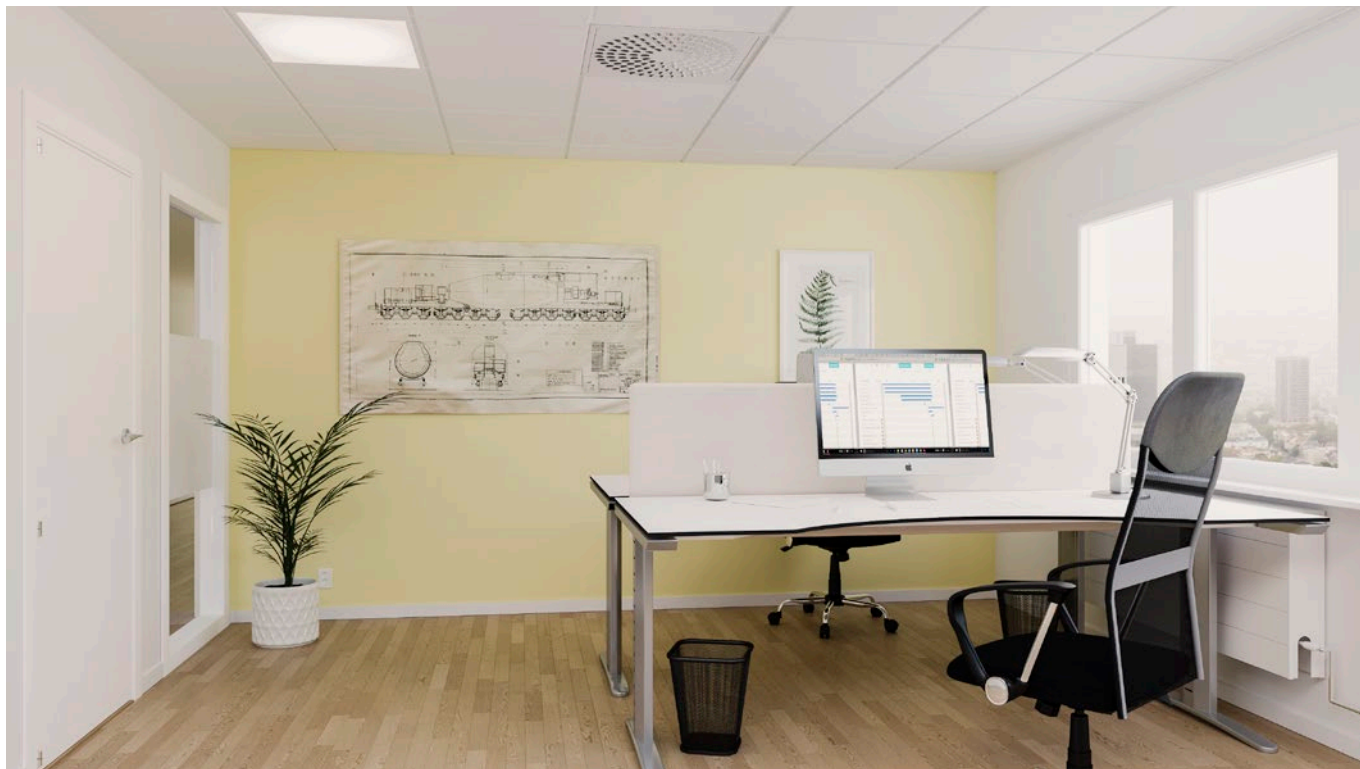


# COLIBRI Ceiling

Square ceiling diffuser with nozzles for supply and extract air



## QUICK FACTS

- Also available in the Extract air version
- Available with circular (COLIBRI CC) and rectangular (COLIBRI CR) nozzle pattern
- Suitable for VAV and DCV applications
- Fast and simple installation and commissioning through Swegon Quick Access
- Manages airflows substantially below room temperature (High  $\Delta T$ )
- Designed for modular suspended ceilings
- ALS commissioning box with 1 or 2 changes in dimension between the inlet and outlet
- Available in a version with low installation height
- 100% flexible spread pattern
- Adapter for false ceilings
- Air diffuser size 250-500 and 315-500 adapted for ADAPTER
- Standard colour White RAL 9003
  - 5 alternative standard colours
  - Other colours upon request

| AIR FLOW - SOUND PRESSURE ROOM (Lp10A) *) |             |          |      |          |      |          |      |
|-------------------------------------------|-------------|----------|------|----------|------|----------|------|
| COLIBRI CR<br>Size                        |             | 25 dB(A) |      | 30 dB(A) |      | 35 dB(A) |      |
|                                           |             | l/s      | m³/h | l/s      | m³/h | l/s      | m³/h |
| 125-400                                   |             | 34       | 122  | 40       | 144  | 46       | 166  |
| 125-600                                   |             | 34       | 122  | 40       | 144  | 46       | 166  |
| 160-400                                   |             | 40       | 144  | 48       | 173  | 58       | 209  |
| 160-600                                   |             | 40       | 144  | 48       | 173  | 58       | 209  |
| 200-500                                   |             | 64       | 230  | 75       | 270  | 89       | 320  |
| 200-600                                   |             | 64       | 230  | 75       | 270  | 89       | 320  |
| 250-500                                   |             | 70       | 252  | 81       | 292  | 95       | 342  |
| 250-600                                   |             | 102      | 367  | 115      | 414  | 135      | 486  |
| 315-500                                   |             | 75       | 270  | 88       | 317  | 102      | 367  |
| 315-600                                   |             | 107      | 385  | 124      | 446  | 140      | 504  |
| 400-600                                   |             | 122      | 439  | 140      | 504  | 160      | 576  |
| COLIBRI CR<br>Size                        | ALS<br>Size | 25 dB(A) |      | 30 dB(A) |      | 35 dB(A) |      |
|                                           |             | l/s      | m³/h | l/s      | m³/h | l/s      | m³/h |
| 125-400                                   | 100-125     | 27       | 97   | 31       | 112  | 37       | 133  |
| 125-600                                   | 100-125     | 27       | 97   | 31       | 112  | 37       | 133  |
| 160-400                                   | 125-160     | 35       | 126  | 41       | 148  | 49       | 176  |
| 160-600                                   | 125-160     | 35       | 126  | 41       | 148  | 49       | 176  |
| 200-500                                   | 160-200     | 59       | 212  | 70       | 252  | 81       | 292  |
| 200-600                                   | 160-200     | 59       | 212  | 70       | 252  | 81       | 292  |
| 250-500                                   | 200-250     | 66       | 238  | 75       | 270  | 88       | 317  |
| 250-600                                   | 200-250     | 94       | 338  | 108      | 389  | 125      | 450  |
| 315-500                                   | 250-315     | 72       | 259  | 83       | 299  | 97       | 349  |
| 315-600                                   | 250-315     | 102      | 367  | 120      | 432  | 138      | 497  |
| 400-600                                   | 315-400     | 116      | 418  | 135      | 486  | 155      | 558  |

Data specified in the lower table applies to open damper when the commissioning box ALS is used.

\*) Lp10A = Sound pressure incl. A-filter with 4 dB room attenuation and 10 m² room absorption area.

# Contents

|                                                                 |           |
|-----------------------------------------------------------------|-----------|
| <b>Technical description .....</b>                              | <b>3</b>  |
| Design .....                                                    | 3         |
| Materials and surface treatment.....                            | 3         |
| Accessories .....                                               | 3         |
| Planning .....                                                  | 3         |
| Installation .....                                              | 3         |
| Commissioning .....                                             | 3         |
| Maintenance.....                                                | 3         |
| Environment .....                                               | 3         |
| <b>Sizing .....</b>                                             | <b>5</b>  |
| Sound data – COLIBRI CC – Supply air – Air diffuser only ...    | 5         |
| Sound data – COLIBRI CC - Extract air – Air diffuser only ..... | 5         |
| Sound data – COLIBRI CC + ALS – Supply air – One step....       | 6         |
| Sound data – COLIBRI CC + ALS – Supply air – Two steps ..       | 6         |
| COLIBRI CC + ALS – Extract Air .....                            | 6         |
| COLIBRI CC + ALS – supply air .....                             | 8         |
| COLIBRI CC + ALS – Extract air .....                            | 11        |
| Sound data – COLIBRI CR - Supply air – Air diffusers only.      | 12        |
| Sound data - COLIBRI CR - Extract air – Air diffusers only.     | 12        |
| Sound data – COLIBRI CR + ALS- Supply air – One step....        | 13        |
| Sound data – COLIBRI CR + ALS – Supply air – Two steps.         | 13        |
| COLIBRI CR + ALS – Extract air .....                            | 13        |
| COLIBRI CR + ALS – Extract air.....                             | 20        |
| <b>Dimensions and weights .....</b>                             | <b>21</b> |
| COLIBRI CC – Circular nozzle arrangement, examples.....         | 23        |
| COLIBRI CR – Square nozzle arrangement, examples .....          | 24        |
| <b>Order key .....</b>                                          | <b>25</b> |

# Technical description

## Design

The square supply air diffuser consists of a diffuser backing box and a diffuser face. The front is equipped with rotatable nozzles and is available in two designs, with a circular nozzle pattern (COLIBRI Ceiling Circular, called COLIBRI CC) as well as with a rectangular nozzle pattern (COLIBRI Ceiling Rectangular, called COLIBRI CR).

The diffuser face is hung on hinges on one side and secured by springs on the opposite side. This Quick Access fastening system makes it simpler and quicker to open and close the diffuser face for installation, commissioning and cleaning.

The air diffuser is also available in a low version for installation in a ceiling void where low installation height is required. The air diffuser is then supplied without sleeve coupling (not sizes 400-600).

## Materials and surface treatment

The backing box and diffuser face are made of sheet steel. The connection branch is made of galvanized sheet steel. The interior and exterior of the air diffuser is painted.

- Standard colour:
  - White semi-gloss, lustre 40, RAL 9003/NCS S 0500-N
- Alternative standard colours:
  - Silver gloss, lustre 80, RAL 9006
  - Grey aluminium gloss, lustre 80, RAL 9007
  - White semi-gloss, lustre 40, RAL 9010
  - Black semi-gloss, lustre 35, RAL 9005
  - Grey semi-gloss, lustre 30, RAL 7037
- Non-painted finish and other colours available on request.

The nozzles are made of plastic (PP-polypropylene).

## Accessories

### Commissioning box:

ALS. Made of galvanized sheet steel. Contains removable commissioning damper, fixed measurement tapplings and sound absorbing material with reinforced surface layer, to Fire Resistance Class B-s1,d0 according to EN ISO 11925-2. Tightness class C on the housing according to SS-EN 12237.

The commissioning box is also available in a low version for installation in a ceiling void where low installation height is required. The air diffuser is then supplied without sleeve coupling. The commissioning box is available with 1 or 2 changes in dimension between the inlet and outlet.

### Frame:

SAR K. For aesthetic installation of a lowered diffuser.

### Adapter:

ADAPTER, for adaptation to various variants and makes of systemized false ceilings: Ecophon, Gyproc, Dampa etc. Also used for adaptation to optional sizes of lay-in ceilings, for instance 625 x 625 or 675 x 675. Specification in separate product sheet for ADAPTER.

## Planning

The COLIBRI Ceiling is available with square dimensions of 595 x 595 mm in all connection sizes. This makes COLIBRI Ceiling very easy to install in 600 x 600 suspended ceiling modules. Position these directly down in the T-bar framework, and then secure them to the duct system or to the commissioning box. COLIBRI Ceiling is also available in a low version for installation in ceiling void where low installation height is required. See Figure 2.



## Installation

To dismantle the face (see Figure 1) prior to installing the air diffuser, insert a thin object, such as a Quick Access card or similar card, between the air diffuser face and backing box to release the springs. Then slide the card from the centre outward toward the corners.

The inlet spigot of the diffuser backing box can be secured to the connecting ducting by means of self-tapping screws or a blind rivets. For flush-mounting in fixed ceiling constructions, secure the diffuser by means of screws into place in the framework through either the sides or top of the diffuser backing box. The face and backing box in the version for low installation height must be centred and jointed together using the locking strip supplied. Secure the air diffuser in the correct position by means of self-tapping screws to the underside of commissioning box.

For mounting in modular suspended ceilings, it is advisable to select air diffusers with outer dimensions of 595 x 595 mm. Position these directly down in the T-bar framework, and then secure them to the duct system or to the commissioning box. If an ALS commissioning box is used, it must be secured to the building structure by means of hangers or mounting brackets.

The distance between the air diffuser and the commissioning box can be increased by as much as 500 mm with an ordinary circular duct without having to lengthen the measuring tubes and damper adjustment cords.

See Figure 2.

## Commissioning

Commissioning must be carried out with the diffuser face mounted. Pull out the measuring tubes and damper adjustment cords through the diffuser face nozzles. Connect a manometer to the measuring tubes. The desired commissioning pressure can be computed by applying the rated coefficient of performance of the air diffuser. Set the damper blade in the correct position and tie the damper adjustment cords in a commissioning knot to indicate the damper position.

Measurement accuracy and requirement on straight duct before the commissioning box, see Figure 2. The requirements of straight duct depends on the type of disturbance before the commissioning box. Figure 2 shows a bend, a dimensional change and a T-piece. Other types of disturbances requires at least 2xD straight (D = connection dimension) for measurement accuracy of  $\pm 10\%$  of the flow.

The rated coefficient of performance (K-factor) is specified on the identification label of the product and the relevant commissioning instructions are also available at [www.swegon.com](http://www.swegon.com).

## Maintenance

The air diffuser can be cleaned, if necessary, using lukewarm water with dishwashing detergent added. The duct system can be accessed after opening the diffuser face. If an ALS commissioning box is used, pull the distributor plate aside and then grip and twist the damper unit from of its mounting.

## Environment

The Declaration of construction materials is available at [www.swegon.com](http://www.swegon.com).

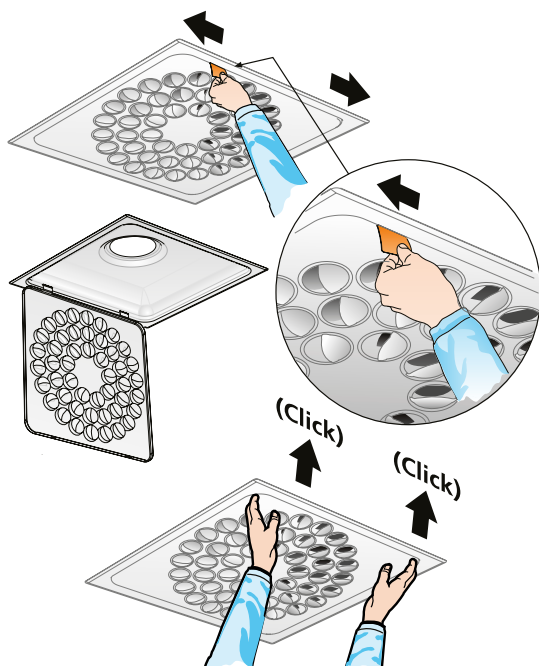


Figure 1. Quick Access, dismantling of the diffuser front.

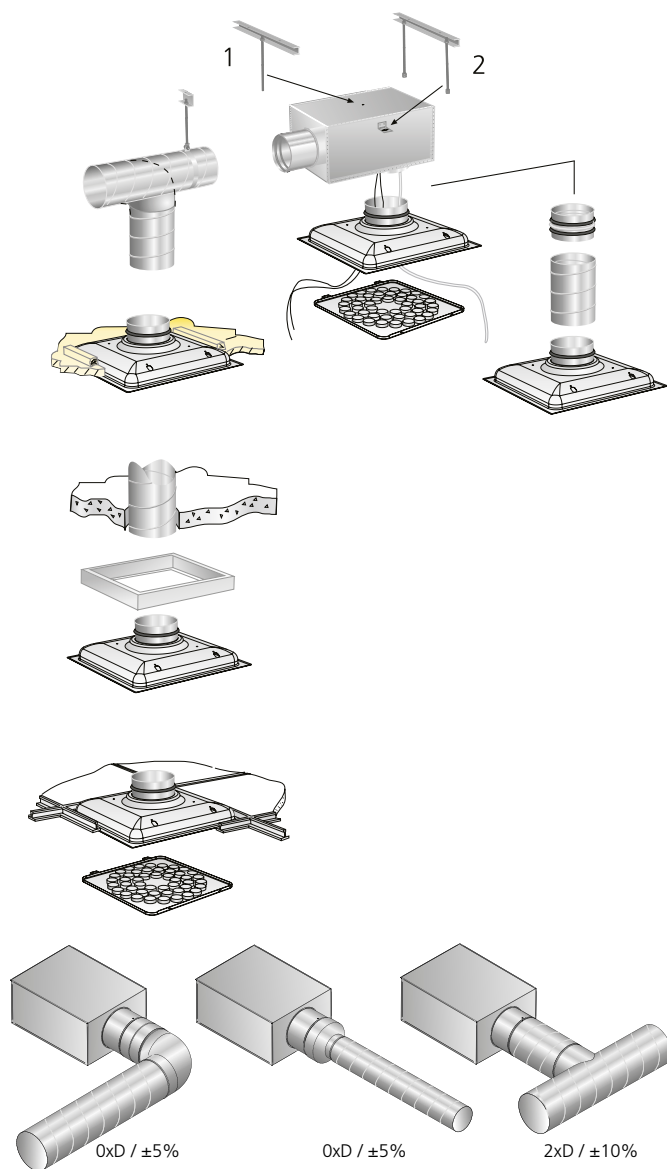


Figure 2. Installation.

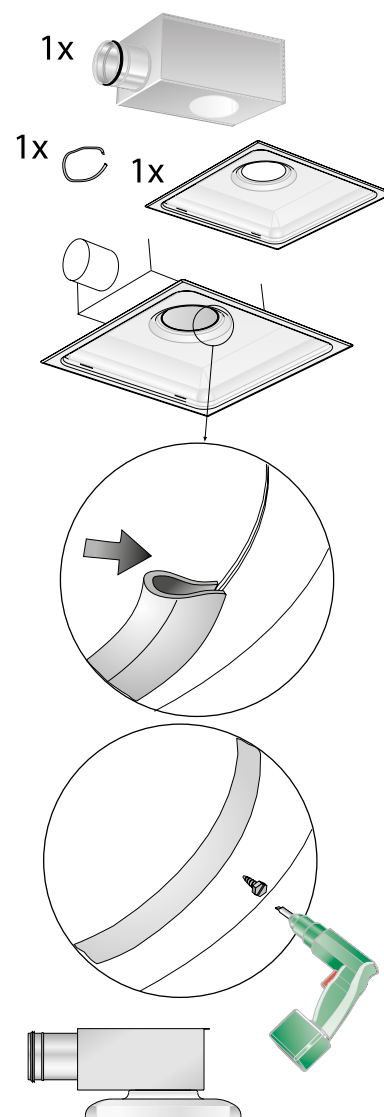


Figure 3. Installing air diffusers and commissioning box with low installation height.

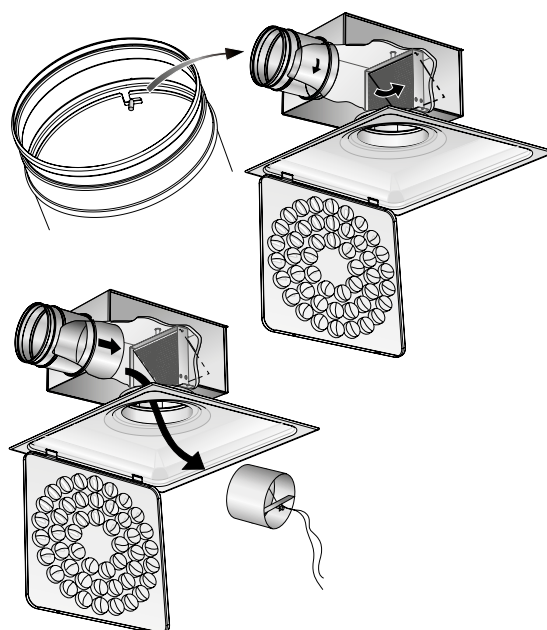


Figure 4. Damper removal.

## Sizing

- Sound pressure level dB(A) applies to rooms with 10 m<sup>2</sup> equivalent sound absorption area.
- Sound attenuation ( $\Delta L$ ) below is shown in the octave band. Orifice attenuation is included in the values.
- Throw  $I_{0.2}$  is measured under isothermal discharge conditions.
- Recommended max. permissible temperature below room temperature is 14 K.
- For calculating the width of the air stream, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our web calculation softwares available at [www.swegon.com](http://www.swegon.com).

$L_w$  = Sound power level

$L_{p10A}$  = Sound pressure level dB (A)

$K_{ok}$  = Correction for producing the  $L_w$  value in the octave band

$L_w = L_{p10A} + K_{OK}$  gives the frequency divided octave band

### Sound data – COLIBRI CC – Supply air – Air diffuser only

#### Sound power level $L_w$ (dB)

Table  $K_{ok}$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 1                              | 1   | 2   | 5   | 5    | -8   | -22  | -23  |
| 125-600    | -6                             | -1  | 3   | 5   | -2   | -12  | -26  | -25  |
| 160-400    | -7                             | -1  | -2  | 0   | 2    | -10  | -27  | -29  |
| 160-600    | -2                             | 0   | 2   | 5   | -1   | -11  | -26  | -28  |
| 200-500    | -4                             | -3  | -2  | 1   | 2    | -12  | -29  | -26  |
| 200-600    | -3                             | -2  | 0   | 4   | 0    | -13  | -28  | -30  |
| 250-500    | -4                             | -3  | -1  | 1   | 2    | -10  | -27  | -32  |
| 250-600    | -5                             | -2  | -1  | 3   | 1    | -12  | -27  | -26  |
| 315-500    | -7                             | -1  | -1  | 0   | 2    | -8   | -25  | -30  |
| 315-600    | -3                             | 0   | 0   | 2   | 1    | -13  | -27  | -24  |
| 400-600    | 4                              | 1   | 1   | 2   | 1    | -10  | -21  | -21  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

#### Sound attenuation $\Delta L$ (dB)

Table  $\Delta L$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 20                             | 15  | 10  | 5   | 3    | 5    | 5    | 4    |
| 125-600    | 20                             | 15  | 10  | 5   | 3    | 5    | 5    | 4    |
| 160-400    | 19                             | 14  | 9   | 4   | 3    | 5    | 5    | 4    |
| 160-600    | 19                             | 14  | 9   | 4   | 3    | 5    | 5    | 4    |
| 200-500    | 19                             | 14  | 8   | 3   | 3    | 4    | 5    | 5    |
| 200-600    | 19                             | 14  | 8   | 3   | 3    | 4    | 5    | 5    |
| 250-500    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 250-600    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 315-500    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 315-600    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 400-600    | 13                             | 8   | 4   | 1   | 0    | 0    | 0    | 0    |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

### Sound data – COLIBRI CC - Extract air – Air diffuser only

#### Sound power level $L_w$ (dB)

Table  $K_{ok}$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 0                              | 9   | 7   | 5   | 2    | -3   | -9   | -16  |
| 315-600    | 0                              | 8   | 8   | 5   | 2    | -3   | -9   | -14  |
| 400-600    | -2                             | 5   | 5   | 5   | 4    | -4   | -12  | -16  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

#### Sound attenuation $\Delta L$ (dB)

Table  $\Delta L$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 315-600    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 400-600    | 13                             | 8   | 4   | 1   | 0    | 0    | 0    | 0    |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## Sound data – COLIBRI CC + ALS – Supply air – One step

Sound power level  $L_w$  (dB)Table  $K_{ok}$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 1                              | 7   | 6   | 2   | -1   | -11  | -18  | -21  |
| 125-600    | 1                              | 7   | 6   | 2   | -1   | -11  | -18  | -21  |
| 160-400    | 1                              | 4   | 4   | 2   | 1    | -11  | -20  | -20  |
| 160-600    | 1                              | 4   | 4   | 2   | 1    | -11  | -20  | -20  |
| 200-500    | -1                             | 3   | 3   | 1   | 0    | -9   | -16  | -14  |
| 200-600    | -1                             | 3   | 3   | 1   | 0    | -9   | -16  | -14  |
| 250-500    | -4                             | 4   | 1   | 1   | 2    | -9   | -22  | -25  |
| 250-600    | -3                             | 4   | 2   | 2   | 0    | -10  | -19  | -19  |
| 315-500    | -5                             | 3   | 1   | -1  | 2    | -9   | -24  | -29  |
| 315-600    | 2                              | 2   | 0   | 3   | 1    | -13  | -24  | -22  |
| 400-600    | 0                              | 5   | 1   | 1   | 2    | -10  | -25  | -25  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

Sound attenuation  $\Delta L$  (dB)Table  $\Delta L$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 21                             | 16  | 9   | 17  | 23   | 16   | 11   | 13   |
| 125-600    | 21                             | 16  | 9   | 17  | 23   | 16   | 11   | 13   |
| 160-400    | 19                             | 14  | 10  | 17  | 19   | 12   | 10   | 12   |
| 160-600    | 19                             | 14  | 10  | 17  | 19   | 12   | 10   | 12   |
| 200-500    | 16                             | 11  | 8   | 16  | 18   | 12   | 11   | 11   |
| 200-600    | 16                             | 11  | 8   | 16  | 18   | 12   | 11   | 11   |
| 250-500    | 13                             | 8   | 8   | 16  | 17   | 12   | 12   | 13   |
| 250-600    | 13                             | 8   | 8   | 16  | 17   | 12   | 12   | 13   |
| 315-500    | 11                             | 6   | 7   | 19  | 14   | 10   | 10   | 13   |
| 315-600    | 11                             | 6   | 7   | 19  | 14   | 10   | 10   | 13   |
| 400-600    | 14                             | 5   | 8   | 14  | 11   | 10   | 11   | 12   |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## Sound data – COLIBRI CC + ALS – Supply air – Two steps

Sound power level  $L_w$  (dB)Table  $K_{ok}$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 160-400    | 0                              | 8   | 6   | 2   | -2   | -11  | -17  | -17  |
| 160-600    | 0                              | 8   | 6   | 2   | -2   | -11  | -17  | -17  |
| 200-500    | 0                              | 9   | 6   | 1   | -3   | -9   | -16  | -17  |
| 200-600    | 0                              | 9   | 6   | 1   | -3   | -9   | -16  | -17  |
| 250-600    | 2                              | 8   | 4   | 0   | -3   | -8   | -15  | -16  |
| 315-500    | -3                             | 5   | 2   | 0   | 2    | -9   | -21  | -23  |
| 315-600    | 0                              | 7   | 2   | 2   | -1   | -10  | -17  | -18  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

Sound attenuation  $\Delta L$  (dB)Table  $\Delta L$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 160-400    | 19                             | 14  | 11  | 17  | 24   | 15   | 13   | 15   |
| 160-600    | 19                             | 14  | 11  | 17  | 24   | 15   | 13   | 15   |
| 200-500    | 18                             | 14  | 10  | 16  | 23   | 15   | 14   | 15   |
| 200-600    | 18                             | 14  | 10  | 16  | 23   | 15   | 14   | 15   |
| 250-600    | 15                             | 9   | 9   | 20  | 19   | 15   | 16   | 14   |
| 315-500    | 13                             | 8   | 10  | 19  | 16   | 13   | 16   | 16   |
| 315-600    | 13                             | 8   | 10  | 19  | 16   | 13   | 16   | 16   |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## COLIBRI CC + ALS – Extract Air

Sound power level  $L_w$  (dB)Table  $K_{ok}$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 3                              | 14  | 8   | 2   | 0    | -4   | -10  | -15  |
| 315-600    | 5                              | 11  | 6   | 2   | 3    | -4   | -14  | -18  |
| 400-600    | 6                              | 8   | 4   | 4   | 4    | -4   | -14  | -18  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

Sound attenuation  $\Delta L$  (dB)Table  $\Delta L$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 315-600    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 400-600    | 13                             | 8   | 4   | 1   | 0    | 0    | 0    | 0    |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## Engineering graphs

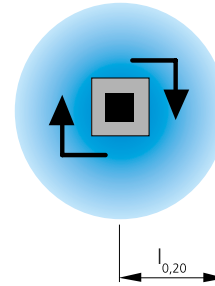
- The graphs must not be used for commissioning.
- The dB(A) values are applicable to rooms with normal acoustic absorption of 4 dB.
- The dB(C) value is normally 6-9 dB higher than the dB(A) value.
- Air diffuser size 250-500, 315-500 adapted for ADAPTER

### COLIBRI CC - Supply air

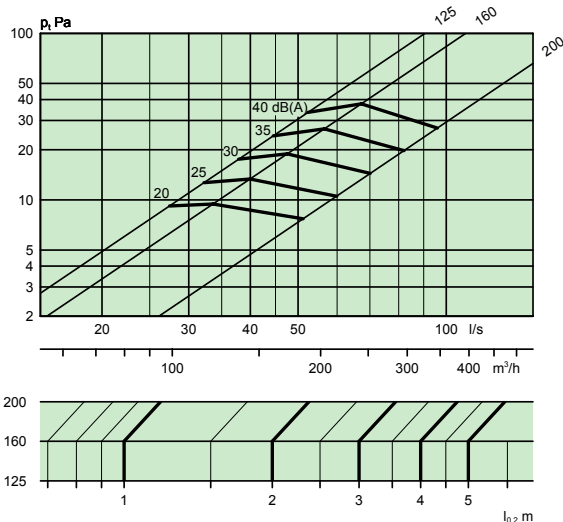
#### Air diffuser only

##### Airflow – Pressure drop – Sound level – Throw

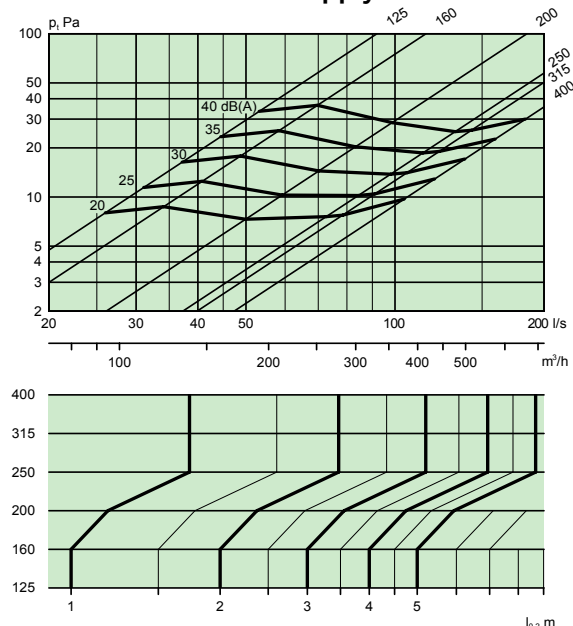
- Throw  $l_{0,2}$  is measured under isothermal discharge conditions.
- Recommended max. permissible temperature below room temperature is 14K.
- For calculating the width of the air stream, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our web calculation softwares available for download at [www.swegon.com](http://www.swegon.com)
- The graphs illustrate data for COLIBRI Ceiling recessed in the ceiling.
- Throw for adjusting the swirl. For other adjustments, see the graphs for diffusers with the ALS commissioning box.



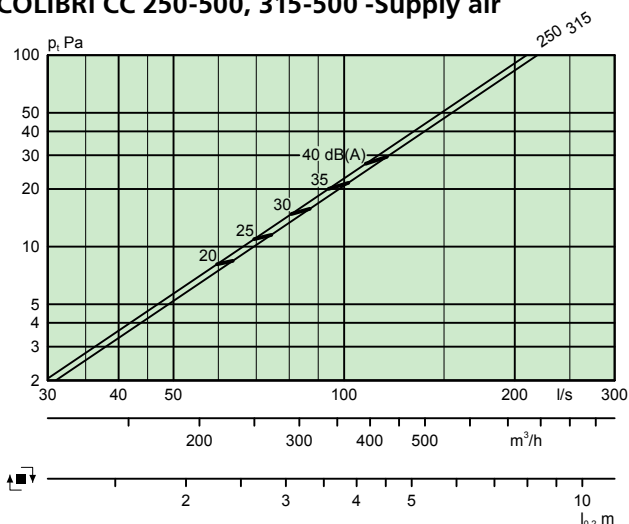
#### COLIBRI CC 125-400, 160-400 and 200-500 - Supply air



#### COLIBRI CC 125-600, 160-600, 200-600, 250-600, 315-600 and 400-600 - Supply air



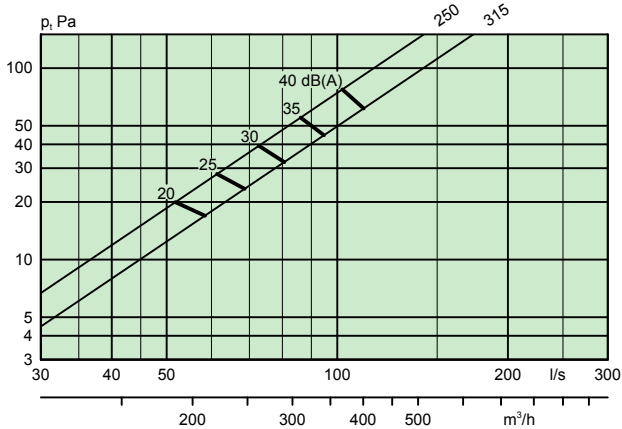
#### COLIBRI CC 250-500, 315-500 -Supply air



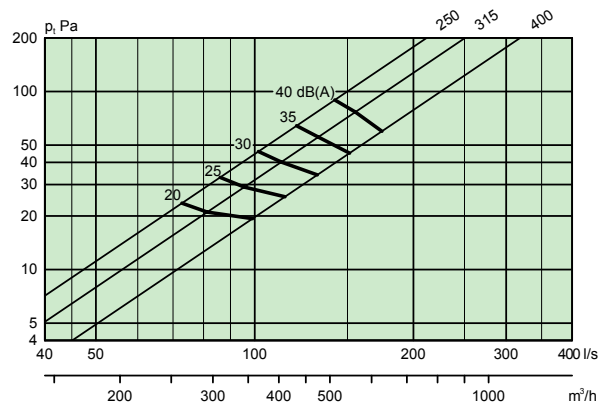
## COLIBRI CC – Extract air

### Air diffuser only

#### COLIBRI CC 250-500, 315-500 - Extract air



#### COLIBRI CC 250-600, 315-600 and 400-600 – Extract air

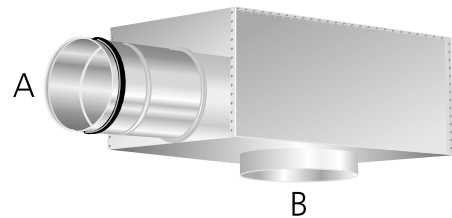


## COLIBRI CC – Supply air

### Air diffuser with commissioning box

#### Air flow – Pressure drop – Sound level – Throw

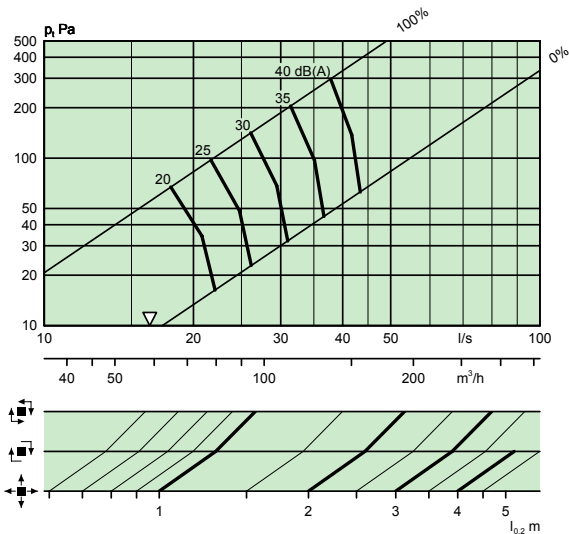
- The graphs illustrate data for air diffuser recessed in the ceiling
- $\Delta$  = Minimum airflow required for obtaining sufficient commissioning pressure
- The version for low installation height generates approx. 3 dB(A) higher sound level than the value plotted in the graph.



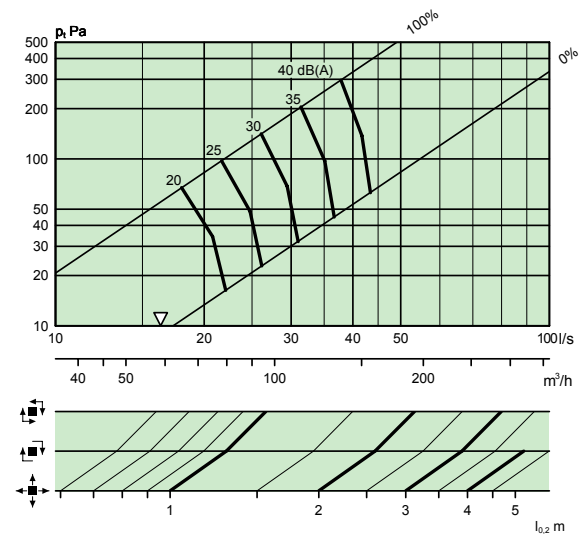
Explanation of the step model:

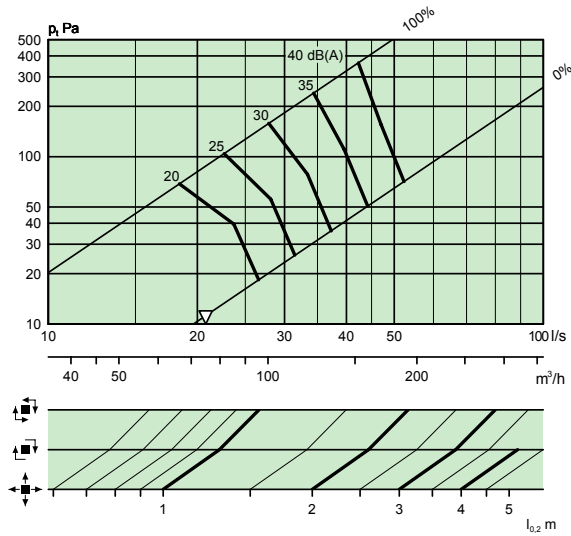
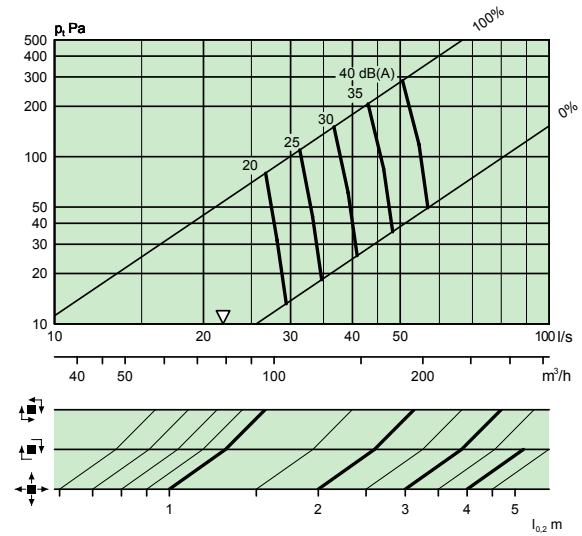
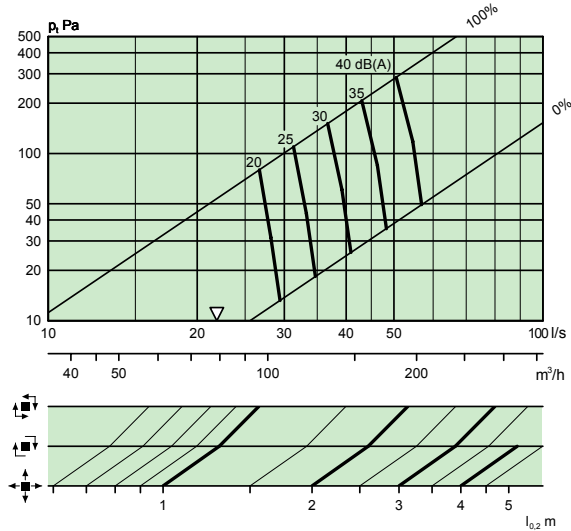
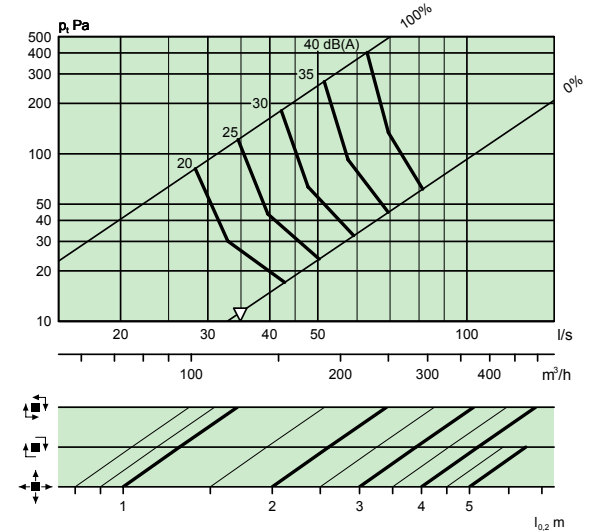
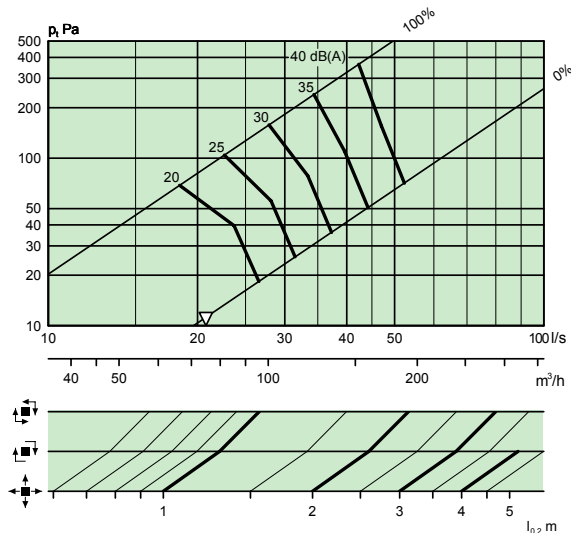
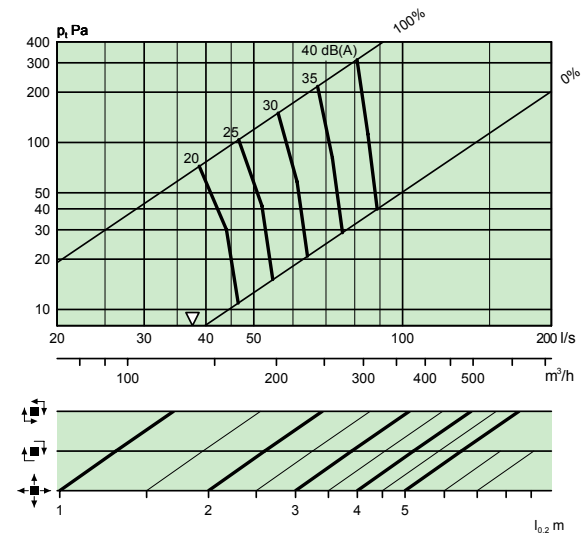
- One step = One dimensional change between A and B, for example, A = Ø160 mm and B = Ø200 mm.
- Two steps = Two dimensional changes between A and B, for example, A = Ø160 mm and B = Ø250 mm.

#### COLIBRI CC 125-400 + ALS 100-125 – One step

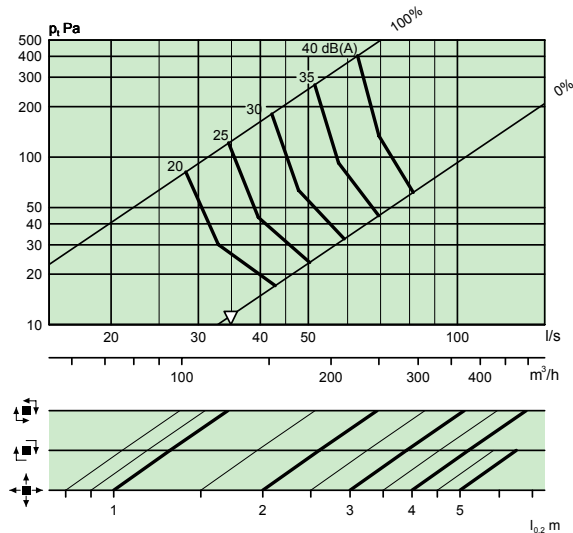


#### COLIBRI CC 125-600 + ALS 100-125 – One step

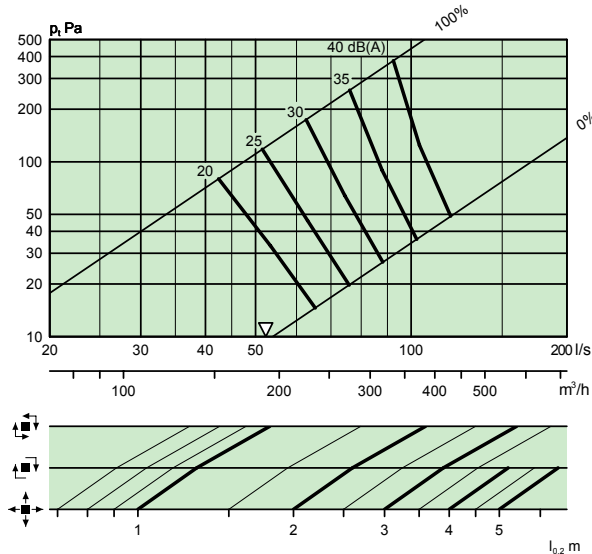


**COLIBRI CC 160-400 + ALS 100-160 – Two steps****COLIBRI CC 160-600 + ALS 125-160 – One step****COLIBRI CC 160-400 + ALS 125-160 – One step****COLIBRI CC 200-500 + ALS 125-200 – Two steps****COLIBRI CC 160-600 + ALS 100-160 – Two steps****COLIBRI CC 200-500 + ALS 160-200 – One step**

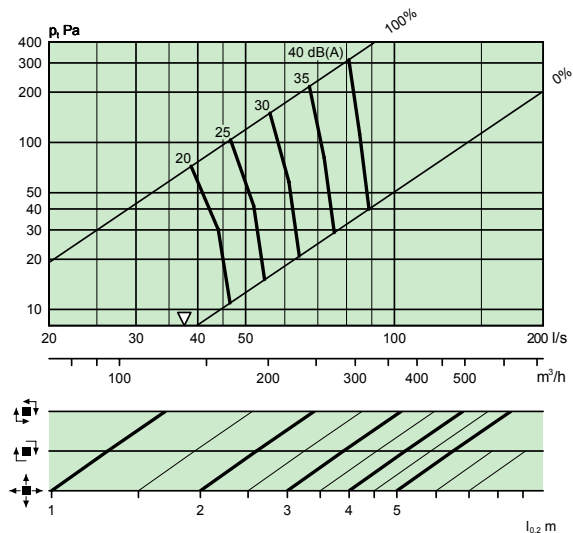
**COLIBRI CC 200-600 + ALS 125-200 – Two steps**



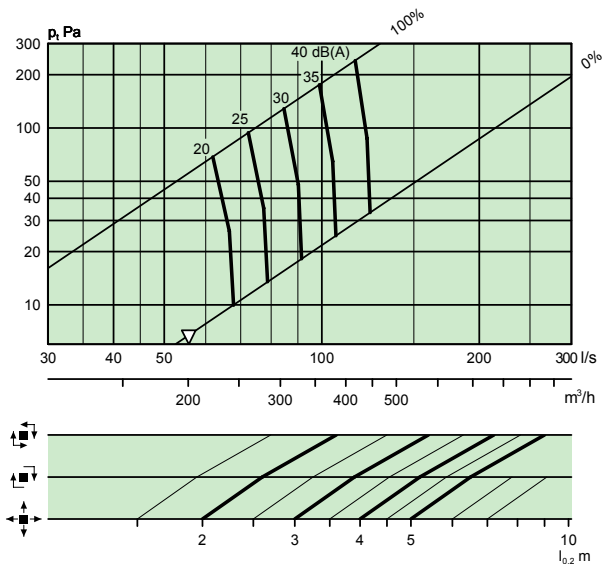
**COLIBRI CC 250-600 + ALS 160-250 – Two steps**



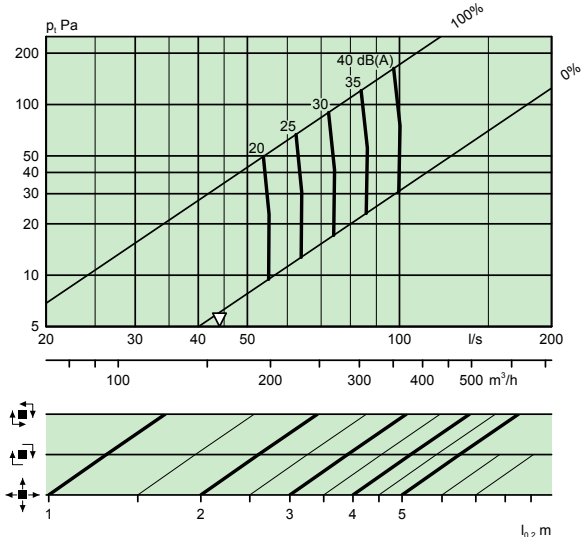
**COLIBRI CC 200-600 + ALS 160-200 – One step**



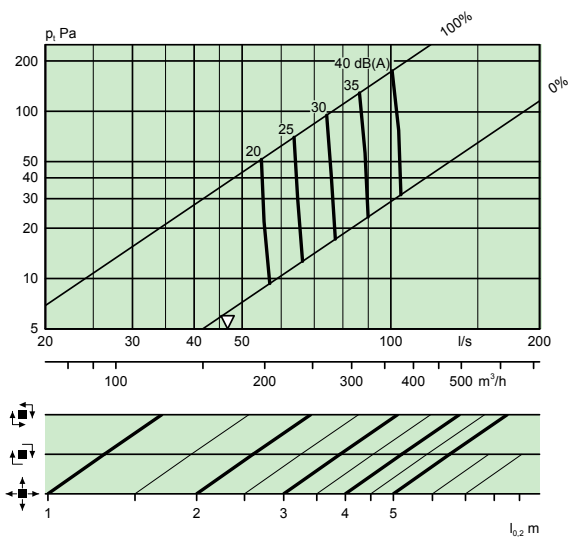
**COLIBRI CC 250-600 + ALS 200-250 – One step**

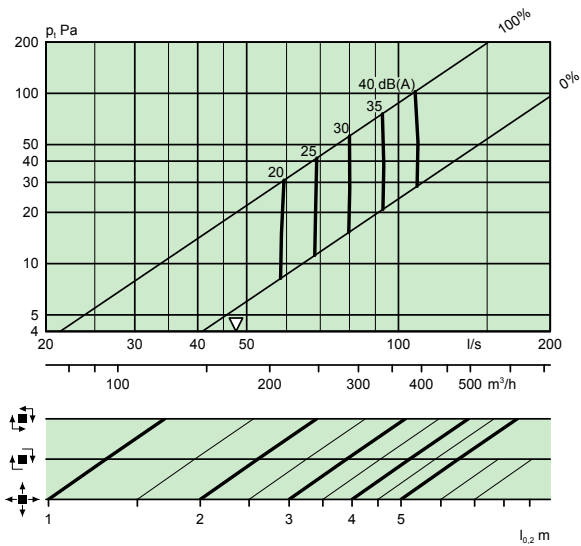
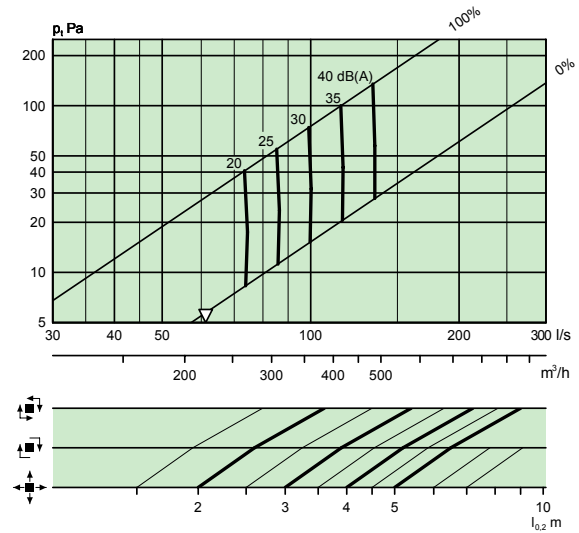
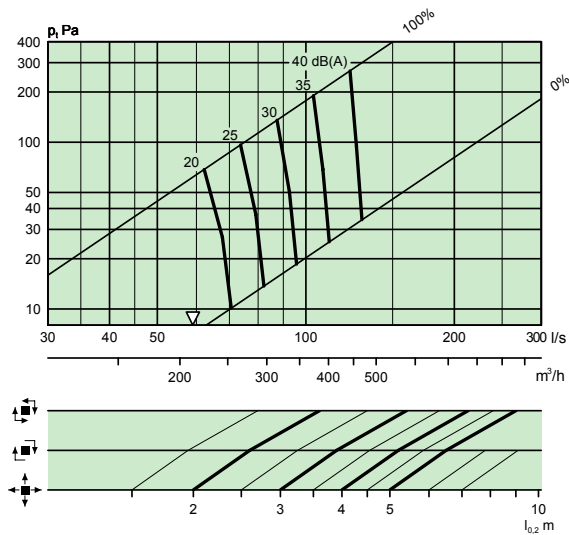
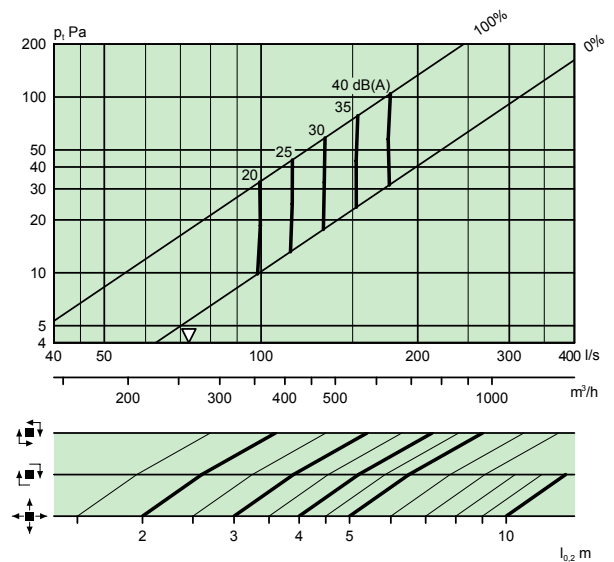


**COLIBRI CC 250-500+ALS 200-250 – One step**



**COLIBRI CC 315-500+ALS 200-315 – Two steps**



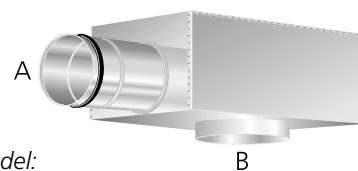
**COLIBRI CC 315-500+ALS 250-315 – One step****COLIBRI CC 315-600 + ALS 250-315 – One step****COLIBRI CC 315-600 + ALS 200-315 – Two steps****COLIBRI CC 400-600 + ALS 315-400 – One step**

## COLIBRI CC with ALS – Extract air

### Air diffuser with commissioning box

#### Air flow – Pressure drop – Sound level

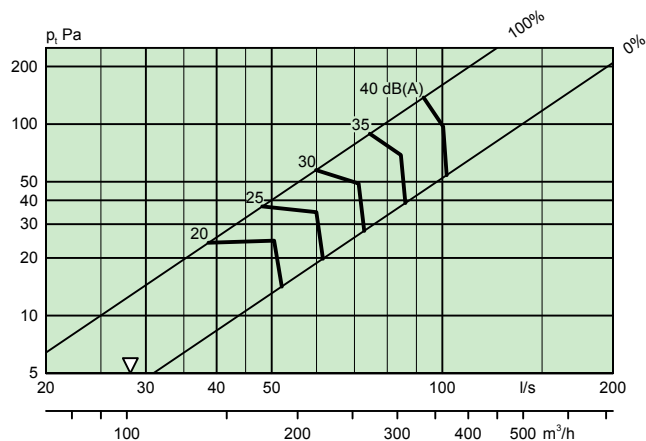
- The graphs illustrate data for air diffuser recessed in the ceiling.
- $\Delta$  = Minimum airflow required for obtaining sufficient commissioning pressure.



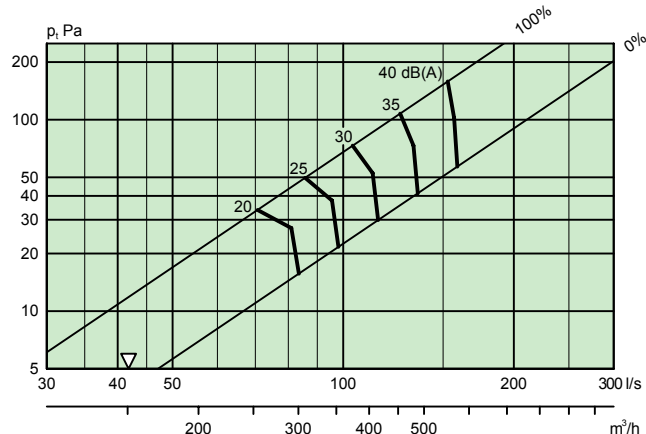
Explanation of the step model:

- One step = One dimensional change between A and B, for example, A = Ø160 mm and B = Ø200 mm.
- Two steps = Two dimensional changes between A and B, for example, A = Ø160 mm and B = Ø250 mm.

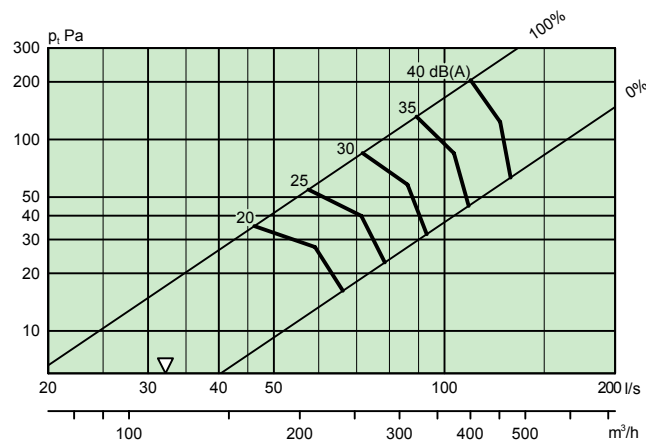
#### COLIBRI CC 250-500+ALS 200-250 – One step



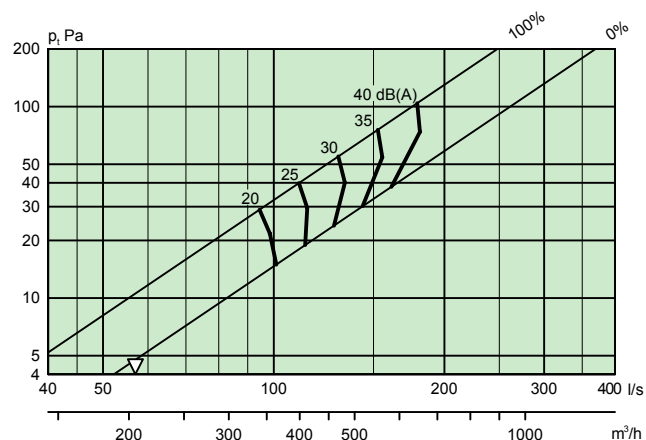
#### COLIBRI CC 315-600 + ALS 250-315 – One step



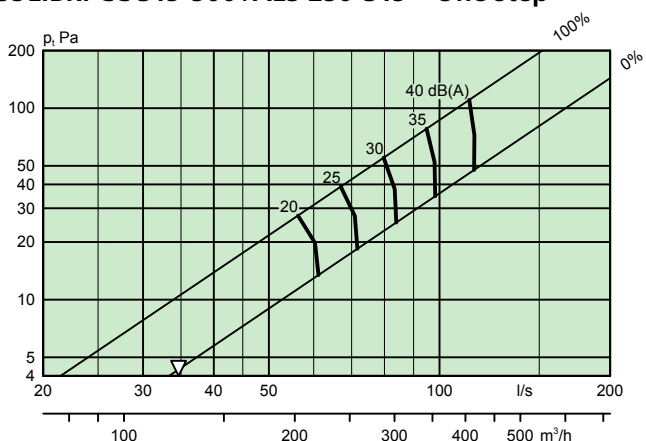
#### COLIBRI CC 250-600 + ALS 200-250 – One step



#### COLIBRI CC 400-600 + ALS 315-400 – One step



#### COLIBRI CC 315-500+ALS 250-315 – One step



## Sizing

- Sound pressure level dB(A) applies to rooms with 10 m<sup>2</sup> equivalent sound absorption area.
- Sound attenuation ( $\Delta L$ ) below is shown in the octave band. Orifice attenuation is included in the values.
- Throw  $I_{0,2}$  is measured under isothermal discharge conditions.
- Recommended max. permissible temperature below room temperature is 14 K.
- For calculating the width of the air stream, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our web calculation softwares available for download at [www.swegon.com](http://www.swegon.com).

$L_w$  = Sound power level

$L_{p10A}$  = Sound pressure level dB (A)

$K_{ok}$  = Correction for producing the  $L_w$  value in the octave band

$L_w = L_{p10A} + K_{ok}$  gives the frequency divided octave band

## Sound data – COLIBRI CR - Supply air – Air diffusers only

### Sound power level $L_w$ (dB)

Table  $K_{ok}$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | -5                             | -2  | -2  | 1   | 2    | -10  | -25  | -26  |
| 125-600    | -6                             | -1  | 2   | 5   | -2   | -11  | -26  | -25  |
| 160-400    | 0                              | -2  | -3  | 0   | 3    | -9   | -25  | -28  |
| 160-600    | -4                             | -2  | 1   | 5   | -2   | -10  | -25  | -27  |
| 200-500    | -4                             | -1  | -1  | -1  | 3    | -9   | -25  | -28  |
| 200-600    | 4                              | -1  | -1  | 3   | 1    | -11  | -25  | -30  |
| 250-500    | -12                            | -3  | -1  | -1  | 3    | -10  | -27  | -30  |
| 250-600    | 0                              | 1   | 2   | 3   | 5    | -7   | -24  | -25  |
| 315-500    | -12                            | -2  | -1  | -2  | 3    | -9   | -26  | -29  |
| 315-600    | -2                             | -1  | -1  | -1  | 3    | -10  | -27  | -26  |
| 400-600    | -5                             | -2  | -1  | -1  | 3    | -10  | -26  | -22  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

### Sound attenuation $\Delta L$ (dB)

Table  $\Delta L$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 20                             | 15  | 10  | 5   | 3    | 5    | 5    | 4    |
| 125-600    | 20                             | 15  | 10  | 5   | 3    | 5    | 5    | 4    |
| 160-400    | 19                             | 14  | 9   | 4   | 3    | 5    | 5    | 4    |
| 160-600    | 19                             | 14  | 9   | 4   | 3    | 5    | 5    | 4    |
| 200-500    | 19                             | 14  | 8   | 3   | 3    | 4    | 5    | 5    |
| 200-600    | 19                             | 14  | 8   | 3   | 3    | 4    | 5    | 5    |
| 250-500    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 250-600    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 315-500    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 315-600    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 400-600    | 13                             | 8   | 4   | 1   | 0    | 0    | 0    | 0    |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## Sound data - COLIBRI CR - Extract air – Air diffusers only

### Sound power level $L_w$ (dB)

Table  $K_{ok}$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 2                              | 8   | 5   | 4   | 3    | -2   | -10  | -17  |
| 315-600    | 0                              | 8   | 7   | 4   | 3    | -3   | -10  | -18  |
| 400-600    | 2                              | 4   | 4   | 3   | 3    | -4   | -11  | -17  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

### Sound attenuation $\Delta L$ (dB)

Table  $\Delta L$

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 16                             | 11  | 5   | 4   | 2    | 3    | 4    | 4    |
| 315-600    | 14                             | 9   | 4   | 2   | 2    | 2    | 3    | 3    |
| 400-600    | 13                             | 8   | 4   | 1   | 0    | 0    | 0    | 0    |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## Sound data – COLIBRI CR + ALS- Supply air – One step

Sound power level  $L_w$  (dB)Table  $K_{ok}$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 2                              | 7   | 6   | 2   | 0    | -11  | -18  | -22  |
| 125-600    | 2                              | 7   | 6   | 2   | 0    | -11  | -18  | -22  |
| 160-400    | 1                              | 4   | 4   | 1   | 1    | -11  | -20  | -20  |
| 160-600    | 1                              | 4   | 4   | 1   | 1    | -11  | -20  | -20  |
| 200-500    | -2                             | 4   | 4   | 0   | 0    | -8   | -16  | -17  |
| 200-600    | -2                             | 4   | 4   | 0   | 0    | -8   | -16  | -17  |
| 250-500    | -4                             | 4   | 1   | 0   | 2    | -10  | -22  | -24  |
| 250-600    | -3                             | 6   | 3   | -2  | 0    | -8   | -16  | -17  |
| 315-500    | -5                             | 3   | 1   | 0   | 3    | -9   | -24  | -28  |
| 315-600    | 0                              | 4   | 1   | 0   | 2    | -10  | -22  | -22  |
| 400-600    | -1                             | 4   | 0   | -2  | 3    | -11  | -26  | -25  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

Sound attenuation  $\Delta L$  (dB)Table  $\Delta L$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 125-400    | 21                             | 16  | 9   | 17  | 23   | 16   | 11   | 13   |
| 125-600    | 21                             | 16  | 9   | 17  | 23   | 16   | 11   | 13   |
| 160-400    | 19                             | 14  | 10  | 17  | 19   | 12   | 10   | 12   |
| 160-600    | 19                             | 14  | 10  | 17  | 19   | 12   | 10   | 12   |
| 200-500    | 16                             | 11  | 8   | 16  | 18   | 12   | 11   | 11   |
| 200-600    | 16                             | 11  | 8   | 16  | 18   | 12   | 11   | 11   |
| 250-500    | 13                             | 8   | 8   | 16  | 17   | 12   | 12   | 13   |
| 250-600    | 13                             | 8   | 8   | 16  | 17   | 12   | 12   | 13   |
| 315-500    | 11                             | 6   | 7   | 19  | 14   | 10   | 10   | 13   |
| 315-600    | 11                             | 6   | 7   | 19  | 14   | 10   | 10   | 13   |
| 400-600    | 14                             | 5   | 8   | 14  | 11   | 10   | 11   | 12   |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## Sound data – COLIBRI CR + ALS – Supply air – Two steps

Sound power level  $L_w$  (dB)Table  $K_{ok}$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 160-400    | -2                             | 8   | 6   | 2   | -2   | -11  | -17  | -18  |
| 160-600    | -2                             | 8   | 6   | 2   | -2   | -11  | -17  | -18  |
| 200-500    | 1                              | 8   | 7   | 0   | -3   | -8   | -15  | -17  |
| 200-600    | 0                              | 8   | 7   | 0   | -3   | -8   | -15  | -17  |
| 250-600    | 1                              | 9   | 5   | -2  | -3   | -7   | -14  | -17  |
| 315-500    | -2                             | 5   | 2   | -2  | 2    | -8   | -19  | -23  |
| 315-600    | 3                              | 8   | 3   | -2  | 0    | -7   | -15  | -18  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

Sound attenuation  $\Delta L$  (dB)Table  $\Delta L$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 160-400    | 19                             | 14  | 11  | 17  | 24   | 15   | 13   | 15   |
| 160-600    | 19                             | 14  | 11  | 17  | 24   | 15   | 13   | 15   |
| 200-500    | 18                             | 14  | 10  | 16  | 23   | 15   | 14   | 15   |
| 200-600    | 18                             | 14  | 10  | 16  | 23   | 15   | 14   | 15   |
| 250-600    | 15                             | 9   | 9   | 20  | 19   | 15   | 16   | 14   |
| 315-500    | 13                             | 8   | 10  | 19  | 16   | 13   | 16   | 16   |
| 315-600    | 13                             | 8   | 10  | 19  | 16   | 13   | 16   | 16   |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## COLIBRI CR + ALS – Extract air

Sound power level  $L_w$  (dB)Table  $K_{ok}$ 

| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 0                              | 13  | 8   | 1   | 0    | -4   | -10  | -16  |
| 315-600    | 4                              | 12  | 6   | 1   | 3    | -4   | -13  | -18  |
| 400-600    | 5                              | 9   | 4   | 2   | 3    | -4   | -13  | -20  |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

Sound attenuation  $\Delta L$  (dB)Table  $\Delta L$ 

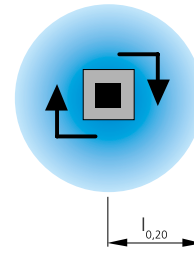
| Size       | Mid-frequency (Octave band) Hz |     |     |     |      |      |      |      |
|------------|--------------------------------|-----|-----|-----|------|------|------|------|
|            | 63                             | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
| 250-600    | 13                             | 8   | 8   | 16  | 17   | 12   | 12   | 13   |
| 315-600    | 11                             | 6   | 7   | 19  | 14   | 10   | 10   | 13   |
| 400-600    | 14                             | 5   | 8   | 14  | 11   | 10   | 11   | 12   |
| Tol. $\pm$ | 2                              | 2   | 2   | 2   | 2    | 2    | 2    | 2    |

## COLIBRI CR – Supply air

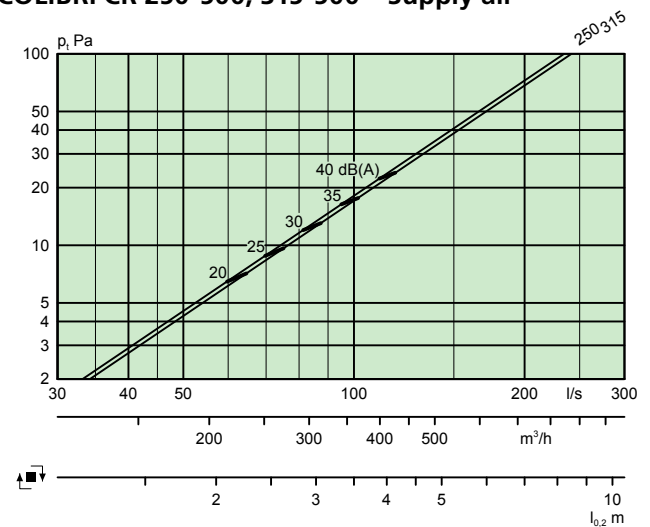
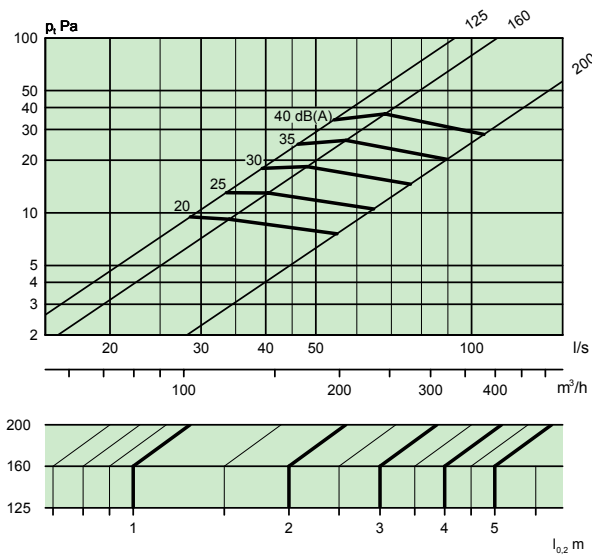
### Air diffuser only

#### Airflow – Pressure drop – Sound level – Throw

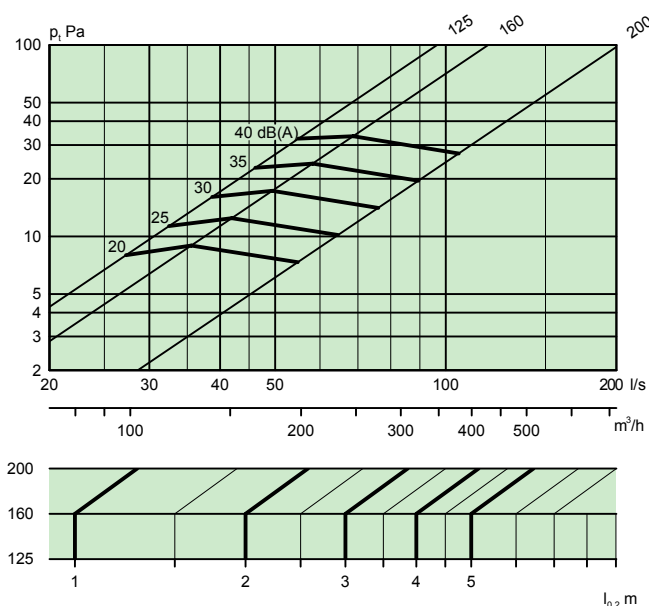
- The graphs illustrate data for air diffuser recessed in the ceiling.
- Throw for adjusting the swirl. For other adjustments, see the graphs for diffusers with the ALS commissioning box.
- Throw  $l_{0,2}$  is measured under isothermal discharge conditions.
- Recommended max. permissible temperature below room temperature is 14 K.



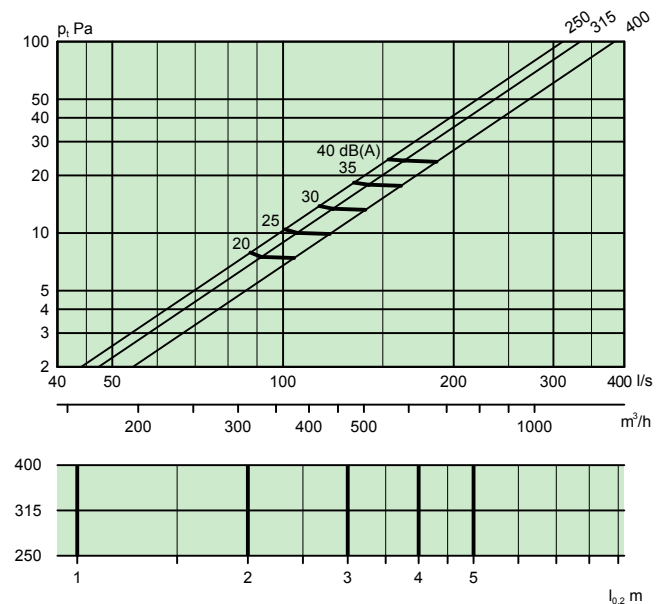
### COLIBRI CR 125-400, 160-400 and 200-500 – Supply air COLIBRI CR 250-500, 315-500 – Supply air



### COLIBRI CR 125-600, 160-600 and 200-600 – Supply air

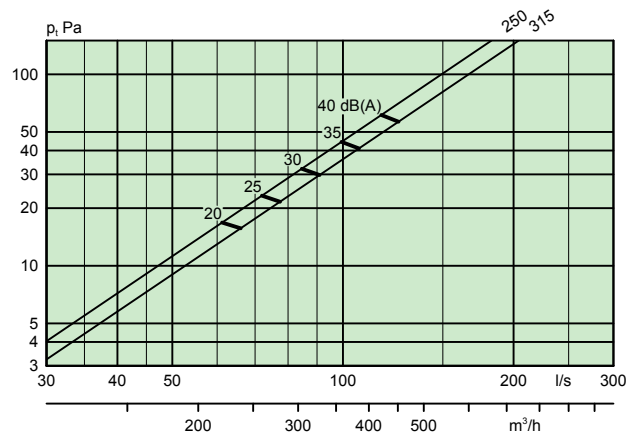


### COLIBRI CR 250-600, 315-600 and 400-600 – Supply air

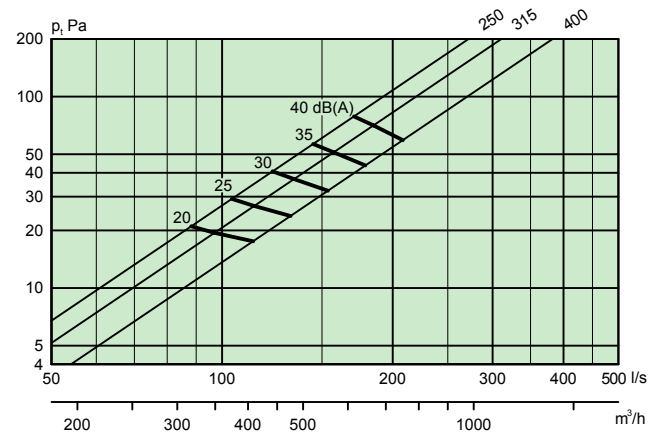


COLIBRI CR – Extract air  
Air diffuser only

COLIBRI CR 250-500, 315-500



COLIBRI CR 250-600, 315-600 and 400-600

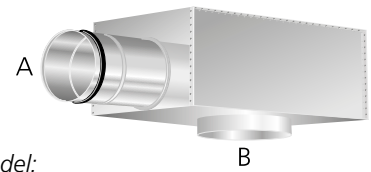


## COLIBRI CR with ALS – Supply air

### Air diffuser with commissioning box

#### Airflow – Pressure drop – Sound level – Throw

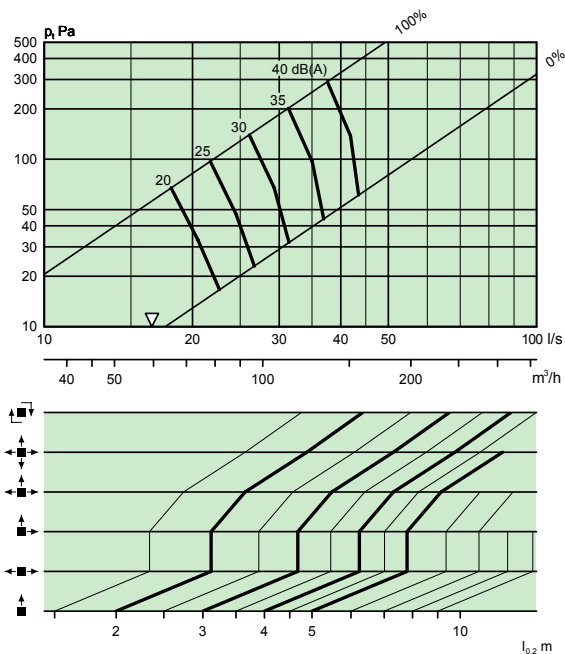
- The graphs illustrate data for air diffuser recessed in the ceiling.
- $\nabla$  = Min. airflow required for obtaining sufficient commissioning pressure.
- The version for low installation height generates approx. 3 dB(A) higher sound level than the value plotted in the graph.



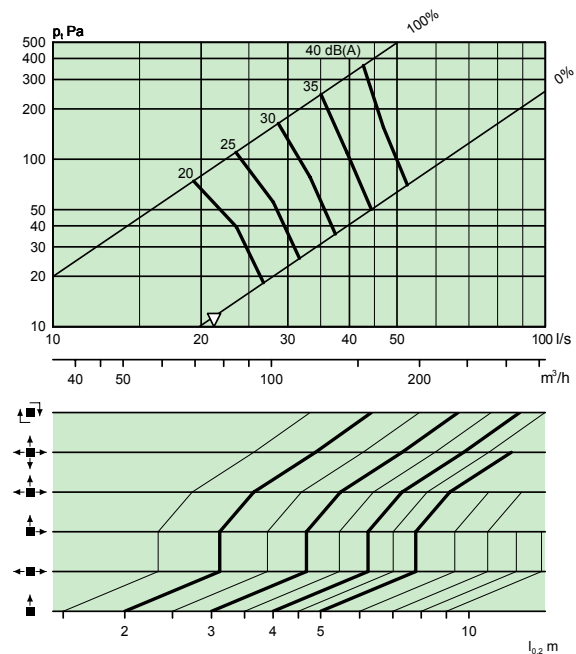
Explanation of the step model:

- One step = One dimensional change between A and B, for example, A = Ø160 mm and B = Ø200 mm.
- Two steps = Two dimensional changes between A and B, for example, A = Ø160 mm and B = Ø250 mm.

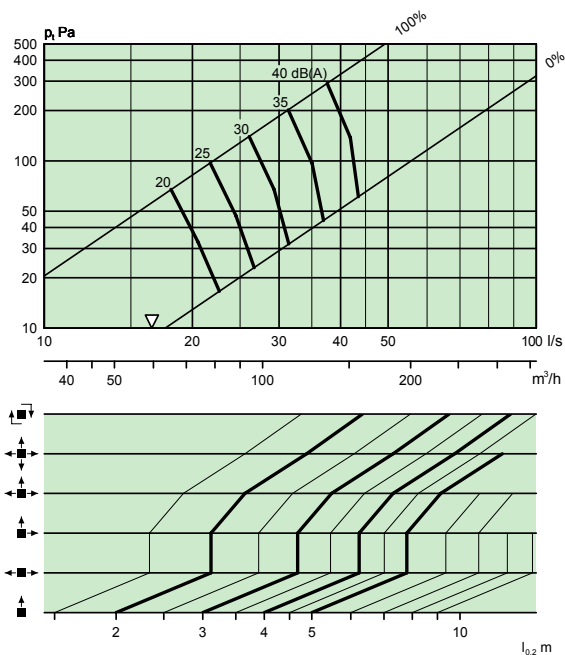
#### COLIBRI CR 125-400 + ALS 100-125 – One step



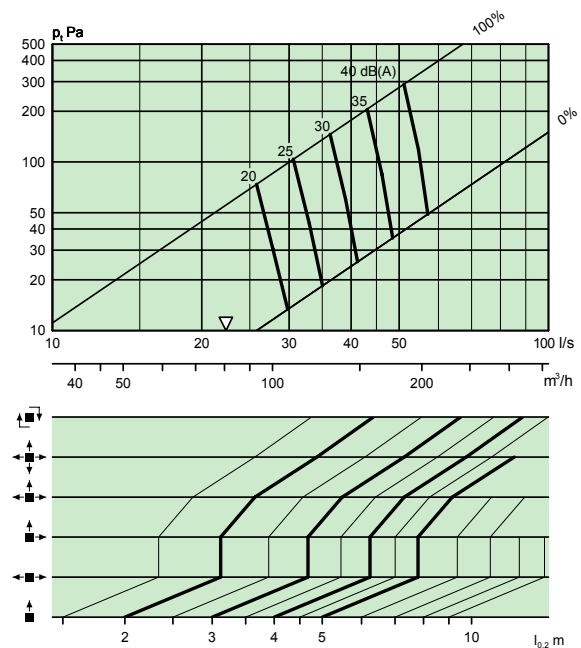
#### COLIBRI CR 160-400 + ALS 100-160 – Two steps



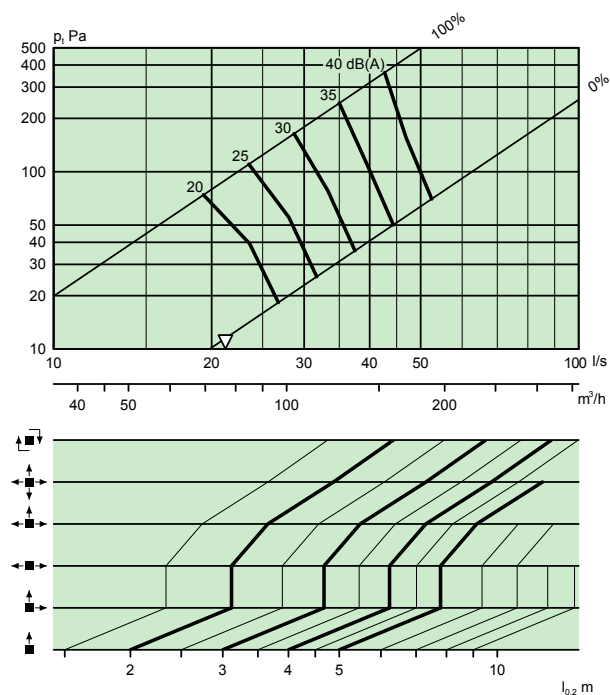
#### COLIBRI CR 125-600 + ALS 100-125 – One step



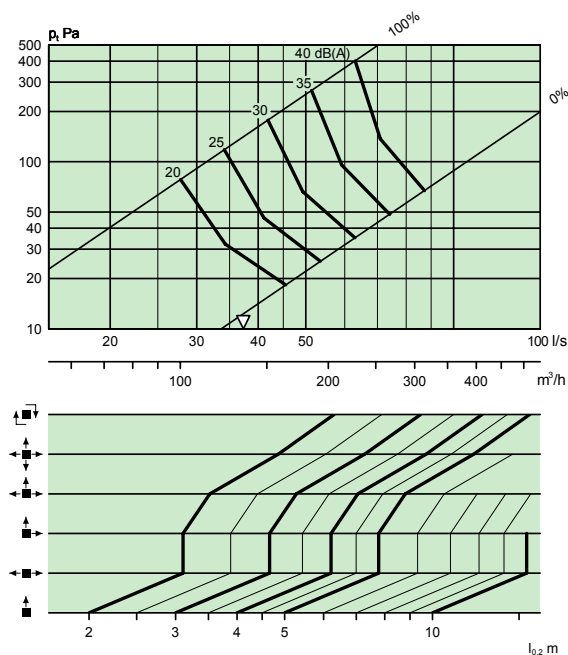
#### COLIBRI CR 160-400 + ALS 125-160 – One step



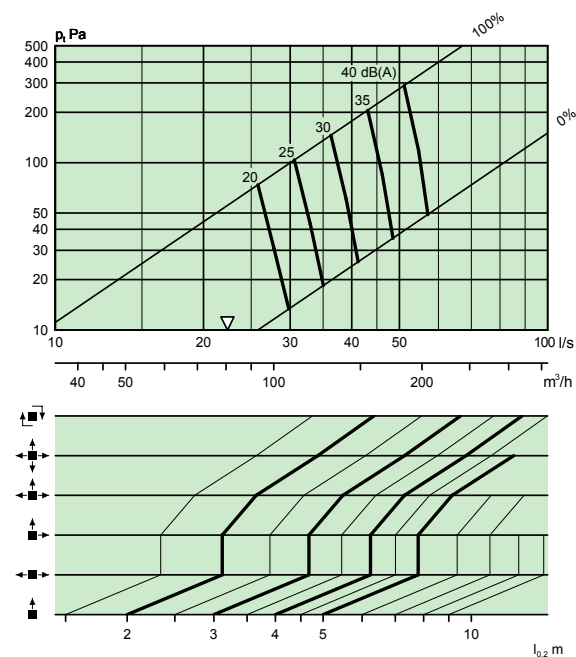
COLIBRI CR 160-600 + ALS 100-160 – Two steps



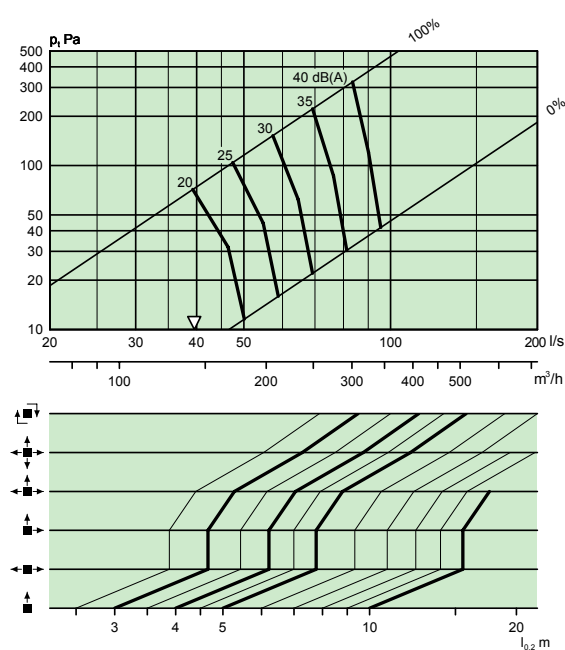
COLIBRI CR 200-500 + ALS 125-200 – Two steps

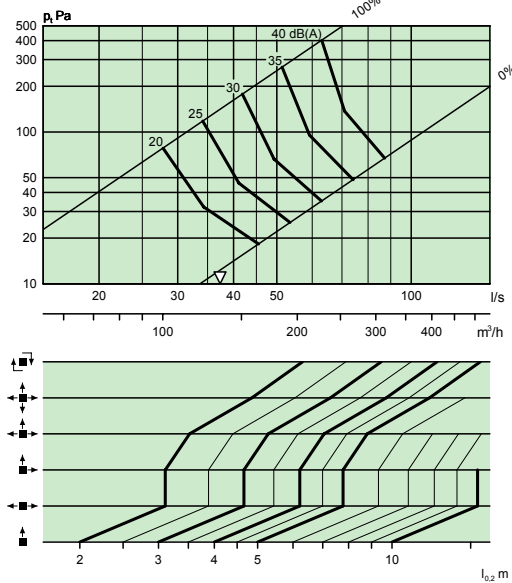
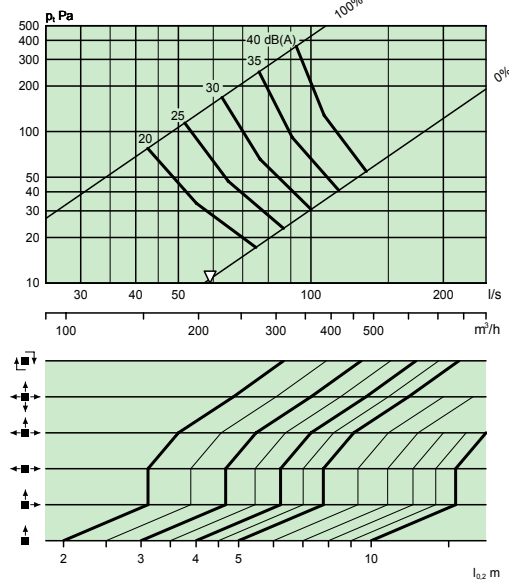
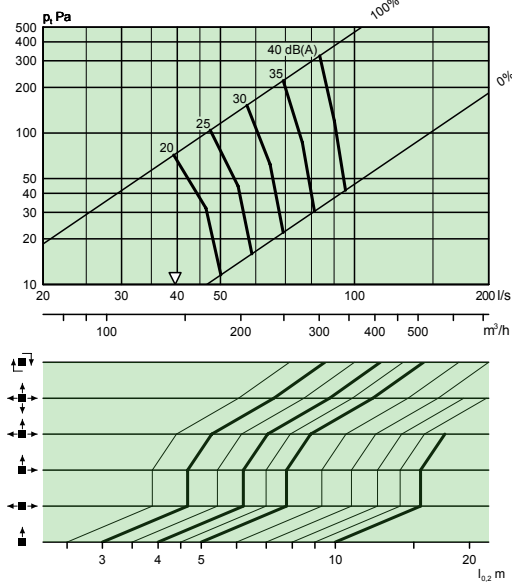
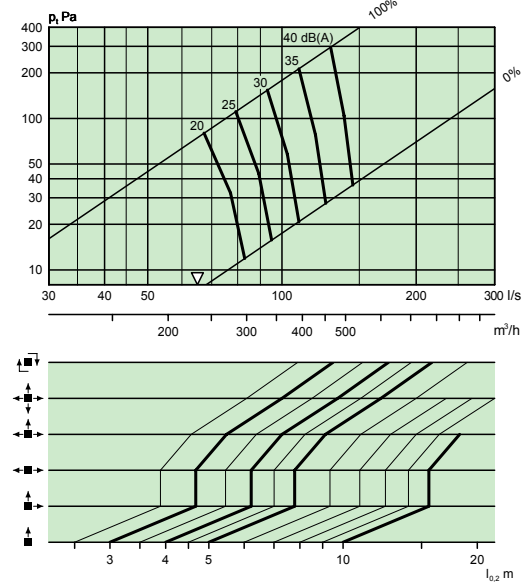
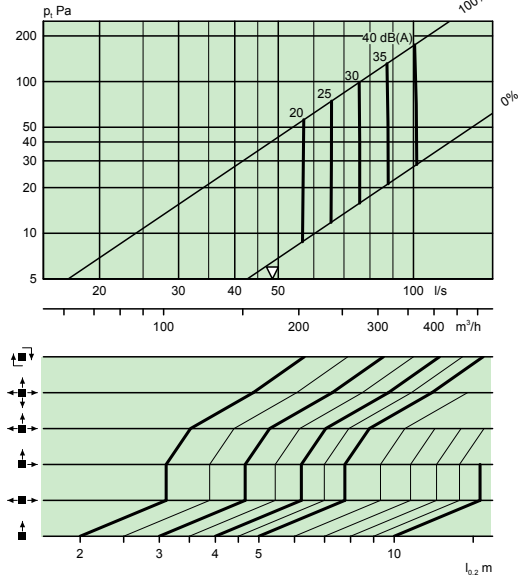


COLIBRI CR 160-600 + ALS 125-160 – One step

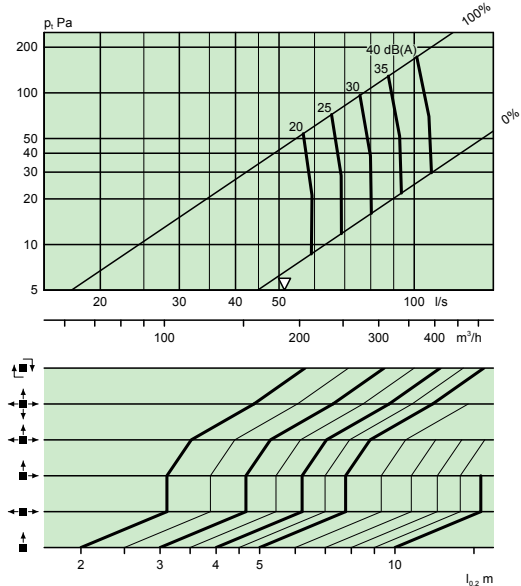


COLIBRI CR 200-500 + ALS 160-200 – One step

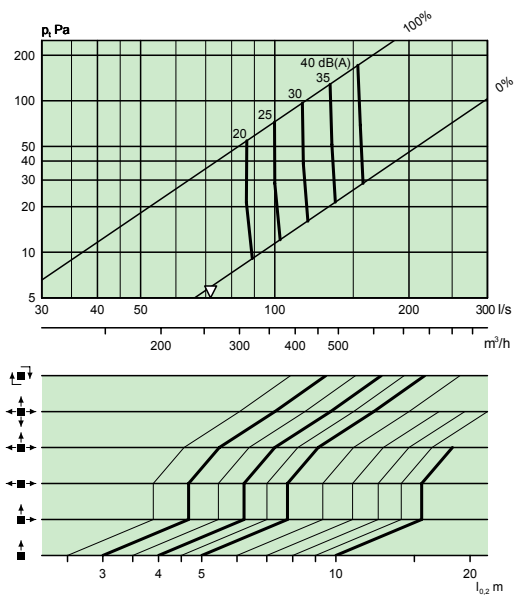


**COLIBRI CR 200-600 + ALS 125-200 – Two steps****COLIBRI CR 250-600 + ALS 160-250 – Two steps****COLIBRI CR 200-600 + ALS 160-200 – One step****COLIBRI CR 250-600 + ALS 200-250 – One step****COLIBRI CR 250-500 + ALS 200-250**

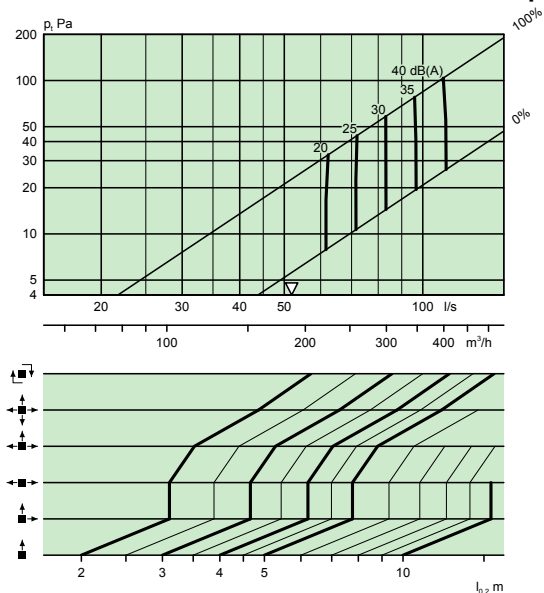
**COLIBRI CR 315-500 + ALS 200-315 – Two steps**



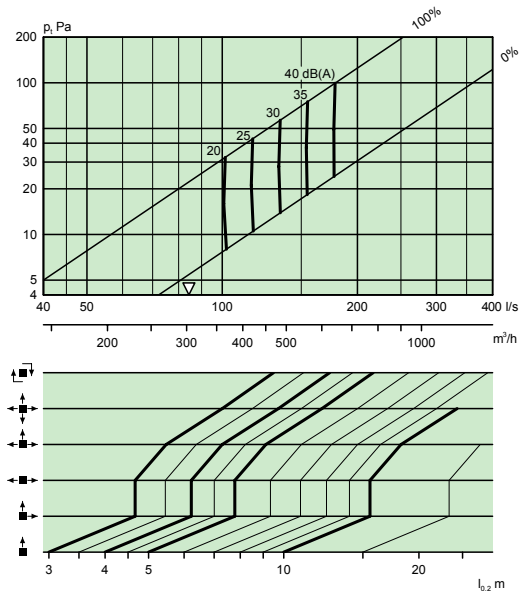
**COLIBRI CR 315-600 + ALS 250-315 – One step**



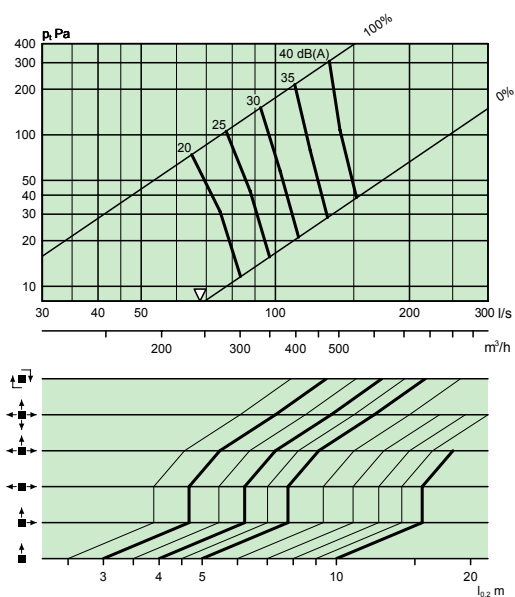
**COLIBRI CR 315-500+ALS 250-315 – One step**



**COLIBRI CR 400-600 + ALS 315-400 – One step**



**COLIBRI CR 315-600 + ALS 200-315 – Two steps**

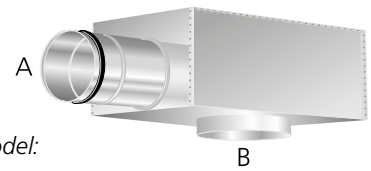


## COLIBRI CR with ALS – Extract air

### Air diffuser with commissioning box

#### Air flow – Pressure drop – Sound level

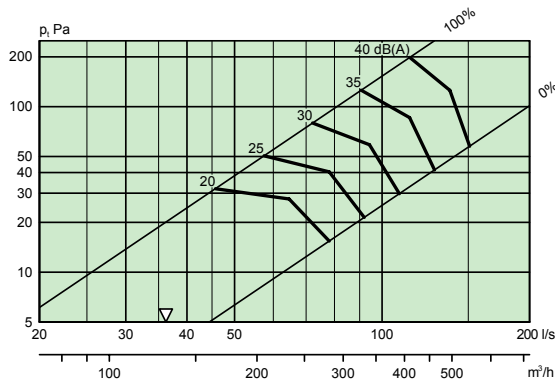
- The graphs illustrate data for air diffuser recessed in the ceiling.
- $\nabla$  = Min. airflow required for obtaining sufficient commissioning pressure.



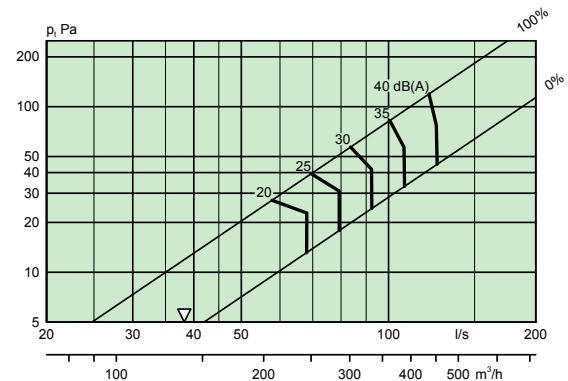
Explanation of the step model:

- One step = One dimensional change between A and B, for example, A =  $\varnothing 160$  mm and B =  $\varnothing 200$  mm.
- Two steps = Two dimensional changes between A and B, for example, A =  $\varnothing 160$  mm and B =  $\varnothing 250$  mm.

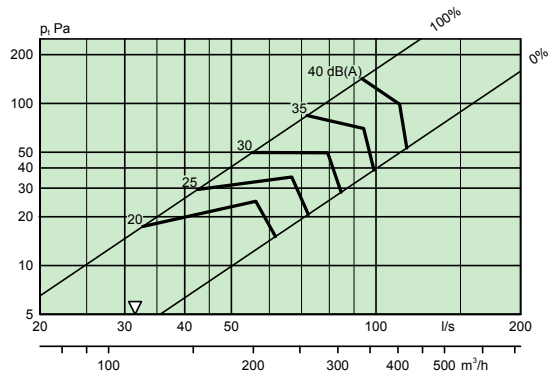
#### COLIBRI CR 250-600 + ALS 200-250 – One step



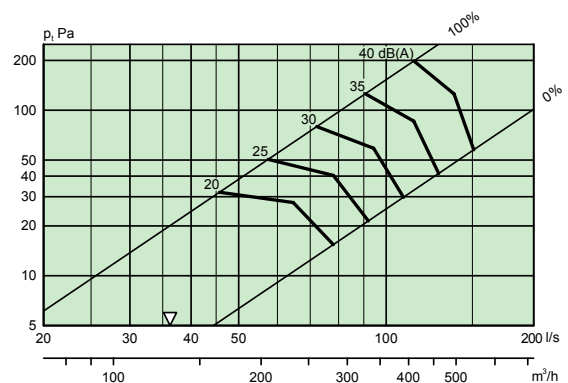
#### COLIBRI CR 315-500+ALS 250-315 – One step



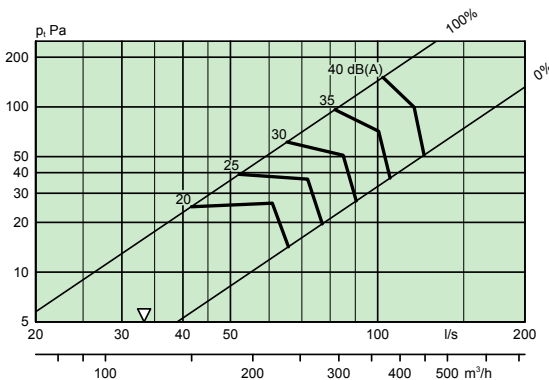
#### COLIBRI CR 250-500 + ALS 200-250 – One step



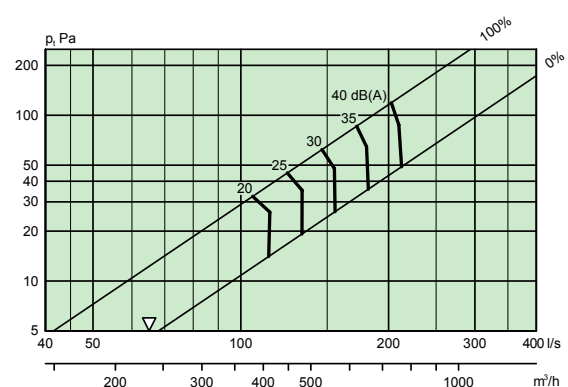
#### COLIBRI CR 315-600 + ALS 250-315 – One step



#### COLIBRI CR 315-500 + ALS 200-315 – One step



#### COLIBRI CR 400-600 + ALS 315-400 – One step



# Dimensions and weights

## COLIBRI Ceiling

| Size    | Dimensions (mm) |     |     |    | Weight, kg | Nr. of nozzles |     |
|---------|-----------------|-----|-----|----|------------|----------------|-----|
|         | A               | Ød1 | I   | M  |            | CC             | CR  |
| 125-400 | 395             | 124 | 375 | 70 | 1,5        | 47             | 49  |
| 125-600 | 595             | 124 | 575 | 70 | 3,5        | 47             | 49  |
| 160-400 | 395             | 159 | 375 | 70 | 1,5        | 47             | 49  |
| 160-600 | 595             | 159 | 575 | 70 | 3,5        | 47             | 49  |
| 200-500 | 495             | 199 | 475 | 70 | 2,5        | 90             | 100 |
| 200-600 | 595             | 199 | 575 | 70 | 3,5        | 90             | 100 |
| 250-500 | 495             | 249 | 475 | 70 | 3,4        | 90             | 100 |
| 250-600 | 595             | 249 | 575 | 70 | 3,5        | 130            | 169 |
| 315-500 | 495             | 314 | 475 | 50 | 3,4        | 90             | 100 |
| 315-600 | 595             | 314 | 575 | 50 | 3,5        | 130            | 169 |
| 400-600 | 595             | 399 | 575 | 50 | 3,5        | 130            | 169 |

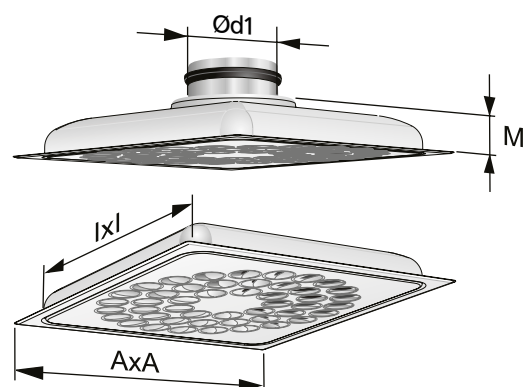


Figure 5. COLIBRI Ceiling.

Dimensions of opening I x I

## COLIBRI Ceiling with ALS, 1-step

| Size    | A   | B   | C   | ØD  | Ød  | E1  | E2  | F1  | F2 | G1  | G2  | H   | K   | Weight, kg |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|
| 125-400 | 395 | 282 | 217 | 99  | 125 | 255 | 212 | 113 | 70 | 175 | 132 | 270 | 80  | 3,5        |
| 125-600 | 595 | 282 | 217 | 99  | 125 | 255 | 212 | 113 | 70 | 175 | 132 | 270 | 80  | 5,5        |
| 160-400 | 395 | 342 | 252 | 124 | 160 | 279 | 236 | 113 | 70 | 188 | 145 | 315 | 80  | 4,2        |
| 160-600 | 595 | 342 | 252 | 124 | 160 | 279 | 236 | 113 | 70 | 188 | 145 | 315 | 80  | 6,2        |
| 200-500 | 495 | 404 | 288 | 159 | 200 | 314 | 271 | 113 | 70 | 205 | 162 | 375 | 100 | 6,0        |
| 200-600 | 595 | 404 | 288 | 159 | 200 | 314 | 271 | 113 | 70 | 205 | 162 | 375 | 100 | 7,0        |
| 250-600 | 595 | 504 | 332 | 199 | 250 | 354 | 311 | 113 | 70 | 225 | 182 | 465 | 115 | 8,7        |
| 315-600 | 595 | 622 | 388 | 249 | 315 | 395 | 352 | 93  | 50 | 230 | 187 | 575 | 140 | 11,8       |
| 400-600 | 595 | 767 | 488 | 314 | 400 | 455 | –   | 93  | –  | 262 | –   | 712 | 175 | 15,0       |

## COLIBRI Ceiling with ALS, 2-steps

| Size    | A   | B   | C   | ØD  | Ød  | E1  | E2  | F1  | F2 | G1  | G2  | H   | K   | Weight, kg |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|------------|
| 160-400 | 395 | 342 | 252 | 99  | 160 | 255 | 212 | 113 | 70 | 175 | 132 | 315 | 80  | 3,5        |
| 160-600 | 595 | 342 | 252 | 99  | 160 | 255 | 212 | 113 | 70 | 175 | 132 | 315 | 80  | 5,5        |
| 200-500 | 495 | 404 | 288 | 124 | 200 | 279 | 236 | 113 | 70 | 188 | 145 | 355 | 80  | 3,2        |
| 200-600 | 595 | 404 | 288 | 124 | 200 | 279 | 236 | 113 | 70 | 188 | 145 | 355 | 80  | 4,2        |
| 250-600 | 595 | 504 | 332 | 159 | 250 | 314 | 271 | 113 | 70 | 205 | 162 | 450 | 100 | 7,0        |
| 315-600 | 595 | 622 | 388 | 199 | 315 | 334 | 291 | 93  | 50 | 205 | 162 | 550 | 115 | 8,7        |

CL = Center line

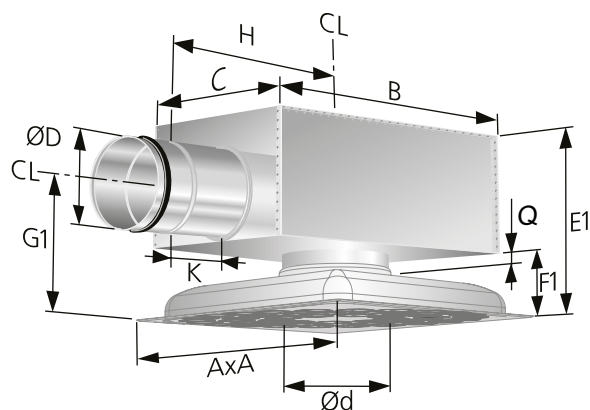


Figure 6. COLIBRI Ceiling with ALS.

CL = Centerline.

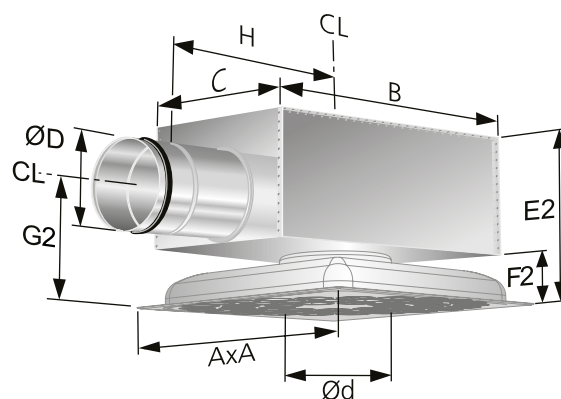


Figure 7. COLIBRI Ceiling with ALS. Low installation height.

Sarg – SAR K

| Size | Dimensions (mm) |    | Weight (kg) |
|------|-----------------|----|-------------|
|      | L               | N  |             |
| 400  | 395             | 75 | 1,0         |
| 500  | 495             | 75 | 1,0         |
| 600  | 595             | 75 | 1,0         |

When installing sizes 315-600 and 400-600 terminals, position the ALS box so that its branch extends 20 mm below the ceiling surface.

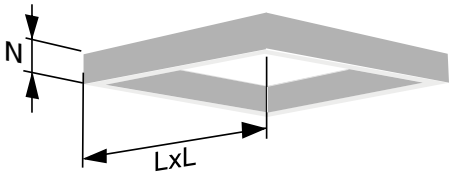


Figure 8. Frame, SAR K.

## Nozzle pattern and nozzle settings

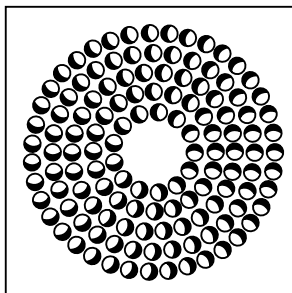
Standard and alternative nozzle settings for various diffusion patterns.

NOTE: Air direction in the figure.

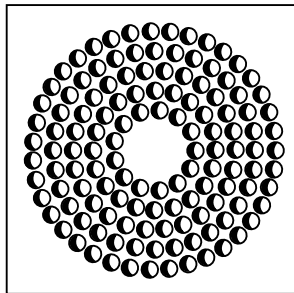


### Examples, circular nozzle arrangement:

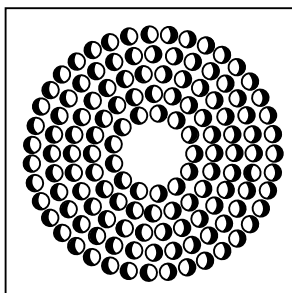
**Clock-wise swirl  
(standard)**



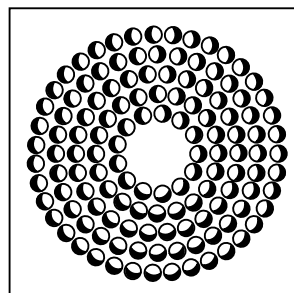
**1-way**



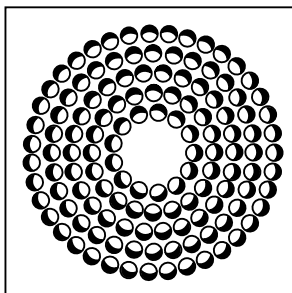
**2-way**



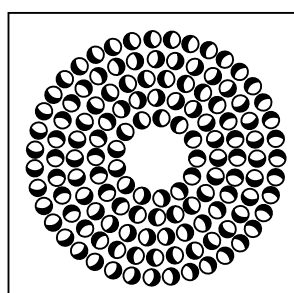
**3-way**



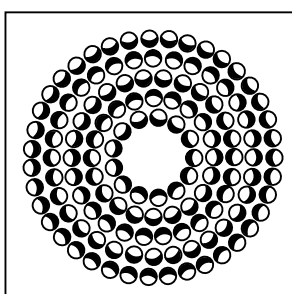
**4-way**



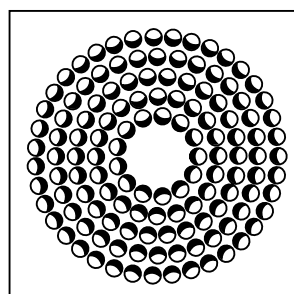
**Counter-flow**



**VD Vertical, diffused**

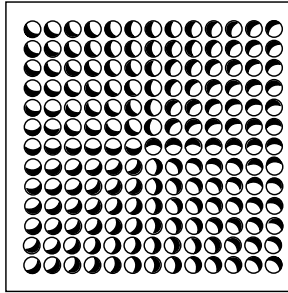


**VK Vertical, concentrated**

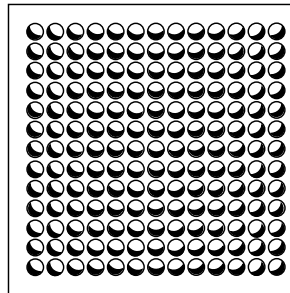


### Examples, square nozzle arrangement:

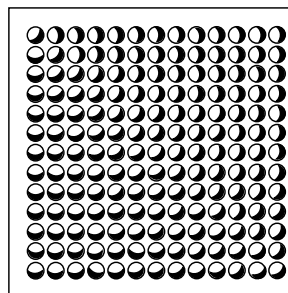
**Clock-wise swirl  
(standard)**



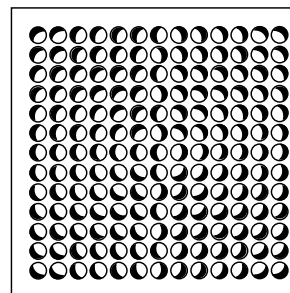
**1-way**



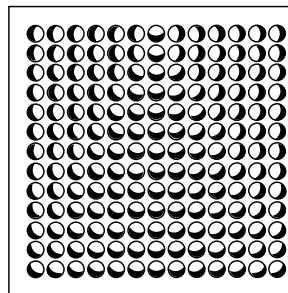
**2H-way**



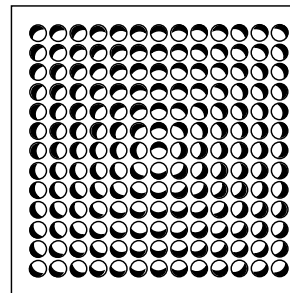
**2M-way**



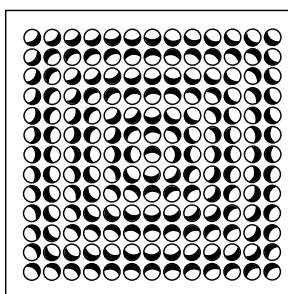
**3-way**



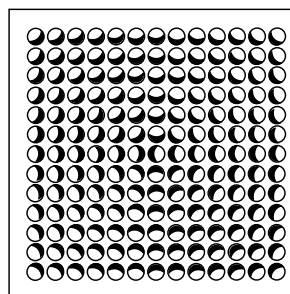
**4-way**



**VD Vertical, diffused**



**VK Vertical, concentrated**



## Order key

### Product

Square ceiling diffusers COLIBRI xx b aaa -bbb -c  
for supply air

Variant:

CC: Circular nozzle arrangement

CR: Square arrangement

Version:

Nom. connection size, mm:

125, 160, 200, 250, 315, 400

Nom. square dimensions, mm: 400, 500, 600

Low version: L

To be specified only if low installation height is desirable  
(all sizes except 400-600)

Standard range:

|      |         |
|------|---------|
| Size | 125-400 |
|      | 125-600 |
|      | 160-400 |
|      | 160-600 |
|      | 200-500 |
|      | 200-600 |
|      | 250-600 |
|      | 315-600 |
|      | 400-600 |

### Accessories

Commissioning box ALS d aaa-bbb -c

Version:

|                     |         |
|---------------------|---------|
| For COLIBRI Ceiling | ALS     |
| 125-400 and 125-600 | 100-125 |
| 160-400 and 160-600 | 100-160 |
| 160-400 and 160-600 | 125-160 |
| 200-500 and 200-600 | 125-200 |
| 200-500 and 200-600 | 160-200 |
| 250-600             | 160-250 |
| 250-600             | 200-250 |
| 315-600             | 200-315 |
| 315-600             | 250-315 |
| 400-600             | 315-400 |

Low installation height: L

Low installation height should only be specified if  
a diffuser in the low version is selected.

### Frame

Frame SAR b K aaa

Version

K = square

|           |         |     |
|-----------|---------|-----|
| For size: | 125-400 | 400 |
|           | 160-400 | 400 |
|           | 200-500 | 500 |
|           | 125-600 | 600 |
|           | 160-600 | 600 |
|           | 200-600 | 600 |
|           | 250-600 | 600 |
|           | 315-600 | 600 |
|           | 400-600 | 600 |

## Specification example

Swegon's complete square type COLIBRI Ceiling nozzle diffuser with circular nozzle arrangement and ALS commissioning box and the following features:

- Designed for modular suspended ceilings (600x600 mm).
- 100% flexible distribution pattern.
- Individually adjustable nozzles.
- Quick Access diffuser face opening/closing action for quick access to the commissioning box and duct system.
- Powder painted in white, RAL 9003/NCS S 0500-N.
- Cleanable ALS commissioning box with removable adjustment damper, measuring method with low systematic error and lined inside with sound absorbing material covered with woven surface layer that prevents fibre migration.

Size: COLIBRI CCb aaa-bbb-c with  
ALSd aaa-bbb-c xx items

Accessories

Frame: SARb K aaa xx items