

COLIBRI Free b

Installation – Commissioning – Maintenance

20220425

Installation

The air diffuser is normally suspended from the ceiling. An M8 pop nut, i.e. a threaded grommet that facilitates installation, is in the centre of the top of the air diffuser. On the size 315 and 400 air diffusers, there are two M8 pop nuts for more stable mounting, see figure 1 and 3.

Alternative installation in pre-punched Ø10 mm hole, see figure 3a.

Commissioning

Commissioning should be carried out with the diffuser face mounted. Pull the measuring tubes and the damper adjustment cords out of the air diffuser through one nozzle in the diffuser face. Then connect the manometer to the correct measuring tube(s): two blue tubes for supply air and one 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. See Figure 1.

The K-factor is specified on the product's identification label and last in these instructions.

Maintenance

- Clean the air diffuser if needed with lukewarm water and dishwashing detergent added.
- The duct system can be accessed and lightly pulling the spring-loaded diffuser front downwards and then tilting, see figure 2.
- Dismantle the perforated air distribution plate located on the inlet as shown in figure 4. Use in extract air version: If necessary, the perforated air distribution plate can be dismantled, performed in connection with installation or commissioning.
- Loosen the damper in the inlet from its bayonet fastening by rotating to the side.

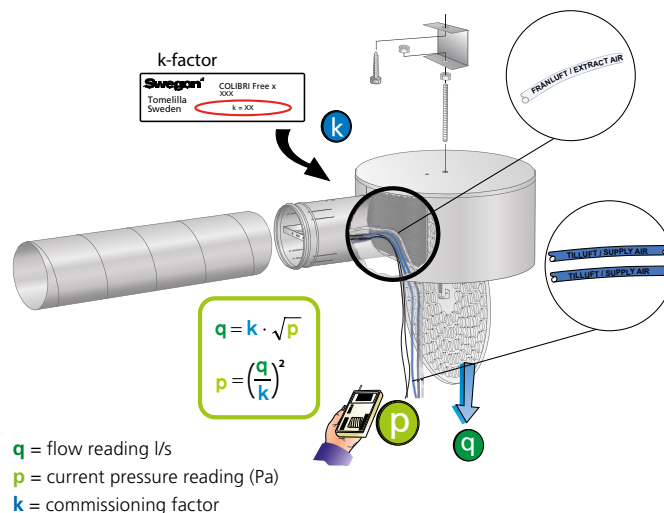


Figure 1. Installation. Commissioning. Maintenance.

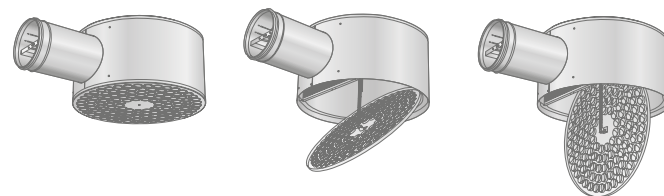


Figure 2. Spring-loaded diffuser front.

Length of straight duct

Type of obstruction upstream of COLIBRI Free	Length of straight duct upstream of the COLIBRI Free	
	m ₂ = 5%	m ₂ = 10%
One 90° bend	3 · Ød	2 · Ød
Two 90° bends in the same plane	4 · Ød	2 · Ød
Two 90° bends in alignment at right angles to one another.	4 · Ød	2 · Ød
One 45° damper	6 · Ød	3 · Ød
One T-piece	4 · Ød	3 · Ød

m² = accuracy of the method according to NVG's report T32:1982

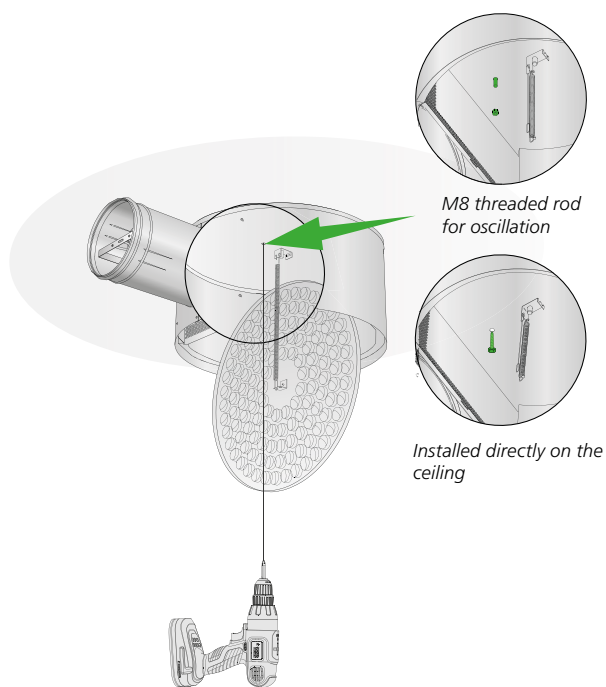


Figure 3a. Alternative installation in pre-punched Ø10 mm hole.

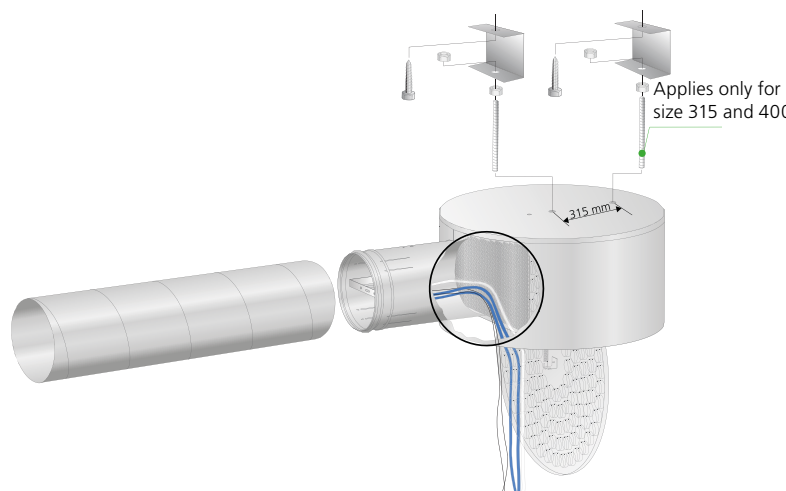


Figure 3b. Extra M8 pop nut, size 315 and 400.

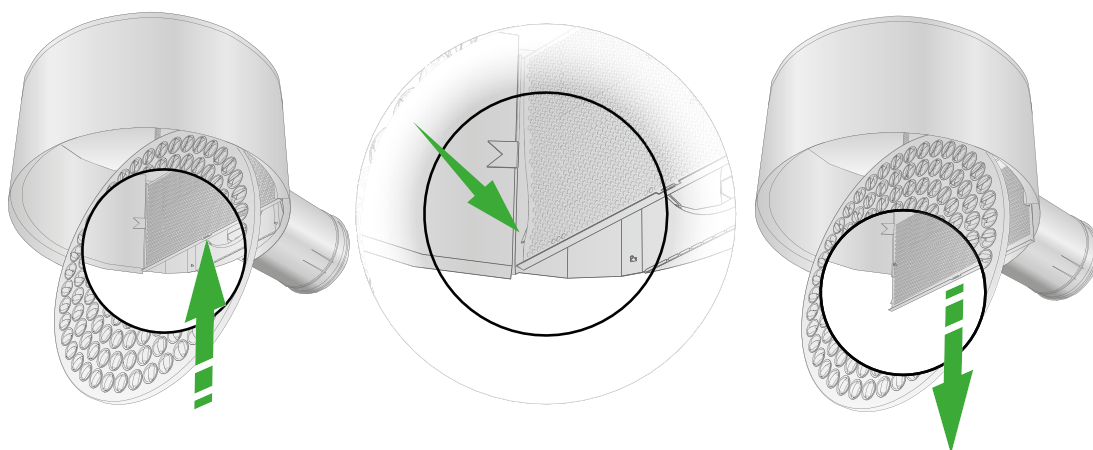



Figure 4. Dismantling of the perforated air distribution plate.

Note: If necessary, the perforated air distribution plate can be dismantled for the extract air version.

 We recommend wearing gloves as there is a risk of cut injuries to the hands/fingers.

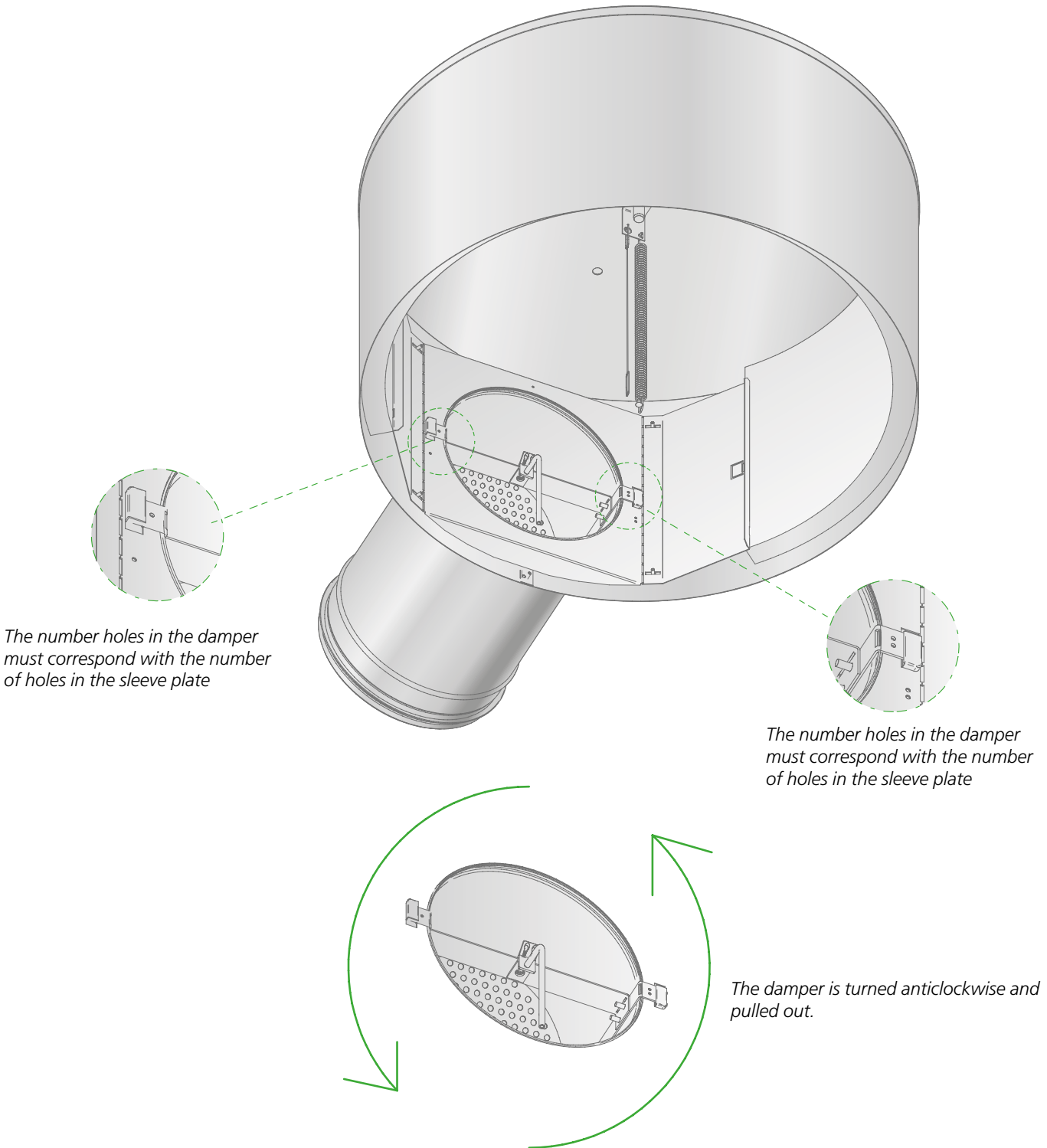



Figure 5. Damper installation and dismantling.

 We recommend wearing gloves as there is a risk of cut injuries to the hands/fingers.

Dimensions and weights

Size	A	B	C	D	E	Number of nozzles	Weight, kg
100	304	192	118	99	96	36	2,6
125	380	217	210	124	108	55	3,9
160	456	252	220	159	126	84	5,3
200	568	288	230	199	144	130	7,6
250	568	338	275	249	169	136	8,7
315	700	388	330	314	194	186	12,9
400	700	488	350	399	244	200	15,5

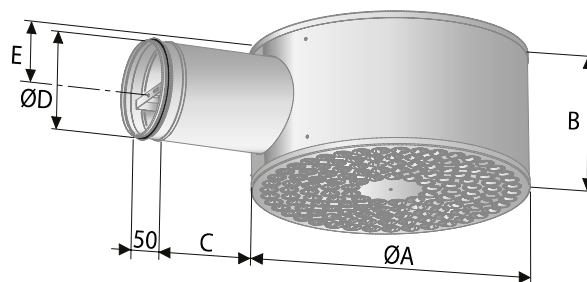


Figure 6. COLIBRI Free.

K-factor (COP)

COLIBRI F supply air

Size	k-factor	Tube colour
100	4,9	Blue + Blue
125	8,3	Blue + Blue
160	14,6	Blue + Blue
200	24,1	Blue + Blue
250	36,4	Blue + Blue
315	59,2	Blue + Blue
400	100,0	Blue + Blue

Number of measuring tubes: 2

COLIBRI F extract air

Size	k-factor	Tube colour
100	5,0	Transparent
125	7,7	Transparent
160	12,8	Transparent
200	21,0	Transparent
250	26,2	Transparent
315	38,3	Transparent
400	44,7	Transparent

Number of measuring tubes: 1

Nozzle settings – examples

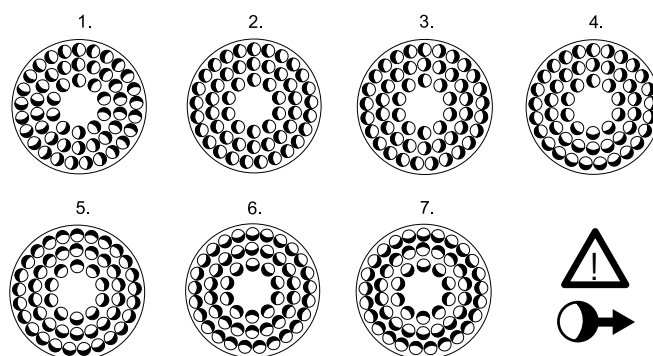


Figure 7. Nozzle settings.

NOTE: Air direction in the figure.

1. Clockwise swirling air discharge (standard)
2. 1-way
3. 2-way
4. 3-way
5. 4-way
6. VK Vertical Concentrated
7. VD Vertical Diffused