



TROX FBA-3 FBA Floor Diffusers Instructions

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TROX[®] TECHNIK

TROX FBA-3 FBA Floor Diffusers



Product Information

Specifications

- Product Model: FBA-3, FBA-3*-SM, FBA-4*-KF, FBA-1-VF, FBA
- Color: Black lacquered
- Material: Aluminium
- Nominal Sizes: 150, 200

Product Usage Instructions

Application

The Round Aluminium Air Diffusers (FBA) are designed for installation in floors. They can be used in various applications with different air flows and installation conditions.

Special Features

- High mechanical strength/breaking resistance > 17 kN
- Ideal for comfort zones
- Optional equipment and accessories available

Variants

The product is available in different variants based on the attachments:

- FBA-3*-SM: Adjustable dirt trap
- FBA-4*-KF: Trim ring with spring clip fixing

- FBA-1-VF: With swirl element to adjust the air flow

Setting the Air Flow Direction

The air flow direction can be set based on the variant:

- -*: Vertical air flow, inalterable
- -V: Preset vertical swirling airflow, the swirl vane is manually adjustable
- -H: Preset horizontal swirling airflow, the swirl vane is manually adjustable

Installation

The product can be installed in the following ways:

- -*-: Floor diffuser with spacing ring
- -KF: Floor diffuser with trim ring and spring clip fixing

Dirt Trap

The dirt trap can be included or adjusted based on the variant:

- -*: Without dirt trap
- -SM: With adjustable dirt trap
- -SV: With adjustable dirt trap adjustable from the diffuser face front

Plenum Box

The product can be used with or without a plenum box:

- -*: Without plenum box
- -A: With plenum box for connection to the on-site air duct system

Construction

The product is constructed with the following features:

- Surface floor diffuser (floor grille and trim ring)
- Deburred diffuser core
- Painted black (for FBA-3 variant)
- Exposed surface overtightened (for FBA-3 and FBA-4 variants)

Parts and Characteristics

The product consists of the following parts and characteristics:

- Grille insert
- Floor diffuser with ring spacing of 6 mm
- Height-adjustable dirt trap that serves as a reduction element for volume flow rate balancing
- Adjustable swirl unit for vertical or horizontal swirling air flow or air routing
- Trim ring with spring clip fixing for rotation lock and centring grille insert

Attachments

The product can be used with the following attachments:

- Spacing ring to hold the grille insert for variants without trim ring
- Trim ring with spring clip fixing to accommodate the grille insert and attach the installation opening
- Adjustable swirl unit for vertical or horizontal swirling air flow
- Fixed swirl unit for vertical air flow (only for nominal size 200)
- Height-adjustable dirt trap that also serves as a reduction element for volume flow rate balancing

Accessories

The product can be used with a plenum box (-A) for direct connection to the on-site air duct system. The plenum box includes an incorporated air distribution element for a steady flow to the floor diffuser.

Frequently Asked Questions (FAQ)

- **Q: What are the available nominal sizes for the Round Aluminium Air Diffusers?**

A: The available nominal sizes are 150 and 200.

- **Q: Can I adjust the air flow direction?**

A: Yes, you can adjust the air flow direction based on the variant. The swirl vane is manually adjustable for vertical and horizontal swirling air flow.

- **Q: Can the dirt trap be adjusted?**

A: Yes, the dirt trap can be adjusted based on the variant. It can also serve as a reduction element for volume flow rate balancing.

- **Q: Can I use the product with soft flooring?**

A: Yes, the product works well with soft flooring such as carpet.

- **Q: Is a plenum box included?**

A: No, a plenum box is not included by default. However, a plenum box (-A) is available as an accessory for direct connection to the on-site air duct system.



- **FBA-3**

Deburred, black lacquered, visible side turned over

- **FBA-3*-SM**

Adjustable dirt trap

- **FBA-4*-KF**

Trim ring with spring clip fixing



- **FBA-1-VF**

With swirl element to adjust the air flow



FBA

ROUND ALUMINIUM AIR DIFFUSERS FOR INSTALLATION IN FLOORS

The different attachments allow a wide range of applications with different air flows, installation conditions and several options for volume flow balancing.

- Nominal sizes: 150, 200 mm
- Volume flow range 1 – 59 l/s or 4 – 213 m³/h
- Annular diffuser contour with different surface structures
- For constant and variable volume flows
- For all types of raised floors
- Horizontal or vertical air flow
- Reduction element adjustable on the front or rear side
- Can be installed with and without trim ring
- The trim ring allows quick and easy installation and removal of the grille inserts for cleaning purposes
- High mechanical strength/breaking resistance > 17 kN
- Ideal for comfort zones

Optional equipment and accessories

- Swirl unit adjustable at the back for manual adjustment between vertical and horizontal air routing
- Trim ring with spring clip fixing to cover the installation opening
- Dirt trap can also be used as a reduction element
- Plenum box

General Information

Application

- Floor diffusers as supply air diffusers for comfort areas
- Installation in raised floors without plenum box if it is constructed as a pressurised floor
- Installation in raised floors with plenum box to allow individual ventilation in rooms or zones
- Vertical supply air flow, with adjustable swirl unit also horizontal air flow
- Variants with adjustable swirl units can be manually set to vertical or horizontal air routing
- Attractive design element with various types of surfaces, for building owners and architects with demanding aesthetic requirements
- Comfortable and energy-efficient airflow through supporting convection currents in the occupied zone
- Thermal loads are effectively dissipated
- For constant and variable volume flows
- For supply air temperature differences of $-12 - +20$ K

Special features

- Simple and quick assembly and covering of the installation opening when used with trim ring and spring clip fixing
- Installation in hard flooring requires a spacing ring The spacing ring is included in the delivery if no trim ring has been selected
- High crush resistance > 17 kN
- The grille insert is torsion-proof and centred in combination with trim ring
- With or without swirl unit to allow for various air patterns
- A dirt trap reduces contamination of the floor and facilitates volume flow rate balancing. It can be adjusted from the diffuser front and back surface

Nominal sizes

- 150, 200

Variants

Setting the air flow direction

- -*: no entry: vertical air flow, inalterable
- -V: preset vertical swirling airflow, the swirl vane is manually adjustable
- -H: preset horizontal swirling airflow, the swirl vane is manually adjustable

Installation

- -*: Floor diffuser with spacing ring
- -KF: Floor diffuser with trim ring and spring clip fixing

Dirt trap

- -*: no entry: without dirt trap
- -SM: with adjustable dirt trap Dirt trap adjustable on the back, the dirt trap can also serve as a reduction element for volume flow rate balancing
- -SV: with adjustable dirt trap Dirt trap adjustable from the diffuser face front, the dirt trap can also serve as a reduction element for volume flow rate balancing

Plenum box

- -*: no entry: without plenum box
- -A: with plenum box for connection to the on-site air duct system

Construction

Surface floor diffuser (floor grille and trim ring)

- -1: Deburred diffuser core
- -3: Deburred diffuser core, painted black, exposed surface overtightened
- -4: Deburred diffuser core, exposed surface overtightened

Parts and characteristics

Grille insert Floor diffuser

- Ring spacing: 6 mm
- Height-adjustable dirt trap which serves as a reduction element for volume flow rate balancing
- Adjustable swirl unit for vertical or horizontal swirling air flow or air routing

Trim ring with spring clip fixing

- Rotation lock and centring grille insert
- Covers the installation opening
- Spring clip fixing enables different magnitude of the raised floor and the compensation of large cut-out tolerances when creating the installation openings. For the
- tightest possible fit of the trim ring, we recommend the minimum installation dimension
- Balancing with soft flooring, e.g. carpet Works well with soft flooring, e.g. carpet

Attachments

- Spacing ring to hold the grille insert for variants without trim ring
- Trim ring with spring clip fixing to accommodate the grille insert and to attach the installation opening
- Adjustable swirl unit for vertical or horizontal swirling air flow
- Fixed swirl unit for vertical air flow (only for nominal size 200)
- Height-adjustable dirt trap which also serves as a reduction element for volume flow rate balancing

Accessories

Plenum box -A:

- For direct connection to the on-site air duct system
- With incorporated air distribution element for a steady flow to the floor diffuser
- Plenum box suitable for all nominal sizes

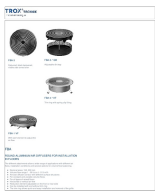
Material

- Grille insert and trim ring made of die-cast aluminium
- Spring clips made of stainless steel
- Adjustable swirl unit and dirt trap made of ABS plastic, UL94-V-0
- Spacing ring made of plastic ABS UL 94-V-0
- Dirt trap adjustment device and connective material made of galvanised steel
- Plenum box made of galvanised sheet steel

Technical data

- Nominal sizes: 150, 200 mm
 - Volume flow rate range: 1 – 59 l/s or 4 – 213 m³/h
 - Supply air temperature difference: -12 – +20 K
 - Crush resistance > 17 kN
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Documents / Resources

	<p>TROX FBA-3 FBA Floor Diffusers [pdf] Instructions FBA-3 FBA Floor Diffusers, FBA-3, FBA Floor Diffusers, Floor Diffusers, Diffusers</p>
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References

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