

## **CAP-F**

### **Multi-Nozzle Diffuser**



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## Description

CAP-F is a multi-nozzle diffuser. The product is intended for air supply. The product is installed in T-bar false ceiling. The field of application is comfort ventilation systems for offices, shops, medical rooms, school classrooms, etc.

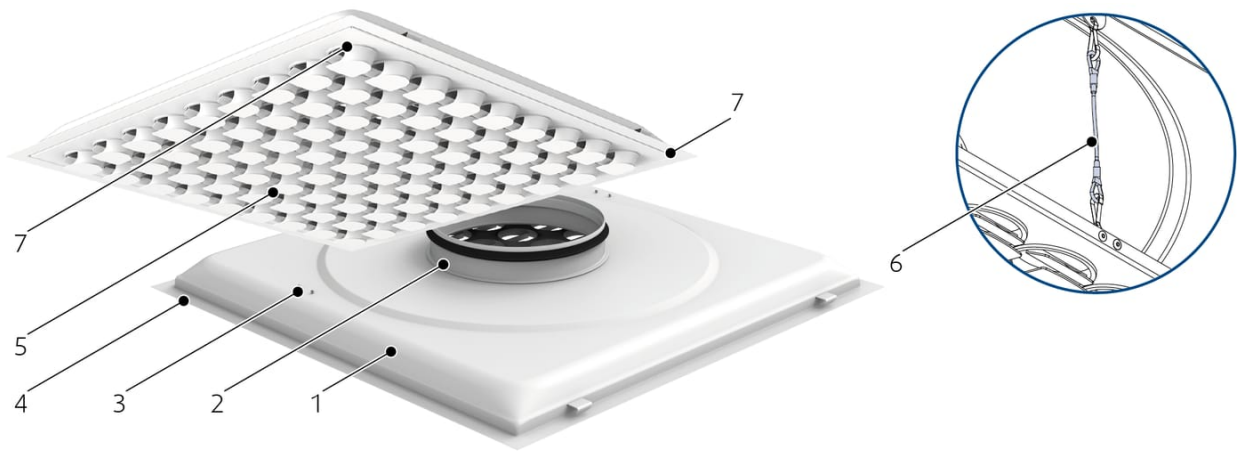
## Highlights

- Versatile adjustability of air discharge patterns
- Excellent air induction and mixing even with small air flow volumes, fit for VAV ventilation
- High air flow capacity with low noise and moderate pressure drop
- Compact design

## Design

CAP-F is manufactured from galvanized steel. The product consists of a backing box with a vertically oriented rubber gasket sealed circular connection and diffuser plate with polymer nozzles, attached by spring clips. The nozzles can be rotated by 360° in the plane of the diffuser plate. The proper directional adjustment of the individual nozzles results in the desired air discharge pattern. The backing box frame has dimensions to fit into the T-bar false ceiling either with raster 600 mm or 625 mm. The product is provided powder painted to RAL9003 (signal white) as standard. Other RAL colours for the diffuser plate are available upon request.

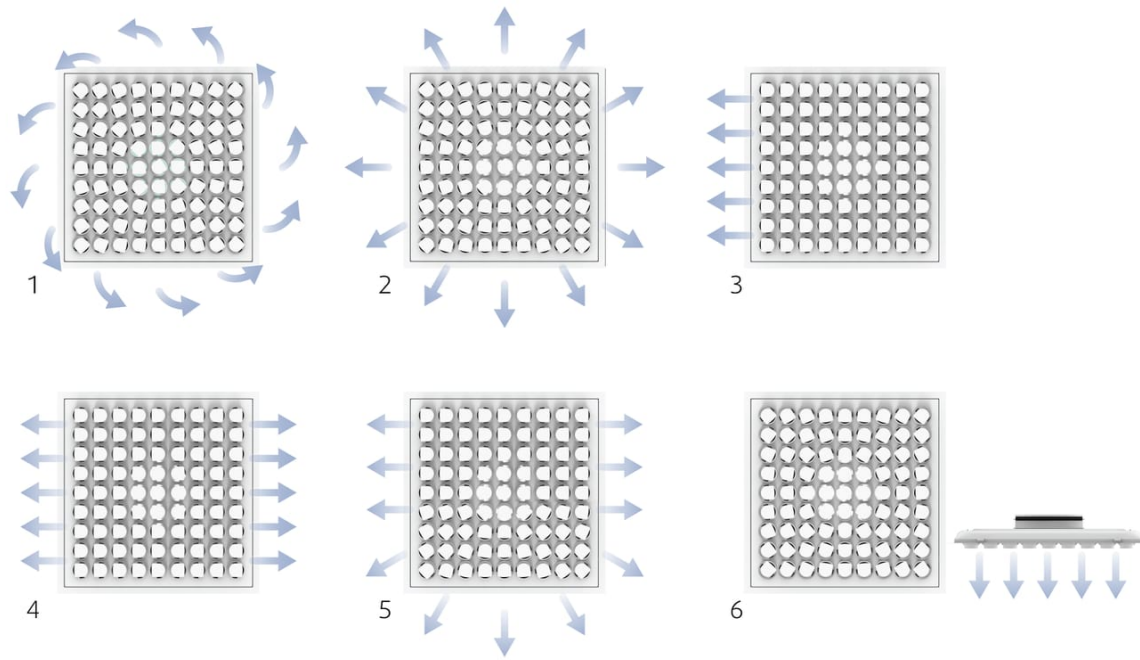
## Product Parts



## Legend

- 1 Backing box
- 2 Connection with rubber gasket
- 3 Spring clips for diffuser plate fixing (inside the backing box)
- 4 Diffuser plate
- 5 Nozzles
- 6 Safety cable (inside the backing box)
- 7 Commissioning tubes pull cut-outs

# Setup Possibilities



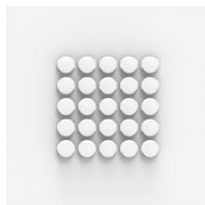
Nozzle adjustments and resulting air flow pattern

## Legend

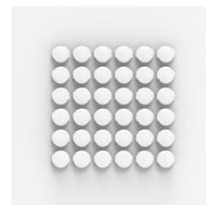
- 1 Tangential horizontal swirl discharge
- 2 Radial horizontal omnidirectional discharge
- 3 Horizontal discharge, single direction
- 4 Horizontal discharge, 2 directions
- 5 Horizontal discharge, 3 directions
- 6 Vertical discharge



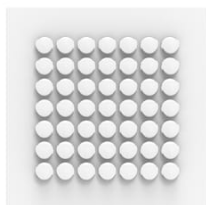
CAP-F-...-16



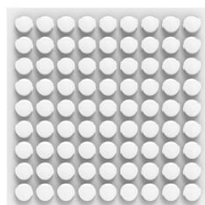
CAP-F-...-25



CAP-F-...-36

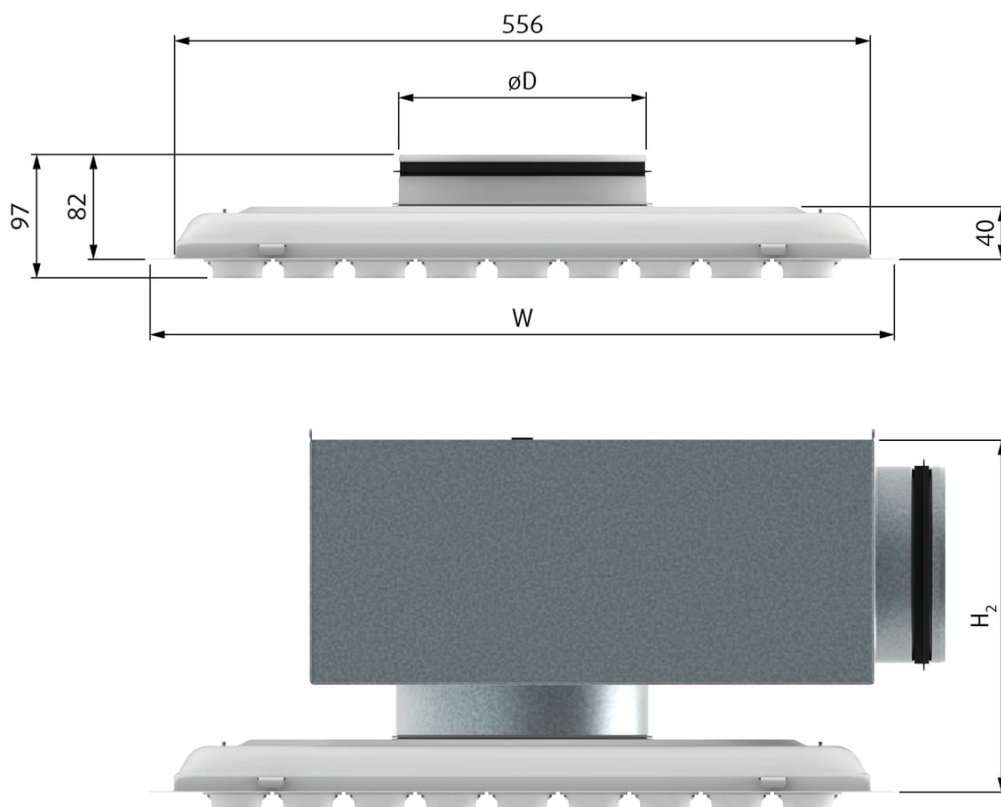


CAP-F-...-49



CAP-F-...-81

## Dimensions & Weights



CAP-F...	W	øD	H <sub>2</sub>	m
	mm			kg
125-600-16*	595	124	234	4,8
125-625-16*	620	124	234	4,9
160-600-25*	595	159	244	4,7
160-625-25*	620	159	244	4,9
200-600-36*	595	199	279	4,6
200-625-36*	620	199	279	4,7
250-600-49*	595	249	334	4,4
250-625-49*	620	249	334	4,6
315-600-81*	595	314	384	4,0
315-625-81*	620	314	384	4,2
400-600-81*	595	399	485	4,0
400-625-81*	620	399	485	3,9

NOTE: \* Number of nozzles

# Ordering Codes

CAP-F-

## Nominal size (connection diameter)

125

160

200

250

315

400

## T-bar raster size

600

625

## Number of nozzles

**16** (for nom. size 125)

**25** (for nom. size 160)

**36** (for nom. size 200)

**49** (for nom. size 250)

**81** (for nom. size 315)

**81** (for nom. size 400)

## Surface and nozzle colour

**SW** Signal white (RAL9003, gloss 30%)

**RALXXXX** Other RAL colour

## Example of the Ordering Code

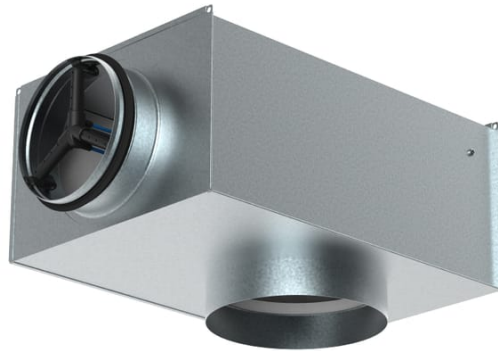
CAP-F-250-600-49-SW

Diffuser CAP-F in signal white colour (RAL 9003) with connection diameter 250 mm and 49 nozzles for T-bar raster 600 mm.

# Accessory

## THOR

Plenum Box



### Description

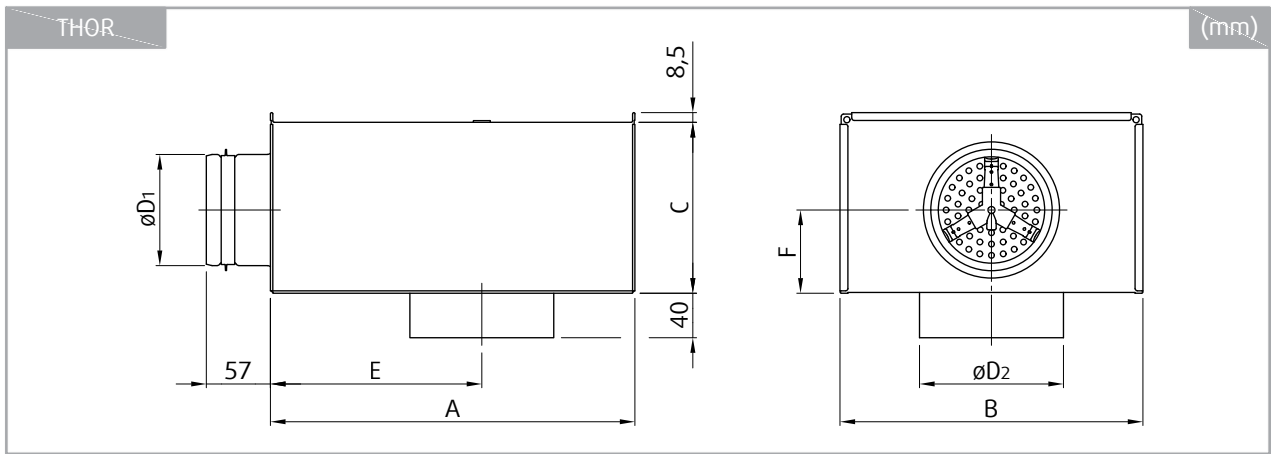
The THOR plenum box is used together with air diffusers for pressure reduction, airflow balancing and sound attenuation as well as for measuring and adjusting the air flow. The plenum box can be used for air inlet and extract.

### Design

THOR plenum boxes are manufactured from hot-dip galvanized sheet steel with inlet connection sleeve fitted with a rubber seal tested for air-tightness. The inlet is equipped by the ZEUS damper with impulse tubes for measuring differential pressure for flow volume calculation, using a portable measuring device. It can be adjusted manually using a cable gearing.



## Dimensions



THOR CAP-F	A	B	C	$\varnothing D_1$	$\varnothing D_2$	E	F	m
	mm							kg
100-125	320	267	150	98	126	185	75	2,5
125-160	360	267	160	123	161	210	80	2,9
160-200	450	317	195	158	201	280	98	4,0
200-250	500	367	250	198	251	305	125	5,4
250-315	565	467	300	248	316	330	150	7,3
315-400	620	567	400	313	401	360	200	10,1

## Ordering code

THOR-

## Inlet DN<sub>1</sub>(mm)

100

125

160

200

250

315

## Outlet DN<sub>2</sub>(mm)

125

160

200

250

315

400

## Example of the Ordering Code

THOR-125-160

Plenum box THOR with 125 mm circular inlet and 160 mm circular outlet (nominal dimensions).

## Quick Selection

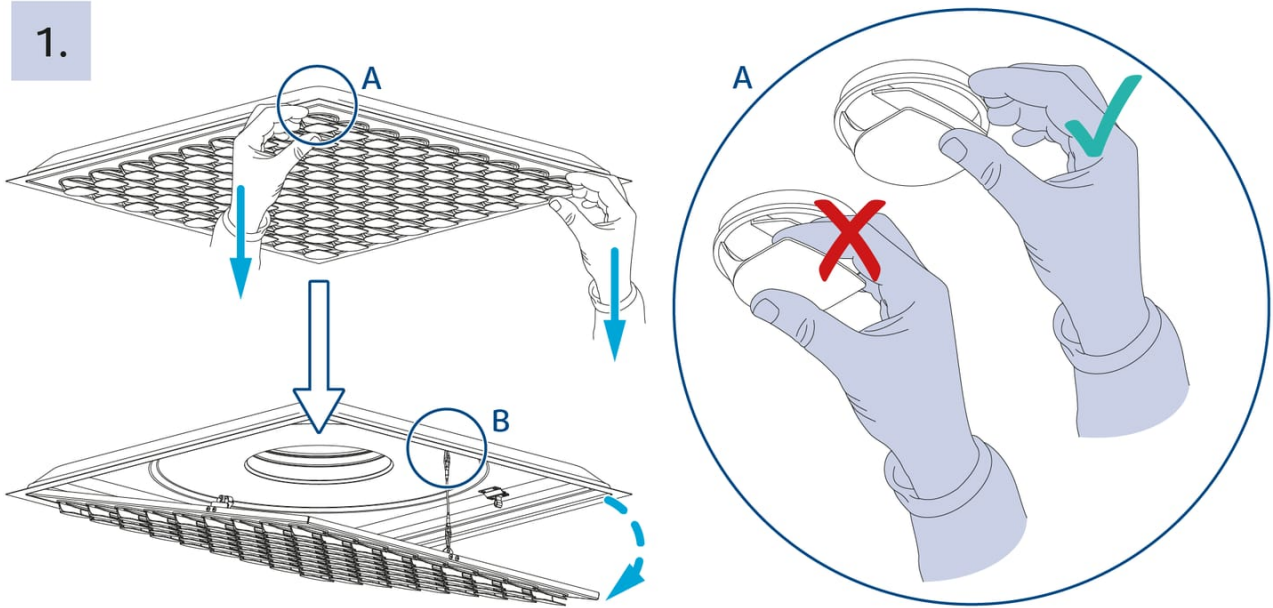
	$L_{WA}$					
	25 dB		30 dB		35 dB	
	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h	l/s
CAP-F-125-...-16	73	20	92	26	110	31
CAP-F-160-...-25	103	29	136	38	168	47
CAP-F-200-...-36	159	44	203	56	245	68
CAP-F-250-...-49	237	66	286	79	338	94
CAP-F-315-...-81	332	92	417	116	497	138
CAP-F-400-...-81	468	130	585	163	694	193

# Technical Parameters

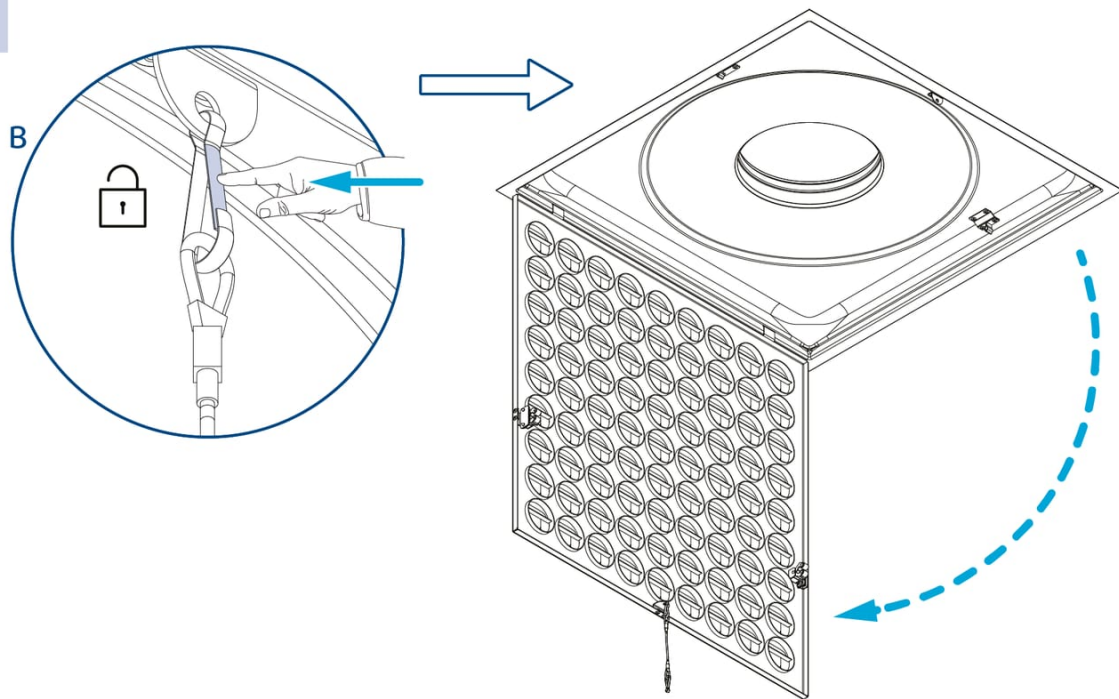
Diagrams and technical parameters are available at [design.systemair.com](http://design.systemair.com)

# Installation

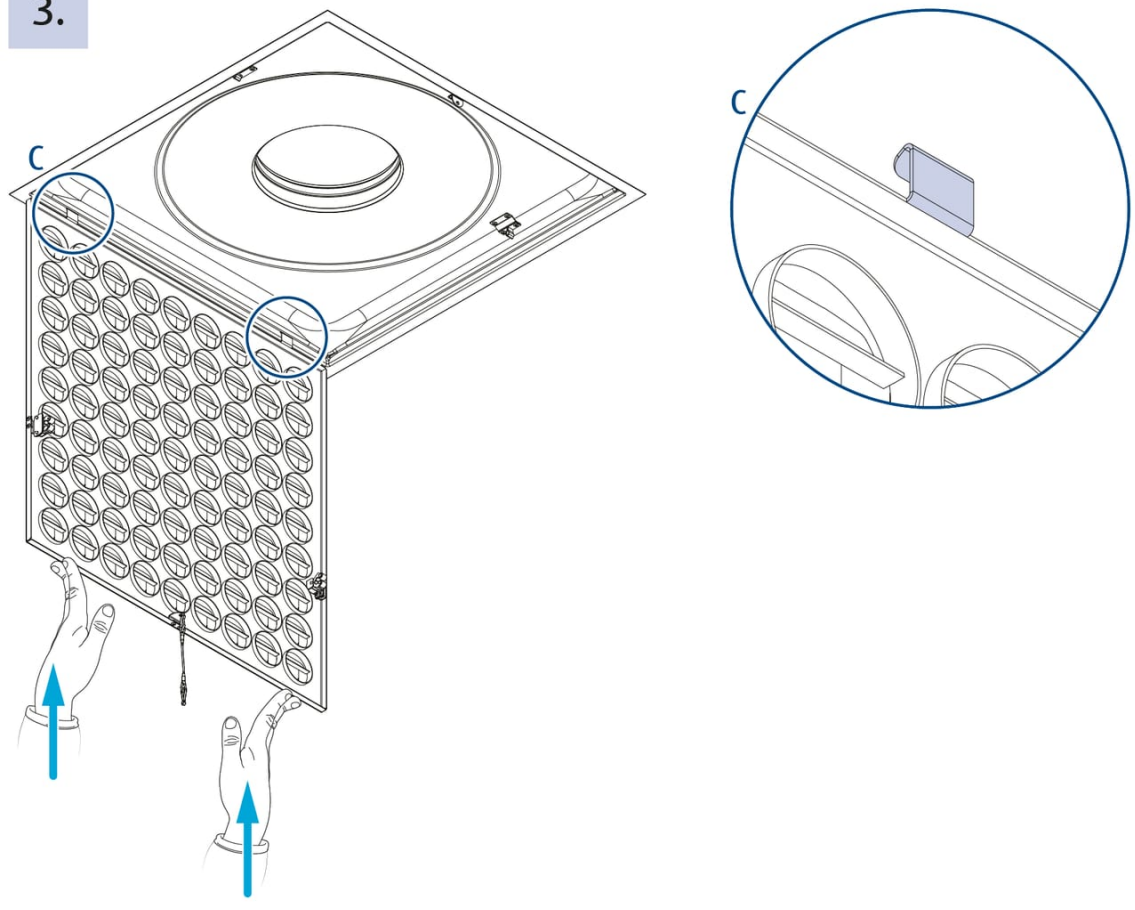
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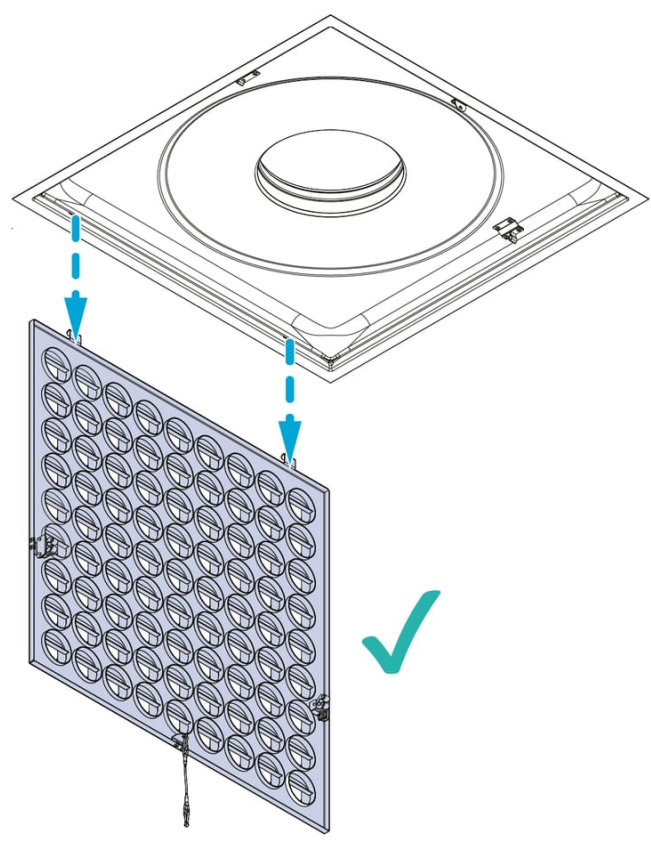
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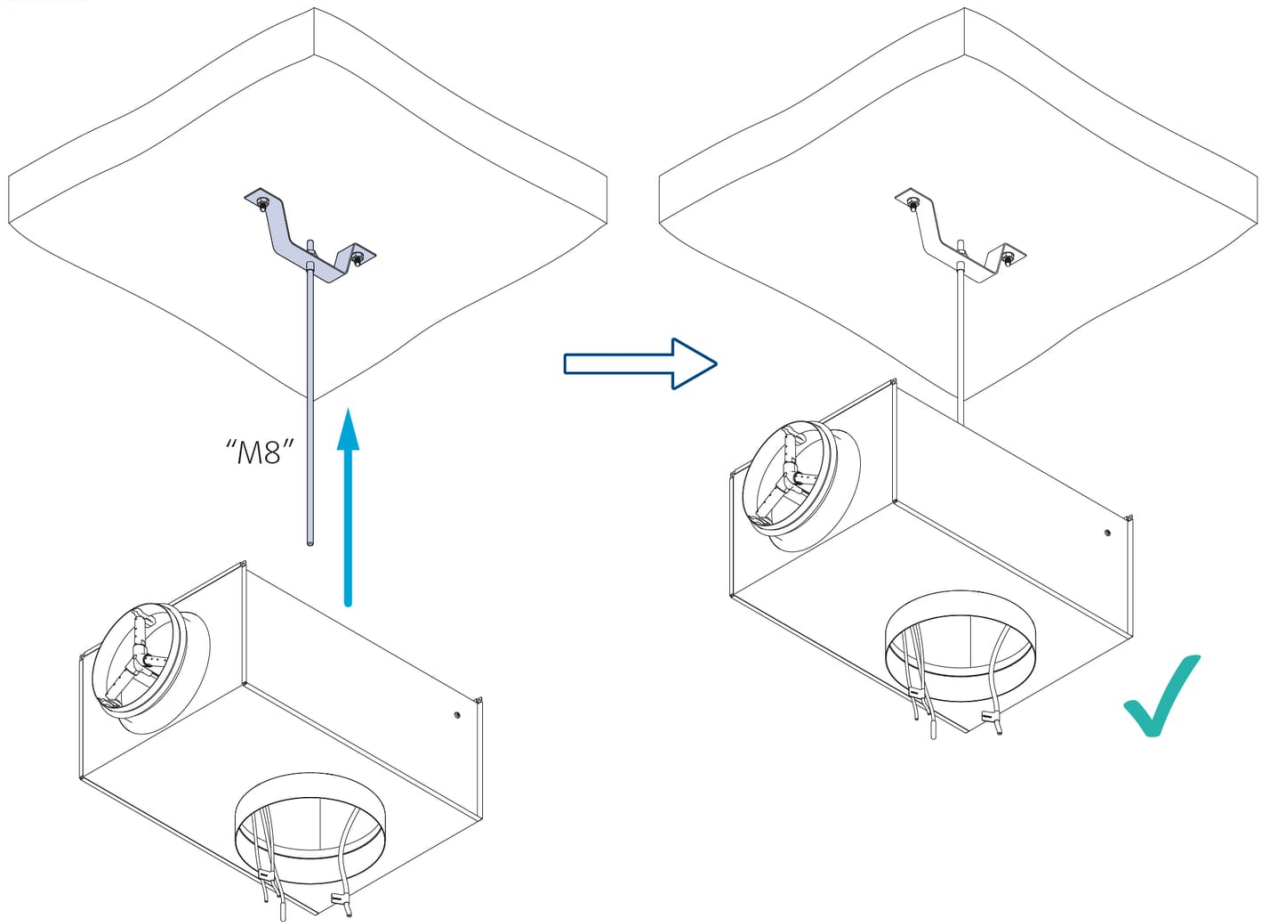
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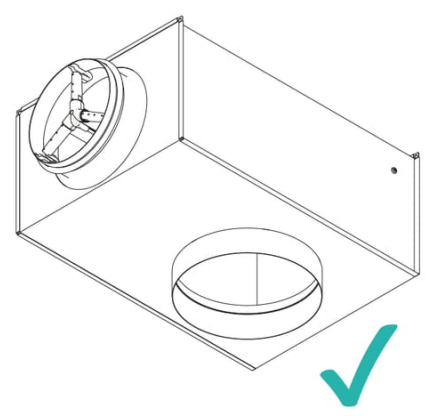
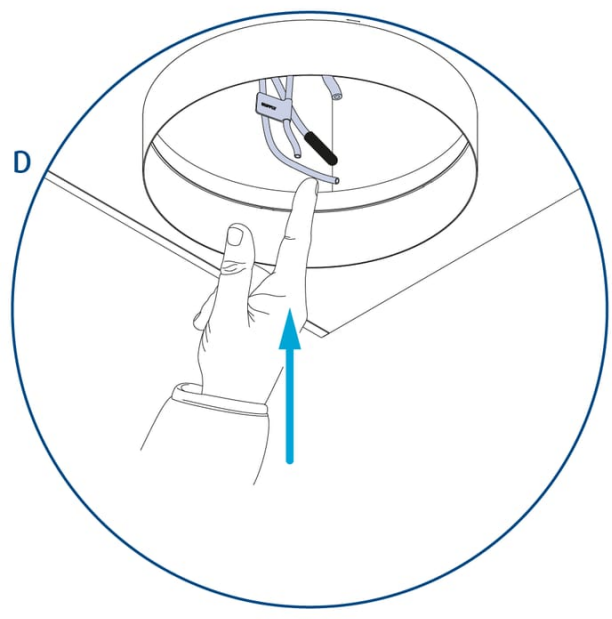
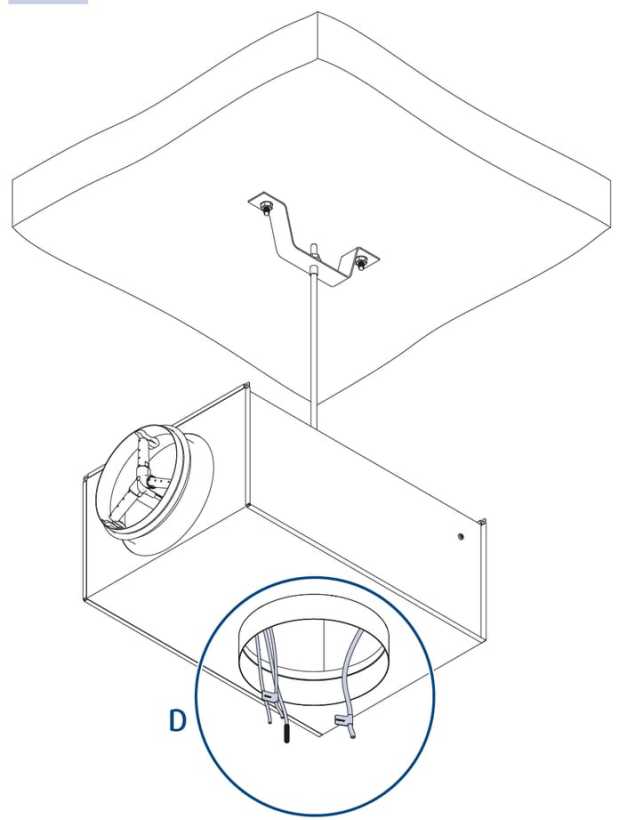
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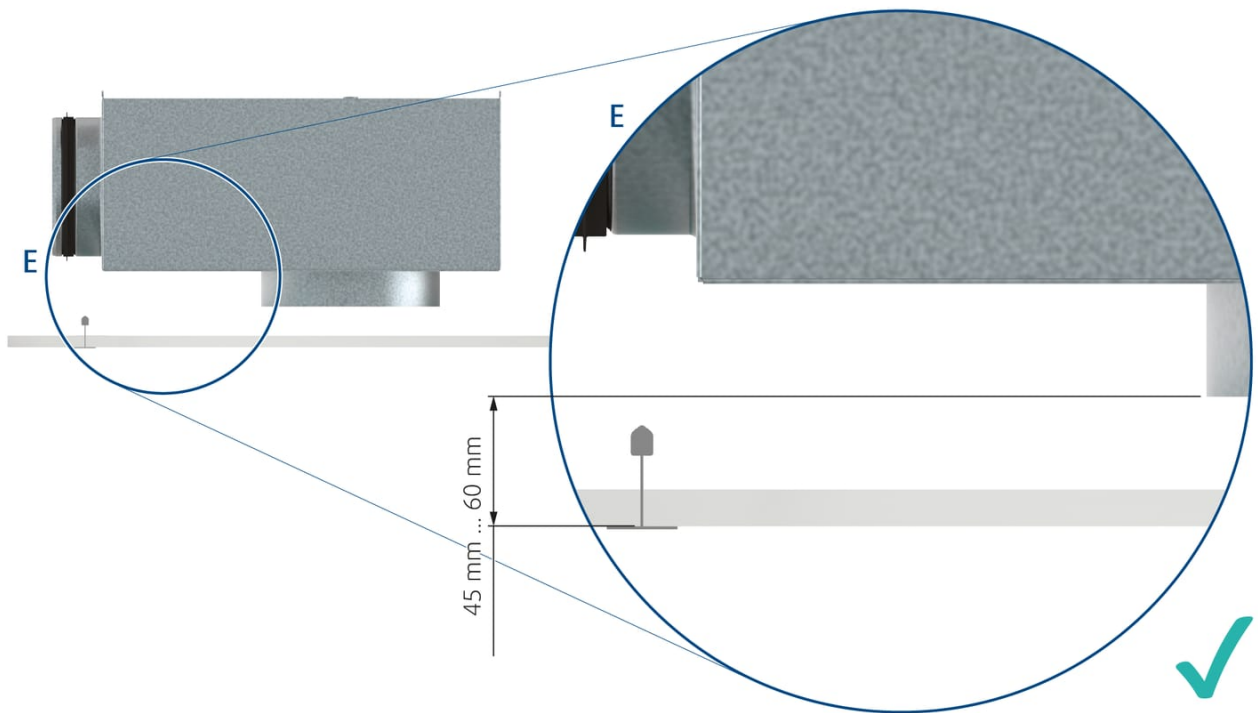
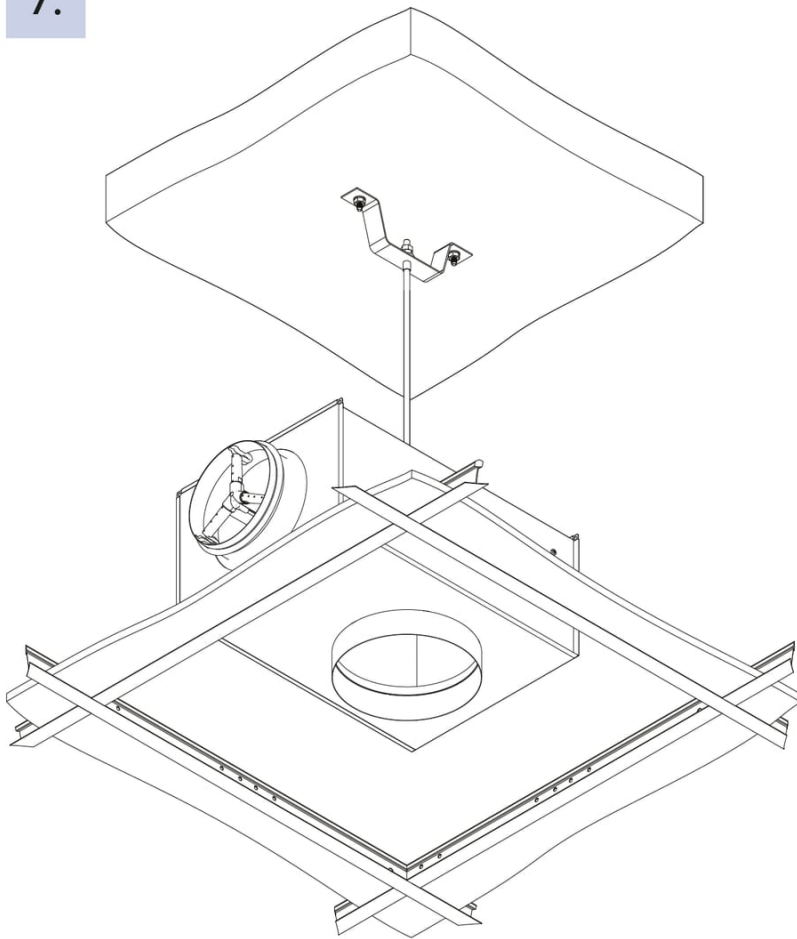


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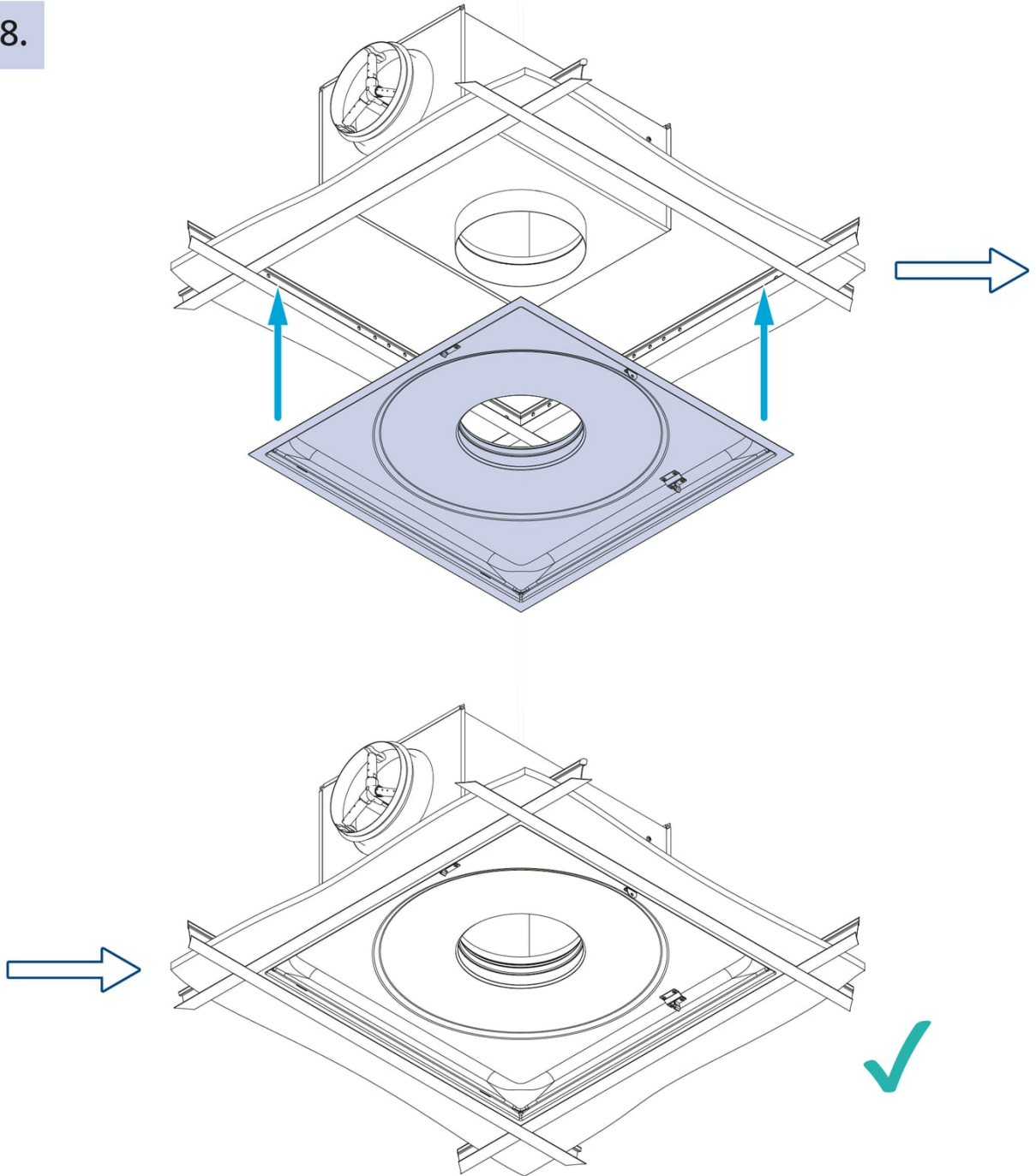




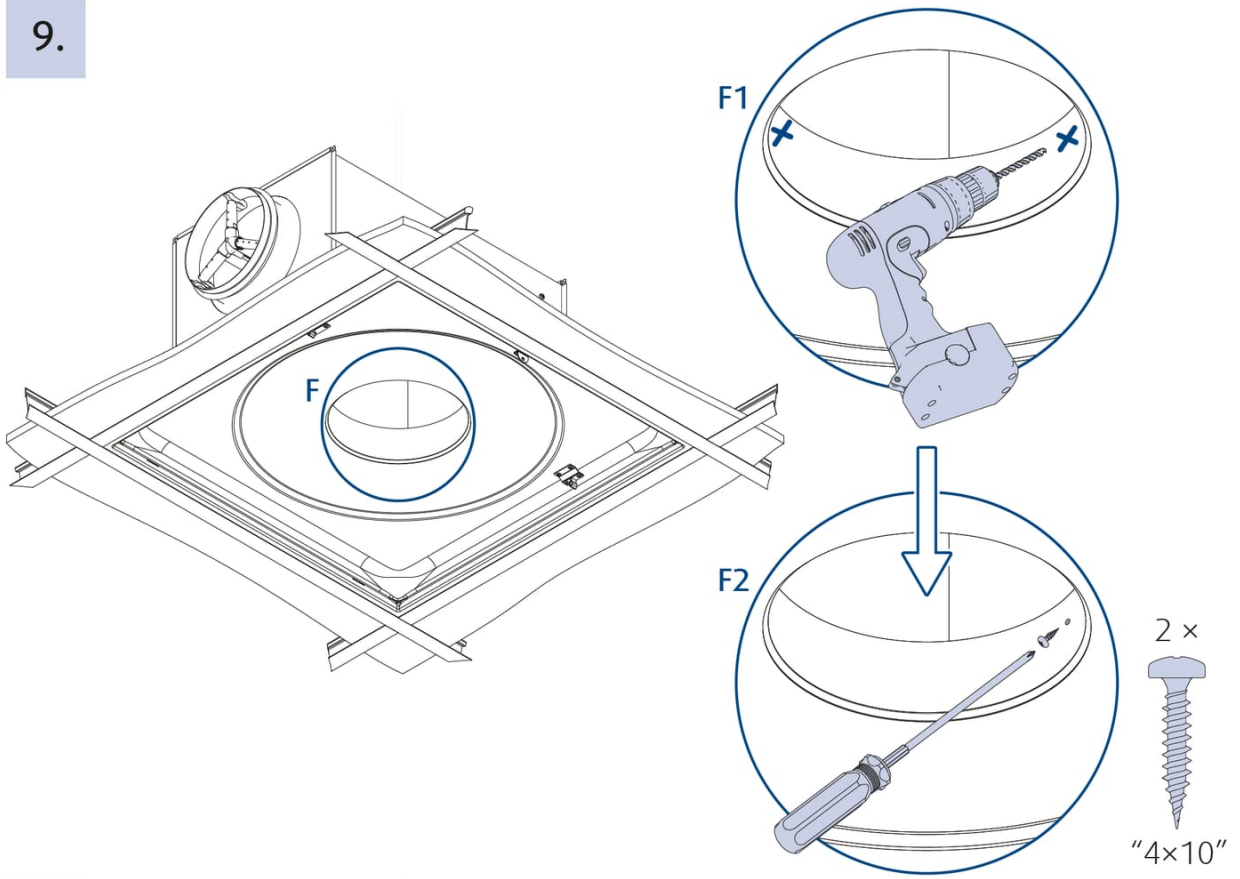
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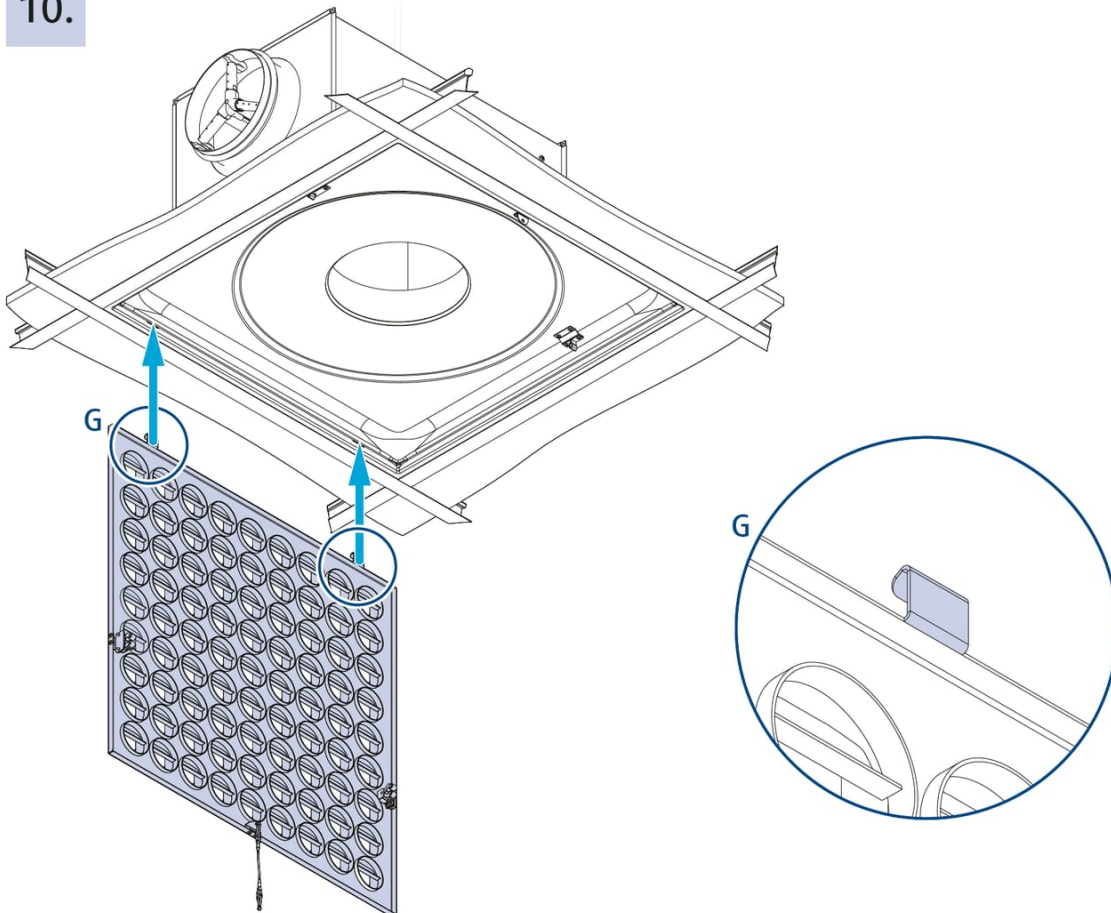
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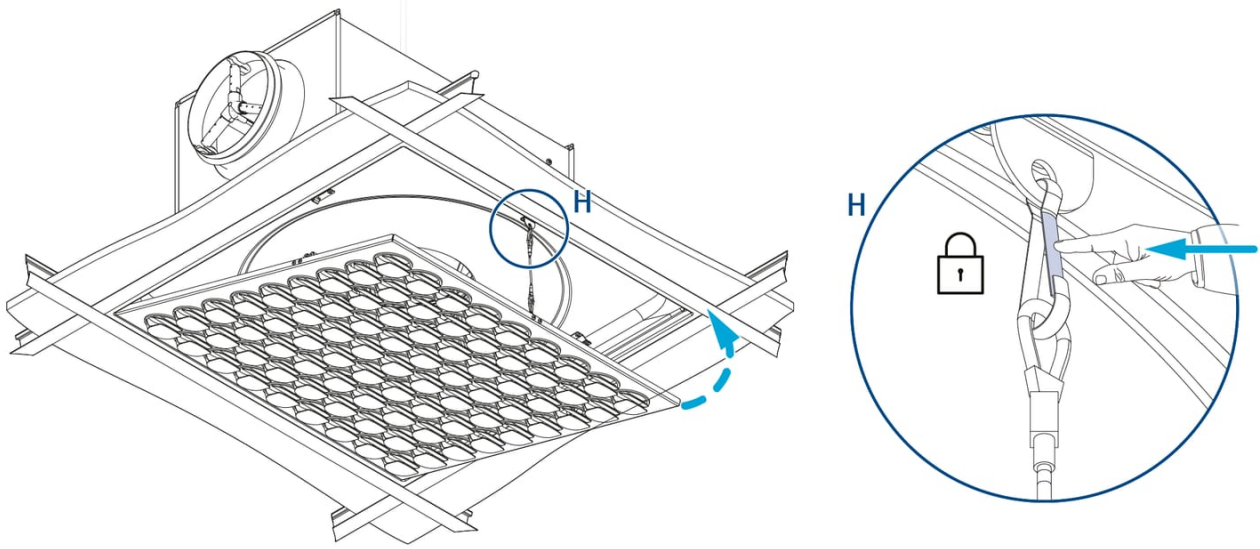
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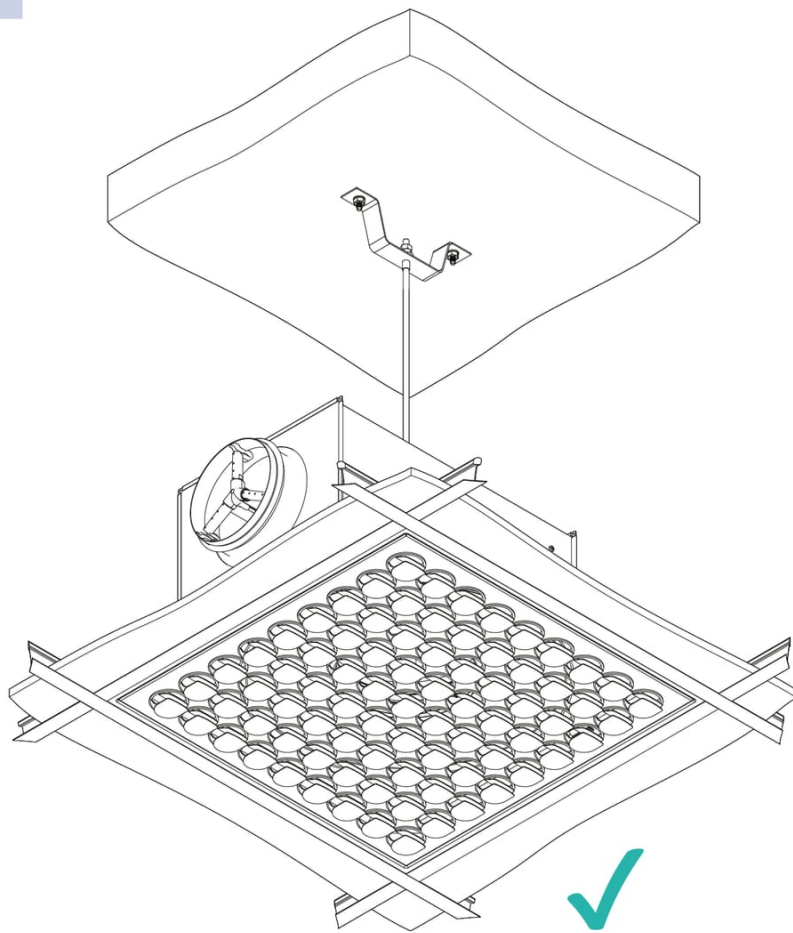
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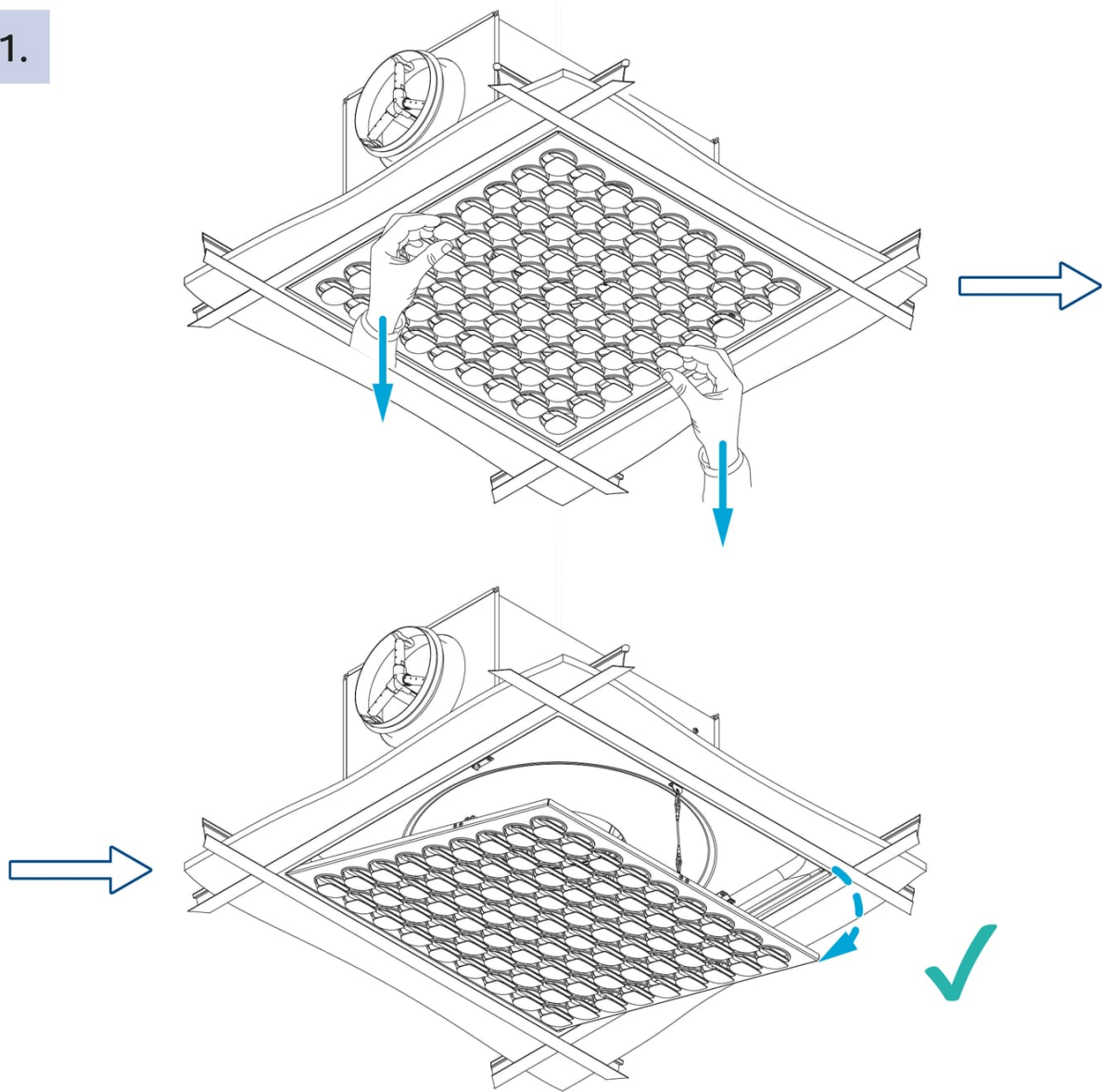


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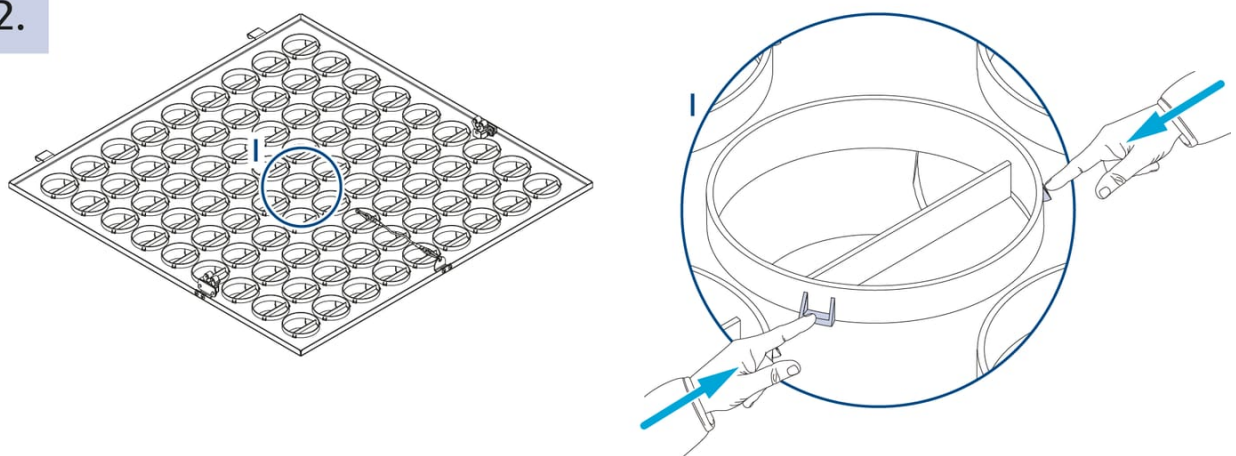


# Setting

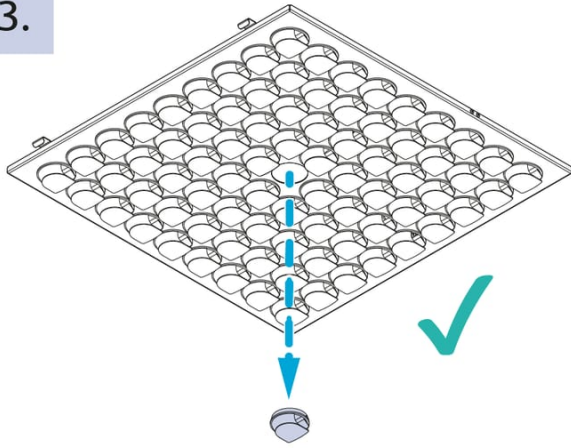
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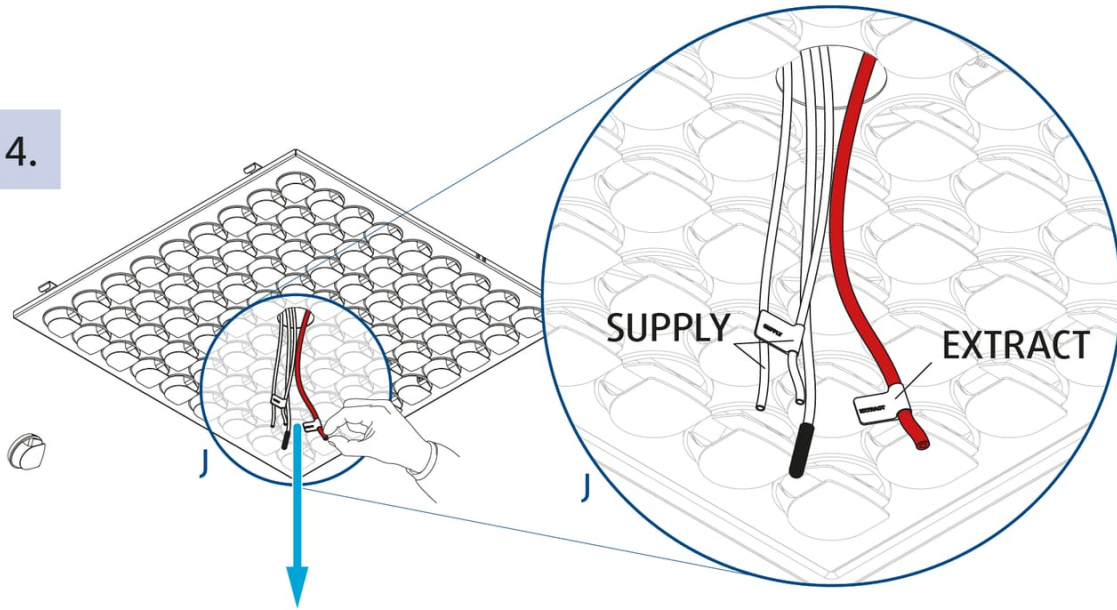
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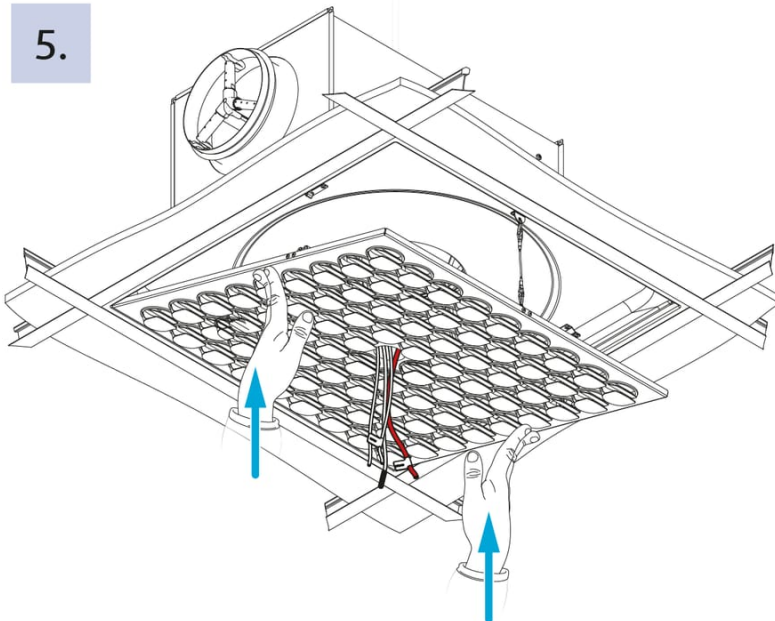
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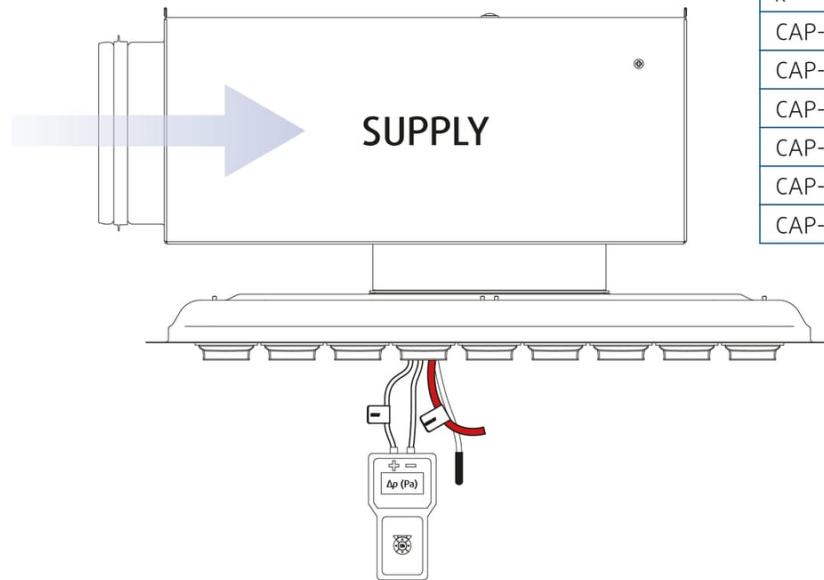


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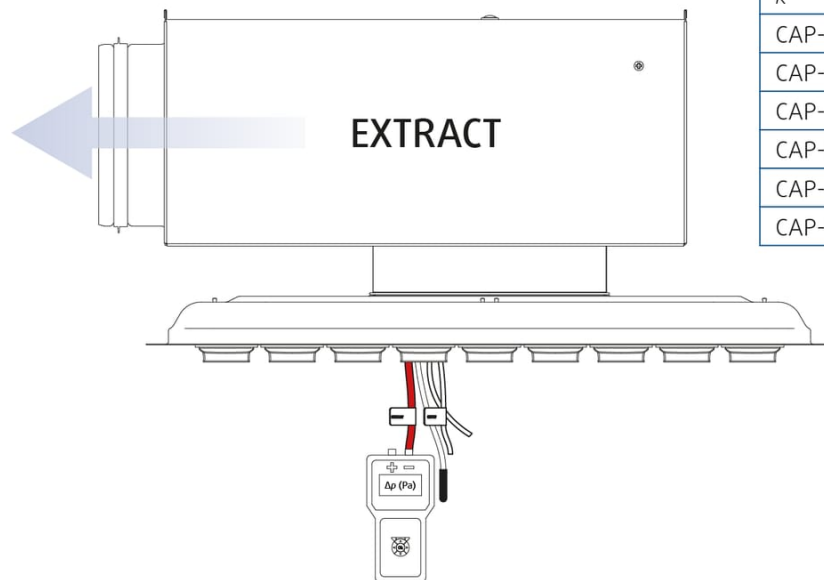
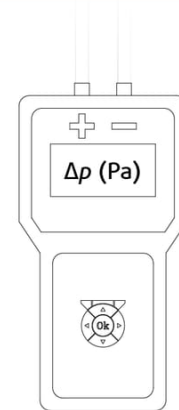


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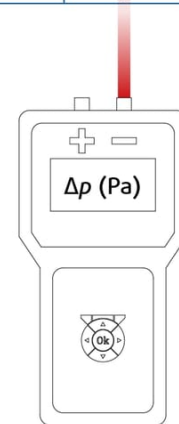
$$Q = k\sqrt{\Delta p \text{ (Pa)}}$$



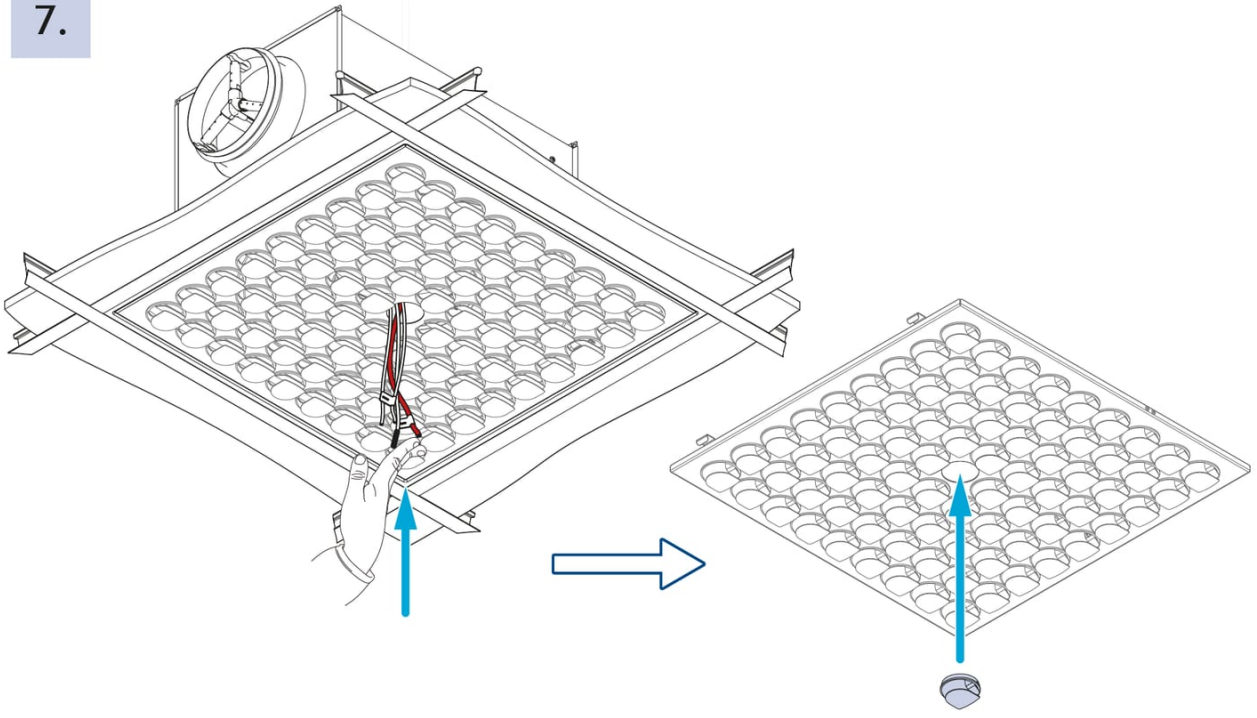
k	m³/h	l/s
CAP-F-125-...-16	19,1	5,3
CAP-F-160-...-25	33,1	9,2
CAP-F-200-...-36	57,2	15,9
CAP-F-250-...-64	93,6	26,0
CAP-F-315-...-81	150,1	41,7
CAP-F-400-...-81	258,8	71,9



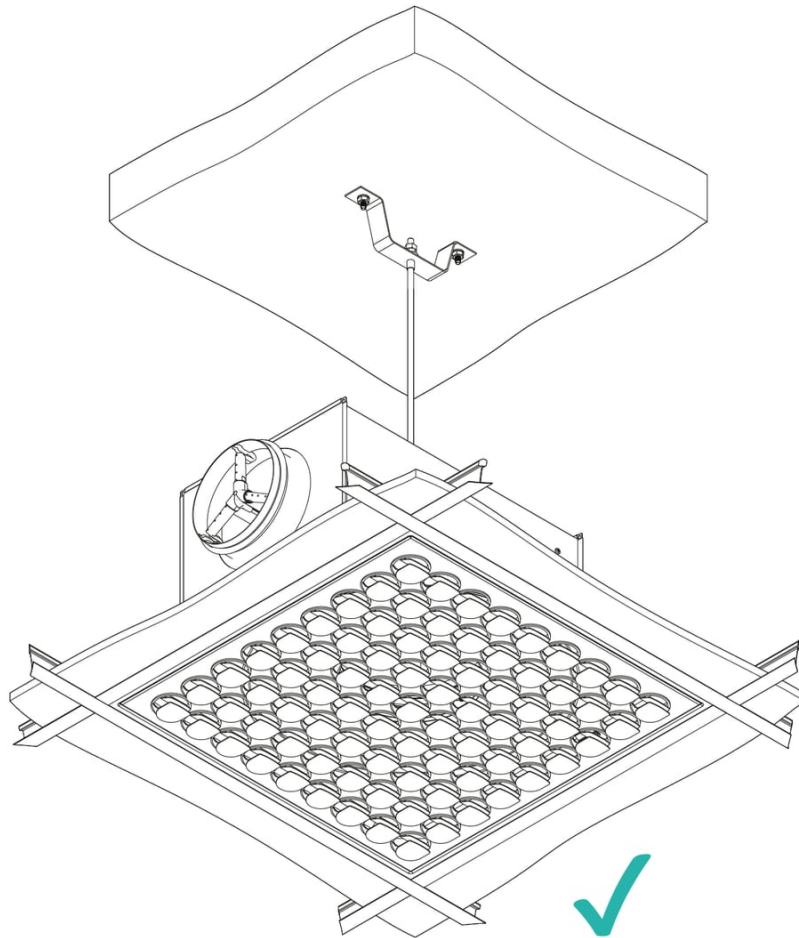
k	m³/h	l/s
CAP-F-125-...-16	37,3	10,4
CAP-F-160-...-25	47,6	13,2
CAP-F-200-...-36	73,9	20,5
CAP-F-250-...-64	93,0	25,8
CAP-F-315-...-81	149,5	41,5
CAP-F-400-...-81	203,3	56,5



7.



8.

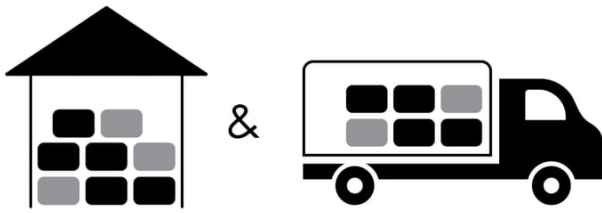






# Cleaning




# Transport, Storage and Operation



 °C -40 °C ... +50 °C

 % ≤ 95%



 °C -20 °C ... +50 °C

 % ≤ 95%

## Supplement

Any deviations from the technical specifications contained herein and the terms should be discussed with the manufacturer. We reserve the right to make any changes to the product without prior notice, provided that these changes do not affect the quality of the product and the required parameters. Current information on all products is available on [design.systemair.com](http://design.systemair.com).



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