

Econox linear grille, aluminium

Description and function

The Econox linear grille is a linear slot diffuser featuring adjustable aluminum air deflectors within its slots, designed primarily for spaces where discrete, elegant, yet flexible ventilation is required. The Econox linear grille is constructed from high-quality extruded aluminum, available with anodized or powder-coated finishes, ensuring durability and a polished appearance. The simple manual adjustment of the air deflectors allows for both horizontal and vertical airflow, depending on the application. The diffuser design leverages the Coanda effect, allowing the airflow to adhere to ceilings, ensuring efficient air mixing and good overall air distribution, resulting in low-velocity airflow in occupied spaces when designed properly. The slot diffuser can be directly connected to the commissioning box, providing additional sound attenuation, even air distribution, and the ability to adjust the air volume and pressure drop.

Applications

The design of the Econox linear grille linear slot diffuser facilitates precise control over airflow direction, making it highly adaptable to various architectural requirements. The diffuser is perfect for residential houses, offices, retail stores, restaurants, and hotels. Due to its specially shaped and adjustable extruded aluminum slot profiles are optimized for VAV or DCV applications. The recommended maximum temperature difference (Δt) for cooling applications is 10°C.

Standard sizes

500, 1000, 1250, 1500 and 2000 mm lengths and 1, 2, 3 or 4 slot design.

Airflow rates

See technical data sheet for more information.



Main characteristics

- Linear slot ceiling diffuser
- Elegant, minimalistic appearance
- Horizontal or vertical air distribution
- Available with 1 to 4 slots
- Adjustable extruded aluminum profiles
- Draught-free operation with low sound levels
- Excellent ventilation efficiency

Materials

Econox linear grille is constructed with an aluminum frame, extruded profiles and end pieces, available in RAL 9010, 9016, and 9005 color.

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Mounting instructions

The Econox linear grille slots can be installed in either a solo or in a continuous row design. For a continuous row installation the hidden assembly of the slot rows we provide a sufficient number of fastening elements. The plenum boxes can be connected through the pre-drilled holes on their sides with 2 Ø3,2x6 POP rivets.

The Econox linear grille and the plenum box are connected with a galvanized fastening bridge with M4x50 socket head screws. The required amount of fastening bridges and hexagonal screws are supplied together with the Econox linear grille slot diffusers.

The diffuser can be connected from below to the connection box after rotating the air inlet deflector by 90°. The assembled unit can be leveled by changing the hanging height of the box.

When mounting the diffusers and the boxes in a continuous row, it is recommended to first position the slot diffusers and plenum boxes, before connecting them to each other.

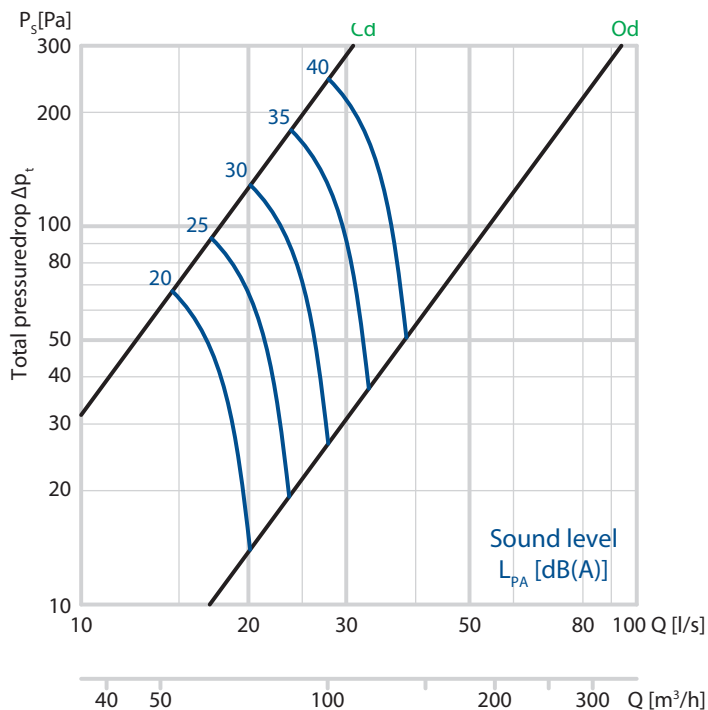
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Diagrams and acoustic data

The Econox slot diffuser noise levels were performed together with connection box.

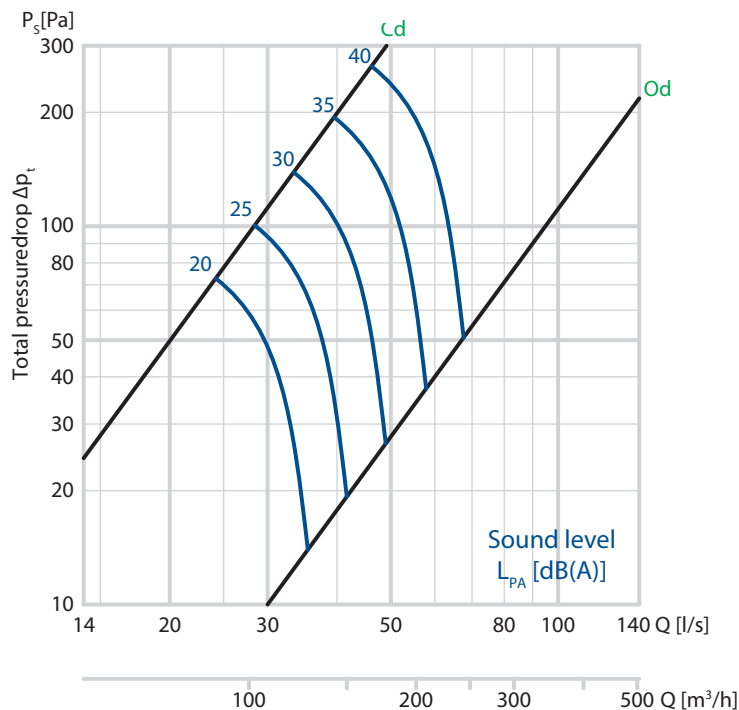
D.1.

Econox 500-1 row



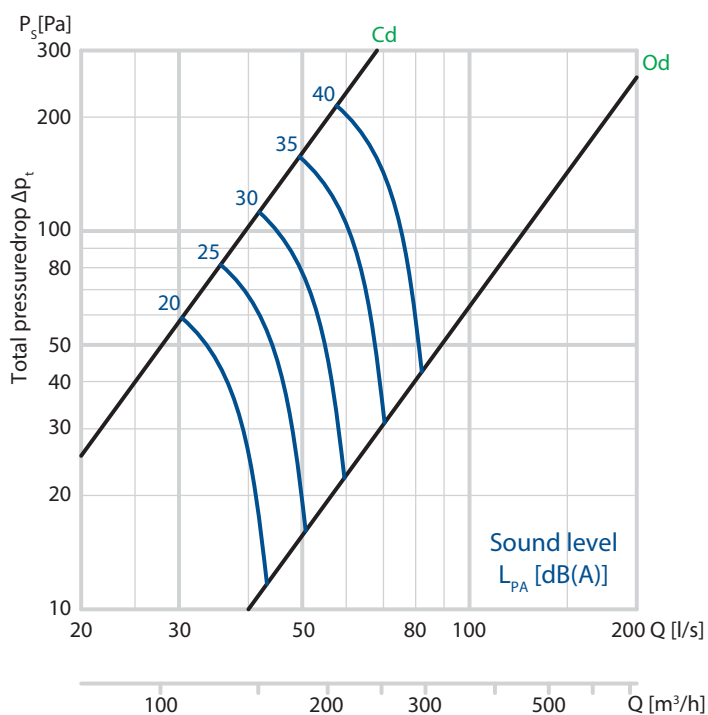
D.2.

Econox 500-2 rows



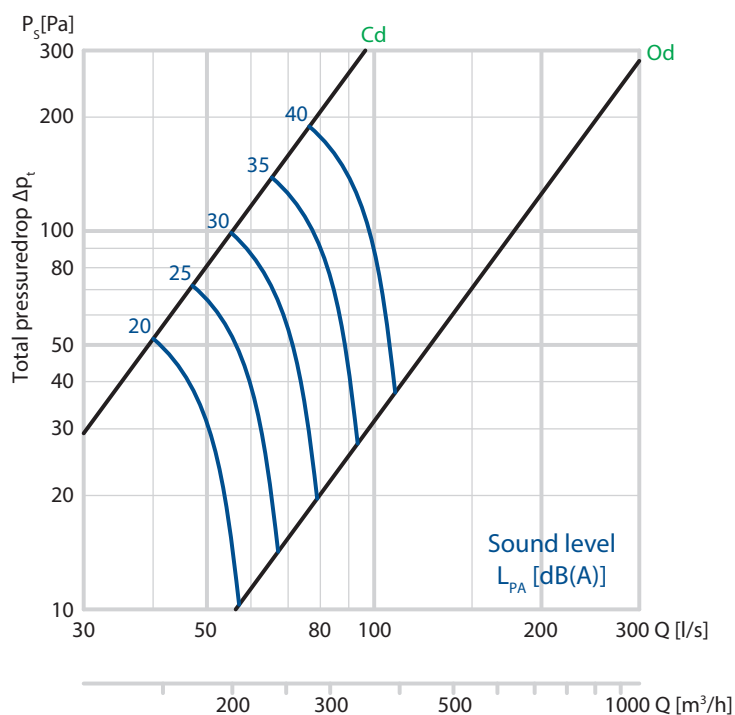
D.3.

Econox 500-3 rows



D.4.

Econox 500-4 rows

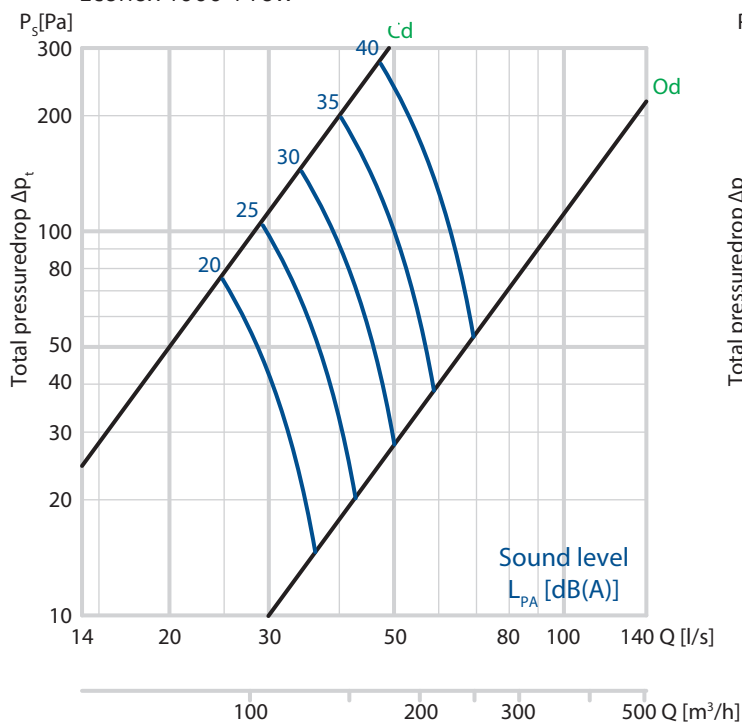


Cd = Closed damper
Od = Opened damper

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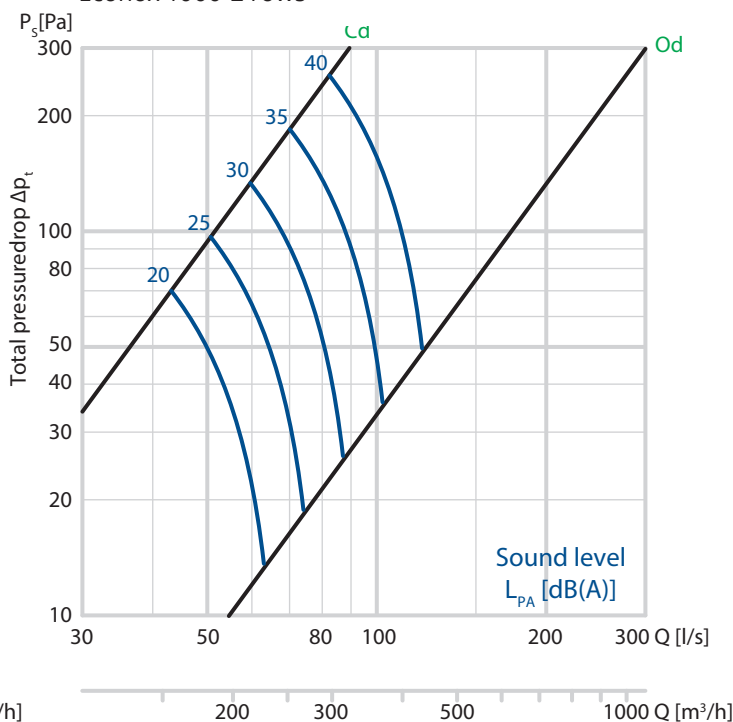
D.5.

Econox 1000-1 row



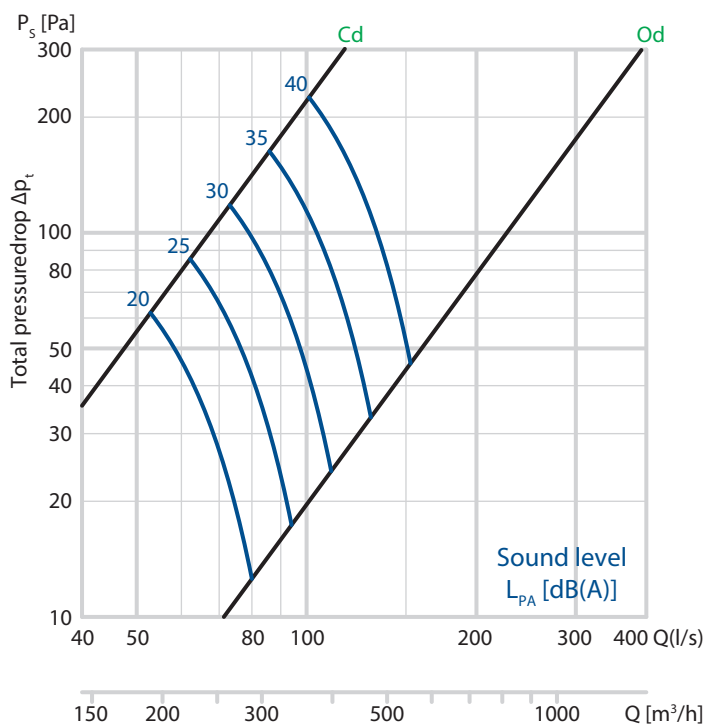
D.6.

Econox 1000-2 rows



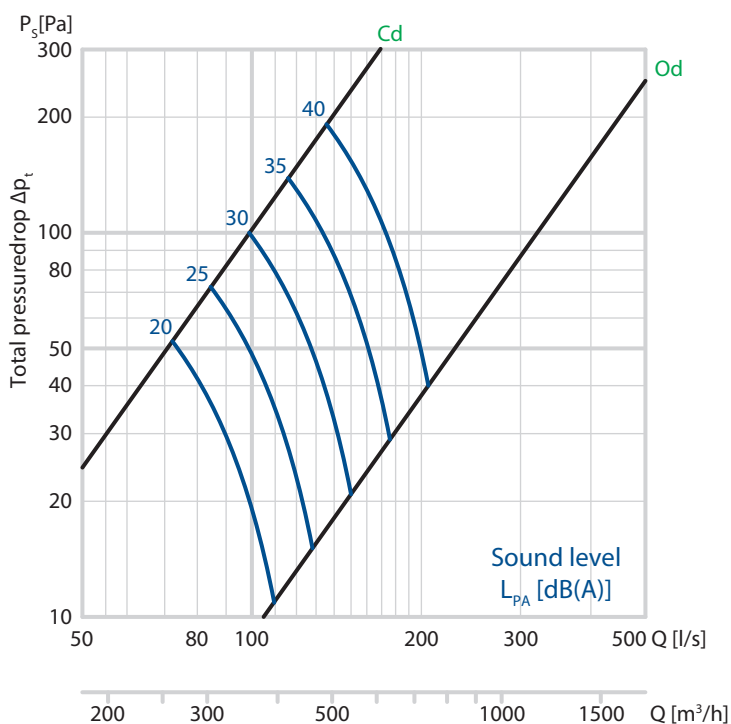
D.6.

Econox 1000-3 rows



D.7.

Econox 1000-4 rows

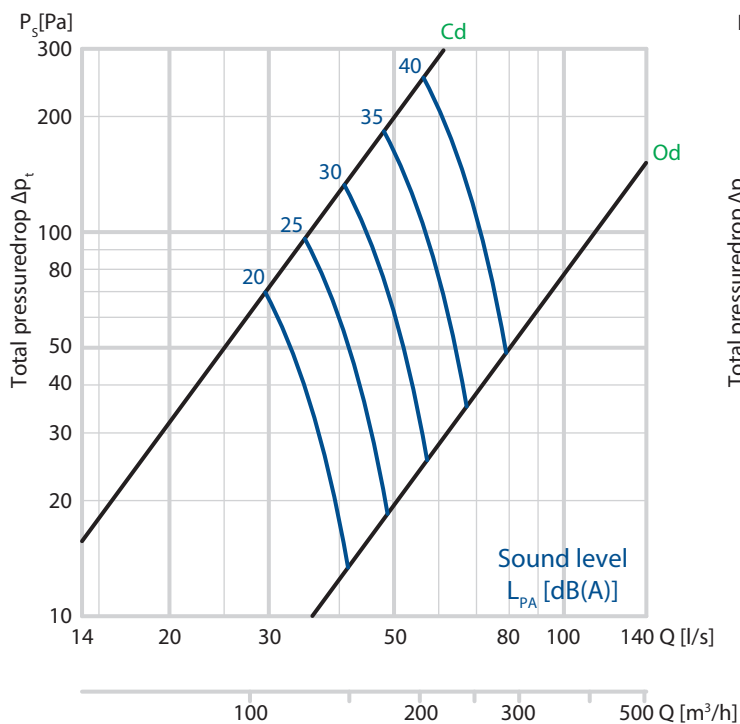


Cd = Closed damper
Od = Opened damper

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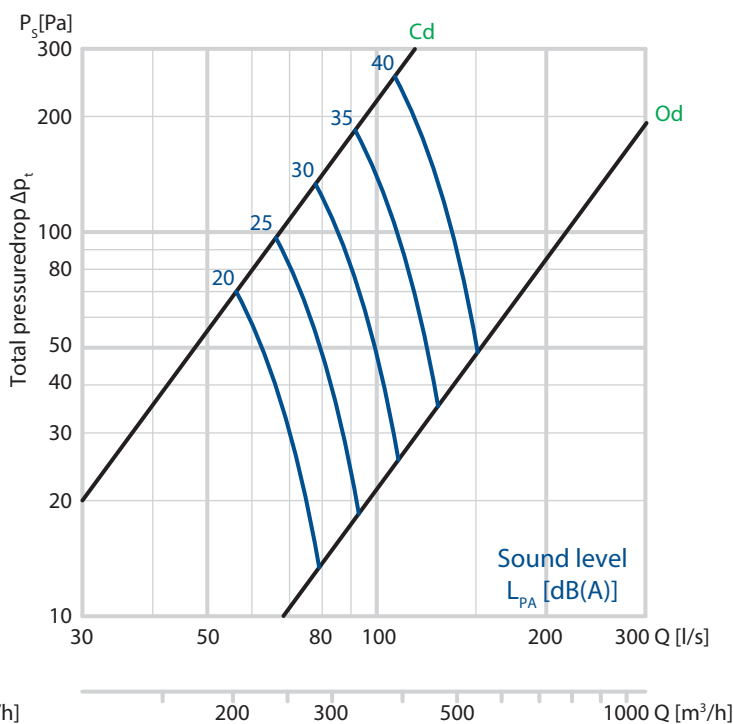
D.8.

Econox 1250-1 row



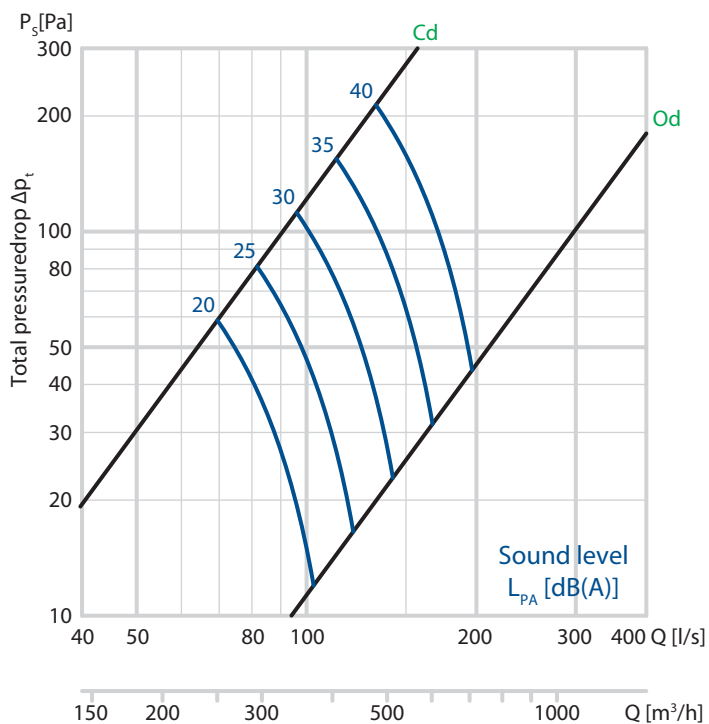
D.9.

Econox 1250-2 rows



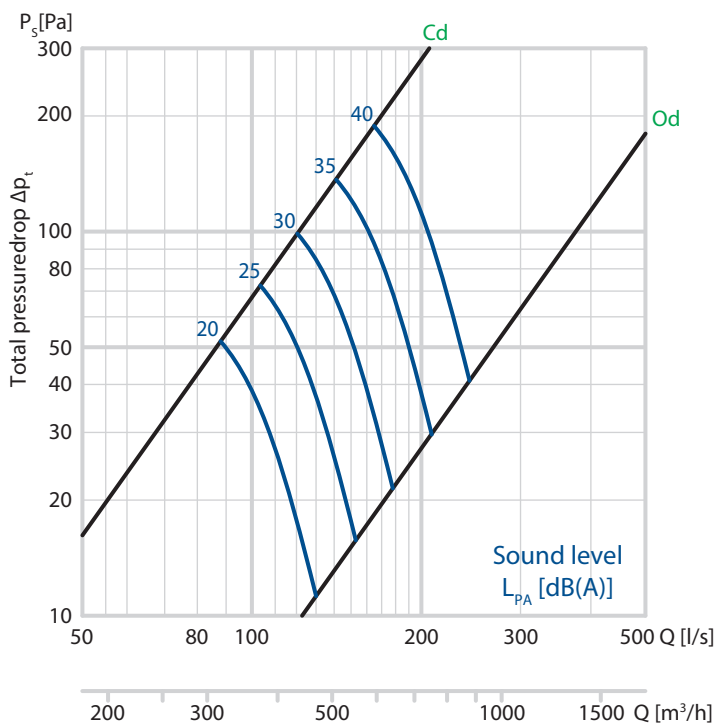
D.10.

Econox 1250-3 rows



D.11.

Econox 1250-4 rows

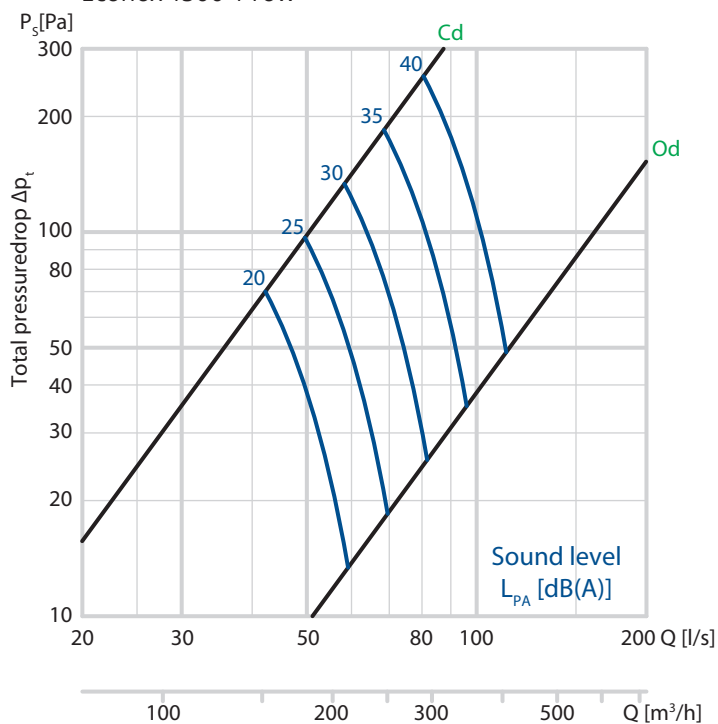


Cd = Closed damper
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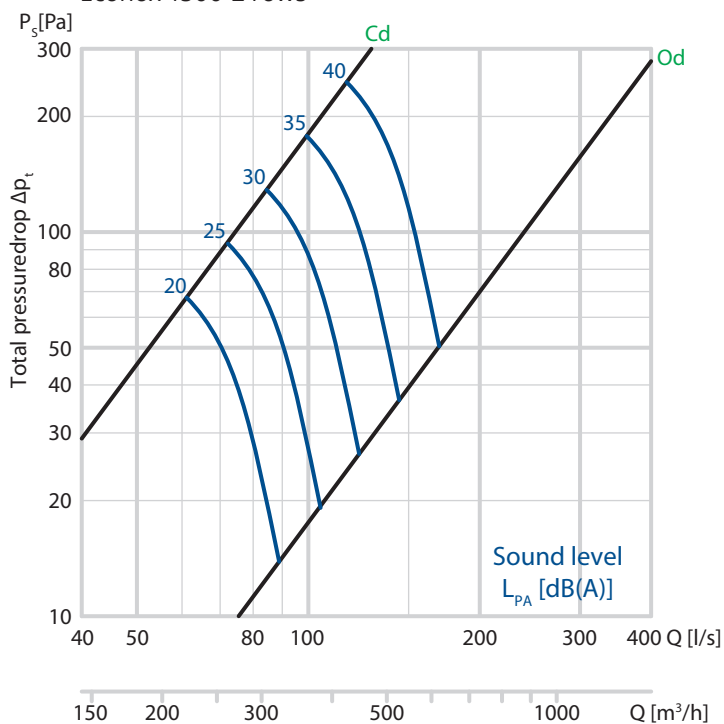
D.12.

Econox 1500-1 row



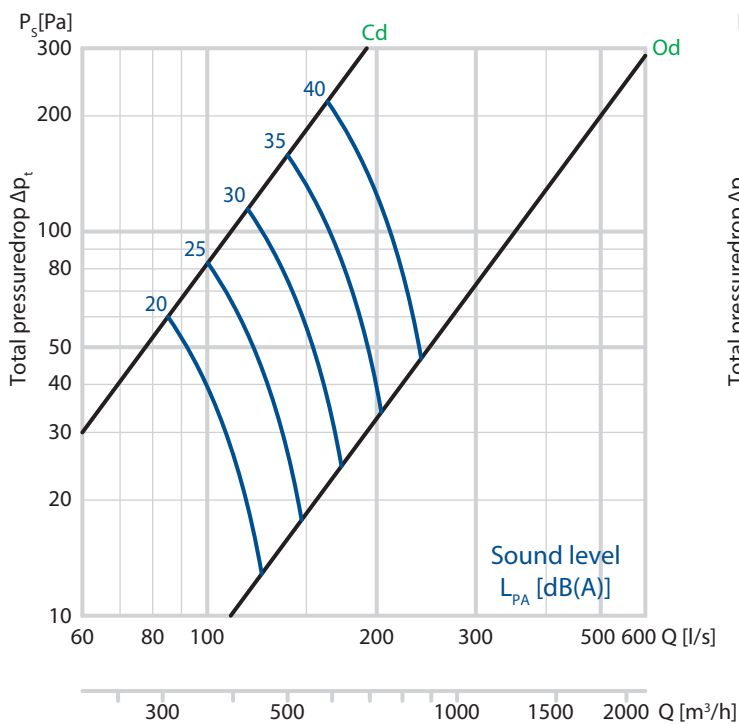
D.13.

Econox 1500-2 rows



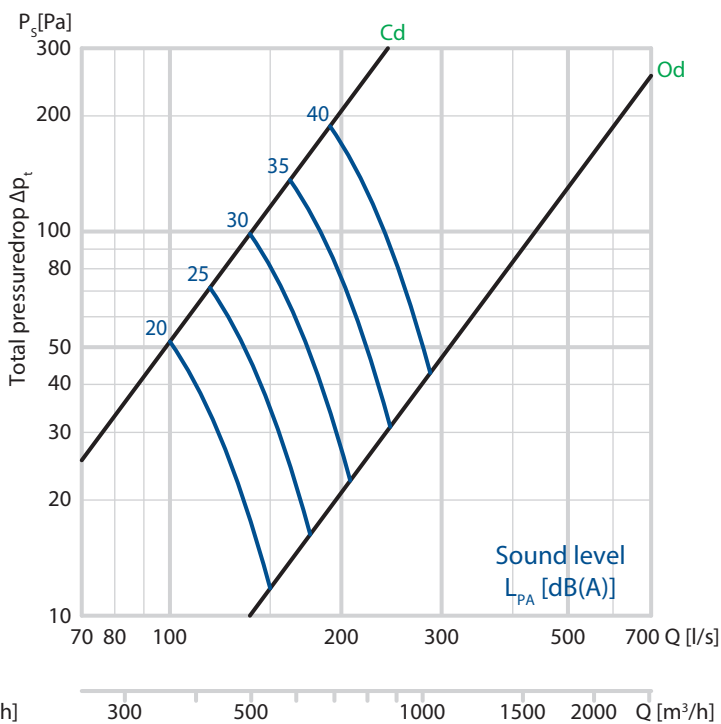
D.14.

Econox 1500-3 rows



D.15.

Econox 1500-4 rows

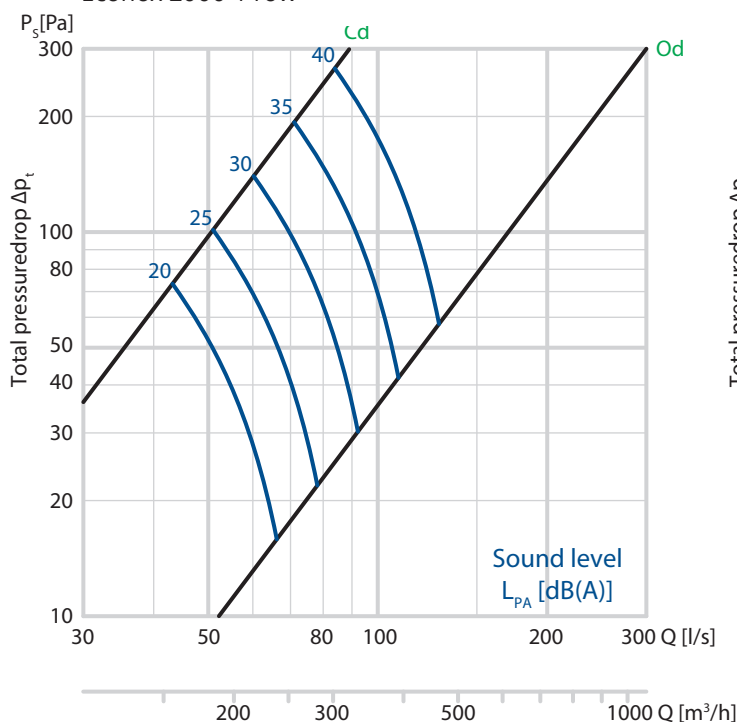


Cd = Closed damper
Od = Opened damper

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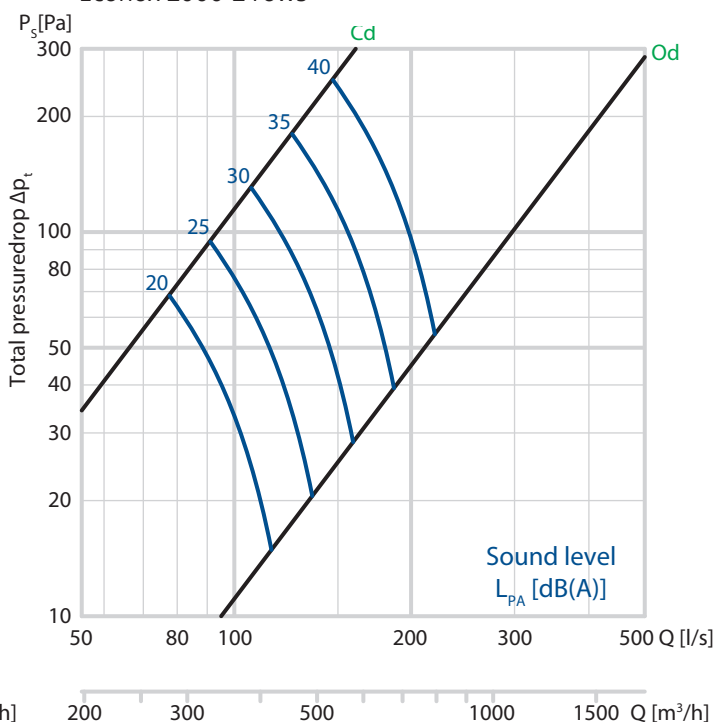
D.16.

Econox 2000-1 row



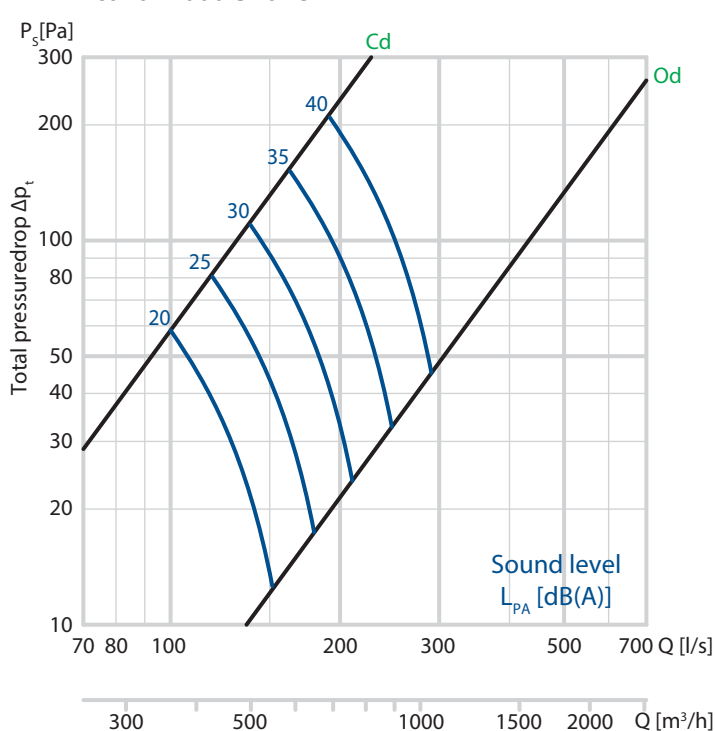
D.17.

Econox 2000-2 rows



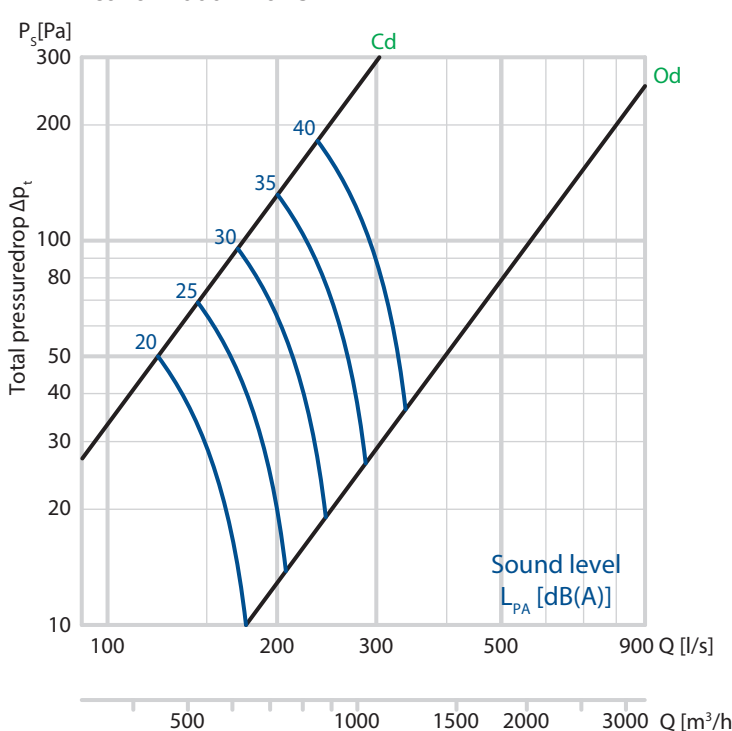
D.18.

Econox 2000-3 rows



D.19.

Econox 2000-4 rows

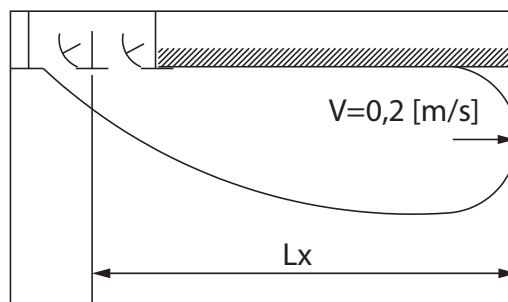


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Od = Opened damper

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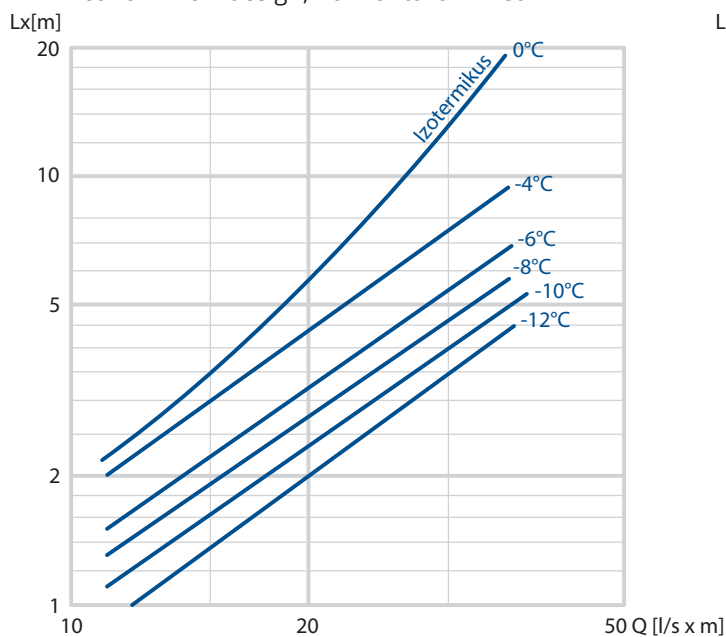
Horizontal throw length

The horizontal throw length depends on the Δt between the supply air and the room air temperature.



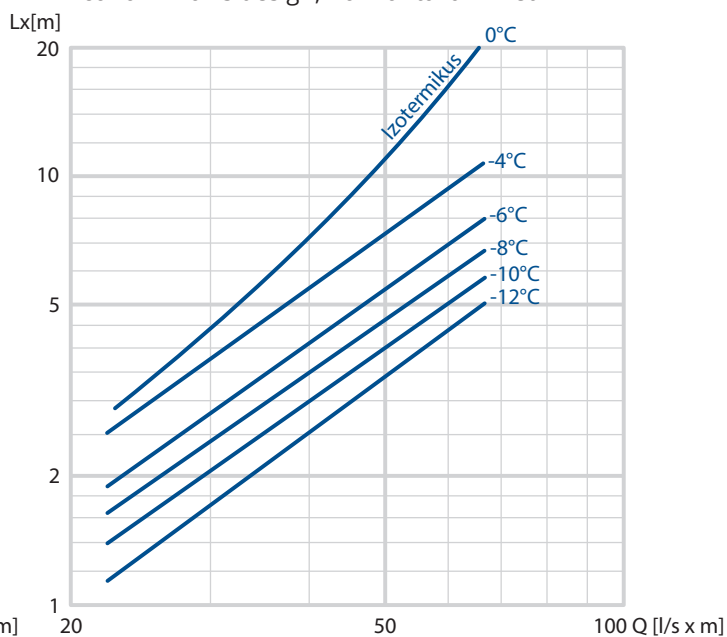
D.21.

Econox 1-row design, horizontal air inlet



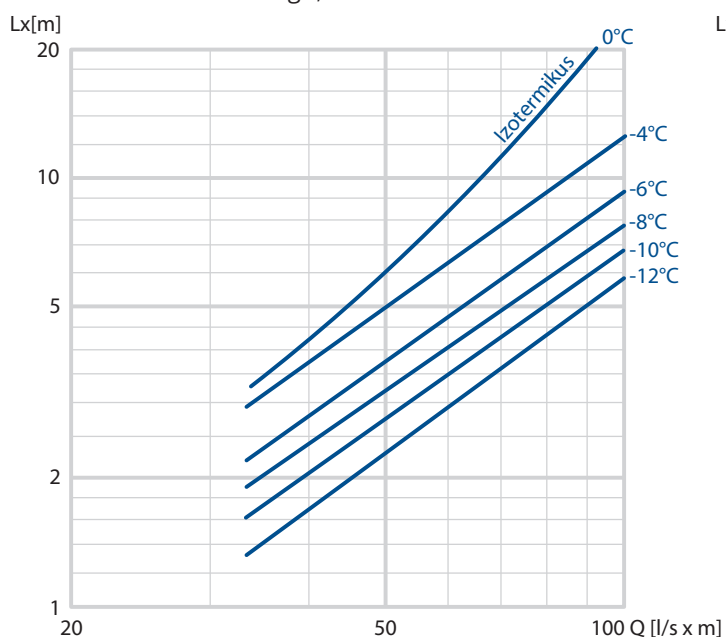
D.22.

Econox 2-rows design, horizontal air inlet



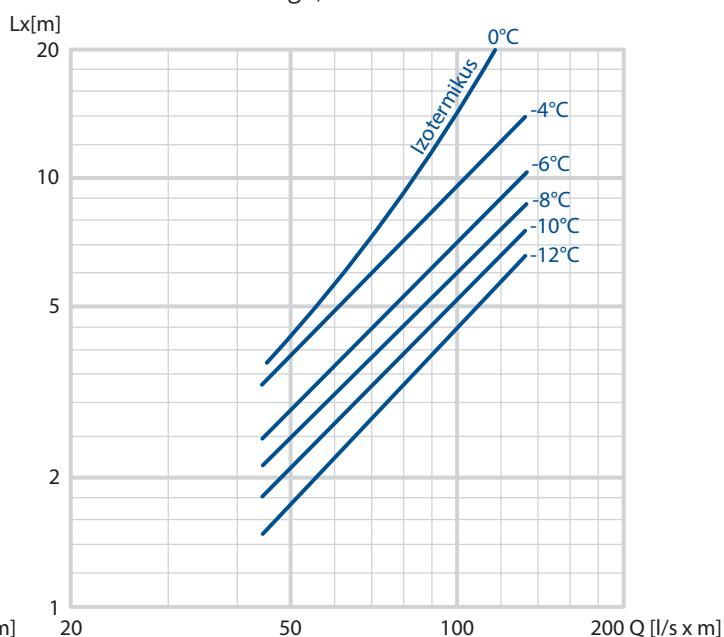
D.23.

Econox 3-rows design, horizontal air inlet



D.24.

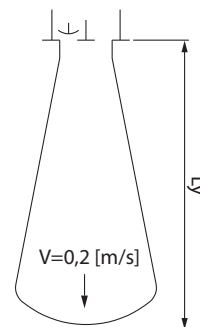
Econox 4-rows design, horizontal air inlet



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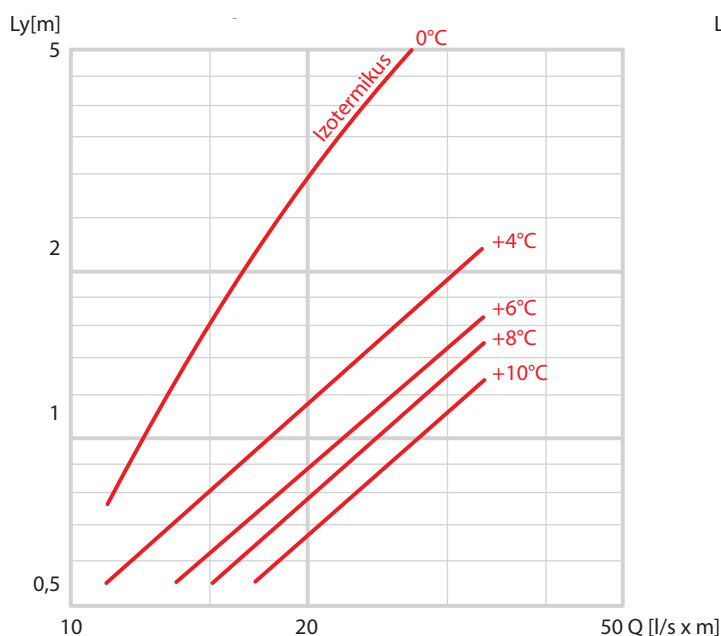
Vertical throw length

The vertical throw length depends on the Δt between the supply air and the room air temperature.



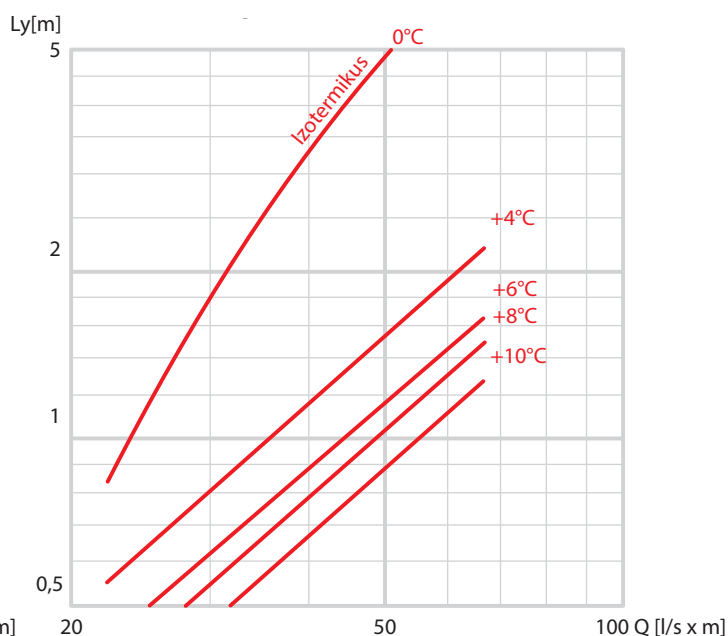
D.25.

Econox 1-row design, vertical air inlet



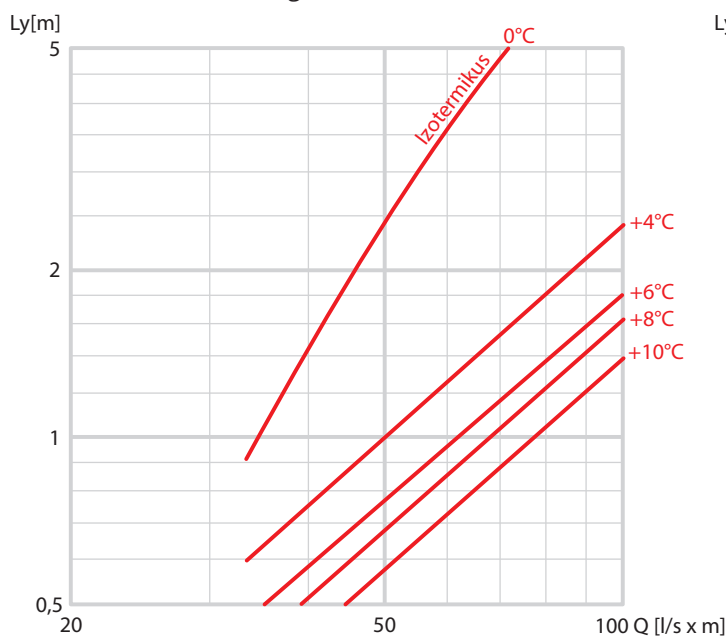
D.26.

Econox 2-rows design, vertical air inlet



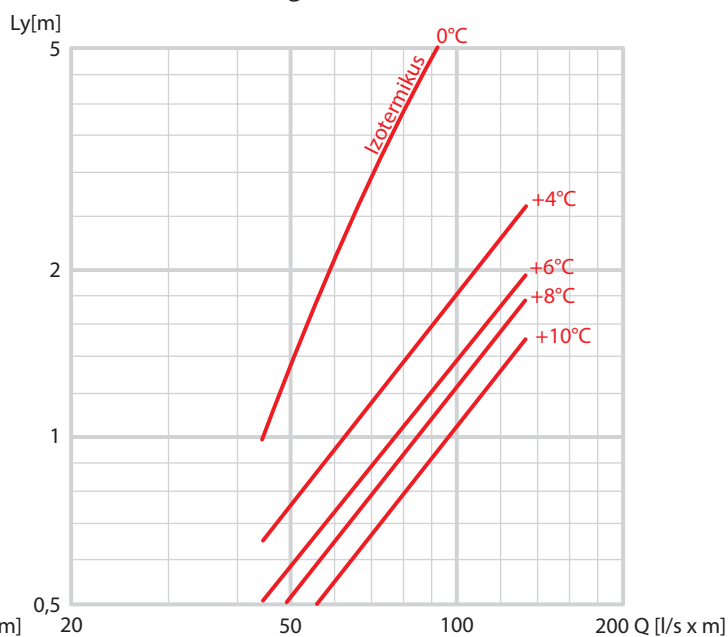
D.27.

Econox 3-rows design, vertical air inlet



D.28.

Econox 4-rows design, vertical air inlet



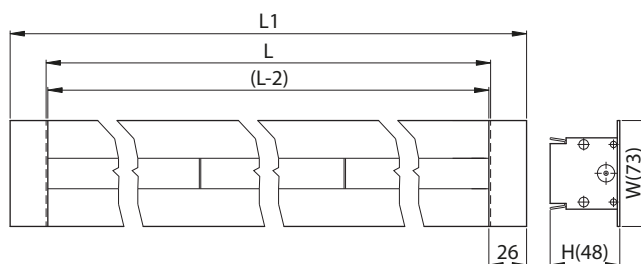
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Dimensions

T.1. Econox 1-row slot diffuser (Econox-1)

Type	Dimensions (mm)				Fin division (pcs)*
	L	L1	W	H	
500	500	550	73	48	1x2
1000	1000	1050			1x4
1250	1250	1300			1x5
1500	1500	1550			1x6
2000	2000	2050			1x8

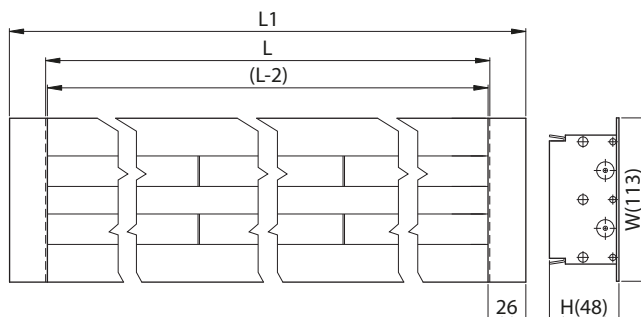
* 1 unit of diffuser profile length: 250mm. The dimensions shown are in mm.



T.2. Econox 2-rows slot diffuser (Econox-2)

Type	Dimensions (mm)				Fin division (pcs)*
	L	L1	W	H	
500	500	550	113	48	2x2
1000	1000	1050			2x4
1250	1250	1300			2x5
1500	1500	1550			2x6
2000	2000	2050			2x8

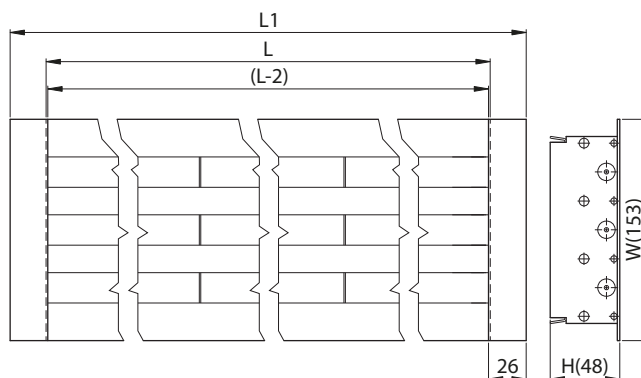
* 1 unit of diffuser profile length: 250mm. The dimensions shown are in mm.



T.3. Econox 3-rows slot diffuser (Econox-3)

Type	Dimensions (mm)				Fin division (pcs)*
	L	L1	W	H	
500	500	550	153	48	3x2
1000	1000	1050			3x4
1250	1250	1300			3x5
1500	1500	1550			3x6
2000	2000	2050			3x8

* 1 unit of diffuser profile length: 250mm. The dimensions shown are in mm.



T.4. Econox 4-rows slot diffuser (Econox-4)

Type	Dimensions (mm)				Fin division (pcs)*
	L	L1	W	H	
500	500	550	193	48	4x2
1000	1000	1050			4x4
1250	1250	1300			4x5
1500	1500	1550			4x6
2000	2000	2050			4x8

* 1 unit of diffuser profile length: 250mm. The dimensions shown are in mm.

