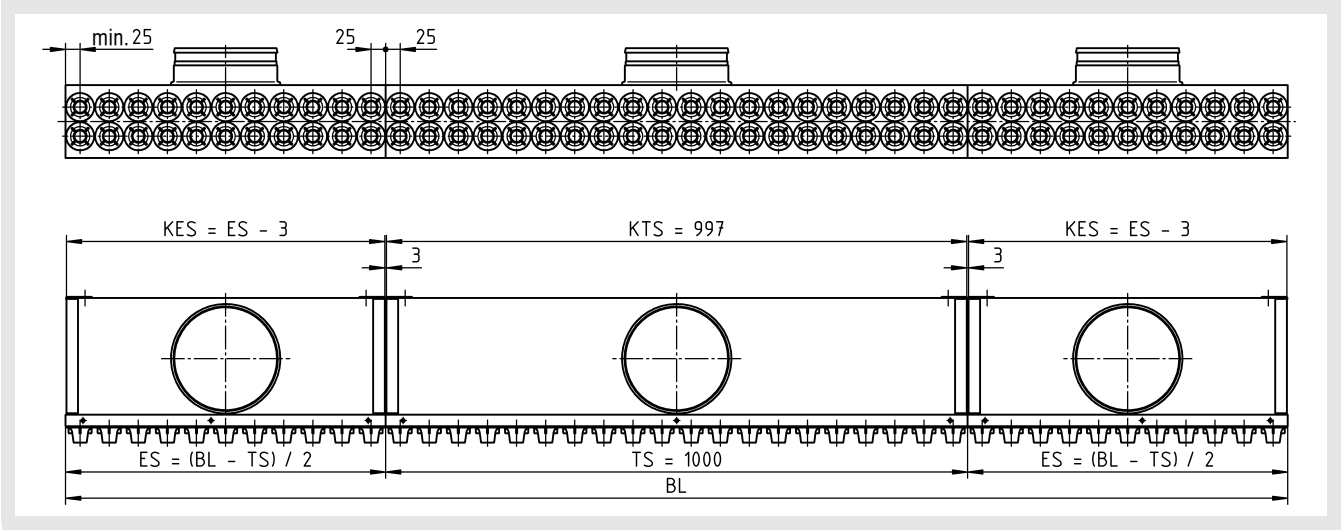
Band design DSA-F0 / V0

(DSA-F0 is shown, also valid for DSA-V0)

DSA-F0 / V0-…-B-…-FV with AK-30-…-B-FV-…-S1
2-part if length of band BL ≤ 2025 mm



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



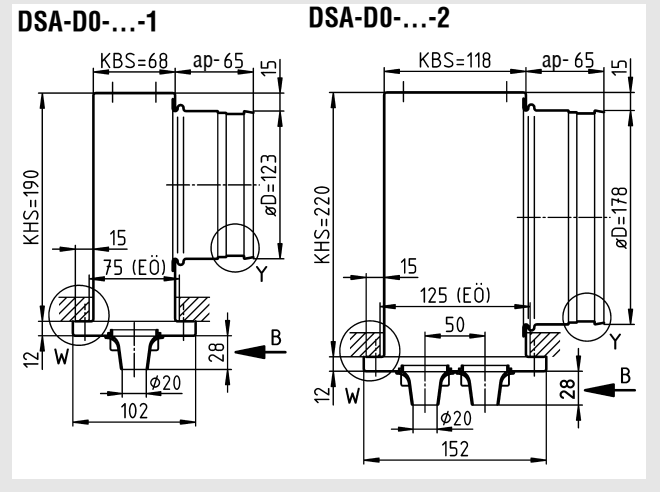
ES = End piece
TS = Section(s)
KES = Box end piece
KTS = Section(s) of the box
BL = Length of band

When the nozzle jet diffuser type DSA is designed as a band > 2025 mm, the total length BL is assembled from standard lengths (sections) L = 1000 mm. The end pieces ≤ 1200 mm to ≥ 400 mm can be fitted with a plenum box.
The end pieces < 400 mm are supplied as dummy pieces without plenum box. A different band division is possible after consultation and when required by the customer.

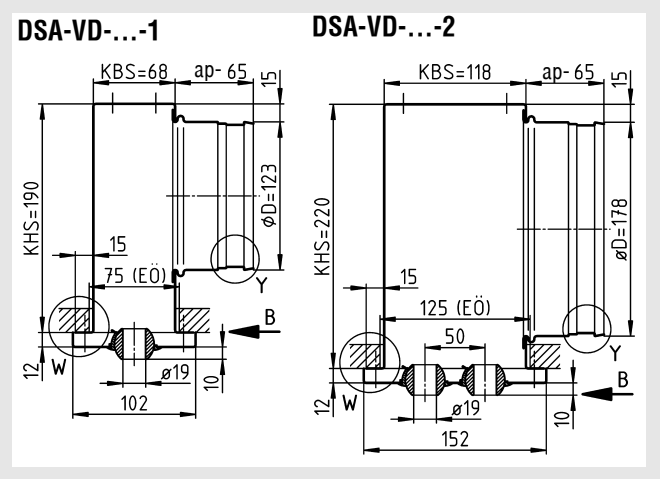
Nozzle Jet Diffuser Model DSA

Dimensions DSA-D0 / VD (single length)

DSA-D0-...-N-...-SM with AK-30-...-N-SM-...-S1
(with fixed nozzles, with dismountable faceplate, lateral spigot position)



DSA-VD-...-N-...-SM with AK-30-...-N-SM-...-S1
(with manually individually adjustable nozzles, with dismountable faceplate, lateral spigot position)



Available sizes DSA-D0 / VD-...

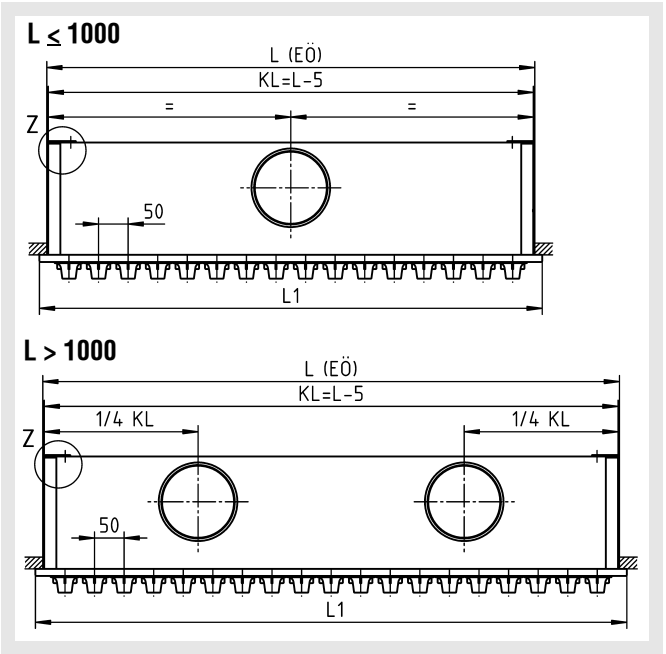
L	L1	DSA-D0 / VD-...-1-...		DSA-D0 / VD-...-2-...	
		Number of nozzles	øD	Number of nozzles	øD
625	650	12	123	24	178
825	850	16	123	32	178
1025	1050	20	123	40	178
1225	1250	24	2 x 123	48	2 x 178

Minimum dimension KHS:
with spigot position S0 /S1 = spigot diameter øD + 42 mm
with spigot position S4 = spigot diameter øD + 67 mm

Minimum dimension KBS:
with spigot position S0 = spigot diameter øD + 30 mm

For detail W, see page 9. For detail Y see page 8.
EÖ = Installation opening

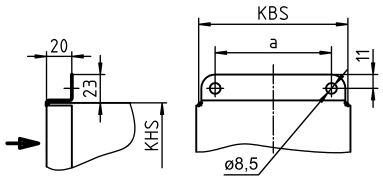
Spigot arrangement AK
View B (DSA-D0 is shown, also valid for DSA-VD)



Plenum box mounting
Detail Z

as-delivered condition with fitted fixing lug

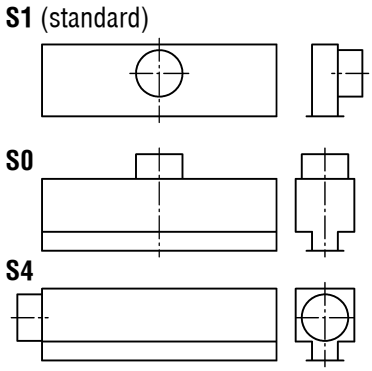
with bent fixing lug



DSA-D0 / VD

	a
DSA-...-1-...	42
DSA-...-2-...	92

Spigot position



S0 = Spigot from above
S1 = Lateral spigot on the box (standard)
S4 = Spigot front side (not possible with band design)

Dimension AK-... for spigot position S0 and S4 on request.

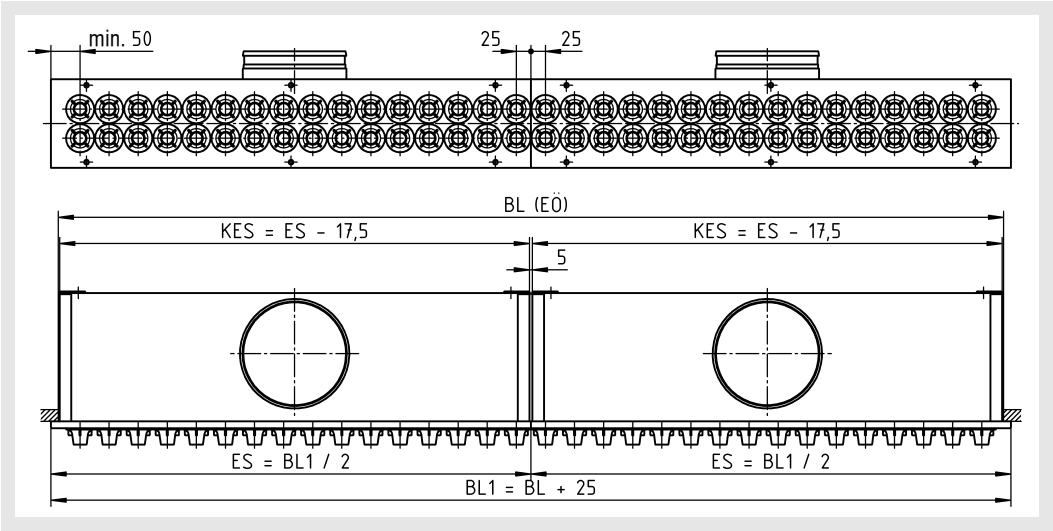
Fastening (see page 9)
Screw mounting standard.
Concealed mounting at an extra charge.
Permanent connection not possible.

Nozzle Jet Diffuser Model DSA

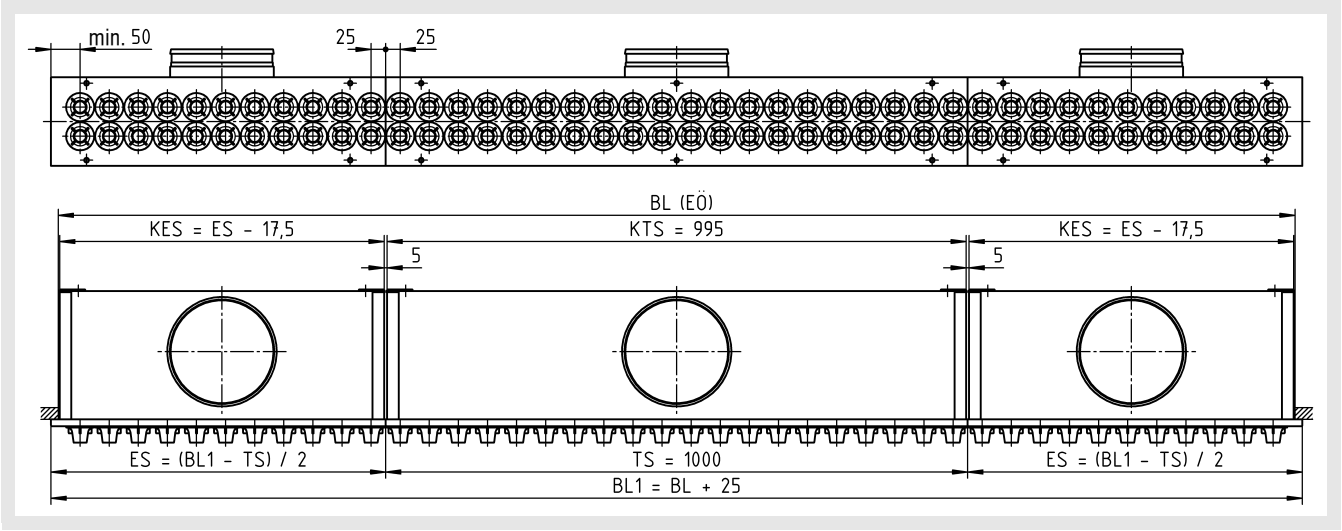
Band design DSA-D0 / VD

(DSA-D0 is shown, also valid for DSA-VD)

DSA-D0 / VD-…-B-…-SM with AK-30-…-B-SM-…-S1
2-part if length of band BL ≤ 2025 mm



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



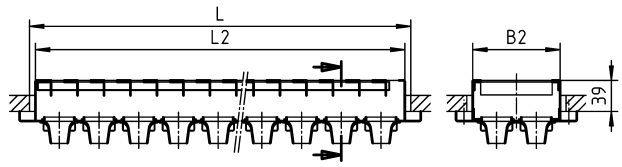
ES = End piece
TS = Section(s)
KES = Box end piece
KTS = Section(s) of the box
BL = Length of band
BL1 = Grille length
EÖ = Installation opening

When the nozzle jet diffuser type DSA is designed as a band > 2025 mm, the total length BL is assembled from standard lengths (sections) L = 1000 mm. The end pieces ≤ 1200 mm to ≥ 400 mm can be fitted with a plenum box.
The end pieces < 400 mm are supplied as dummy pieces without plenum box. A different band division is possible after consultation and when required by the customer.

Nozzle Jet Diffuser Model DSA

Dimensions of accessories

Hit-and-miss damper (-SS)
(DSA-D0 is shown, also valid for DSA-VD)
Only possible for DSA-D0-...- and DSA-VD-....

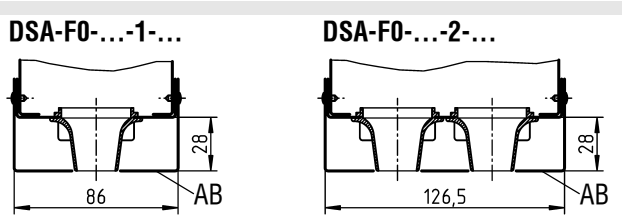


Available sizes (-SS)

L	L2
625	610
825	810
1025	1010
1225	1210

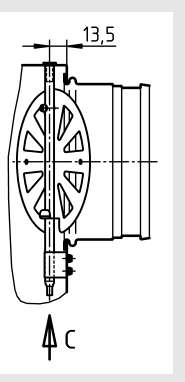
	B2
DSA-D0/VD-...-1-...	60
DSA-D0/VD-...-2-...	110

Cover plate (-AB)
(only possible for DSA-F0-...)

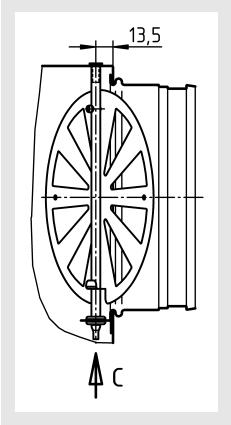


AB = cover plate

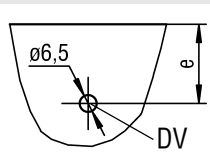
Damper (-DK1), for AK-...
DSA-...-1-...



DSA-...-2-...



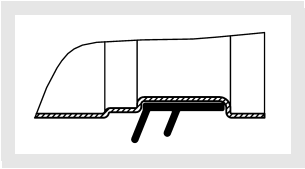
Damper adjustment in faceplate DSA-....
View C



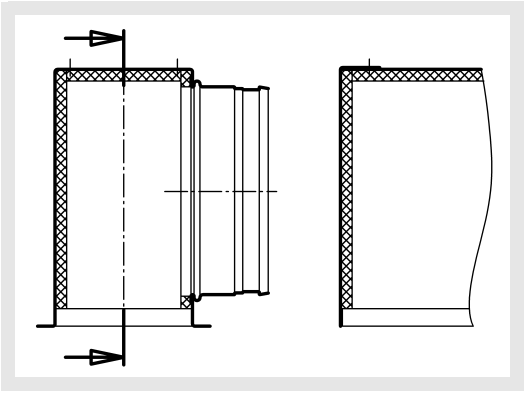
		e
DSA-F0-...	1 row	14
DSA-V0-...	2 row	15
DSA-D0-...	1 row	30,5
DSA-VD-...	2 row	

DV = Hole for damper adjustment

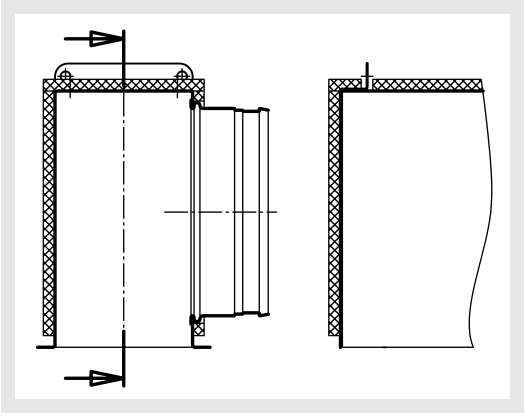
Rubber lip seal (-GD1), for AK-...
Detail Y



Thermal insulation (-li / -la), for AK-...
(Plenum box for DSA-D0/VD is shown, also valid for DSA-F0/V0)
internal (-li)



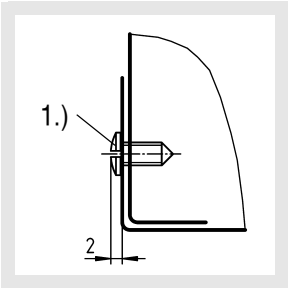
external (-la)
In case of an external insulation, the fixing lugs are already bent in the as-delivered condition.



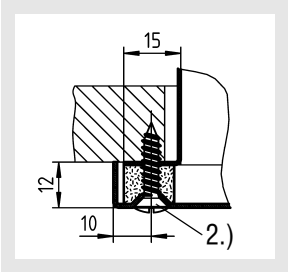
Nozzle Jet Diffuser Model DSA

Fastening methods

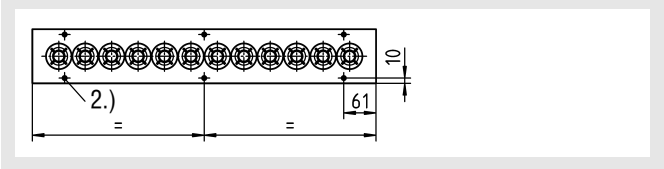
Permanent connection (-FV)
(Standard for DSA-F0-... and DSA-V0-..., not possible for DSA-D0-... and DSA-VD-...)
Detail X



Screw mounting (-SM)
(Standard for DSA-D0-... and DSA-VD-..., not possible for DSA-F0-... and DSA-V0-...)
Detail W

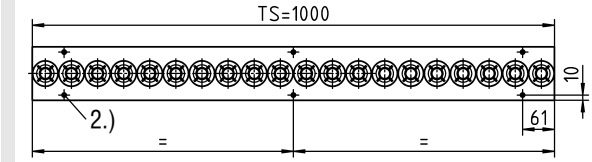


Number of indentations:
Single lengths with 6 indentations

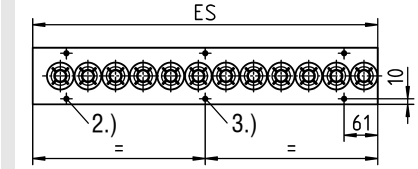


Band design

Section with 6 indentations

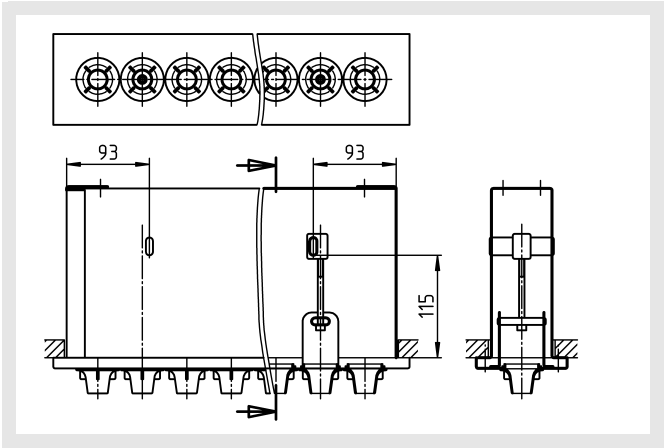


End piece with 6 or 4 indentations

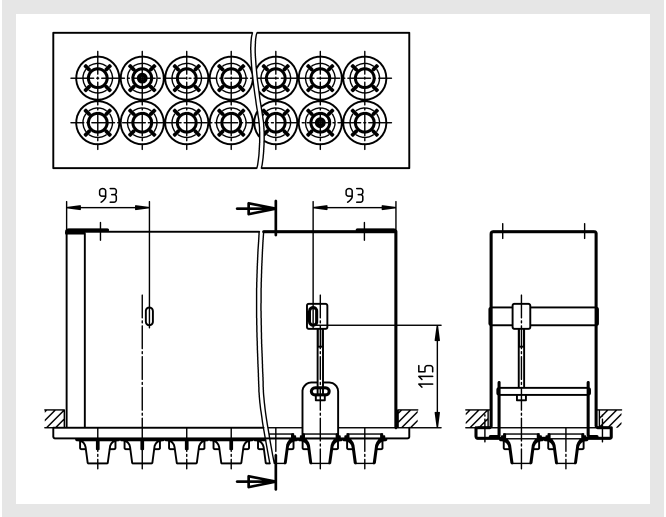


Concealed mounting (-VM)
(possible for DSA-D0-... and DSA-VD-..., not possible for DSA-F0-... and DSA-V0-...)
Only possible in connection with plenum box !

DSA-D0-...-1-... / DSA-VD-...-1-...
(DSA-D0 is shown, also valid for DSA-VD)



DSA-D0-...-2-... / DSA-VD-...-2-...
(DSA-D0 is shown, also valid for DSA-VD)



1.) Rivet DIN 7337- A 3.2 x 2-ST/ST
2.) Indentation for slotted shallow-raised countersunk-head tapping screw DIN ISO 7051 pitch 3.9 (on site)
3.) For end piece ≥ 625

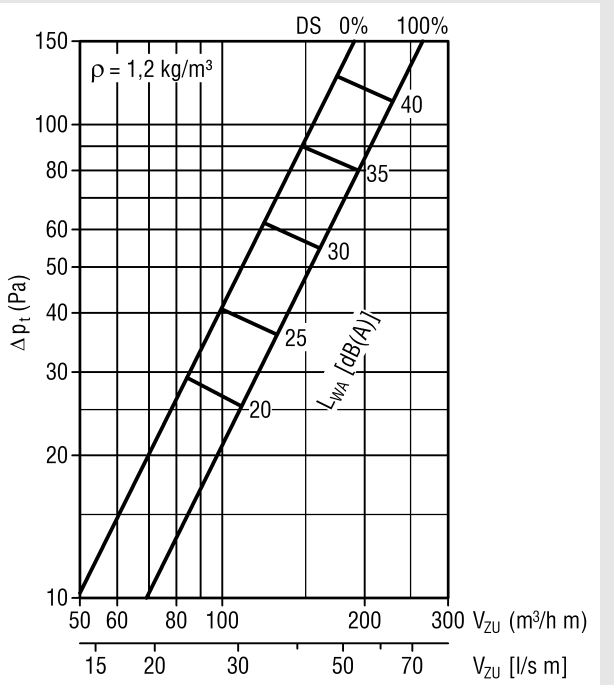
ES = End piece
TS = Section(s)

Nozzle Jet Diffuser Model DSA

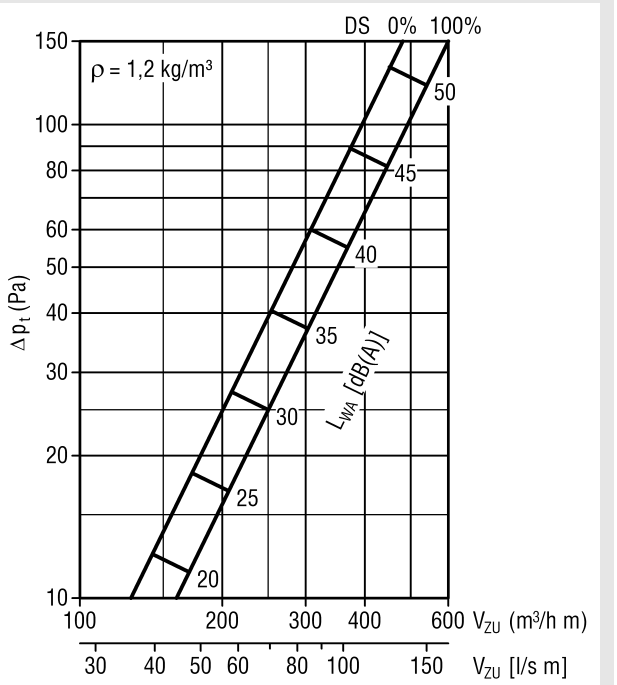
Technical data

Pressure loss and noise level

DSA-F0-...-1-... / DSA-D0-...-1-... (1 row)
L=1000



DSA-F0-...-2-... / DSA-D0-...-2-... (2 rows)
L=1000



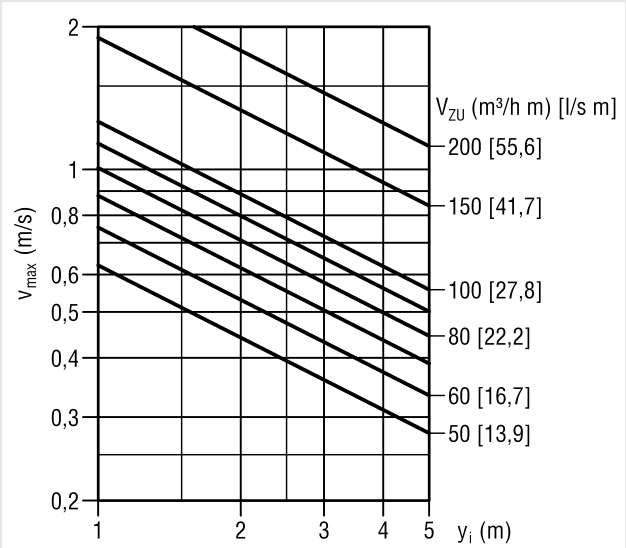
Damper position (DS): CLOSE = 0%
D
OPEN = 100%

Correction factor for sound power level
for DSA-V0-... and DSA-VD-... :
L_{WA}(DSA-V0/-VD-...) = 1.38 x (L_{WA}DSA-F0/-D0-...)

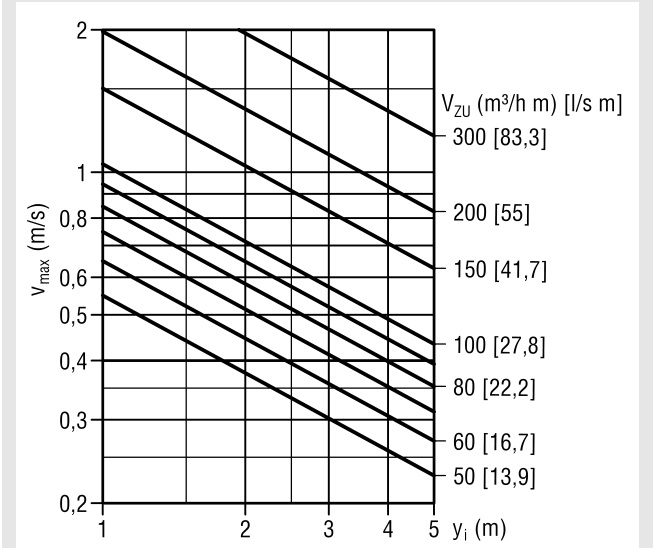
Nozzle Jet Diffuser Model DSA

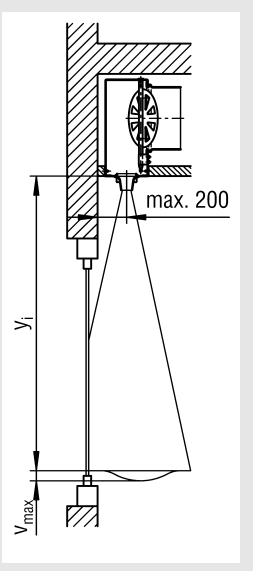
Maximum end velocity of jet

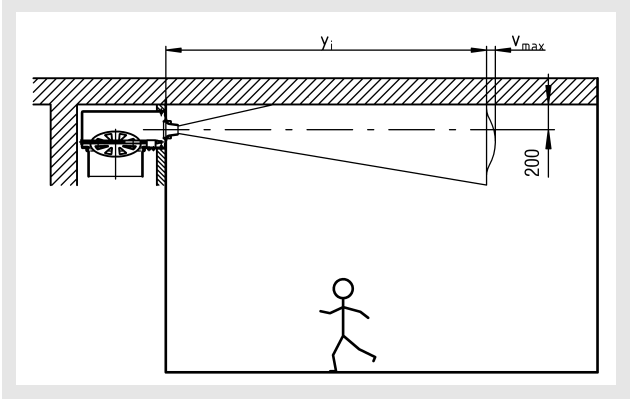
DSA-…-1-… (isothermal)



DSA-…-2-… (isothermal)







Correction factors medium speeds v_{mittel}		
vertical throw, with wall effect	DSA-...-1-...	DSA-...-2-...
	$v_{mittel} = v_{max} \times 0.7$	$v_{mittel} = v_{max} \times 0.65$

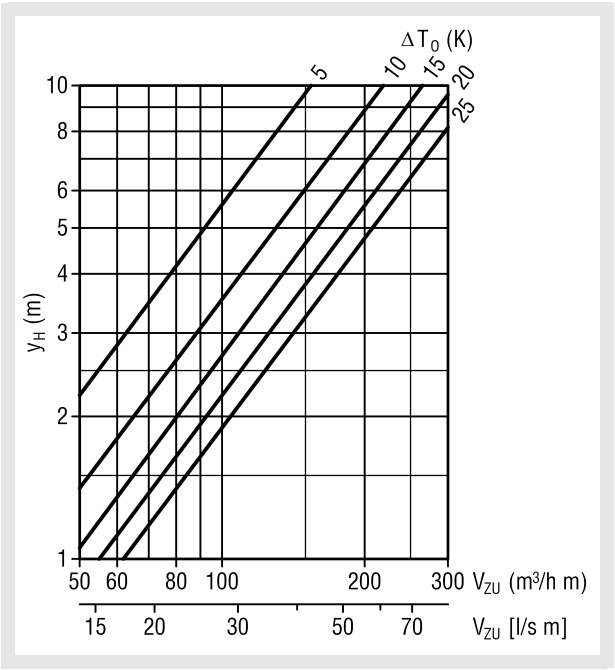
Correction factors medium speeds v_{mittel}		
Straight nozzles with horizontal throw, with coanda effect	DSA-...-1-...	DSA-...-2-...
	$v_{mittel} = v_{max} \times 0.7$	$v_{mittel} = v_{max} \times 0.7$

Correction factors medium speeds v_{mittel}		
nozzles with horizontal throw diverging with coanda effect	DSA-...-1-...	DSA-...-2-...
	$v_{mittel} = v_{max} \times 0.33$	$v_{mittel} = v_{max} \times 0.28$

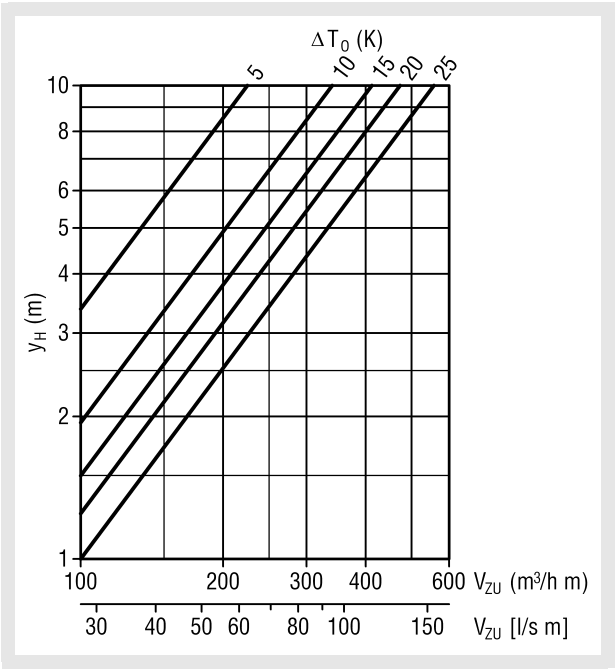
Nozzle Jet Diffuser Model DSA

Maximum penetration

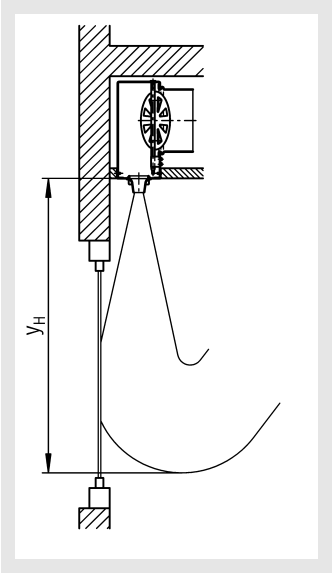
DSA-...-1 (in heating mode)



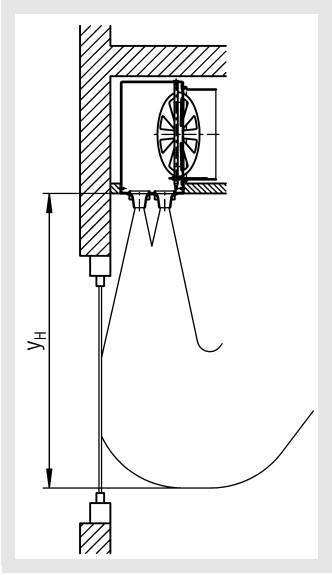
DSA-...-2-... (in heating mode)



DSA-...-1-...



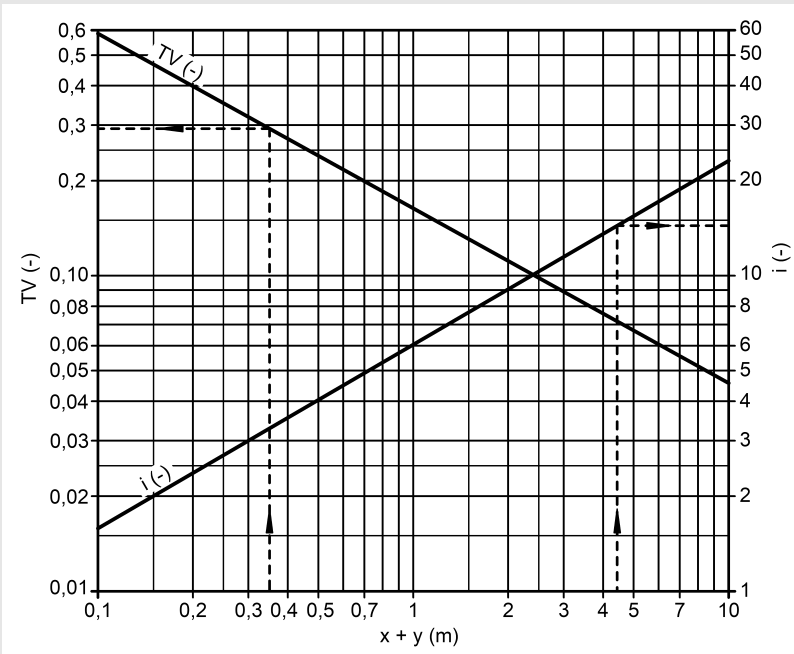
DSA-...-2-...



Nozzle Jet Diffuser Model DSA

Temperature and induction ratios

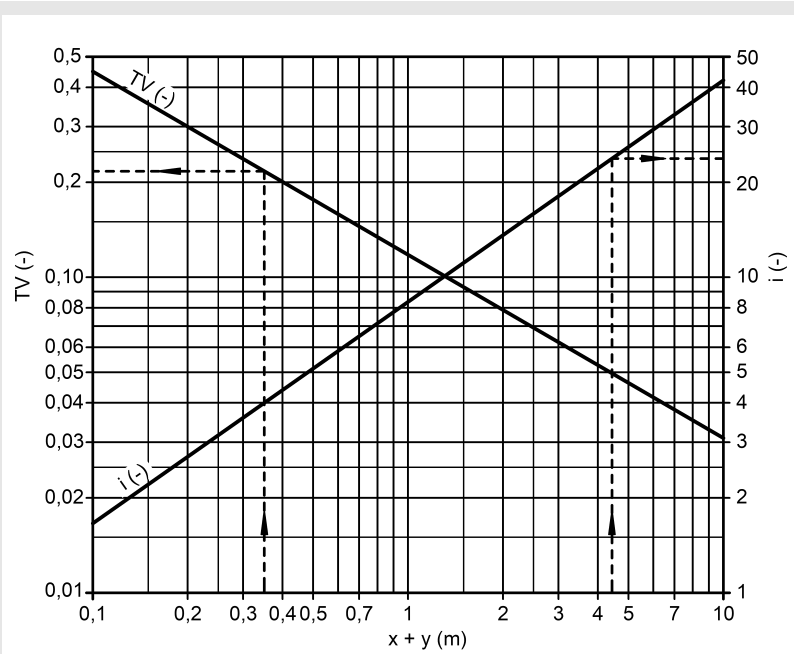
DSA-F0-...-1-... / DSA-D0-...-1-...



Correction factor
for DSA-F0-...-2-... / DSA-D0-...-2-...

i x 0.77
TV x 1.41

DSA-V0-...-1-... / DSA-VD-...-1-...



Correction factor
for DSA-V0-...-2-... / DSA-VD-...-2-...

i x 0.77
TV x 1.41

Nozzle Jet Diffuser Model DSA

Legend

Δp_t	(Pa)	=	Pressure loss
V_{ZU}	(m³/h m)	=	Supply air volume per metre
V_{ZU}	[l/s m]	=	Supply air volume per metre
L_{WA}	[dB(A)]	=	A-weighted sound power level
ρ	(kg/m³)	=	Density
v_{max}	(m/s)	=	Maximum end velocity of jet
y_H	(m)	=	Maximum penetration in heating mode
y_i	(m)	=	Maximum penetration (isothermal)
ΔT_0	(K)	=	Temperature difference between supply air temperature and room temperature ($\Delta T_0 = t_{ZU} - t_R$)
t_{zu}	(K)	=	Supply air temperature
t_R	(K)	=	Room temperature
TV	(-)	=	Temperature ratio ($TV = \Delta T_X / \Delta T_0$)
i	(-)	=	Induction ratio ($i = V_X / V_{ZU}$)
x+y	(m)	=	Horizontal + vertical throw
L	(mm)	=	Length
ΔT_X	(K)	=	Temperature difference at point x
V_X	(m³/h)	=	total air jet volume at point x
V_X	[l/s]	=	total air jet volume at point x

Nozzle Jet Diffuser Model DSA

Order details DSA

01	02	03	04	05
Type	Model	Length	Height	Single / band design
Example				
DSA	-F0	-00600	-1	-N

06	07	08	09	10	11
Material	Paint	Nozzle colour	Fastening	Hit-and-miss damper	Cover plate
-SB	-F9010	-DW	-FV	-SN	-B0

Sample
DSA-F0-00600-1-N-SB-F9010-DW-FV-SN-B0

Nozzle jet diffuser type DSA I with fixed nozzles and faceplate riveted to the plenum box I length 600 mm I one row I single length I sheet steel I painted to RAL colour 9010 I white similar to RAL9010 I with fixed connection I without hit-and-miss damper I without cover plate

Order details

01 - Type

DSA = Nozzle Jet Diffuser Model DSA

02 – Model

F0 = with fixed nozzles and faceplate riveted to the plenum box
V0 = with manually individually adjustable nozzles and faceplate riveted to the plenum box
D0 = with fixed nozzles and faceplate dismountable
VD = with manually individually adjustable nozzles and faceplate dismountable

03 - Length

00600 = Grille length 600 mm (DSA-F0-... / DSA-V0-...)
00625 = Grille length 625 mm (DSA-D0-... / DSA-VD-...)
00800 = Grille length 800 mm (DSA-F0-... / DSA-V0-...)
00825 = Grille length 825 mm (DSA-D0-... / DSA-VD-...)
01000 = Grille length 1000 mm (DSA-F0-... / DSA-V0-...)
01025 = Grille length 1025 mm (DSA-D0-... / DSA-VD-...)
01200 = Grille length 1200 mm (DSA-F0-... / DSA-V0-...)
01225 = Grille length 1225 mm (DSA-D0-... / DSA-VD-...)
xxxxx = Band design (always with 5 digits)
- available from BL > 1200 mm for DSA-F0-... / DSA-V0-...
- available from BL > 1225 mm for DSA-D0-... / DSA-VD-...

04 - Height

1 = nozzles, 1 row
2 = nozzles, 2 rows

05 - Single / band design

N = Single length
B = Band design (two pieces and more)
- for DSA-F0-... / DSA-V0-... available from BL >1200 mm
- for DSA-D0-... / DSA-VD-... available from BL >1225 mm

06 - Material

SB = Sheet steel (standard)

07 – Paint

9010 = RAL 9010 (white, standard)
9005 = RAL9005 (black)
xxxx = painted to RAL colour of your choice (always with 4 digits)

08 - Nozzle colour

DS = black, similar to RAL 9005
DA = white aluminium, similar to RAL9006
DW = white, similar to RAL 9010 (standard)

09 - Fastening

FV = Permanent connection (standard for DSA-F0-... / DSA-V0-..., not possible for DSA-D0-... and DSA-VD-...)
SM = Screw mounting (standard for DSA-D0-... / DSA-VD-..., not possible for DSA-F0-... / DSA-V0-...)
VM = concealed mounting (possible for DSA-D0-... / DSA-VD-..., not possible for DSA-F0-... / DSA-V0-...)

10 - Hit-and-miss damper

SN = without hit-and-miss damper
SS = with hit-and-miss damper (only possible for DSA-D0-... / DSA-VD-...)

11 - Cover plate

A0 = without cover plate (standard)
AB = with cover plate (only possible for DSA-F0-..., painted to the RAL colour of the faceplate)

Nozzle Jet Diffuser Model DSA

Order details AK DSA

01	02	03	04	05	06	07
Type	Air diffuser	Length	Height	Single / band design	Fastening	Material
Example						
AK	-30	-00600	-068	-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

Sample
AK-30-00600-068-N-SM-SV-DK1-GD1-I0-KHS-KBS-SDS-S1

Plenum box, rectangular design | suitable for diffuser type DSA | length 600 mm | height 68 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

30 = for nozzle jet diffuser type DSA-...

03 - Length

00600 = Grille length 600 mm (DSA-F0-... / DSA-V0-...)
00625 = Grille length 625 mm (DSA-D0-... / DSA-VD-...)
00800 = Grille length 800 mm (DSA-F0-... / DSA-V0-...)
00825 = Grille length 825 mm (DSA-D0-... / DSA-VD-...)
01000 = Grille length 1000 mm (DSA-F0-... / DSA-V0-...)
01025 = Grille length 1025 mm (DSA-D0-... / DSA-VD-...)
01200 = Grille length 1200 mm (DSA-F0-... / DSA-V0-...)
01225 = Grille length 1225 mm (DSA-D0-... / DSA-VD-...)
xxxxx = Length in mm for band design > 1200 mm) (always with 5 digits)

04 - Height

068 = 1 row (DSA-D0-...-1-... / DSA-VD-...-1-...)
083 = 1 row (DSA-F0-...-1-... / DSA-V0-...-1-...)
118 = 2 row (DSA-D0-...-2-... / DSA-VD-...-2-...)
122 = 2 row (DSA-F0-...-2-... / DSA-V0-...-2-...)

05 - Single / band design

N = Single length (standard)
B = Band design (module length max. 1200mm)

06 - Fastening

FV = Permanent connection (standard for DSA-F0-... / DSA-V0-..., not possible for DSA-D0-... / DSA-VD-...)
SM = Screw mounting (standard for DSA-D0-... / DSA-VD-..., screws are provided on site, not possible for DSA-F0-... / DSA-V0-...)
VM = Concealed mounting (not possible for DSA-F0-... / DSA-V0-...)

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 external box insulation (only available with already bent fixing lugs)

11 - Height of plenum box

KHS = Height of plenum box standard
xxx = Box height in mm (minimum height with spigot position S0 / S1 = spigot diameter øD + 42 mm, minimum height with spigot position S4 = spigot diameter øD + 67 mm, always with 3 digits)

12 - Width of box

KBS = Standard width of box
xxx = Width of box in mm (minimum width with spigot position S0 = spigot diameter øD + 30 mm, always with 3 digits)

13 - Spigot diameter

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

14 - Spigot arrangement

S0 = Spigot from above
S1 = Lateral spigot on the box (standard)
S4 = Spigot front side (not possible with band design)

Nozzle Jet Diffuser Model DSA

Specification texts

Nozzle jet diffuser for installation in ceilings or floors. Faceplate riveted to plenum box.

- With fixed plastic nozzles.
  Product: SCHAKO **type DSA-F0-…-FV-…**
- With individually manually adjustable plastic nozzles.
  Product: SCHAKO **type DSA-V0-…-FV-…**

Nozzle jet diffuser for installation in ceilings or floors. With dismountable faceplate. With indentations for screwed mounting (-SM, standard) of concealed mounting (-VM, traverse fixing, only possible in connection with a plenum box).

- With fixed plastic nozzles.
  Product: SCHAKO **type DSA-D0-…-SM/-VM-…**
- With individually manually adjustable plastic nozzles.
  Product: SCHAKO **type DSA-VD-…-SM/-VM-…**

Grille length:

- 600 (-00600) (DSA-F0-... / DSA-V0-...)
- 625 (-00625) (DSA-D0-... / DSA-VD-...)
- 800 (-00800) (DSA-F0-... / DSA-V0-...)
- 825 (-00825) (DSA-D0-... / DSA-VD-...)
- 1000 (-01000) (DSA-F0-... / DSA-V0-...)
- 1025 (-01025) (DSA-D0-... / DSA-VD-...)
- 1200 (-01200) (DSA-F0-... / DSA-V0-...)
- 1225 (-01225) (DSA-D0-... / DSA-VD-...)
- Band design (-xxxxx, always with 5 digits)
  - available from BL > 1200 mm for DSA-F0-... / DSA-V0-...
  - available from BL > 1225 mm for DSA-D0-... / DSA-VD-...

Grille height

- Nozzles 1 row (-1)
- Nozzles 2 row (-2)

Single / band design:

- Single length (-N)
- Band design (-B, two pieces and more)
  - for DSA-F0-... / DSA-V0-... available from BL >1200 mm
  - for DSA-D0-... / DSA-VD-... available from BL >1225 mm

Material / paint:

- Sheet steel painted to RAL 9010 (-SB-9010, white, standard)
- Sheet steel painted to RAL 9005 (-SB-9005, black)
- Sheet steel painted to RAL colour of your choice (-SB-xxxx)

Nozzle colour:

- white, similar to RAL colour 9010 (-DW, standard)
- black, similar to RAL colour 9005 (-DS, standard)
- white aluminium, similar to RAL colour 9006 (-DA)

Accessories:

- Plenum box (-AK-30), in rectangular design. Housing with round connection spigot and fixing lugs made of galvanised sheet steel (-SV).
  - Fastening:
    - Permanent connection (-FV) (standard for DSA-F0-... / DSA-V0-..., not possible for DSA-D0-... / DSA-VD-...)
    - Screw mounting (-SM, standard, screws must be provided on site, not possible for DSA-F0-... / DSA-V0-...)
    - Concealed mounting (-VM, not possible for DSA-F0-... / DSA-V0-...)
  - throttle damper (-DK1) in the plenum box, adjustable at the front, made of galvanised sheet steel for air volume regulation.
  - rubber lip seal (-GLD1), made of special rubber, at the plenum box connection spigot
  - with thermal insulation
    - internal (-Ii), inside the plenum box
    - external (-Ia), on the outside of the plenum box (only available with already bent fixing lugs)
  - Height of plenum box:
    - Standard (-KHS)
    - Can be freely selected (-xxx, in mm) (minimum height with spigot position -S0 / -S1 = spigot diameter øD + 42 mm, minimum height with spigot position -S4 = spigot diameter øD + 67 mm)
  - Width of plenum box:
    - Standard (-KBS)
    - Can be freely selected (-xxx in mm) (minimum width with spigot position -S0 = spigot diameter øD + 30 mm)
  - Spigot diameter:
    - Standard (-SDS)
    - Can be freely selected (-xxx, in mm)
  - Spigot position:
    - 1 spigot from above (-S0)
    - 1 lateral spigot on the box (-S1, standard)
    - 1 spigot front side (-S4)
- Hit-and-miss damper (-SS) made of galvanised sheet steel (only possible for DSA-D0-... and DSA-VD-...)
- Cover sheet (-AB), made of galvanised sheet steel painted to the colour of the faceplate (only possible for DSA-F0-...).