

## 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		∅ vcd
	OA	OR	
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.

# PTVD

- ▶ Perforated diffuser
- ▶ Supply

## 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

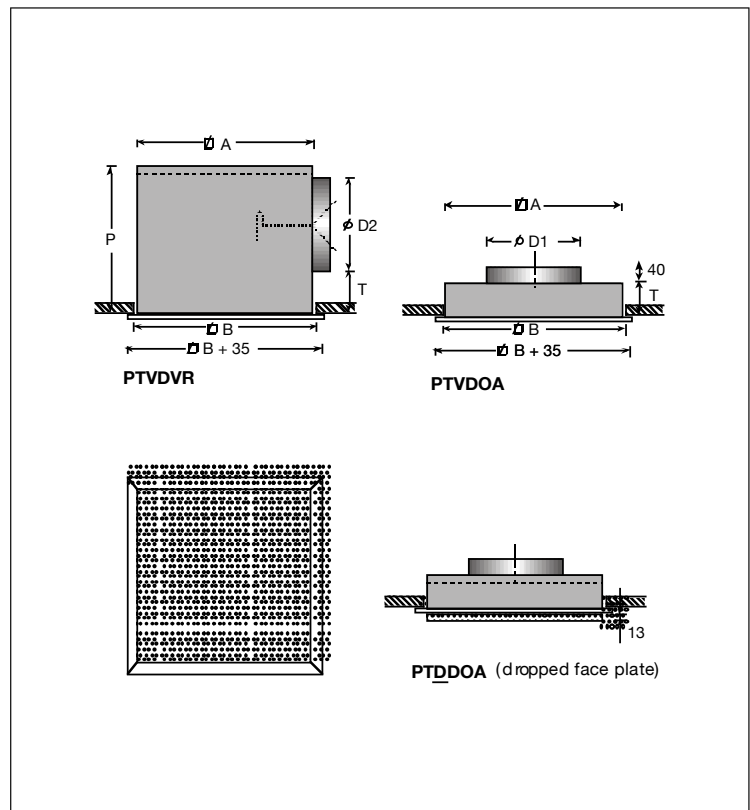
- face plate  
V flat  
D dropped 13 mm (other drops available)

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														
m <sup>3</sup> /s	m <sup>3</sup> /h		4-way			3-way			2-way opposite.			2-way corner			1-way		
			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