

COLIBRI Ceiling

Square ceiling diffuser with discs for supply air



QUICK FACTS

- Adjustable discs
- 100% flexible spread pattern
- Can be used for vertical air diffusion
- Swirl function
- Also available in the Extract air version
- Designed for modular suspended ceilings (595 x 595 mm)
- Quick Access diffuser face
- Easy to access
- ALS commissioning box with 1 or 2 changes in dimension between the inlet and outlet.
- Available in a version with low installation height
- Available in alternative colours

AIR FLOW - SOUND LEVEL							
COLIBRI Ceiling R		25 dB(A)		30 dB(A)		35 dB(A)	
Size		l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h
125-400, 125-600		34	123	39	140	46	165
160-400, 160-600		40	144	48	173	54	195
200-500, 200-600		64	230	75	270	89	320
250-500		70	252	81	292	95	342
250-600		100	360	115	414	135	486
315-500		75	270	88	317	102	367
315-600		110	396	125	450	140	504
400-600		125	450	140	504	160	576
COLIBRI Ceiling R	ALS	25 dB(A)		30 dB(A)		35 dB(A)	
Size	Size	l/s	m ³ /h	l/s	m ³ /h	l/s	m ³ /h
125-400, 125-600	100-125	24	86	30	108	37	133
160-400, 160-600	125-160	33	119	40	144	47	169
200-500, 200-600	160-200	53	191	66	238	79	284
250-500	200-250	63	227	73	263	87	313
250-600	200-250	87	313	105	378	123	443
315-500	250-315	69	248	80	288	93	335
315-600	250-315	100	360	120	432	140	504
400-600	315-400	115	414	140	504	155	558

Data specified in the lower table is applicable to 50 Pa total pressure when the commissioning box ALS is used

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Technical description

Design

The square supply air diffuser consists of a diffuser backing box and a diffuser face. The diffuser face is equipped with aerodynamically shaped, adjustable discs. 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. 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.

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 in our white standard colour, RAL 9003/NCS S 0500-N. The air diffuser is also available in alternative standard colours: Dusty grey RAL 7037, white aluminium RAL 9006, jet black RAL 9005, grey aluminium RAL 9007 and white RAL 9010.

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

Accessories

Commissioning box:

ALS. Made of galvanized sheet steel. Contains removable commissioning damper, fixed measurement tappings 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 and VVS/AMA 12.

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 discs. 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.

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.

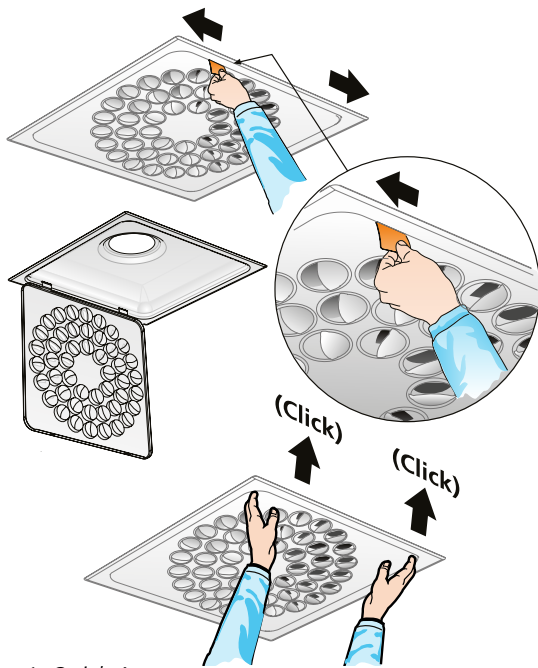


Figure 1. Quick Access.

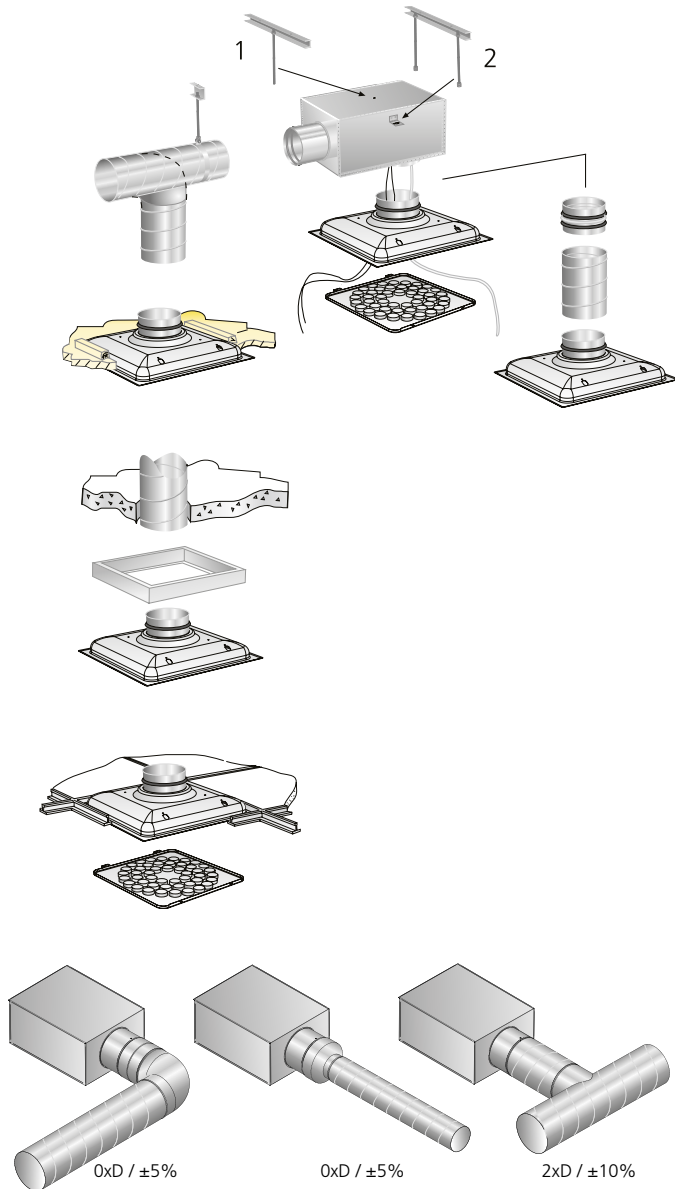


Figure 2. Installation.

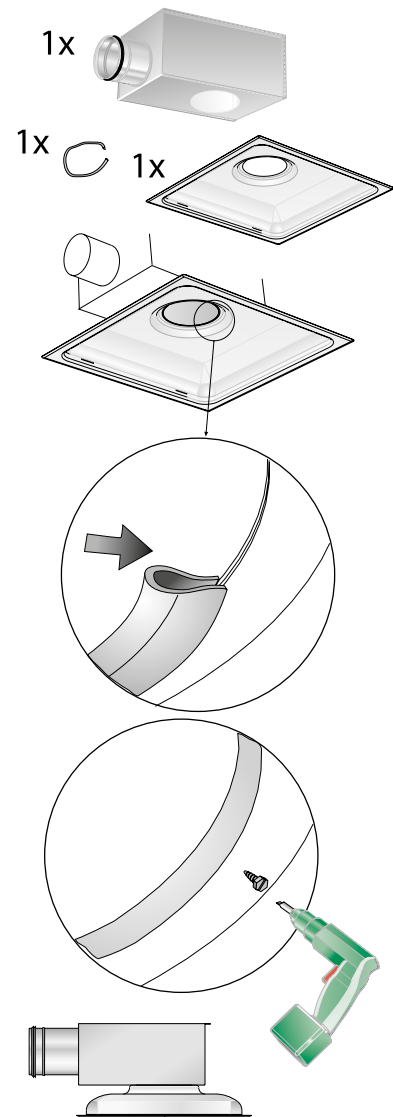


Figure 3. Installing air diffusers and commissioning box with low installation height.

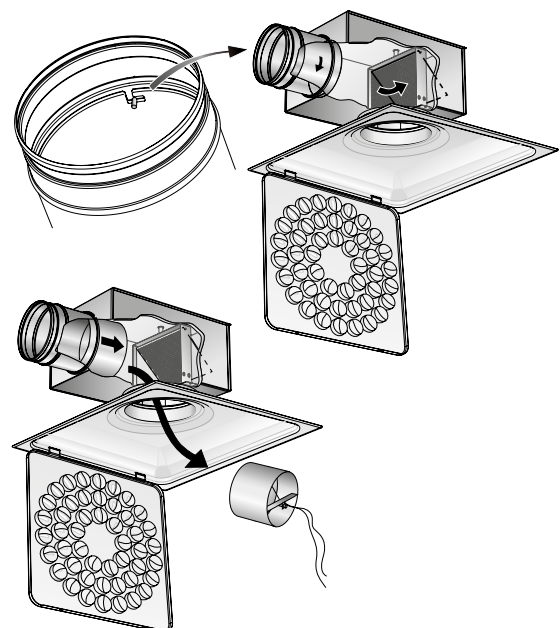


Figure 4. Damper removal.

Sizing

- The sound level, dB(A), values are applicable to rooms with an equivalent sound absorption area of 10 m²
- 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

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

Sound power level L_w (dB)

Table K_{ok}

Size COLIBRI CC	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	-3	2	6	8	1	-9	-23	-22
160-400	-4	2	1	3	5	-7	-24	-26
160-600	1	3	5	8	2	-8	-23	-25
200-500	-1	0	1	4	5	-9	-26	-23
200-600	0	1	3	7	3	-10	-25	-27
250-600	-2	1	2	6	4	-9	-24	-23
315-600	0	3	3	5	4	-10	-24	-21
400-600	7	4	4	5	4	-7	-18	-18
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CC	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
250-600	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. ±	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 COLIBRI CC	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. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CC	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. ±	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 COLIBRI CC + ALS, One step	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-400	4	10	9	5	2	-8	-15	-18
125-600	4	10	9	5	2	-8	-15	-18
160-400	4	7	7	5	4	-8	-17	-17
160-600	4	7	7	5	4	-8	-17	-17
200-500	2	6	6	4	3	-6	-13	-14
200-600	2	6	6	4	3	-6	-13	-14
250-600	0	7	5	5	3	-7	-16	-16
315-600	5	5	3	6	4	-10	-21	-19
400-600	3	8	4	4	5	-7	-22	-22
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CC + ALS, One step	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
250-600	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. ±	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 COLIBRI CC + ALS, Two steps	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-400	3	11	9	5	1	-8	-14	-14
160-600	3	11	9	5	1	-8	-14	-14
200-500	3	12	9	4	0	-6	-13	-14
200-600	3	12	9	4	0	-6	-13	-14
250-600	5	11	7	3	0	-5	-12	-13
315-600	3	10	3	5	2	-7	-14	-15
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CC + ALS, Two steps	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
315-600	13	8	10	19	16	13	16	16
Tol. ±	2	2	2	2	2	2	2	2

COLIBRI CC + ALS – Extract Air

Sound power level L_w (dB)

Table K_{ok}

Size COLIBRI CC	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. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CC	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. ±	2	2	2	2	2	2	2	2

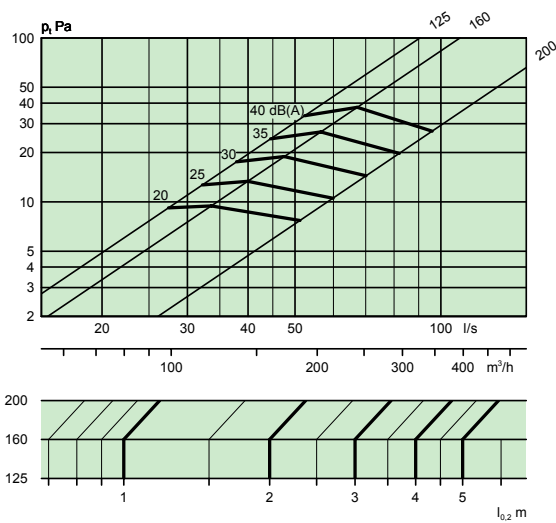
Engineering graphs – COLIBRI CC

Airflow – Pressure drop – Sound level – Throw

- The graphs illustrate data for COLIBRI Ceiling recessed in the ceiling.
- 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.
- Throw for adjusting the swirl. For other adjustments, see the graphs for diffusers with the ALS commissioning box.

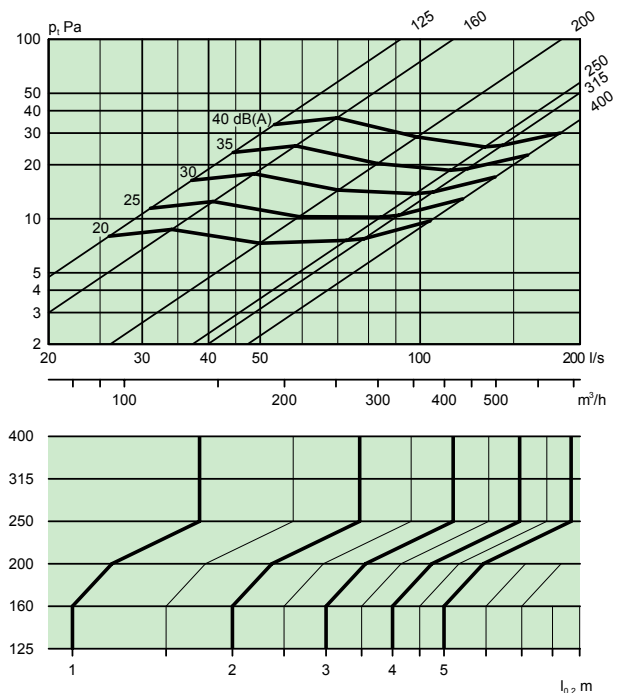
COLIBRI CC, 125-400, 160-400 and 200-500

– Supply air

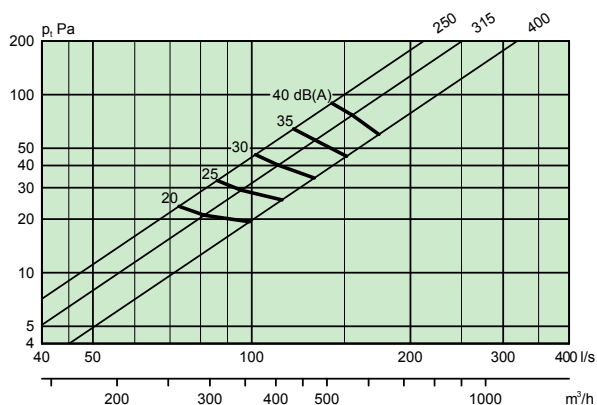


COLIBRI CC 125-600, 160-600, 200-600, 250-600,

315-600 and 400-600 – Supply air



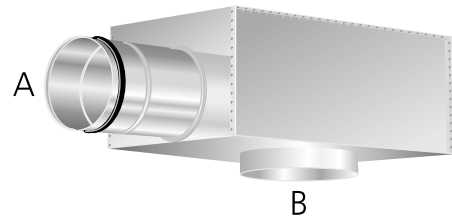
COLIBRI CC 250-600, 315-600 and 400-600 – Extract air



COLIBRI CC + ALS – supply air

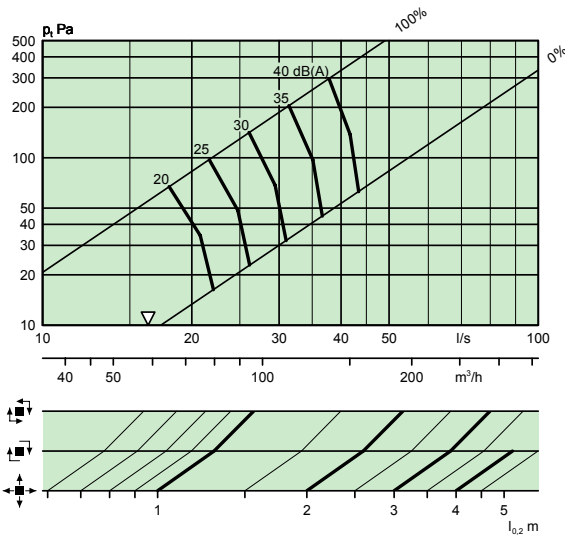
Air flow – Pressure drop – Sound level – Throw

- The graphs illustrate data for COLIBRI Ceiling recessed in the ceiling
- The graphs must not be used for commissioning
- ∇ = Minimum airflow required for obtaining sufficient commissioning pressure
- 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.
- The version for low installation height generates approx. 3 dB(A) higher sound level than the value plotted in the graph.

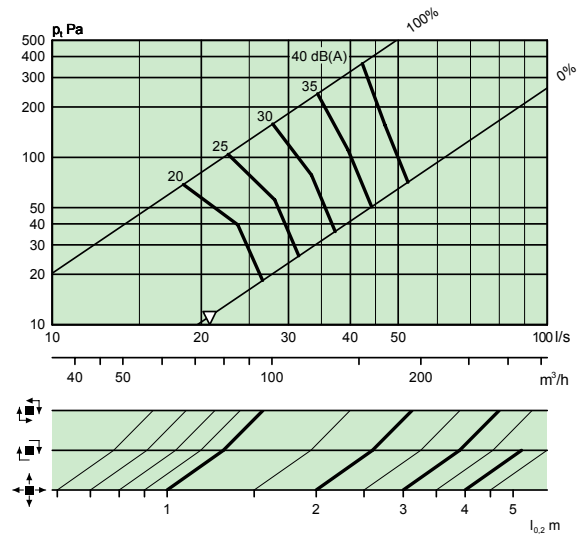


Explanation of the step model: • One step = One dimensional change between A and B, for example, A = Ø160 mm and B = Ø200 mm. • Two steps = Two dimensional changes between A and B, for example, A = Ø160 mm and B = Ø250 mm.

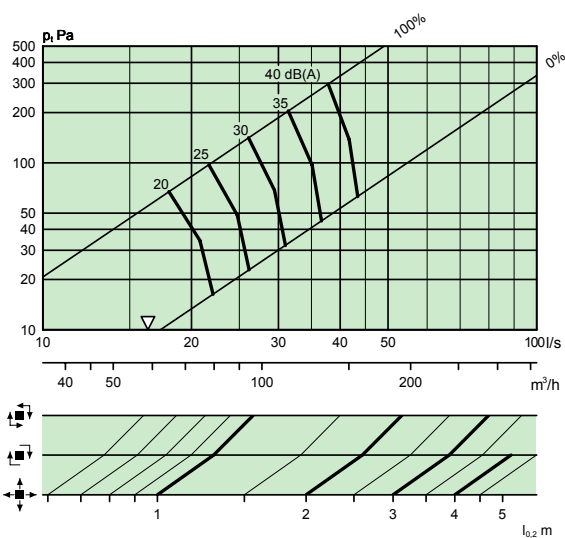
COLIBRI CC 125-400 + ALS 100-125 – One step



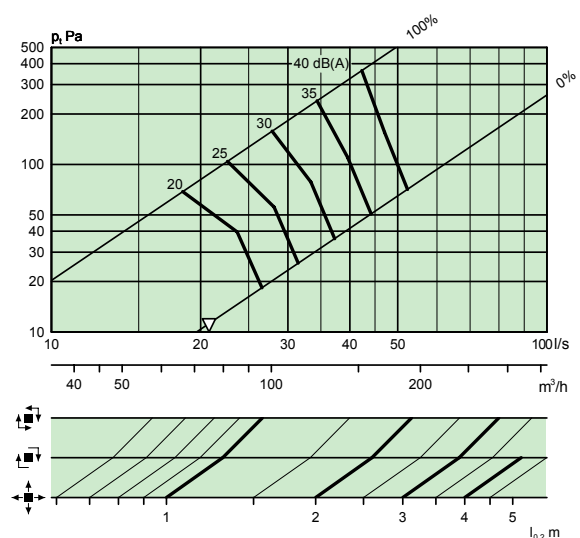
COLIBRI CC 160-400 + ALS 100-160 – Two steps



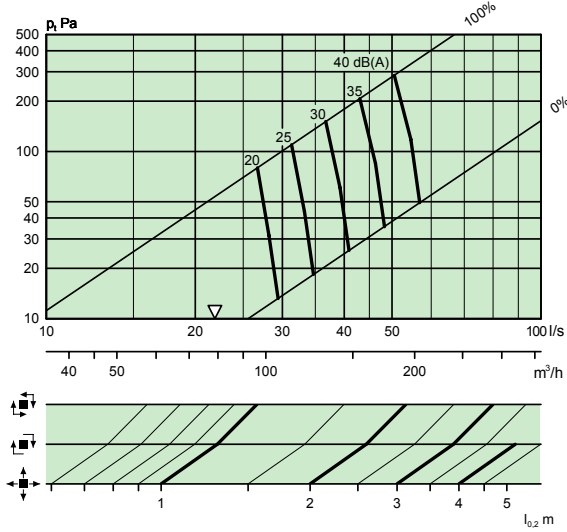
COLIBRI CC 125-600 + ALS 100-125 – One step



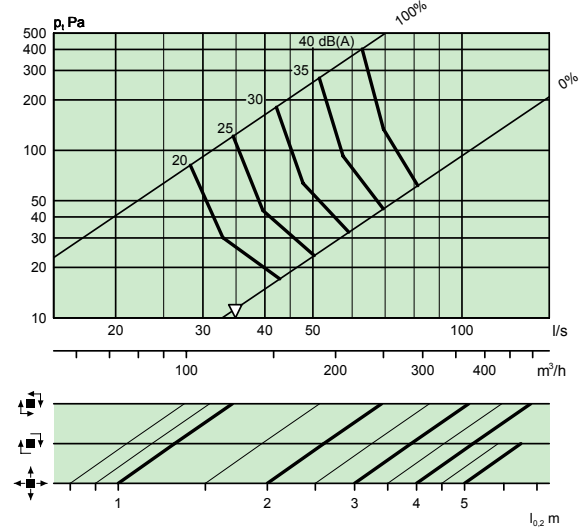
COLIBRI CC 160-600 + ALS 100-160 – Two steps



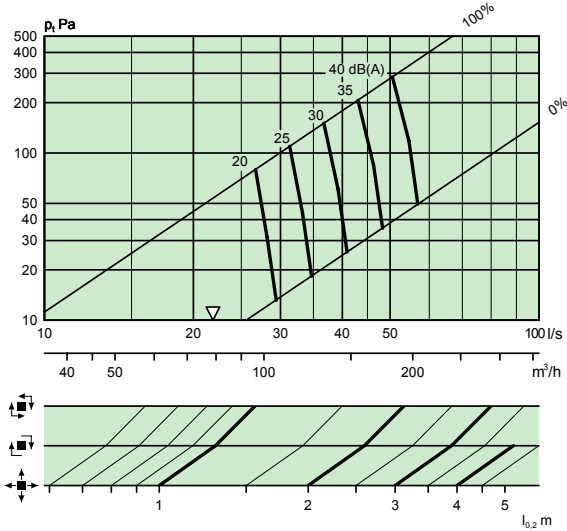
COLIBRI CC 160-400 + ALS 125-160 – One step



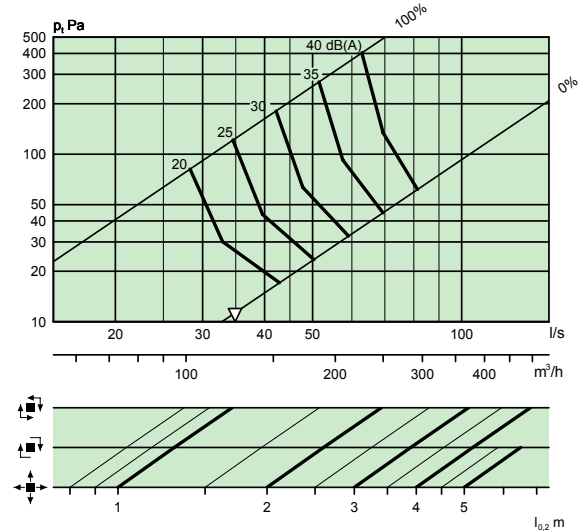
COLIBRI CC 200-500 + ALS 125-200 – Two steps



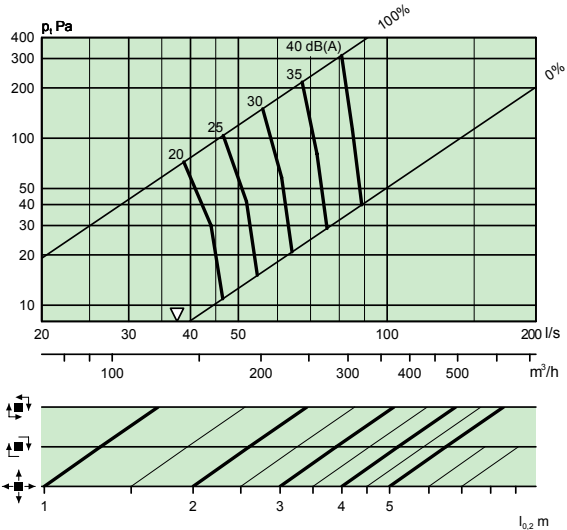
COLIBRI CC 160-600 + ALS 125-160 – One step



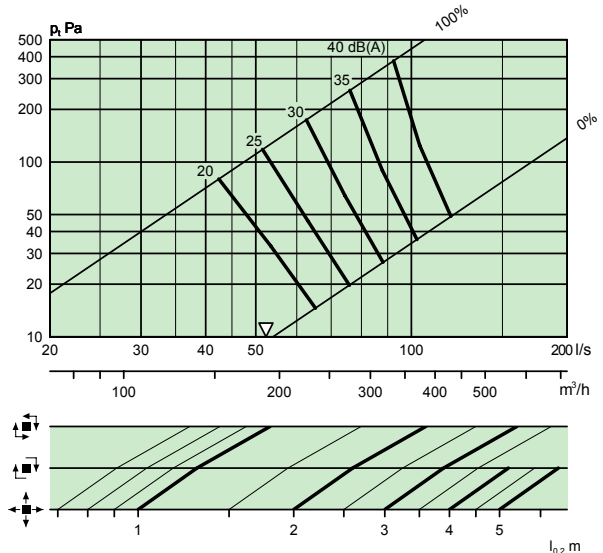
COLIBRI CC 200-600 + ALS 125-200 – Two steps



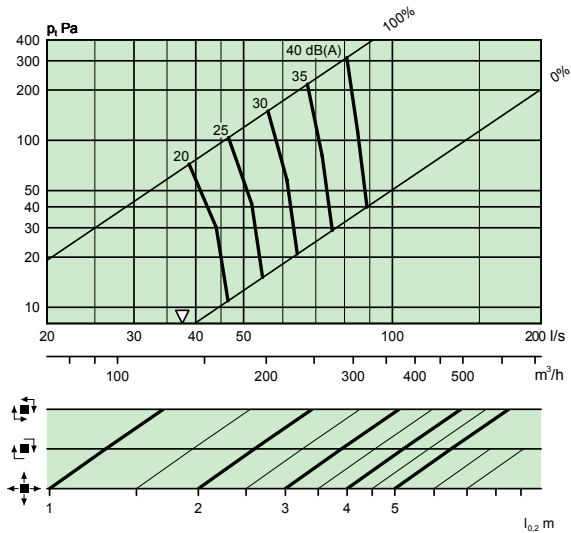
COLIBRI CC 200-500 + ALS 160-200 – One step



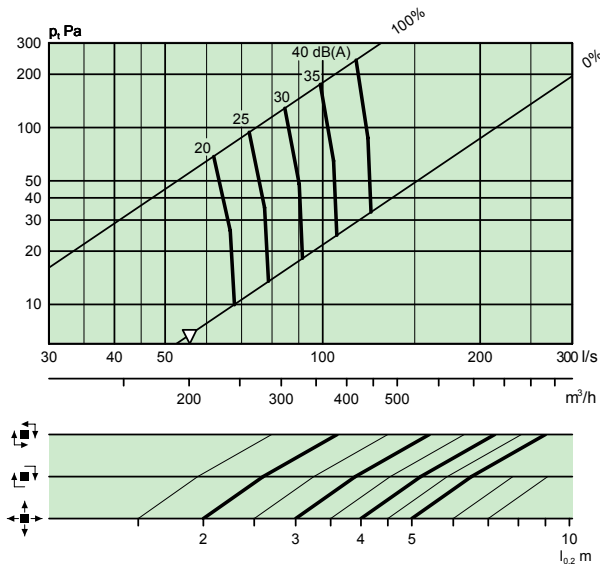
COLIBRI CC 250-600 + ALS 160-250 – Two steps



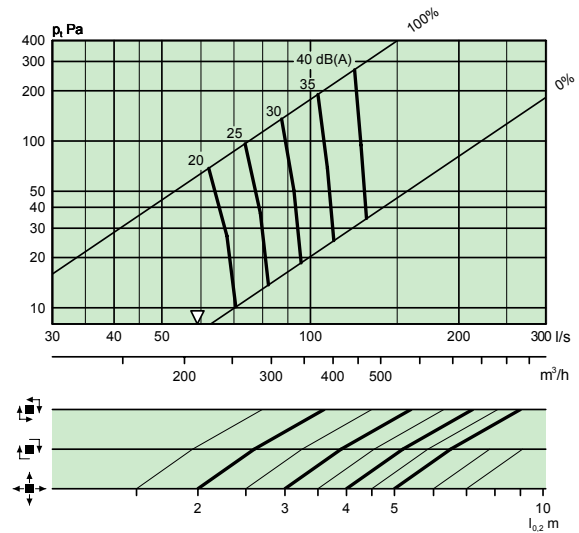
COLIBRI CC 200-600 + ALS 160-200 – One step



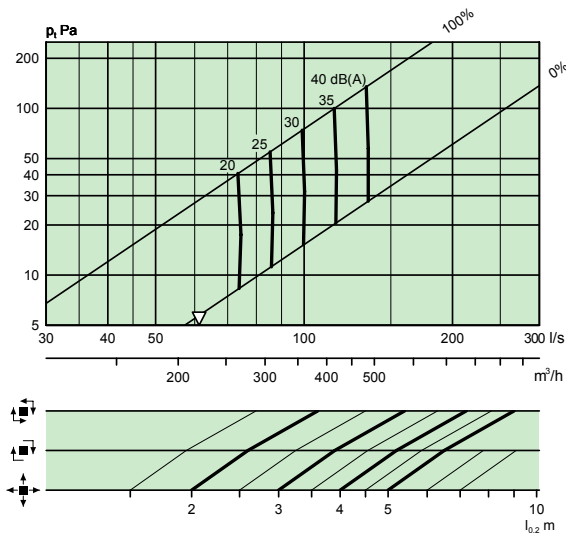
COLIBRI CC 250-600 + ALS 200-250 – One step



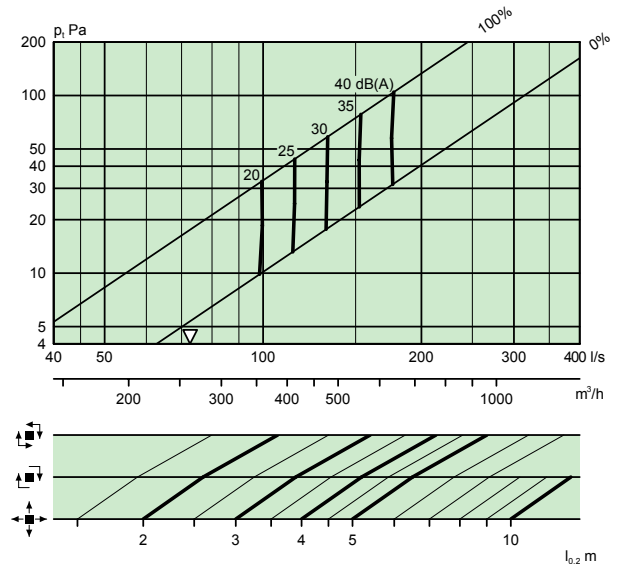
COLIBRI CC 315-600 + ALS 200-315 – Two steps



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



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

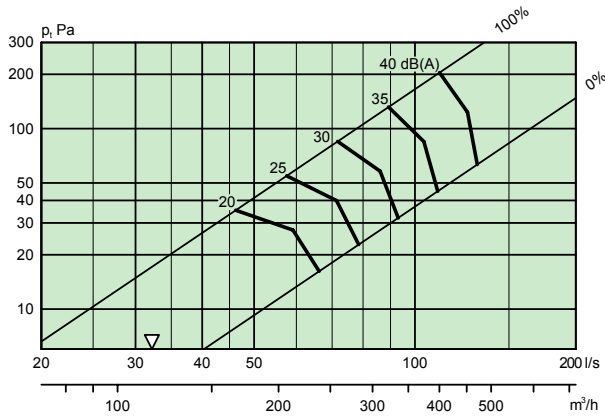


COLIBRI CC + ALS – Extract air

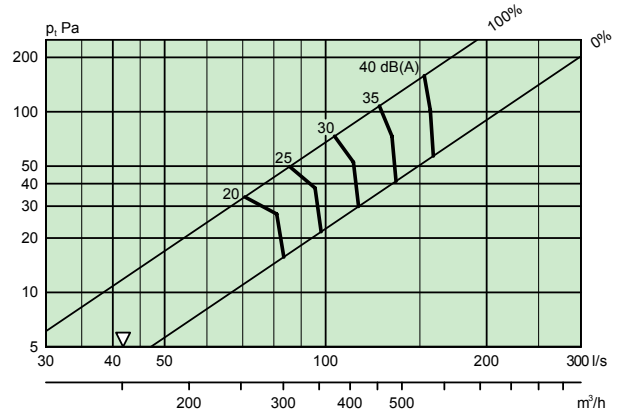
Air flow – Pressure drop – Sound level

- The sound level, dB(A), values are applicable to rooms with an equivalent sound absorption area of 10 m².
- 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.

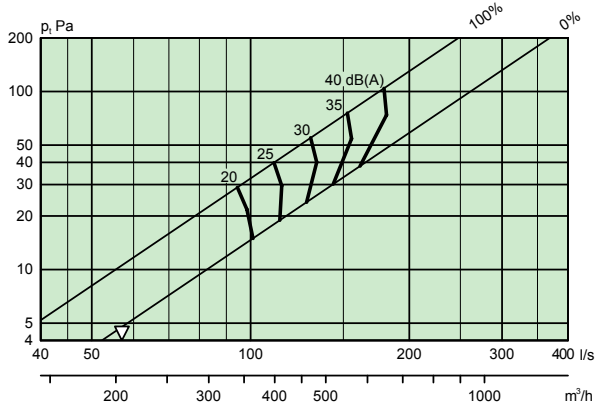
COLIBRI CC 250-600 + ALS 200-250



COLIBRI CC 315-600 + ALS 250-315



COLIBRI CC 400-600 + ALS 315-400



Sizing

- The sound level, dB(A), values are applicable to rooms with an equivalent sound absorption area of 10 m².
- 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.

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

Sound power level L_w(dB)

Table K_{ok}

Size COLIBRI CR	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-400	-2	1	1	4	5	-7	-22	-23
125-600	-3	2	5	8	1	-8	-23	-22
160-400	3	1	0	3	6	-6	-22	-25
160-600	-1	1	4	8	1	-7	-22	-24
200-500	-1	2	2	2	6	-6	-22	-25
200-600	7	2	2	6	4	-8	-22	-27
250-600	0	1	2	3	5	-7	-24	-25
315-600	0	1	2	2	2	-7	-24	-23
400-600	-3	0	1	1	5	-8	-24	-20
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CR	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
250-600	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. ±	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 COLIBRI CR	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. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CR	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. ±	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 COLIBRI CR + ALS, One step	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-400	5	10	9	5	3	-8	-15	-19
125-600	5	10	9	5	3	-8	-15	-19
160-400	4	7	7	4	4	-8	-17	-17
160-600	4	7	7	4	4	-8	-17	-17
200-500	1	7	7	3	3	-5	-13	-14
200-600	1	7	7	3	3	-5	-13	-14
250-600	0	9	6	3	3	-5	-13	-14
315-600	3	7	4	3	3	-7	-19	-19
400-600	1	6	2	0	5	-9	-24	-23
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CR + ALS, One step	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
250-600	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. ±	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 COLIBRI CR + ALS, Two steps	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-400	1	11	9	5	1	-8	-14	-15
160-600	1	11	9	5	1	-8	-14	-15
200-500	3	11	10	3	0	-5	-12	-14
200-600	3	11	10	3	0	-5	-12	-14
250-600	4	12	8	1	0	-4	-11	-13
315-600	6	11	6	1	3	-4	-12	-15
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CR + ALS, Two steps	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
315-600	13	8	10	19	16	13	16	16
Tol. ±	2	2	2	2	2	2	2	2

COLIBRI CR + ALS – Extract air

Sound power level L_w (dB)

Table K_{ok}

Size COLIBRI CR	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. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size COLIBRI CR	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. ±	2	2	2	2	2	2	2	2

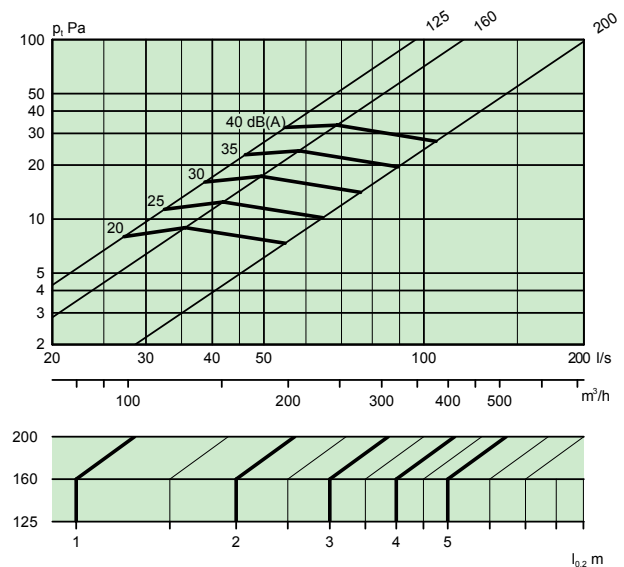
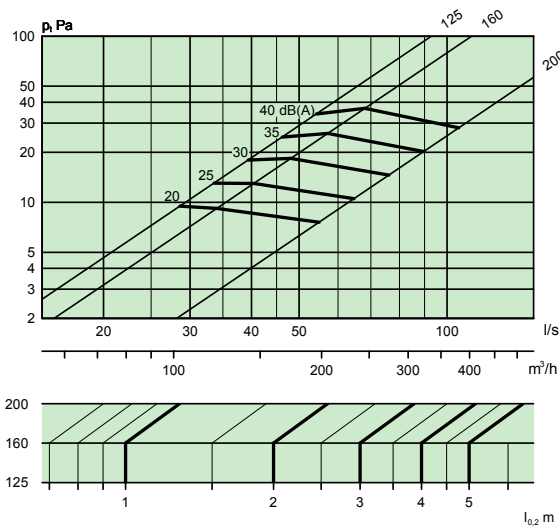
Engineering graphs – COLIBRI CR

Airflow – Pressure drop – Sound level – Throw

- The graphs illustrate data for COLIBRI Ceiling recessed in the ceiling.
- The graphs are not to 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.
- Throw for adjusting swirl. For other adjustments, see the graphs for diffusers with the ALS commissioning box.

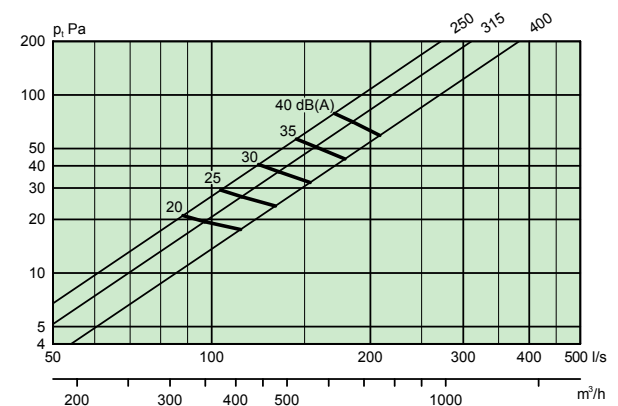
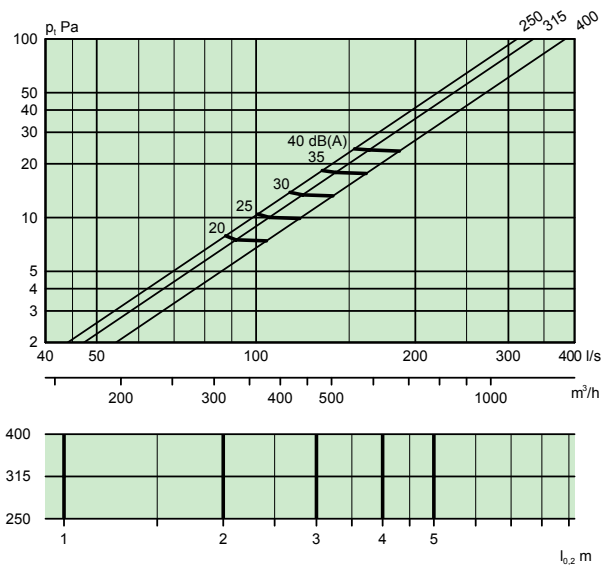
COLIBRI CR 125-400, 160-400 and 200-500 – Supply air

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



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

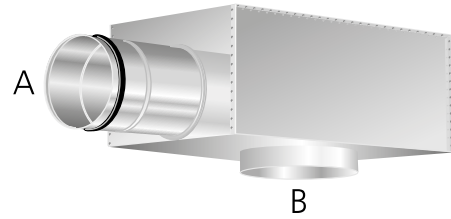
COLIBRI CR 250-600, 315-600 and 400-600 – Extract air



COLIBRI CR + ALS – Supply air

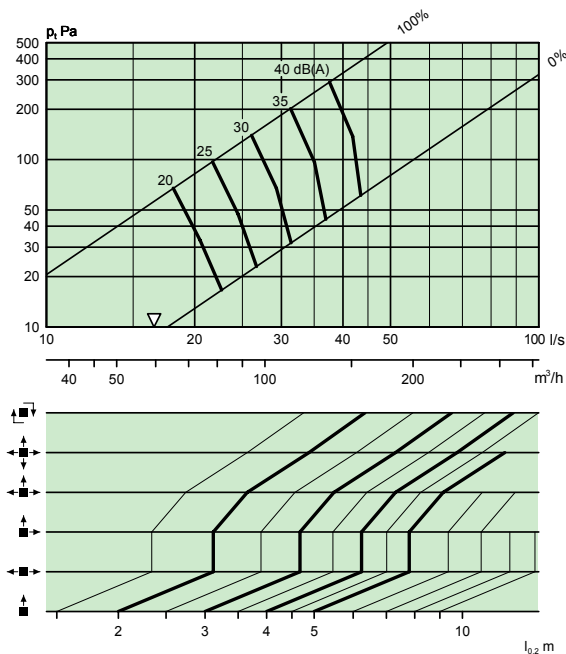
Airflow – Pressure drop – Sound level – Throw

- The graphs illustrate data for COLIBRI Ceiling recessed in the ceiling.
- The graphs are not meant to be used in conjunction with commissioning.
- ∇ = Min. airflow required for obtaining sufficient commissioning pressure.
- 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.
- The version for low installation height generates approx. 3 dB(A) higher sound level than the value plotted in the graph.

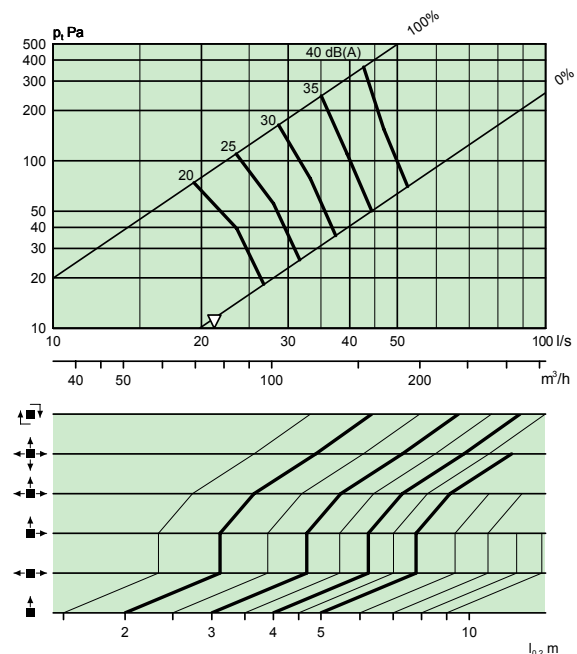


Explanation of the step model: • One step = One dimensional change between A and B, for example, A = Ø160 mm and B = Ø200 mm. • Two steps = Two dimensional changes between A and B, for example, A = Ø160 mm and B = Ø250 mm.

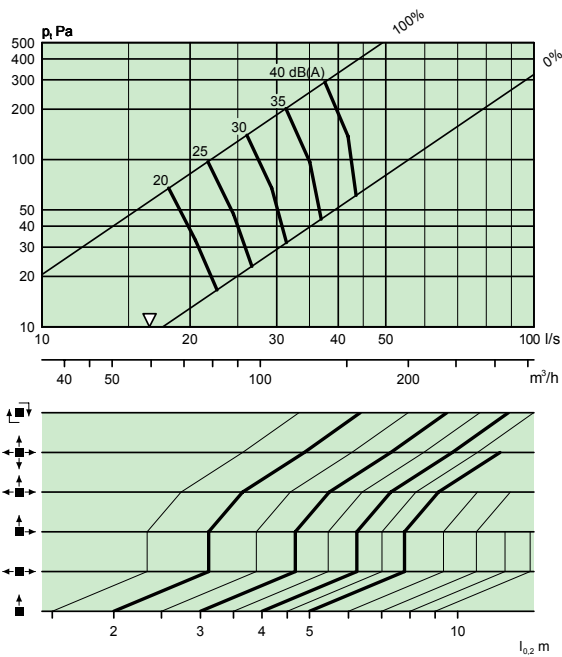
COLIBRI CR 125-400 + ALS 100-125 – One step



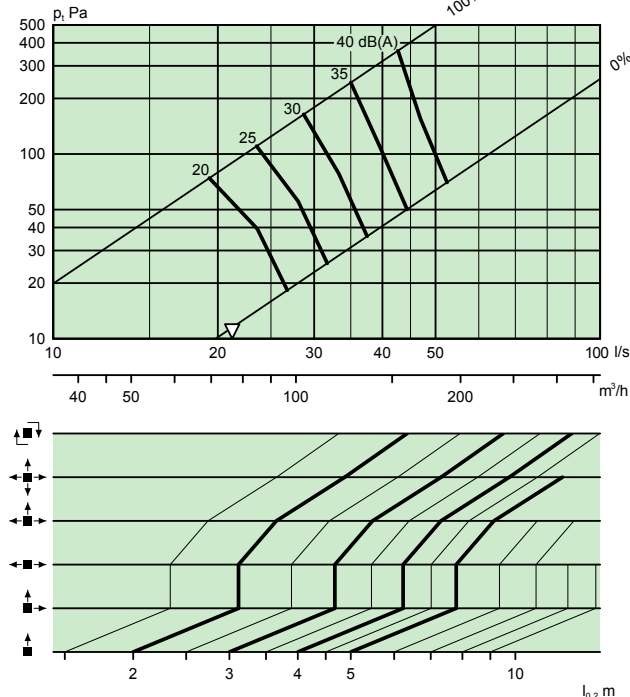
COLIBRI CR 160-400 + ALS 100-160 – Two steps



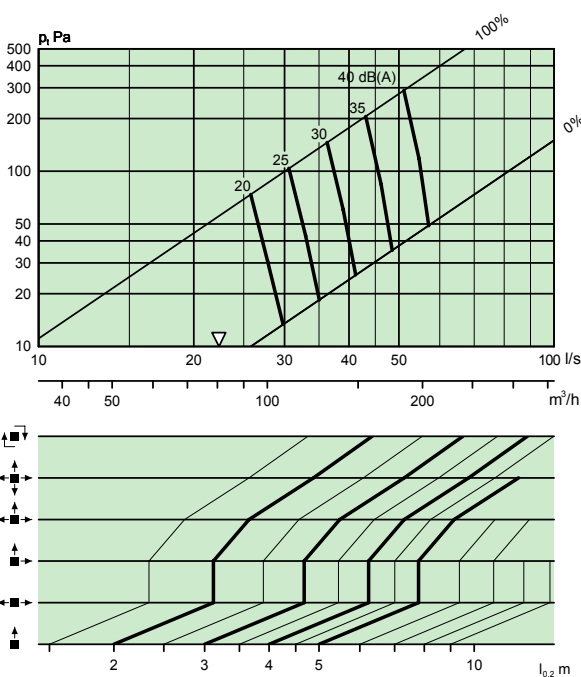
COLIBRI CR 125-600 + ALS 100-125 – One step



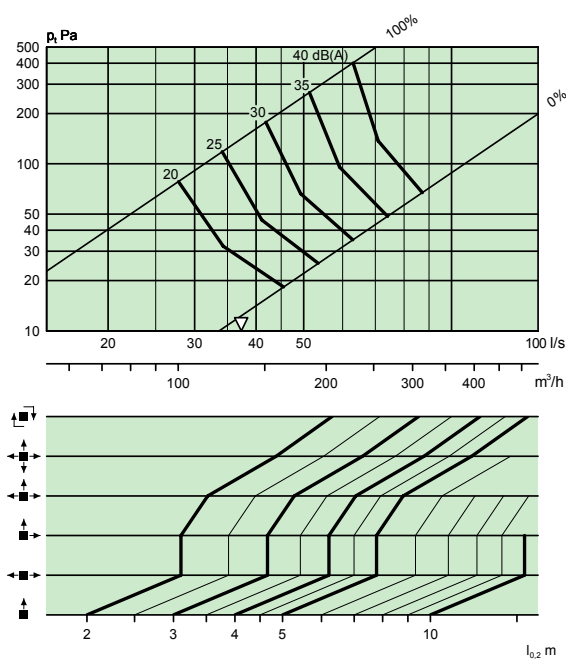
COLIBRI CR 160-600 + ALS 100-160 – Two steps



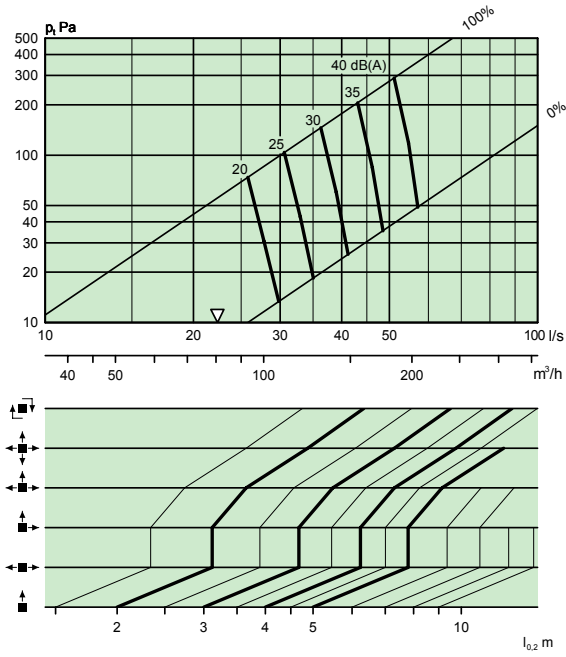
COLIBRI CR 160-400 + ALS 125-160 – One step



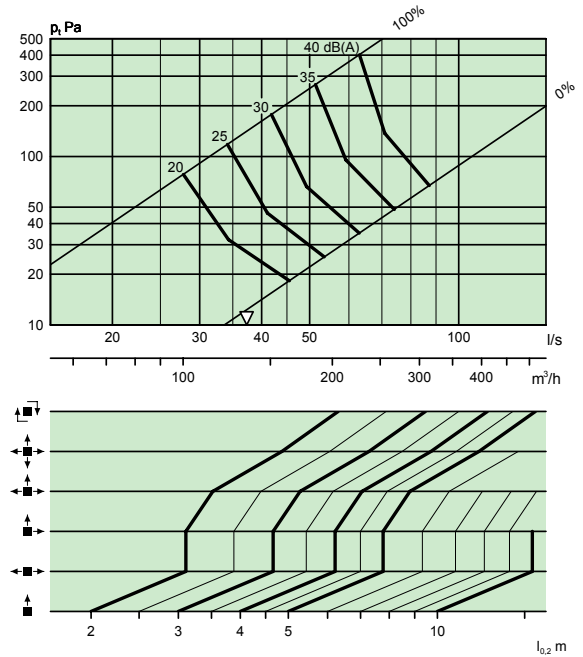
COLIBRI CR 200-500 + ALS 125-200 – Two steps



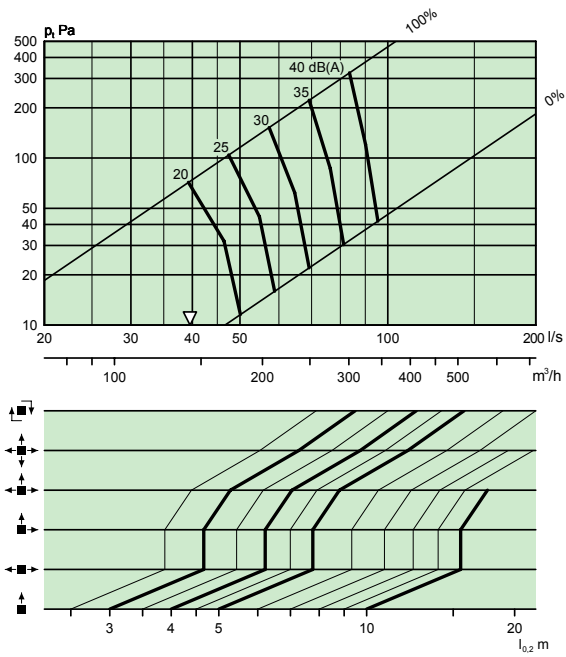
COLIBRI CR 160-600 + ALS 125-160 – One step



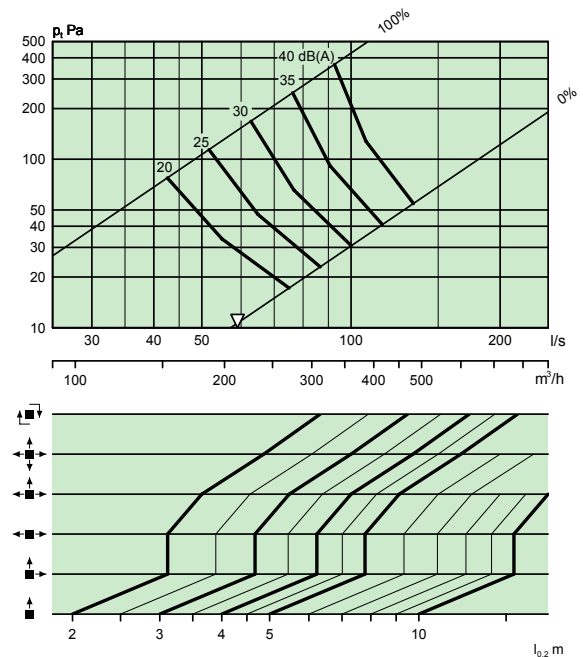
COLIBRI CR 200-600 + ALS 125-200 – Two steps



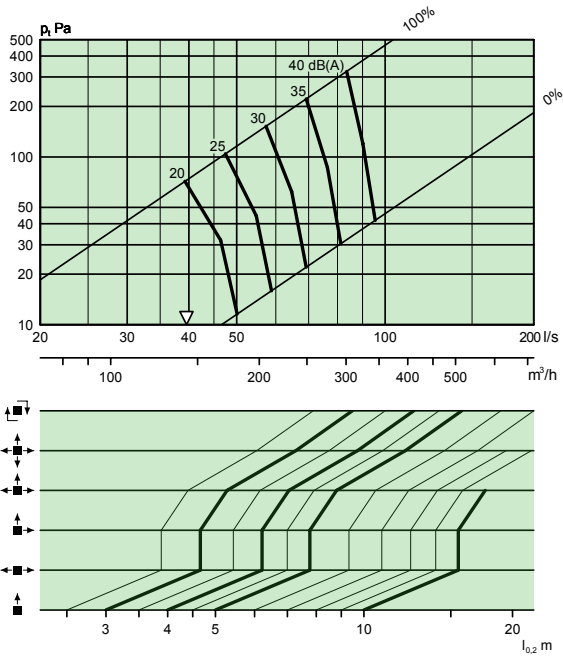
COLIBRI CR 200-500 + ALS 160-200 – One step



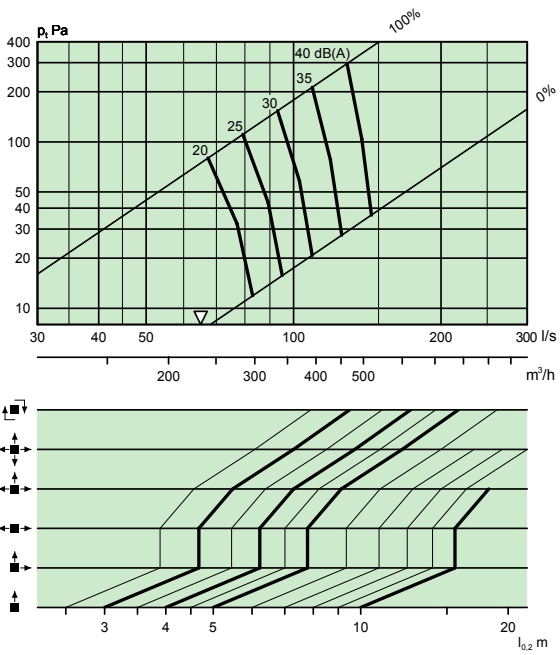
COLIBRI CR 250-600 + ALS 160-250 – Two steps



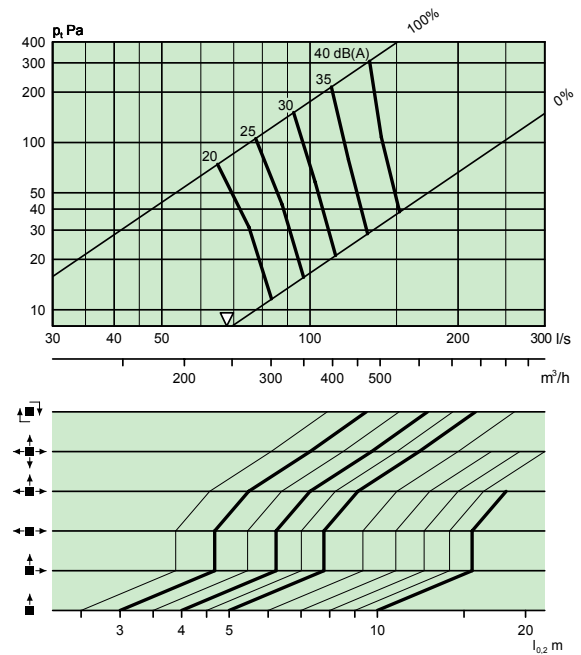
COLIBRI CR 200-600 + ALS 160-200 One step



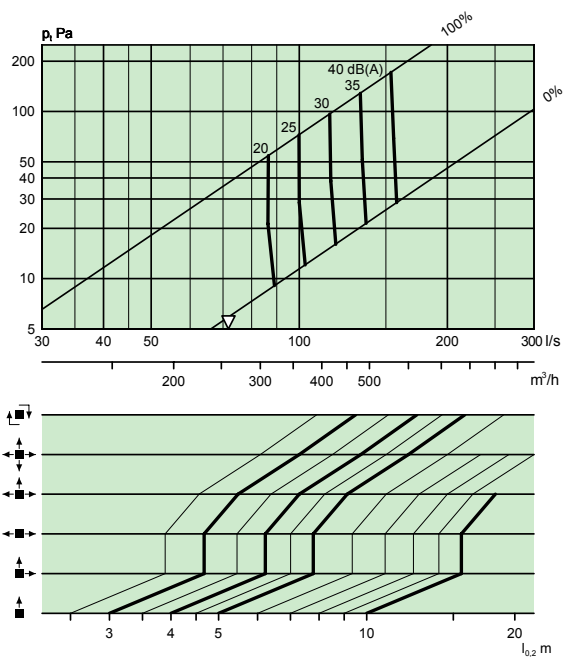
COLIBRI CR 250-600 + ALS 200-250 One step



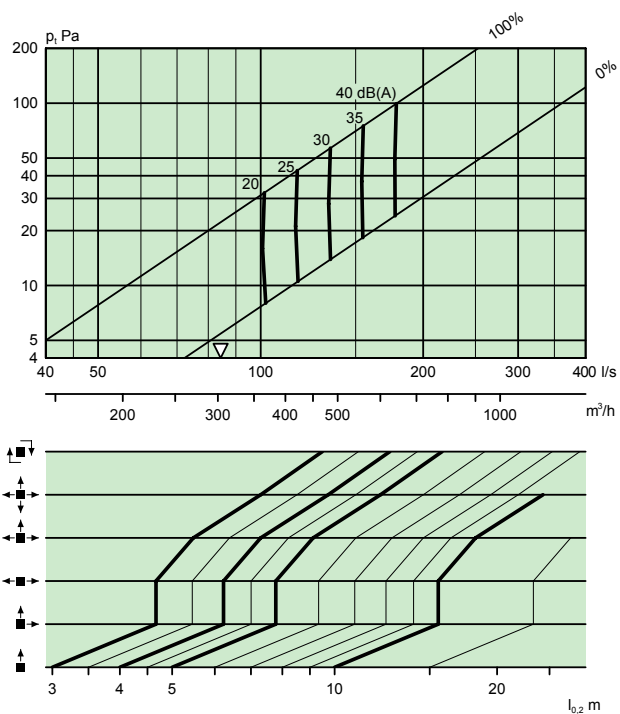
COLIBRI CR 315-600 + ALS 200-315 Two steps



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



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

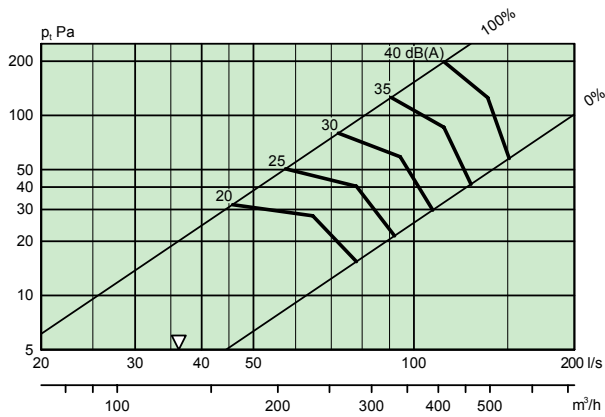


COLIBRI CR + ALS – Extract air

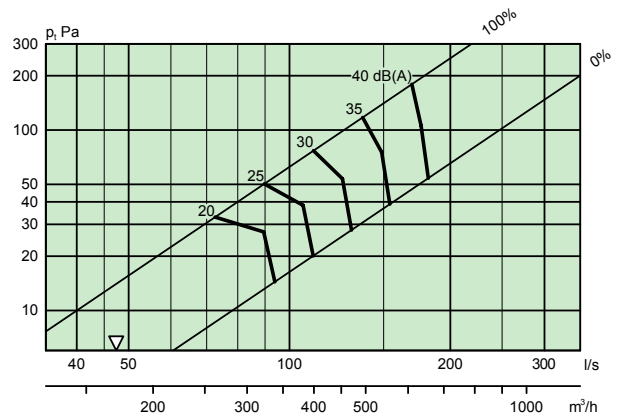
Air flow – Pressure drop – Sound level

- The sound level, dB(A), values are applicable to rooms with an equivalent sound absorption area of 10 m² .
- 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.

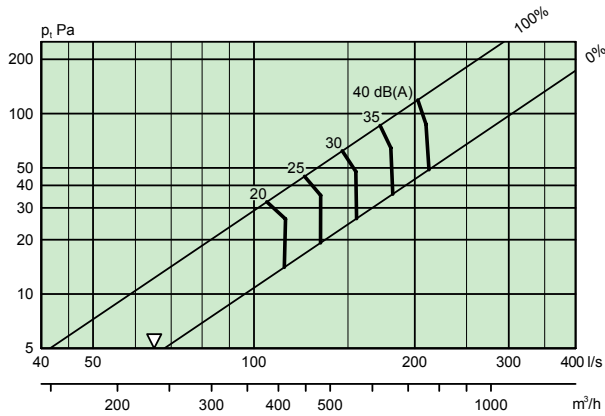
COLIBRI CR 250-600 + ALS 200-250



COLIBRI CR 315-600 + ALS 250-315



COLIBRI CR 400-600 + ALS 315-400



Dimensions and weights

COLIBRI Ceiling

Size	A	Ød	l	M	Weight, kg
125-400	395	124	375	70	1,5
125-600	595	124	575	70	3,5
160-400	395	159	375	70	1,5
160-600	595	159	575	70	3,5
200-500	495	199	475	70	2,5
200-600	595	199	575	70	3,5
250-600	595	249	575	70	3,5
315-600	595	314	575	50	3,5
400-600	595	399	575	50	3,5

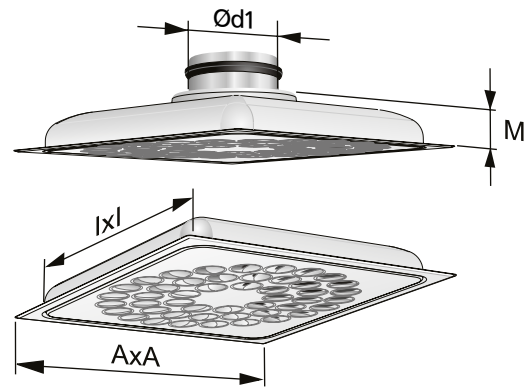


Figure 5. COLIBRI Ceiling.

Dimensions of opening l x l

Number of discs

Size	COLIBRI CC	COLIBRI CR
125-400	47	49
125-600	47	49
160-400	47	49
160-600	47	49
200-500	90	100
200-600	90	100
250-600	130	169
315-600	130	169
400-600	130	169

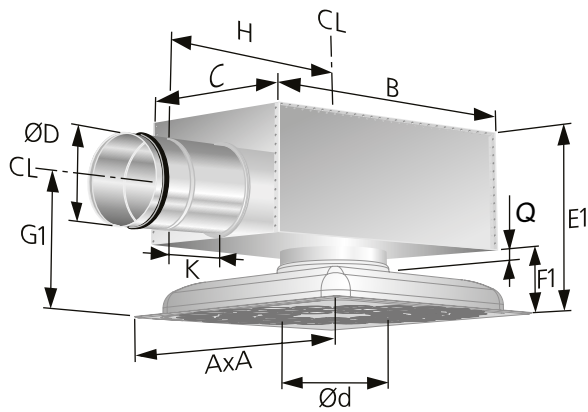
COLIBRI Ceiling with ALS, 1-step

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



Figur 6. COLIBRI Ceiling with ALS.
CL = Centerline.

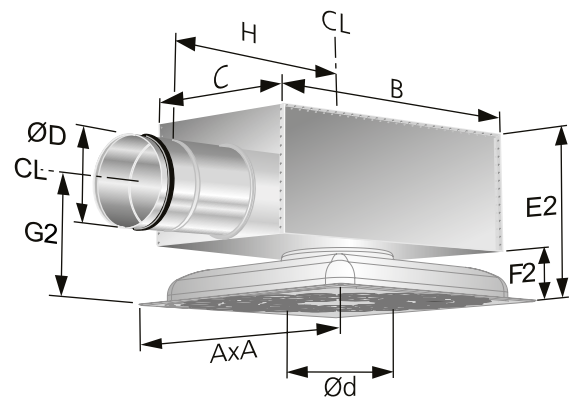


Figure 7. COLIBRI Ceiling with ALS. Low installation height.

Frame, SAR K

Size	L	Weight, kg
400	395	1.0
500	495	1.0
600	595	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.

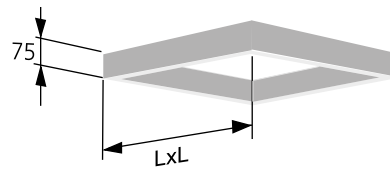


Figure 8. Frame, SAR K.

Disc pattern and disc settings

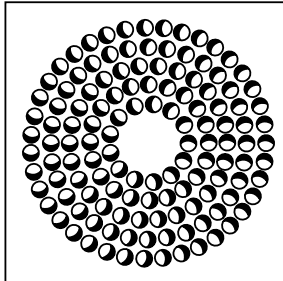
Standard and alternative disc settings for various diffusion patterns.

NOTE: Air direction in the figure.

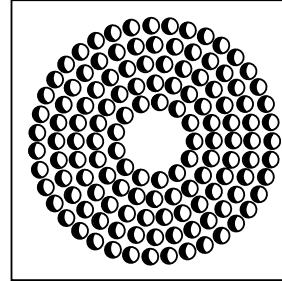


COLIBRI CC – Circular disc arrangement, examples

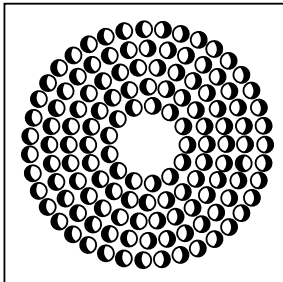
Clock-wise swirl (standard)



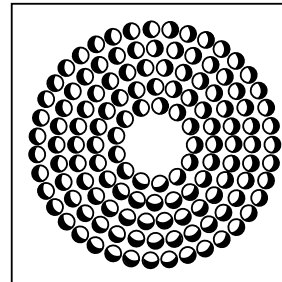
1-way



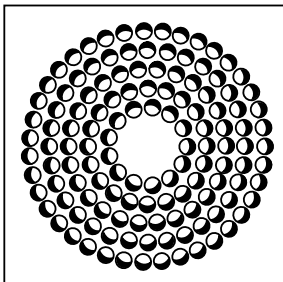
2-way



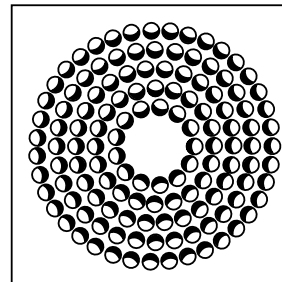
3-way



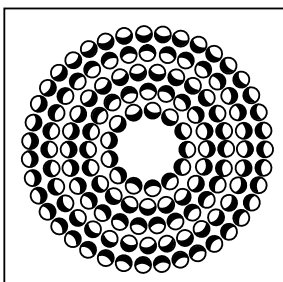
4-way



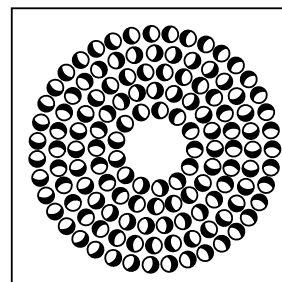
V1 Vertical, concentrated



V2 Vertical, diffused

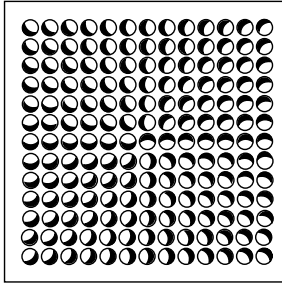


Counter-flow distribution pattern

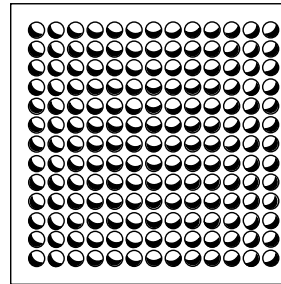


COLIBRI CR – Square disc arrangement, examples

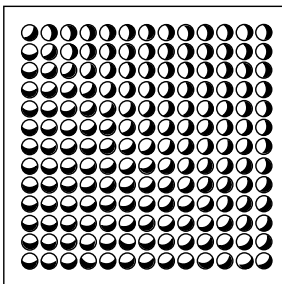
Clock-wise swirl (standard)



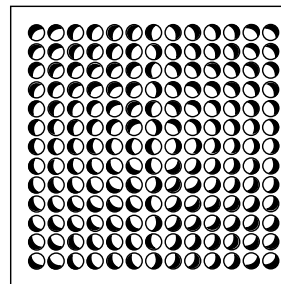
1-way



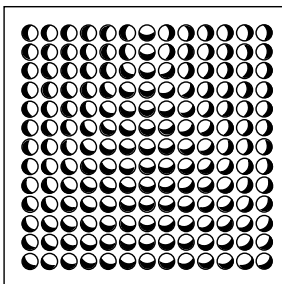
2H-way



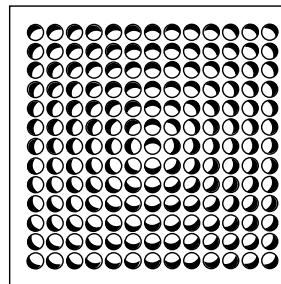
2M-way



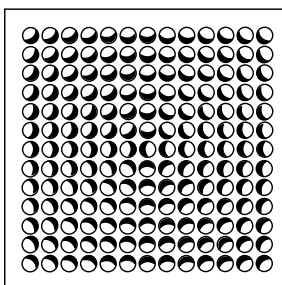
3-way



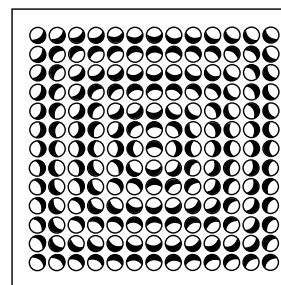
4-way



V1 Vertical, concentrated



V2 Vertical, diffused



Order key

Product

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

Variant:

CC: Circular disc 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

SD XX

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

- Designed for modular suspended ceilings (600x600 mm)
- 100% flexible spread pattern
- Individually adjustable discs
- 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