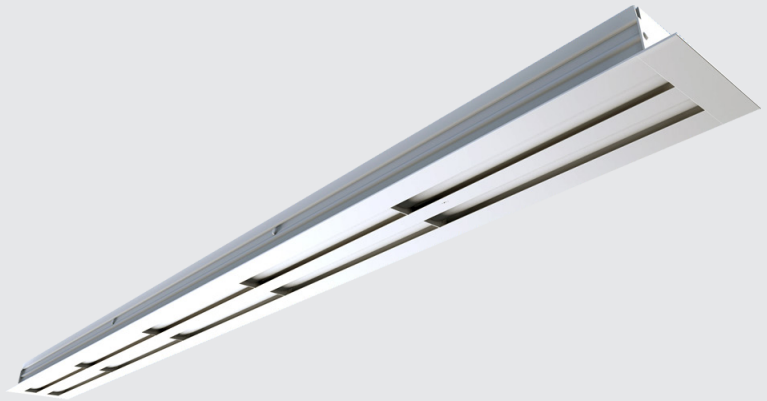


Linear slot diffuser

RBF



Description

The RBF is a rectangular, linear supply air diffuser equipped with slots, which is suitable for both supply and exhaust air. The simple manual adjustment of the aluminium air deflectors allows for both horizontal and vertical airflow. The slot diffuser can be connected directly to the RDS plenum box. The RBF linear slot diffuser is best suited for applications where discrete, elegant, but flexible ventilation is required, e.g. for residential houses, offices and department stores etc. Due to the specially shaped and adjustable extruded aluminium slot profiles, the diffuser works very well in VAV applications as well.

Sizes

As standard RBF is supplied in 500, 1000, 1250, 1500 and 2000 mm lengths and 1, 2, 3 or 4 row design.

Airflow rates

See the diagrams below for further information.

Material & finish

RBF linear slot diffuser:

Frame, extruded profiles and end pieces of aluminium. Slots and frame are powder coated in standard white colour. The unit can also be supplied in anodised or natural aluminium finish.

RDS commissioning box:

Made of galvanized sheet steel, sound-reducing glass-wool laminated glass fibre insulation.

Main features (Main characteristics)

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

RDS commissioning box

RDS is the optimal connection box for the RBF linear slot supply air diffuser. The RDS contains a commissioning damper and an air deflector which makes it possible to provide an even air distribution through the slot openings. The RDS should be ordered separately. The amount of connection spigots in the plenum box depends on the length and row quantity of the matching RBF diffuser. An air volume controller is integrated in each spigot, which makes it possible to adjust the airflow even without removing the difuser front.

Mounting instructions

The RBF 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 RBF and the RDS 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 RBF slot diffusers.

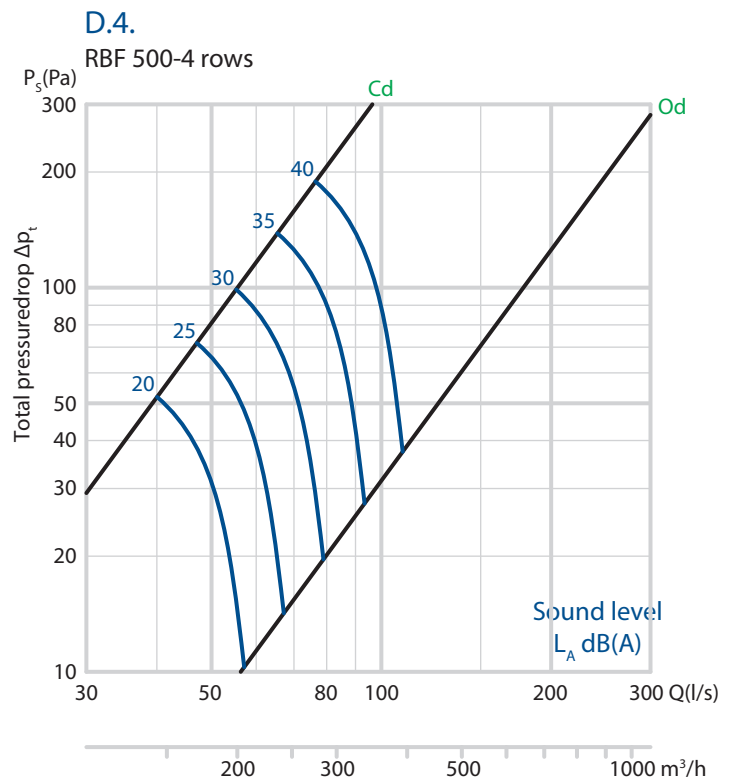
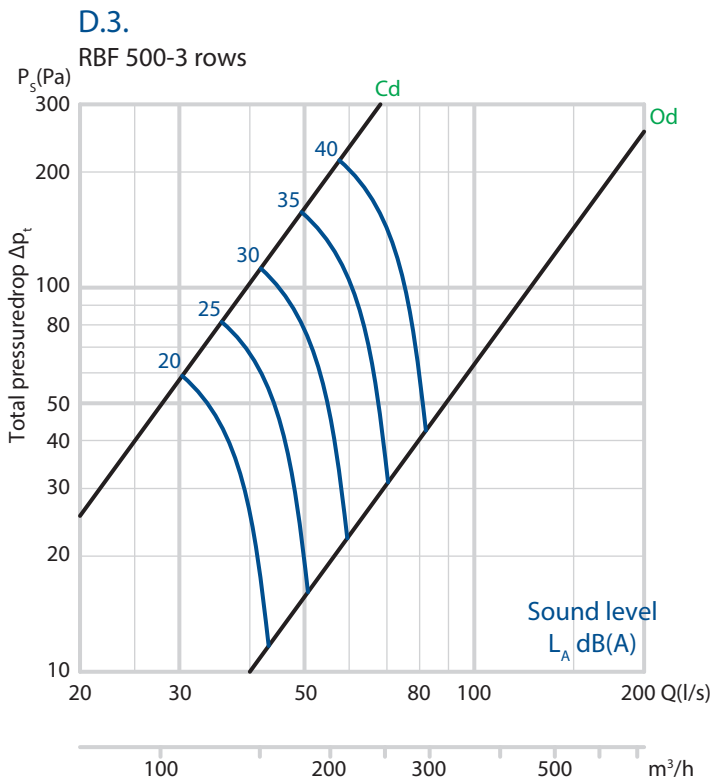
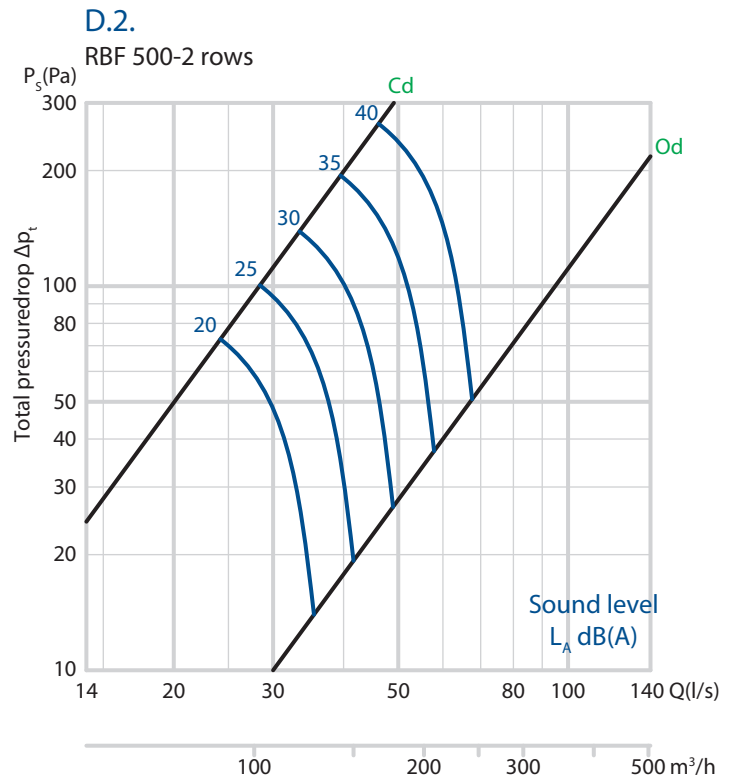
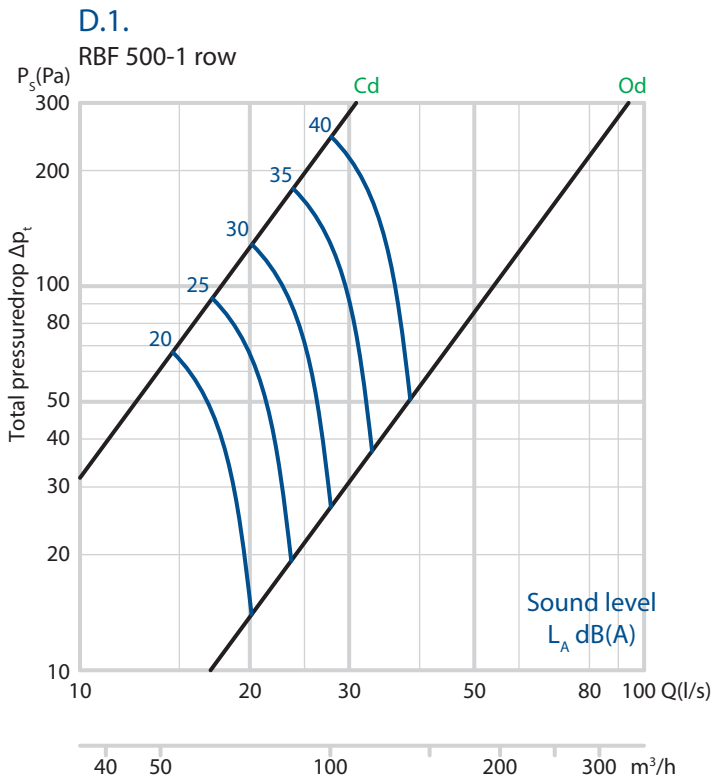
The diffuser can be connected from below to the connection box after rotating the air inlet deflector by 90°. The assembled unit can be leveled by changing the hanging height of the box.

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.

Acoustic data

Diagrams

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

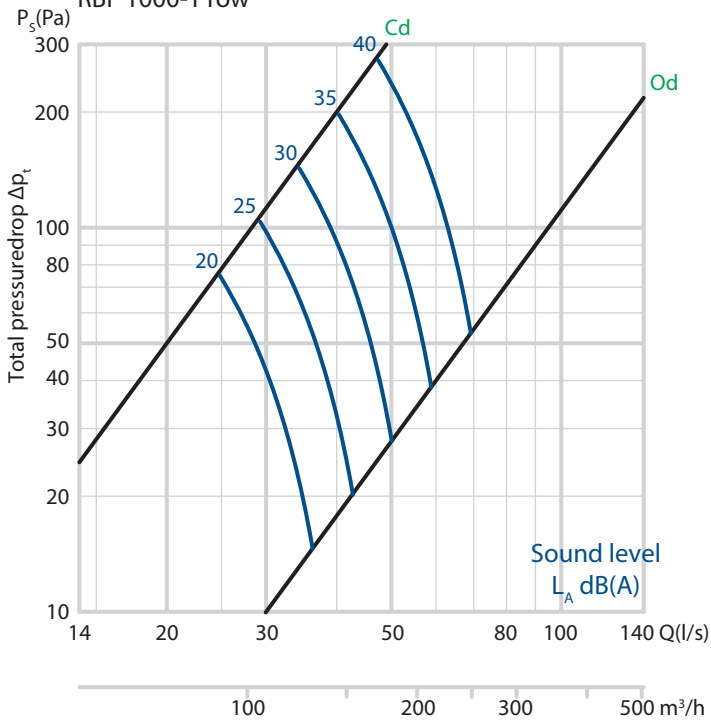


Cd = Closed damper
Od = Opened damper

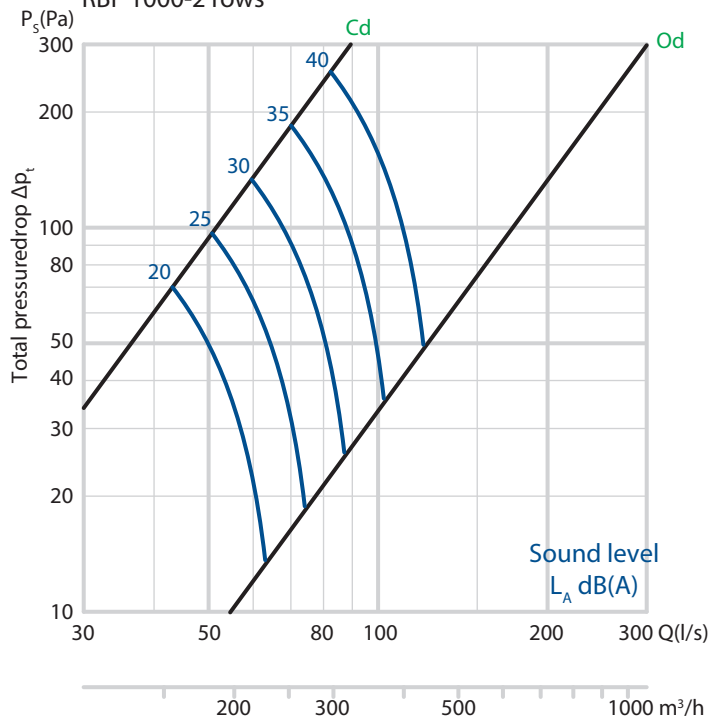
Diagrams

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

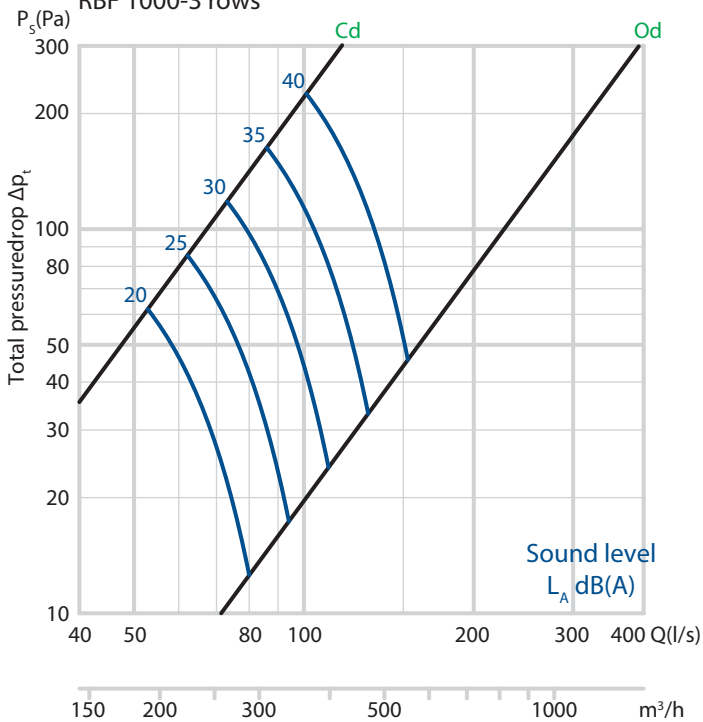
D.5.
RBF 1000-1 row



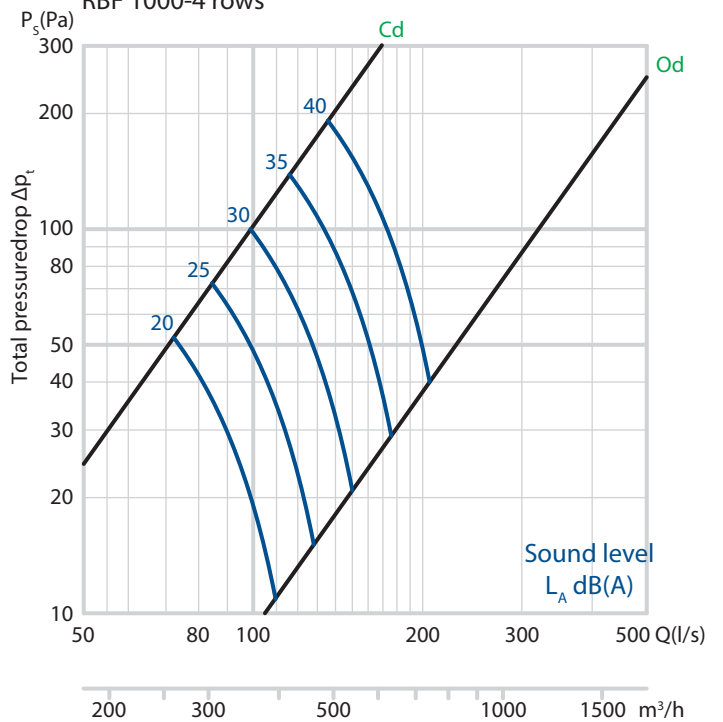
D.6.
RBF 1000-2 rows



D.7.
RBF 1000-3 rows



D.8.
RBF 1000-4 rows



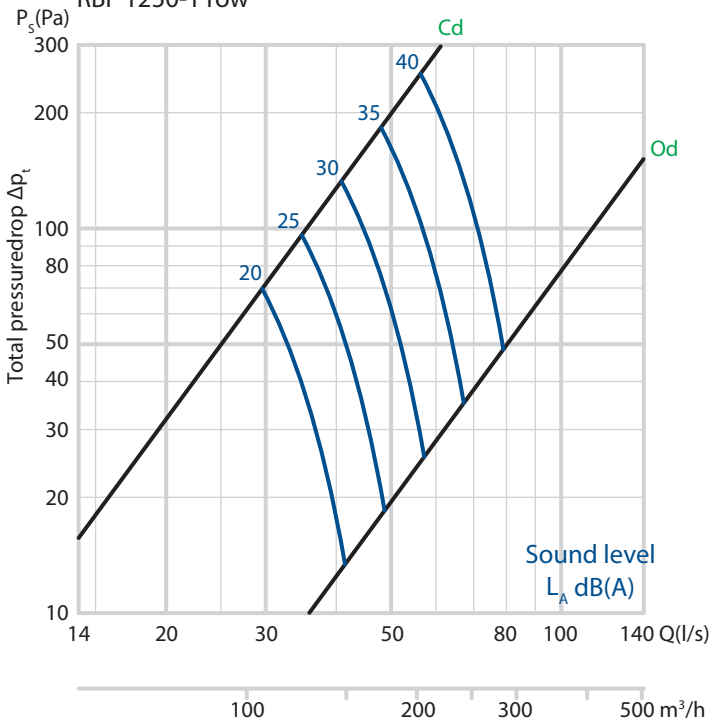
Cd = Closed damper
Od = Opened damper

Diagrams

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

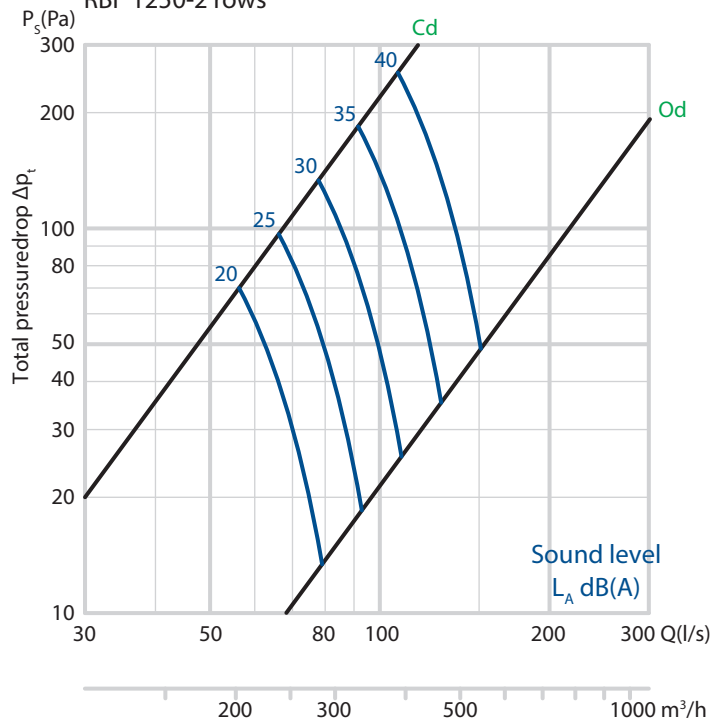
D.9.

RBF 1250-1 row



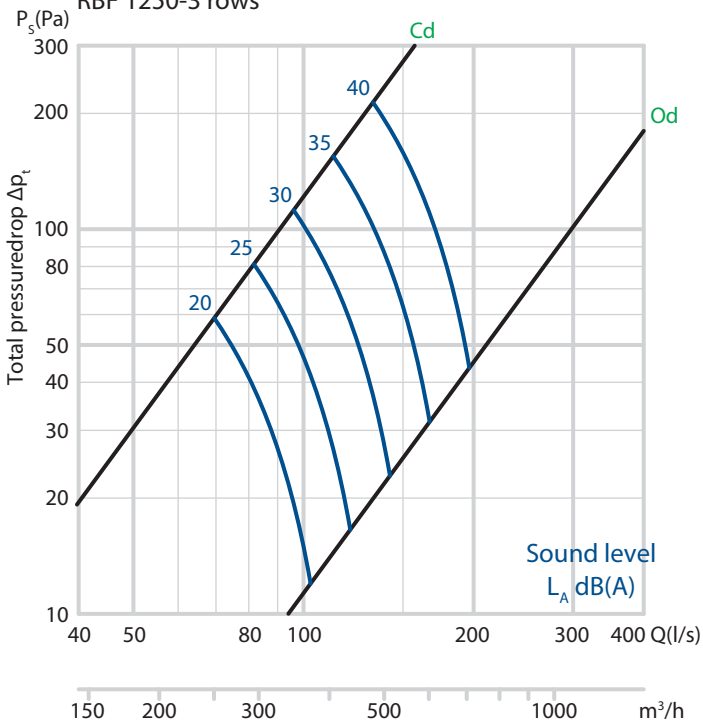
D.10.

RBF 1250-2 rows



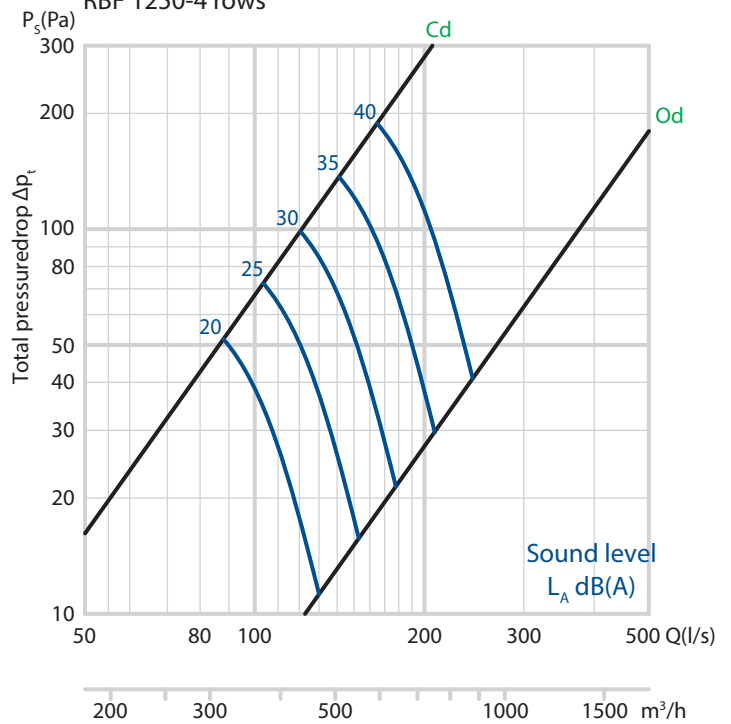
D.11.

RBF 1250-3 rows



D.12.

RBF 1250-4 rows



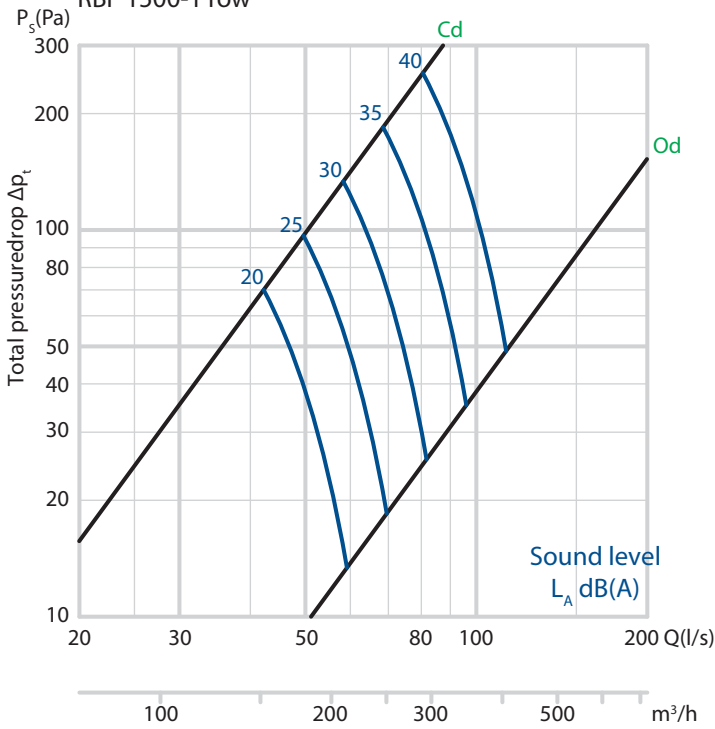
Cd = Closed damper
Od = Opened damper

Diagrams

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

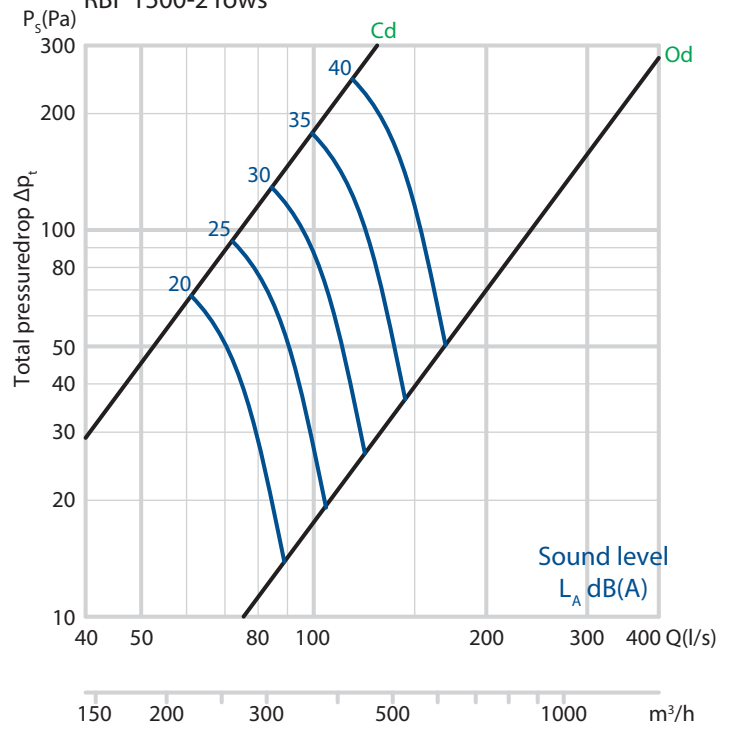
D.13.

RBF 1500-1 row



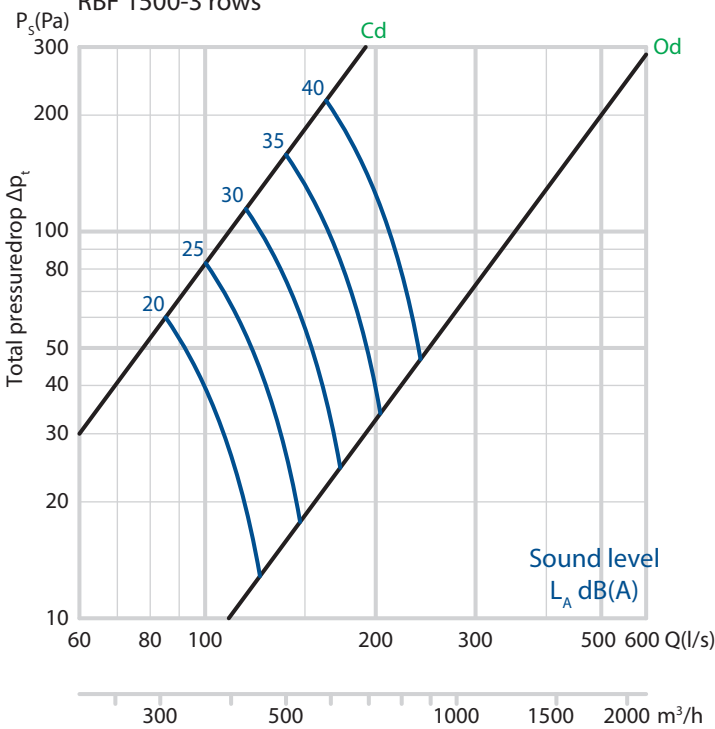
D.14.

RBF 1500-2 rows



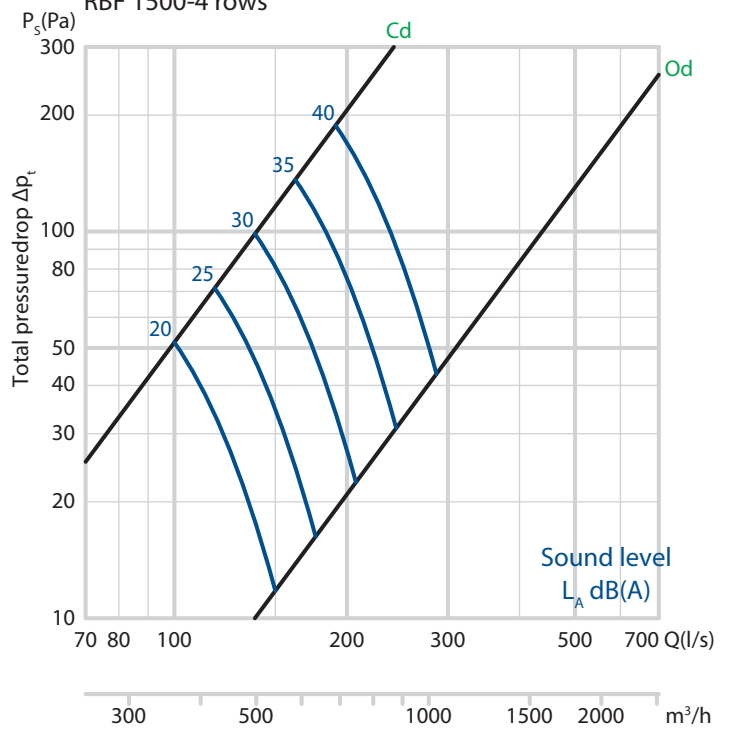
D.15.

RBF 1500-3 rows



D.16.

RBF 1500-4 rows



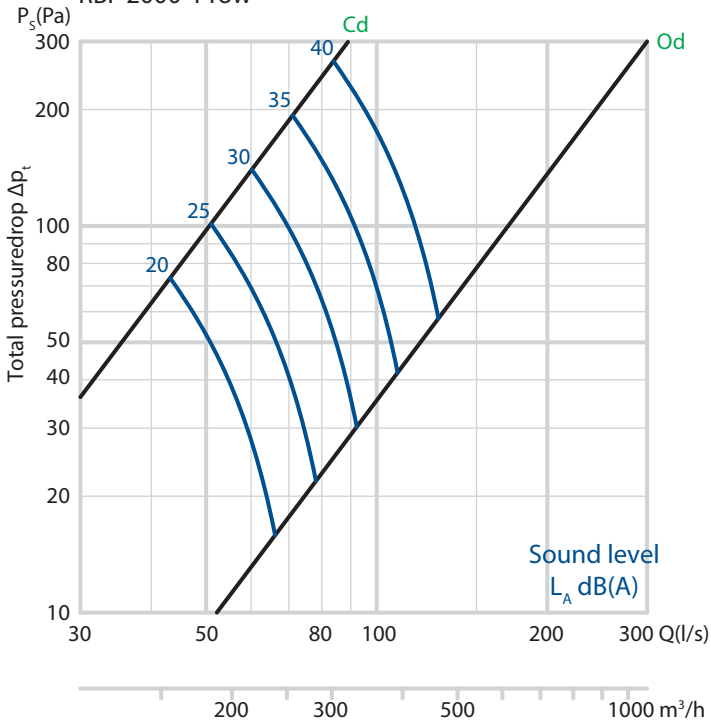
Cd = Closed damper
Od = Opened damper

Diagrams

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

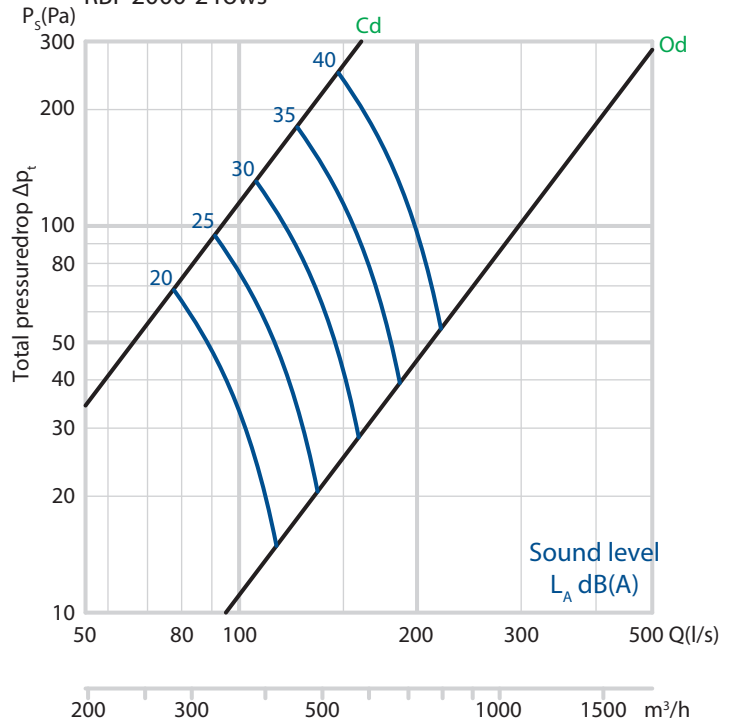
D.17.

RBF 2000-1 row



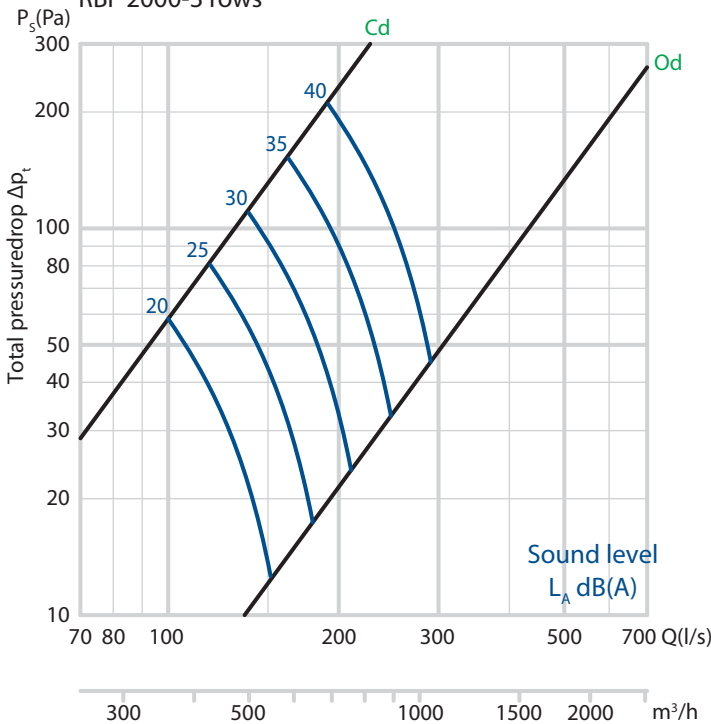
D.18.

RBF 2000-2 rows



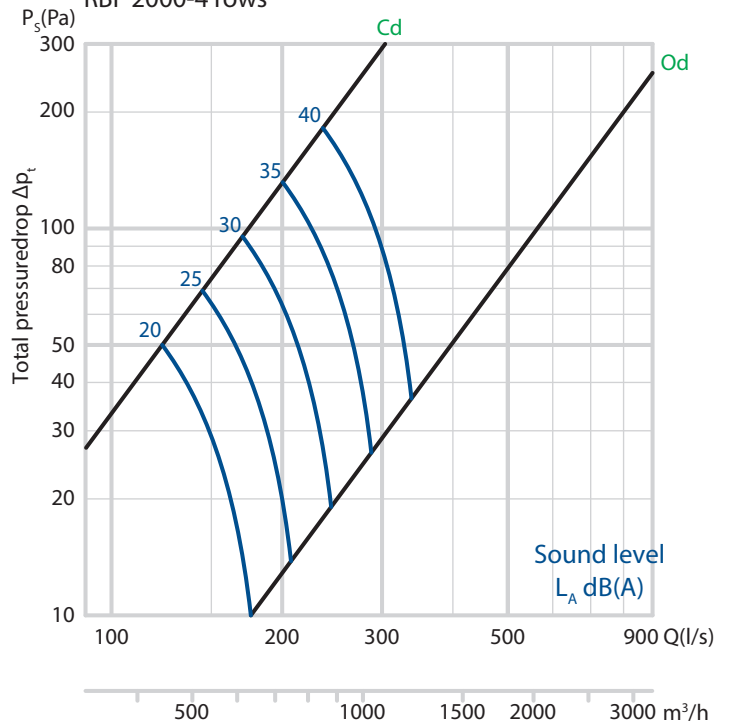
D.19.

RBF 2000-3 rows



D.20.

RBF 2000-4 rows

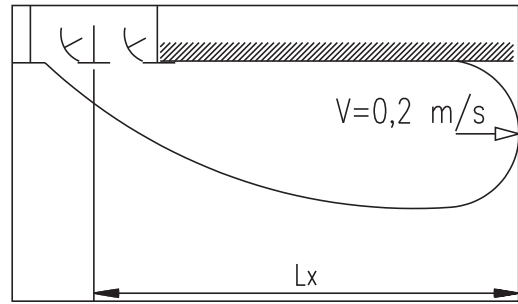


Cd = Closed damper
Od = Opened damper

Throw

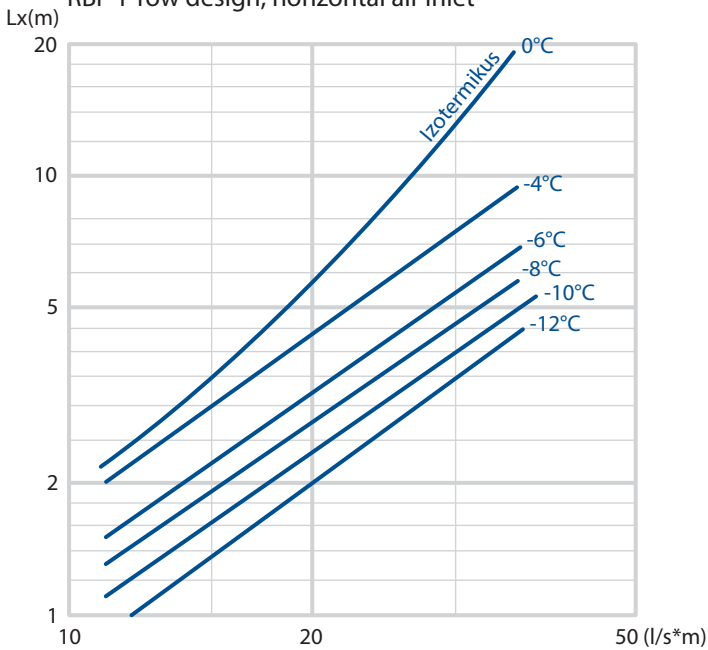
Horizontal throw length

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



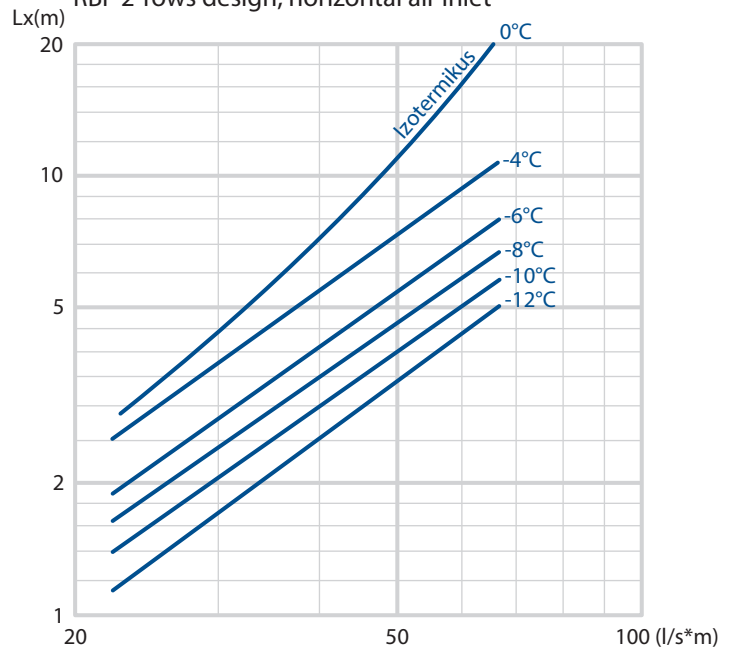
D.21.

RBF 1-row design, horizontal air inlet



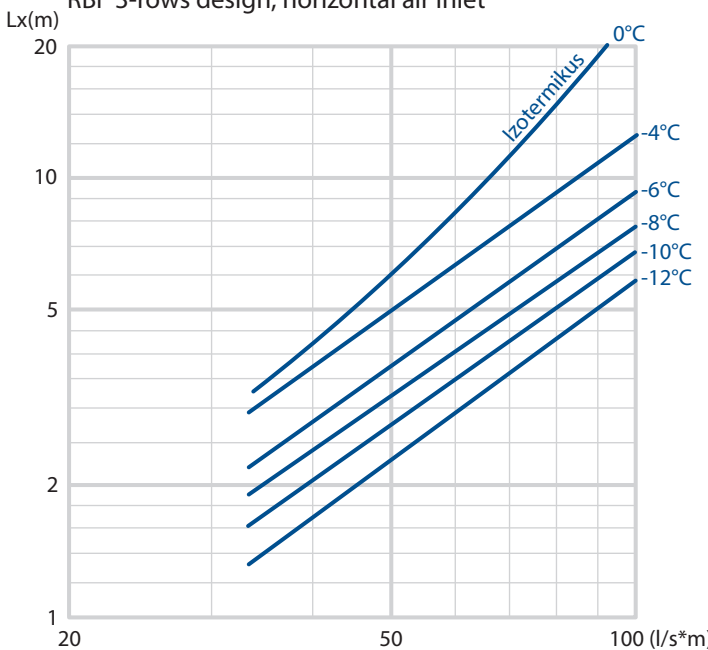
D.22.

RBF 2-rows design, horizontal air inlet



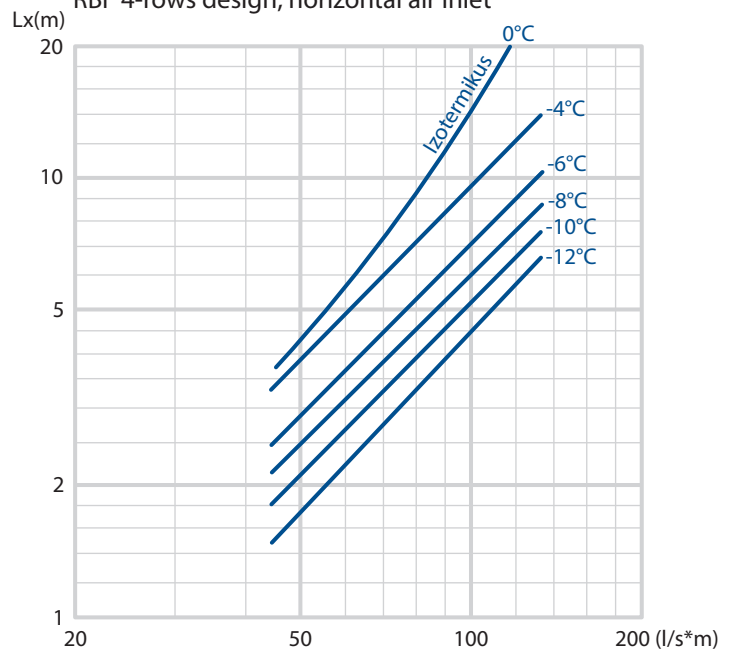
D.23.

RBF 3-rows design, horizontal air inlet



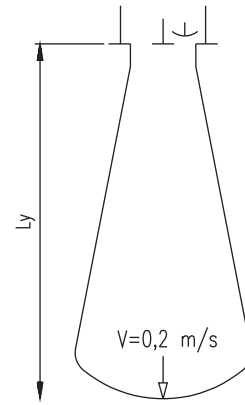
D.24.

RBF 4-rows design, horizontal air inlet



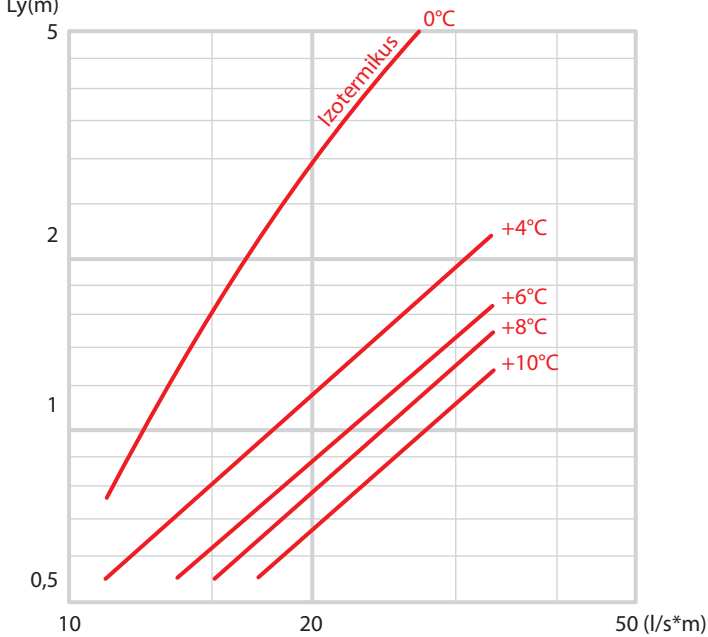
Vertical throw length

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



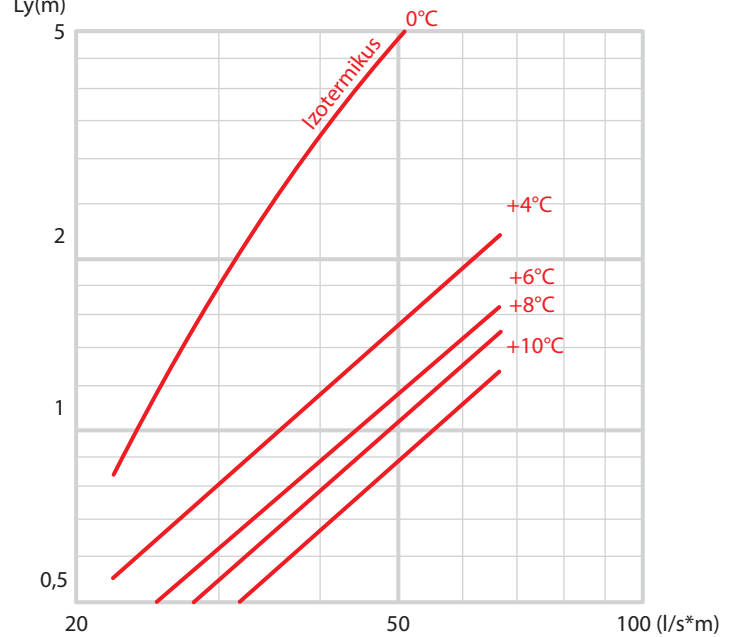
D.25.

RBF 1-row design, vertical air inlet



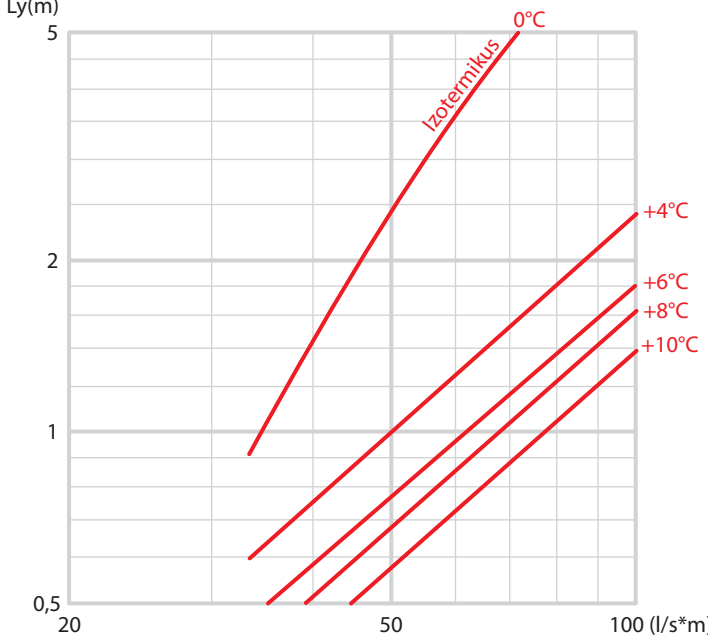
D.26.

RBF 2-rows design, vertical air inlet



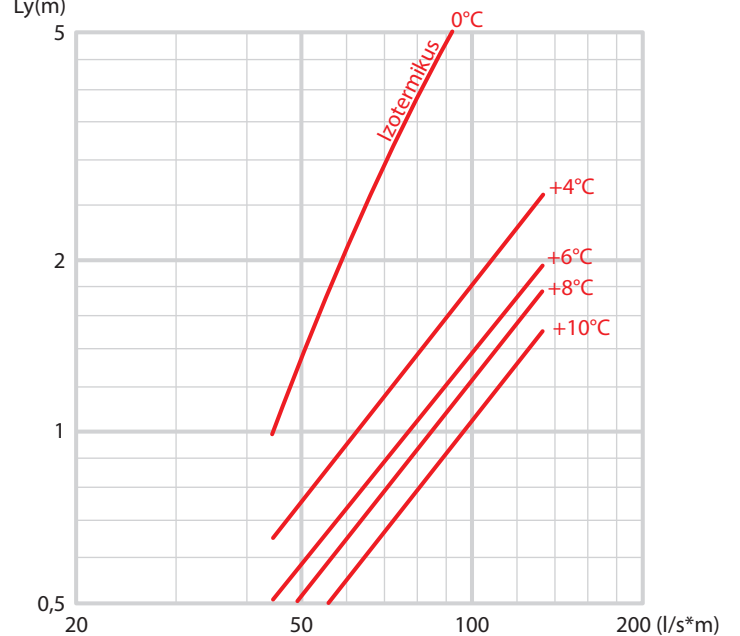
D.27.

RBF 3-rows design, vertical air inlet



D.28.

RBF 4-rows design, vertical air inlet



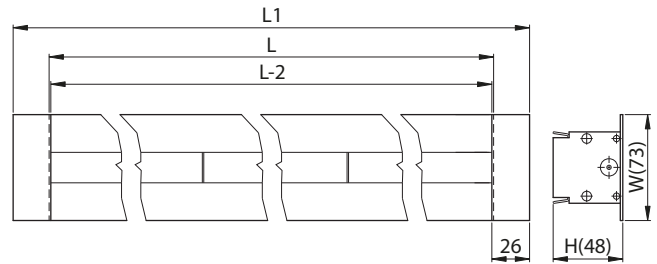
Dimensions

T.1.

RBF 1-row slot diffuser (RBF-1)

| Type | Dimensions(mm) | | | | Fin division (pcs)* | Total division -brackets (pcs) |
|------|----------------|------|----|----|---------------------|--------------------------------|
| | L | L1 | W | H | | |
| 500 | 500 | 550 | | | 1x2 | 1 |
| 1000 | 1000 | 1050 | | | 1x4 | 3 |
| 1250 | 1250 | 1300 | 73 | 48 | 1x5 | 4 |
| 1500 | 1500 | 1550 | | | 1x6 | 5 |
| 2000 | 2000 | 2050 | | | 1x8 | 7 |

* 1 unit of diffuser profile length: 250mm.

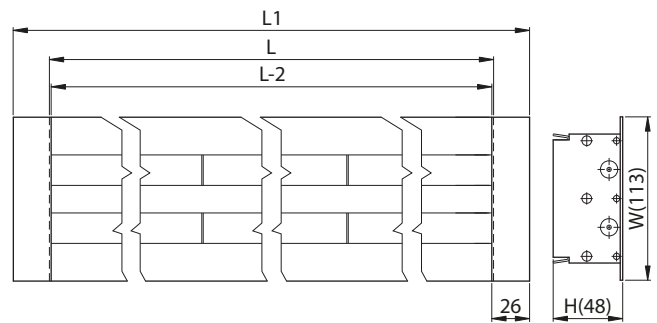


T.2.

RBF 2-rows slot diffuser (RBF-2)

| Type | Dimensions(mm) | | | | Fin division (pcs)* | Total division -brackets (pcs) |
|------|----------------|------|-----|----|---------------------|--------------------------------|
| | L | L1 | W | H | | |
| 500 | 500 | 550 | | | 2x2 | 2 |
| 1000 | 1000 | 1050 | | | 2x4 | 6 |
| 1250 | 1250 | 1300 | 113 | 48 | 2x5 | 8 |
| 1500 | 1500 | 1550 | | | 2x6 | 10 |
| 2000 | 2000 | 2050 | | | 2x8 | 14 |

* 1 unit of diffuser profile length: 250mm.

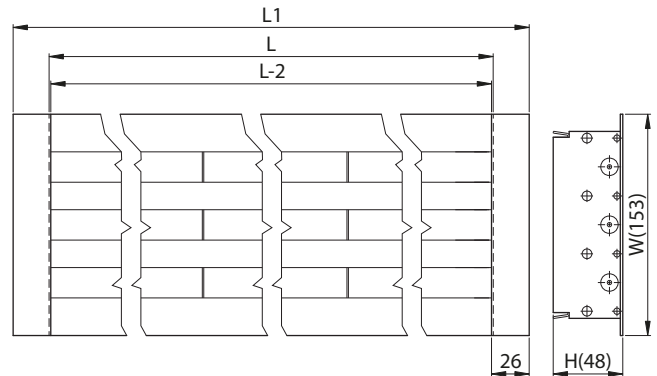


T.3.

RBF 3-rows slot diffuser (RBF-3)

| Type | Dimensions(mm) | | | | Fin division (pcs)* | Total division -brackets (pcs) |
|------|----------------|------|-----|----|---------------------|--------------------------------|
| | L | L1 | W | H | | |
| 500 | 500 | 550 | | | 3x2 | 3 |
| 1000 | 1000 | 1050 | | | 3x4 | 9 |
| 1250 | 1250 | 1300 | 153 | 48 | 3x5 | 12 |
| 1500 | 1500 | 1550 | | | 3x6 | 15 |
| 2000 | 2000 | 2050 | | | 3x8 | 21 |

* 1 unit of diffuser profile length: 250mm.

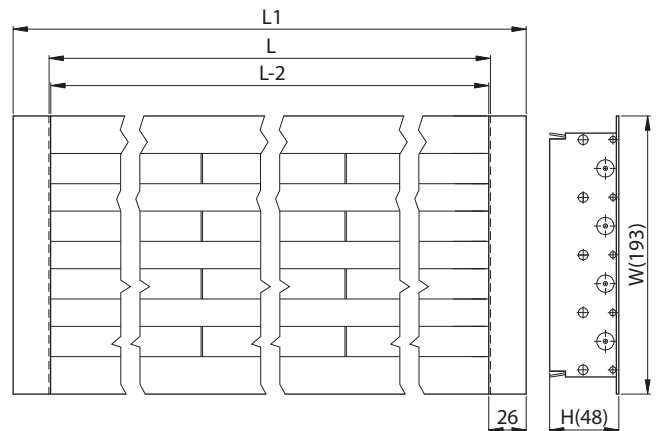


T.4.

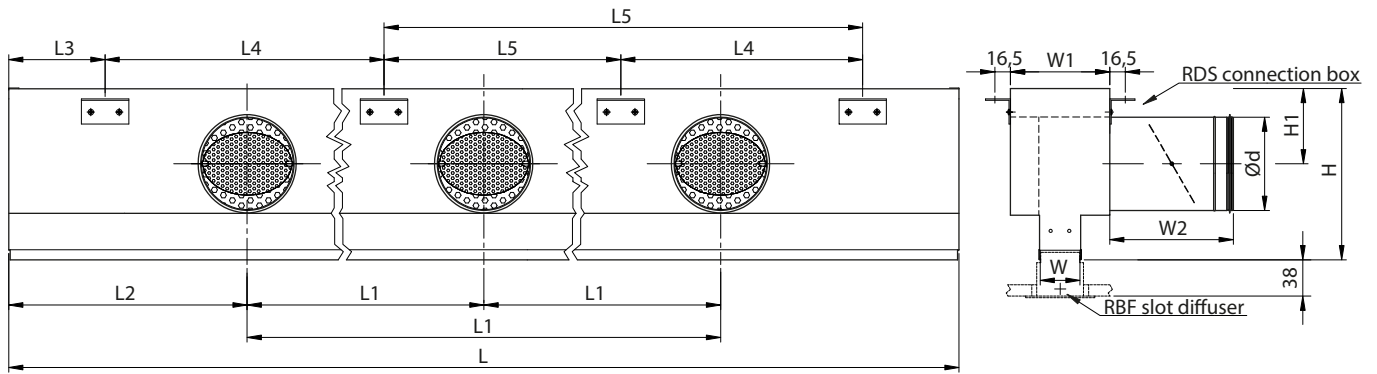
RBF 4-rows slot diffuser (RBF-4)

| Type | Dimensions(mm) | | | | Fin division (pcs)* | Total division -brackets (pcs) |
|------|----------------|------|-----|----|---------------------|--------------------------------|
| | L | L1 | W | H | | |
| 500 | 500 | 550 | | | 4x2 | 4 |
| 1000 | 1000 | 1050 | | | 4x4 | 12 |
| 1250 | 1250 | 1300 | 193 | 48 | 4x5 | 16 |
| 1500 | 1500 | 1550 | | | 4x6 | 20 |
| 2000 | 2000 | 2050 | | | 4x8 | 28 |

* 1 unit of diffuser profile length: 250mm.



Dimensions



T.5.

RDS connection box

| Type | Number of slot rows | Dimensions | | | | | | | | | Fastening points | | |
|----------|---------------------|------------|-----|---------|------|-------|-----|-------|-----|-------|------------------|-----|-----|
| | | L | W | Ød* | L1 | L2 | W1 | W2 | H | H1 | L3 | L4 | L5 |
| RDS 500 | 1 | 500 | 42 | 1*NA100 | - | 250 | 105 | 134,5 | 181 | 80 | 75 | 350 | - |
| | 2 | | 82 | 1*NA125 | | | 145 | 153,5 | 206 | 92,5 | | | |
| | 3 | | 122 | 1*NA160 | | | 185 | 183,5 | 241 | 110 | | | |
| | 4 | | 162 | 1*NA200 | | | 225 | 213,5 | 281 | 130 | | | |
| RDS 1000 | 1 | 1000 | 42 | 1*NA100 | - | 500 | 105 | 134,5 | 181 | 80 | 150 | 700 | - |
| | 2 | | 82 | 1*NA160 | | | 145 | 183,5 | 241 | 110 | | | |
| | 3 | | 122 | 1*NA200 | | | 185 | 213,5 | 281 | 130 | | | |
| | 4 | | 162 | 1*NA250 | | | 225 | 273,5 | 331 | 155 | | | |
| RDS 1250 | 1 | 1250 | 42 | 2*NA100 | 650 | 300 | 105 | 134,5 | 181 | 80 | 150 | 500 | 450 |
| | 2 | | 82 | 1*NA160 | - | 625 | 145 | 183,5 | 241 | 110 | | | |
| | 3 | | 122 | 1*NA200 | | | 185 | 213,5 | 281 | 130 | | | |
| | 4 | | 162 | 1*NA250 | | | 225 | 273,5 | 331 | 155 | | | |
| RDS 1500 | 1 | 1500 | 42 | 2*NA100 | | | 700 | 400 | 105 | 134,5 | 181 | 80 | 150 |
| | 2 | | 82 | 2*NA160 | 145 | 183,5 | | | 241 | 110 | | | |
| | 3 | | 122 | 2*NA200 | 185 | 213,5 | | | 281 | 130 | | | |
| | 4 | | 162 | 2*NA250 | 225 | 273,5 | | | 331 | 155 | | | |
| RDS 2000 | 1 | 2000 | 42 | 3*NA100 | 600 | 400 | 105 | 134,5 | 181 | 80 | 150 | 550 | 600 |
| | 2 | | 82 | 2*NA160 | 1000 | 500 | 145 | 183,5 | 241 | 110 | | | |
| | 3 | | 122 | 2*NA200 | | | 185 | 213,5 | 281 | 130 | | | |
| | 4 | | 162 | 2*NA250 | | | 225 | 273,5 | 331 | 155 | | | |

The indicated sizes in mm.

* The quantity and dimension of the air connection spigots.

Specification

RBF slot diffuser*

| | | | |
|---|------|----|-------|
| Ordering code: | RBF | -X | -XXXX |
| Product acronym: | RBF | | |
| Number of slot rows: | 1 | | |
| | 2 | | |
| | 3 | | |
| | 4 | | |
| Nominal length (shown as 'L' on the technical drawing)**: | 500 | | |
| | 1000 | | |
| | 1250 | | |
| | 1500 | | |
| | 2000 | | |
| Example: RBF-3-1000 | | | |
| RBF-2-6000** | | | |

* For 2000 mm or longer slot diffuser installations the RBF diffuser can be supplied as a continuous rack design. In this case, the total length of the diffuser has to be provided during the order. The optimal division of the total length is performed by Airvent with the end-brackets (RBF-SV) and connection brackets (RBF-SK).

** The total length of the slot diffuser=nominal size+50 mm for the end brackets.

RDS connection box* (optional)

| | | | |
|---------------------------|------|----|-------|
| Ordering code: | RDS | -X | -XXXX |
| Product acronym: | RDS | | |
| Number of slot rows: | 1 | | |
| | 2 | | |
| | 3 | | |
| | 4 | | |
| Connection box dimension: | 500 | | |
| | 1000 | | |
| | 1250 | | |
| | 1500 | | |
| | 2000 | | |
| Example: RDS-3-1000 | | | |
| RDS-2-6000* | | | |

* For 2000 mm or longer slot designs the RBF diffuser can be supplied as a continuous rack installation. The optimal division of the total length is performed by Airvent. In such cases, the division of the RDS connection boxes matches the length of the diffusers.