

- Wall grilles
- Aluminium
- Anodized natural finish
- Adjustable blades



## Aluminium wall grilles double deflection type AHVN

Double deflection grilles with adjustable blades

### Brand

- Cairox

### Application

- For air supply and exhaust in ventilation and air conditioning systems

### Material

- Aluminium

### Colour

- Anodized natural finish
- Other colours available upon request

### Composition

- Deflection: adjustable
- Double row of blades (distance between blades = 20 mm)

### Mounting

- Invisible mounting with clips in mounting frame, type **CCN**

### Accessories

- Mounting frame, type **CCN**
- Volume control damper, type **DWN**
- Plenum box, type **REW**
- Insulating plenum box, type **REW ISO**

### Order example

- **AHVN, 800, 200 + CCN + DWN + REW**

Explanation

**AHVN** = Grille type

**800** = Length (see table)

**200** = Height (see table)

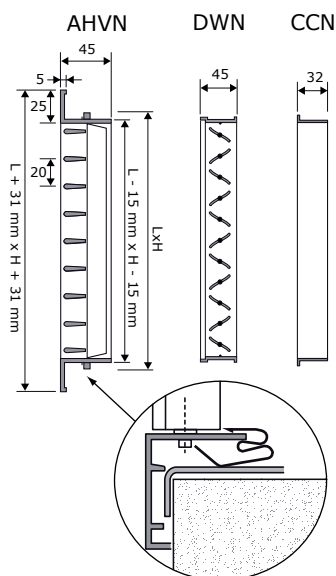
Accessories (Optional)

**CCN** = Mounting frame

**DWN** = Volume damper

**REW** = Plenum box

# Wall and floor grilles



| Quick selection |       |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|-----------------|-------|---------|--------------------|-------------------------------|---------|-------------------------------|-------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------------------|--------------------------------|---------------------|----------------------|----------|
| AHVN            | LxH   | 200x100 | 300x100<br>200x150 | 400x100<br>300x150<br>200x200 | 500x100 | 600x100<br>400x150<br>300x200 | 800x100<br>500x150<br>400x200 | 1000x100<br>600x150<br>500x200<br>300x300 | 1200x100<br>800x150<br>600x200<br>400x300 | 1000x150<br>800x200<br>500x300<br>400x400 | 1200x150<br>1000x200<br>600x300<br>500x400 | 1200x200<br>800x300<br>600x400 | 1000x300<br>800x400 | 1200x300<br>1000x400 | 1200x400 |
| Q               | Ak    | 0.0088  | 0.0144             | 0.02                          | 0.0256  | 0.0311                        | 0.0423                        | 0.0534                                    | 0.0646                                    | 0.0813                                    | 0.098                                      | 0.1315                         | 0.1649              | 0.1983               | 0.2652   |
| 100             | Vk    | 3.2     | 1.9                | 1.4                           | 1.1     |                               |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|                 | X0,25 | 3.1     | 2.4                | 2.1                           | 1.8     |                               |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|                 | Ps    | 4.3     | 1.6                | 0.8                           | 0.5     |                               |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|                 | Lw(A) | <20     | <20                | <20                           | <20     |                               |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
| 150             | Vk    | 4.7     | 2.9                | 2.1                           | 1.6     | 1.3                           |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|                 | X0,25 | 4.7     | 3.7                | 3.1                           | 2.7     | 2.5                           |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|                 | Ps    | 9.8     | 3.6                | 1.9                           | 1.2     | 0.8                           |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
|                 | Lw(A) | 31      | <20                | <20                           | <20     | <20                           |                               |                                           |                                           |                                           |                                            |                                |                     |                      |          |
| 200             | Vk    | 6.3     | 3.9                | 2.8                           | 2.2     | 1.8                           | 1.3                           | 1                                         |                                           |                                           |                                            |                                |                     |                      |          |
|                 | X0,25 | 6.2     | 4.9                | 4.1                           | 3.7     | 3.3                           | 2.8                           | 2.5                                       |                                           |                                           |                                            |                                |                     |                      |          |
|                 | Ps    | 17.4    | 6.5                | 3.4                           | 2.1     | 1.4                           | 0.8                           | 0.5                                       |                                           |                                           |                                            |                                |                     |                      |          |
|                 | Lw(A) | 38      | 27                 | 20                            | <20     | <20                           | <20                           | <20                                       |                                           |                                           |                                            |                                |                     |                      |          |
| 300             | Vk    |         | 5.8                | 4.2                           | 3.3     | 2.7                           | 2                             | 1.6                                       | 1.3                                       | 1                                         |                                            |                                |                     |                      |          |
|                 | X0,25 |         | 7.3                | 6.2                           | 5.5     | 5                             | 4.3                           | 3.8                                       | 3.5                                       | 3.1                                       |                                            |                                |                     |                      |          |
|                 | Ps    |         | 14.6               | 7.6                           | 4.6     | 3.1                           | 1.7                           | 1.1                                       | 0.7                                       | 0.5                                       |                                            |                                |                     |                      |          |
|                 | Lw(A) |         | 38                 | 31                            | 26      | 21                            | <20                           | <20                                       | <20                                       | <20                                       |                                            |                                |                     |                      |          |
| 400             | Vk    |         | 7.7                | 5.6                           | 4.3     | 3.6                           | 2.6                           | 2.1                                       | 1.7                                       | 1.4                                       | 1.1                                        |                                |                     |                      |          |
|                 | X0,25 |         | 9.7                | 8.3                           | 7.3     | 6.6                           | 5.7                           | 5.1                                       | 4.6                                       | 4.1                                       | 3.7                                        |                                |                     |                      |          |
|                 | Ps    |         | 26.1               | 13.5                          | 8.2     | 5.6                           | 3                             | 1.9                                       | 1.3                                       | 0.8                                       | 0.6                                        |                                |                     |                      |          |
|                 | Lw(A) |         | 46                 | 39                            | 33      | 29                            | 22                            | <20                                       | <20                                       | <20                                       | <20                                        |                                |                     |                      |          |
| 600             | Vk    |         |                    |                               | 6.5     | 5.4                           | 3.9                           | 3.1                                       | 2.6                                       | 2.1                                       | 1.7                                        | 1.3                            | 1                   |                      |          |
|                 | X0,25 |         |                    |                               | 11      | 10                            | 8.5                           | 7.6                                       | 6.9                                       | 6.2                                       | 5.6                                        | 4.8                            | 4.3                 |                      |          |
|                 | Ps    |         |                    |                               | 18.6    | 12.6                          | 6.8                           | 4.3                                       | 2.9                                       | 1.8                                       | 1.3                                        | 0.7                            | 0.4                 |                      |          |
|                 | Lw(A) |         |                    |                               | 44      | 40                            | 33                            | 28                                        | 24                                        | <20                                       | <20                                        | <20                            | <20                 |                      |          |
| 800             | Vk    |         |                    |                               |         | 7.1                           | 5.3                           | 4.2                                       | 3.4                                       | 2.7                                       | 2.3                                        | 1.7                            | 1.3                 | 1.1                  |          |
|                 | X0,25 |         |                    |                               |         | 13.3                          | 11.4                          | 10.1                                      | 9.2                                       | 8.2                                       | 7.5                                        | 6.5                            | 5.8                 | 5.3                  |          |
|                 | Ps    |         |                    |                               |         | 22.4                          | 12.1                          | 7.6                                       | 5.2                                       | 3.3                                       | 2.3                                        | 1.3                            | 0.8                 | 0.6                  |          |
|                 | Lw(A) |         |                    |                               |         | 48                            | 41                            | 36                                        | 32                                        | 27                                        | 23                                         | <20                            | <20                 | <20                  |          |
| 1000            | Vk    |         |                    |                               |         |                               | 6.6                           | 5.2                                       | 4.3                                       | 3.4                                       | 2.8                                        | 2.1                            | 1.7                 | 1.4                  | 1        |
|                 | X0,25 |         |                    |                               |         |                               | 14.2                          | 12.7                                      | 11.5                                      | 10.3                                      | 9.3                                        | 8.1                            | 7.2                 | 6.6                  | 5.7      |
|                 | Ps    |         |                    |                               |         |                               | 19                            | 11.9                                      | 8.1                                       | 5.1                                       | 3.5                                        | 2                              | 1.2                 | 0.9                  | 0.5      |
|                 | Lw(A) |         |                    |                               |         |                               | 47                            | 42                                        | 38                                        | 33                                        | 29                                         | 22                             | <20                 | <20                  | <20      |
| 1200            | Vk    |         |                    |                               |         |                               | 7.9                           | 6.2                                       | 5.2                                       | 4.1                                       | 3.4                                        | 2.5                            | 2                   | 1.7                  | 1.3      |
|                 | X0,25 |         |                    |                               |         |                               | 17.1                          | 15.2                                      | 13.8                                      | 12.3                                      | 11.2                                       | 9.7                            | 8.6                 | 7.9                  | 6.8      |
|                 | Ps    |         |                    |                               |         |                               | 27.4                          | 17.2                                      | 11.7                                      | 7.4                                       | 5.1                                        | 2.8                            | 1.8                 | 1.2                  | 0.7      |
|                 | Lw(A) |         |                    |                               |         |                               | 52                            | 47                                        | 43                                        | 38                                        | 34                                         | 27                             | 22                  | <20                  | <20      |
| 1600            | Vk    |         |                    |                               |         |                               |                               |                                           | 6.9                                       | 5.5                                       | 4.5                                        | 3.4                            | 2.7                 | 2.2                  | 1.7      |
|                 | X0,25 |         |                    |                               |         |                               |                               |                                           | 18.4                                      | 16.4                                      | 14.9                                       | 12.9                           | 11.5                | 10.5                 | 9.1      |
|                 | Ps    |         |                    |                               |         |                               |                               |                                           | 20.9                                      | 13.2                                      | 9.1                                        | 5                              | 3.2                 | 2.2                  | 1.2      |
|                 | Lw(A) |         |                    |                               |         |                               |                               |                                           | 50                                        | 45                                        | 41                                         | 35                             | 30                  | 26                   | <20      |
| 2000            | Vk    |         |                    |                               |         |                               |                               |                                           |                                           | 6.8                                       | 5.7                                        | 4.2                            | 3.4                 | 2.8                  | 2.1      |
|                 | X0,25 |         |                    |                               |         |                               |                               |                                           |                                           | 20.5                                      | 18.7                                       | 16.1                           | 14.4                | 13.1                 | 11.4     |
|                 | Ps    |         |                    |                               |         |                               |                               |                                           |                                           | 20.6                                      | 14.2                                       | 7.9                            | 5                   | 3.5                  | 1.9      |
|                 | Lw(A) |         |                    |                               |         |                               |                               |                                           |                                           | 51                                        | 47                                         | 41                             | 36                  | 32                   | 25       |
| 2400            | Vk    |         |                    |                               |         |                               |                               |                                           |                                           |                                           | 6.8                                        | 5.1                            | 4                   | 3.4                  | 2.5      |
|                 | X0,25 |         |                    |                               |         |                               |                               |                                           |                                           |                                           | 22.4                                       | 19.4                           | 17.3                | 15.8                 | 13.6     |
|                 | Ps    |         |                    |                               |         |                               |                               |                                           |                                           |                                           | 20.5                                       | 11.4                           | 7.2                 | 5                    | 2.8      |
|                 | Lw(A) |         |                    |                               |         |                               |                               |                                           |                                           |                                           | 52                                         | 46                             | 41                  | 37                   | 30       |
| 2800            | Vk    |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            | 7.9                            | 5.9                 | 4.7                  | 3.9      |
|                 | X0,25 |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            | 26.2                           | 22.6                | 20.2                 | 18.4     |
|                 | Ps    |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            | 27.9                           | 15.5                | 9.8                  | 6.8      |
|                 | Lw(A) |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            | 56                             | 50                  | 45                   | 41       |
| 3200            | Vk    |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            |                                | 6.8                 | 5.4                  | 4.5      |
|                 | X0,25 |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            |                                | 25.8                | 23                   | 21       |
|                 | Ps    |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            |                                | 20.2                | 12.9                 | 8.9      |
|                 | Lw(A) |         |                    |                               |         |                               |                               |                                           |                                           |                                           |                                            |                                | 53                  | 48                   | 44       |

### Symbols and specifications

- $L \times H$  = Width  $L$  and height  $H$  in mm
  - $Q$  = Air volume in  $\text{m}^3/\text{h}$
  - $A_k$  = Effective surface (free area) in  $\text{m}^2$
  - $V_k$  = Average effective velocity through the grill in  $\text{m/s}$
  - $X_{0.25}$  = Horizontal throw in m at an end velocity  $V_t$  of  $0.25 \text{ m/s}$
  - $P_s$  = Static pressure loss given in Pa
  - $L_w(A)$  = Acoustic power in  $\text{dB}(A)$
- The throw  $X_{0.25}$  is given without deflection of the airstream at an end velocity of  $0.25 \text{ m/s}$ . The distances are given for a smooth ceiling and installation distance of the center of the grille at  $300 \text{ mm}$  from the ceiling surface. When mounted at a distance of  $400$  to  $600 \text{ mm}$  from the ceiling, a horizontal deflection towards the ceiling of  $15^\circ$  is advised. When mounted at a distance larger than  $600 \text{ mm}$  from the ceiling, the throw distance  $X_{0.25}$  will be smaller than mentioned due to the missing coanda effect. In these cases and for all other special requirements, please contact our engineering office.
  - The values are given for isothermal supply air. Throw distances for cooling conditions at  $-11\text{K}$  can be calculated by dividing the  $X_{0.25}$  values with factor  $1.1$ . For heating purposes at  $\Delta t$  of  $+11\text{K}$  a multiplier of  $1.1$  should be applied to the given  $X_{0.25}$  value.
  - Advised mounting distance between centers of multiple grilles in the same wall should be greater than  $1/3$  of the throw length  $X_{0.25}$  (without spread)
  - The pressure losses  $P_s$  are given for grilles without damper or with fully opened damper.
  - The acoustic powers  $L_w(A)$  are given for grilles without damper or with fully opened damper without room attenuation. Acoustic powers below  $20 \text{ dB}(A)$  are mentioned as " $<20$ " in the tables.

### Placement instruction

