

Application:

The perforated diffuser types PSVT and PTVT are suited for supplying cooled and heated air with a large temperature differential with respect to the room temperature.

The diffuser can be Tee-bar mounted in a ceiling with a module size of 300 mm and can be fitted with a (lined) plenum box which is delivered ready assembled and includes a stabilisation plate.

The type PSVT has a fixed one-way spread pattern. The PTVT type is equipped with pattern adjusting blades that enable a free choice of the discharge direction. Prior to adjustment refer to the performance data. The very shallow inflow pattern also makes these diffusers suited for somewhat lower spaces. The radial pattern minimises ceiling smudging.

Features:

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

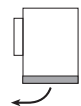
Available dimensions:

| | panel | |
|------------|---------|---------|
| | 600x300 | 300x300 |
| PSVTOR 160 | • | |
| PTVTOR 125 | • | • |
| PTVTOR 160 | • | |

Remarks:

The dimensions are given in mm.
Connection "D" is actual O.D.

Type PSVT: The exhaust direction will be in the direction of the connection



PSVT & PTVT

- ▶ Perforated diffuser
- ▶ Supply
- ▶ For Tee-bar mounting

Design:

Perforated diffuser

| | |
|----------------|----------------|
| face plate: | steel |
| finish | |
| visible parts: | epoxy powder |
| colour: | white RAL 9010 |

Plenum box

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

Damper

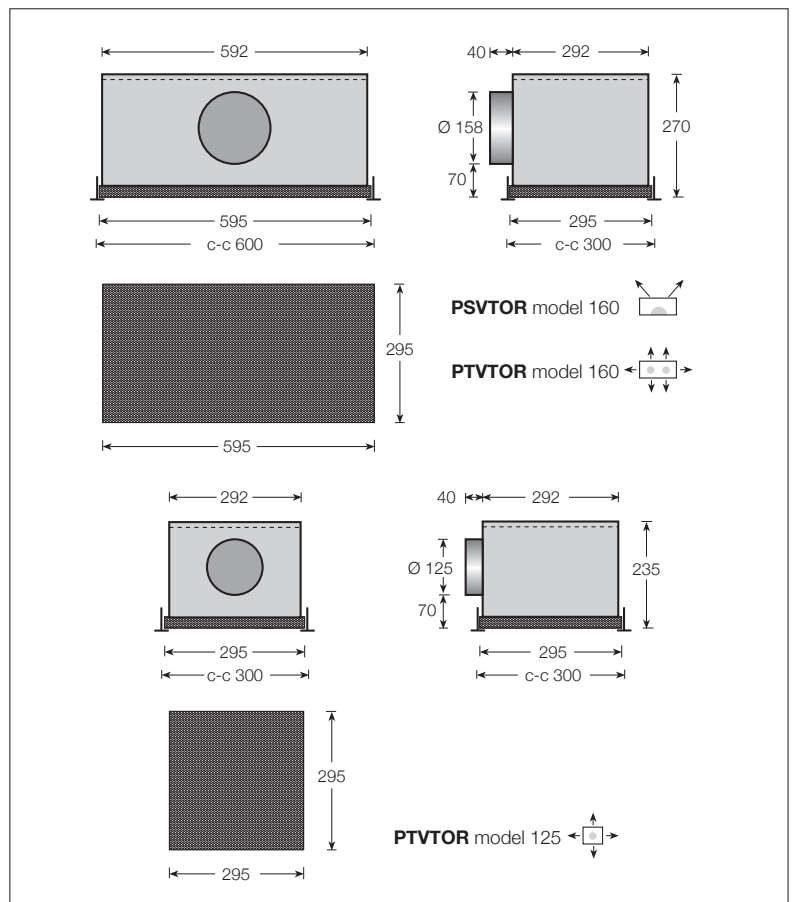
| | |
|-----------|----------------------------------|
| material: | steel galvanised sendzimir |
| finish: | none |

Available types:

P - V T O R

- P** perforated ceiling diffuser
- **spread pattern**
 - S** supply, one-way spread pattern (fixed)
 - T** supply, adjustable spread pattern (equipped with pattern blades)
- V** flat face plate
- T** suited for standard Tee-bar mounting, module size 300/600 mm
- O** not applicable
- R** lined plenum box

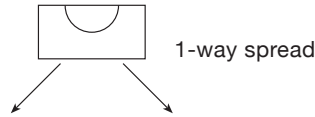
Dimensions:



Performance data:

PSVTOR 160 front 600 x 300

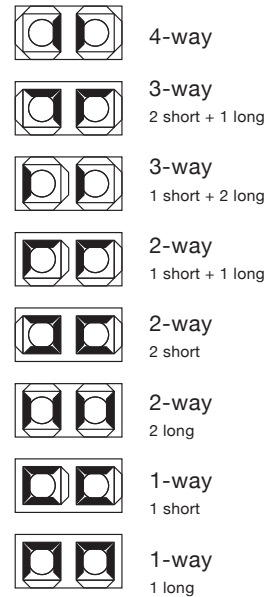
| air volume | | 1-way spread | | |
|-------------------|-------------------|--------------|----|----|
| m ³ /s | m ³ /h | T | Ps | Lp |
| 0.025 | 90 | 0.8 | 2 | 6 |
| 0.030 | 108 | 1.0 | 2 | 11 |
| 0.040 | 144 | 1.3 | 4 | 19 |
| 0.050 | 180 | 1.6 | 7 | 24 |
| 0.060 | 216 | 2.0 | 10 | 29 |



PTVTOR 160 front 600 x 300

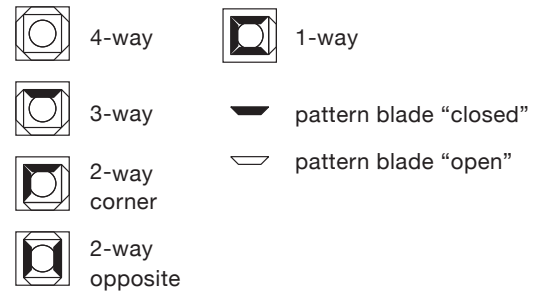
| air volume | | 4-way | | | 3-way 2K + 1L | | | 3-way 1K + 2L | | | 2-way 1K + 1L | | |
|-------------------|-------------------|-------|----|----|---------------|----|----|---------------|----|----|---------------|----|----|
| m ³ /s | m ³ /h | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp |
| 0.030 | 108 | 0.6 | 3 | - | 0.7 | 4 | 10 | 0.6 | 3 | - | 0.9 | 4 | 10 |
| 0.040 | 144 | 0.7 | 6 | 16 | 1.0 | 7 | 19 | 0.8 | 6 | 17 | 1.2 | 7 | 19 |
| 0.050 | 180 | 0.9 | 9 | 23 | 1.2 | 11 | 26 | 1.0 | 10 | 24 | 1.4 | 12 | 26 |
| 0.060 | 216 | 1.1 | 13 | 28 | 1.4 | 16 | 31 | 1.2 | 14 | 29 | 1.7 | 17 | 31 |
| 0.080 | 288 | 1.5 | 23 | 37 | 1.9 | 29 | 40 | 1.7 | 25 | 38 | 2.3 | 29 | 40 |
| 0.100 | 360 | 1.8 | 36 | 44 | 2.4 | 45 | 47 | 2.1 | 39 | 45 | 2.9 | 46 | 47 |

| air volume | | 2-way 2L | | | 2-way 2K | | | 1-way 1L | | | 1-way 1K | | |
|-------------------|-------------------|----------|----|----|----------|----|----|----------|----|----|----------|----|----|
| m ³ /s | m ³ /h | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp |
| 0.020 | 72 | 0.5 | 3 | - | 0.6 | 2 | - | 0.8 | 2 | - | 1.1 | 7 | 24 |
| 0.025 | 90 | 0.7 | 5 | - | 0.7 | 3 | - | 1.0 | 3 | - | 1.4 | 11 | 30 |
| 0.030 | 108 | 0.8 | 7 | 15 | 0.8 | 5 | 13 | 1.2 | 5 | 13 | 1.7 | 16 | 35 |
| 0.040 | 144 | 1.0 | 11 | 24 | 1.1 | 9 | 22 | 1.6 | 9 | 22 | 2.2 | 28 | 42 |
| 0.050 | 180 | 1.4 | 19 | 31 | 1.4 | 13 | 29 | 2.0 | 13 | 29 | 2.8 | 44 | 48 |
| 0.060 | 216 | 1.7 | 30 | 36 | 1.7 | 19 | 34 | 2.3 | 20 | 34 | | | |
| 0.080 | 288 | 2.1 | 47 | 46 | 2.2 | 34 | 43 | 3.1 | 36 | 43 | | | |



PTVTOR 125 front 300 x 300

| air volume | | 4-way | | | 3-way | | | 2-way opposite | | | 2-way corner | | | 1-way | | |
|-------------------|-------------------|-------|----|----|-------|----|----|----------------|----|----|--------------|----|----|-------|----|----|
| m ³ /s | m ³ /h | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp | T | Ps | Lp |
| 0.015 | 54 | 0.4 | 1 | - | 0.4 | 1 | - | 0.6 | 2 | 3 | 0.6 | 3 | 5 | 0.9 | 7 | 13 |
| 0.020 | 72 | 0.6 | 1 | 5 | 0.6 | 2 | 7 | 0.7 | 4 | 10 | 0.7 | 4 | 12 | 1.2 | 12 | 21 |
| 0.025 | 90 | 0.7 | 2 | 11 | 0.7 | 3 | 13 | 0.9 | 5 | 16 | 0.9 | 7 | 18 | 1.5 | 19 | 27 |
| 0.030 | 108 | 0.8 | 3 | 16 | 0.9 | 4 | 18 | 1.1 | 8 | 21 | 1.1 | 10 | 23 | 2 | 28 | 31 |
| 0.040 | 144 | 1.1 | 4 | 23 | 1.2 | 6 | 25 | 1.5 | 13 | 28 | 1.5 | 17 | 29 | 2.5 | 49 | 39 |
| 0.050 | 180 | 1.4 | 6 | 29 | 1.5 | 10 | 31 | 1.9 | 20 | 34 | 1.9 | 25 | 34 | | | |
| 0.060 | 216 | 1.7 | 8 | 34 | 1.9 | 13 | 36 | 2.2 | 28 | 39 | 2.2 | 35 | 41 | | | |



Return:

If used as return diffuser please refer to chapter 3 page 179
 PSVT and PTVT 160: performance data PRVDOR 300
 PTVT 125 : performance data PRVDOR 250

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.

Lined Plenums:

| model | middle frequency bands | | | | | |
|-------|------------------------|-----|-----|----|----|----|
| | 125 | 250 | 500 | 1K | 2K | 4K |
| 300 | 3 | 1 | 6 | 7 | 7 | 9 |
| 600 | 4 | 0 | 5 | 8 | 7 | 8 |