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### **Description**

Modern office buildings are often built without suspended ceilings. This opens up a saving potential regarding the floor heights. This means that the same building height can accommodate more floors.

To provide the possibly cheapest office space creates conflicts with the demand for comfort. Therefore, to reduce the room temperatures, in some cases component cooling systems are used for the ground load cooling.

According to the thermal isolation regulations, an air-conditioning installation is demanded for dense facades, to prevent building damage and mould fungus. The necessary supply and return air ducts are preferably installed between the false ceiling in the corridors. In doing so, the main ducts and the connection lines for each room are installed in the smallest possible space.

The air diffuser system with integrated cross-talk sound attenuator has been developed for this application. The integrated cross-talk sound attenuator performs the same function as the cross-talk sound attenuators previously inserted separately into the ducting system, for which there is seldom sufficient space available. The transmission of cross-talk sound through the ducting system is thus effectively prevented.

The AUDIX®-AW air diffuser system reduces the installation costs, as an additional cross-talk sound attenuator is not required and the integrated cross-talk sound attenuator saves space in the corridor area. The dimensions of the AUDIX®-AW air diffuser system have been adjusted to the requirements in dry building and can be fitted completely in front of lightweight partition walls, thus facilitating the cooperation between the dry builders and the air conditioning installers and saving assembly time. The diffuser can be installed subsequently with a spring connection, thus avoiding damage to the diffuser during the building phase. As an accessory, covers for the opening made of galvanised sheet steel are available, which can be fitted during the building phase to avoid contamination of the box.

The air diffuser system AUDIX®-AW consists of galvanised sheet steel and an inner insulation made of special insulating panels, which are laid out in a reverse labyrinth.

The plenum box can be combined with the proven slot diffusers from SCHAKO, thus allowing greater design freedom.

The slot diffusers DSC, DSX and DSX-XXL-W allow the ceiling flow to be adjusted, thus contributing to increasing the efficiency of the convective performance of cooling ceilings.

The slot diffusers from SCHAKO integrated into the AUDIX®-AW unit achieve a draught-free air pattern with long throws. The free cross-section remains the same for all adjustable jet directions, as a result of which the pressure loss and the sound volume also stay the same. A subsequent change of the air outflow direction on site is possible at any time, even when the diffuser has already been fitted. The connection of the slot diffuser is performed using springs, which allows easy fitting. This also allows easy dismounting, making for easy cleaning of the diffusers. The AUDIX®-AW units can also be used as combination diffuser for supply and return air as a continuous band with one slot dif-

fuser plenum box each for supply and return air.

A damper at the connection pipe is used to control the air volume and is adjustable from the room side by means of a cable.

#### Advantages:

- Prevents air from entering or escaping from the dry wall construction filled with mineral wool, thus creating a hygienically optimum situation.
- The fastening system included in the delivery facilitates mounting, allowing it to be mounted by the RLT or dry builders.
- Excellent sound-absorbing properties
- Acoustic insulating panels of building material class B1 (standard) or building material class A2 (non-flammable to DIN 4102 at an extra charge)

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# Characteristics of each slot diffuser: AUDIX®-AW-...-DSX:

The air outflow direction can also be adjusted even after installation of the diffuser. In doing so, the free cross-section always remains constant. Likewise, the pressure loss and noise level do not change. A subsequent adjustment of the air jet pattern to changed room conditions is possible. For adjustment, single blades must be taken out and put back turned into the required air direction. The stable air jet means that the diffuser is suitable for VAV systems.

### AUDIX®-AW-...-DSX-XXL-W:

The air outflow direction is set by factory at a horizontal, slightly upwards outflow position. The high induction ensures fast reduction of the air outflow velocity and of the temperature difference in the cooling mode. The stable air jet means that the diffuser is suitable for VAV systems.

### AUDIX®-AW-...-DSC:

The support profile blades produce a stable jet set to a horizontal throw, directed slightly upwards. Due to the central housing of the support profile blades, the free cross-section is always the same. Accordingly, when the blades are adjusted, the pressure loss and sound power level remain constant. An adjustment of the air outflow direction at a later stage is possible at any time, even when the outlet has already been fitted.

### AUDIX®-AW-...-DSA:

The fixed or adjustable nozzles (-V) produce a stable core jet. Their low noise level allows a high blow velocity, resulting in correspondingly long throw distances. This ensures that fresh air is circulated through the whole room and not just near the supply air diffuser. The temperature and the velocity are broken down quickly.

### Construction

#### Plenum box

- Galvanised sheet steel
- with round or rectangular connection pipe

#### Insulation

- Housing inside lined with fibre-free insulating material, formed as reverse labvrinth.
- Acoustic insulating panels of building material class B1 (standard) or building material class A2 (non flammable to DIN 4102)

#### Slot rails

- for the AUDIX®-AW-DSX, AUDIX®-AW-DSX-XXL-W and AUDIX®-AW-DSC models
- Aluminium natural colour anodised E6/EV1
- Aluminium painted to RAL 9010 (white) at an extra charge

#### **Faceplate**

- for AUDIX®-AW-DSA model
- Sheet steel painted to RAL 9010 (white)

#### Air guide elements

- for the AUDIX®-AW-DSX and AUDIX®-AW-DSX-XXL-W models
- Plastic, similar to RAL colour 9010 (white) or RAL 9005 (black)

#### Blades

- for AUDIX®-AW-DSC model
- Plastic (hard PVC) similar to RAL colour 9010 (white) or RAL 9005 (black, standard)
- Aluminium painted to the same RAL colour as the frame profile (at an extra charge). The painted blades cannot be adjusted subsequently

#### Nozzles

- for AUDIX®-AW-DSA model
- Plastic, similar to RAL colour 9010 (white) or RAL 9005 (black)

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#### Model

AUDIX®-AW-R

- for installation in walls, with round connection pipe

AUDIX®-AW-RE

- for installation in walls, with rectangular connection pipe

AUDIX®-AW-...-Z

- only supply air

AUDIX®-AW-...-A

- only return air

AUDIX®-AW-...-Z/A

- for supply and return air

AUDIX®-AW-...-DSX

- with slot diffuser type DSX

- 1- to 4-slot

- with narrow frame profile (-P) or wide frame profile (-

AUDIX®-AW-...-DSX-XXL-W

with slot diffuser type DSX-XXL-W

- 1- to 2-slot

with narrow frame profile (-P) or wide frame profile (-PR)

AUDIX®-AW-...-DSC

- with slot diffuser type DSC

- 1- to 2-slot

with standard frame profile (-) or special frame profile (-P)

AUDIX®-AW-...-DSA

- with nozzle jet diffuser type DSA

1 row

- with fixed nozzles (-D) or adjustable nozzles (-VD)

### **Accessories**

Damper (-DK)

- manually adjustable from corridor

- Throttle damper made of galvanised sheet steel

- Damper fastening made of plastic

Rubber lip seal (-GD)

- Special rubber (AUDIX®-AW-R only)

Cover (-ÖA)

- Galvanised sheet steel

Box neck extension (-KHV)

- for wall thicknesses > 100 mm up to max. 260 mm

### **Fastening**

Prong fastening (-BK, for AUDIX®-AW...-DSX / -DSX-XXL)

- concealed prong fastening for subsequent mounting and dismounting of the diffuser

Spring connection (-FM, for AUDIX®-...-DSC /-DSA)

- concealed spring connection for subsequent mounting and dismounting of the diffuser

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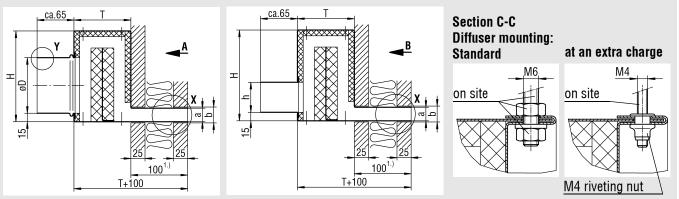


### **Models and dimensions**

### **Dimensions**

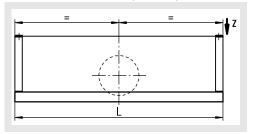
AUDIX®-AW-R

### **AUDIX®-AW-RE**

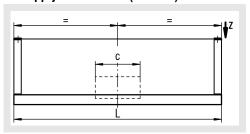


1.) For wall thicknesses >100 mm, a box neck extension (up to max. 260 mm) is required.

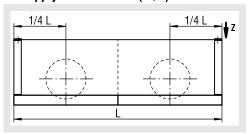
# View A for supply or return air (-Z or -A)



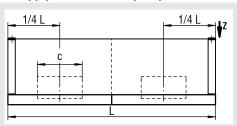
# View B for supply or return air (-Z or -A)



### for supply and return air (-Z/A)



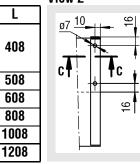
### for supply and return air (-Z/A)



### **Available sizes**

|           |                       |                    |        |     | AUDIX® | -AW-R | AUD | $IX^{	ext{	ext{	iny P}}}-AV$ | V-RE | Number                       |
|-----------|-----------------------|--------------------|--------|-----|--------|-------|-----|------------------------------|------|------------------------------|
|           |                       | a <sub>außen</sub> | b (WÖ) | Т   | øD     | Н     | С   | h                            | Н    | of con-<br>nection<br>blades |
| DSX       | 1-slot                | 24                 | 28     | 100 | 98     | 170   | 132 | 55                           | 130  | 1                            |
|           | 2-slot                | 38                 | 42     | 120 | 123    | 210   | 209 | 55                           | 150  | 1                            |
|           | 3-slot                | 52                 | 56     | 120 | 123    | 210   | 209 | 55                           | 150  | 1                            |
|           | 4-slot                | 66                 | 70     | 180 | 123    | 270   | 209 | 55                           | 210  | 2                            |
| DSX-XXL-W | 1-slot                | 42                 | 46     | 140 | 138    | 250   | 145 | 100                          | 210  | 1                            |
|           | 2-slot                | 74                 | 78     | 220 | 138    | 330   | 145 | 100                          | 290  | 2                            |
| DSC       | 1-slot                | 54                 | 58     | 100 | 98     | 170   | 132 | 55                           | 130  | 1                            |
|           | 2-slot                | 94                 | 98     | 140 | 138    | 250   | 145 | 100                          | 210  | 1                            |
| DSA-D     | Single-nozzle rows    | 66                 | 70     | 120 | 123    | 210   | 209 | 55                           | 150  | 1                            |
| DSA-VD    | Single-nozzle<br>rows | 52                 | 56     | 120 | 123    | 210   | 209 | 55                           | 150  | 1                            |

View Z



Wall opening in the length: L+5

WÖ = wall opening

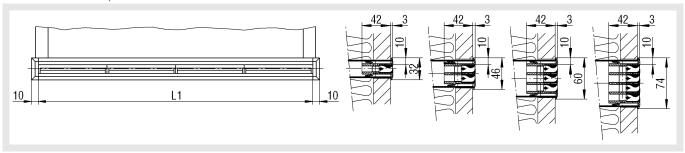
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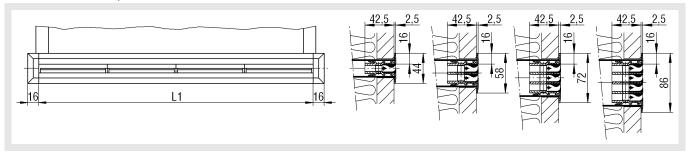
### Diffuser models

Detail X

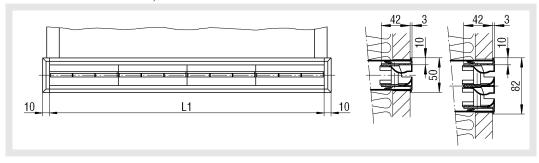
**AUDIX®-AW-DSX-P**, 1 to 4 slots



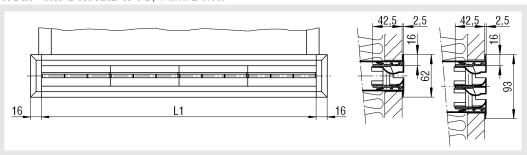
### **AUDIX®-AW-DSX-PB**, 1 to 4 slots



### AUDIX®-AW-DSX-XXL-W-P, 1 and 2 slots



### AUDIX®-AW-DSX-XXL-W-PB, 1 and 2 slots



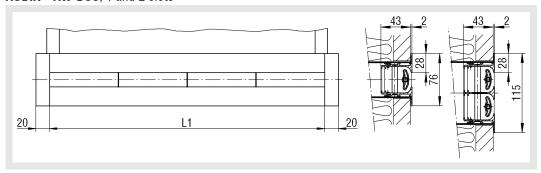
### **Available sizes**

| L    | L1   |
|------|------|
| 408  | 400  |
| 508  | 500  |
| 608  | 600  |
| 808  | 800  |
| 1008 | 1000 |
| 1208 | 1200 |

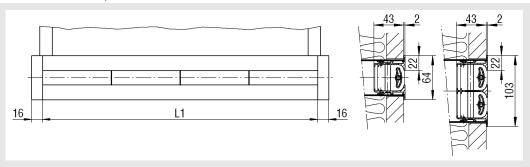
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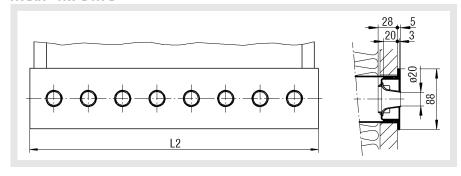
### AUDIX®-AW-DSC, 1 and 2 slots



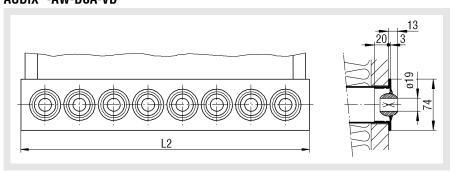
### **AUDIX®-AW-DSC-P**, 1 and 2 slots



### AUDIX®-AW-DSA-D



### AUDIX®-AW-DSA-VD



### **Available sizes**

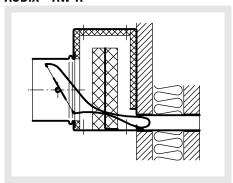
| L    | L1   | L2   |
|------|------|------|
| 408  | 400  | 420  |
| 508  | 500  | 520  |
| 608  | 600  | 620  |
| 808  | 800  | 820  |
| 1008 | 1000 | 1020 |
| 1208 | 1200 | 1220 |

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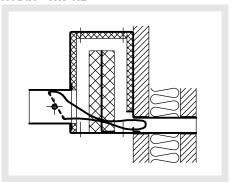


### **Dimensions of accessories**

 $\begin{array}{l} \textbf{Damper (-DK)}, \text{ with cable adjustment} \\ \textbf{AUDIX}^{\circledR}\textbf{-AW-R} \end{array}$ 

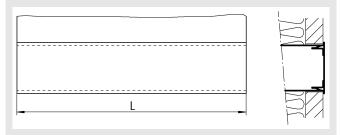


AUDIX®-AW-RE

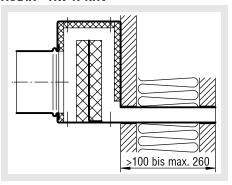


### Cover (-ÖA)

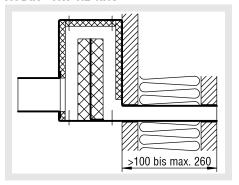
To prevent contamination or damage during assembly.



# Box neck extension (-KHV) AUDIX®-AW-R-KHV

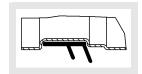


### **AUDIX®-AW-RE-KHV**



# Rubber lip seal (-GD) (only AUDIX $^{\otimes}$ -AW-R)

Detail W

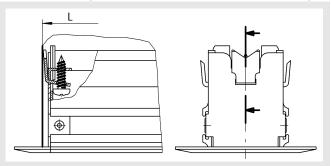


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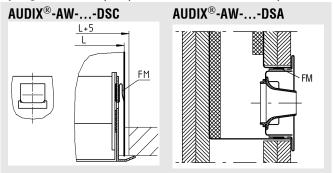
### **Fastening methods**

Prong fastening (-BK, for AUDIX®-AW...-DSX / -DSX-XXL)



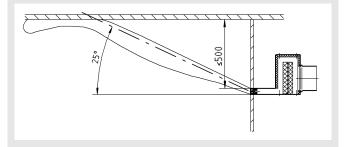
The prong fastening (-BK) is always attached to the front (to the end pieces).

### Spring connection (-FM) for $\text{AUDIX}^\circledast\text{-}\dots\text{-}\text{DSC}$ /-DSA)



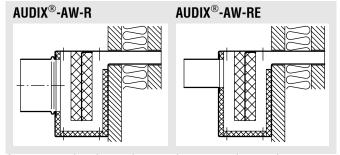
The spring connection (FM) is always attached to the diffuser on the longitudinal side.

### Installation **Optimum installation**



The clearance between ceiling and upper edge of the diffuser must not exceed 0.5 m, otherwise no coanda effect is achieved!

### Installation of plenum box rotated

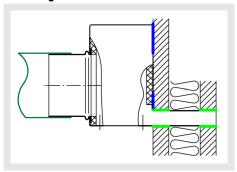


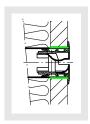
On request, the plenum box can be mounted rotated.

#### Attention!

If the plenum box is mounted rotated, there is a risk of dirt deposits in the box lower portion.

#### **Mounting information**





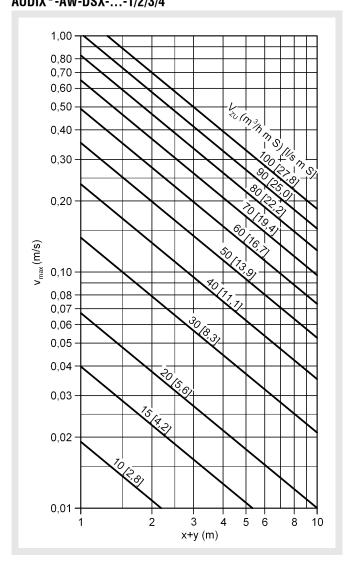
Additional on-site sound-absorbing strips Close gap between box neck and wall planking with permanently elastic material.

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### **Technical data**

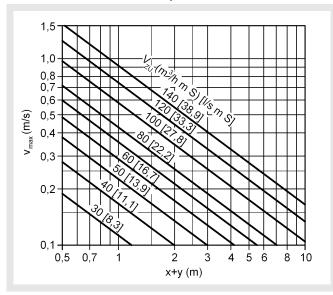
Maximum end velocity of jet AUDIX®-AW-DSX-...-1/2/3/4



### Correction factors for maximum end velocity of jet DSX

| Slot lengths   |        | k fa   | ctor   |        |
|----------------|--------|--------|--------|--------|
| Siut leligilis | DSX-1  | DSX-2  | DSX-3  | DSX-4  |
| 1200 mm        | x 0.80 | x 1.22 | x 2.02 | x 2.25 |
| 1000 mm        | x 1.00 | x 1.53 | x 2.53 | x 2.81 |
| 900 mm         | x 1.11 | x 1.70 | x 2.80 | x 3.11 |
| 800 mm         | x 1.25 | x 1.91 | x 3.16 | x 3.51 |
| 700 mm         | x 1.42 | x 2.17 | x 3.59 | x 3.99 |
| 600 mm         | x 1.66 | x 2.54 | x 4.25 | x 4.66 |
| 500 mm         | x 2.00 | x 3.06 | x 5.06 | x 5.62 |
| 400 mm         | x 2.50 | x 3.82 | x 6.33 | x 7.02 |

### AUDIX®-AW-DSX-XXL-W-...-1/2



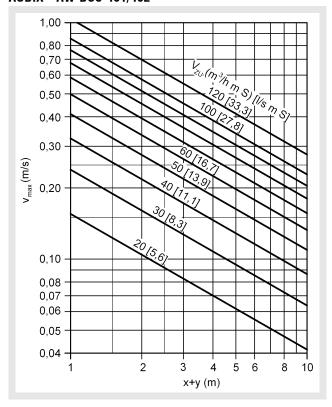
### Correction factors for maximum end velocity of jet DSX-XXL-W

| Slot lengths  | k factor    |             |  |  |
|---------------|-------------|-------------|--|--|
| Siot lellyths | DSX-XXL-W-1 | DSX-XXL-W-2 |  |  |
| 1200 mm       | x 0.80      | x 1.06      |  |  |
| 1000 mm       | x 1.00      | x 1.33      |  |  |
| 900 mm        | x 1.11      | x 1.48      |  |  |
| 800 mm        | x 1.25      | x 1.45      |  |  |
| 700 mm        | x 1.42      | x 1.66      |  |  |
| 600 mm        | x 1.66      | x 2.21      |  |  |
| 500 mm        | x 2.00      | x 2.66      |  |  |
| 400 mm        | x 2.50      | x 3.33      |  |  |

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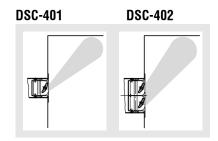


### AUDIX®-AW-DSC-401/402

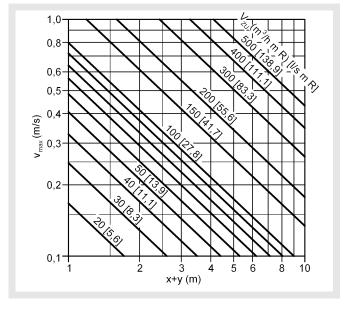


# Correction factors for maximum end velocity of jet DSC

| Slot lengths   | k fa    | ctor    |
|----------------|---------|---------|
| Siut leligilis | DSC-401 | DSC-402 |
| 1200 mm        | x 0.80  | x 1.26  |
| 1000 mm        | x 1.00  | x 1.58  |
| 900 mm         | x 1.11  | x 1.75  |
| 800 mm         | x 1.25  | x 1.97  |
| 700 mm         | x 1.42  | x 2.24  |
| 600 mm         | x 1.66  | x 2.62  |
| 500 mm         | x 2.00  | x 3.16  |
| 400 mm         | x 2.50  | x 3.95  |



**AUDIX®-AW-DSA-D-1** 



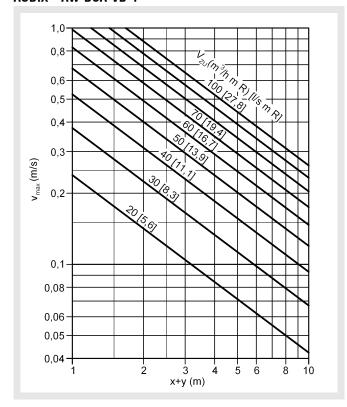
### Correction factors for maximum end velocity of jet DSA-D

| Slot lengths   | k factor |
|----------------|----------|
| Siut leligilis | DSA-D-1  |
| 1200 mm        | x 0.80   |
| 1000 mm        | x 1.00   |
| 900 mm         | x 1.11   |
| 800 mm         | x 1.25   |
| 700 mm         | x 1.42   |
| 600 mm         | x 1.66   |
| 500 mm         | x 2.00   |
| 400 mm         | x 2.50   |

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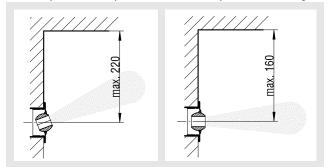
### AUDIX®-AW-DSA-VD-1



### Correction factors for maximum end velocity of jet DSA-VD

|              | k factor                  |                     |  |  |  |
|--------------|---------------------------|---------------------|--|--|--|
| Slot lengths | DSA-VD positioned upwards | DSA-VD              |  |  |  |
|              | •                         | positioned straight |  |  |  |
| 1200 mm      | x 0.87                    | x 0.94              |  |  |  |
| 1000 mm      | x 1.00                    | x 1.09              |  |  |  |
| 900 mm       | x 1.07                    | x 1.22              |  |  |  |
| 800 mm       | x 1.14                    | x 1.34              |  |  |  |
| 700 mm       | x 1.28                    | x 1.45              |  |  |  |
| 600 mm       | x 1.42                    | x 1.56              |  |  |  |
| 500 mm       | x 1.55                    | x 1.74              |  |  |  |
| 400 mm       | x 1.66                    | x 1.88              |  |  |  |

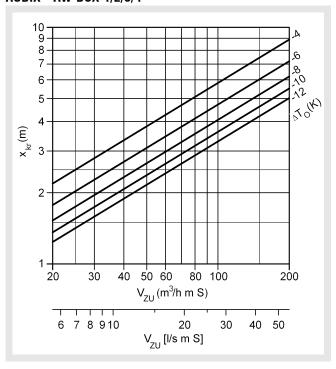
Maximum assembly dimension to achieve a coanda effect Nozzles positioned upwards Nozzles positioned straight



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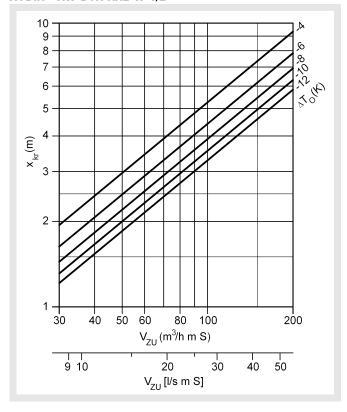
### Critical throw AUDIX®-AW-DSX-1/2/3/4



### Correction factors for x-critical DSX

| Clat langtha |        | k fa   | ctor   |        |
|--------------|--------|--------|--------|--------|
| Slot lengths | DSX-1  | DSX-2  | DSX-3  | DSX-4  |
| 1200 mm      | x 0.80 | x 0.82 | x 1.06 | x 1.22 |
| 1000 mm      | x 1.00 | x 1.03 | x 1.33 | x 1.52 |
| 900 mm       | x 1.11 | x 1.14 | x 1.47 | x 1.68 |
| 800 mm       | x 1.25 | x 1.28 | x 1.66 | x 1.90 |
| 700 mm       | x 1.42 | x 1.46 | x 1.88 | x 2.15 |
| 600 mm       | x 1.66 | x 1.70 | x 2.20 | x 2.52 |
| 500 mm       | x 2.00 | x 2.06 | x 2.66 | x 3.04 |
| 400 mm       | x 2.50 | x 2.57 | x 3.32 | x 3.80 |

### **AUDIX®-AW-DSX-XXL-W-1/2**



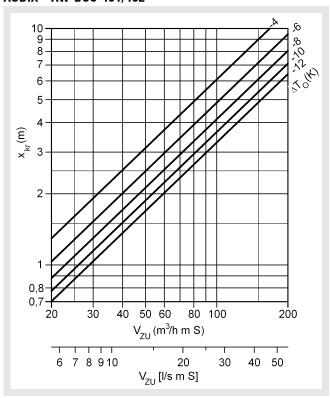
#### Correction factors for x-critical DSX-XXL-W

| Slot lengths | k factor    |             |  |  |
|--------------|-------------|-------------|--|--|
| Siut lengins | DSX-XXL-W-1 | DSX-XXL-W-2 |  |  |
| 1200 mm      | x 0.80      | x 1.20      |  |  |
| 1000 mm      | x 1.00      | x 1.50      |  |  |
| 900 mm       | x 1.14      | x 1.71      |  |  |
| 800 mm       | x 1.28      | x 1.92      |  |  |
| 700 mm       | x 1.44      | x 2.16      |  |  |
| 600 mm       | x 1.61      | x 2.42      |  |  |
| 500 mm       | x 1.69      | x 2.54      |  |  |
| 400 mm       | x 1.81      | x 2.72      |  |  |

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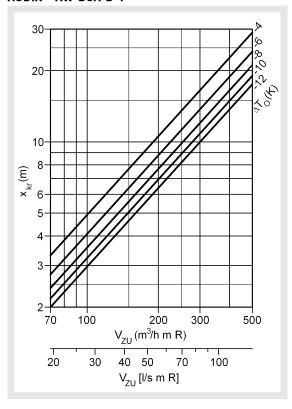
### AUDIX®-AW-DSC-401/402



### Correction factors for x-critical DSC

| Slot lengths  | k fa    | ctor    |
|---------------|---------|---------|
| Siot lellyths | DSC-401 | DSC-402 |
| 1200 mm       | x 0.80  | x 0.96  |
| 1000 mm       | x 1.00  | x 1.20  |
| 900 mm        | x 1.26  | x 1.51  |
| 800 mm        | x 1.34  | x 1.60  |
| 700 mm        | x 1.38  | x 1.65  |
| 600 mm        | x 1.50  | x 1.80  |
| 500 mm        | x 1.63  | x 1.95  |
| 400 mm        | x 1.77  | x 2.12  |

### AUDIX®-AW-DSA-D-1



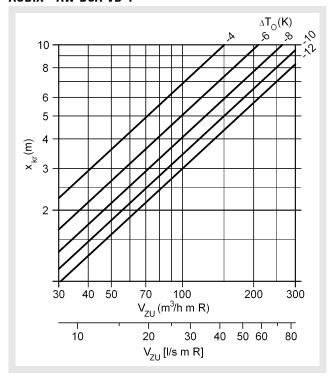
#### Correction factors for x-critical DSA-D

| Slot lengths | k factor<br>DSA-D-1 |
|--------------|---------------------|
| 1200 mm      | x 0.80              |
| 1000 mm      | x 1.00              |
| 900 mm       | x 1.24              |
| 800 mm       | x 1.39              |
| 700 mm       | x 1.59              |
| 600 mm       | x 1.89              |
| 500 mm       | x 2.24              |
| 400 mm       | x 2.80              |

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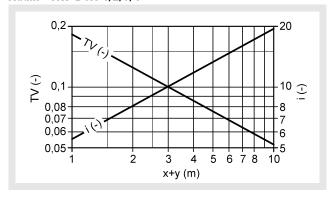
### **AUDIX®-AW-DSA-VD-1**



### Correction factors for x-critical DSA-VD

|              | k factor                  |                            |  |  |
|--------------|---------------------------|----------------------------|--|--|
| Slot lengths | DSA-VD positioned upwards | DSA-VD positioned straight |  |  |
| 1200 mm      | x 0.90                    | x 0.99                     |  |  |
| 1000 mm      | x 1.00                    | x 1.10                     |  |  |
| 900 mm       | x 1.06                    | x 1.16                     |  |  |
| 800 mm       | x 1.11                    | x 1.22                     |  |  |
| 700 mm       | x 1.25                    | x 1.37                     |  |  |
| 600 mm       | x 1.38                    | x 1.52                     |  |  |
| 500 mm       | x 1.51                    | x 1.66                     |  |  |
| 400 mm       | x 1.64                    | x 1.80                     |  |  |

# Temperature and induction ratios Audix®-AW-DSX-1/2/3/4



### **Correction factors for temperature ratio DSX**

| Slot lengths | k factor (TV) |        |        |        |  |
|--------------|---------------|--------|--------|--------|--|
| Siot lengins | DSX-1         | DSX-2  | DSX-3  | DSX-4  |  |
| 1200 mm      | x 1.25        | x 1.58 | x 1.76 | x 2.38 |  |
| 1000 mm      | x 1.00        | x 1.26 | x 1.41 | x 1.91 |  |
| 900 mm       | x 0.98        | x 1.23 | x 1.38 | x 1.87 |  |
| 800 mm       | x 0.97        | x 1.22 | x 1.36 | x 1.85 |  |
| 700 mm       | x 0.89        | x 1.12 | x 1.25 | x 1.70 |  |
| 600 mm       | x 0.84        | x 1.06 | x 1.18 | x 1.60 |  |
| 500 mm       | x 0.78        | x 0.98 | x 1.09 | x 1.49 |  |
| 400 mm       | x 0.73        | x 0.92 | x 1.03 | x 1.39 |  |

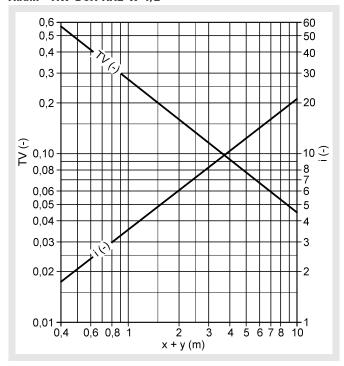
### **Correction factors for induction ratio DSX**

| Slot lengths   | k factor (i) |        |        |        |  |
|----------------|--------------|--------|--------|--------|--|
| Stot leligilis | DSX-1        | DSX-2  | DSX-3  | DSX-4  |  |
| 1200 mm        | x 0.80       | x 0.63 | x 0.57 | x 0.42 |  |
| 1000 mm        | x 1.00       | x 0.79 | x 0.71 | x 0.52 |  |
| 900 mm         | x 1.02       | x 0.81 | x 0.72 | x 0.53 |  |
| 800 mm         | x 1.03       | x 0.82 | x 0.74 | x 0.54 |  |
| 700 mm         | x 1.12       | x 0.89 | x 0.80 | x 0.58 |  |
| 600 mm         | x 1.18       | x 0.94 | x 0.84 | x 0.62 |  |
| 500 mm         | x 1.28       | x 1.02 | x 0.92 | x 0.67 |  |
| 400 mm         | x 1.37       | x 1.08 | x 0.97 | x 0.72 |  |

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### Audix®-AW-DSX-XXL-W-1/2



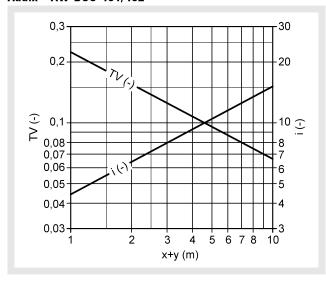
### Correction factors for temperature ratio DSX-XXL-W

| Slot lengths  | k factor (TV) |             |  |  |
|---------------|---------------|-------------|--|--|
| Siot lellyths | DSX-XXL-W-1   | DSX-XXL-W-2 |  |  |
| 1200 mm       | x 1.25        | x 1.73      |  |  |
| 1000 mm       | x 1.00        | x 1.38      |  |  |
| 900 mm        | x 0.95        | x 1.31      |  |  |
| 800 mm        | x 0.89        | x 1.23      |  |  |
| 700 mm        | x 0.83        | x 1.15      |  |  |
| 600 mm        | x 0.77        | x 1.06      |  |  |
| 500 mm        | x 0.70        | x 0.97      |  |  |
| 400 mm        | x 0.63        | x 0.87      |  |  |

### Correction factors for induction ratio DSX-XXL-W

| Clat langtha | k factor (i) |             |  |  |
|--------------|--------------|-------------|--|--|
| Slot lengths | DSX-XXL-W-1  | DSX-XXL-W-2 |  |  |
| 1200 mm      | x 0.80       | x 0.58      |  |  |
| 1000 mm      | x 1.00       | x 0.71      |  |  |
| 900 mm       | x 1.06       | x 0.75      |  |  |
| 800 mm       | x 1.12       | x 0.80      |  |  |
| 700 mm       | x 1.21       | x 0.86      |  |  |
| 600 mm       | x 1.31       | x 0.93      |  |  |
| 500 mm       | x 1.44       | x 1.02      |  |  |
| 400 mm       | x 1.62       | x 1.15      |  |  |

### Audix®-AW-DSC-401/402



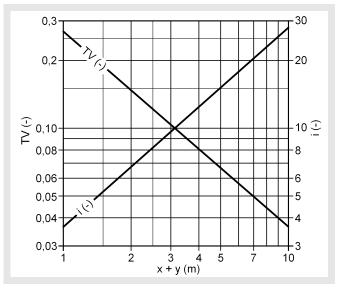
### Correction factors for temperature and induction ratio DSC

| Slot lengths   | k facto           | or (TV) | k factor (i) |         |  |
|----------------|-------------------|---------|--------------|---------|--|
| Siut lellytiis | DSC-401   DSC-402 |         | DSC-401      | DSC-402 |  |
| 1200 mm        | x 1.25            | x 1.65  | x 0.80       | x 0.61  |  |
| 1000 mm        | x 1.00            | x 1.32  | x 1.00       | x 0.75  |  |
| 900 mm         | x 0.98            | x 1.29  | x 1.02       | x 0.77  |  |
| 800 mm         | x 0.97            | x 1.28  | x 1.03       | x 0.78  |  |
| 700 mm         | x 0.89            | x 1.17  | x 1.12       | x 0.85  |  |
| 600 mm         | x 0.84            | x 1.10  | x 1.18       | x 0.90  |  |
| 500 mm         | x 0.78            | x 1.03  | x 1.28       | x 0.97  |  |
| 400 mm         | x 0.73            | x 0.96  | x 1.37       | x 1.04  |  |

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### Audix®-AW-DSA-D-1



### Correction factors for temperature and induction ratio DSA-D

| Slot lengths | k factor (TV)<br>DSA-D-1 | k factor (i)<br>DSA-D-1 |
|--------------|--------------------------|-------------------------|
| 1200 mm      | x 1.25                   | x 0.80                  |
| 1000 mm      | x 1.00                   | x 1.00                  |
| 900 mm       | x 0.95                   | x 1.05                  |
| 800 mm       | x 0.91                   | x 1.10                  |
| 700 mm       | x 0.84                   | x 1.19                  |
| 600 mm       | x 0.79                   | x 1.27                  |
| 500 mm       | x 0.71                   | x 1.40                  |
| 400 mm       | x 0.64                   | x 1.57                  |

#### Correction factors for temperature ratio DSA-VD

|              | k factor (TV)             |                            |  |  |
|--------------|---------------------------|----------------------------|--|--|
| Slot lengths | DSA-VD positioned upwards | DSA-VD positioned straight |  |  |
| 1200 mm      | x 1.13                    | x 0.73                     |  |  |
| 1000 mm      | x 1.00                    | x 0.65                     |  |  |
| 900 mm       | x 0.94                    | x 0.62                     |  |  |
| 800 mm       | x 0.88                    | x 0.58                     |  |  |
| 700 mm       | x 0.87                    | x 0.57                     |  |  |
| 600 mm       | x 0.85                    | x 0.55                     |  |  |
| 500 mm       | x 0.76                    | x 0.49                     |  |  |
| 400 mm       | x 0.64                    | x 0.41                     |  |  |

#### **Correction factors for induction ratio DSA-VD**

|              | k factor (i)                 |                            |  |  |  |
|--------------|------------------------------|----------------------------|--|--|--|
| Slot lengths | DSA-VD<br>positioned upwards | DSA-VD positioned straight |  |  |  |
| 1200 mm      | x 0.88                       | x 1.36                     |  |  |  |
| 1000 mm      | x 1.00                       | x 1.53                     |  |  |  |
| 900 mm       | x 1.06                       | x 1.61                     |  |  |  |
| 800 mm       | x 1.13                       | x 1.72                     |  |  |  |
| 700 mm       | x 1.15                       | x 1.75                     |  |  |  |
| 600 mm       | x 1.17                       | x 1.81                     |  |  |  |
| 500 mm       | x 1.31                       | x 2.04                     |  |  |  |
| 400 mm       | x 1.56                       | x 2.43                     |  |  |  |

| Transmission loss D <sub>ts</sub> (dB)        |   |         |        |       |          |         |        |      |
|---|---|---------|--------|-------|----------|---------|--------|------|
| f/Hz  | 63  | 125     | 250    | 500   | 1000     | 2000    | 4000   | 8000 |
| Aud   | WA-xit  | /, L=10 | 08, cd | nnec  | tion spi | got 1x  | 138 mı | п    |
| $D_{ts}$ (dB)                                 | 34  | 31      | 35     | 41    | 50       | 59      | 60     | 54   |
| Aud   | Audix-AW, L=1008, connection spigot 1x 123 mm |         |        |       |          |         |        |      |
| $D_{ts}$ (dB)                                 | 34  | 34      | 39     | 44    | 51       | 54      | 60     | 54   |
| Au  | dix-AV  | V, L=1  | 008, c | onnec | tion sp  | igot 1x | 98 mn  | ı    |
| $D_{ts}$ (dB)                                 | 35  | 38      | 43     | 47    | 52       | 52      | 60     | 53   |
| Aud   | MA-xit  | /, L=10 | 08, cd | nnec  | tion spi | got 2x  | 138 mı | n    |
| $D_{ts}$ (dB)                                 | 30  | 22      | 25     | 33    | 44       | 52      | 56     | 53   |
| Audix-AW, L=1008, connection spigot 2x 123 mm |   |         |        |       |          |         |        |      |
| $D_{ts}$ (dB)                                 | 32  | 29      | 34     | 40    | 48       | 53      | 58     | 54   |

### Legend

 $V_{ZU}$  (m³/h) = Supply air volume  $V_{ZU}$  [l/s] = Supply air volume

 $V_{ZU}$  (m<sup>3</sup>/h m S) = Supply air volume per metre of slot  $V_{ZU}$  [l/s m S] = Supply air volume per metre of slot  $V_{ZU}$  (m<sup>3</sup>/h m R) = Supply air volume per metre of row  $V_{ZU}$  [l/s m R] = Supply air volume per metre of row

 $V_X$  (m³/h) = total air jet volume at point x  $V_X$  [l/s] = total air jet volume at point x x+y (m) = Horizontal and vertical throw

 $\Delta T_0$  (K) = Temperature difference between supply air temperature and room temperature ( $\Delta T_0$  =

 $t_{ZU}$  -  $t_{R}$ )

 $\Delta T_X$  (K) = Temperature difference at point x

 $t_{zu}$  (°C) = Supply air temperature  $t_R$  (°C) = Room temperature

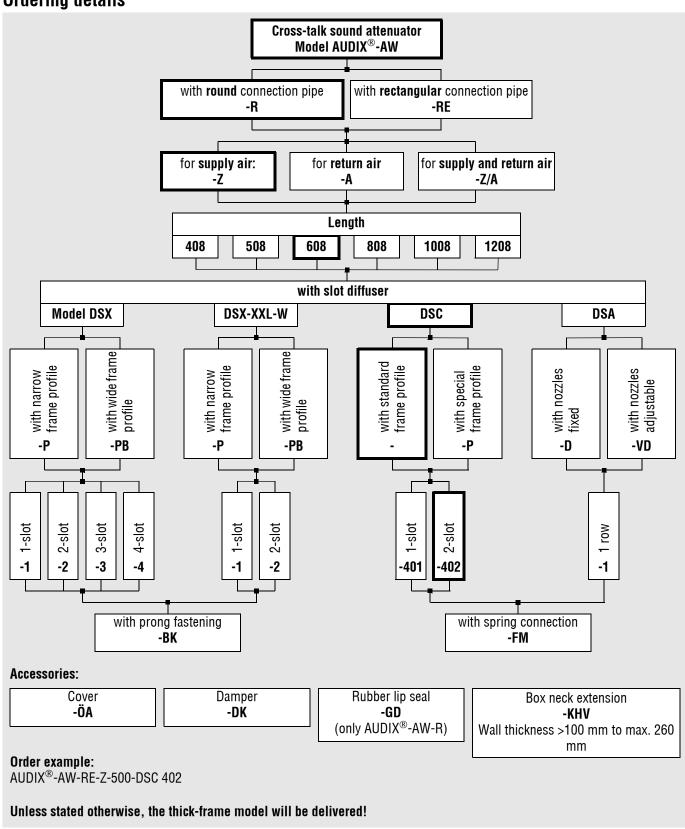
 $v_{max}$  (m/s) = Maximum end velocity of jet i (-) = Induction ratio (i =  $V_X / V_{ZU}$ ) TV (-) = Temperature ratio (TV =  $\Delta T_X / \Delta T_0$ )

 $x_{kr}$  (m) = Critical throw  $D_{ts}$  (dB) = Transmission loss

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### **Ordering details**



**04/08 - 19** Version: 27.03.2018



### **Specification texts**

Air diffuser system for supply air, with rectangular connection pipe, with integrated silencer for installation in front of lightweight walls for connection of 1 diffuser. Plenum box made of galvanised sheet steel. Integrated silencer to prevent cross-talk sound and for silencing in the duct consisting of an abrasion-resistant absorption material laid out as reverse labyrinth and attached on both sides, including a fitting system to assemble it outside the columns of lightweight walls.

Product: SCHAKO Type AUDIX®-AW-RE-Z

- Air diffuser system for return air Product: SCHAKO Type AUDIX®-AW-RE-A
- Air diffuser system for supply and return air Product: SCHAKO Type AUDIX®-AW-RE-Z/A
- Air diffuser system for return air, with round connection pipe, with integrated silencer for installation in front of lightweight walls to connect 1 diffuser.

Product: SCHAKO type AUDIX®-AW-R-Z

 Air pass system for return air, with round spigot, with integrated silencer for installation in front of lightweight walls for connection of 1 diffuser.

Product: SCHAKO type AUDIX®-AW-R-A

Air diffuser system for supply and return air, with round connection pipe, with integrated silencer for installation in front of lightweight walls to connect 1 diffuser.

Product: SCHAKO type AUDIX®-AW-R-Z/A

#### Equipped with:

Diffuser type: ..... from SCHAKO for subsequent final assembly, with concealed fixing via springs.

Simple assembly and disassembly for maintenance purposes

#### Diffusers:

- DSA-1: 1 row
  - Sheet steel faceplate painted to RAL 9005 (black) or RAL 9010 (white)
  - Plastic nozzles, similar to RAL colour 9005 (black, standard) or RAL 9010 (white)
  - Fixed (-D) or adjustable (-VD) nozzles
  - with spring connection (-FM)

Product: SCHAKO Type DSA-1

- DSC40..: 1 or 2 slots
  - Frame profile made of aluminium natural colour anodised (E6/EV1) or aluminium painted to RAL 9010 (white)
  - Pivoting air deflection blades in support blade profiles made of plastic (hard PVC)
    - similar to RAL colour 9005 (black)
    - similar to RAL colour 9010 (white) or
    - Aluminium painted to the same RAL colour as the frame profile Subsequent adjustment of blades not possible.
  - end pieces on both sides
  - With standard frame profile (-) or with special frame profile (-P)
  - with spring connection (-FM)

Product: SCHAKO type DSC 401 or 402

- DSX: 1, 2, 3 or 4 slots
  - Frame profile made of aluminium natural colour anodised (E6/EV1) or aluminium painted to RAL 9010 (white)
  - Blades made of plastic, similar to RAL colour 9005 (black) or RAL 9010 (white)
  - end pieces on both sides
  - with narrow frame profile (-P) or wide frame profile (-PB)
  - with prong fastening (-BK)

Product: SCHAKO type **DSX-...** 

- DSX-XXL-W: 1 or 2 slots
  - Frame profile made of aluminium natural colour anodised (E6/EV1) or aluminium painted to RAL 9010 (white)
  - Blades made of plastic, similar to RAL colour 9005 (black) or RAL 9010 (white)
  - end pieces on both sides
  - with narrow frame profile (-P) or wide frame profile (-PB)
  - with prong fastening (-BK)

Product: SCHAKO type DSX-XXL-W-...

### **Accessories:**

- Cover (ÖA) to prevent soiling or damage during assembly, made of galvanised sheet steel with fixing via springs.
- Throttle damper (-DK), manually adjustable from room side. Throttle made of stainless steel, with cable adjustment.
- Rubber lip seal (-GD), made of special rubber (only AU-DIX®-AW-R-...)
- Box neck extension (-KHV) for wall thicknesses > 100 mm