

# NoiseTrap<sup>®</sup> Blox

Modular sound-insulating ventilation grill

Combine the properties of an outside wall grill with acoustic attenuation in a single innovative, patented product. NoiseTrap Blox, a modular alternative to conventional sound-insulating grills, achieves high attenuation of low frequency sound. Despite this, NoiseTrap Blox has a low installation depth. The elements are easy to assemble thanks to the user-friendly click system.

## Applications

NoiseTrap Blox is developed specifically for use in a wide range of applications. The elements are suitable for situations where large volumes of air must flow through an opening and where installation space is limited. This includes housings, industrial façades, and cooling and heating installations. The elements can be used both horizontally and vertically.

## Sound insulation

The sound insulation is shown in the table on the next page. The insulation values are measured in accordance with BS EN ISO 10140-2:2010.

## Dimensions

- A single element is 236.5 mm wide, 236.5 mm high, and 306 mm deep. When an element is connected, it still measures 232 mm in width, 232 mm in height; the depth of the element does not change.
- Unlike conventional grill systems, there is no limit to the number of NoiseTrap Blox elements that can be combined. Using the click system and installation frame, the elements can be interconnected to form a complete assembly. The frame is designed such that larger walls of the elements can also be formed.

## Composition

NoiseTrap Blox consists of a number of components made of polypropylene, a non-reflective, non-toxic plastic. The material is 100% recyclable, thanks in part to its low density. The interior of Blox has the shape of an 'X' and consists of several coupled chambers based on the Helmholtz resonator principle. Based on this theory, the opening and chamber volumes are tuned to the intended attenuation at low frequencies. The housing, in black as standard, has two openings for the airflow. The elements are small and light, so they can be easily transported to roof installations with a lift.

## Options

- Fine-mesh grill that prevents entry of vermin (birds, mice etc.) and leaves.
- Version without sound-absorbent foam (for clinical areas, e.g. in the food sector).



## Properties

- High attenuation of low frequencies with low installation depth
- Absorption based on metamaterial principle (Helmholtz resonator)
- Rain resistant (drainage system)
- Modular system
- Assembly with click system
- Lightweight plastic
- Dimensionally stable
- Available in RAL 9011 (graphite black) and RAL 7074 (light concrete grey)
- Colour-fast and UV resistant
- Mounting flange or support angle
- Can be recycled in PP recycling systems

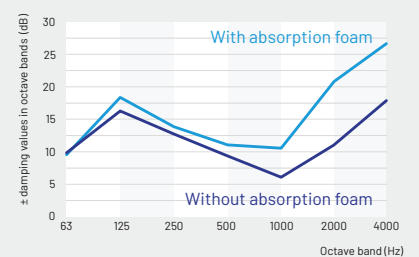
## Applications

- Industrial sound sources
- Facades (balanced ventilation and natural ventilation)
- Air-conditioning installations
- Cooling and heating installations



## Sound insulation

Airborne sound insulation values measured in accordance with BS EN ISO 10140-2:2010



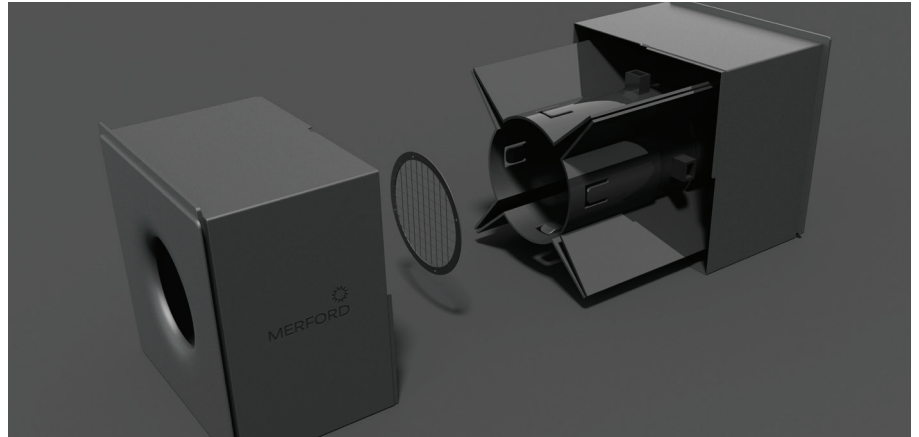
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## Guarantee

Merford provides you with guaranteed, acoustic, safe, thermal, custom-made solutions. Call our sales department right away to discuss your specific requirements.

## Disclaimer

Although this product sheet is drawn up with care, we cannot guarantee its content. We reserve the right to make changes. For the most up-to-date version, please contact our sales department or visit merford.com.



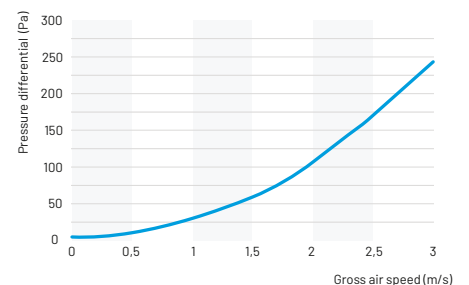
— Construction and main components of NoiseTrap Blox

Frequency band (Hz)	Transmission loss (dB)			
	With absorption foam		Without absorption foam	
	Third octave values	Octave values	Third octave values	Octave values
50	10,2		10,4	
63	9,1	9,8	10,0	9,6
80	10,3		8,5	
100	20,4		18,6	
125	16,7	18,2	14,2	16,0
160	18,3		16,3	
200	15,3		14,8	
250	16,9	14,1	15,1	12,7
315	11,8		10,2	
400	14,8		11,7	
500	13,1	11,2	12,8	9,3
630	8,3		6,4	
800	8,2		5,3	
1000	11,3	10,5	7,0	6,9
1250	13,6		9,4	
1600	17,7		11,1	
2000	21,7	20,8	10,2	11,2
2500	28,6		12,7	
3150	30,2		14,5	
4000	26,7	26,5	20,0	17,7
5000	24,4		22,7	
Rw/NRC	15 (-1;-2)		10 (-1;-1)	

— Sound-insulation values NoiseTrap Blox measured in accordance with BS EN ISO 10140-2:2010

Air speed (m/s)	Pressure loss (Pa)
0,25	2,1
0,50	7,7
0,75	16,7
1,00	29,0
1,25	44,6
1,50	63,4
1,75	85,4
2,00	110,7
2,25	139,5
2,50	171,5
2,75	206,9
3,00	245,5

— Air speed at inlet boundary



— Theoretical pressure differential calculated via CFD (Computational Fluid Dynamics - simulation)

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