systemair

Handbook

KONIKA

Supply Diffuser

Table of Contents

Description

KONIKA is a ceiling diffuser. The product is mainly intended for air supply and can be used for air extract as well. The product is installed into a circular duct by the use of KONIKA bar. The product has high induction which allows a maximum air temperature difference of dT 12 K.The field of application is offices, schools, medical premises, shops, halls and corridors.

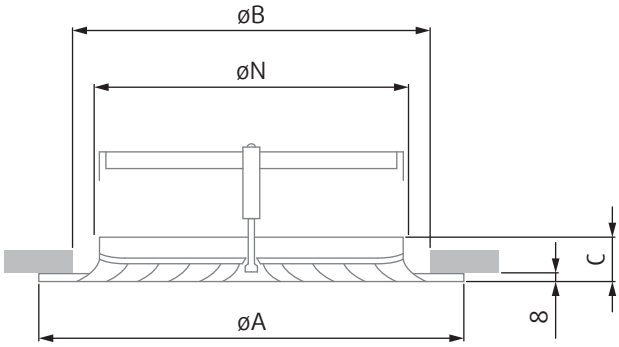
Accessories

- THOR: Plenum box
- THOR-E: Plenum box

Design

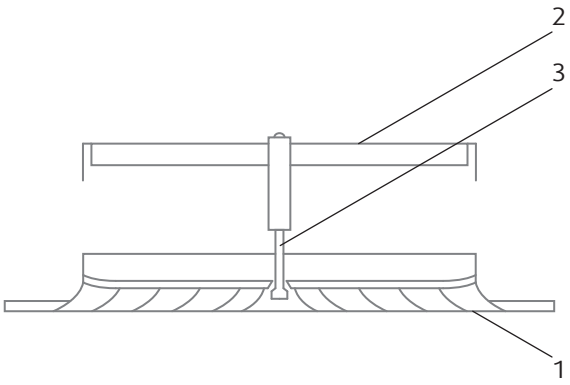
KONIKA is manufactured from galvanized steel. The product consists of a front plate, a mounting bridge, a thread bolt and a bolt cover. The product is powder painted to RAL9003 (signal white) as standard. Other RAL colours are available upon request.

Dimensions & Weights



DN	øA	øB	C	øN	m
	mm				kg
160	248	190	36	158	0,5
200	298	230	36	198	0,7
250	363	280	36	248	0,9
315	448	350	36	313	1,4

Product parts



Legend

1 - Front plate

2 - Mounting bridge

3 - Thread bolt

Ordering Codes

KONIKA-

Size (mm)

160

200

250

315

Surface finish [1]

SW Signal white (RAL9003, gloss 30%)

RALXXXX Other RAL colour

NOTES:

[1] If no colour is defined in ordering code, the diffuser will be delivered in signal white colour RAL9003 gloss 30.

Example of the Ordering Code

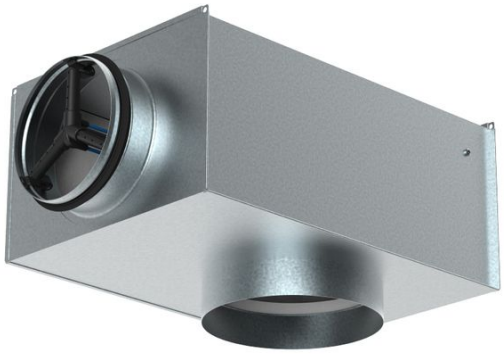
KONIKA-200-SW

KONIKA ceiling diffuser size 200. In signal white colour (RAL9003).

Accessories

THOR

Plenum Box



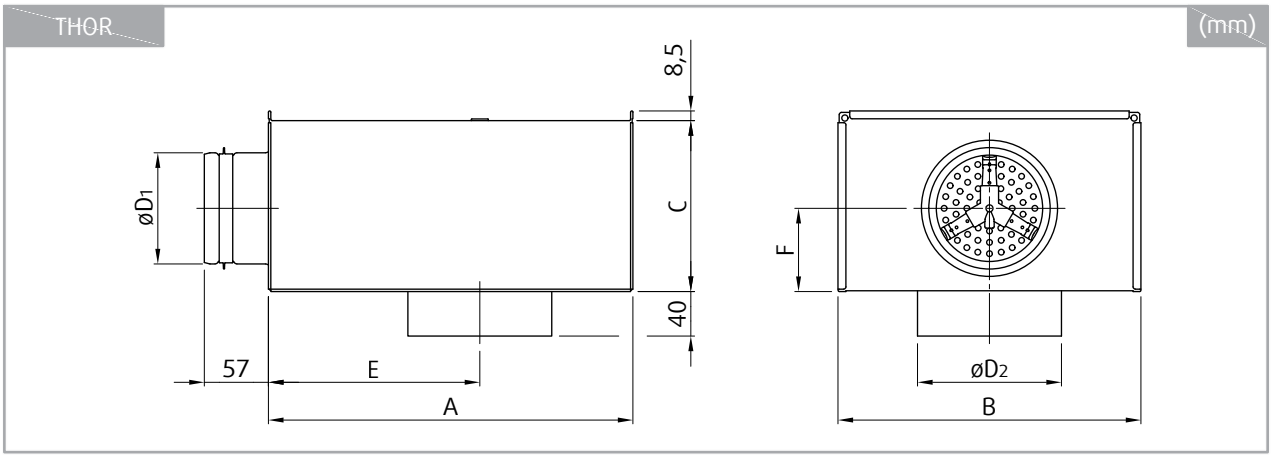
Description

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	A	B	C	$øD_1$	$øD_2$	E	F	m
	mm							kg
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

Ordering Codes

Nominal size: Inlet-Outlet

80-100

100-125

125-160

160-200

200-250

250-315

315-400

Example of the Ordering Code

THOR-100-125

Plenum box THOR with 100 mm circular inlet and 125 mm circular outlet (nominal dimensions).

Quick Selection

DN	L_{wA}					
	25 dB		30 dB		35 dB	
	m^3/h	l/s	m^3/h	l/s	m^3/h	l/s
160	113	31	136	38	161	45
200	192	53	231	64	276	77
250	281	78	326	91	375	104
315	380	106	441	123	508	141

Technical Parameters

Legend

$L_{0,2}$ (m) Air throw length with terminal velocity 0,2 m/s

L_x (m) Air throw length calculated for specific terminal velocity

x (m/s) Terminal velocity in range of 0,1 m/s ... 1 m/s

0%, 25%, 50%, 75%, 100% The plenum box damper positions in pressure drop/noise diagrams are represented as percentage. 0% is full damper restriction. 100% is fully open damper.

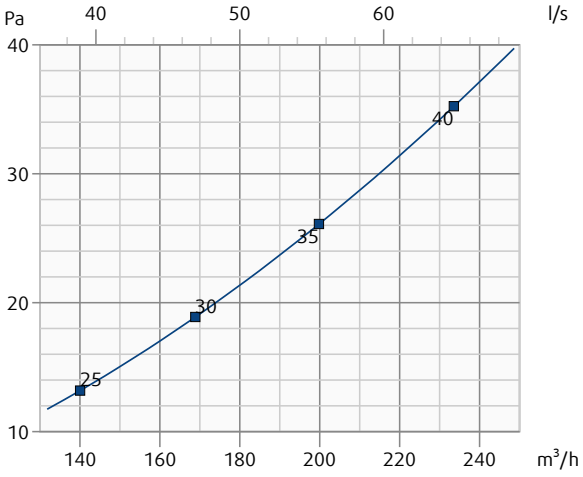
Calculation of Air Throw for Different Terminal Velocities

$L_x = L_{0,2} \cdot 0,2/x$

Diagrams without THOR, air supply

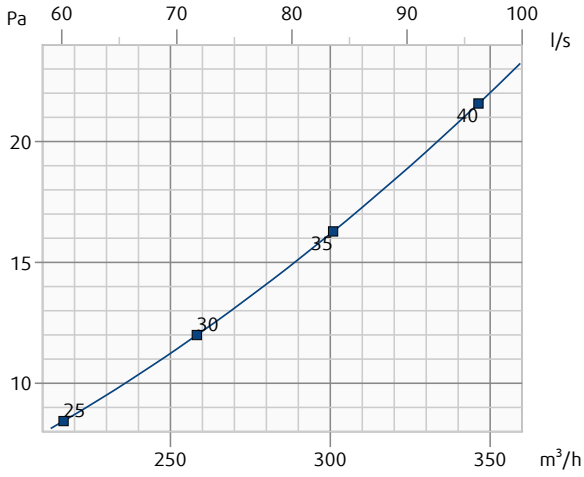
KONIKA-160-SW

Pressure drop & A-weighted sound power level in dB(A)



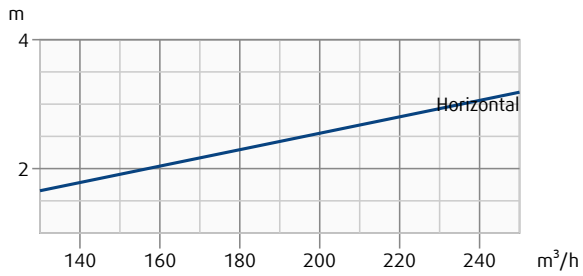
KONIKA-200-SW

Pressure drop & A-weighted sound power level in dB(A)



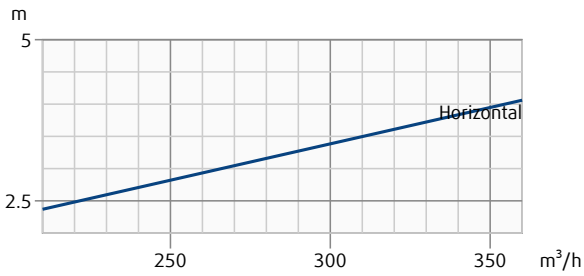
KONIKA-160-SW

Throw length (terminal velocity 0.2 m/s)



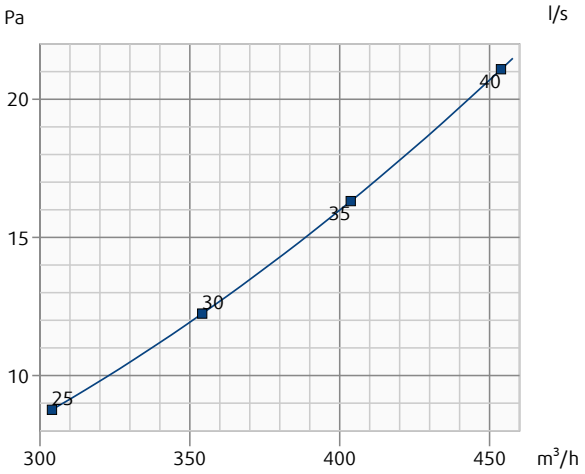
KONIKA-200-SW

Throw length (terminal velocity 0.2 m/s)



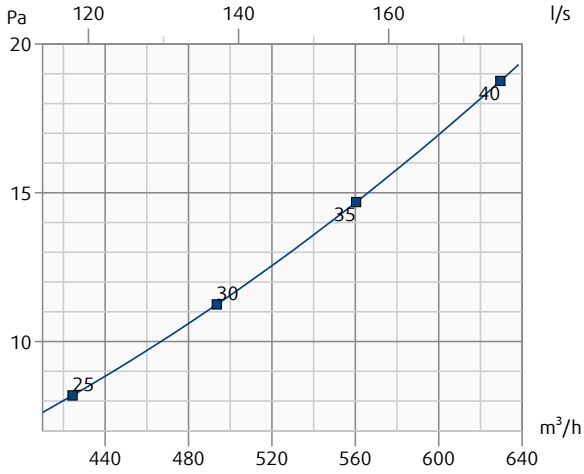
KONIKA-250-SW

Pressure drop & A-weighted sound power level in dB(A)



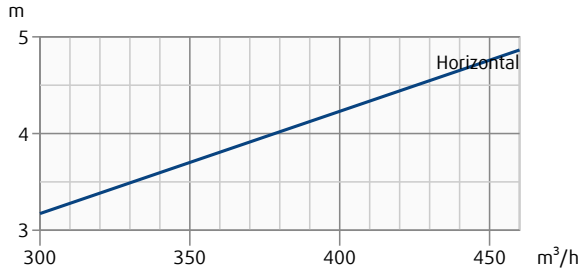
KONIKA-315-SW

Pressure drop & A-weighted sound power level in dB(A)



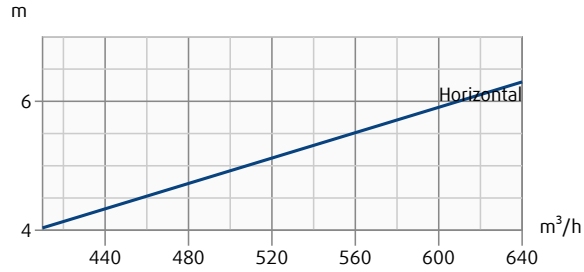
KONIKA-250-SW

Throw length (terminal velocity 0.2 m/s)



KONIKA-315-SW

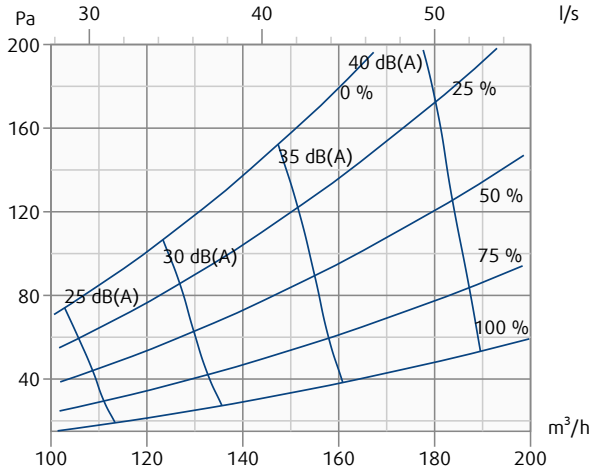
Throw length (terminal velocity 0.2 m/s)



Diagrams with THOR, air supply

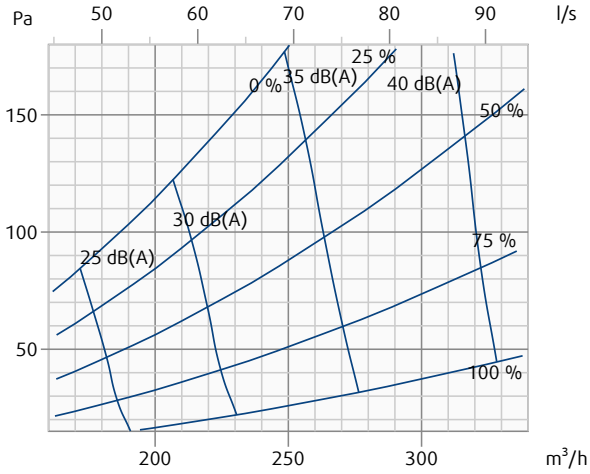
KONIKA-160-SW + THOR-125-160

Pressure drop & A-weighted sound power level in dB(A)



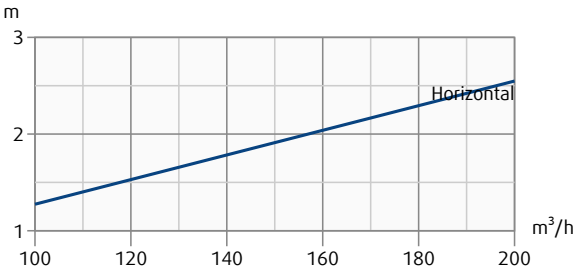
KONIKA-200-SW + THOR-160-200

Pressure drop & A-weighted sound power level in dB(A)



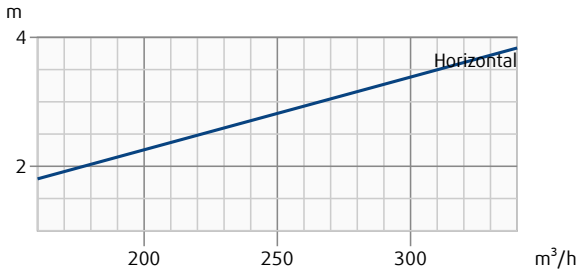
KONIKA-160-SW + THOR-125-160

Throw length (terminal velocity 0.2 m/s)



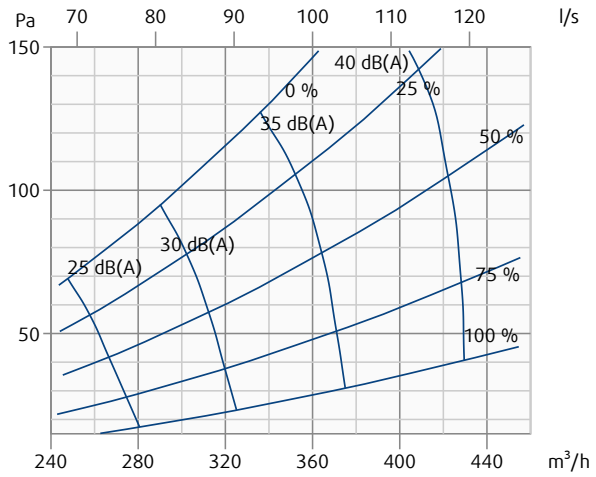
KONIKA-200-SW + THOR-160-200

Throw length (terminal velocity 0.2 m/s)



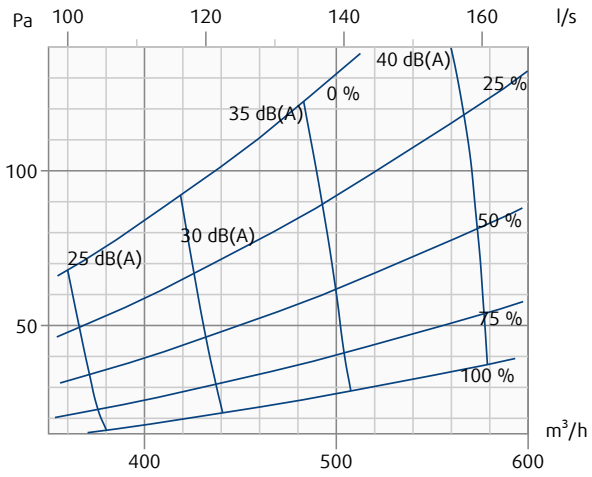
KONIKA-250-SW + THOR-200-250

Pressure drop & A-weighted sound power level in dB(A)



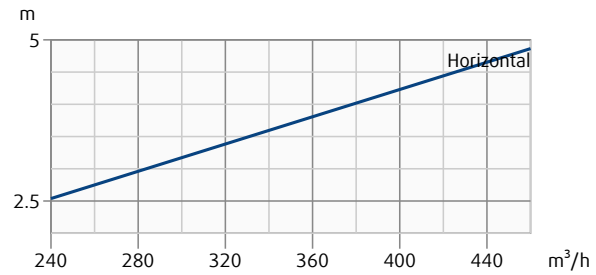
KONIKA-315-SW + THOR-250-315

Pressure drop & A-weighted sound power level in dB(A)



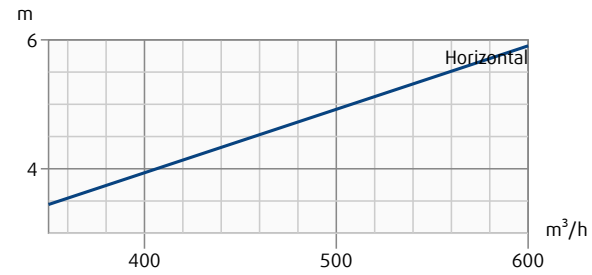
KONIKA-250-SW + THOR-200-250

Throw length (terminal velocity 0.2 m/s)



KONIKA-315-SW + THOR-250-315

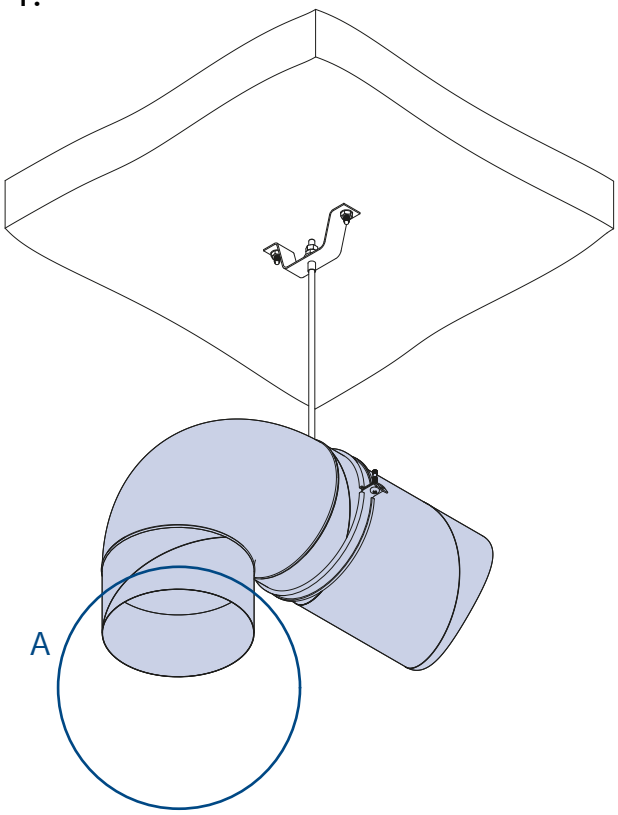
Throw length (terminal velocity 0.2 m/s)

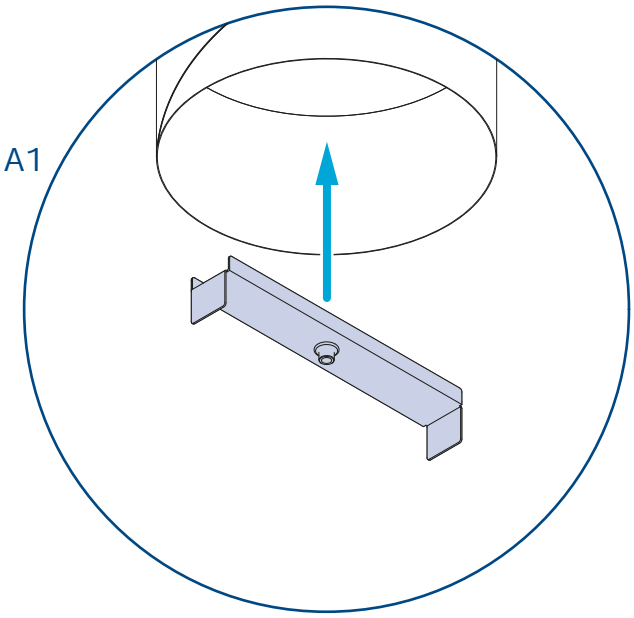


Installation

Installation into circular duct

1.





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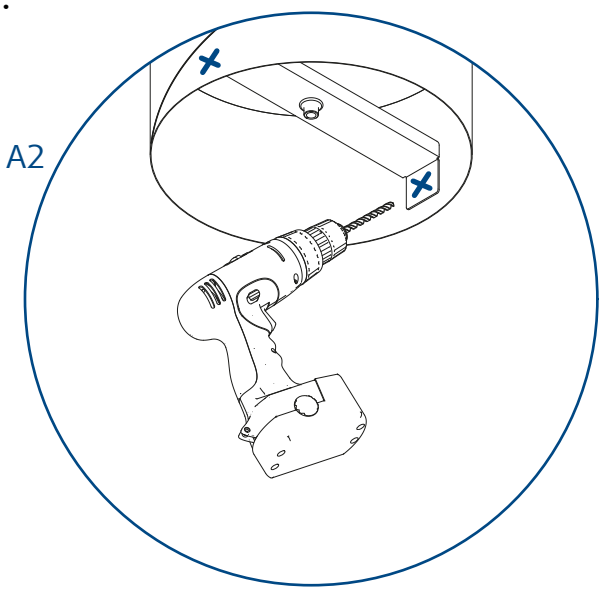

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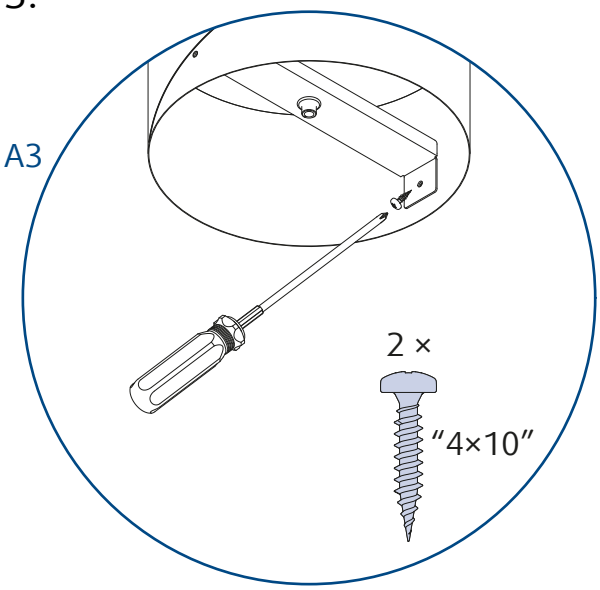

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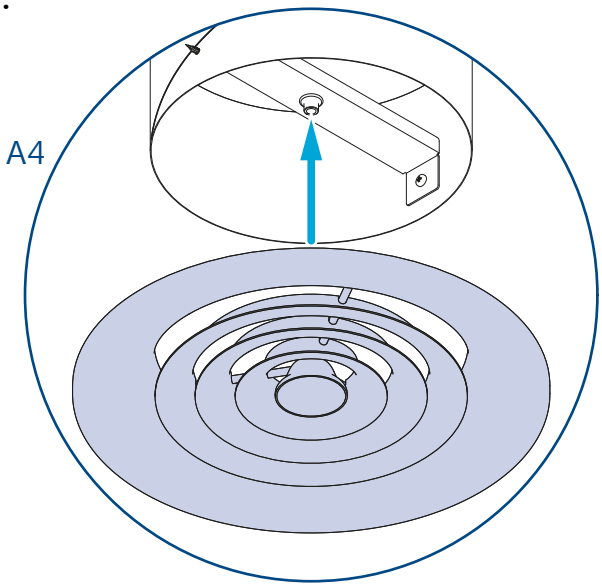

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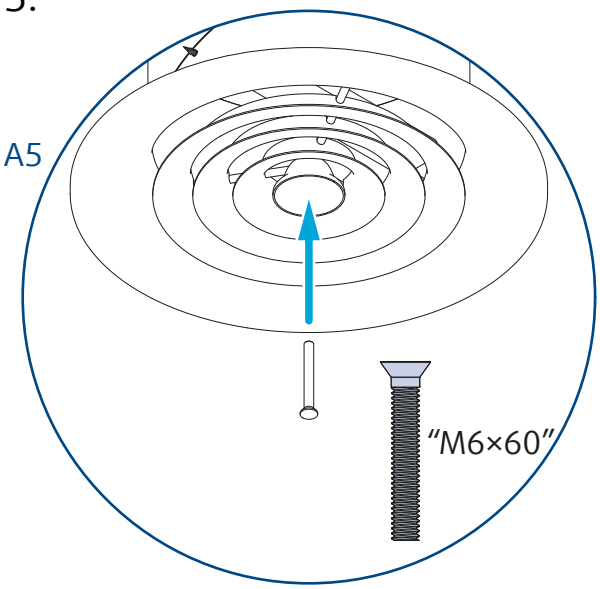

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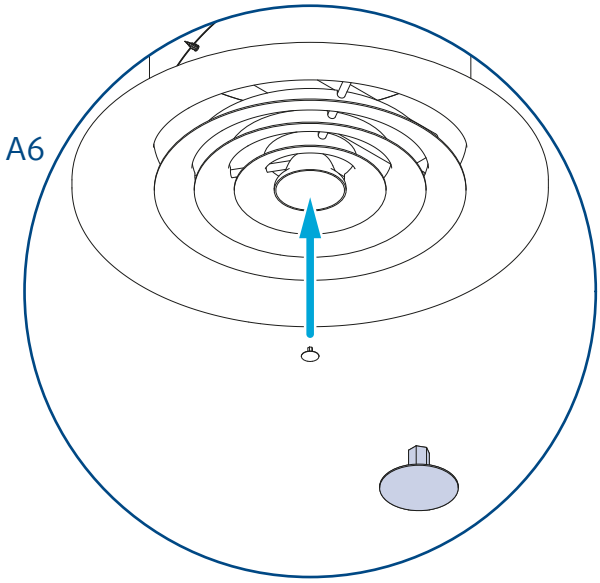

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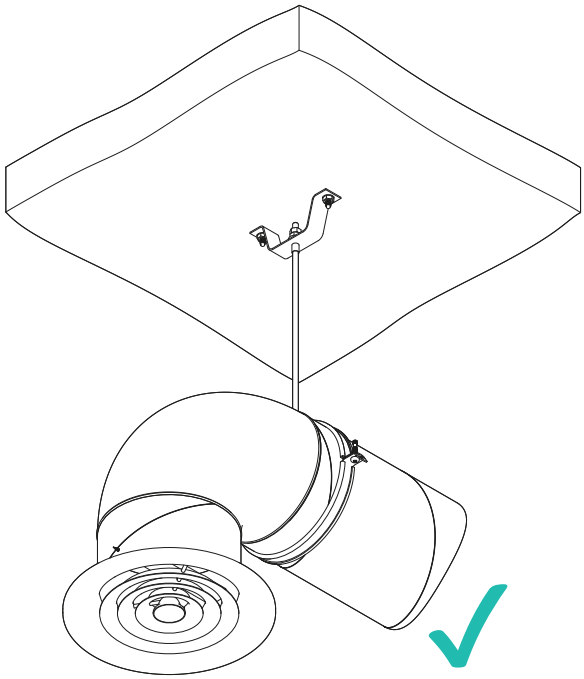
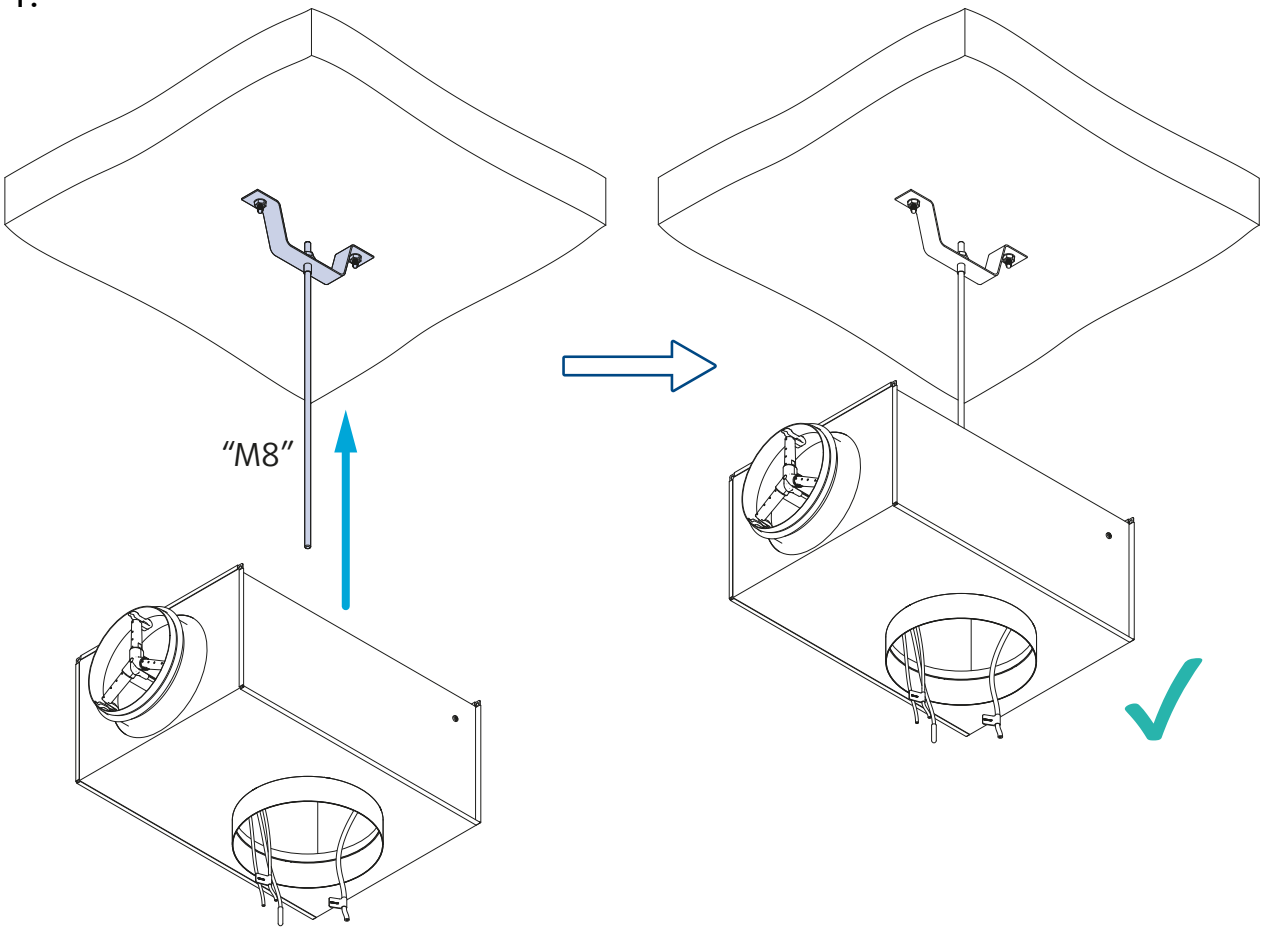


Installation into THOR plenum box

1.



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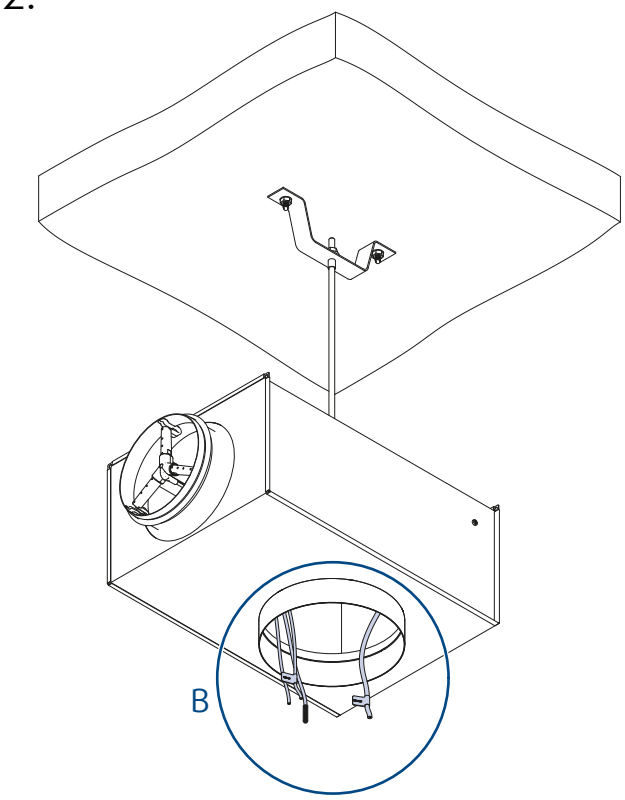

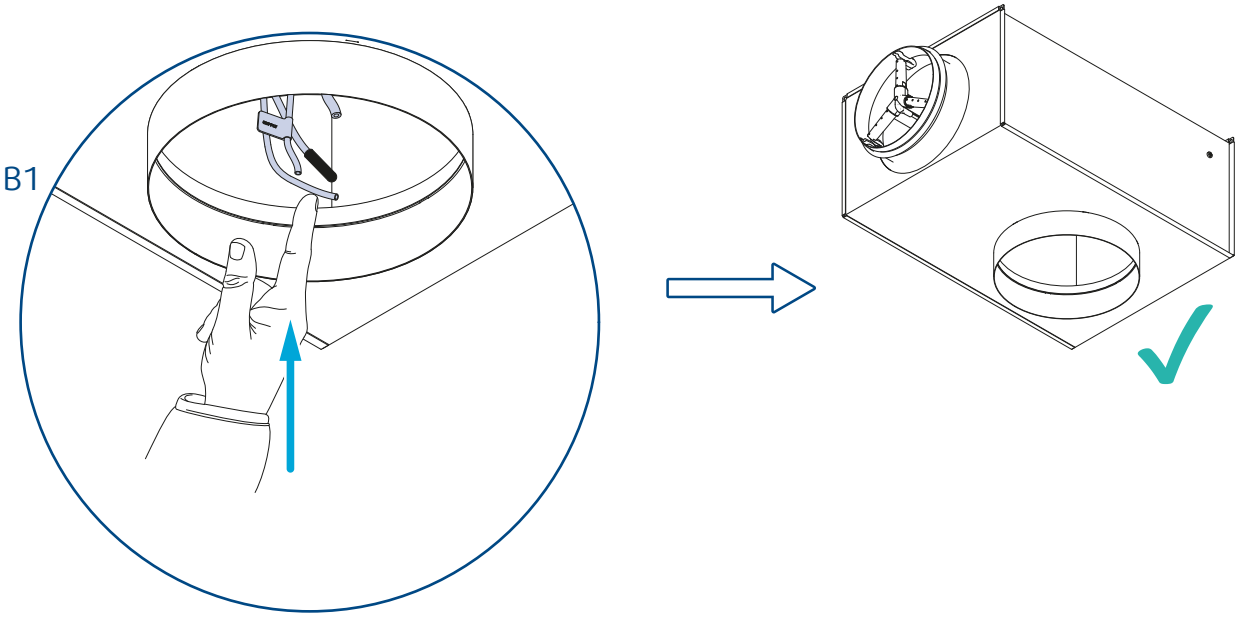

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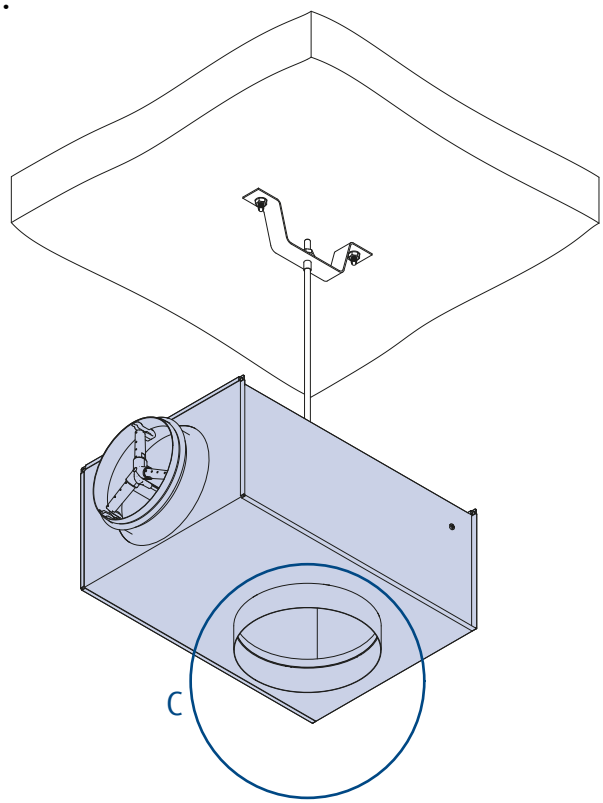

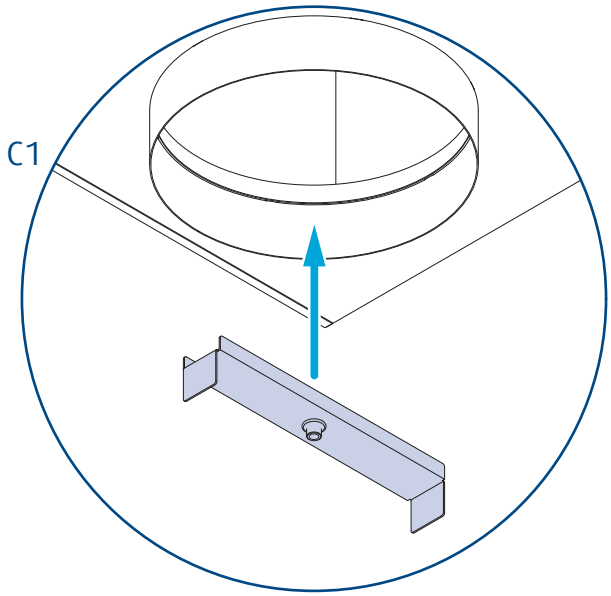

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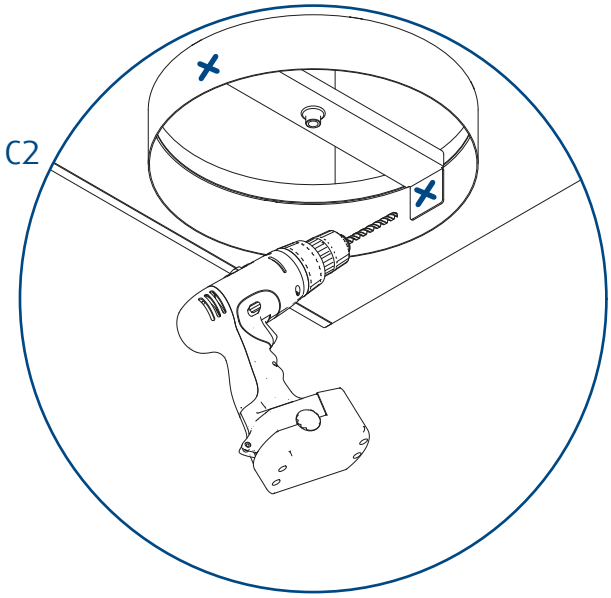

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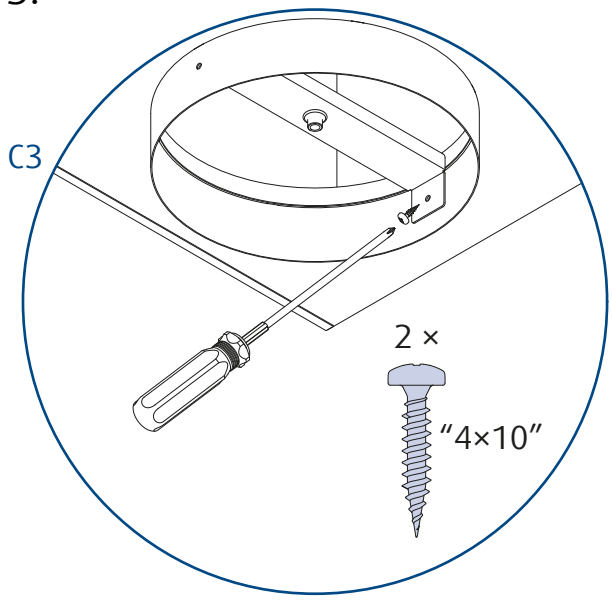

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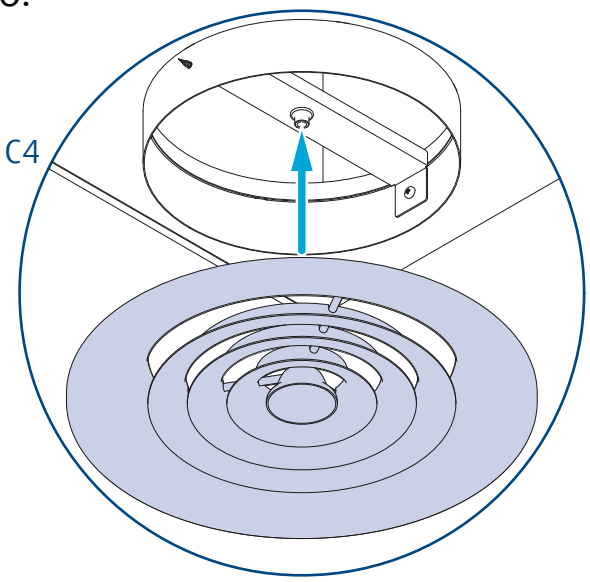

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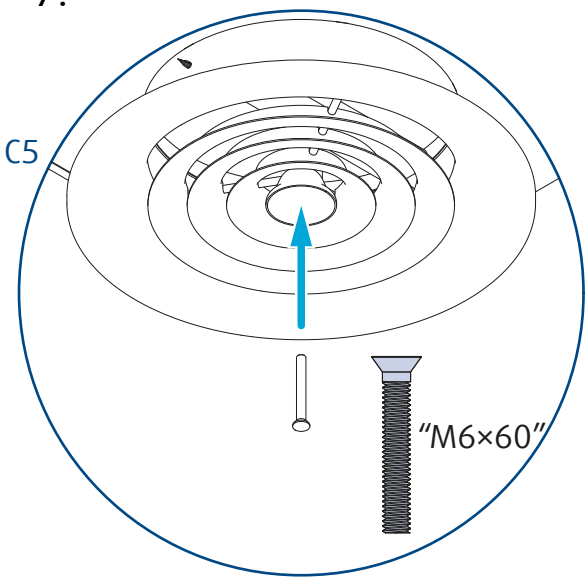

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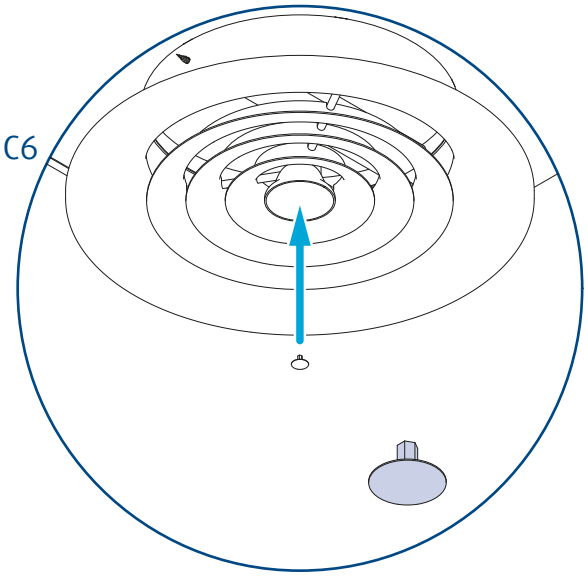

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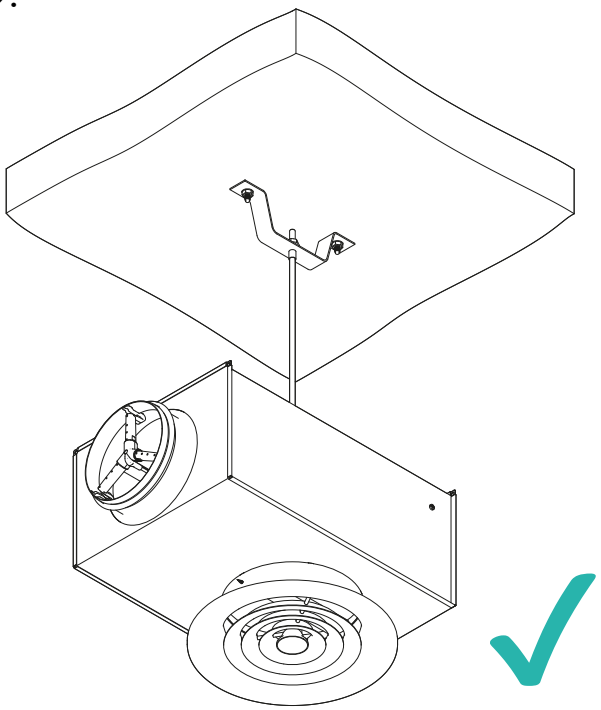
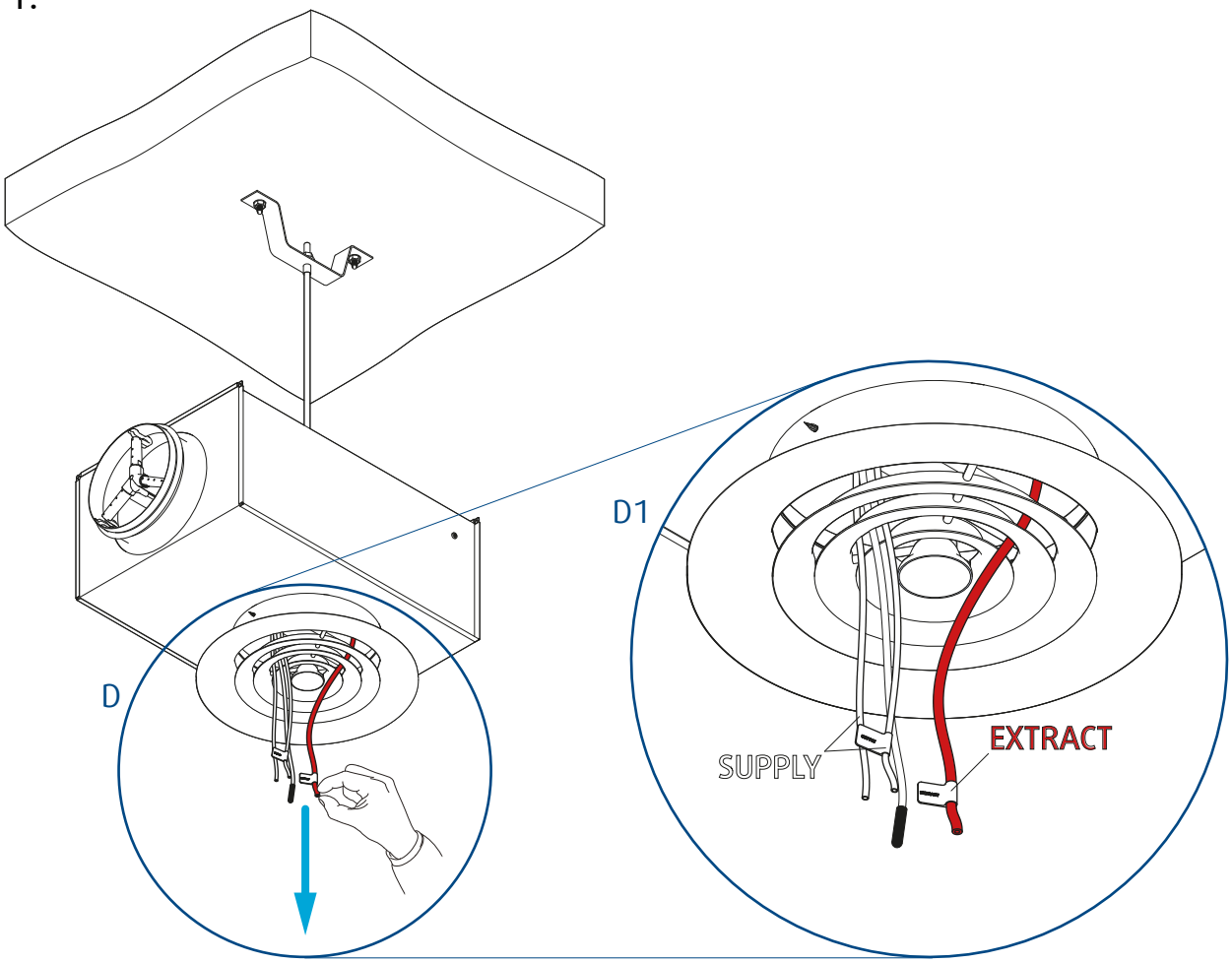


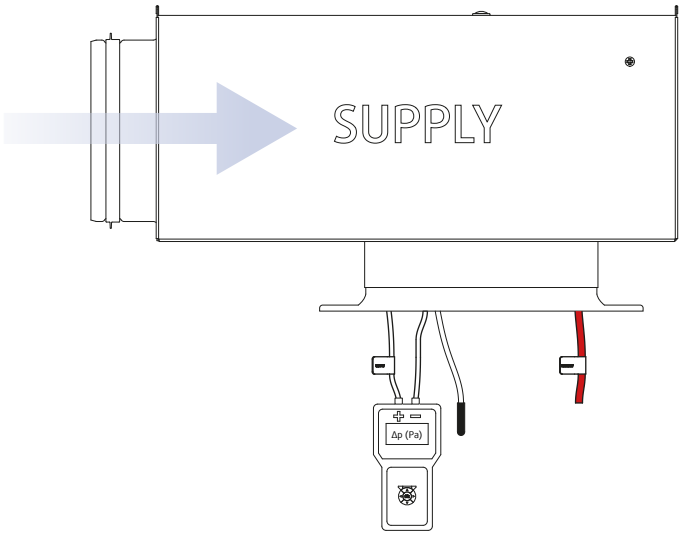
Measuring

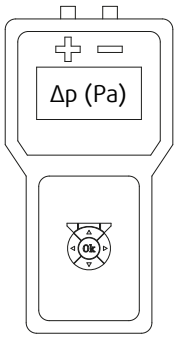
1.



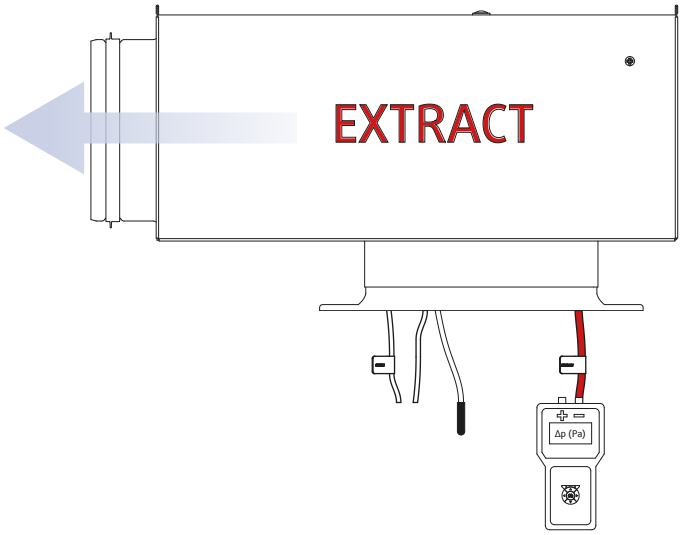
2.

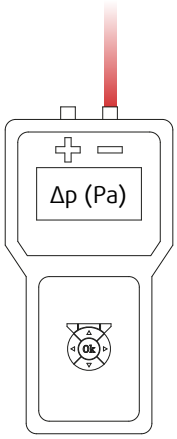
$$Q = \text{k-factor} \cdot \sqrt{\Delta p\ (Pa)}$$





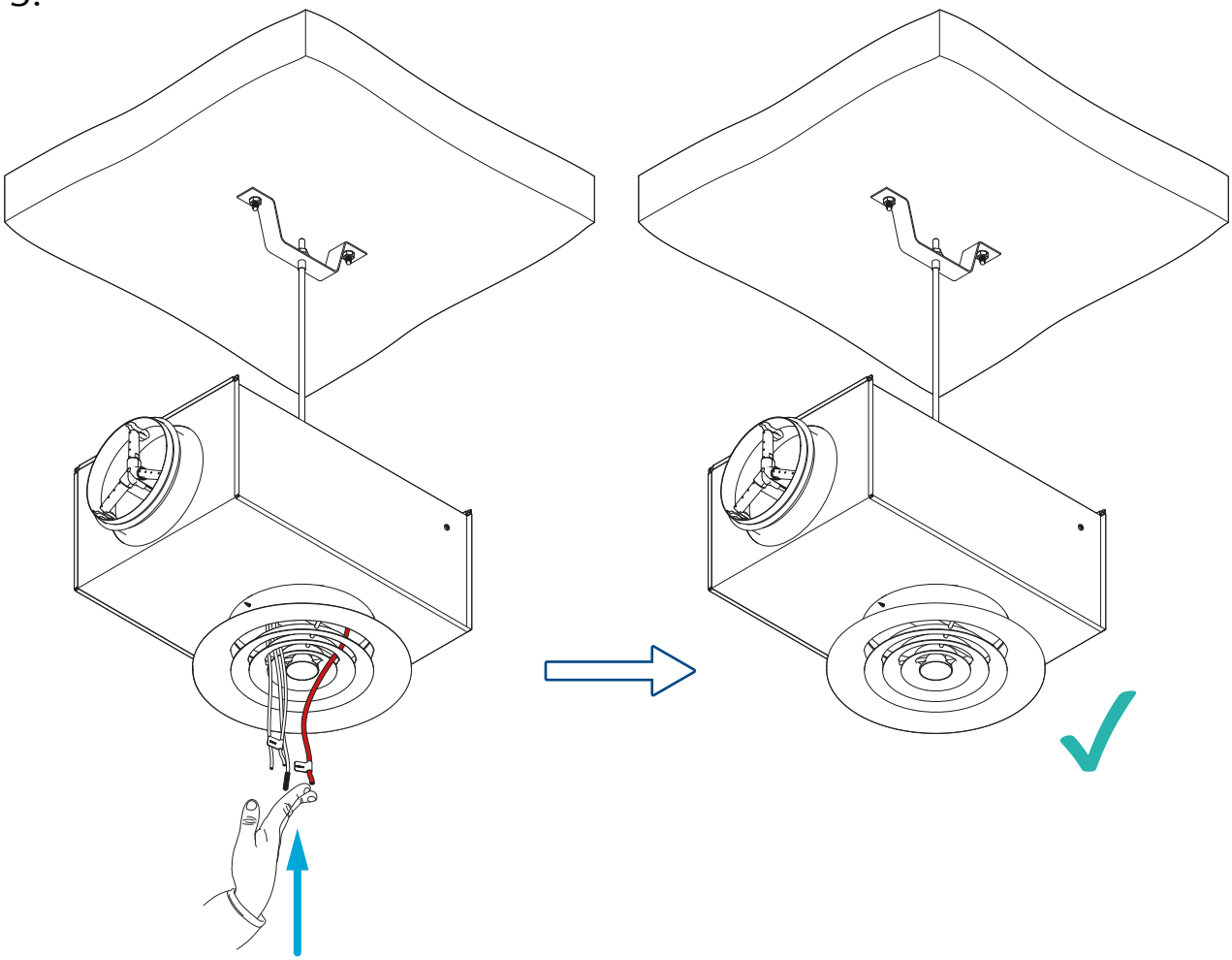
k-factor	l/s	m³/h
KONIKA-160	15,9	57,2
KONIKA-200	26,0	93,6
KONIKA-250	41,7	150,1
KONIKA-315	71,9	258,8



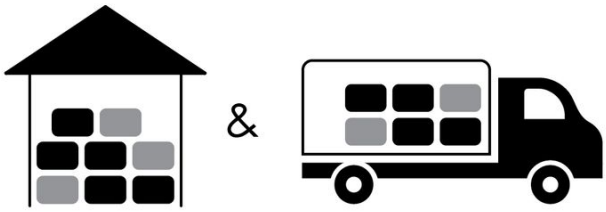


k-factor	l/s	m³/h
KONIKA-160	11,8	42,6
KONIKA-200	16,5	59,2
KONIKA-250	27,6	99,5
KONIKA-315	36,7	132,2

3.



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.

Handbook_KONIKA_en-GB

design.systemair.com
www.systemair.com