

LOCKZONE Base b

Installation – Commissioning – Maintenance

20230317

Installation

Cut an opening in the floor according to the floor opening dimension specified. See Dimensions and weight.

Fix the mounting frame to the flooring with screws in the edge of the frame. Place the air diffuser onto the mounting frame and secure it with the centre screw. If an ALS commissioning box is used, it must be secured to the building structure. See Figure 1.

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

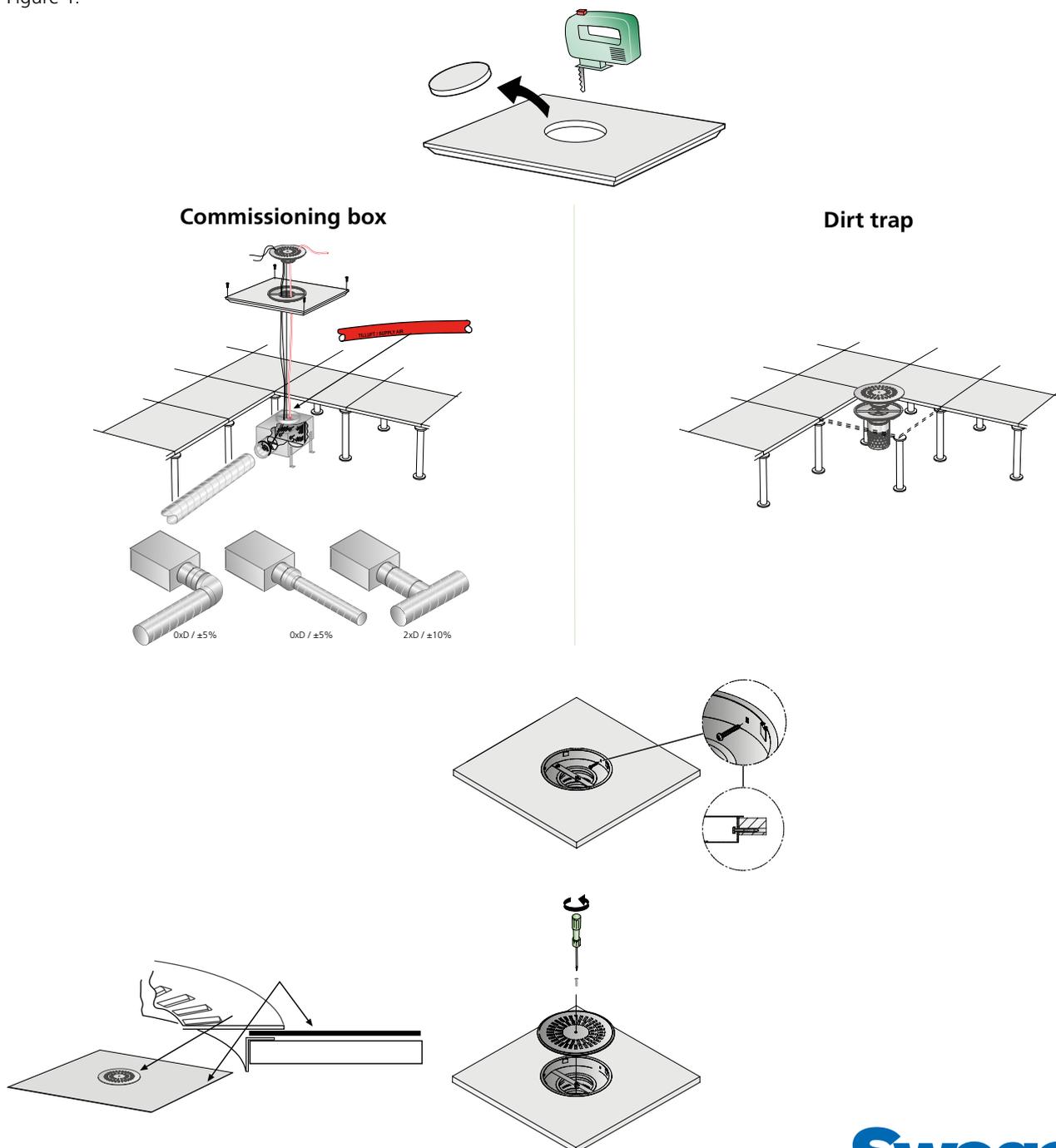


Figure 1. Installation.

Commissioning

LOCKZONE B is not equipped with a damper or measuring gauge. To measure the airflow it is advisable to install a flow measurement and control damper in the duct system upstream of the so-called pressure chamber. The total airflow in the pressure chamber can then be checked using this flow measurement and control damper.

Both the flow measurement and damper functions will be obtained if the ALS commissioning box is used. Commissioning should be carried out with the diffuser face mounted. Pull the measuring tubes and damper adjustment cords out through the diffuser face after you have opened it. Then refit the diffuser face. 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 to the correct blade position, tie a commissioning knot in the damper cords to indicate the damper position. See Figures 1 and 2.

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 ± 10% of the flow.

The K-factor (rated coefficient of performance) is specified on the identification label of the product and in this document.

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 can be reached for cleaning after opening the diffuser face. If a type ALS commissioning box is used, swing the distribution plate to the side so that you then can grip the handle of the tubular damper casing and rotate it out of its holder. See Figures 2 and 3.

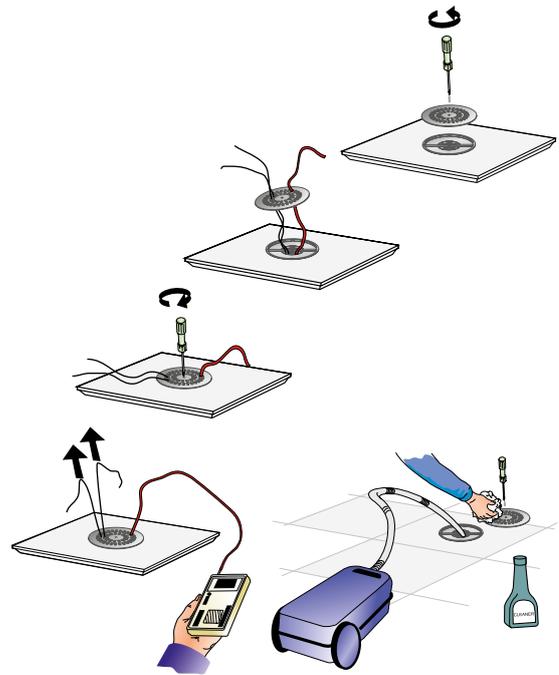


Figure 2. Commissioning. Maintenance.

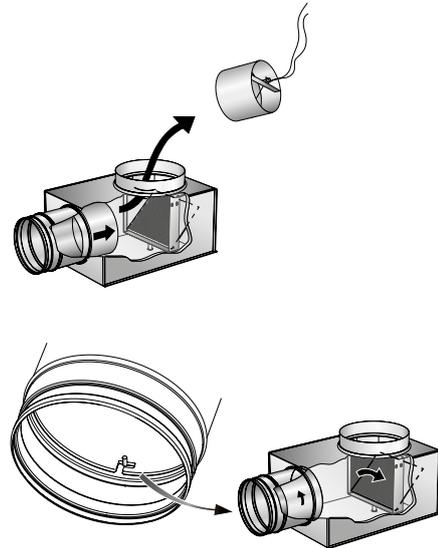


Figure 3. ALS. Damper removal.

K-factor

Size, LOCKZONE B + ALS	K-factor
LOCKZONE B 100 + ALS 80-100	3,4
LOCKZONE B 125 + ALS 100-125	3,7
LOCKZONE B 160 + ALS 125-160	5,6
LOCKZONE B 200 + ALS 160-200	11,2

To calculate the airflow using the K-factor:

$$q = k \cdot \sqrt{p_i} \quad [l/s] \quad p_i = \left(\frac{q}{k} \right)^2 \quad [Pa]$$

- q = flow reading (l/s)
- p_i = current pressure reading (Pa)
- k = commissioning factor

Dimensions and weights

LOCKZONE B + LOCKZONE T

Size	ØA	ØB	ØD	ØC	ØE	Weight, kg
100	99	100	192	196	220	1,4
125	124	125	228	232	265	1,6
160	159	160	228	232	265	1,7
200	199	200	304	310	345	2,3

ØC = Size of floor opening.

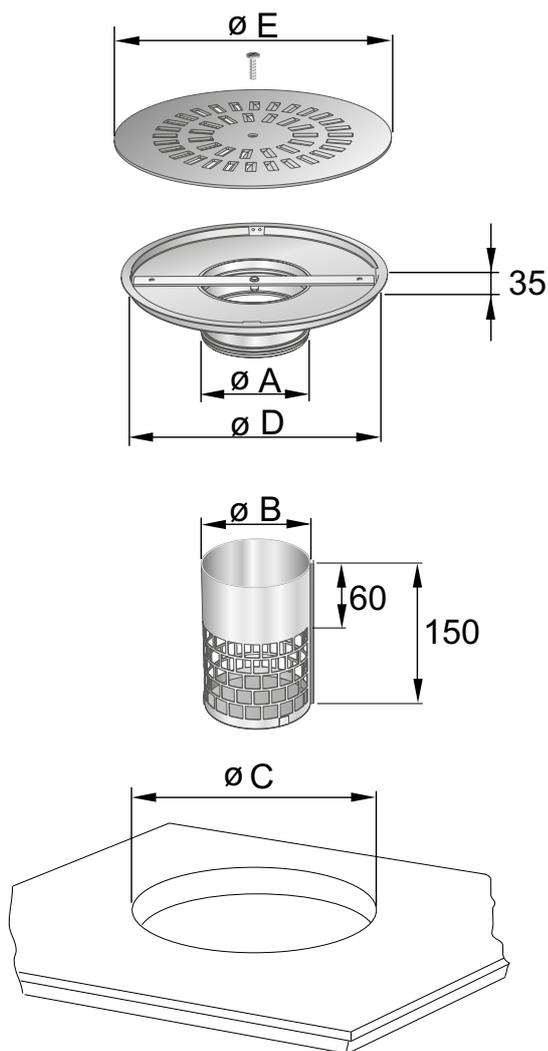


Figure 4. LOCKZONE B + LOCKZONE T.

ALS

Size	B	C	ØD	Ød	F	G	H	K	Weight, kg
80-100	227	192	79	100	162	90	200	48	1.5
100-125	282	217	99	125	182	100	275	83	2.0
125-160	342	252	124	160	206	113	318	83	2.5
160-200	404	288	159	200	240	132	375	100	3,3

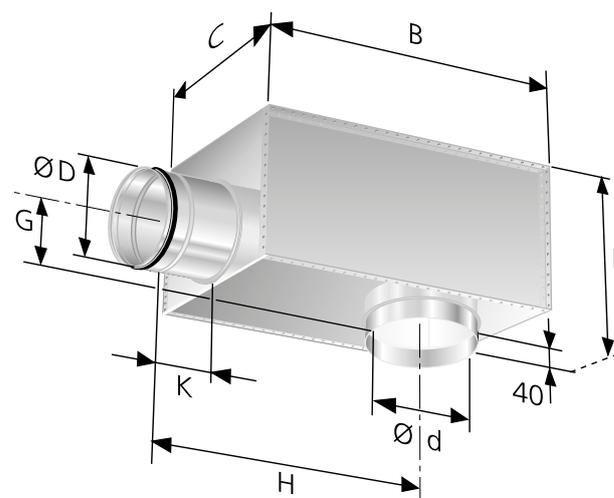


Figure 5. Commissioning box, ALS.