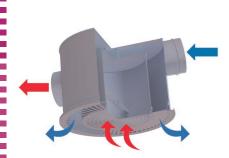


DFRT-I/R





Supply and return air swirl diffuser

Product description

KOOLAIR **DFRT-I/R-Q** fixed blade swirl diffuser for simultaneous supply and return air in the same unit. Integrated in a 595x595 mm ceiling tile for installation in suspended ceilings. Made of sheet steel. Incorporates two plenums with independent connections (supply and return air) made of galvanized steel sheet, with regulating damper on supply spigot. Painted finish in RAL colour of choice. Air is supplied through the outer section of the unit, creating high induction rotating airflow and rapidly reducing the terminal velocity of the air jet and the temperature difference in the range and ensuring the absence of draughts and thermal asymmetry in the occupied zone.

This model of diffuser is very useful for small spaces (e.g. small meeting rooms) or ceilings with different equipment densely grouped as it avoids the need to install an additional return grille that would further clutter the little space available. All of this in a compact solution with unique aesthetics.

The design of the perforation pattern of the return section of can be customised on request depending on the needs of the project or client.

Models

DFRT-I/R. Fixed blade swirl diffuser for supply and return air, integrated in LxH ceiling tile for installation in suspended ceilings.

DFRT-I/R-Q. Fixed blade swirl diffuser for supply and return air, integrated in 595x595 ceiling tile for installation in suspended ceilings. (Not available in 800 mm).

DFRT-I/R-C. Fixed blade swirl diffuser for supply and return air, integrated in LxH circular ceiling tile for suspended ceilings.

DFRT-I/R-E. Fixed blade swirl diffuser for supply and return air, integrated in ceiling tile for flush mounting in suspended ceiling (no lug).

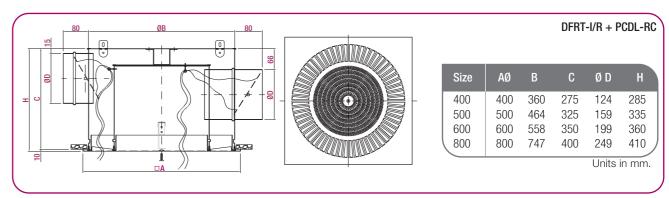
Mounting

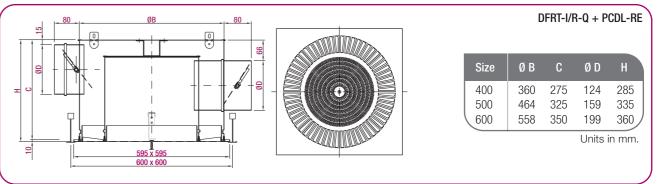
PCDL(R)/PCDL. Demountable circular plenum box with side connection on return, and removable circular plenum box with side connection on supply. PCDL(R) /PCDS. Demountable circular plenum box with side connection on return, and removable circular plenum box with top connection on supply.

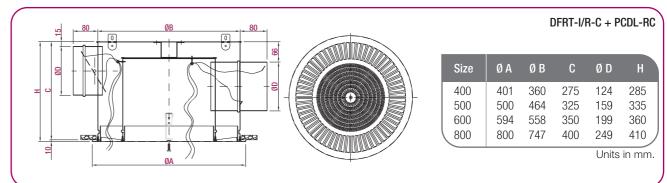
Accessories

- **-A.** Interior insulated. (In cases with insulation, it will be on supply and extract).
- **-RE.** With regulating damper accessible from false ceiling.
- **-RC.** With regulating damper accessible from below, with strings.

General dimensions







Selection table

| | | Supply data | | | | Return data | | |
|------|----------|-------------------------|----------------------|-------|----------------------|-------------------------|----------------------|----------------------|
| Size | Q (m³/h) | L _{wA} [dB(A)] | ΔP _t (Pa) | X (m) | V _K (m/s) | L _{wA} [dB(A)] | ΔP _t (Pa) | V _K (m/s) |
| 400 | 100 | 24 | 4 | 0,8 | 1,8 | <20 | 10 | 0,7 |
| | 140 | 32 | 8 | 1,1 | 2,5 | 26 | 19 | 1,0 |
| | 185 | 40 | 15 | 1,5 | 3,3 | 34 | 33 | 1,4 |
| 500 | 140 | 24 | 4 | 0,9 | 1,7 | <20 | 7 | 0,6 |
| | 200 | 32 | 7 | 1,3 | 2,4 | 26 | 13 | 0,8 |
| | 280 | 40 | 15 | 1,9 | 3,3 | 33 | 27 | 1,2 |
| 600 | 260 | 24 | 4 | 1,5 | 2,3 | <20 | 11 | 1,0 |
| | 380 | 32 | 9 | 2,2 | 3,4 | 29 | 24 | 1,4 |
| | 480 | 40 | 14 | 2,7 | 4,3 | 34 | 38 | 1,8 |
| 800 | 390 | 24 | 3 | 1,6 | 1,8 | <20 | 9 | 1,0 |
| | 510 | 32 | 6 | 2,0 | 2,3 | 25 | 15 | 1,4 |
| | 670 | 40 | 10 | 2,7 | 3,0 | 33 | 26 | 1,8 |

The selection table reflects the technical data for the models: DFRT-I/R, DFRT-I/R-Q, DFRT-I/R-C, DFRT-I/R-E.

LEGEND

Q (m³/h): Air flow. L_{wA} [dB(A)]: Sound power level. ΔP, (Pa): Total pressure loss.

 V_k (m/s): Effective air velocity through filter (m/s). X (m): Horizontal range for a maximum velocity in occupied zone of 0.25 m/s, thermal gap $\Delta T = -10^{\circ}$ C (cold) and an installation height of 2.8 m.