

LPA_d

Installation – Commissioning – Maintenance

20190614

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*³ with reinforced surface layer.

The ALS commissioning box is available with one or two differences in dimension between the inlet and the outlet and also a version for low installation where a low overall height is required. The ALS commissioning box is then supplied without outlet branch.

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

Installation

Cut the opening in the false ceiling according to the dimension print and the table with measurements. Place a mounting frame on top of the false ceiling and unfold it to form a square frame around the opening. Secure the frame with screws from the underside. Tighten the screws through the false ceiling slab, into the perforation on the long sides of the frame. If a flexible tube is used as the connecting duct, connect it at this phase of the work, and fasten it to the air diffuser with a hose clamp. Place the diffuser backing box in the opening with four angle brackets firmly against the false ceiling. Tighten the screws through the angle brackets and into the false ceiling slab and into the perforation of the mounting frame. Fasten the diffuser face in the safety chain and press it into its spring mounts.

If an ALS commissioning box is used, the sleeve coupling between the ALS and the air diffuser can be lengthened using an ordinary circular duct of up to 500 mm without having to lengthen the measuring tubes and damper adjustment cords. See Figure 1.

Commissioning

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

Measurement accuracy and requirement on straight duct before the commissioning box, see Figure 1. The requirements of straight duct depends on the type of disturbance before the commissioning box. Figure 1 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 K-factor (COP) is specified on the product's identification label. K-factors can also be found 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. The duct system can be reached by dismantling the diffuser face. Pull the distributor plate in the ALS commissioning box aside and then twist the damper unit from of its mounting. See Figure 1.

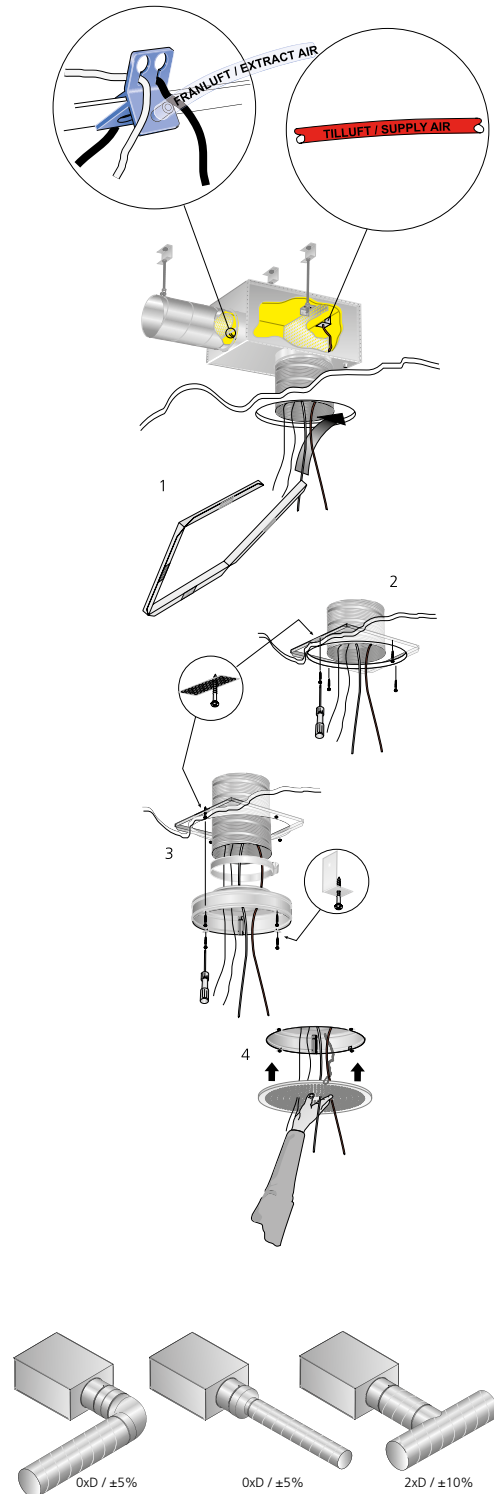


Figure 1. Installation. Commissioning.

Dimensions and weights K-factor (COP)

LPA

Size	ØA	B	C	Ød	ØD	E
160	380	342	252	159	124	55
200	456	404	288	199	159	55
250	568	504	332	249	199	55
315	568	622	388	314	249	85
400	700	767	488	399	314	85

Size	F	G	H	ØJ	K	Weight, kg
160	204	170	315	325	80	4.9
200	239	185	375	410	100	6.9
250	279	205	465	510	115	9.6
315	340	260	575	510	140	15.4
400	400	300	722	640	180	22.7

ØJ = Dimension for hole cutting.
CL = Center line

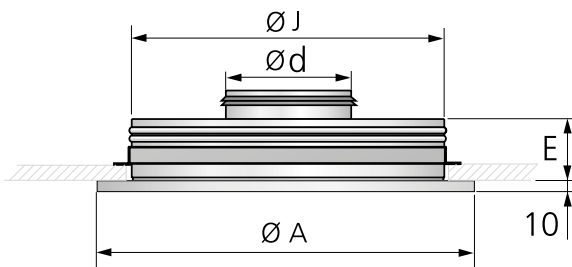
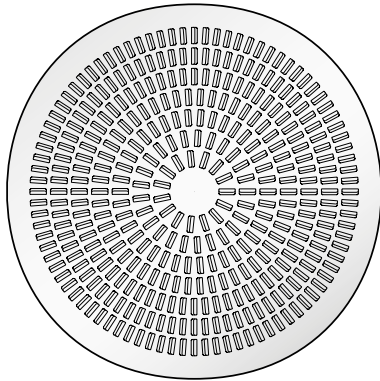


Figure 2. LPA.

ALSd Size	LPA - Supply air	
	Size	k-factor
125-160	160	11,0
160-200	200	18,1
200-250	250	27,5
250-315	315	38,0
315-400	400	58,7

Number of measuring tubes: 1
Tube colour: Red

ALSd Size	LPA - Extract air	
	Size	k-factor
125-160	160	7,0
160-200	200	11,5
200-250	250	17,7
250-315	315	28,5
315-400	400	41,6

Number of measuring tubes: 1
Tube colour: Transparent

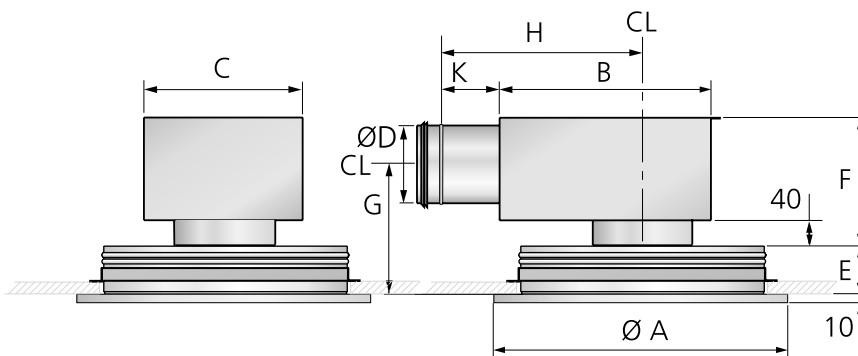


Figure 3. LPA + ALS.