

PELICAN™ Ceiling HF

Square extract air registers



PELICAN CE HF

Quick facts

- ▶ Perforated air register face
- ▶ Manages large extract airflows
- ▶ Flush design
- ▶ Designed for modular suspended ceilings
- ▶ Quick Access air register face
- ▶ Can be combined with ALS commissioning box
- ▶ Available in alternative colours
- ▶ Included in the MagiCAD and CadVent databases

Quick selection

AIR FLOW - SOUND LEVEL				
PELICAN CE HF		l/s		
Size		25 db(A)	30 dB(A)	35 dB(A)
160-600		117	139	165
200-600		206	244	288
250-600		301	356	423
315-600		393	472	568
400-600		563	660	775
PELICAN CE HF	ALS	l/s		
Size	Size	25 db(A)	30 dB(A)	35 dB(A)
160-600	125-160	23	40	57
200-600	160-200	50	70	92
250-600	200-250	78	110	143
315-600	250-315	92	157	211
400-600	315-400	153	267	342

The data is specified for extract air at 50 Pa total pressure when an ALS commissioning box is used.

Technical description

Design

The square PELICAN CE High Flow extract air register consists of a backing box and a perforated air register face. The air register 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 air register face for installation, commissioning and cleaning.

Materials and finish

The backing box and air register face are made of sheet steel. The connection branch is made of galvanized sheet steel. The interior and exterior surfaces of the air register are painted in our standard white colour: RAL 9010. The air registers are also available painted in alternative standard colours: dusty grey RAL 7037, white aluminium RAL 9006, jet black RAL 9005, grey aluminium RAL 9007 and signal white RAL 9003 (NCS 0500).

Accessories

Commissioning box:

ALS. The ALS commissioning box is made of galvanized sheet steel and contains a removable commissioning damper, fixed measurement tapping and sound absorbing material*) with reinforced surface layer.

The ALS commissioning box is available with a change in dimension between the inlet and outlet.

*)Fire resistance rated to B-s1,d0 in accordance with EN ISO 11925-2

Frame:

SAR K. For aesthetic installation of a lowered air register.

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 type ceilings, for instance 625 x 625 or 675 x 675.

Project planning

The PELICAN CE HF is available with square dimensions of 595 x 595 mm in all the connection sizes. This makes the air register very easy to install in modular suspended ceilings with modular dimensions of 600 x 600 mm.

Place the air register onto the T-bar framework, and then secure it to the duct system. See Figure 2.

Installation

To dismantle the air register face, insert a thin object, for example a Quick Access card or the equivalent, in between the diffuser face and the diffuser backing box in order to release the springs. Move the card from the centre out towards the corner, see Figure 1.

The inlet spigot of the air register backing box can be secured to the connecting duct by means of self-tapping screws or a blind rivets. For flush-mounting in fixed ceiling constructions, secure the air register by means of screws into place in the framework through either the sides or top of the air register backing box.



For mounting in modular suspended ceilings, it is advisable to select air registers 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 commissioning box and the air register can be increased by as much as 500 mm without having to lengthen the measuring tubes and damper adjustment cords. See Figure 2.

Commissioning

Commissioning should be carried out with the air register face mounted. Pull the measuring tubes and damper adjustment cords out through the air register face. Then connect the manometer to the correct measuring tube. Always use the transparent tube for extract air. The rated coefficient of performance of the air register can be used in a calculation to determine the required commissioning pressure. Conclude commissioning by adjusting the damper to the correct blade position, tie a commissioning knot in the damper cords to indicate the damper position.

The rated coefficient of performance (K-factor) is specified on the identification label of the product and in the relevant commissioning instructions at www.swegon.com.

Maintenance

The air register can be cleaned, if necessary, using luke-warm water with dishwashing detergent added or by vacuum cleaning using a brush nozzle. The duct system can be reached for cleaning after opening the air register face. If a type ALS commissioning box is used, swing the air register face to the side on its hinges so that you then can grip the handle of the tubular damper casing and rotate it out of its holder. See Figure 3.

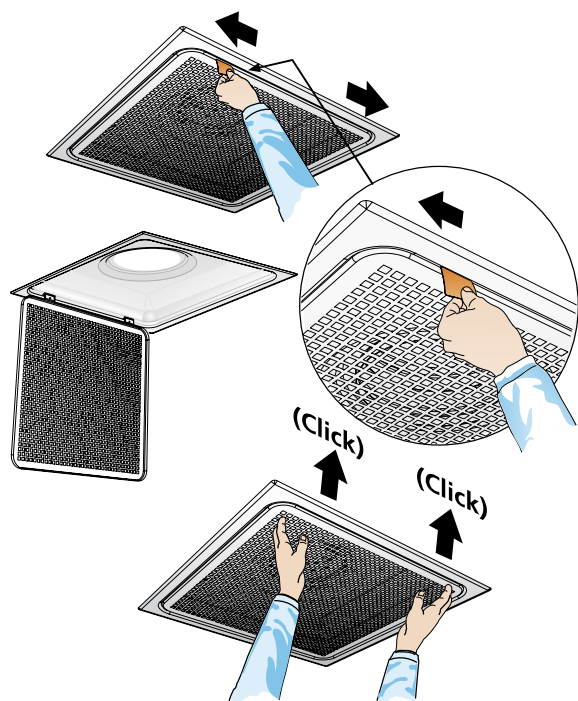


Figure 1. Quick Access.

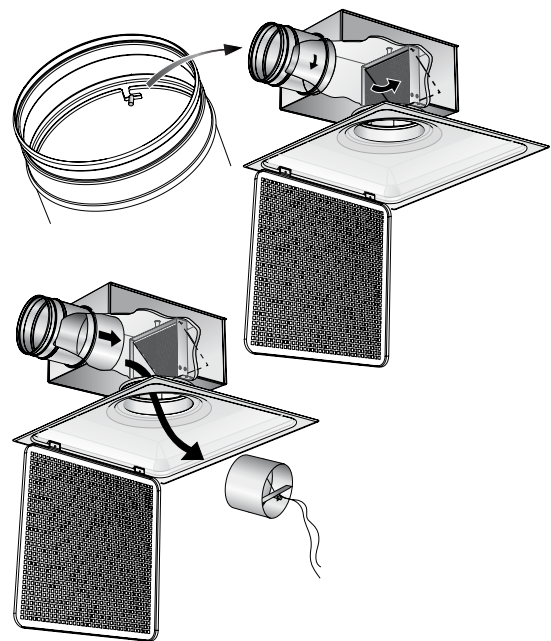


Figure 3. To dismantle the damper.

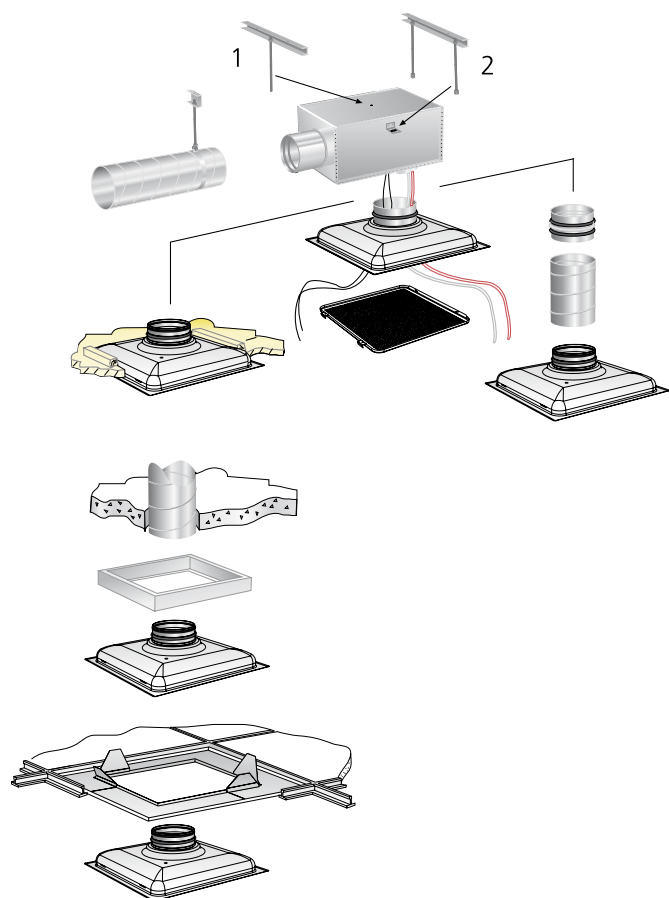


Figure 2. Installation alternatives.

Sizing

- The specified sound levels dB(A) are applicable to rooms with an equivalent sound absorption area of 10 m².
- To calculate the sound levels in rooms with other dimensions, please refer to our ProAir web software, which can be found at www.swegon.com.

Acoustic data

PELICAN CE HF – Extract air

PELICAN CE HF – Air register only

Sound power level L_w (dB)

Table K_{OK}

Size	Mid-frequency (Octave band) Hz							
PELICAN CE HF	63	125	250	500	1000	2000	4000	8000
160-600	-8	4	9	2	-7	-13	-20	-24
200-600	-2	5	7	3	-4	-8	-15	-22
250-600	-1	6	5	3	-3	-6	-15	-21
315-600	-1	2	1	-1	0	-2	-9	-11
400-600	3	1	2	-1	0	-2	-12	-20
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size	Mid-frequency (Octave band) Hz							
PELICAN CE HF	63	125	250	500	1000	2000	4000	8000
160-600	20	13	8	4	3	1	1	0
200-600	18	11	6	3	2	1	0	0
250-600	16	10	5	2	1	1	0	0
315-600	14	8	4	1	1	0	0	0
400-600	13	8	4	1	0	0	0	0
Tol. ±	2	2	2	2	2	2	2	2

PELICAN CE HF + ALS, One step

Sound power level L_w (dB)

Table K_{OK}

Size	Mid-frequency (Octave band) Hz							
PELICAN CE HF	63	125	250	500	1000	2000	4000	8000
160-600	-1	9	7	-1	-7	-7	-11	-17
200-600	-2	7	4	-4	-6	-6	-12	-19
250-600	0	10	3	-4	-5	-7	-12	-20
315-600	0	8	3	-2	-2	-6	-15	-19
400-600	8	11	4	0	-2	-6	-12	-19
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size	Mid-frequency (Octave band) Hz							
PELICAN CE HF	63	125	250	500	1000	2000	4000	8000
160-600	22	14	10	17	19	12	10	12
200-600	19	11	8	16	18	12	11	11
250-600	16	8	8	16	17	12	12	13
315-600	14	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

PELICAN CE HF + sound attenuator, LD and damper, SP

Sound power level L_w (dB)

Table K_{OK}

Size	Mid-frequency (Octave band) Hz							
PELICAN CE HF	63	125	250	500	1000	2000	4000	8000
Comb. 1	17	17	4	-1	-6	-11	-12	-20
Comb. 2	16	12	2	-2	-3	-5	-9	-12
Comb. 3	12	9	0	-1	-2	-4	-8	-11
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)

Table ΔL

Size	Mid-frequency (Octave band) Hz							
PELICAN CE HF	63	125	250	500	1000	2000	4000	8000
Comb. 1	See corresponding product: CLA and CRM.							
Comb. 2								
Comb. 3								
Tol. ±	2	2	2	2	2	2	2	2

K_{OK} for Comb 1-3 is applicable with CRM and CLA.

LD = CLA sound attenuator, SP = CRM damper

See also figures on page 7.

Comb. 1 = LD-SP-315 + PELICAN CE HF 2 x 250-600

Comb. 2 = LD-SP-400 + PELICAN CE HF 2 x 315-600

Comb. 3 = LD-SP-400 + PELICAN CE HF 400-600

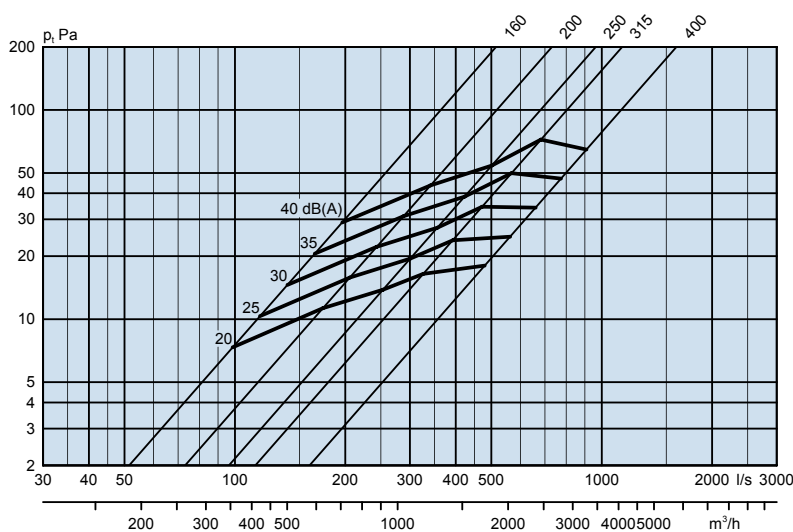
Sizing diagram

PELICAN CE HF – Extract air

Airflow - Pressure drop - Sound level

- The diagrams illustrate data for the PELICAN CE HF recessed in a ceiling.
- The diagrams should not be used for commissioning.
- The dB(A) values are for rooms with normal acoustic absorption (4 dB room attenuation).
- The dB(C) value is normally 6-9 dB higher than the dB(A) value.

PELICAN CE HF – Overview diagram

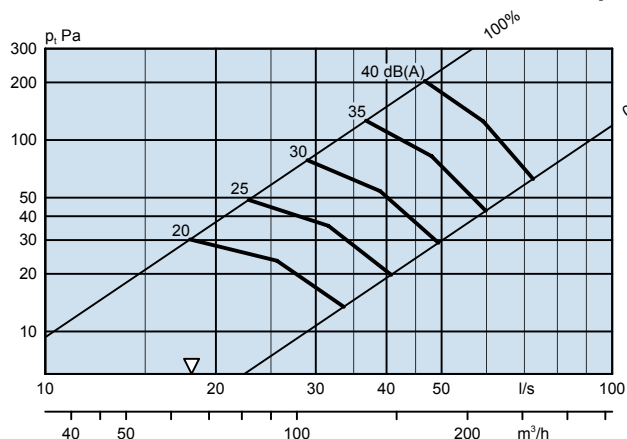


PELICAN CE HF + ALS – Extract air - One step

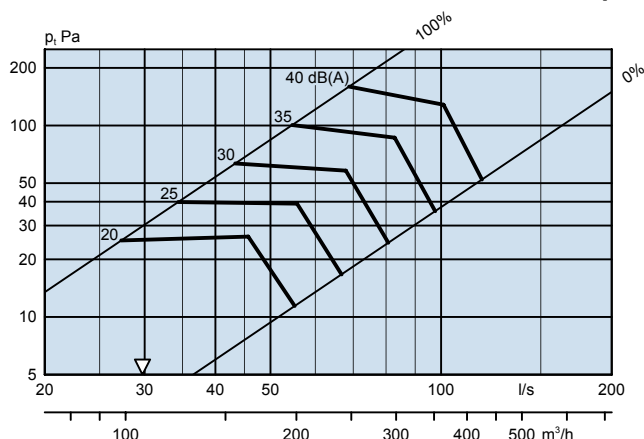
Airflow - Pressure drop - Sound level

- Sound level dB(A) applies to rooms of 10 m² equivalent sound absorption area.
- ∇ = Min. airflow required for obtaining sufficient commissioning pressure.
- To calculate the sound levels in rooms with other dimensions, please refer to our ProAir web software, which can be found at www.swegon.com.

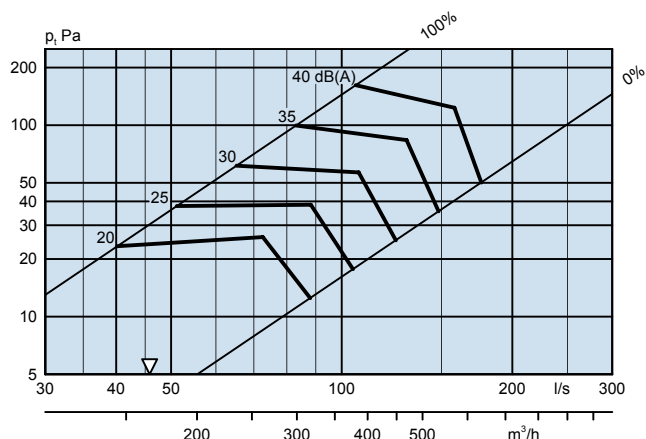
PELICAN CE HF 160-600 + ALS 125-160 – One step



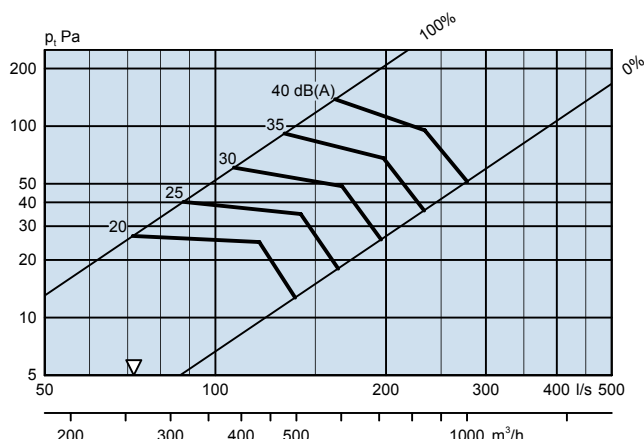
PELICAN CE HF 200-600 + ALS 160-200 – One step



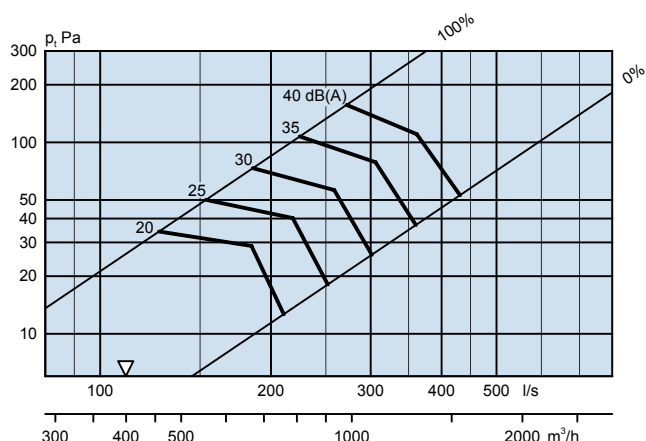
PELICAN CE HF 250-600 + ALS 200-250 – One step



PELICAN CE HF 315-600 + ALS 250-315 – One step



PELICAN CE HF 400-600 + ALS 315-400 – One step



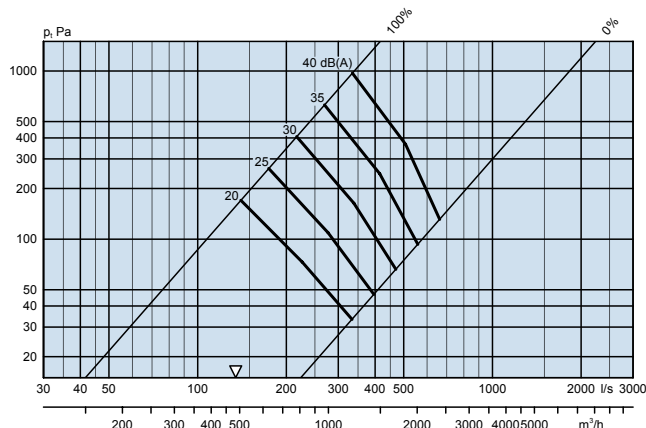
PELICAN CE HF + sound attenuator and damper, a few installation proposals

Airflow - Pressure drop - Sound level

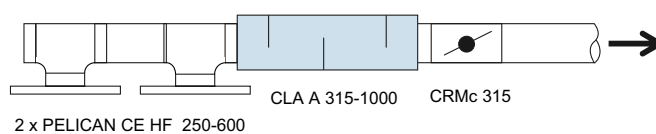
- Sound level dB(A) applies to rooms of 10 m² equivalent sound absorption area.
- ∇ = Min. airflow required for obtaining sufficient commissioning pressure.
- To calculate the sound levels in rooms with other dimensions, please refer to our ProAir web software, which can be found at www.swegon.com.

Comb. 1

PELICAN CE HF 2x250-600 with CLA 315 and CRM 315

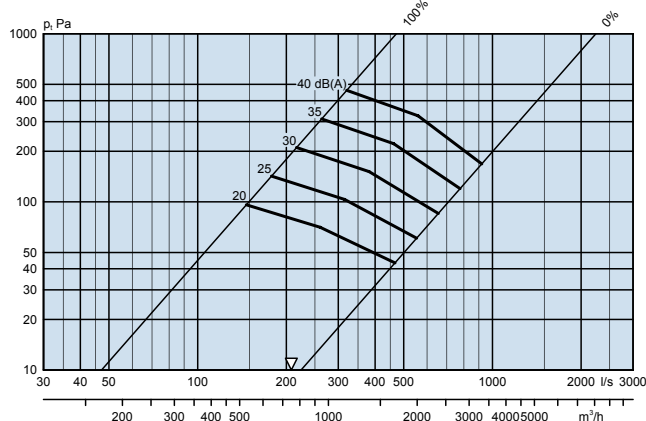


1.

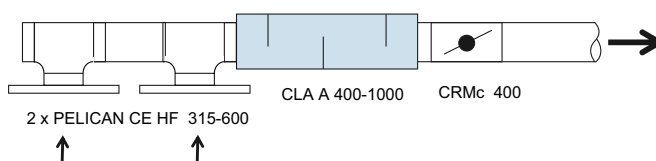


Comb. 2

PELICAN CE HF 2x315-600 with CLA 400 and CRM 400

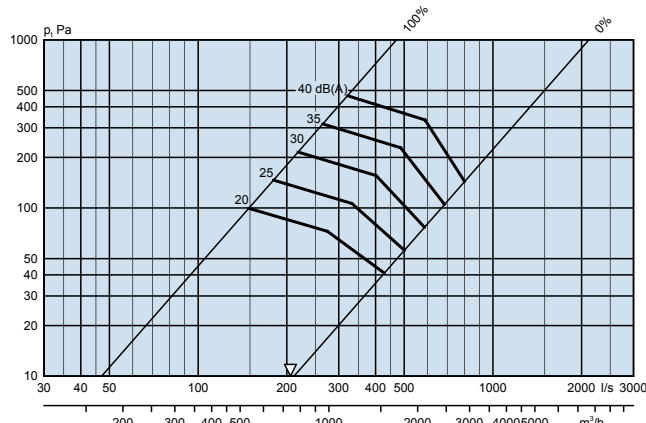


2.

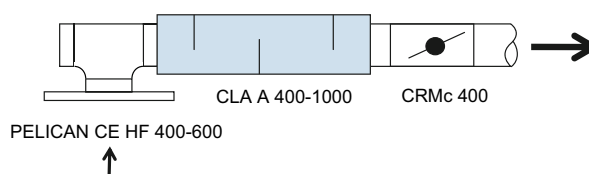


Comb. 3

PELICAN CE HF 400-600 with CLA 400 and CRM 400



3.



Dimensions and weights

PELICAN CE HF

Size	A	ØD	Ød	l	M	Weight, kg
160-600	595	290	159	575	70	3.5
200-600	595	390	199	575	70	3.5
250-600	595	490	249	575	70	3.5
315-600	595	490	314	575	50	3.5
400-600	595	490	399	575	50	3.5

Dimensions of opening in ceiling = l x l

CL = centre line

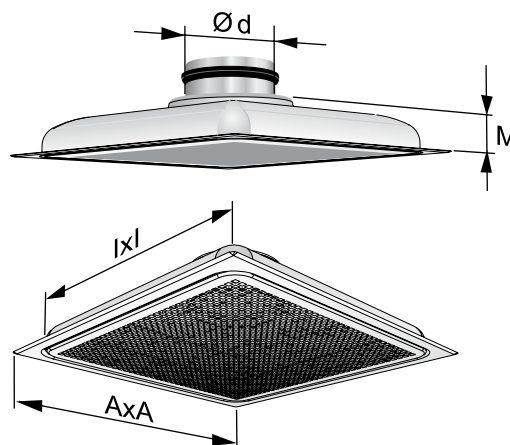


Figure 5. PELICAN CE HF

PELICAN CE HF + ALS - One step

Size	A	B	C	ØD	Ød	E1
160-600	595	342	252	124	160	279
200-600	595	404	288	159	200	314
250-600	595	504	332	199	250	354
315-600	595	622	388	249	315	395
400-600	595	767	488	314	400	455

Size	F1	G1	H	K	Weight, kg
160-600	113	188	315	80	6.2
200-600	113	205	375	100	7.0
250-600	113	225	465	115	8.7
315-600	93	230	575	140	11.8
400-600	93	262	712	175	15.0

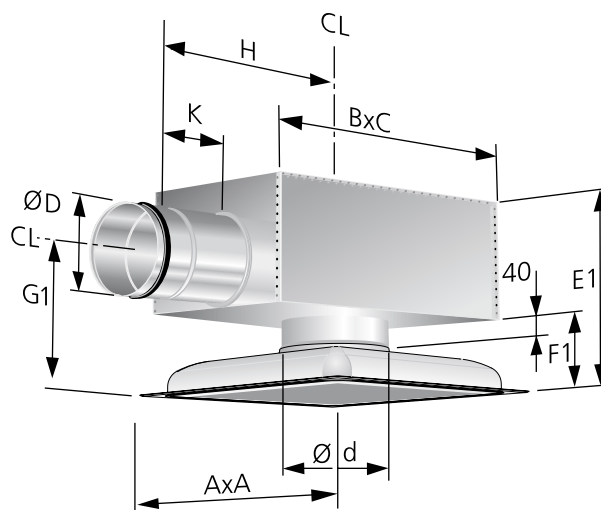


Figure 6. PELICAN CE HF with ALS.

SAR K frame

Size	L	Weight, kg
600	595	1

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

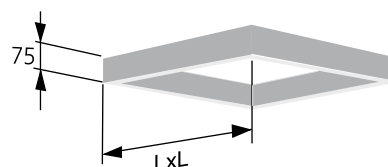


Figure 7. SAR K frame.

Ordering key

Product

Square ceiling air register for extract air PELICAN CE HF a -aaa -bbb

Version

Nominal connection size, mm
160, 200, 250, 315, 400

Nominal square dimensions, mm
600

Standard range

Size: 160-600
 200-600
 250-600
 315-600
 400-600

Accessories

Commissioning box ALS c -aaa - bbb

Version:

For PELICAN CE HF:	ALS:
160-600	125-160
200-600	160-200
250-600	200-250
315-600	250-315
400-600	315-400

Frame SAR b K -aaa

Version:

K = square

Size: 600

Specification text

FD XX

Swegons complete square perforated type PELICAN CE HF ceiling air register, with ALS commissioning box and the following functions:

- Perforated air register face
- Designed for modular suspended ceilings
- Quick Access
- Removable commissioning damper
- Method of measurement with low systematic error
- Interior sound absorbing lining with reinforced surface layer
- White powder paint sprayed and baked finish, RAL 9010

Size: PELICAN CE HF a -aaa-bbb-c with xx items
 ALSc aaa-bbb-c

Accessory:

Frame: SARb K aaa xx items