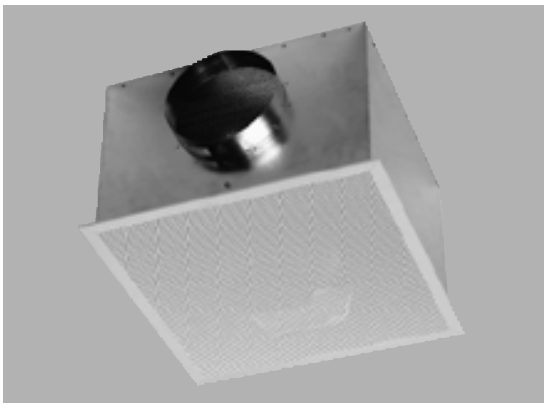


# PTVD

- **Perforated diffuser**
- **Supply**

## Application:

The perforated diffuser type PTVD is suited for supplying cooled and heated air with a large temperature differential with respect to the room temperature.
The diffuser can be mounted in the ceiling and can be fitted with a (lined) plenum box which is delivered ready assembled, including a stabilisation plate. The diffuser has a removable face plate located on the visible side. The four in-built pattern blades enable a free choice of the discharge direction, also after mounting. Prior to adjustment refer to the performance data. The high induction effect enables a high number of air changes. The precise radial pattern minimises ceiling smudging. The very shallow inflow pattern also makes the diffuser type PTVD suited for somewhat lower spaces.

## Features:

| | |
|---|---|
| Max. air exchanges: | up to 10 x |
| Under temperature: | up to 10 K |
| Over temperature: | up to 15 K |
| Free area | 50% |

## Dimensional data:

| Model | B | A | D1 | D2 | T | P |
|---|---|---|---|---|---|---|
| **250** | 249 | 242 | 123 | 123 | 70 | 235 |
| **300** | 313 | 307 | 158 | 158 | 70 | 270 |
| **400** | 388 | 382 | 198 | 198 | 75 | 315 |
| **500** | 483 | 477 | 248 | 198 | 85 | 325 |
| **550** | 556 | 551 | 313 | 248 | 105 | 395 |

## Weights:

| Model | type | | Ø |
|---|---|---|---|
| | OA | OR | vcd |
| **250** | 1.4 | 2.6 | 0.1 |
| **300** | 1.9 | 3.8 | 0.2 |
| **400** | 2.5 | 5.4 | 0.3 |
| **500** | 3.6 | 7,4 | 0.4 |
| **550** | 4.6 | 9.9 | 0.5 |

## Remarks:

The dimensions are given in mm.
Weights are given in kg.

## Design:

**Perforated diffuser**

| | |
|---|---|
| flange: | extruded aluminium |
| face plate: | steel |
| finish: | epoxy powder |
| colour: | white RAL 9010 |

**Plenum box**

| | |
|---|---|
| material: | steel galvanised sendzimir |
| lining: | 12 mm polyester wool |
| finish: | none |

**Damper**

| | |
|---|---|
| material: | steel galvanised sendzimir |
| finish: | none |

## Available types:

**P T - D - -**

**P** perforated ceiling diffuser
**T** supply

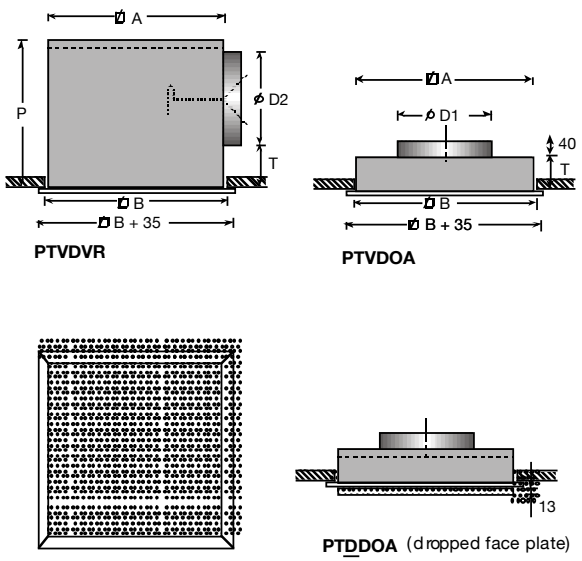
**- face plate**
**V** flat
**D** dropped 13 mm (other drops available

**D** flange

**- accessories**
**O** none
**V** damper

**- available as options**
**A** round top connection
**R** lined plenum box (assembled)
**U** un-lined plenum box (assembled)
**L** lined top connection

## Dimensions:



## Performance data PTVD:

| Air volume | | Model | Air volume | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 4-way | | | 3-way | | | 2-way opposite. | | | 2-way corner | | | 1-way | | |
| m³/s | m³/h | | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp |
| 0,015 | 54 | 250 | 0,4 | 1 | - | 0,4 | 1 | - | 0,6 | 2 | 3 | 0,6 | 3 | 5 | 0,9 | 7 | 13 |
| 0,020 | 72 | 250 | 0,6 | 1 | 5 | 0,6 | 2 | 7 | 0,7 | 4 | 10 | 0,7 | 4 | 12 | 1,2 | 12 | 21 |
| 0,025 | 90 | 250 | 0,7 | 2 | 11 | 0,7 | 3 | 13 | 0,9 | 5 | 16 | 0,9 | 7 | 18 | 1,5 | 19 | 27 |
| | | 300 | 0,6 | 1 | - | 0,6 | 1 | 4 | 0,8 | 3 | 7 | 0,8 | 3 | 19 | 1,3 | 9 | 19 |
| 0,030 | 108 | 250 | 0,8 | 3 | 16 | 0,9 | 4 | 18 | 1,1 | 8 | 21 | 1,1 | 10 | 23 | 2,0 | 28 | 31 |
| | | 300 | 0,7 | 1 | 2 | 0,7 | 2 | 8 | 0,9 | 4 | 12 | 0,9 | 5 | 14 | 1,5 | 13 | 23 |
| 0,040 | 144 | 250 | 1,1 | 4 | 23 | 1,2 | 6 | 25 | 1,5 | 13 | 28 | 1,5 | 17 | 29 | 2,5 | 49 | 39 |
| | | 300 | 0,9 | 3 | 14 | 1,0 | 3 | 16 | 1,2 | 6 | 19 | 1,2 | 8 | 21 | 2,0 | 23 | 31 |
| | | 400 | 0,8 | 1 | 6 | 0,8 | 2 | 8 | 1,0 | 3 | 12 | 1,0 | 4 | 12 | 1,7 | 11 | 22 |
| 0,050 | 180 | 250 | 1,4 | 6 | 29 | 1,5 | 10 | 31 | 1,9 | 20 | 34 | 1,9 | 25 | 34 | | | |
| | | 300 | 1,2 | 4 | 20 | 1,2 | 5 | 22 | 1,5 | 10 | 25 | 1,5 | 13 | 27 | 2,5 | 34 | 36 |
| | | 400 | 1,0 | 2 | 12 | 1,0 | 3 | 14 | 1,3 | 5 | 17 | 1,3 | 6 | 18 | 2,1 | 17 | 28 |
| 0,060 | 216 | 250 | 1,7 | 8 | 34 | 1,8 | 13 | 36 | 2,2 | 28 | 39 | 2,2 | 35 | 41 | | | |
| | | 300 | 1,5 | 6 | 24 | 1,5 | 8 | 26 | 1,8 | 14 | 30 | 1,8 | 19 | 32 | 3,0 | 51 | 41 |
| | | 400 | 1,1 | 3 | 17 | 1,3 | 4 | 19 | 1,5 | 7 | 21 | 1,5 | 8 | 23 | 2,5 | 24 | 32 |
| | | 500 | | | | | | | | | | | | | 2,1 | 13 | 25 |
| 0,080 | 288 | 300 | 1,8 | 11 | 32 | 1,9 | 14 | 34 | 2,4 | 26 | 37 | 2,4 | 33 | 39 | | | |
| | | 400 | 1,5 | 6 | 24 | 1,7 | 7 | 25 | 2,0 | 13 | 29 | 2,0 | 15 | 30 | 3,4 | 43 | 40 |
| | | 500 | 1,3 | 4 | 17 | 1,4 | 5 | 19 | 1,8 | 8 | 22 | 1,8 | 10 | 24 | 2,8 | 23 | 32 |
| | | 550 | | | | | | | | | | | | | 2,4 | 13 | 27 |
| 0,100 | 360 | 300 | 2,3 | 17 | 38 | 2,4 | 21 | 40 | | | | | | | | | |
| | | 400 | 1,9 | 9 | 30 | 2,1 | 11 | 32 | 2,6 | 20 | 32 | 2,6 | 23 | 36 | | | |
| | | 500 | 1,6 | 4 | 22 | 1,8 | 8 | 25 | 2,2 | 12 | 28 | 2,2 | 15 | 30 | 3,5 | 35 | 38 |
| | | 550 | 1,4 | 4 | 16 | 1,6 | 4 | 19 | 1,9 | 7 | 21 | 1,9 | 8 | 23 | 3,1 | 21 | 32 |
| 0,125 | 450 | 400 | 2,4 | 13 | 36 | 2,6 | 18 | 35 | | | | | | | | | |
| | | 500 | 2,0 | 10 | 28 | 2,3 | 12 | 30 | 2,8 | 19 | 34 | 2,8 | 23 | 36 | | | |
| | | 550 | 1,8 | 6 | 22 | 2,0 | 7 | 24 | 2,4 | 10 | 27 | 2,4 | 13 | 29 | 3,8 | 32 | 38 |
| 0,150 | 540 | 400 | 2,9 | 19 | 40 | | | | | | | | | | | | |
| | | 500 | 2,5 | 8 | 33 | 2,7 | 17 | 35 | 3,4 | 28 | 38 | 3,4 | 34 | 41 | | | |
| | | 550 | 2,2 | 8 | 27 | 2,4 | 10 | 29 | 2,9 | 15 | 32 | 2,9 | 19 | 34 | 4,6 | 47 | 43 |
| 0,200 | 720 | 500 | 3,3 | 25 | 40 | 3,6 | 30 | 43 | | | | | | | | | |
| | | 550 | 2,9 | 14 | 34 | 3,2 | 18 | 37 | 3,0 | 27 | 40 | 3,0 | 33 | 41 | | | |
| 0,250 | 900 | 550 | 3,6 | 22 | 40 | 4,0 | 27 | 42 | 4,9 | 42 | 45 | 4,9 | 50 | 46 | | | |
| 0,300 | 1080 | 550 | 4,3 | 32 | 45 | | | | | | | | | | | | |

## Spread pattern

4-way

3-way

2-way corner

2-way opposite

1-way



pattern blade “closed”



pattern blade “open”

## General:

The throw applies to flush mounted in a horizontal dropped ceiling.

- throw T in metres.
- static pressure drop Ps in Pa.

The assumed room absorption is 10 dB.

- sound pressure Lp in dB(A).

Intermediate values may be interpolated.

## Plenum box sound dampering:

| Model | Middle frequency bands | | | | | |
|---|---|---|---|---|---|---|
| | 125 | 250 | 500 | 1K | 2K | 4K |
| 250 | 5 | 0 | 3 | 10 | 5 | 11 |
| 300 | 3 | 1 | 6 | 7 | 7 | 9 |
| 400 | 2 | 2 | 9 | 7 | 7 | 9 |
| 500 | 2 | 4 | 9 | 7 | 7 | 10 |
| 550 | 0 | 6 | 7 | 7 | 6 | 9 |