



**Circular Floor Diffusers  
CFD**

**DESCRIPTION:**

GMCAIR floor diffusers are produced in aluminium (CFD). Their select variety of surface structures and colours makes them an attractive design element for building owners and architects.

**MATERIAL :**

- Steel Sheet (standard)
- Aluminum (optional)

**FUNCTION :**

The introduction of supply air through false floor systems is ideally carried out at locations in which convection currents are to be supported in occupied zones. Convection or lift currents can be caused by people, machines or electrical devices. Air flow from the floor to the ceiling is becoming increasingly popular in offices equipped with computers and other electronic devices. Local thermal loads are effectively discharged by means of this principle. Floor diffusers are installed at locations which are not continuously occupied. They can be deployed at distances of as little as 35cm from seating.

**FINISHING :**

- Powder coated in RAL9010 colour as standard. Other colours on request

**INSTALLATION :**

- Screw
- Mounting Frame

**ACCESSORIES:**

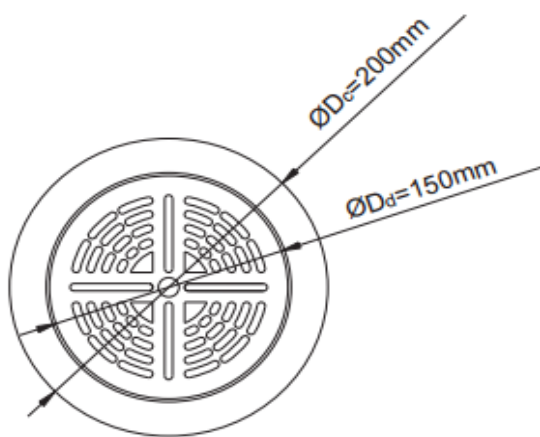
- Damper
- Filter



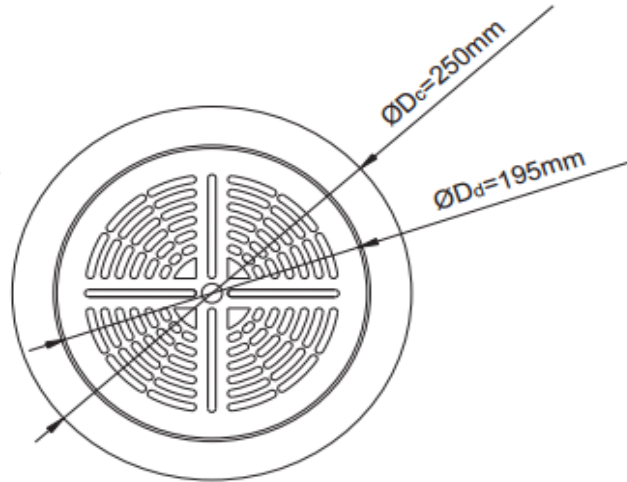
**STANDARD SIZES (mm):**

TYPE CFD - AVAILABLE SIZES (mm)	
NECK SIZE	
Ø150	Ø195
X	X

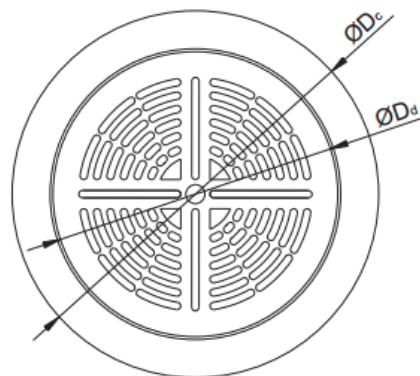
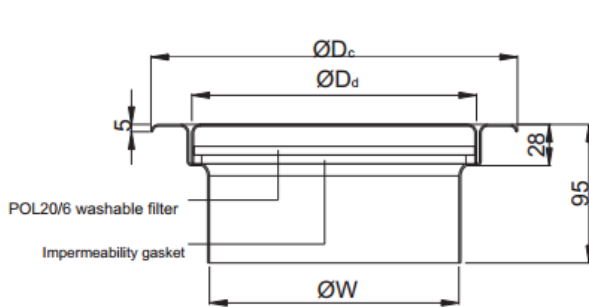
**DIMENSIONS**



**CFD-130**



**CFD-230**



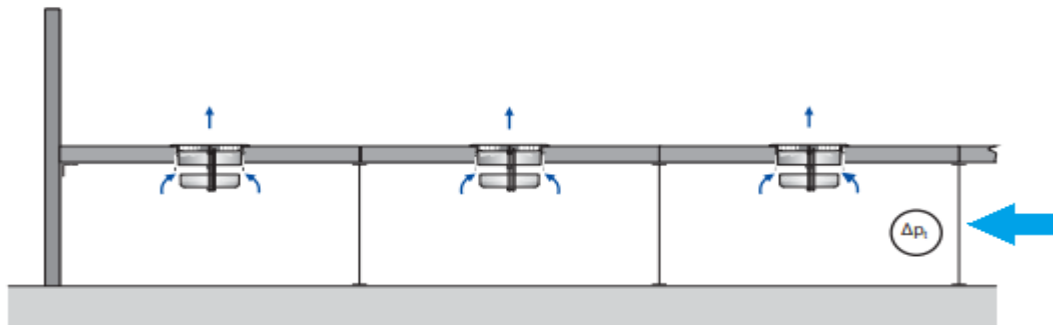
**CFD-130/230 STANDARD SELECTION TABLE**

Model	ØW(mm)	ØDd(mm)	ØDc(mm)	A <sub>eff.</sub> (m <sup>2</sup> )
CFD-130	120	150	200	0,0049
CFD-230	171	195	250	0,0088

## Installation examples

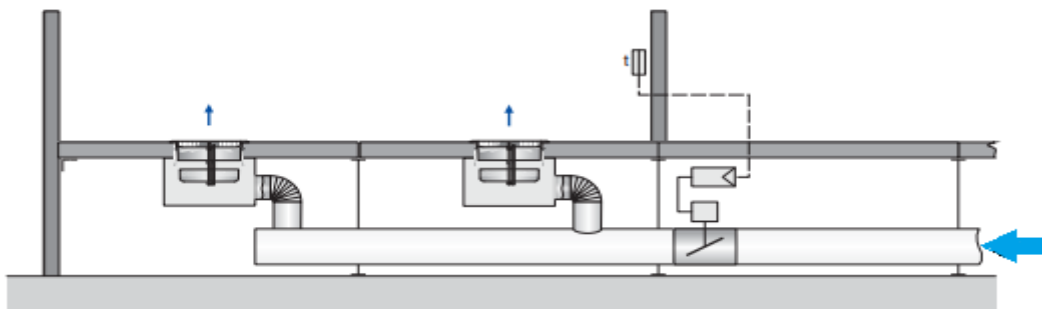
### Positive pressure plenum floors

Positive plenums are preferred for large floor areas. Here, plenum boxes are not required due to the uniform under floor pressure distribution. It is not necessary to balance the air flow to individual diffusers.



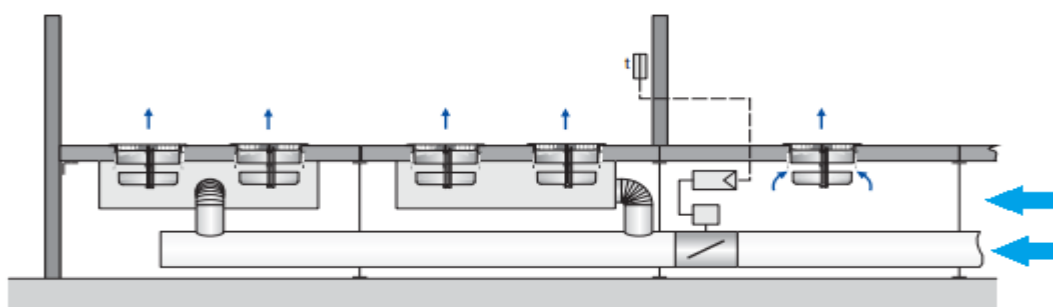
### Individual rooms

The use of plenum boxes is recommended for individual room temperature control. This guarantees that the air flow rate to each room can be controlled separately, e.g. by room thermostats



### Positive pressure plenum floors and individual rooms

For a combination of zone and individual room control, the floor diffusers for the room should have a ducted supply to the plenum boxes. Individual rooms can then be controlled, e.g. by room thermostats. The air is distributed over the zone via a pressurised floor void and hence the floor diffusers will be nominally self balancing. For the individual room a number of multiple diffuser plenum boxes are shown.





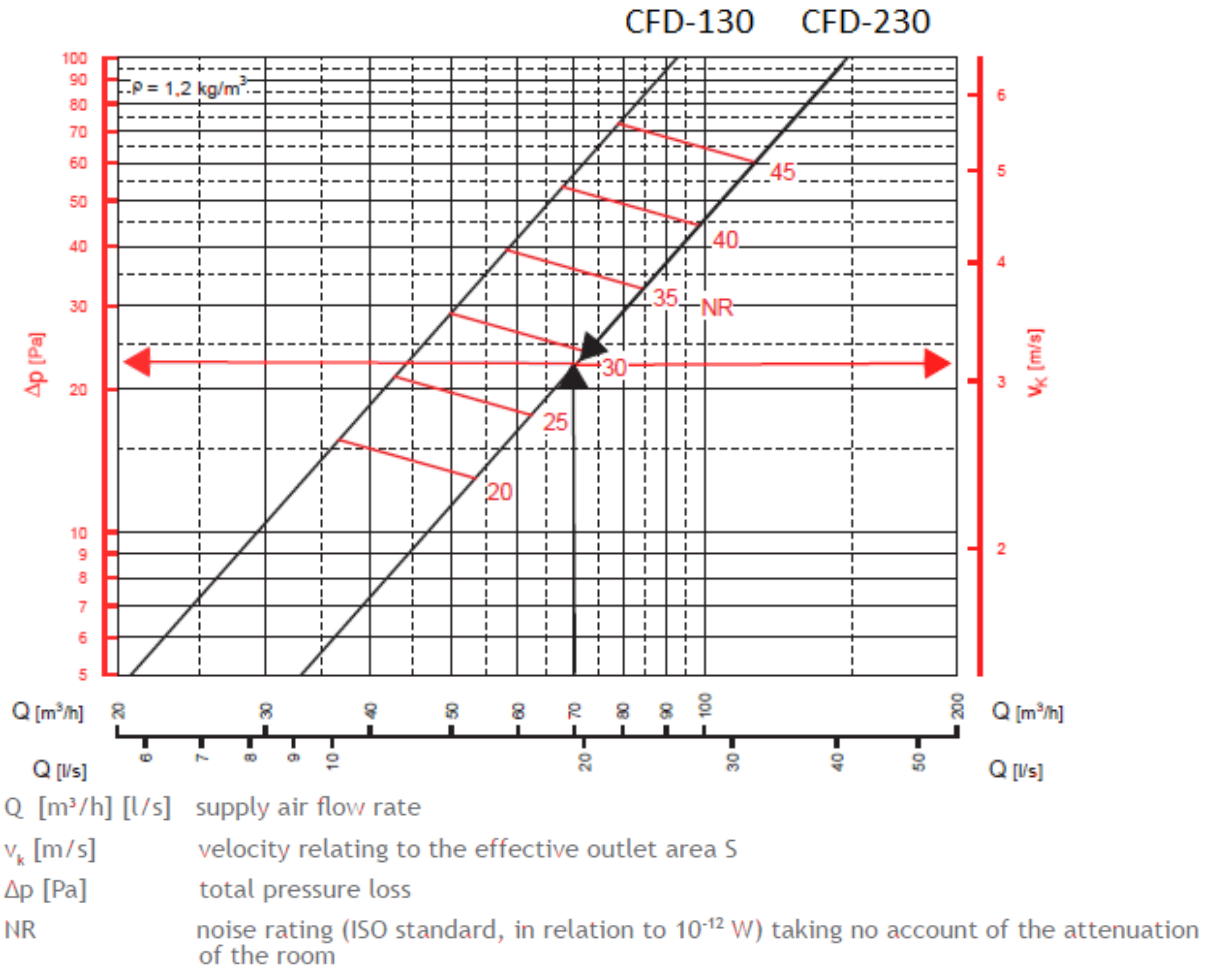
## CDF SELECTION TABLE

V (m <sup>3</sup> /h)	CFD130		CFD230
	A <sub>eff.</sub> (m <sup>2</sup> )	0,0049	0,0088
50	u <sub>eff.</sub> (m/s)	2,8	
	ΔP <sub>tot.</sub> (Pa)	7	
	SPL (dBA)	18	
60	u <sub>eff.</sub> (m/s)	3,4	
	ΔP <sub>tot.</sub> (Pa)	10	
	SPL (dBA)	24	
70	u <sub>eff.</sub> (m/s)	4,0	
	ΔP <sub>tot.</sub> (Pa)	15	
	SPL (dBA)	27	
80	u <sub>eff.</sub> (m/s)	4,5	2,5
	ΔP <sub>tot.</sub> (Pa)	19	10,5
	SPL (dBA)	32	25
90	u <sub>eff.</sub> (m/s)	5,1	2,8
	ΔP <sub>tot.</sub> (Pa)	24	14
	SPL (dBA)	34	28
100	u <sub>eff.</sub> (m/s)	5,7	3,2
	ΔP <sub>tot.</sub> (Pa)	28	16
	SPL (dBA)	37	29
120	u <sub>eff.</sub> (m/s)	6,8	3,8
	ΔP <sub>tot.</sub> (Pa)	43	24
	SPL (dBA)	42	34
140	u <sub>eff.</sub> (m/s)	7,9	4,4
	ΔP <sub>tot.</sub> (Pa)	58	32
	SPL (dBA)	45	37
160	u <sub>eff.</sub> (m/s)	9,1	5,1
	ΔP <sub>tot.</sub> (Pa)	75	42
	SPL (dBA)	49	40
180	u <sub>eff.</sub> (m/s)		5,7
	ΔP <sub>tot.</sub> (Pa)		52
	SPL (dBA)		42
200	u <sub>eff.</sub> (m/s)		6,3
	ΔP <sub>tot.</sub> (Pa)		65
	SPL (dBA)		44

**V (m<sup>3</sup>/h)** : Air flow rate  
**A<sub>eff.</sub> (m<sup>2</sup>)** : Effective area  
**u<sub>eff.</sub> (m/s)** : Effective area  
**ΔP<sub>tot.</sub> (Pa)** : Pressure Drop  
**SPL (dBA)** : Sound Power Level

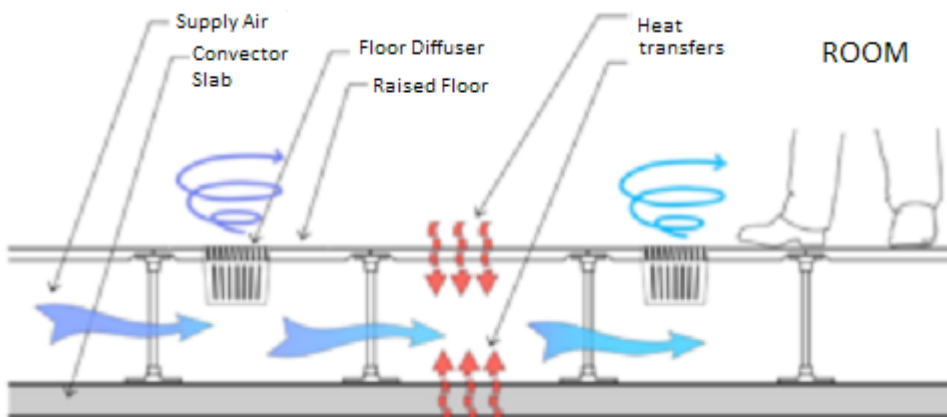
**DATA DIAGRAM**

**PRESSURE LOSS AND NOISE LEVELS**

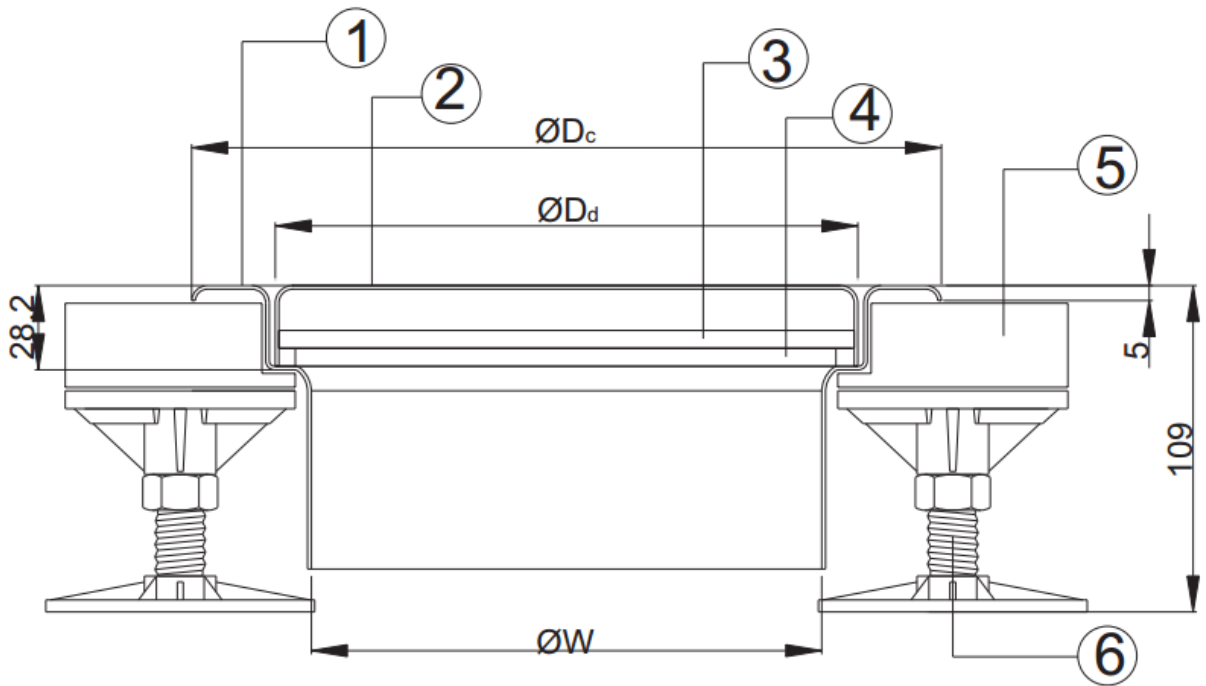


The pressure loss and noise level do not vary noticeably with the type of plate (a, b, c, or d)

**WORKING PRINCIPLE**

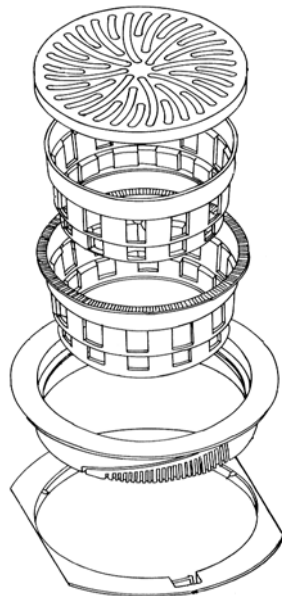


**INSTALLATION:**



- 1 Floor diffuser core
- 2 Diffuser surface
- 3 POL20/6 washable filter
- 4 Impermeability gasket
- 5 False floor
- 6 False floor profile

**DETAIL**





**ORDER CODES**

CFD-130	S	RAL9010	00	
CFD-130: Standard CFD-230: Improved				00: No Mounting FM: Click-Fitted Mounting
S: Steel material (standard) A: Aluminum (opsiyonel)				00: No coating OD----: Oven Drying Coating