



## Perforated Face Diffusers

### CPD / CPDE

#### Introduction

The Waterloo CPD range of diffusers have been designed for use in commercial applications and are particularly suited to projects with high air change rates and high cooling differentials.

CPD diffusers are suitable for installation in 300, 600 and 1200mm tile module systems and the range includes square and rectangular types.

The aluminium face plate may be pivoted down and removed to ease installation, commissioning and maintenance and is held closed by spring clips.

The diffusers are constructed from aluminium extruded frames and perforated face plates with plated steel, square, rectangular and circular connections suitable for top entry ducts.

#### Product Description

- CPD2** 2 way perforated face supply diffuser
- CPD3** 3 way perforated face supply diffuser
- CPD4** 4 way perforated face supply diffuser
- CPDE** Exhaust air perforated face diffuser
- OBSS** Opposed blade damper for square /rectangular connections
- LD** Louvre damper for circular connections

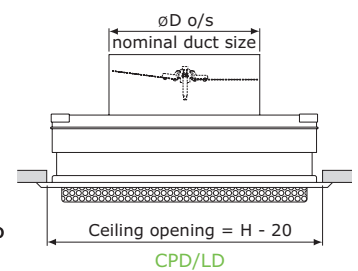
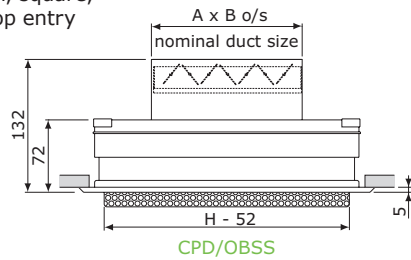
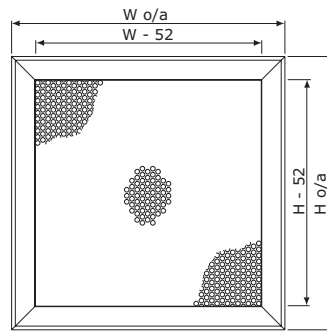
#### Features

- Integrate with 300, 600 and 1200mm tile sizes
- All aluminium face construction
- Pivoting, removable face plate
- Range of four sizes
- High air handling capacity
- Supply or exhaust diffusers visually compatible

#### Finishes

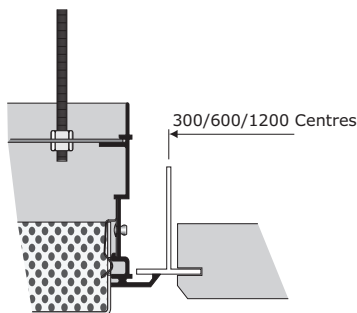
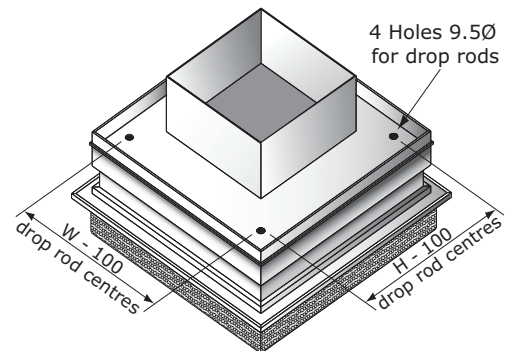
- PPG9010 (RAL 9010 Gloss - 80% Gloss White)
- PPM9010 (RAL 9010 Matt - 20% Gloss White)
- PPM9006 (RAL 9006 Matt - 30% Gloss Silver)
- Other colours available on request

Type	Unit size	W x H	ØD	A x B	Weight (kg)
CPD	300 x 300	295 x 295	147	147 x 147	2.0
CPD	600 x 600	595 x 595	297	297 x 297	3.4
CPD	600 x 300	595 x 295	—	297 x 147	2.8
CPD	1200 x 600	1195 x 595	—	597 x 297	6.5
CPDE	300 x 300	295 x 295	—	147 x 147	2.0
CPDE	600 x 600	595 x 595	—	447 x 447	3.4
CPDE	600 x 300	595 x 295	—	447 x 147	2.8
CPDE	1200 x 600	1195 x 595	—	597 x 297	6.5

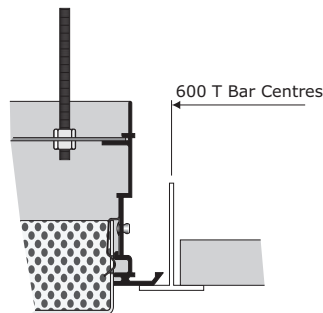


#### Installation

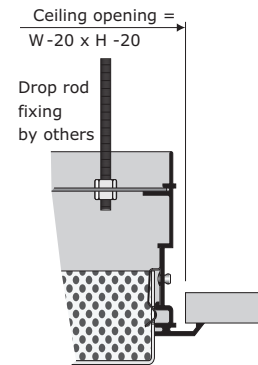
Drop rod (or tie wire) support method is recommended for concealed T and flush mounting options.



CONCEALED T BAR



LAY-IN / EXPOSED T BAR



FLUSH

#### ORDER EXAMPLE

CPD/4/300/300/150 DIA/PPM9010/LD

Type \_\_\_\_\_

Pattern \_\_\_\_\_

Nominal Width \_\_\_\_\_

Nominal Height \_\_\_\_\_

Spigot Size \_\_\_\_\_

Finish \_\_\_\_\_

Damper \_\_\_\_\_

Free Area  
54%



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#### Selection Criteria

Ceiling height up to 2.8 m  
 Radius of diffusion is based on terminal velocities of 0.75 m/s (minimum) and 0.15 m/s (maximum) to achieve mean room air velocities of 0.25 m/s and 0.10 m/s respectively.  
 Noise level is based on diffuser sound power level less 8dB room absorption.

#### Selection Example CPD4/300X300/150

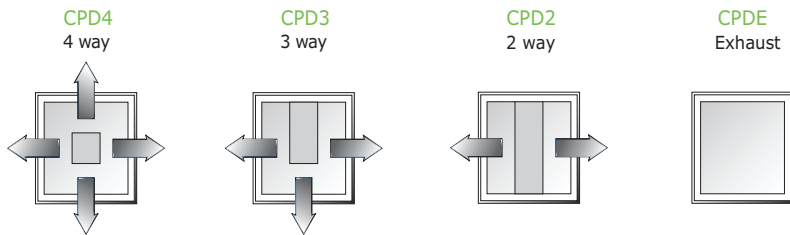
Air flow rate 88 l/s  
 Throw 0.8 - 1.9 m  
 Static Pressure Loss 7 Pa  
 Noise level 38 dBA

Square Neck Supply Diffuser Corrections	
CPD / 300 x 300/ 150 x 150 as 150Ø - 6dB	Pa x 0.65
CPD / 600 x 600/ 300 x 300 as 300Ø - 6dB	Pa x 0.65

### Performance Table

CPD		4 way				3 way			2 way			Exhaust				
Sizes		300 X 300	600 X 600	600 X 300	1200 X 600	300 X 300	600 X 600	600 X 300	300 X 300	600 X 600	600 X 300	300 X 300	600 X 300	600 X 600	600 X 600	
Spigot size		Ø 150	Ø 300	300 X 150	600 X 300	Ø 150	Ø 300	300 X 150	Ø 150	Ø 300	300 X 150	150 X 150	150 X 150	450 X 150	450 X 450	600 X 300
Air Flow Rate	m³/h	126	508	324	1296	126	508	324	126	508	324	162	486	1458	1296	
	l/s	35	141	90	360	35	141	90	35	141	90	45	135	405	360	
Throw Short Side Min.-Max. [m]		0.2-0.5	1.0-2.3	0.8-1.8	1.0-3.2	0.3-0.6	1.0-2.3	0.8-1.8	0.8-1.8	1.4-3.3	1.1-2.5					
Throw Long Side Min.-Max. [m]				1.0-2.3	1.7-4.0			1.0-2.3								
Noise Level [dBA]			23	21	36	21	24	24	25	28	26					
Static Pressure Loss [Pa]		1	3	4	18	2	3	4	3	4	6	6	6	6	6	
Air Flow Rate	m³/h	191	763	486	1944	191	763	486	191	763	486	241	727	2185	1944	
	l/s	53	212	135	540	53	212	135	53	212	135	67	202	607	540	
Throw Short Side Min.-Max. [m]		0.4-0.9	1.5-3.6	1.3-3.1	1.8-4.0	0.5-1.1	1.5-3.6	1.3-3.1	1.3-3.1	2.3-5.4	2.5-5.8					
Throw Long Side Min.-Max. [m]				1.9-4.4	2.6-5.0			1.9-4.4								
Noise Level [dBA]		27	32	33	47	29	33	31	34	37	34		20	24	25	
Static Pressure Loss [Pa]		3	6	4	40	4	6	9	8	9	12	10	10	10	10	
Air Flow Rate	m³/h	252	1015	648	2592	252	1015	648	252	1015	648	324	972	2916	2592	
	l/s	70	282	180	720	70	282	180	70	282	180	90	270	810	720	
Throw Short Side Min.-Max. [m]		0.6-1.4	2.1-5.0	1.9-4.4	2.7-5.0	0.7-1.7	2.1-5.0	1.9-4.4	2.0-4.6	3.2-7.6	3.8-9.0					
Throw Long Side Min.-Max. [m]				2.8-6.6	3.3-6.0			2.8-6.6								
Noise Level [dBA]		33	41	37	56	35	41	37	39	43	41	24	30	34	33	
Static Pressure Loss [Pa]		5	10	14	70	7	11	17	13	16	22	14	14	14	14	
Air Flow Rate	m³/h	-	-	-	-	-	-	-	-	-	-	403	1213	3636	3240	
	l/s	-	-	-	-	-	-	-	-	-	-	112	337	1010	900	
Throw Short Side Min.-Max. [m]		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Throw Long Side Min.-Max. [m]		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Noise Level [dBA]		-	-	-	-	-	-	-	-	-	-	32	38	42	41	
Static Pressure Loss [Pa]		-	-	-	-	-	-	-	-	-	-	20	20	20	20	

### Deflection Patterns



Nominal Size (mm)	Deflecting Pad Size		
	CPD4	CPD3	CPD2
300x300	150x150	195x150	240x150
600x600	200x200	370x200	540x200
600x300	300x150	420x150	540x150
1200x600	950x200	-	-