



Handbook

BOR-C

Residential Supply Diffuser



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Description

BOR-C is a residential diffuser. The product is intended for air flow adjustment of air supply. The product is installed into ceilings. The field of application is offices, hotels, residential rooms etc.

Highlights

- Very low sound generation
- Good induction performance even in comfort cooling mode
- Precise supply air flow measurement and adjustment, no dismantling required
- Easy and quick installation
- Short duct connection for installation with limited space

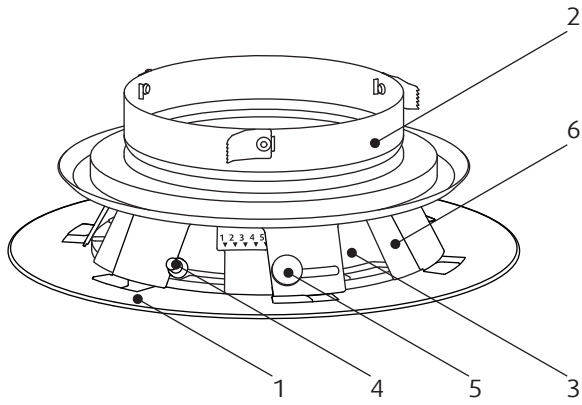
Accessories

- RB-BOR-C: Discharge Angle Restriction Blind
- RF-BOR-C: Mounting Frame

Design

BOR-C is manufactured from galvanized steel sheet. The product consists of a front panel, a duct connection, air discharge vents, a measurement pin, an adjustment handle and an adjustable blind. The duct connection has springs fixing the diffuser in the duct. The front panel is powder painted to RAL9003 (signal white) as standard. Other RAL colours are available upon request.

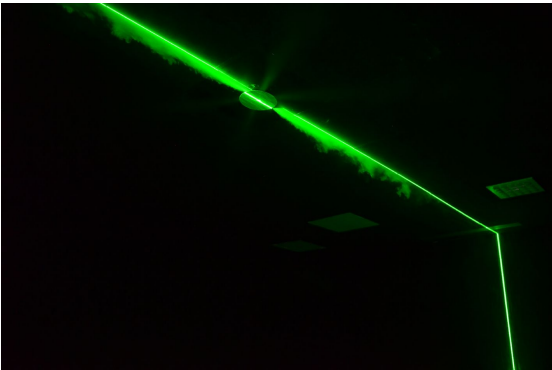
Product Parts



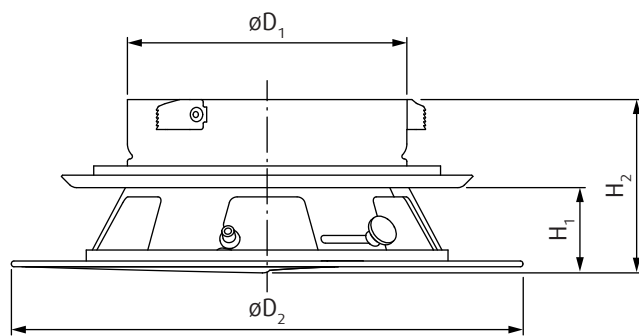
Legend

- 1 - Front plate
- 2 - Duct connection
- 3 - Air discharge vents
- 4 - ΔP measurement pin
- 5 - Adjustment handle
- 6 - Adjustable blind

Airflow visualisation



Dimensions & Weights



DN	$\varnothing D_1$	$\varnothing D_2$	H_1	H_2	m
	mm				kg
100	87	180	29	65	0,5
125	112	205	34	70	0,6
160	147	240	39	75	0,9

Ordering Codes

BOR-C-

Duct connection nominal dimension

100

125

160

Surface finish¹

SW Signal white (RAL9003, gloss 30%)

RALXXXX Other RAL colour

NOTE:

1. In case the surface finish is not specified in the ordering code, the product will be delivered in RAL9003 signal white.

Example of the Ordering Code

BOR-C-100-SW

BOR-C residential supply diffuser with duct connection nominal dimension 100. In signal white colour (RAL9003).

Accessories

RB-BOR-C

Discharge Angle Restriction Blind



Adjustable blind for regulating air discharge
Available for BOR-C nominal dimensions (DN): 100, 125, 160

Ordering Codes

- RB-BOR-C-100
- RB-BOR-C-125
- RB-BOR-C-160

RF-BOR-C



Description

RF-BOR-C is a mounting frame. The product enables connection of the duct types that cannot be connected directly to the valve, like e.g. flexible ducts. Also the frame helps fixing the valves to the rigid construction parts like e.g. suspended ceiling.

Design

RF-BOR-C is manufactured from galvanized steel. The product is fitted with fixing straps for fixing the valve to rigid construction parts.

Ordering code

RF-BOR-C-

Dimension

100

125

160

Example of the Ordering Code

RF-BOR-C-100

RF-BOR-C mounting frame with nominal dimension 100.

Quick Selection

Air flow volume q_v at different A-weighted sound power levels L_{WA}

Item	25 dB(A)		30 dB(A)		35 dB(A)	
	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s
BOR-C-100-SW	52	14	67	19	82	23
BOR-C-125-SW	77	21	100	28	122	34
BOR-C-160-SW	119	33	155	43	191	53

NOTE: The working points were measured with open adjustment damper.

Air flow volume q_v at different A-weighted sound pressure levels L_{pA} with 10m² absorption area

Item	20 dB(A)		25 dB(A)		30 dB(A)	
	m ³ /h	l/s	m ³ /h	l/s	m ³ /h	l/s
BOR-C-100-SW	49	14	64	18	79	22
BOR-C-125-SW	71	20	96	27	117	32
BOR-C-160-SW	110	31	148	41	183	51

NOTE: The working points were measured with open adjustment damper.

Technical Parameters

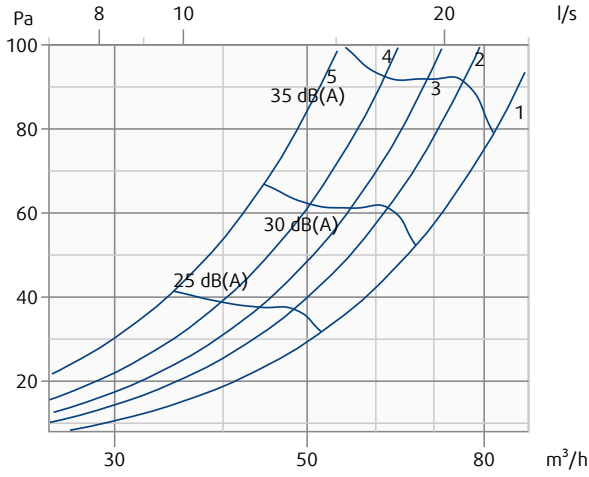
Calculation of Air Throw for Different Terminal Velocities

$$Lx = L0,2 \cdot 0,2/x$$

Sound and pressure diagrams for BOR-C with 360° discharge pattern

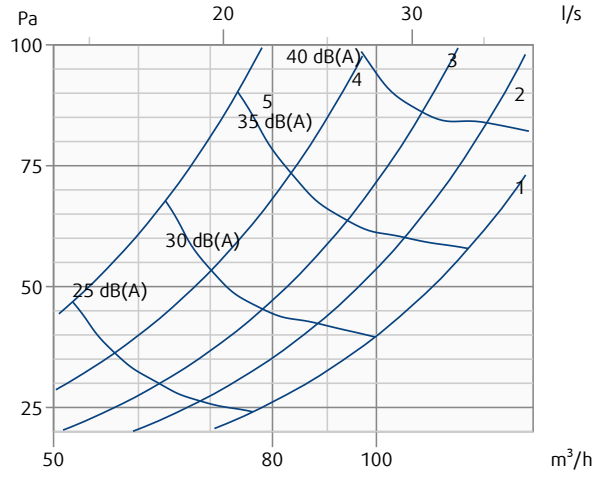
BOR-C-100-SW

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



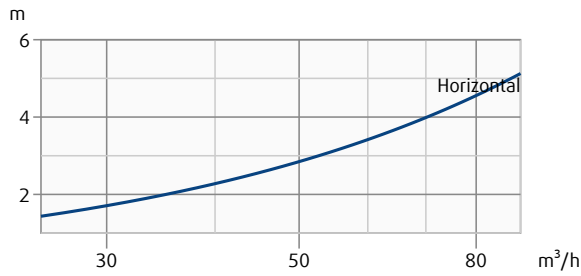
BOR-C-125-SW

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



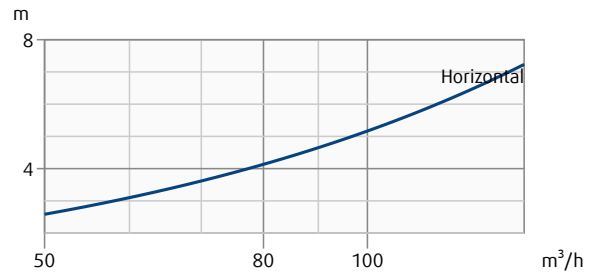
BOR-C-100-SW

Throw length (terminal velocity 0.2 m/s)



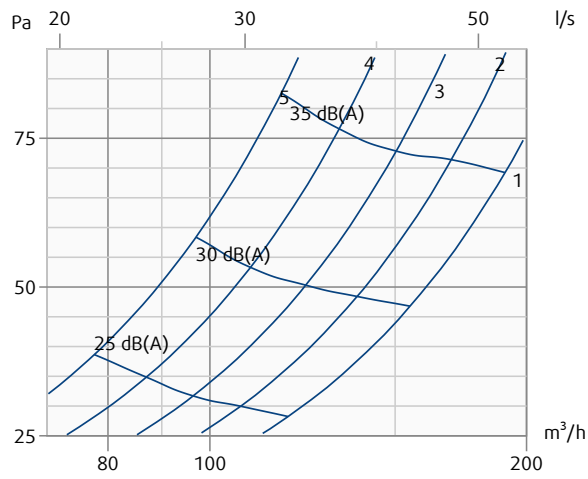
BOR-C-125-SW

Throw length (terminal velocity 0.2 m/s)



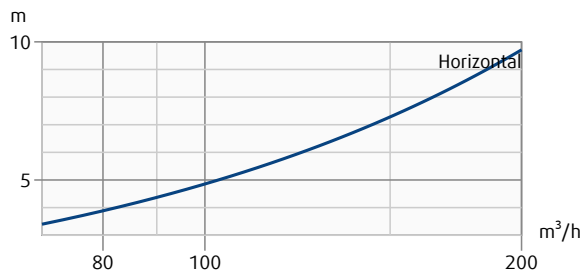
BOR-C-160-SW

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



BOR-C-160-SW

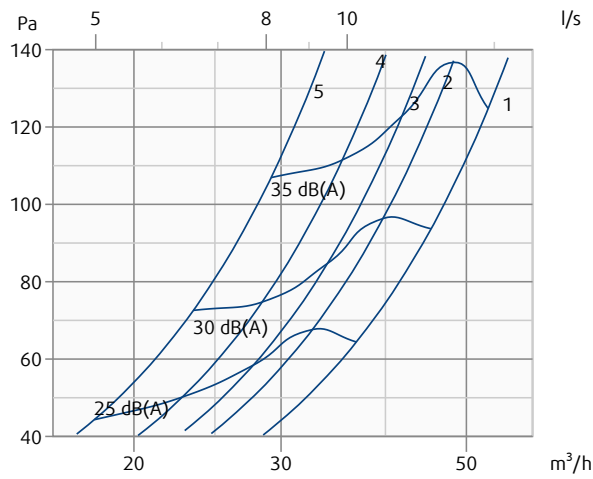
Throw length (terminal velocity 0.2 m/s)



Sound and pressure diagrams for BOR-C with 120° discharge pattern

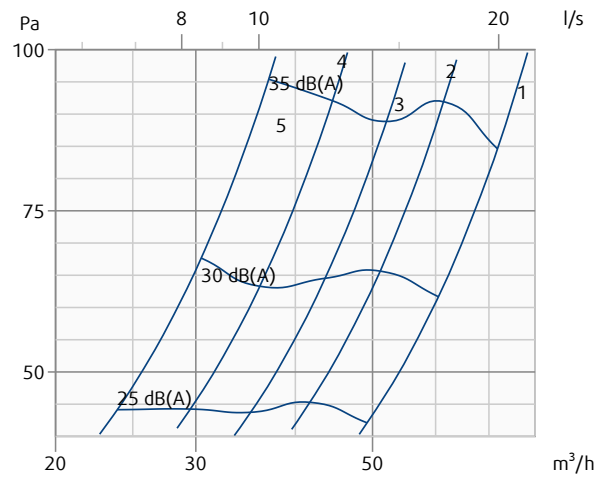
BOR-C-100-SW

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



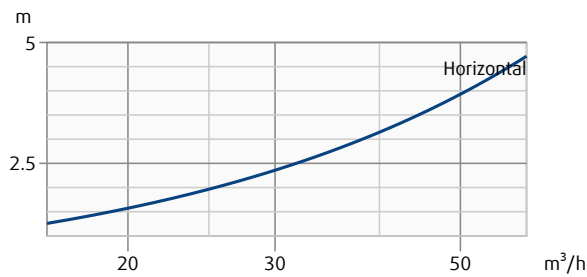
BOR-C-125-SW

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



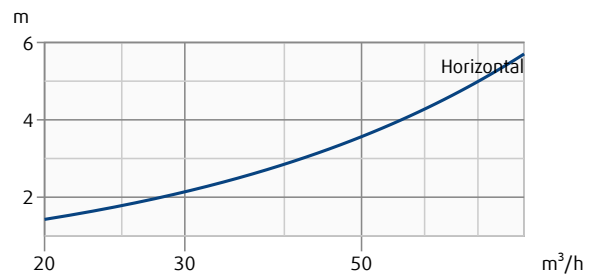
BOR-C-100-SW

Throw length (terminal velocity 0.2 m/s)



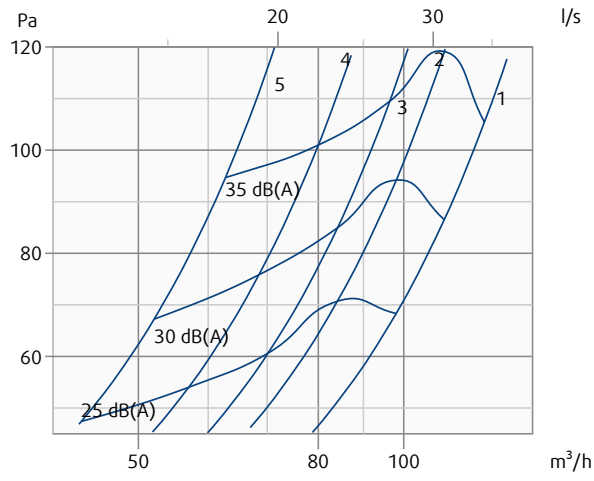
BOR-C-125-SW

Throw length (terminal velocity 0.2 m/s)



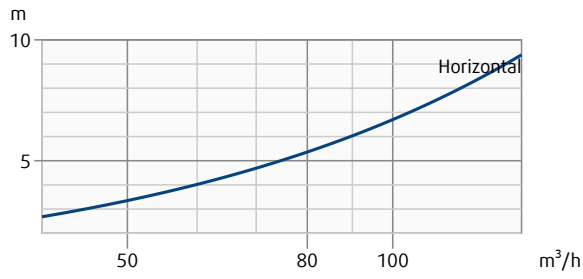
BOR-C-160-SW

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



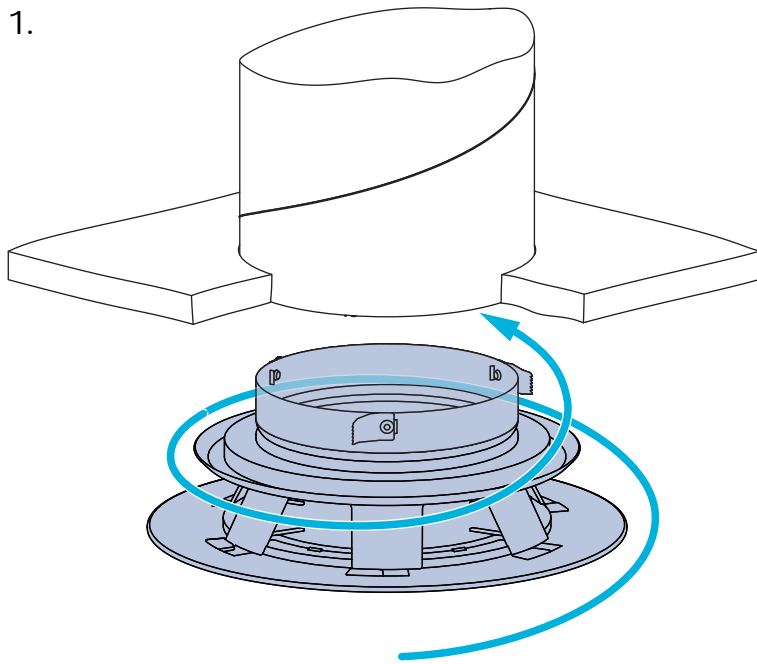
BOR-C-160-SW

Throw length (terminal velocity 0.2 m/s)

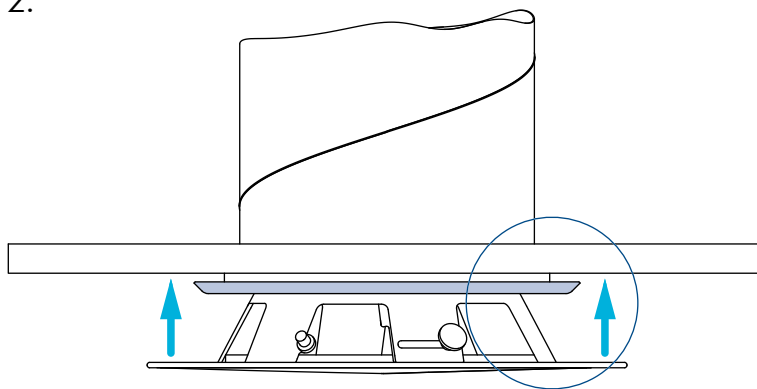


Installation

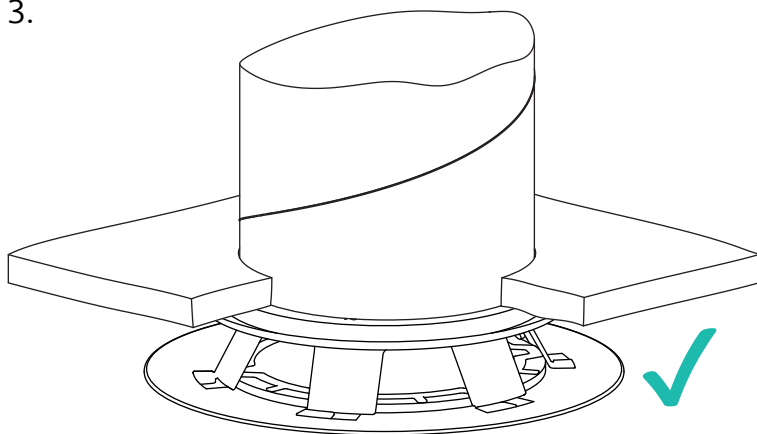
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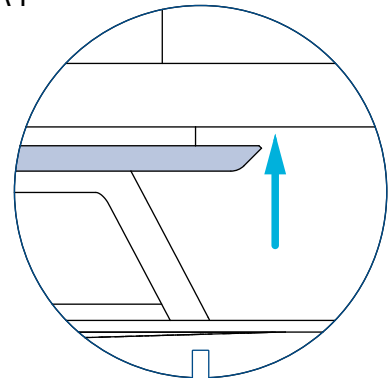
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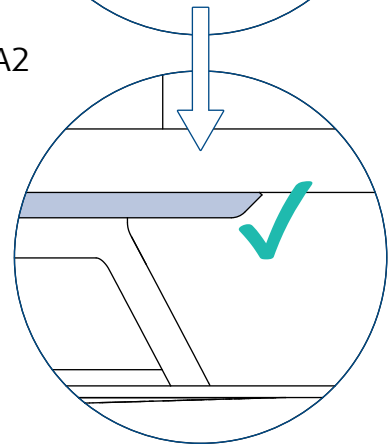
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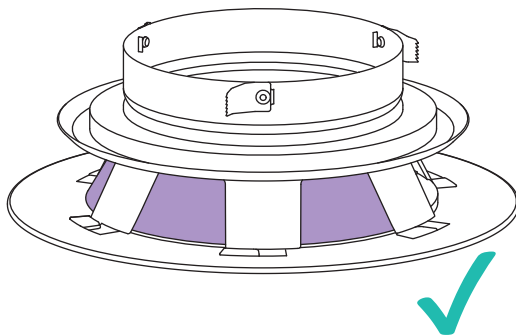
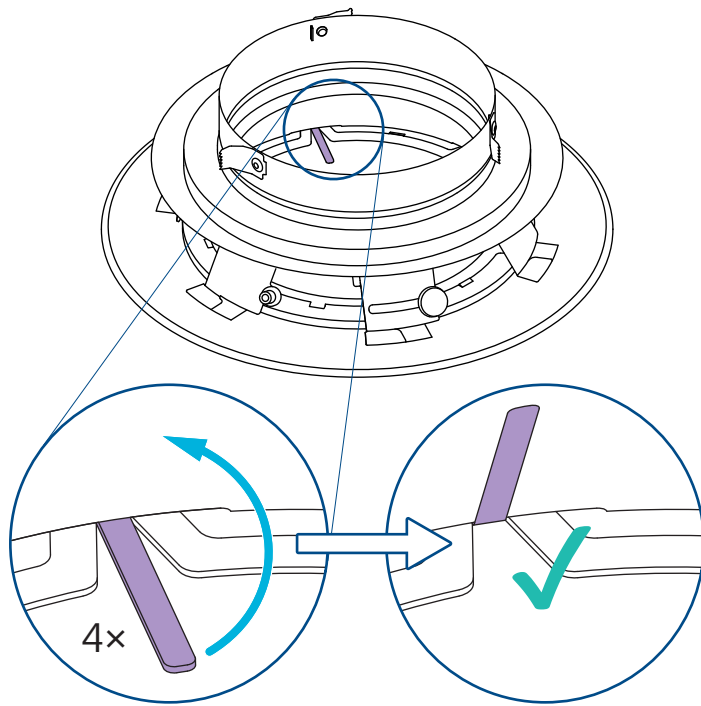
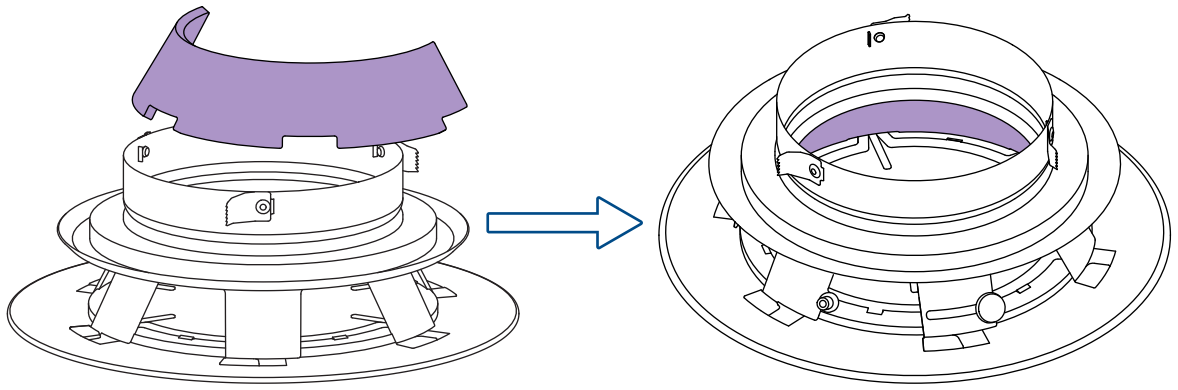


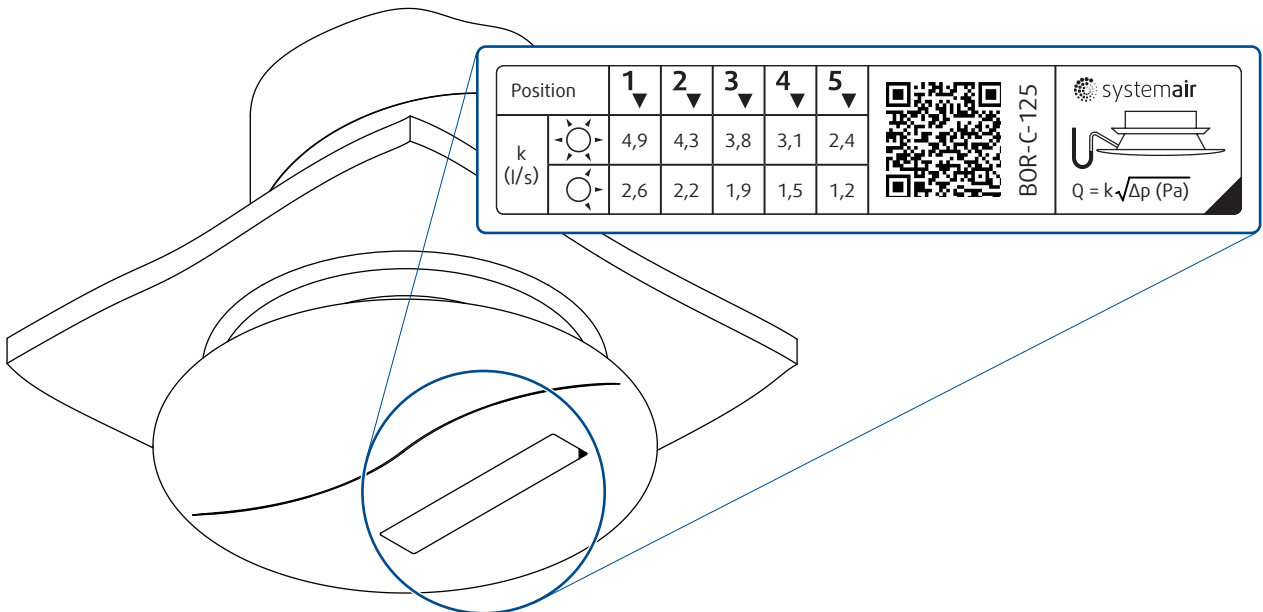
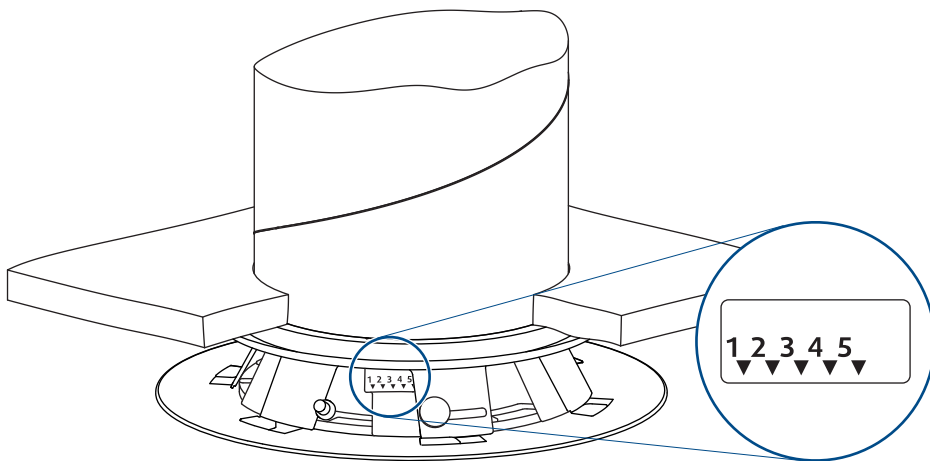
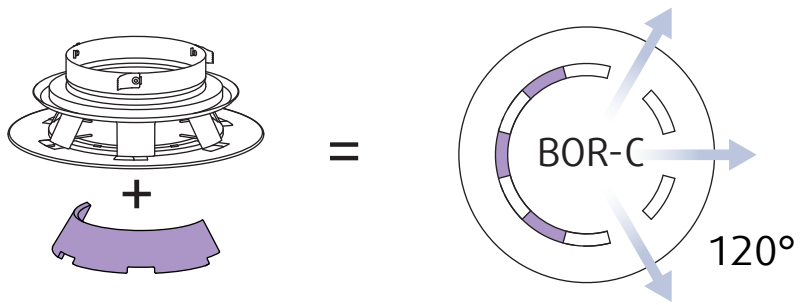
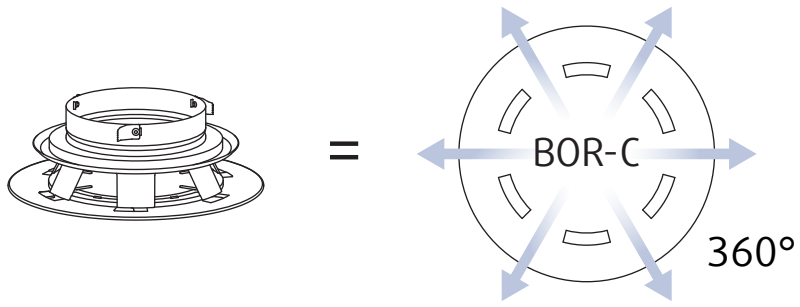
A1



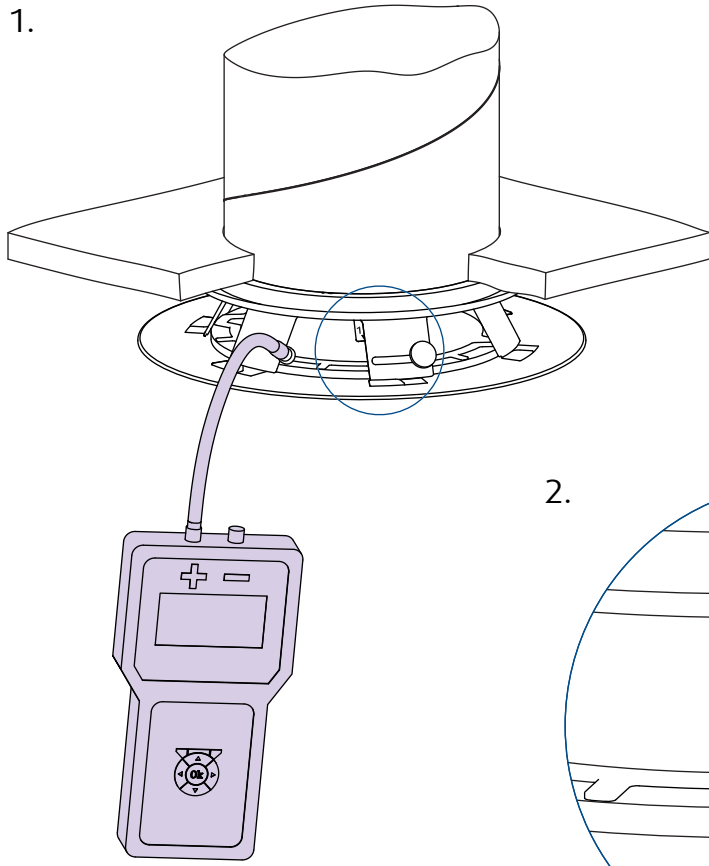
A2



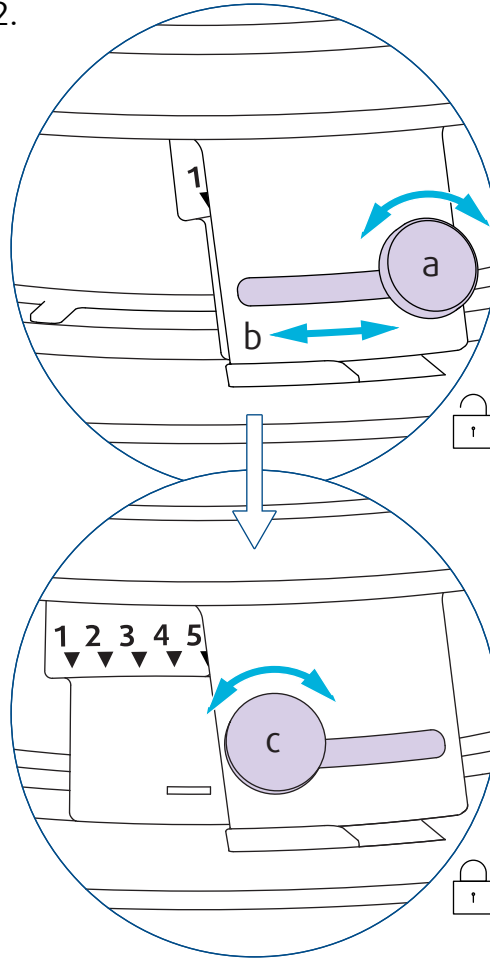




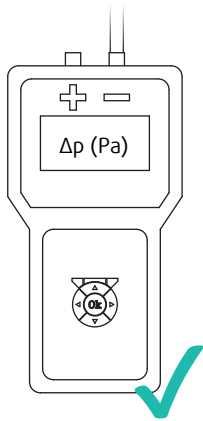
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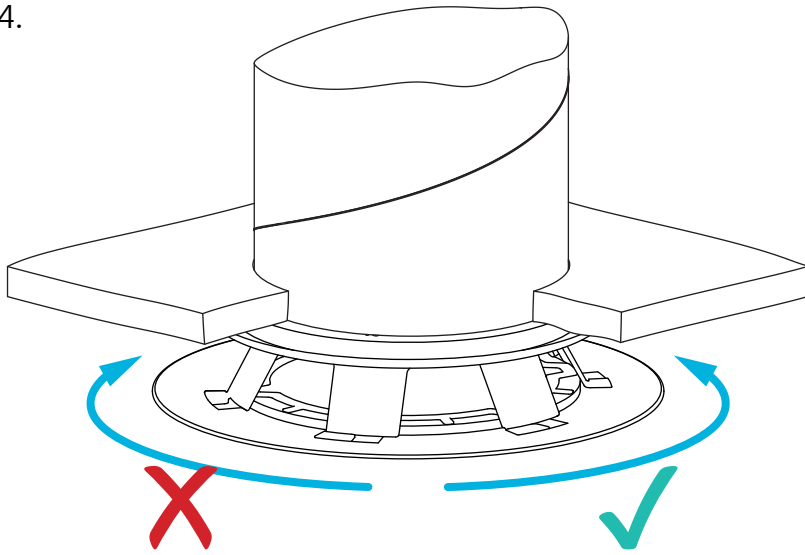
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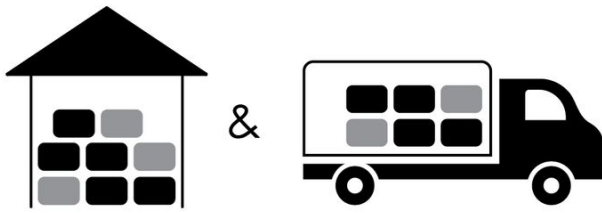
3.




4.




Transport, Storage and Operation



 °C -40 °C ... +50 °C

 % ≤ 95%



 °C -20 °C ... +70 °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.



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