

Air through perfection

Circular ceiling diffuser

RCD



ACP
Ceiling diffusers

Circular ceiling diffuser RCD



Description

RCD is a circular ceiling diffuser with concentric rings used for introducing or evacuating the air. The circular ceiling diffuser is used in installations with constant or variable air flow.

Technical specifications

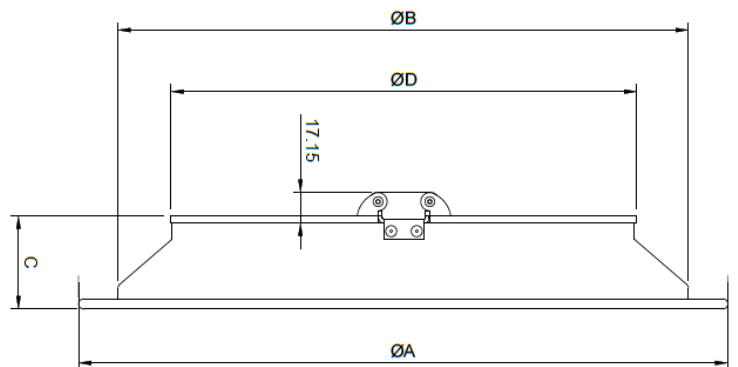
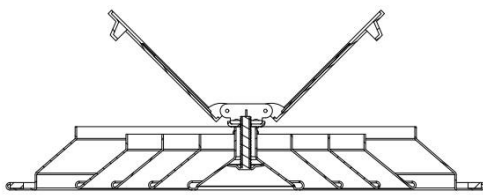
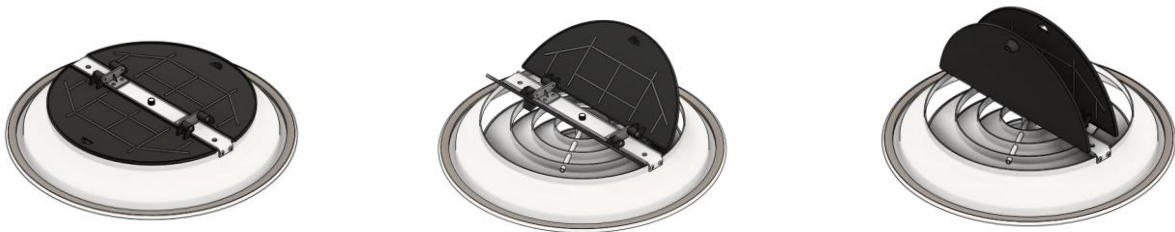
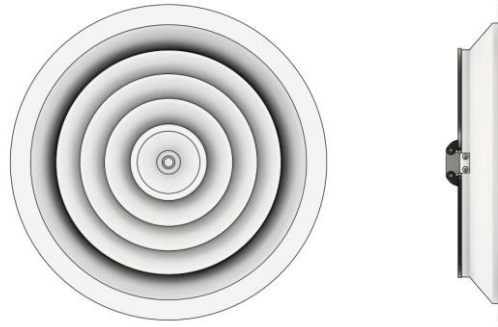
Characteristics

The ceiling diffuser has a conical construction, a removable central core and is equipped with butterfly damper. The ceiling diffuser is delivered with a bracket-type fastening system. Dimensional range: $\varnothing 150$, $\varnothing 200$, $\varnothing 250$, $\varnothing 300$, $\varnothing 350$.

Materials

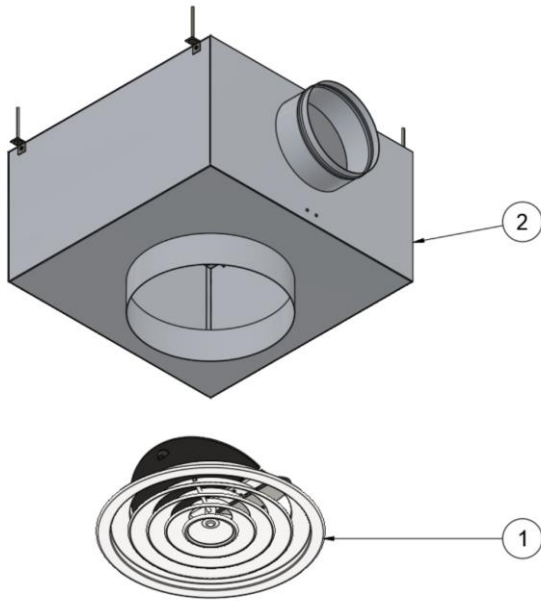
The product is made of aluminum with a glossy white RAL 9016 finish.
Other RAL colours are available on request.

Technical drawing



| RCD | ØD | ØA | ØB | C |
|------|-----|-----|-----|----|
| D150 | 147 | 257 | 214 | 54 |
| D200 | 197 | 310 | 266 | 54 |
| D250 | 246 | 357 | 317 | 54 |
| D300 | 296 | 416 | 377 | 54 |
| D350 | 347 | 470 | 427 | 54 |

Product specifications



- 1 - RCD Circular ceiling diffuser
- 2 - Plenum box (on request)

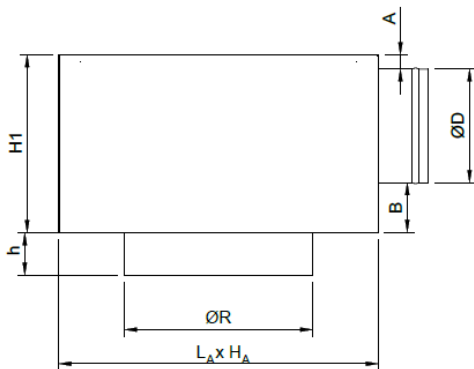
Accessories

The ceiling diffuser can be delivered with a connecting plenum to the circular duct, with a horizontal connection.

The plenum is provided with suspension elements (lugs) and bead roll on the spigot, for easy fixing of the flexible duct.

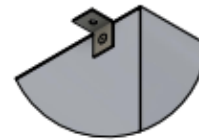
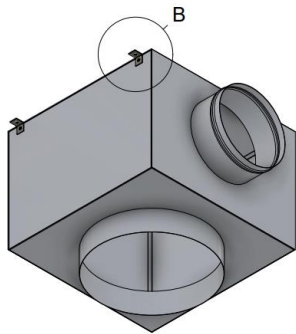
On request, the product can also be delivered with a connection (CR) for flexible duct.

Adapter (plenum box)



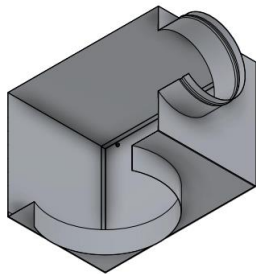
- $L_A \times H_A$ – depending on $\varnothing R$
- A, B, H1 – depending on request and $\varnothing D$
- $\varnothing R$ – connection diameter RCD + 10 mm
- $h = 40$ mm

The adapter is made of galvanized steel sheet Z140 and is equipped with 4 lugs for suspension.

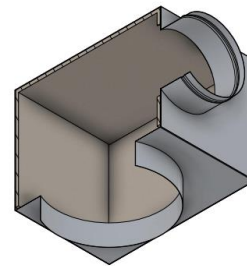


B - Suspension lug

On request, the plenum can be insulated with 6 mm thick elastomeric rubber.



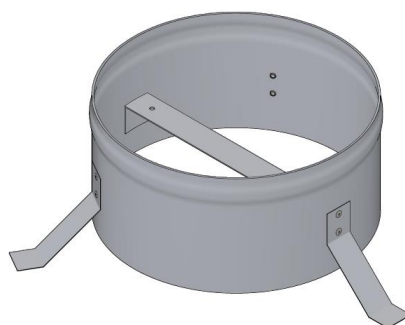
AN - Uninsulated adapter



AIZ - Insulated adapter

Connection for flexible duct (CR)

CR is made of galvanized steel sheet and is used as a connecting element between the circular ceiling diffuser and the flexible duct.



Functional parameters

| Air flow (m ³ /h) | Ø [mm] | 150 | 200 | 250 | 300 | 350 |
|---------------------------------|----------------------|-------|------|-------|-------|-------|
| | Ak [m ²] | 0.011 | 0.02 | 0.031 | 0.046 | 0.047 |
| 150 | X [m] | 1.8 | 1.3 | | | |
| | NR [dB(A)] | 22.0 | 8.0 | | | |
| | Veff [m/s] | 3.9 | 2.1 | | | |
| | ΔPt [Pa] | 1.0 | 6.0 | | | |
| 200 | X [m] | 2.3 | 1.8 | 1.4 | | |
| | NR [dB(A)] | 27.0 | 14.0 | 7.0 | | |
| | Veff [m/s] | 5.0 | 2.8 | 1.9 | | |
| | ΔPt [Pa] | 22.0 | 7.8 | 5.0 | | |
| 300 | X [m] | 3.4 | 2.6 | 2.1 | 1.7 | |
| | NR [dB(A)] | 41.0 | 23.0 | 13.0 | 8.0 | |
| | Veff [m/s] | 7.5 | 4.1 | 2.7 | 1.9 | |
| | ΔPt [Pa] | 50.0 | 15.0 | 7.2 | 4.3 | |
| 400 | X [m] | | 3.4 | 2.7 | 2.3 | 1.9 |
| | NR [dB(A)] | | 33.0 | 20.0 | 10.0 | 7.0 |
| | Veff [m/s] | | 5.7 | 3.6 | 2.5 | 2.4 |
| | ΔPt [Pa] | | 28.0 | 12.0 | 5.5 | 3.2 |
| 500 | X [m] | | 4.3 | 3.5 | 2.8 | 2.0 |
| | NR [dB(A)] | | 41.0 | 27.0 | 15.0 | 10.0 |
| | Veff [m/s] | | 7.0 | 4.5 | 3.1 | 2.8 |
| | ΔPt [Pa] | | 45.0 | 18.0 | 8.0 | 4.8 |
| 600 | X [m] | | | 4.1 | 3.3 | 2.8 |
| | NR [dB(A)] | | | 34.0 | 22.0 | 20.0 |
| | Veff [m/s] | | | 5.5 | 3.7 | 3.5 |
| | ΔPt [Pa] | | | 26.0 | 14.0 | 7.0 |
| 800 | X [m] | | | 5.5 | 4.6 | 3.5 |
| | NR [dB(A)] | | | 45.0 | 32.0 | 30.0 |
| | Veff [m/s] | | | 7.5 | 5.0 | 4.8 |
| | ΔPt [Pa] | | | 50.0 | 22.0 | 12.0 |
| 1000 | X [m] | | | | 5.7 | 4.5 |
| | NR [dB(A)] | | | | 40.0 | 37.0 |
| | Veff [m/s] | | | | 6.2 | 6.0 |
| | ΔPt [Pa] | | | | 35.0 | 20.0 |
| 1200 | X [m] | | | | 6.7 | 5.4 |
| | NR [dB(A)] | | | | 46.0 | 40.0 |
| | Veff [m/s] | | | | 7.5 | 7.0 |
| | ΔPt [Pa] | | | | 50.0 | 28.0 |
| 1400 | X [m] | | | | | 7.1 |
| | NR [dB(A)] | | | | | 50.0 |
| | Veff [m/s] | | | | | 10.2 |
| | ΔPt [Pa] | | | | | 39.2 |
| 1600 | X [m] | | | | | 7.8 |
| | NR [dB(A)] | | | | | 57.0 |
| | Veff [m/s] | | | | | 11.6 |
| | ΔPt [Pa] | | | | | 50.3 |

The legend

Ak [m²] - The free surface

X [m] - The length of the air jet at a speed of 0.25 m/s

NR [dB (A)] - Noise level without room attenuation

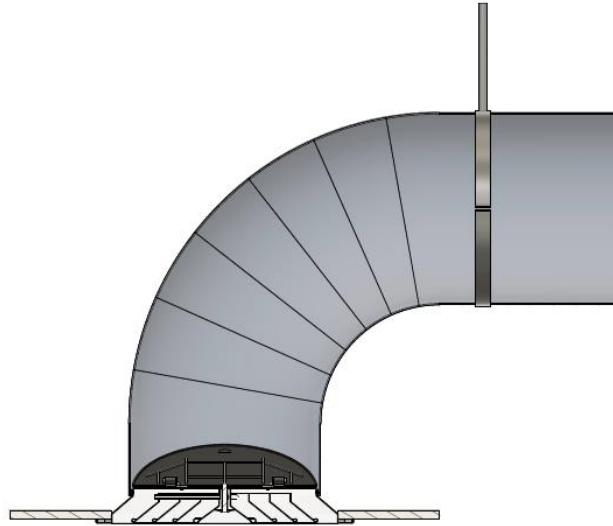
Veff [m/s] - The effective air velocity

ΔPt [Pa] - Pressure loss

Installation

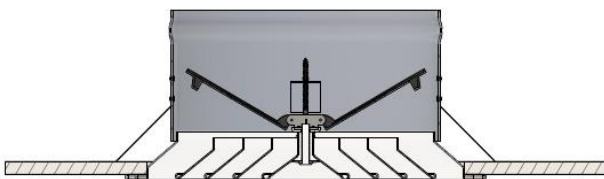
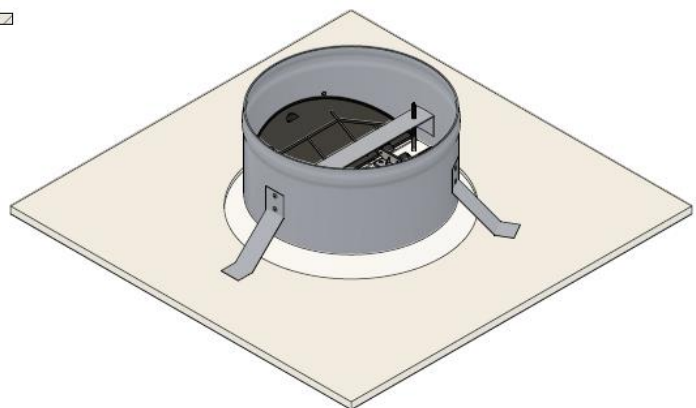
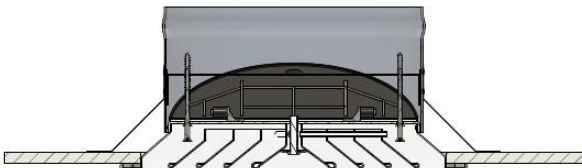
The ceiling diffuser is mounted in a false ceiling, at the end of the duct or suspended.

Rigid duct installation

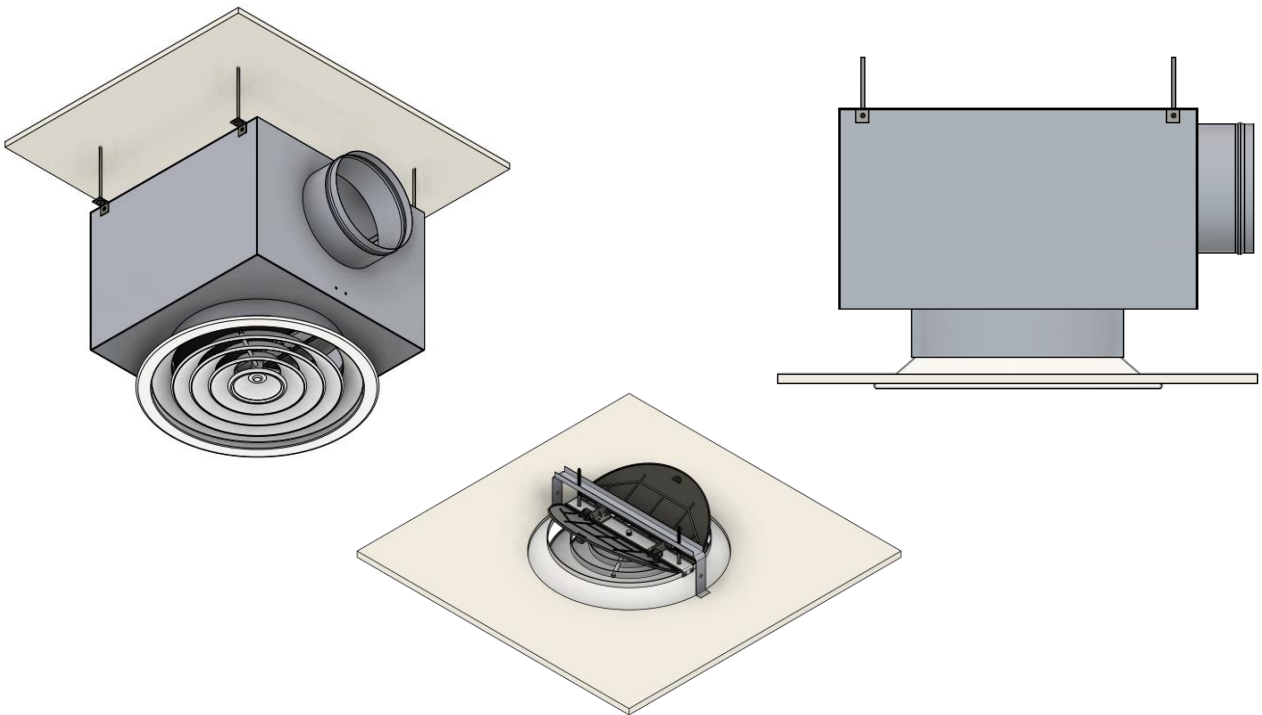


Flexible duct installation

For installation in flexible duct, it is recommended to use a connection (CR) between the circular ceiling diffuser and the duct. The connection element is ordered separately.



Suspended in the ceiling



Order code

Example on how to place an order

| Type | Dimensions | Accessories | Finish |
|-------------------------------------|------------------|-------------|--------|
| RCD | Ø150 ... Ø350 mm | | |
| AIZ - Insulated adapter | | | |
| AN - Uninsulated adapter | | | |
| CR - Duct connection | | | |
| RAL 9016 | | | |
| RAL.. - Other RAL colors on request | | | |