



BOR-C

Residential Supply Diffuser

Data Sheet



Get In Touch

 Call: [0845 6880112](tel:08456880112)
 Email: info@adremit.co.uk

Our Address

Puravent, Adremit Limited, Unit 5a, Commercial Yard,
Settle, North Yorkshire, BD24 9RH



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Good to know

Current information on all products is available at design.systemair.com

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Description

BOR-C is a residential diffuser, developed to provide a draught-free and low acoustic noise air supply. The product is equipped for air flow adjustment and commissioning measurement. It is intended for installation on ceilings of offices, hotels, residential rooms etc. possibly as a part of VAV ventilation system.

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

List of Accessories

Detailed information about accessories for BOR-C is available on page [7](#).

- RB-BOR-C: Discharge Angle Restriction Blind
- RFU: Mounting frame
- RFP: Mounting frame with gasket

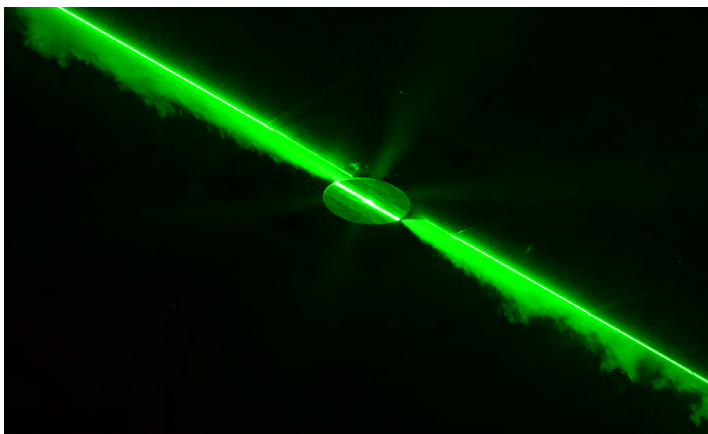


Fig. 1: Air flow visualisation

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Design

The BOR-C is manufactured from galvanized steel. The surface finish is signal white RAL 9003 or white RAL 9010, gloss 30 powder coating as standard.

Other RAL colours are possible upon request. Inside the body at the side vents the adjustable blinds are attached. The circular duct connection has a tight rubber gasket that locks the diffuser in the spiro - duct.

Product Parts & Setup Possibilities

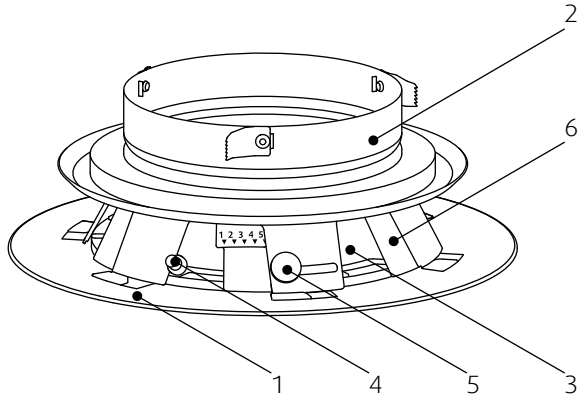


Fig. 2: Components of the BOR-C

Legend

1	Front plate
2	Duct connection with springs
3	Air discharge vents
4	ΔP measurement pin
5	Dial with marked positions and adjustment handle parked in the position 1
6	Adjustable blind

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Dimensions

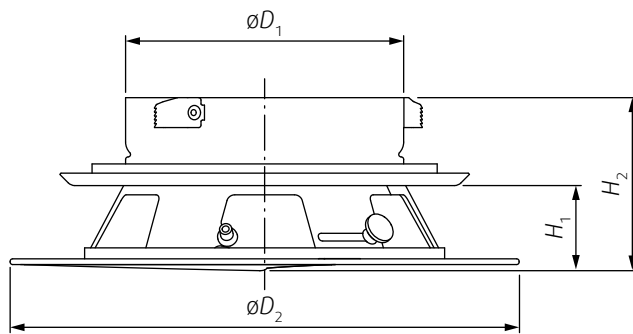


Fig. 3: Dimensions of BOR-C

Tab. 1: Dimensions of BOR-C

Type	DN (mm)	$\varnothing D_1$	$\varnothing D_2$	H_1	H_2	m (kg)
BOR-C-100	100	87	180	29	65	0,48
BOR-C-125	125	112	205	34	70	0,63
BOR-C-160	160	147	240	39	75	0,85

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Ordering Code

		BOR-C-	<input type="text"/>	-	<input type="text"/>
			100		
			125		
Nominal size $\varnothing D$ - connection diameter (mm)			160		
	Signal white RAL9003		SW		
Surface finish ¹⁾	Other RAL colour		RALXXXX		

NOTE: 1) If no colour is stated in the ordering code, the diffuser will be delivered in the RAL 9003 signal white colour.

Example of the Ordering Code

BOR-C-125-SW

Residential ceiling diffuser with nominal (connection) size 125 mm, coloured in RAL 9003 signal white.

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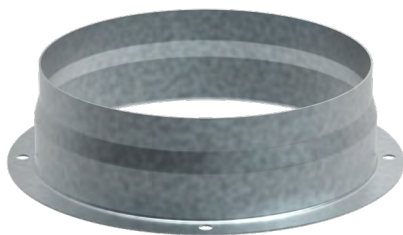
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Accessories

RFU

Mounting Frame



Mounting frame for installation of valves and diffusers to flexible ducts made from galvanized steel.

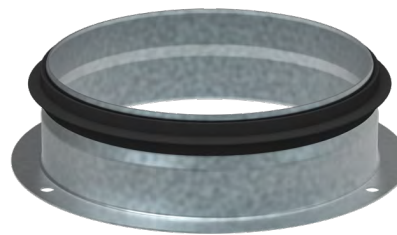
Sizes (DN): 100 mm, 125 mm, 160 mm

Item Numbers:

Product Code	Item Number
RFU-100	6130
RFU-125	6131
RFU-160	6134

RFP

Mounting Frame with Gasket



Mounting frame for installation of valves and diffusers to flexible ducts made from galvanized steel, with rubber gasket.

Sizes (DN): 100 mm, 125 mm, 160 mm

Item Numbers:

Product Code	Item Number
RFP-100	6125
RFP-125	6126
RFP-160	6127

RB-BOR-C

Discharge Angle Restriction Blind

Available for BOR-C sizes (DN): 100 mm, 125 mm, 160 mm

Ordering Codes:

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

Quick Selection

Type	Air flow volume and pressure drop at different sound power levels L_{WA}								
	25 dB			30 dB			35 dB		
	q (m ³ /h)	q (l/s)	Δp (Pa)	q (m ³ /h)	q (l/s)	Δp (Pa)	q (m ³ /h)	q (l/s)	Δp (Pa)
BOR-C-100	52	14	32	63	18	52	82	23	79
BOR-C-125	77	21	22	100	28	36	122	34	57
BOR-C-160	118	33	27	155	43	46	190	53	69

NOTE: The values are measured in air flow adjustment position 1

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Technical Parameters

Legend

p_s	Pa	Pressure drop
q_v	m ³ /h l/s	Air flow volume
L_{WA}	dB(A)	A-weighted total radiated sound power level
L_{pA}	dB(A)	A-weighted total sound pressure level expressed for 10 m ² room absorption area
$L_{0,2}$	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
1 2 3 4 5 ▼▼▼▼▼		Air flow volume adjustment position on the scale
 		Supply air horizontal discharge patterns 360° angle or 120° angle (restriction blind applied)

Calculation of Air Throw for Different Terminal Velocities

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

SIZE 100

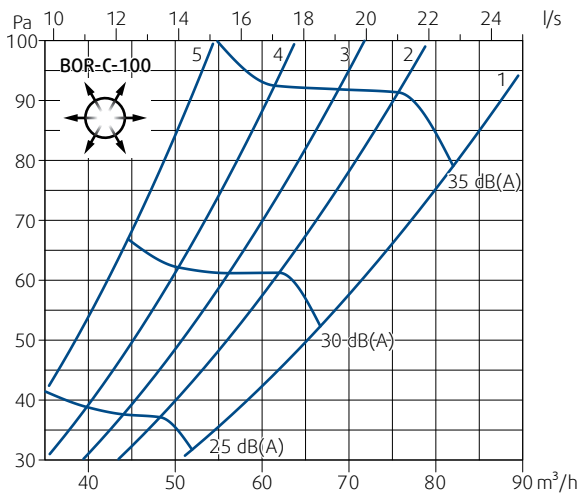


Diagram 1: Pressure drop and radiated sound power level dependent on supply air flow volume

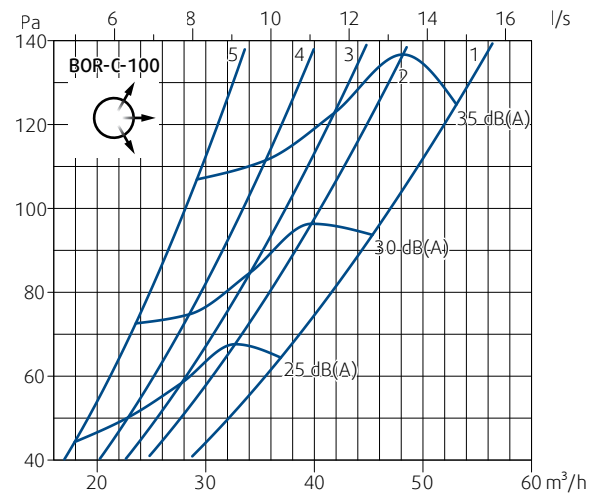


Diagram 3: Pressure drop and radiated sound power level dependent on supply air flow volume

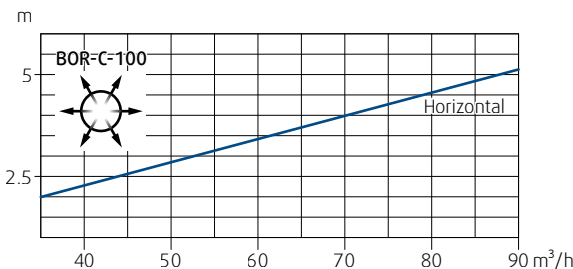


Diagram 2: Isothermal horizontal air throw length with terminal velocity 0,2 m/s in 360° angle, dependent on supply air flow volume

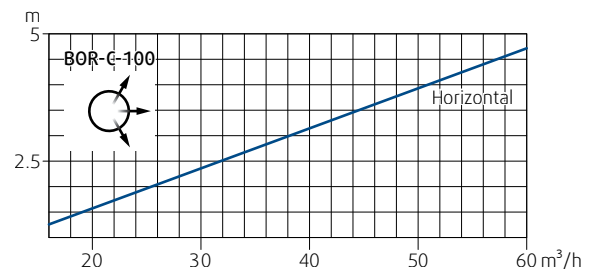




Diagram 4: Isothermal horizontal air throw length with terminal velocity 0,2 m/s in angle restricted to 120°, dependent on supply air flow volume



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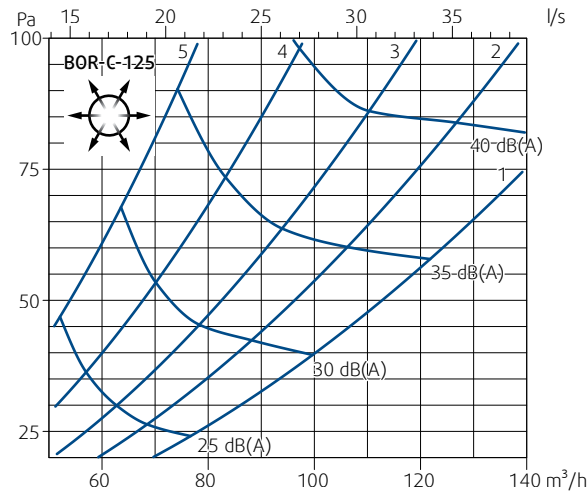


Diagram 5: Pressure drop and radiated sound power level dependent on supply air flow volume

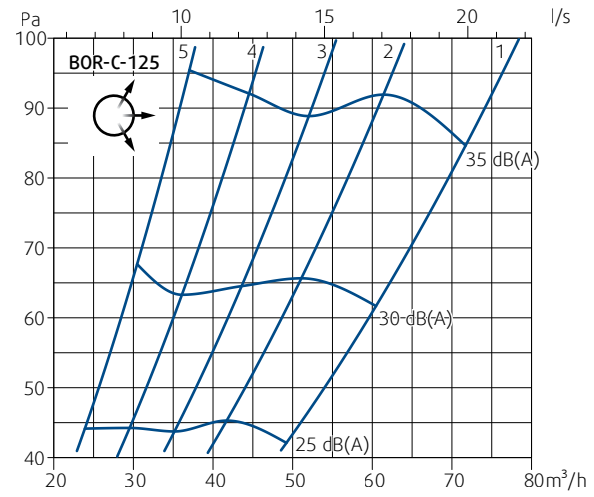


Diagram 7: Pressure drop and radiated sound power level dependent on supply air flow volume

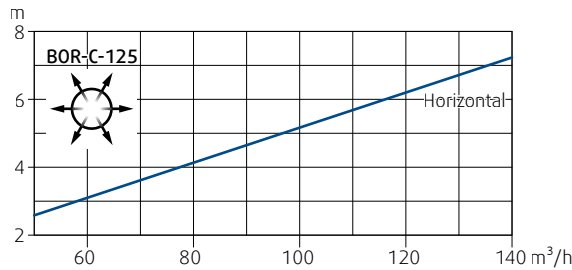


Diagram 6: Isothermal horizontal air throw length with terminal velocity 0,2 m/s in 360° angle, dependent on supply air flow volume

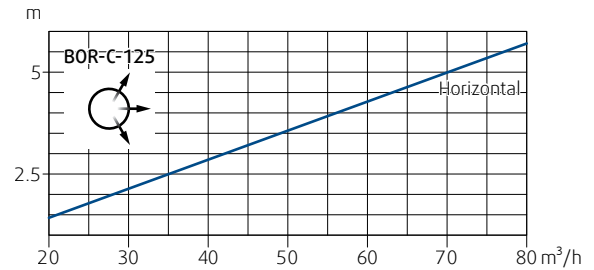


Diagram 8: Isothermal horizontal air throw length with terminal velocity 0,2 m/s in angle restricted to 120°, dependent on supply air flow volume

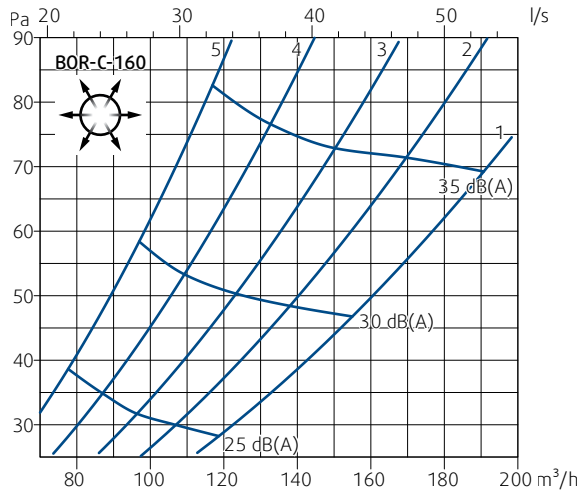


Diagram 9: Pressure drop and radiated sound power level dependent on supply air flow volume

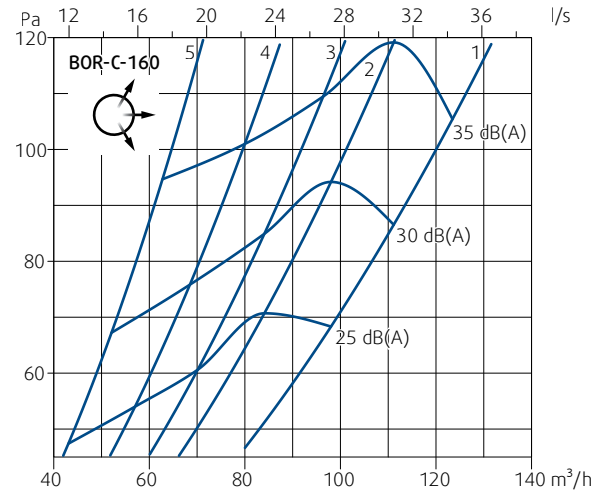


Diagram 11: Pressure drop and radiated sound power level dependent on supply air flow volume

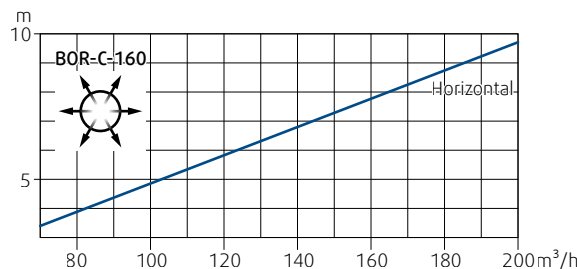


Diagram 10: Isothermal horizontal air throw length with terminal velocity 0,2 m/s in 360° angle, dependent on supply air flow volume

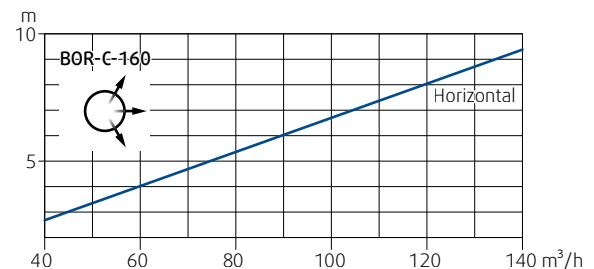


Diagram 12: Isothermal horizontal air throw length with terminal velocity 0,2 m/s in angle restricted to 120°, dependent on supply air flow volume

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Installation, Maintenance & Operation

Information about installation, maintenance and operation is available in the [“UserManual_BOR-C”](#) document or follow the instructions on [Systemair DESIGN](#).

Dry indoor conditions with an operation temperature range of -20°C to +70°C.

Transport & Storage



Dry indoor conditions with a temperature range of -40°C to +50°C.

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 [Systemair DESIGN](#).

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Related Products

BOR-R

Residential Supply Diffusers

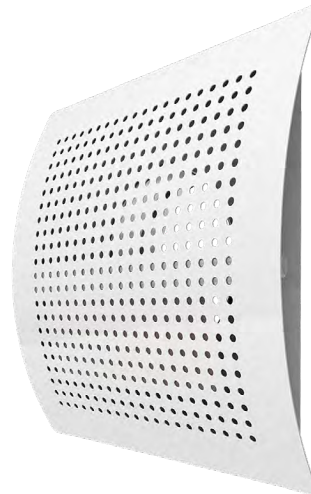
Product information is available within the ["DataSheet_BOR-R"](#) technical documentation and on [Systemair DESIGN](#).



BOR-S

Residential Supply Diffusers

Product information is available within the ["DataSheet_BOR-S"](#) technical documentation and on [Systemair DESIGN](#).



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