KITE Ceiling

Square ceiling diffuser for supply and extract air

QUICK FACTS

- Available with a circular diffuser face (KITE CC) and a square diffuser face (KITE CR)
- Flush design
- Suitable for VAV and DCV applications
- Easy Access gives fast and easy installation and commissioning
- Manages large temperatures below room temperature (High ΔT)
- Designed for suspended ceiling systems 600x600
- May be adapted to a variety of suspended ceiling systems
- Commissioning box ALS with one- or two-dimensional changes between duct and air diffuser connection
- Used together with REACT ALS commissioning box for variable flow regulation
- Available in a version with low installation height
- Spread pattern that can be blanked off with the accessory SECTOR
- Standard colour White RAL 9003
  - 5 alternative standard colours
  - Other colours upon request

AIR FLOW - SOUND PRESSURE ROOM (Lp10A) *)									
KITE CC Size				25 dB(A)		30 dB(A)		35 dB(A)	
				l/s	m³/h	l/s	m³/h	l/s	m³/h
125-600				48	171	56	202	66	238
160-600				64	230	74	268	87	311
200-600				82	297	95	343	110	397
250-600				107	386	126	453	147	531
315-600				150	539	177	639	210	757
KITE CC Size	ALS Size			25 dB(A)		30 dB(A)		35 dB(A)	
				l/s	m³/h	l/s	m³/h	l/s	m³/h
125-600	100-125			30	107	36	131	44	159
160-600	125-160			49	177	58	210	69	249
200-600	160-200			72	260	85	305	99	357
250-600	200-250			96	347	113	406	132	475
315-600	250-315			137	492	157	567	181	652
KITE CC Size	REACT ALS Size	Min.*		25 dB(A)		30 dB(A)		35 dB(A)	
		l/s	m³/h	l/s	m³/h	l/s	m³/h	l/s	m³/h
250-600	160-250	7	25	62	223	73	263	87	313
315-600	250-315	20	72	93	335	109	392	127	457

The table shows supply air data for fully open damper.

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

**The product must not go below min. as the measurement function cannot then be guaranteed. For tolerances, see REACT ALS product sheet. NOTE: for a high pressure drop across the product, it may be difficult to reach the min. flow. See the sizing diagrams.*

Swegon

Contents

Technical description

Design

- The square supply air diffuser KITE Ceiling is made up of a backing box and an unperforated diffuser face in either a circular (KITE CC) or a square design (KITE CR).
- Easy Access on one side of the diffuser face and a spring function on the opposite side allows fast and simple handling during installation, commissioning and cleaning.
- The air diffuser is available in a low version for installation where the space inside the ceiling void is restricted. The air diffuser is then supplied without sleeve coupling.
- On request, the air diffuser can be adapted to a variety of suspended ceilings, e.g. Focus Dg, Focus Ds, Focus E and Dampa Clip in. The air diffuser can also be adapted to other dimensions for lay-in, e.g. 610x610, 625x625 and 675x675.

Materials and surface treatment

The air diffuser is made of sheet steel and galvanised sheet steel, and its interior and exterior surfaces are 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.

Accessories

Commissioning boxes

ALS/REACT ALS

- The commissioning box is made of galvanized sheet steel.
- Removable commissioning damper, fixed measurement tappings.
- Sound-absorbing material*) with reinforced surface layer.
- Air tightness class according to SS-EN 12237 and VVS/AMA 12, class C.
- The commissioning box ALS is available with 1 or 2 changes in dimension between the inlet and outlet.
- A low version is available for the ALS commissioning box where the space inside the ceiling void is restricted. The air diffuser is then supplied without outlet sleeve coupling.

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

Blanking plate

SECTOR KITE CR

For blanking off a sector of the air distribution pattern in the square slot diffuser design (KITE CR), only standard installation height applies.

Figure 1. Commissioning box ALS.

Figure 2. Active commissioning box REACT ALS.

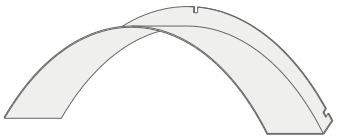


Figure 3. Blanking plate SECTOR KITE CR.

Project planning

- KITE Ceiling has the dimensions 595 x 595 mm in all connection sizes.
- The air diffuser is easy to install in modular suspended ceilings with modular dimensions of 600 x 600 mm.
- Can be placed on top of the T-bar framework, and then fix it in the duct system. See figure 5.
- In combination with the ALS commissioning box, there is a low version model without inlet spigot.

Installation

- The face is easily removed with a simple action, see figure 4.
- The inlet spigot of the air diffuser backing box can be secured to the connecting duct by means of self-tapping screws or blind rivets.
- For flush-mounting in fixed ceilings, secure the air diffuser to the building structure through the top of the backing box.
- The air diffuser and ALS commissioning box with low installation height are centred with each other using the supplied locking strip. The air diffuser is secured in the correct position with screws or blind rivets in the underside of the commissioning box, see figure 6.
- For installation in suspended ceilings with a framework, place the air diffuser directly down in the T-bar framework, and then fix it to the duct system or to the commissioning box.
- When an ALS or REACT 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 diffuser can be increased up to 500 mm with circular duct, without having to lengthen the measuring tubes and damper adjustment cords. See figure 5.

Commissioning with ALS

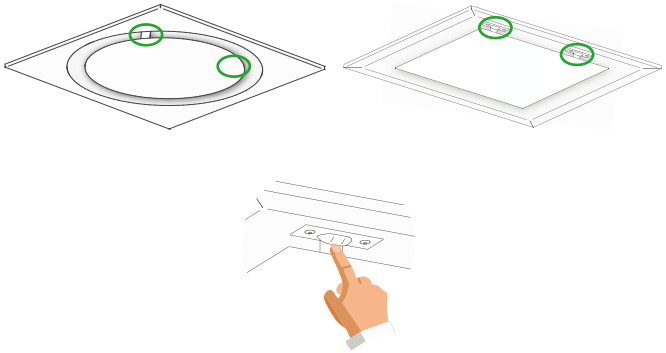
- Commissioning should be carried out with the air diffuser face mounted.
- Pull the measuring tubes and damper adjustment cords out through the face.
- Connect a pressure gauge to the measuring tube/tubes.
- The red tube from the ALS commissioning box in the one-step design is used for supply air.
- The blue tube from the ALS commissioning box in the two-step design.
- For extract air, always use the transparent tube.
- K-factor label is located in the backing box.
- The adjusted damper position is saved by tying together the damper cord in an adjustment knot.
- Measurement accuracy and straight section requirement before the commissioning box, see figure 5.
- Figure 5 shows a bend, a change in dimension and T-piece.
- Other types of disturbance require at least 2xD straight section (D= connection dimension) to obtain a measurement accuracy of ±10% on the flow.
- The K-factor is also specified in the relevant commissioning instructions at www.swegon.com.

Maintenance

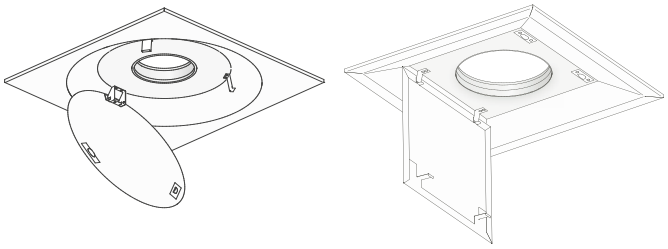
- The air diffuser can be cleaned, if necessary, using lukewarm water with dishwashing detergent added, or by vacuum cleaning using a brush nozzle.
- The duct system is cleaned by opening the diffuser face. If a REACT ALS or ALS commissioning box is used, pull the distributor plate aside and then grip and twist the damper unit from of its mounting. See figure 7.

Environment

The Building Material Declaration is available for downloading at www.swegon.com.



1. *Locate the diffuser face's locking devices (2 pcs).*
2. *Press the spring fasteners (2 pcs) towards the centre of the diffuser, which releases the diffuser face.*



The diffuser face hangs on the corresponding side by the hinge.

Figure 4. Easy Access, dismantling the diffuser face.

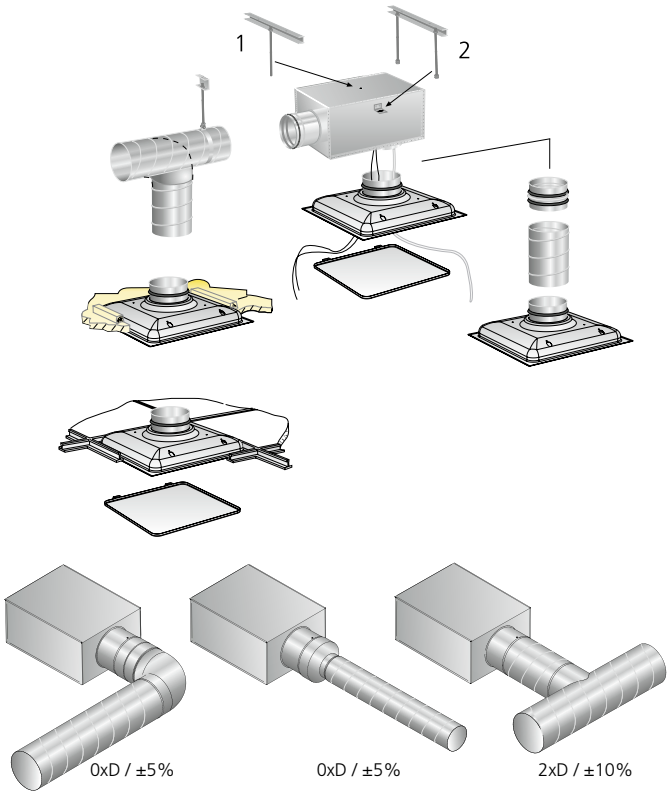


Figure 5. Installation options for the ALS commissioning box. See the REACT ALS product sheet for installation options with active commissioning box.

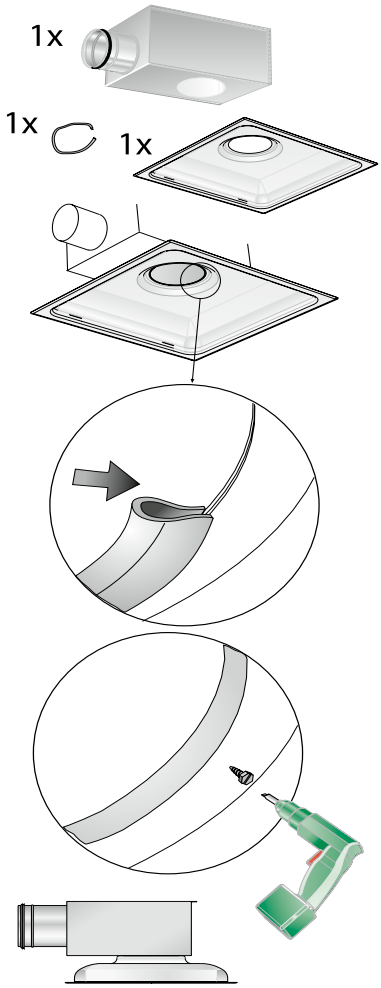


Figure 6. Installation of air diffuser and ALS commissioning box with low installation height.

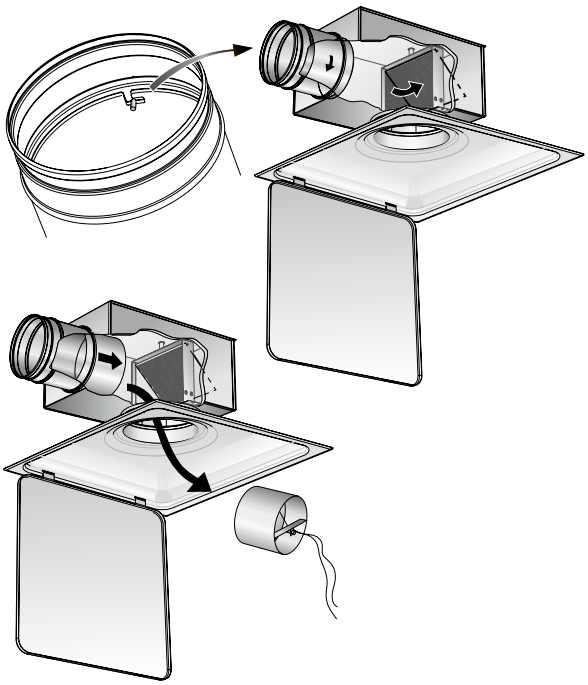


Figure 7. Dismantling the damper when using ALS and REACT ALS commissioning box.

Blanking off the air distribution pattern

Note: Blanking off only applies for KITE CR with standard installation height. A maximum of 2 blanking plates may be used.

To calculate the air stream diffusion, air velocities in the occupied zone or sound levels in rooms where blanking off is performed, please refer to our calculation software available on www.swegon.com.

Installation

The blanking plate is equipped with a magnet, which makes it easy and flexible to place it in the desired orientation.

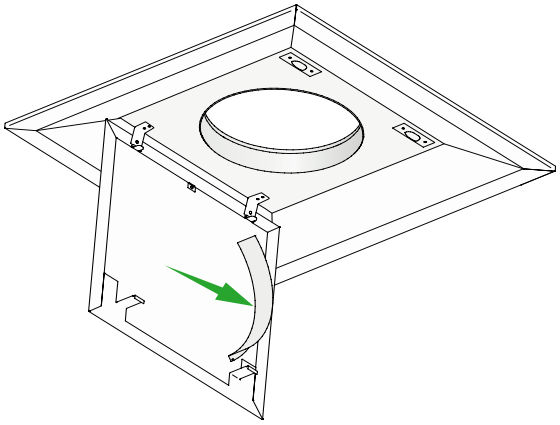


Figure 8. Alternative 1, blanking plate installed on the diffuser face.

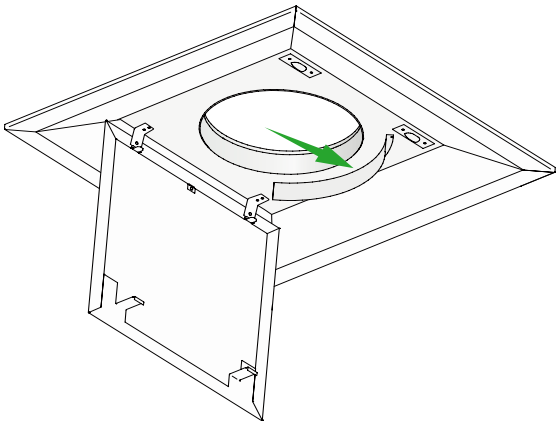


Figure 9. Alternative 2, blanking plate installed on the backing box.

Air distribution patterns with blanking plate installed

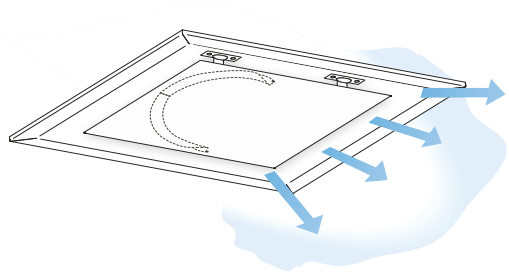


Figure 10. 1-way.
Two blanking plates installed side-by-side on the air diffuser, the joint between the blanking plates is placed in the center of the side.

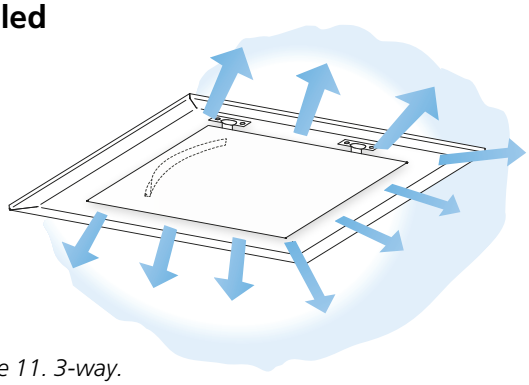


Figure 11. 3-way.
One blanking plate installed on optional side of the air diffuser.

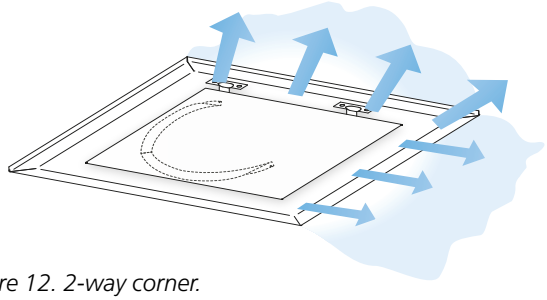


Figure 12. 2-way corner.
Two blanking plates installed side-by-side on the air diffuser, the joint between the blanking plates is placed directed at a corner.

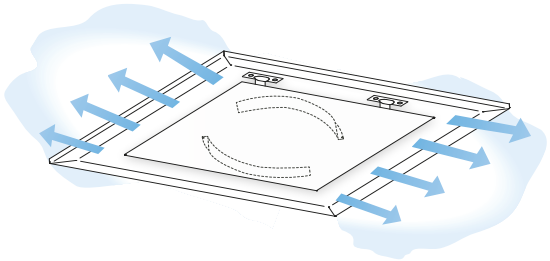


Figure 13. 2-way middle.
Two blanking plates installed on opposite sides of the air diffuser.

Sizing

- Sound pressure level dB(A) applies to rooms with 10 m^2 equivalent sound absorption area.
- Sound attenuation (ΔL) below is shown in the octave band. Orifice attenuation is included in the values.
- The throw length $l_{0.2}$ is measured under isothermal discharge conditions.
- The recommended max. permissible temperature below room temperature is 10 K.
- To calculate the air stream diffusion, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our calculation software, which is at 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 - Only KITE CC

Supply air

Sound power level L_w(dB)
Table K_{OK}

Size	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	-4	2	3	1	1	-9	-19	-27
160-600	-2	5	5	0	1	-9	-20	-28
200-600	1	8	5	0	1	-10	-20	-28
250-600	5	10	5	0	1	-8	-17	-26
315-600	2	8	6	1	-1	-5	-14	-24
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	20	15	10	5	3	5	5	4
160-600	19	14	9	4	3	5	5	4
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
Tol. ±	2	2	2	2	2	2	2	2

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
125-600	-8	9	7	3	-3	-11	-21	-26
160-600	-4	8	7	1	-1	-11	-22	-28
200-600	-2	10	4	0	0	-9	-20	-26
250-600	-2	11	6	0	-1	-7	-18	-26
315-600	-1	9	4	0	-1	-3	-10	-20
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (Octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	20	15	10	5	3	5	5	4
160-600	19	14	9	4	3	5	5	4
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
Tol. ±	2	2	2	2	2	2	2	2

Sound data - KITE CC with commissioning box 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
125-600	-2	8	5	3	-4	-6	-14	-21
160-600	4	7	6	2	-4	-6	-14	-20
200-600	9	8	5	1	-2	-8	-14	-20
250-600	3	10	5	-1	-1	-7	-13	-19
315-600	7	11	5	0	-2	-7	-14	-20
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	21	16	9	17	23	16	11	13
160-600	19	14	10	17	19	12	10	12
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
Tol. ±	2	2	2	2	2	2	2	2

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
160-600	-4	7	6	2	-5	-4	-11	-19
200-600	-2	9	5	0	-4	-4	-13	-19
250-600	3	11	5	-2	-3	-6	-13	-19
315-600	4	11	5	-2	-2	-6	-13	-18
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-600	19	14	11	17	24	15	13	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

Extract 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
125-600	-6	8	7	3	-5	-9	-16	-24
160-600	-4	9	6	1	-6	-6	-14	-23
200-600	0	10	5	-1	-5	-7	-14	-23
250-600	0	9	2	-3	-2	-5	-13	-24
315-600	2	8	2	-4	-2	-3	-15	-25
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	21	16	9	17	23	16	11	13
160-600	19	14	10	17	19	12	10	12
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
Tol. ±	2	2	2	2	2	2	2	2

Extract 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
160-600	-8	9	8	1	-6	-6	-14	-22
200-600	-11	12	6	-1	-6	-5	-13	-21
250-600	-4	12	5	-3	-4	-6	-12	-21
315-600	-1	11	3	-4	-3	-5	-13	-24
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-600	19	14	11	17	24	15	13	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

Sound data - KITE CC with active commissioning box REACT ALS

Supply air

Sound power level L_w(dB)
Table K_{OK}

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-250	-2	2	-3	-7	-9	-11	-12	-5
250-350	-2	2	-3	-6	-6	-9	-12	-7
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-250	15	9	9	20	19	15	16	14
250-350	13	8	10	19	16	13	16	16
Tol. ±	2	2	2	2	2	2	2	2

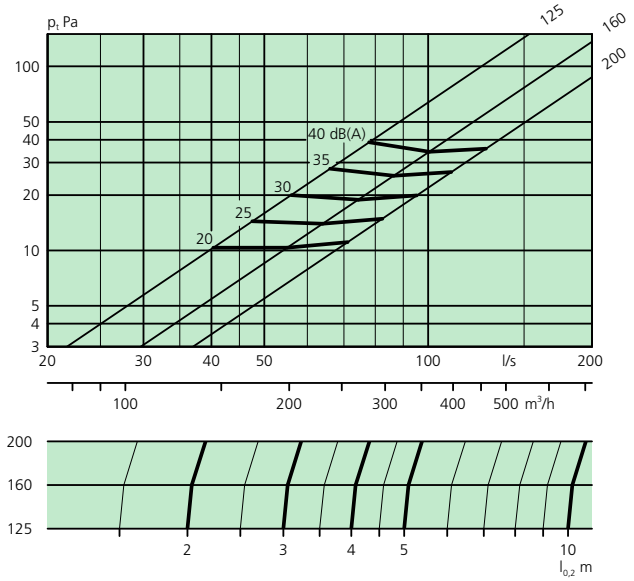
Sizing diagrams

Air flow – Pressure drop – Sound level - Throw length

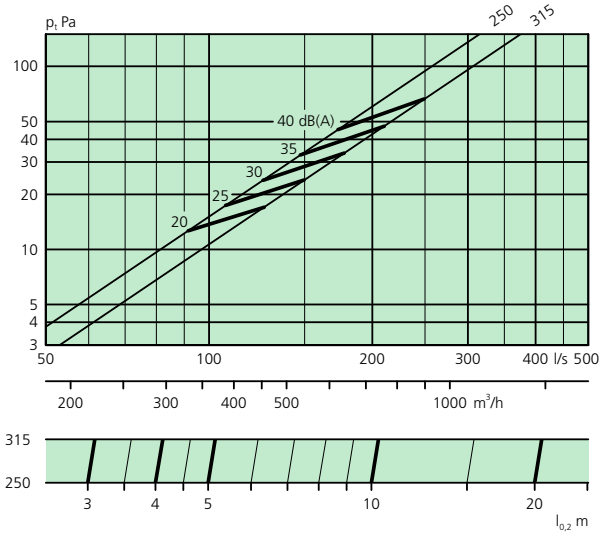
- The diagrams illustrate data for recessed air diffuser in a ceiling.
- The diagrams should not be used for commissioning.
- The dB(A) values apply to rooms with normal acoustic absorption, 4 dB room attenuation/10 m^2 equivalent room absorption area.
- The dB(C) value is normally 6-9 dB higher than the dB(A) value.
- The throw length $l_{0.2}$ is measured under isothermal discharge conditions.
- The recommended max. permissible temperature below room temperature is 10 K.
- ∇ = Min. flow required for obtaining sufficient commissioning pressure.
- The version for low installation height generates about 3 dB(A) higher sound level than the value plotted in the graph.
- To calculate the air stream diffusion, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our calculation software available on www.swegon.com

KITE CC – Air diffuser only – Supply air

KITE CC 125-600, 160-600, 200-600

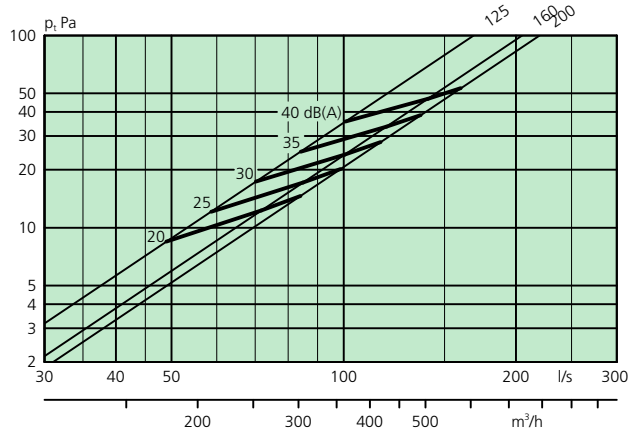


KITE CC 250-600, 315-600

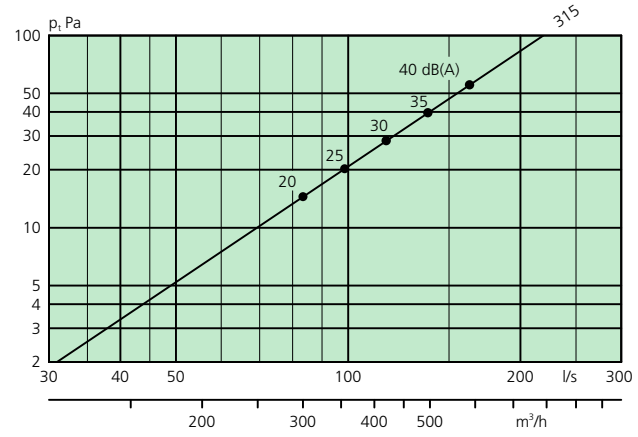


KITE CC – Only air diffuser – Extract air

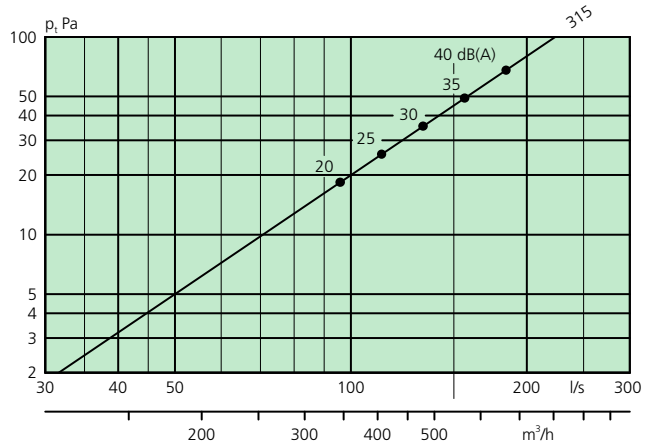
KITE CC 125-600, 160-600, 200-600



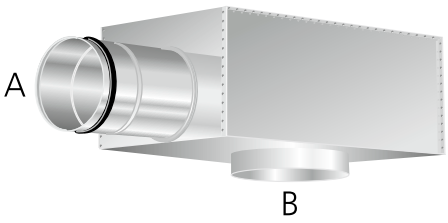
KITE CC 250-600



KITE CC 315-600



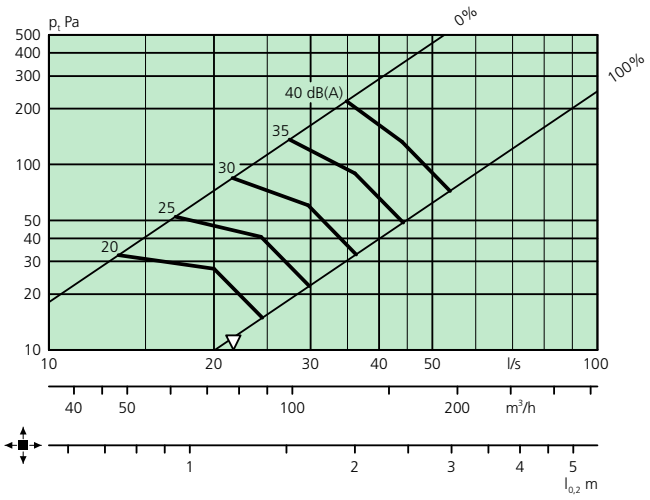
KITE CC with commissioning box ALS – Supply air



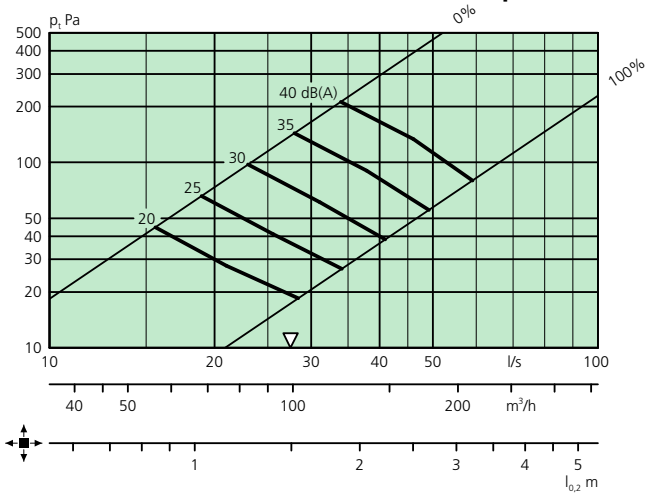
Correlation, connection dimensions.
A = duct connection, B = air diffuser connection.
Explanation of step model:

- *One step = A dimensional change between A and B, e.g. A = Ø160 mm and B = Ø200 mm.*
- *Two steps = Two-dimensional changes between A and B, e.g. A = Ø160 mm and B = Ø250 mm.*

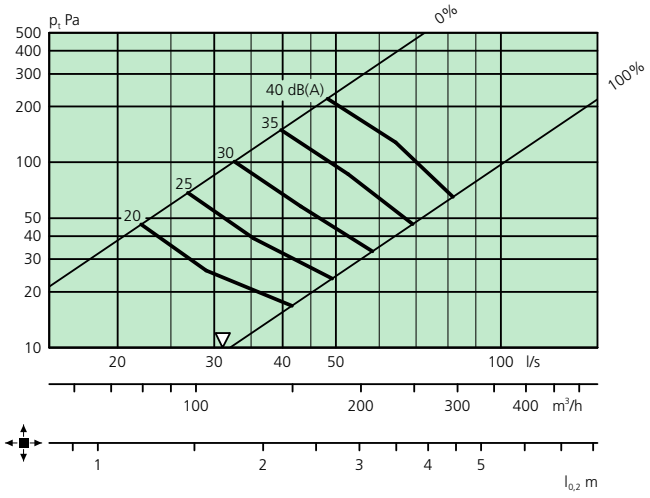
KITE CC 125-600 + ALS 100-125 – One step



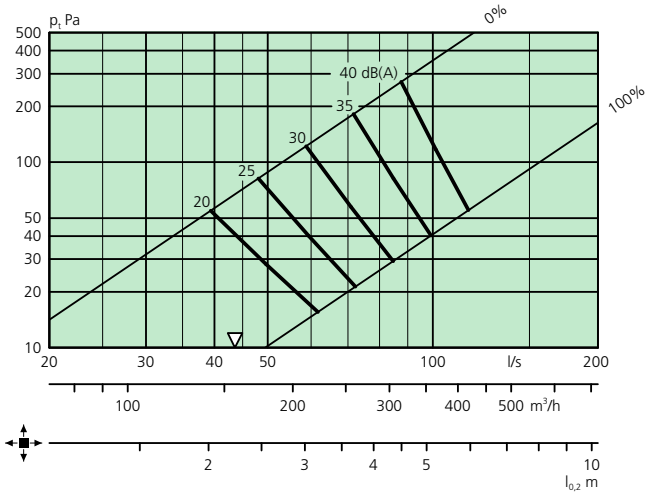
KITE CC 160-600 + ALS 100-160 - Two steps



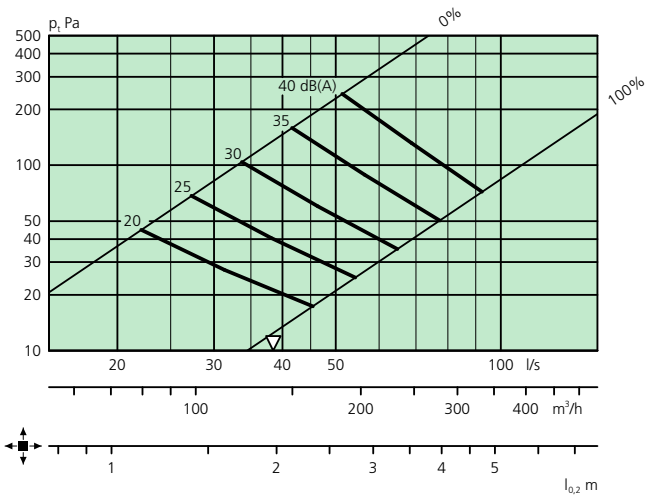
KITE CC 160-600 + ALS 125-160 – One step



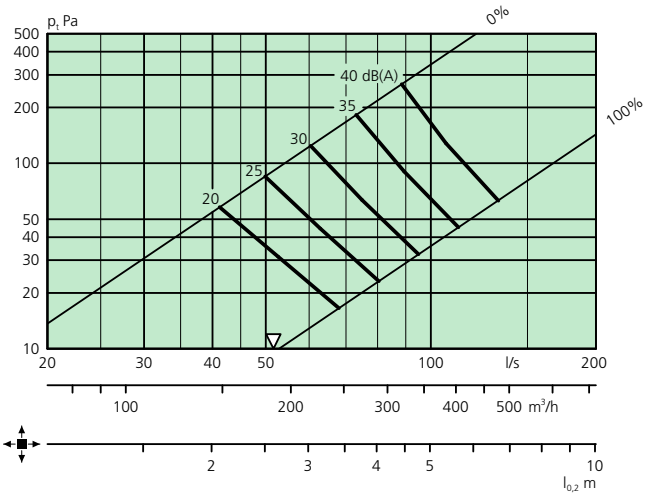
KITE CC 200-600 + ALS 160-200 – One step



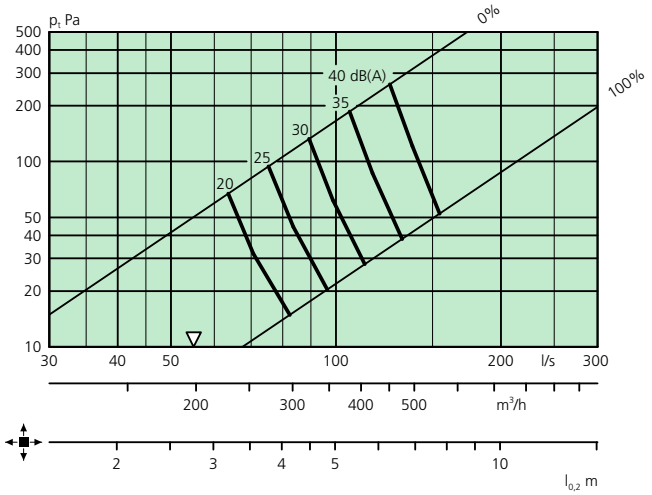
KITE CC 200-600 + ALS 125-200 – Two steps



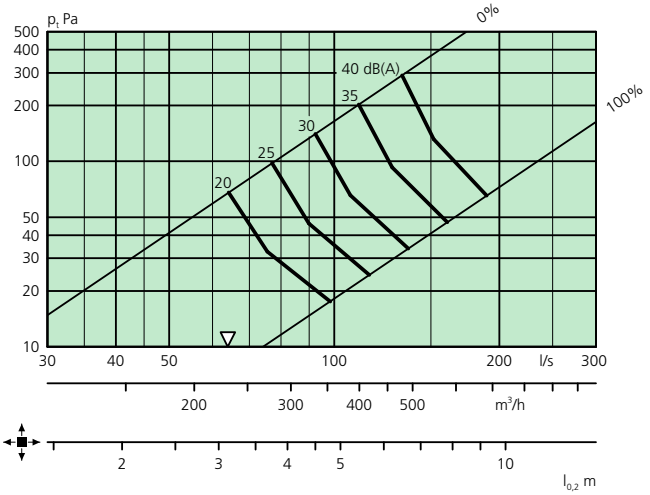
KITE CC 250-600 + ALS 160-250 – Two steps



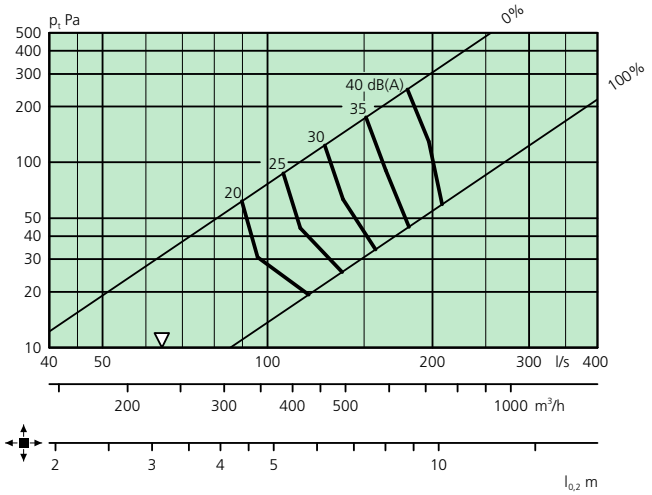
KITE CC 250-600 + ALS 200-250 – One step



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

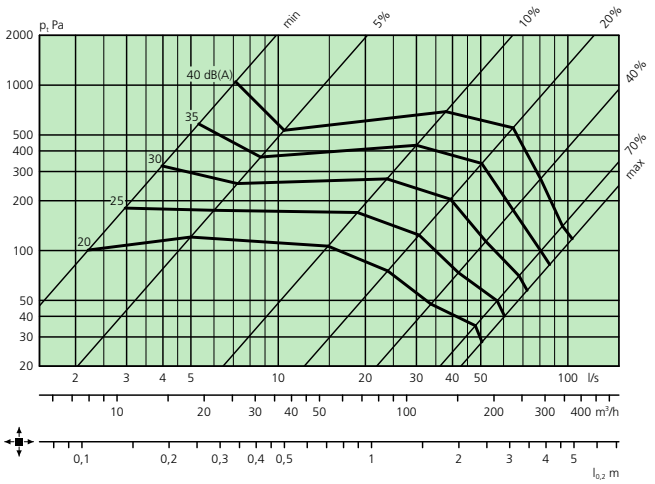


KITE CC 315-600 + ALS 250-315 – One step

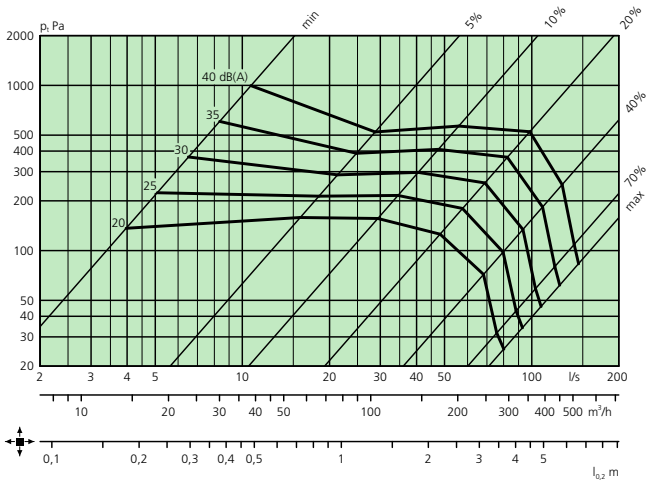


KITE CC with active commissioning box REACT ALS – Supply air

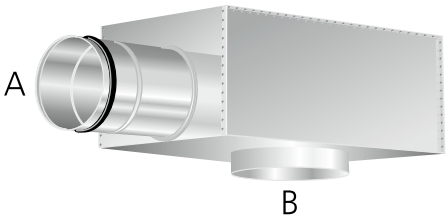
KITE CC 250-600 + REACT ALS 160-250



KITE CC 315-600 + REACT ALS 250-315



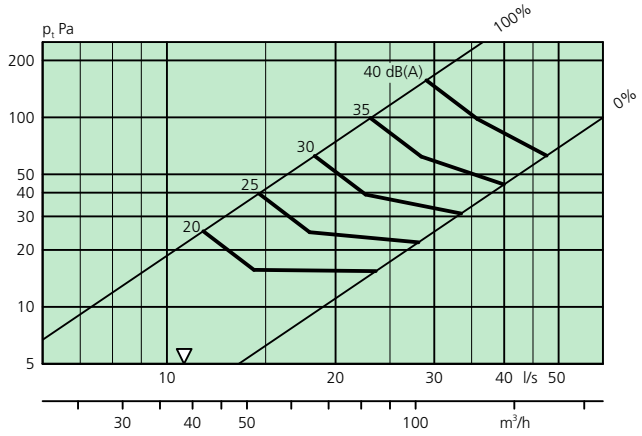
KITE CC with commissioning box ALS - Extract air



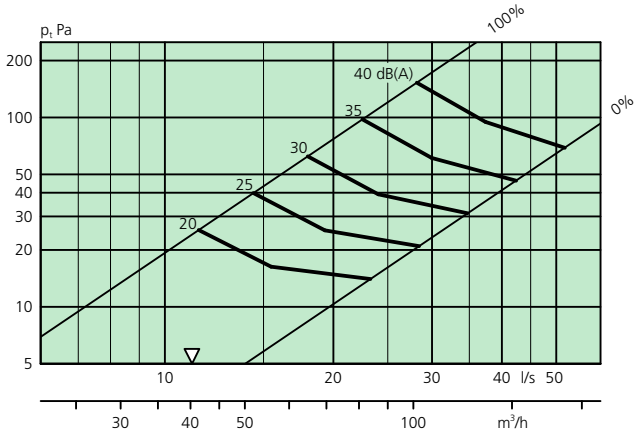
Correlation, connection dimensions.
A = duct connection, B = air diffuser connection.
Explanation of step model:

- *One step = A dimensional change between A and B, e.g. A = Ø160 mm and B = Ø200 mm.*
- *Two steps = Two-dimensional changes between A and B, e.g. A = Ø160 mm and B = Ø250 mm.*

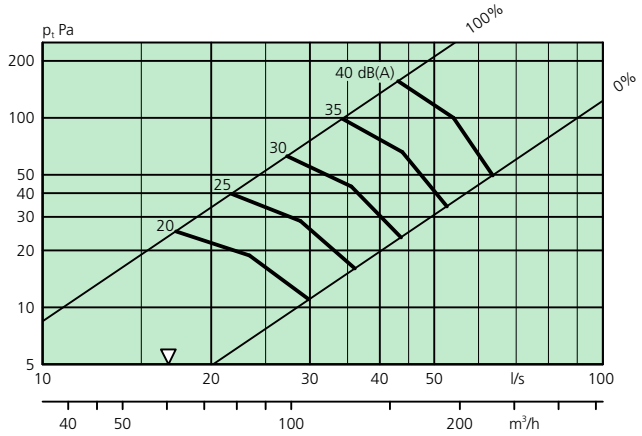
KITE CC 125-600 + ALS 100-125 – One step



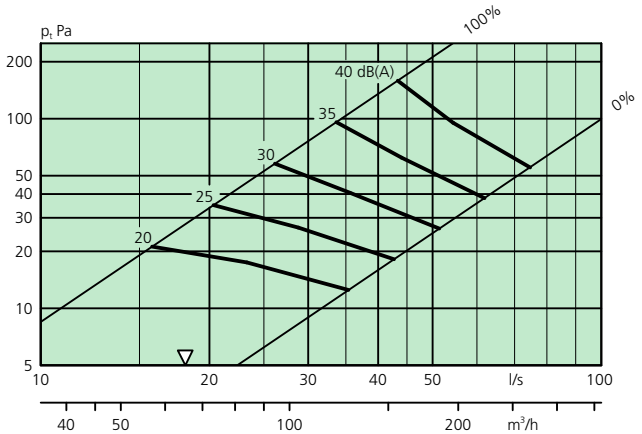
KITE CC 160-600 + ALS 100-160 – Two steps



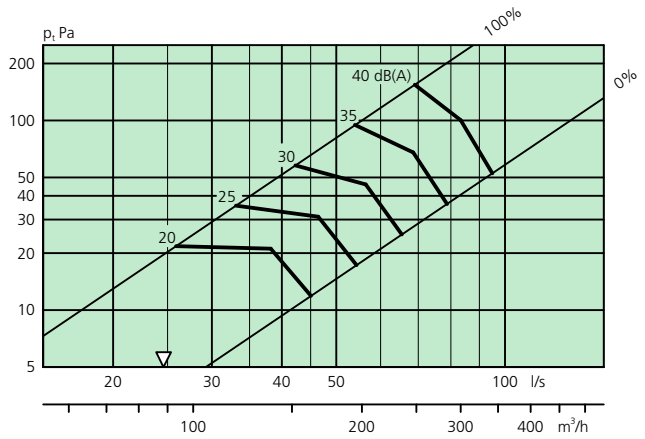
KITE CC 160-600 + ALS 125-160 – One step



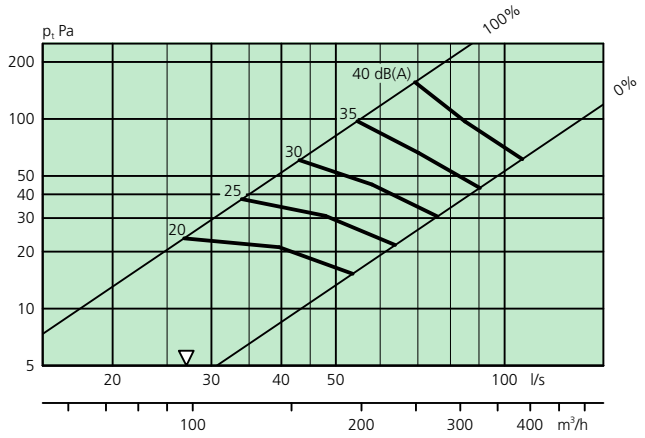
KITE CC 200-600 + ALS 125-200 – Two steps



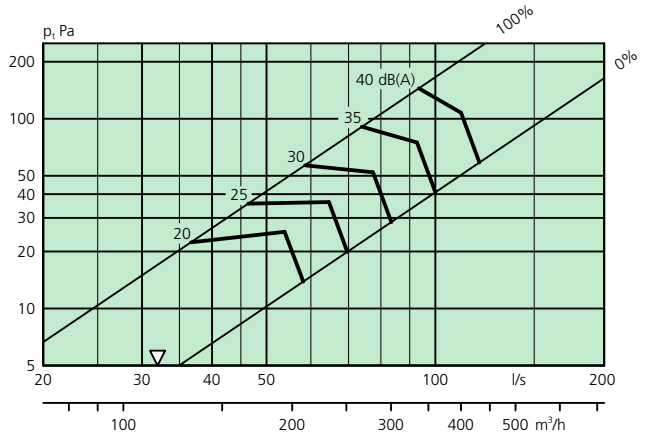
KITE CC 200-600 + ALS 160-200 – One step



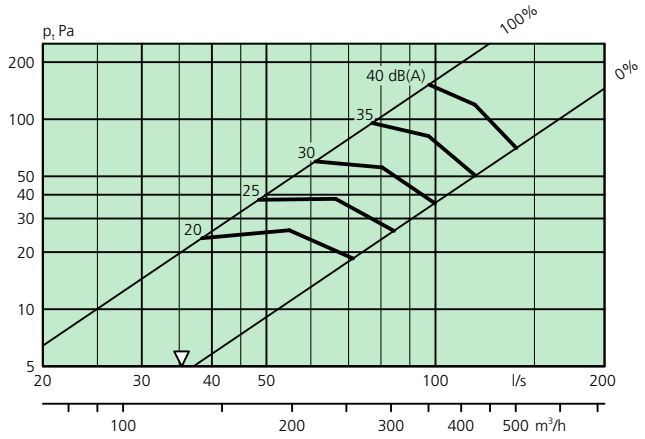
KITE CC 250-600 + ALS 160-250 – Two steps



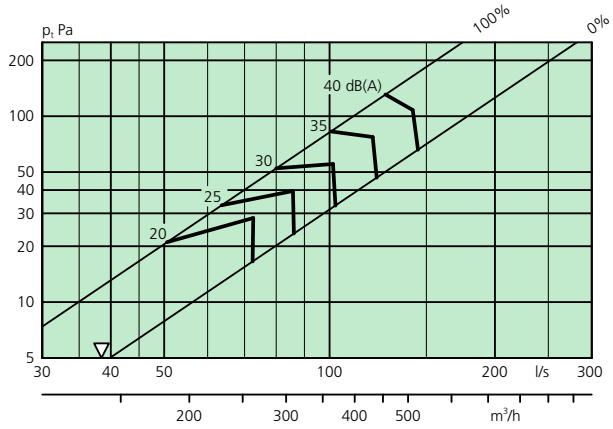
KITE CC 250-600 + ALS 200-250 – One step



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



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



Sizing

- Sound pressure level dB(A) applies to rooms with 10 m^2 equivalent sound absorption area.
- Sound attenuation (ΔL) below is shown in the octave band. Orifice attenuation is included in the values.
- The throw length $l_{0.2}$ is measured under isothermal discharge conditions.
- The recommended max. permissible temperature below room temperature is 10 K.
- For diagram and acoustic data with blanking plate, refer to our calculation programs.
- To calculate the air stream diffusion, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our calculation software, which is at 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 – Only KITE CR

Supply air

Sound power level L_w(dB)
Table K_{OK}

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	-2	6	4	1	1	-7	-18	-26
160-600	-3	9	5	-2	1	-7	-15	-27
200-600	3	12	8	0	-2	-11	-19	-25
250-600	8	12	8	1	-4	-10	-20	-26
315-600	10	13	10	2	-7	-15	-25	-28
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

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

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
125-600	-12	7	5	1	0	-6	-18	-28
160-600	-4	9	6	1	0	-12	-24	-28
200-600	-3	11	5	1	0	-13	-25	-29
250-600	0	13	5	0	-1	-9	-19	-28
315-600	0	12	5	-1	-1	-4	-12	-23
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

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

Sound data - KITE CR with ALS commissioning box

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
125-600	0	8	5	2	-4	-6	-11	-18
160-600	4	9	6	1	-3	-6	-13	-19
200-600	9	9	6	0	-2	-7	-14	-20
250-600	3	10	4	-2	-2	-6	-14	-20
315-600	8	12	7	0	-4	-8	-15	-20
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	21	16	9	17	23	16	11	13
160-600	19	14	10	17	19	12	10	12
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
Tol. ±	2	2	2	2	2	2	2	2

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
160-600	-4	8	4	0	-3	-5	-10	-18
200-600	2	9	5	0	-3	-5	-12	-17
250-600	2	11	5	-2	-2	-5	-13	-19
315-600	2	11	4	-3	-4	-6	-14	-18
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-600	19	14	11	17	24	15	13	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

Extract 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
125-600	-4	9	6	2	-4	-9	-14	-23
160-600	-1	11	7	1	-4	-8	-14	-22
200-600	5	11	5	-1	-4	-8	-14	-24
250-600	-1	10	1	-3	-2	-6	-13	-23
315-600	4	11	4	-2	-2	-5	-11	-21
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
125-600	21	16	9	17	23	16	11	13
160-600	19	14	10	17	19	12	10	12
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
Tol. ±	2	2	2	2	2	2	2	2

Extract 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
160-600	-8	10	7	1	-5	-6	-11	-20
200-600	-2	13	6	0	-6	6	-12	-20
250-600	-1	13	4	-3	-6	-7	-13	-23
315-600	-1	13	4	-3	-3	-6	-13	-21
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-600	19	14	11	17	24	15	13	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

Sound data - KITE CR with REACT ALS active commissioning box

Supply air

Sound power level L_w(dB)
Table K_{OK}

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-250	-2	2	-3	-7	-9	-11	-12	-5
250-350	-2	2	-3	-6	-6	-9	-12	-7
Tol. ±	2	2	2	2	2	2	2	2

Sound attenuation ΔL (dB)
Table ΔL

Size	Mid-frequency (octave band) Hz							
	63	125	250	500	1000	2000	4000	8000
160-250	15	9	9	20	19	15	16	14
250-350	13	8	10	19	16	13	16	16
Tol. ±	2	2	2	2	2	2	2	2

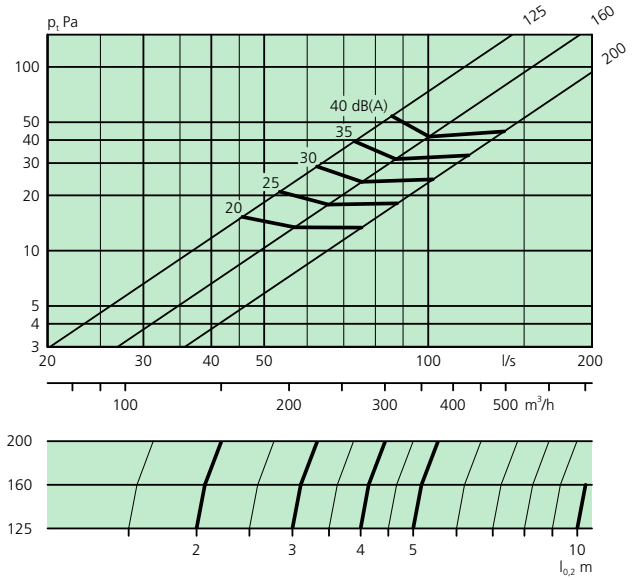
Sizing diagrams

Air flow – Pressure drop – Sound level - Throw length

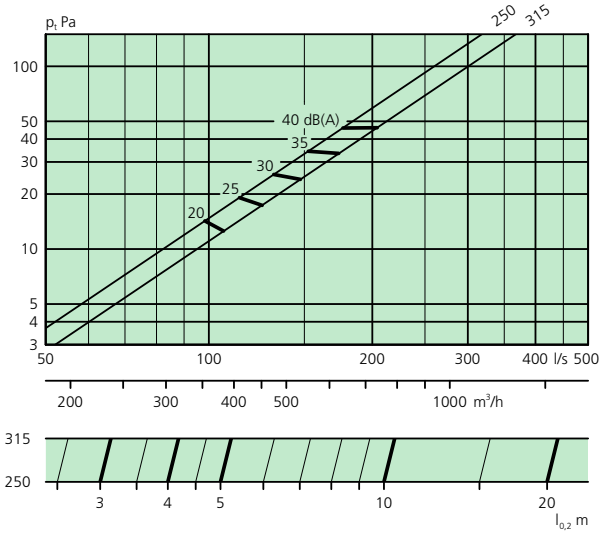
- The diagrams illustrate data for recessed air diffuser in a ceiling.
- The diagrams should not be used for commissioning.
- The dB(A) values apply to rooms with normal acoustic absorption, 4 dB room attenuation/10 m^2 equivalent room absorption area.
- The dB(C) value is normally 6-9 dB higher than the dB(A) value.
- The throw length $l_{0.2}$ is measured under isothermal discharge conditions.
- The recommended max. permissible temperature below room temperature is 10 K.
- ∇ = Min. flow required for obtaining sufficient commissioning pressure.
- The version for low installation height generates about 3 dB(A) higher sound level than the value plotted in the graph.
- For diagrams with blanking plate, refer to our calculation programs.
- To calculate the air stream diffusion, air velocities in the occupied zone or sound levels in rooms with other dimensions, please refer to our calculation software available on www.swegon.com

KITE CR – Air diffuser only – Supply air

KITE CR 125-600, 160-600, 200-600

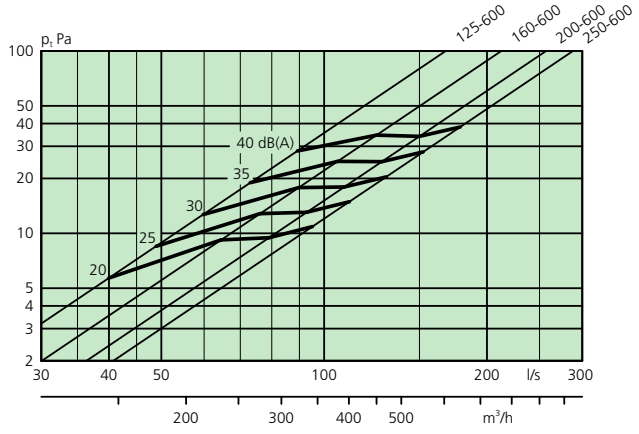


KITE CR 250-600, 315-600

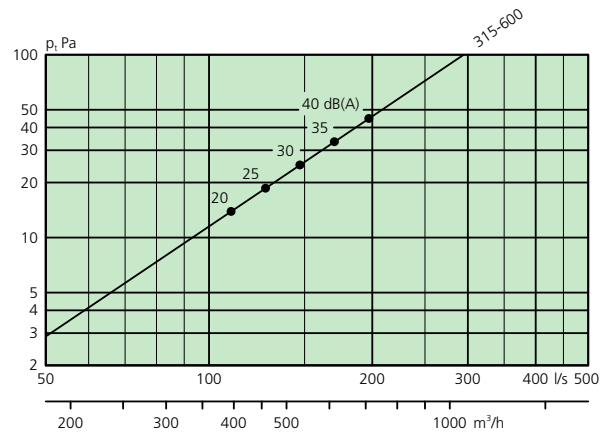


KITE CR – Air diffuser only – Extract air

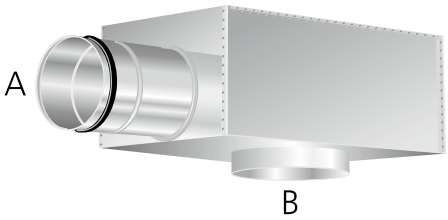
KITE CR 125-600, 160-600, 200-600, 250-600



KITE CR 315-600



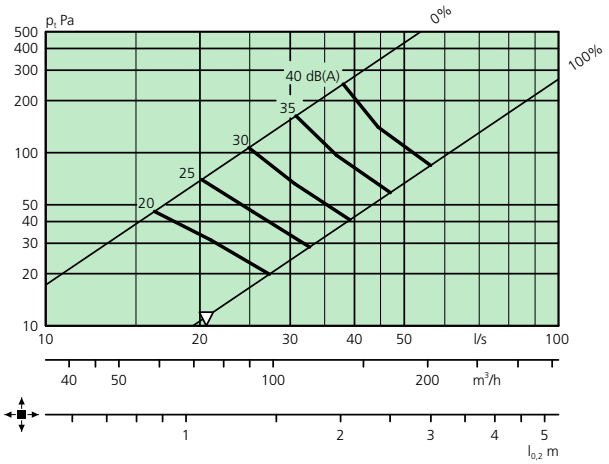
KITE CR with ALS commissioning box – Supply air



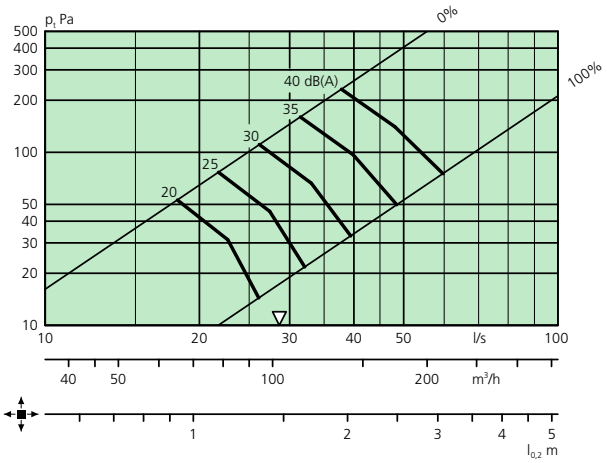
Correlation, connection dimensions.
A = duct connection, B = air diffuser connection.
Explanation of step model:

- *One step = A dimensional change between A and B, e.g. A = Ø160 mm and B = Ø200 mm.*
- *Two steps = Two-dimensional changes between A and B, e.g. A = Ø160 mm and B = Ø250 mm.*

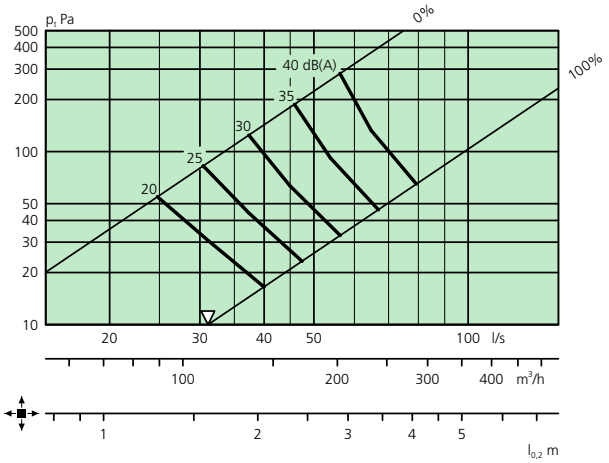
KITE CR 125-600 + ALS 100-125 – One step



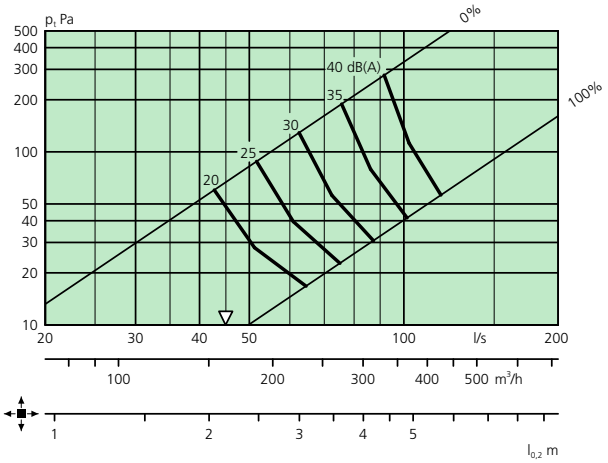
KITE CR 160-600 + ALS 100-160 - Two steps



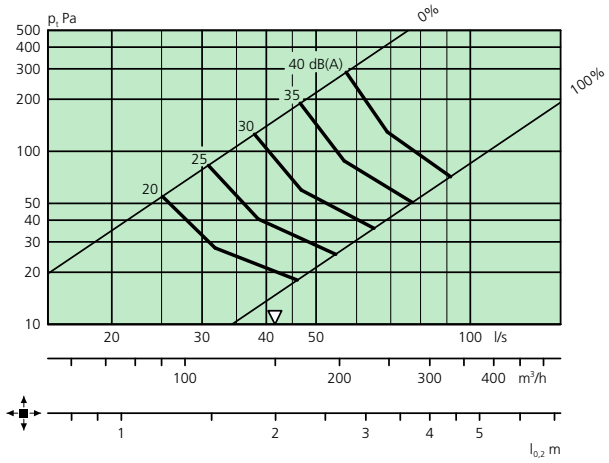
KITE CR 160-600 + ALS 125-160 – One step



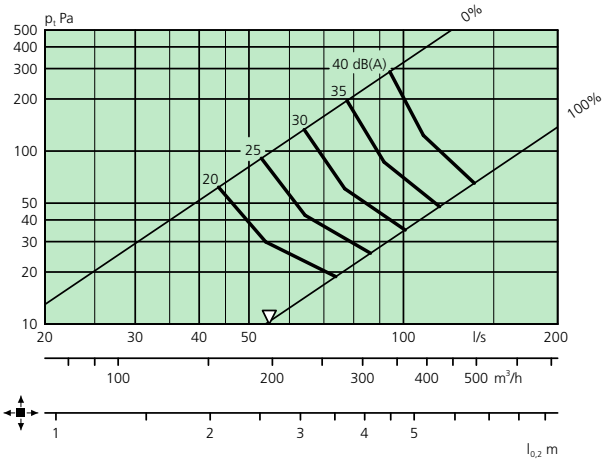
KITE CR 200-600 + ALS 160-200 – One step



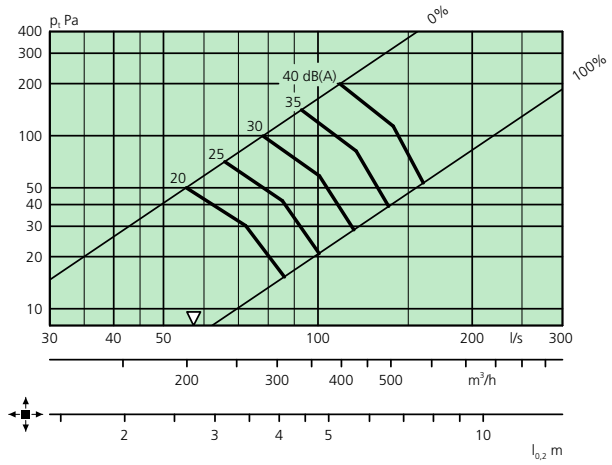
KITE CR 200-600 + ALS 125-200 – Two steps



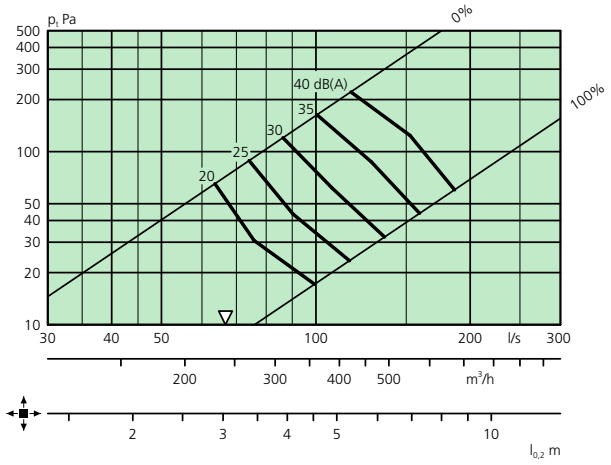
KITE CR 250-600 + ALS 160-250 – Two steps



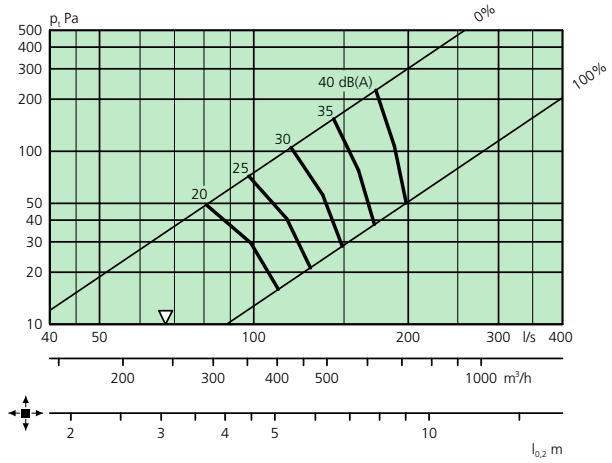
KITE CR 250-600 + ALS 200-250 – One step



KITE CR 315-600 + ALS 200-315 – Two steps

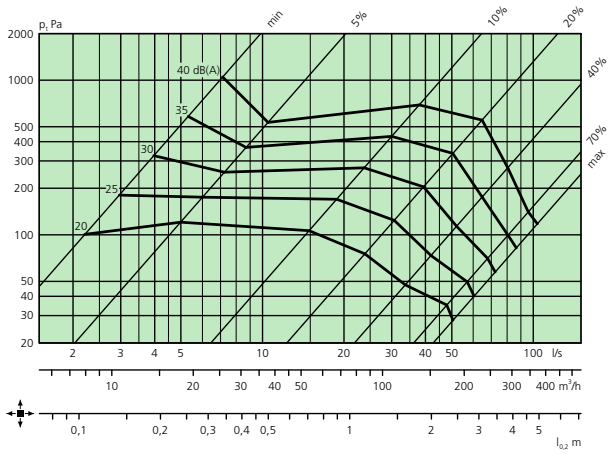


KITE CR 315-600 + ALS 250-315 – One step

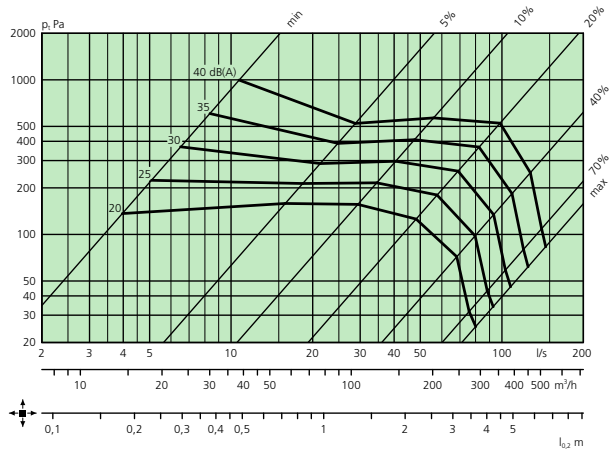


KITE CR with REACT ALS active commissioning box – Supply air

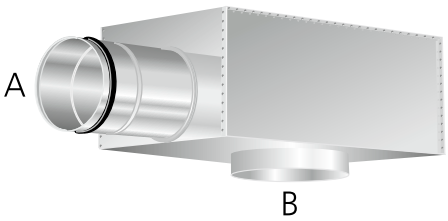
KITE CR 250-600 + REACT ALS 160-250



KITE CR 315-600 + REACT ALS 250-315



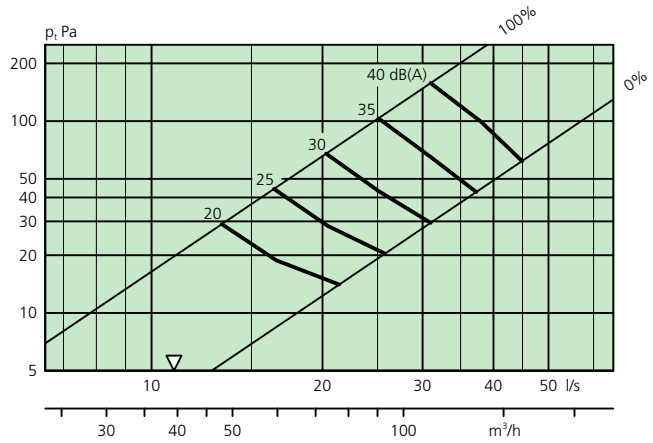
KITE CR with ALS commissioning box - Extract air



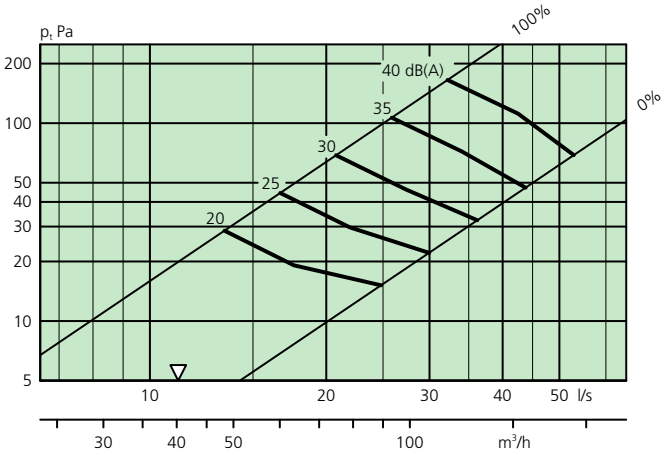
Correlation, connection dimensions.
A = duct connection, B = air diffuser connection.
Explanation of step model:

- *One step = A dimensional change between A and B, e.g. A = Ø160 mm and B = Ø200 mm.*
- *Two steps = Two-dimensional changes between A and B, e.g. A = Ø160 mm and B = Ø250 mm.*

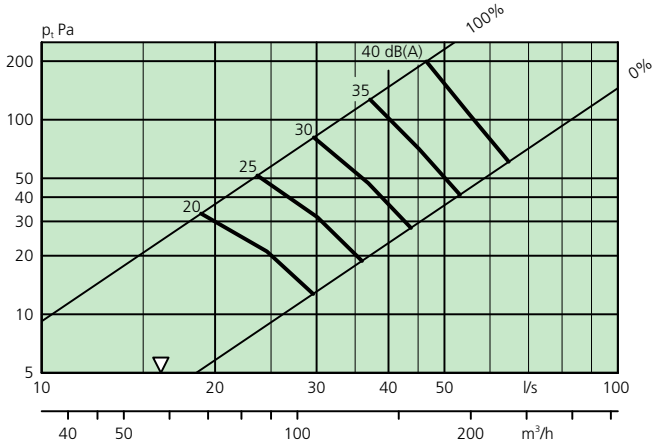
KITE CR 125-600 + ALS 100-125 – One step



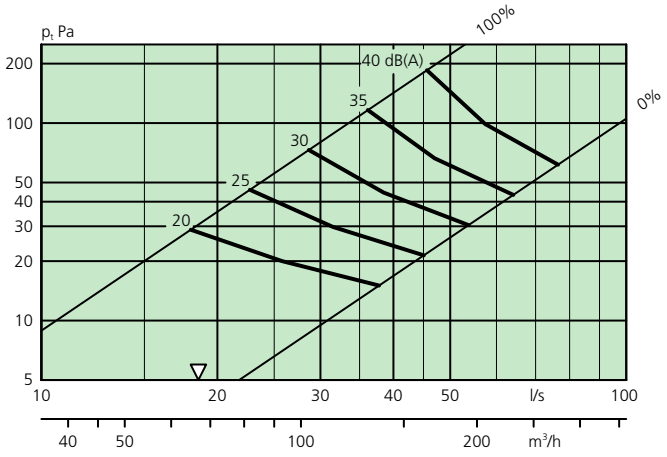
KITE CR 160-600 + ALS 100-160 – Two steps



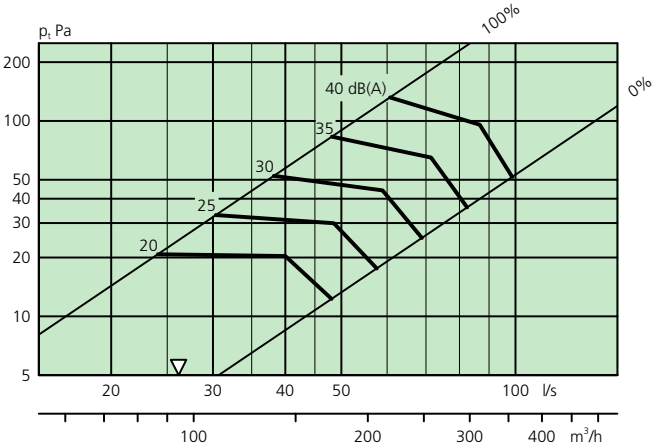
KITE CR 160-600 + ALS 125-160 – One step



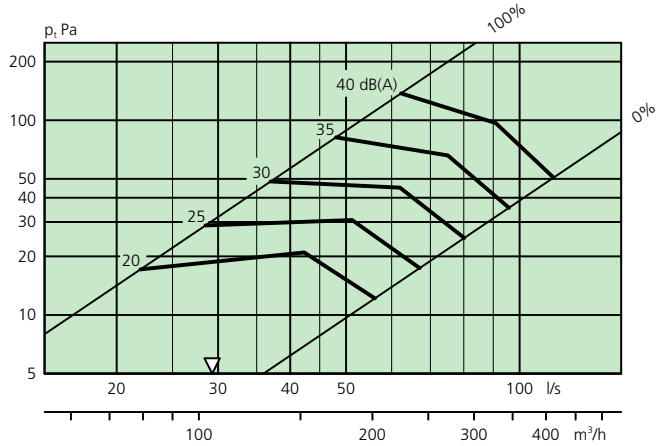
KITE CR 200-600 + ALS 125-200 – Two steps



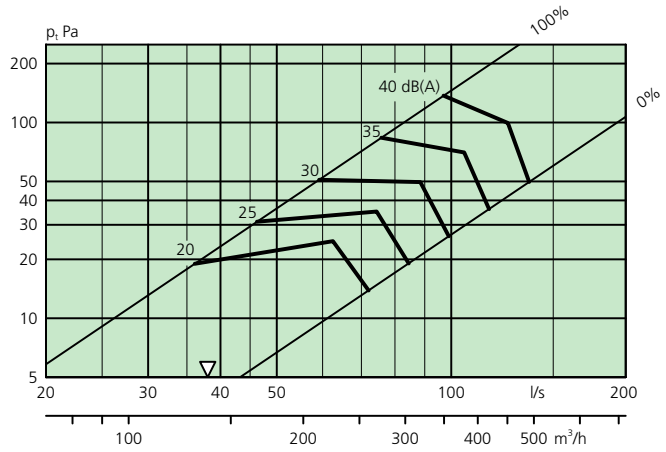
KITE CR 200-600 + ALS 160-200 – One step



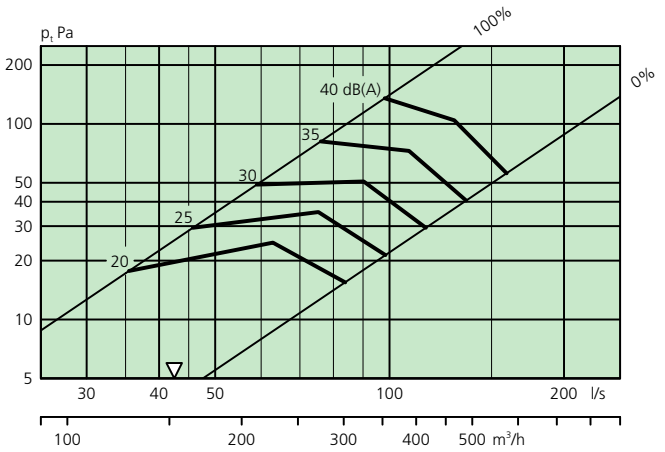
KITE CR 250-600 + ALS 160-250 – Two steps



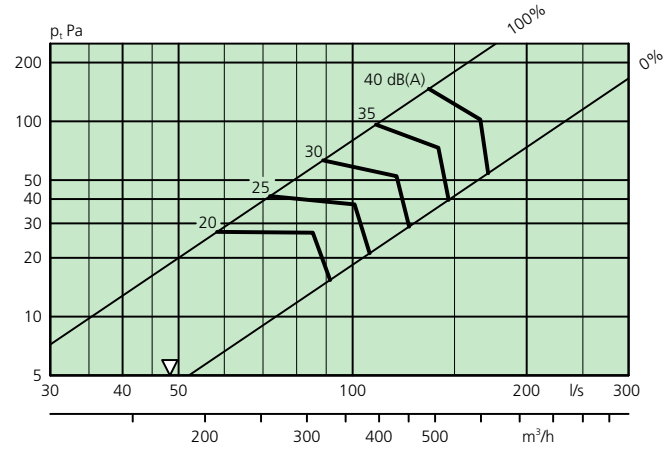
KITE CR 250-600 + ALS 200-250 – One step



KITE CR 315-600 + ALS 200-315 – Two steps



KITE CR 315-600 + ALS 250-315 – One step



Dimensions and weights

KITE CC

Size	ØA	Weight, kg
125	125	3.4
160	160	3.4
200	200	3.4
250	250	3.3
315	315	3.3

Size of the opening = 520 x 520

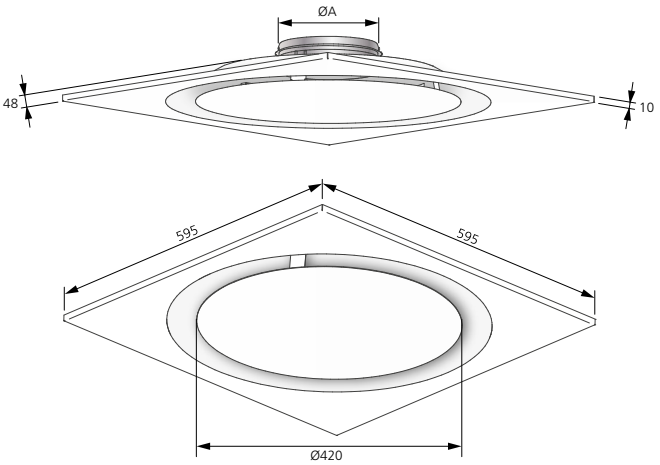


Figure 14. KITE CC.

KITE CC with ALS commissioning box - One step

Size	A	B	C	ØD	Ød	E1	E2	F1	F2	G1	G2	H	K	Weight, kg
125-600	595	282	217	99	125	233	190	91	48	153	110	270	80	5.3
160-600	595	342	252	124	160	257	214	91	48	166	123	315	80	6.0
200-600	595	404	288	159	200	292	249	91	48	183	140	375	100	7.0
250-600	595	504	332	199	250	332	289	91	48	203	160	465	115	8.3
315-600	595	622	388	249	315	393	350	91	48	228	185	575	140	11.1

KITE CC with ALS commissioning box - Two steps

Size	A	B	C	ØD	Ød	E1	E2	F1	F2	G1	G2	H	K	Weight, kg
160-600	595	342	252	99	160	233	190	91	48	153	110	315	80	5.6
200-600	595	404	288	124	200	257	214	91	48	166	123	355	80	6.4
250-600	595	504	332	159	250	292	249	91	48	183	140	450	100	7.5
315-600	595	622	388	199	315	332	289	91	48	203	160	550	115	9.8

KITE CC with REACT ALS active commissioning box

Size	A	B	C	ØD	Ød	E1	F1	G1	H	K	Weight, kg
250-600	595	504	332	159	250	292	91	192	450	100	8.2
315-600	595	622	388	249	315	391	91	243	575	140	11.1

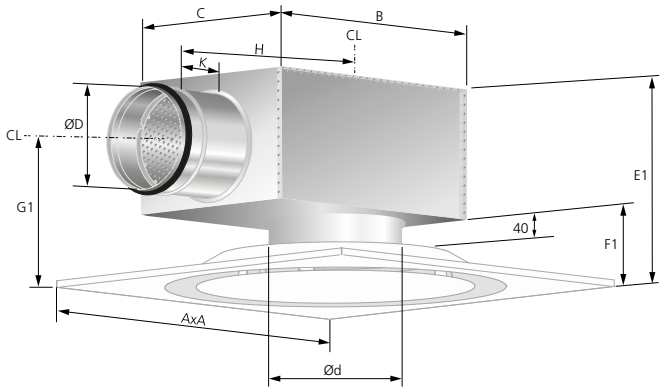


Figure 15. KITE CC with ALS or REACT ALS commissioning box. CL = Centreline

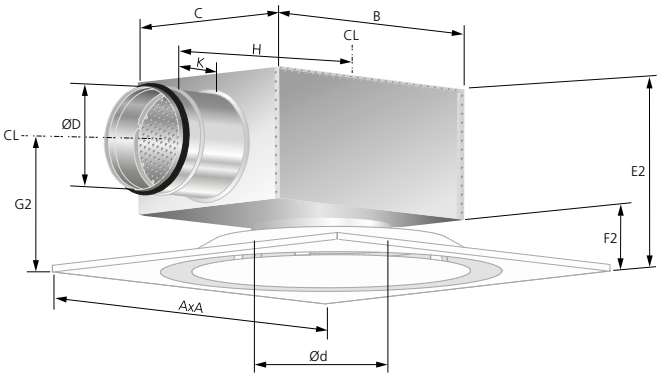


Figure 16. KITE CC with ALS commissioning box. Low installation height.

KITE CR

Size	ØA	Weight, kg
125	125	3.4
160	160	3.3
200	200	3.3
250	250	3.3
315	315	3.3

Size of the opening = 520 x 520

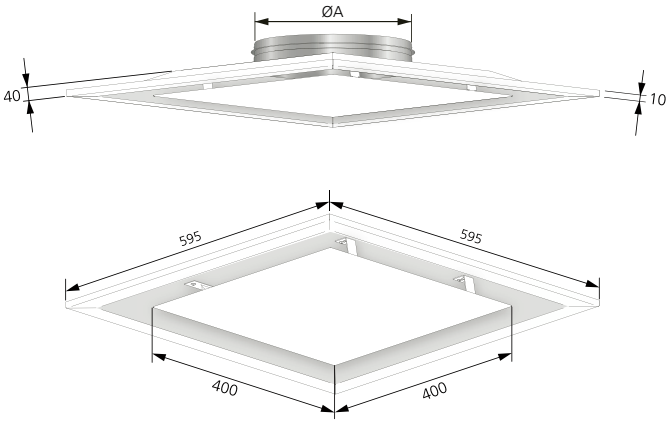


Figure 17. KITE CR.

KITE CR with ALS commissioning box - One step

Size	A	B	C	ØD	Ød	E1	E2	F1	F2	G1	G2	H	K	Weight, kg
125-600	595	282	217	99	125	225	182	83	40	145	102	270	80	5.2
160-600	595	342	252	124	160	249	206	83	40	158	115	315	80	5.9
200-600	595	404	288	159	200	284	241	83	40	175	132	375	100	6.8
250-600	595	504	332	199	250	324	281	83	40	195	152	465	115	8.2
315-600	595	622	388	249	315	385	342	83	40	220	177	575	140	10.9

KITE CR with ALS commissioning box - Two steps

Size	A	B	C	ØD	Ød	E1	E2	F1	F2	G1	G2	H	K	Weight, kg
160-600	595	342	252	99	160	225	182	83	40	145	102	315	80	5.5
200-600	595	404	288	124	200	249	206	83	40	158	115	355	80	6.2
250-600	595	504	332	159	250	284	241	83	40	175	132	450	100	7.4
315-600	595	622	388	199	315	324	281	83	40	195	152	550	115	9.7

KITE CR with REACT ALS active commissioning box

Size	A	B	C	ØD	Ød	E1	F1	G1	H	K	Weight, kg
250-600	595	504	332	159	250	284	83	184	450	100	8.1
315-600	595	622	388	249	315	383	83	235	575	140	10.9

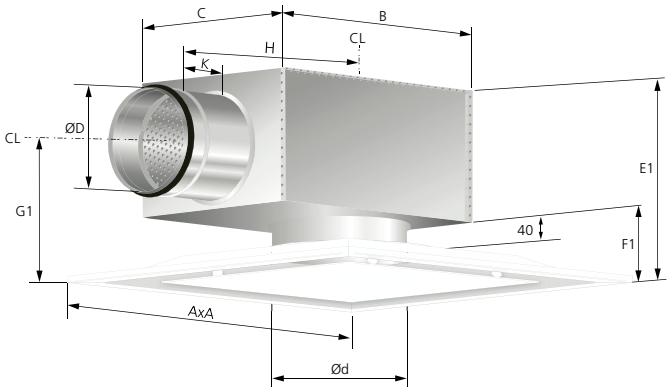


Figure 18. KITE CR with ALS or REACT ALS commissioning box. CL = Centreline

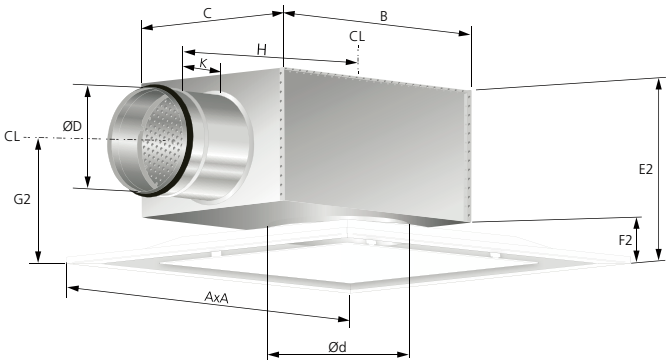


Figure 19. KITE CR with ALS commissioning box. Low installation height.

Specification

Product

Square ceiling diffuser	KITE	XX	a	bbb	-ccc	-L

Design:

CC: Circular slot diffuser
CR: Rectangular slot diffuser

Version

Size:
125, 160, 200, 250, 315

Nominal square dimension, mm
600

Low version: L
Low design only in combination with the low version of the ALS commissioning box

Standard range

Size:	125-600
	160-600
	200-600
	250-600
	315-600

Accessories

ALS

Commissioning box	ALS	d	aaa-bbb	-c

Version:

For KITE Ceiling:	ALS:
125-600	100-125
160-600	100-160
160-600	125-160
200-600	125-200
200-600	160-200
250-600	160-250
250-600	200-250
315-600	200-315
315-600	250-315

Low installation height: L
Specified only if a low version is required.

REACT ALS

Commissioning box with variable flow regulation	REACT ALS	a	aaa

Version:

For KITE Ceiling:	REACT ALS:
250-600	160-250
315-600	250-315

SECTOR KITE CR

Blanking plate	SECTOR KITE CR

Specification text

Air diffuser with ALS commissioning box

Make: Swegon

Type: KITE Ceiling + ALS

Swegon's complete slot diffuser for ceiling installation, type KITE Ceiling, with ALS commissioning box including the following functions:

- Circular diffuser face (KITE CC), or square diffuser face (KITE CR).
- Designed for modular suspended ceilings (600x600mm).
- Easy Access for simple access to the commissioning box and the duct system.
- Potential to change air distribution pattern on KITE CR with the accessory SECTOR.
- Cleanable ALS commissioning box with removable commissioning damper.
  - Method of measurement with low systematic error.
  - Interior sound absorbing lining with reinforced surface layer.
- Powder-painted and baked white finish, RAL 9003/NCS S 0500-N.

Specification	**KITE Ceiling**	
Corrosivity class:	C2 (Powder paint Epoxy Polyester)	
Specification	**ALS**	
Air tightness class, casing:	C	
Corrosivity class:	C3	
Size:	KITE CCa aaa-bbb-c with ALSd aaa-bbb-c	xx pcs
	KITE CRa aaa-bbb-c with ALSd aaa-bbb-c	xx pcs
Accessories		
Blanking plate:	SECTOR KITE CR	xx pcs

Air diffuser with REACT ALS active commissioning box

Make: Swegon

Type: KITE Ceiling + REACT ALS

Swegon's complete slot diffuser for ceiling installation, type KITE Ceiling, with REACT ALS commissioning box including the following functions:

- Circular diffuser face (KITE CC), or square diffuser face (KITE CR).
- Pressure-independent VAV unit for demand-controlled ventilation.
- Integrated flow measurement.
- Integrated controller, flow regulating.
- Setting and reading of parameters on controller.

Must be installed with a minimum straight duct section on the inlet side as per the product sheet for REACT ALS.

Size:	Ø160 Ø250	
Specification	**KITE Ceiling**	
Corrosivity class:	C2 (Powder paint Epoxy Polyester)	
Specification	**REACT ALS**	
Standard SS-EN 1751:	2014, Annex C	
Power supply:	24 V AC ±15% 50 - 60Hz	
Air tightness class, casing:	C	
Corrosivity class:	C3	
Tolerance flow measurement:	±5%, however, at least ±X l/s according to the table in the product sheet for REACT ALS	
Size:	KITE CCa aaa-bbb with REACT ALSa aaa-bbb	xx pcs
	KITE CRa aaa-bbb with REACT ALSa aaa-bbb	xx pcs
Accessories		
Blanking plate:	SECTOR KITE CR	xx pcs