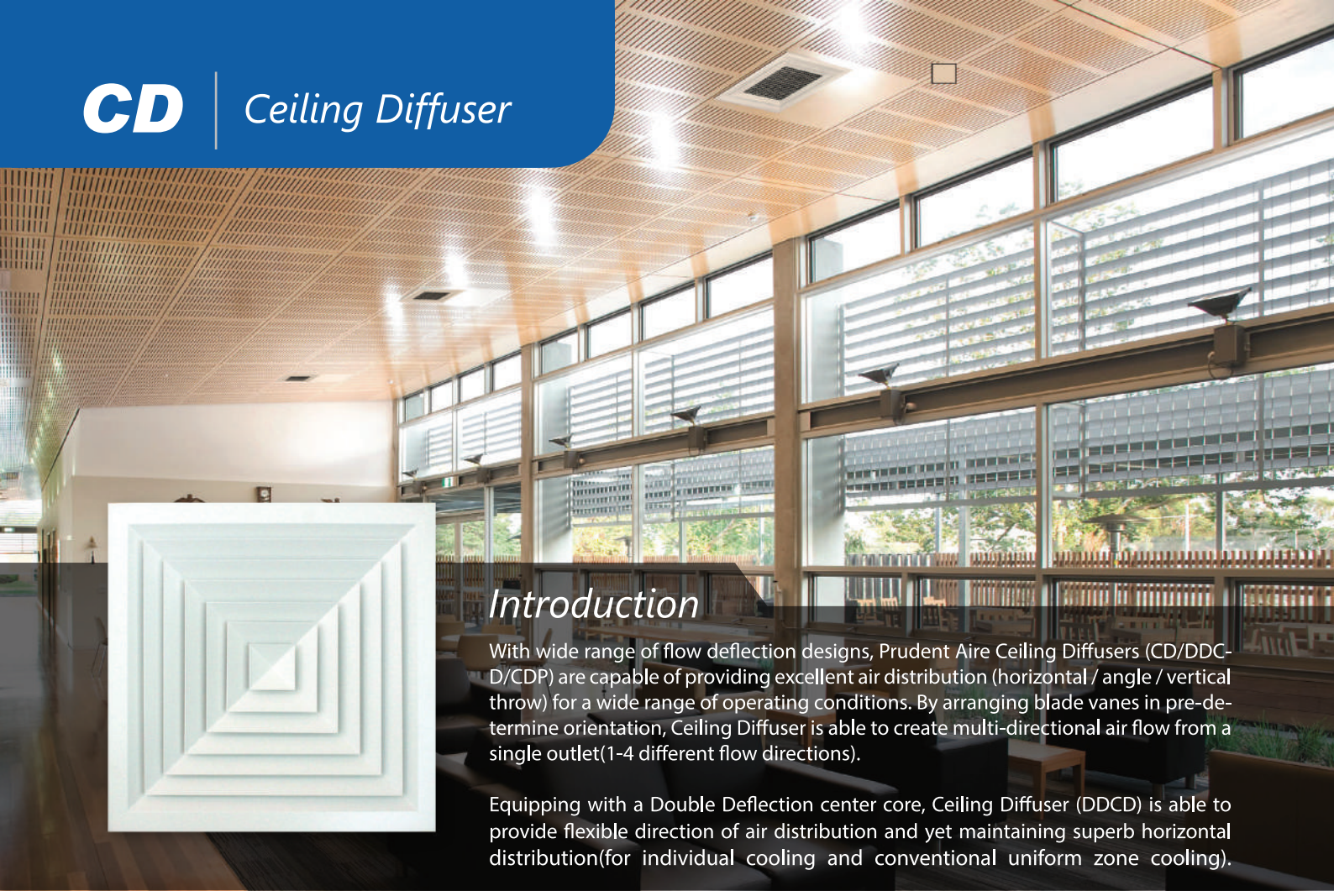
PrudentAire®

CD Ceiling Diffuser

MADE IN MALAYSIA

MEMBER

CD | Ceiling Diffuser



Introduction

With wide range of flow deflection designs, Prudent Aire Ceiling Diffusers (CD/DDC-D/CDP) are capable of providing excellent air distribution (horizontal / angle / vertical throw) for a wide range of operating conditions. By arranging blade vanes in pre-determine orientation, Ceiling Diffuser is able to create multi-directional air flow from a single outlet(1-4 different flow directions).

Equipping with a Double Deflection center core, Ceiling Diffuser (DDCD) is able to provide flexible direction of air distribution and yet maintaining superb horizontal distribution(for individual cooling and conventional uniform zone cooling).

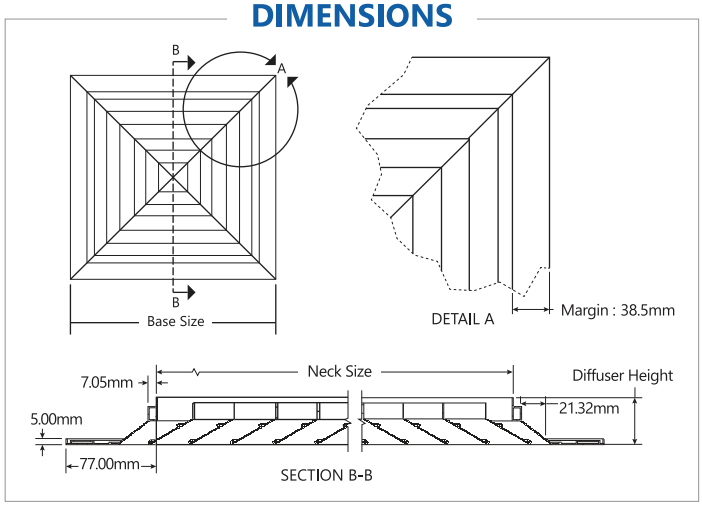
CONSTRUCTIONS & MATERIALS

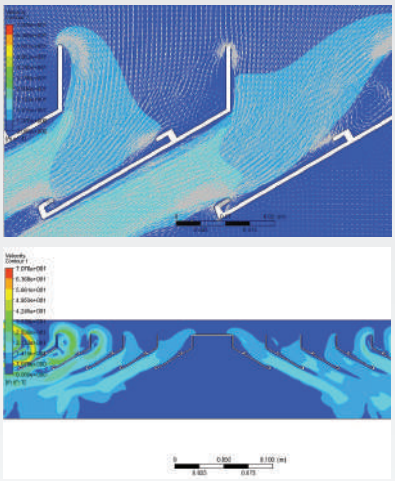
- Free area of the diffuser to be 69%
- 1-4 way flow directions
- Adjustable throw directions (Plate deflector)
- Customizable throw (Horizontal/Angled, Upon request)
- Removable center cores (Upon request)
- Highly customizable designs

Frames			Vanes		
AL 0.9mm	GI 0.6mm	SS 1.0mm	AL 0.9mm	GI 0.5mm	SS 1.0mm
Extruded Aluminium	Galvanized Steel Stainless Steel*	Stainless Steel	Extruded Aluminium	Galvanized Steel Stainless Steel*	Stainless Steel

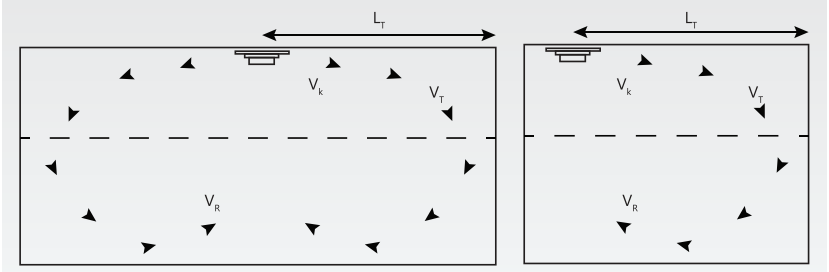
* Upon request

DIMENSIONS

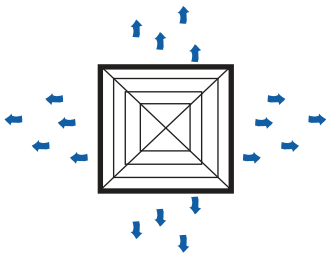




FOR SINGLE CORE PLATE DEFLECTOR



Supply - 4 Way Square Diffuser

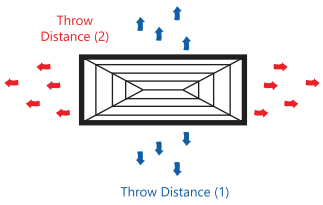


* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

Grille Neck Size, mm	Neck Area (Eff. Area) m²	Unit Volume Flowrate, m³/hr Unit Volume Flowrate, l/s	100 28	150 42	200 56	250 70	500 140	800 224	1000 280	2000 560	3000 840
			NR25	NR35	NR40			NR45			
150 x 150	0.0225 (0.0091)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	1.2 3.0 5.0 20 0.12 13	1.8 4.6 13 30 0.05 23	3.0 6.1 32 42 0.022 >30	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
250 x 250	0.0625 (0.0249)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	1.1 1.7 1.6 <20 0.23 8.0	1.4 2.2 2.8 21 0.13 11	1.8 2.8 4.3 24 0.08 16	3.5 5.6 17.3 39 0.025 >30	- - - - - -	- - - - - -	- - - - - -	- - - - - -
300 x 300	0.09 (0.0361)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	1.2 1.5 <2.0 <20 >0.25 5.0	1.5 1.9 2.2 <20 0.23 7.5	3.0 3.9 8.2 32 0.07 18	4.8 6.2 22 42 0.035 >30	5.8 7.7 32 47 <0.03 >30	- - - - - -	- - - - - -
350 x 350	0.1225 (0.0488)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	1.3 1.4 1.1 <20 >0.25 4.0	2.5 2.9 4.5 26 0.14 11	4.0 4.6 11.6 37 0.065 20	5.0 5.7 18.1 42 0.045 25	10.1 11.5 72.3 >50 - -	- - - - - -
450 x 450	0.2025 (0.0806)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	2.1 1.7 <2.0 <20 >0.25 6.5	3.5 2.7 4.2 27 0.11 13	4.0 3.4 7.0 32 0.09 16	8.0 6.9 27 47 - -	- - - - - -
550 x 550	0.3025 (0.1202)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	1.6 1.2 <1.0 <20 >0.25 2.7	2.6 1.9 1.9 20 0.23 7.5	3.2 2.3 3.0 25 0.15 11	6.4 4.7 11.8 40 - -	9.6 7.0 26.7 >50 - -

Supply - 4 Way Rectangular Diffuser



* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

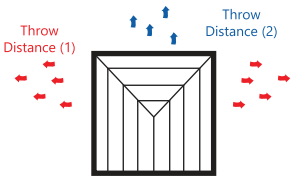
* Neck size given are in Height x Length.

Grille Neck Size, mm	Neck Area (Eff. Area) m²	Unit Volume Flowrate, m³/hr Unit Volume Flowrate, l/s	100 56	250 70	400 112	500 140	600 168	800 224	1000 280	2000 560	2500 700
			NR25		NR40 NR35	NR45					
150 x 225	0.0338 (0.0139)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	2.2 1.6 4.0 9.0 27 0.05/0.1 21/14	2.7 2.0 5.0 14 33 0.04/0.06 27/19	4.5 3.2 8.0 37 44 0.02/0.03 >30	5.5 4.0 10 55 >50 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
150 x 300	0.045 (0.0180)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	2.0 1.2 1.5 5.0 22 0.09/0.22 16/8.0	2.6 1.6 3.9 9.0 27 0.05/0.13 22/11	4.2 2.5 6.2 22 37 0.02/0.04 -/20	5.0 3.0 7.7 30 44 0.01/0.04 -/27	6.0 3.8 9.3 50 >50 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
225 x 300	0.0675 (0.0271)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	1.5 1.3 1.0 2.2 <20 0.19/0.25 8.5/8.0	2.0 1.6 2.6 4.0 20 0.11/0.18 13/9.0	3.0 2.5 4.1 9.0 31 0.05/0.08 22/17	3.9 3.0 5.1 15 36 0.03/0.06 30/22	4.5 3.5 6.2 22 40 0.03/0.04 -/27	6.0 4.7 8.2 40 47 - -	- - - - - - -	- - - - - - -	- - - - - - -
				NR25	NR35			NR40 NR45			
225 x 375	0.0844 (0.0339)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	1.7 1.3 2.0 2.2 <20 0.18/- 9.0/6.0	3.0 2.0 3.3 6.0 26 0.07/0.14 18/11	3.5 2.5 4.1 9.0 32 0.06/0.1 22/14	4.5 2.7 4.9 14 36 0.04/0.09 30/16	5.5 3.5 6.5 22 43 -/0.06 -/23	7.0 4.7 8.2 37 47 -/0.03 -	- - - - - - -	- - - - - - -
225 x 450	0.1013 (0.0409)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	2.7 1.7 2.7 4.5 23 0.09/0.2 16/8	3.5 2.2 3.4 7.0 26 0.06/0.14 23/11	5.2 3.2 5.4 17 38 -/0.07 -/20	5.2 3.2 5.4 17 38 -/0.07 -/20	6.5 3.8 6.8 25 44 -/0.05 -/23	- - - - - - -	- - - - - - -

Supply - 4 Way Rectangular Diffuser

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr Unit Volume Flowrate, l/s	200 56	250 70	400 112	500 140	600 168	800 224	1000 280	2000 560	2500 840
					NR25		NR35	NR40	NR45		
300 x 375	0.1125 (0.0448)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	2.4 2.0 2.5 3.5 21 0.12/0.18 13/9.5	2.8 2.4 3.1 5.0 26 0.11/0.15 14/11	3.4 2.7 3.7 8.0 30 0.07/0.11 19/14	4.7 3.8 4.9 14 36 0.04/0.06 27/23	5.3 4.7 6.2 22 42 -/0.04 -/27	- - - - - - -	- - - - - - -
300 x 450	0.1350 (0.0545)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	2.2 1.6 2.1 2.5 <20 0.17/- 9/6	2.5 2.0 2.6 3.8 23 0.14/0.21 11/8.5	3.0 2.5 3.1 5.0 25 0.11/0.15 14/11	4.0 3.2 4.1 10 33 0.07/0.1 20/15	5.0 4.0 5.1 15 38 0.05/0.07 26/20	- - - - - - -	- - - - - - -
300 x 525	0.1575 (0.0631)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	- - - - - - -	2.6 1.6 2.2 2.5 20 0.15/- 11/5.5	3.2 2.0 2.6 4.0 24 0.11/0.22 13/7.2	4.3 2.7 3.5 7.0 30 0.06/0.14 20/11	5.0 3.5 4.4 13 35 0.05/0.09 24/15	10.5 6.5 8.8 40 >50 - -	- - - - - - -
							NR25	NR35	NR40 NR45		
375 x 450	0.1688 (0.0678)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	- - - - - - -	2.3 1.8 2.0 2.2 20 0.22/- 8/6.5	2.8 2.3 2.5 3.5 24 0.14/0.22 11/8	3.8 3.2 3.3 6.0 30 0.08/0.11 15/13	4.5 3.8 4.1 10 36 0.06/0.08 20/16	9.2 7.2 8.2 37 >50 - -	- - - - - - -
375 x 525	0.1969 (0.0790)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	2.6 1.9 2.1 2.3 20 0.18/- 9/6.5	3.6 2.7 2.8 4.5 24 0.11/0.18 14/9.5	4.5 3.4 3.5 7.0 32 0.08/0.11 18/12.5	9.0 6.5 7.0 27 47 - -	11 8.0 8.8 40 >50 - -
								NR25	NR35 NR40	NR45	
450 x 525	0.2363 (0.0951)	Throw Distance (1) (0.37 m/s), m Throw Distance (2) (0.37m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	2.9 2.7 2.3 3.0 22 0.17/0.22 9.5/8.5	4.0 3.5 2.9 5.0 29 0.11/0.13 14.5/12	7.5 6.5 5.8 17 43 - -	9.8 8.0 7.3 30 47 - -

Supply - 3 Way Square Diffuser



* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

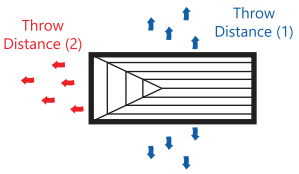
* Neck size given are in Height x Length.

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr Unit Volume Flowrate, l/s	200 56	250 70	400 112	500 140	600 168	800 224	1000 280	2000 560	2500 700
			NR25 NR35	NR40	NR45						
150 x 150	0.0225 (0.0091)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	3.4 2.7 6.2 23 35 0.03/0.02 -	4.2 3.4 7.7 32 41 -/0.02 -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
150 x 300	0.0450 (0.0180)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	2.0 2.6 3.1 5.5 22 0.08/0.05 16/22	2.4 3.3 3.9 9.0 27 0.06/0.04 22/27	4.0 5.5 6.2 22 38 0.025/- -	4.9 6.5 7.7 32 44 0.018/- -	5.8 8.0 9.3 48 46 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -

TECHNICAL PERFORMANCE DATA

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr Unit Volume Flowrate, l/s	200 56	250 70	400 112	500 140	600 168	800 224	1000 280	2000 560	2500 700
			NR25	NR35	NR40		NR45				
225 x 225	0.0506 (0.0201)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	2.3 1.8 2.8 4.5 21 0.07/0.09 19/14	2.7 3.0 3.5 7.0 26 0.05/0.04 23/27	4.5 3.7 5.6 18 37 0.02/0.03 -	5.6 4.8 6.9 27 42 -/0.017 -	6.5 5.8 8.3 38 45 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
225 x 300	0.0675 (0.0271)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	1.8 1.8 2.0 2.3 <20 0.13 11.5	2.4 2.4 2.6 4.0 20 0.08 17	3.6 3.6 4.1 10 31 0.045 26	4.5 4.5 5.1 13 35 0.028 -	5.5 5.5 6.2 22 40 - -	7.0 7.0 8.2 36 47 - -	- - - - - - -	- - - - - - -	- - - - - - -
225 x 375	0.0844 (0.0339)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	1.8 2.4 2.0 2.3 <20 0.15/0.09 11/14.5	2.7 3.5 3.3 6.0 26 0.06/0.05 16/22	3.7 4.5 4.1 10 30 0.05/0.04 23/-	4.5 5.0 4.9 14 35 0.04/0.03 -	5.5 6.5 6.5 23 42 - -	7.8 9.0 8.2 33 47 - -	- - - - - - -	- - - - - - -
				NR25		NR35 NR40	NR45				
300 x 300	0.09 (0.0361)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	3.6 2.6 3.1 5.0 26 0.06/0.07 22/14.5	4.4 3.5 3.9 8.0 31 0.04/0.05 28/23	5.0 4.0 4.6 13 35 0.03/0.05 -/26	6.6 5.5 6.2 23 42 - -	8.0 6.7 7.7 32 47 - -	- - - - - - -	- - - - - - -
300 x 375	0.1125 (0.0448)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	3.0 2.3 2.5 3.5 22 0.08/0.15 15.5/10	3.8 3.5 3.1 5.2 26 0.06/0.07 22/19	4.4 4.1 3.7 7.5 30 0.05/0.06 27/23	6.0 5.5 4.9 14 37 - -	7.5 6.5 6.2 22 42 - -	- - - - - - -	- - - - - - -
300 x 450	0.135 (0.0545)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	2.5 2.7 2.1 2.5 <20 0.15/0.12 11/12	3.2 3.5 2.6 4.0 23 0.1/0.08 14/17	3.7 4.1 3.1 5.0 27 0.07/0.06 18/20	5.0 5.2 4.1 10 34 0.05/- 26/-	6.2 6.5 5.1 15 37 - -	- - - - - - -	- - - - - - -
					NR25		NR35	NR40 NR45			
375 x 375	0.1406 (0.0562)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	1.8 1.3 2.0 2.2 <20 0.24/- 7.5/4.5	3.5 2.7 2.5 3.5 23 0.08/0.12 16.5/13	4.0 3.4 3.0 5.0 27 0.06/0.09 19/16	5.5 4.5 4.0 9.0 34 -/0.05 -/23	7.0 5.5 5.0 14 38 - -	13 11 9.9 50 >50 - -	- - - - - - -
375 x 450	0.1688 (0.0678)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	- - - - - - -	3.0 2.7 2.0 2.3 <20 0.12/0.14 12.5/11	3.7 3.5 2.5 3.5 23 0.08/0.09 17/15	4.7 4.5 3.3 6.0 30 0.05/0.06 22/20	6.1 5.6 4.1 10 34 - -	12 11 8.2 35 50 - -	- - - - - - -
							NR25	NR35 NR40	NR45		
450 x 450	0.2025 (0.0808)	Throw Distance (1) (0.30 m/s), m Throw Distance (2) (0.30 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient (1,2) Induction Ratio (1,2)	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	3.5 2.6 2.1 2.4 20 0.11/0.19 13/9	4.5 3.5 2.7 4.5 26 0.07/0.12 18/14	5.5 4.4 3.4 6.5 31 -/0.07 -/18	11 8.7 6.9 26 45 - -	14 11 8.6 36 >50 - -

Supply - 3 Way Rectangular Diffuser



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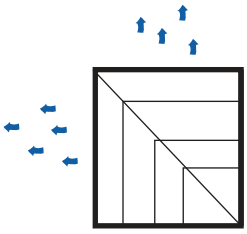
			NR25		NR35 NR40	NR45					
150 x 225		Throw Distance (1) (0.30 m/s), m	2.7	3.5	5.5	7.0	-	-	-	-	-
		Throw Distance (2) (0.30 m/s), m	1.8	2.4	3.7	4.8	-	-	-	-	-
		Face Velocity, m/s	4.0	5.0	7.9	9.9	-	-	-	-	-
		Total Pressure Loss, Pa	9.0	14	32	52	-	-	-	-	-
		Noise Rating (NR)	27	33	44	48	-	-	-	-	-
		Temperature Quotient (1,2)	0.04/0.08	0.03/0.05	-	-	-	-	-	-	-
		Induction Ratio (1,2)	27/17	-/24	-	-	-	-	-	-	-
150 x 300		Throw Distance (1) (0.30 m/s), m	2.6	3.5	5.2	6.2	7.6	-	-	-	-
		Throw Distance (2) (0.30 m/s), m	<1.5	1.8	3.0	3.7	4.3	-	-	-	-
		Face Velocity, m/s	3.1	3.9	6.2	7.7	9.3	-	-	-	-
		Total Pressure Loss, Pa	5.5	9.0	22	32	48	-	-	-	-
		Noise Rating (NR)	23	27	38	44	46	-	-	-	-
		Temperature Quotient (1,2)	0.05/-	0.04/0.09	-/0.04	-/0.03	-	-	-	-	-
		Induction Ratio (1,2)	22/-	27/14	-/26	-	-	-	-	-	-
				NR25		NR35	NR40 NR45				
225 x 300		Throw Distance (1) (0.30 m/s), m	2.0	2.6	4.1	5.0	6.1	8.0	-	-	-
		Throw Distance (2) (0.30 m/s), m	<1.5	1.7	2.7	3.4	4.2	5.6	-	-	-
		Face Velocity, m/s	2.0	2.6	4.1	5.1	6.2	8.2	-	-	-
		Total Pressure Loss, Pa	2.3	4.0	10	13	22	36	-	-	-
		Noise Rating (NR)	<20	20	31	35	40	47	-	-	-
		Temperature Quotient (1,2)	0.11/-	0.07/0.14	0.03/0.07	-/0.05	-	-	-	-	-
		Induction Ratio (1,2)	12.5/-	17/10	-/17	-/26	-	-	-	-	-
225 x 375		Throw Distance (1) (0.30 m/s), m	-	2.3	3.7	4.5	5.3	7.0	9.0	-	-
		Throw Distance (2) (0.30 m/s), m	-	<1.5	2.6	2.7	3.4	4.3	5.7	-	-
		Face Velocity, m/s	-	2.0	3.3	4.1	4.9	6.5	8.2	-	-
		Total Pressure Loss, Pa	-	2.3	6.0	10	14	23	33	-	-
		Noise Rating (NR)	-	<20	26	30	35	42	47	-	-
		Temperature Quotient (1,2)	-	0.12/-	0.05/0.09	0.04/0.09	-/0.05	-/0.035	-	-	-
		Induction Ratio (1,2)	-	13/-	24/15	-/16	-/23	-/30	-	-	-
225 x 525		Throw Distance (1) (0.30 m/s), m	-	-	3.2	4.2	4.8	6.2	8.0	-	-
		Throw Distance (2) (0.30 m/s), m	-	-	1.6	2.0	2.4	3.2	4.0	-	-
		Face Velocity, m/s	-	-	2.4	3.0	3.6	4.8	6.0	-	-
		Total Pressure Loss, Pa	-	-	3.4	7.0	7.5	13	23	-	-
		Noise Rating (NR)	-	-	22	26	30	37	42	-	-
		Temperature Quotient (1,2)	-	-	0.08/0.25	0.05/0.17	0.04/0.13	-/0.08	-/0.05	-	-
		Induction Ratio (1,2)	-	-	17/7	26/9.5	27/12	-/16.5	23	-	-
					NR25		NR35	NR40	NR45		
300 x 375		Throw Distance (1) (0.30 m/s), m	-	-	2.9	3.9	4.4	6.0	7.2	-	-
		Throw Distance (2) (0.30 m/s), m	-	-	2.2	2.7	3.2	4.2	5.5	-	-
		Face Velocity, m/s	-	-	2.4	3.0	3.6	4.8	6.0	-	-
		Total Pressure Loss, Pa	-	-	3.4	7.0	7.5	13	23	-	-
		Noise Rating (NR)	-	-	22	26	30	37	42	-	-
		Temperature Quotient (1,2)	-	-	0.09/0.16	0.06/0.11	0.04/0.08	-/0.05	-	-	-
		Induction Ratio (1,2)	-	-	15.5/10	23/16	26/17	-/24	-	-	-
300 x 450		Throw Distance (1) (0.30 m/s), m	-	-	2.8	3.6	4.4	5.8	7.2	-	-
		Throw Distance (2) (0.30 m/s), m	-	-	1.8	2.3	2.6	3.8	4.7	-	-
		Face Velocity, m/s	-	-	2.1	2.6	3.1	4.1	5.1	-	-
		Total Pressure Loss, Pa	-	-	2.5	4.0	5.0	9.0	15	-	-
		Noise Rating (NR)	-	-	<20	23	27	34	38	-	-
		Temperature Quotient (1,2)	-	-	0.12/0.22	0.08/0.17	0.06/0.14	-/0.07	-/0.05	-	-
		Induction Ratio (1,2)	-	-	13/7.5	18/9.5	23/11	-/19	-/24	-	-
						NR25		NR35			
375 x 450		Throw Distance (1) (0.30 m/s), m	-	-	-	3.0	3.8	5.0	6.1	13	-
		Throw Distance (2) (0.30 m/s), m	-	-	-	2.3	2.8	3.8	4.7	9.0	-
		Face Velocity, m/s	-	-	-	2.0	2.5	3.3	4.1	8.2	-
		Total Pressure Loss, Pa	-	-	-	2.2	3.5	6.0	9.0	35	-
		Noise Rating (NR)	-	-	-	<20	24	30	35	50	-
		Temperature Quotient (1,2)	-	-	-	0.12/0.18	0.08/0.12	0.05/0.1	-/0.06	-	-
		Induction Ratio (1,2)	-	-	-	13/7.7	17/11.5	23/16.5	-/22	-	-
								NR25	NR35	NR45	
450 x 525		Throw Distance (1) (0.30 m/s), m	-	-	-	-	-	4.0	5.6	10	14
		Throw Distance (2) (0.30 m/s), m	-	-	-	-	-	3.0	4.1	7.5	10
		Face Velocity, m/s	-	-	-	-	-	2.3	3.0	5.8	7.3
		Total Pressure Loss, Pa	-	-	-	-	-	3.0	5.0	17	27
		Noise Rating (NR)	-	-	-	-	-	24	29	44	50
		Temperature Quotient (1,2)	-	-	-	-	-	0.07/0.12	-/0.06	-	-
		Induction Ratio (1,2)	-	-	-	-	-	17/12.5	-/18	-	-

Supply - 2 Way Square Diffuser (Type A)

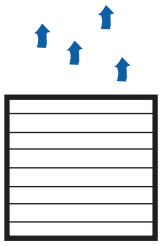


* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	100 28	150 42	200 56	250 70	500 140	800 224	1000 280	1500 420	2000 560
150 x 225	0.0338 (0.0118)	Throw Distance (0.25 m/s), m	2.6	4.0	5.2	6.5	-	-	-	-	-
		Face Velocity, m/s	3.5	5.2	6.9	8.7	-	-	-	-	-
		Total Pressure Loss, Pa	7.0	16	27	37	-	-	-	-	-
		Noise Rating (NR)	22	31	37	42	-	-	-	-	-
		Temperature Quotient	<0.015	<0.015	<0.015	<0.015	-	-	-	-	-
		Induction Ratio	>30	>30	>30	>30	-	-	-	-	-
225 x 225	0.0506 (0.0182)	Throw Distance (0.25 m/s), m	-	2.6	3.5	4.5	8.5	-	-	-	-
		Face Velocity, m/s	-	2.3	3.1	3.9	7.7	-	-	-	-
		Total Pressure Loss, Pa	-	3.0	5.5	8.0	30	-	-	-	-
		Noise Rating (NR)	-	<20	23	28	44	-	-	-	-
		Temperature Quotient	-	0.052	0.03	0.022	-	-	-	-	-
		Induction Ratio	-	23	>30	>30	-	-	-	-	-
300 x 300	0.09 (0.0320)	Throw Distance (0.25 m/s), m	-	-	-	3.2	6.5	10.5	13	-	-
		Face Velocity, m/s	-	-	-	2.2	4.3	6.9	8.7	-	-
		Total Pressure Loss, Pa	-	-	-	2.5	10	27	38	-	-
		Noise Rating (NR)	-	-	-	<20	32	43	49	-	-
		Temperature Quotient	-	-	-	0.055	-	-	-	-	-
		Induction Ratio	-	-	-	21	-	-	-	-	-
375 x 375	0.141 (0.0501)	Throw Distance (0.25 m/s), m	-	-	-	-	5.2	8.2	11	16	-
		Face Velocity, m/s	-	-	-	-	2.8	4.4	5.6	8.3	-
		Total Pressure Loss, Pa	-	-	-	-	4.5	13	17	33	-
		Noise Rating (NR)	-	-	-	-	25	36	41	50	-
		Temperature Quotient	-	-	-	-	-	-	-	-	-
		Induction Ratio	-	-	-	-	-	-	-	-	-
450 x 450	0.2025 (0.0713)	Throw Distance (0.25 m/s), m	-	-	-	-	4.5	7.0	9.0	13	17
		Face Velocity, m/s	-	-	-	-	2.0	3.1	3.9	5.9	7.8
		Total Pressure Loss, Pa	-	-	-	-	2.2	5.5	9.0	20	30
		Noise Rating (NR)	-	-	-	-	<20	28	34	43	50
		Temperature Quotient	-	-	-	-	0.065	-	-	-	-
		Induction Ratio	-	-	-	-	19	-	-	-	-
525 x 525	0.276 (0.0992)	Throw Distance (0.25 m/s), m	-	-	-	-	-	6.2	7.5	12	14.5
		Face Velocity, m/s	-	-	-	-	-	2.2	2.8	4.2	5.6
		Total Pressure Loss, Pa	-	-	-	-	-	2.7	4.5	10	16
		Noise Rating (NR)	-	-	-	-	-	23	28	37	43
		Temperature Quotient	-	-	-	-	-	-	-	-	-
		Induction Ratio	-	-	-	-	-	-	-	-	-

Supply - 1 Way Square Diffuser (Type B)



* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	100 28	150 42	200 56	250 70	500 140	800 224	1000 280	1500 420	2000 560
150 x 225	0.0338 (0.0120)	Throw Distance (0.25 m/s), m	2.1	3.2	4.2	5.2	-	-	-	-	-
		Face Velocity, m/s	2.3	3.5	4.6	5.8	-	-	-	-	-
		Total Pressure Loss, Pa	3.0	7.0	12	17	-	-	-	-	-
		Noise Rating (NR)	<20	24	30	35	-	-	-	-	-
		Temperature Quotient	0.05	0.022	0.015	-	-	-	-	-	-
		Induction Ratio	24	-	-	-	-	-	-	-	-
150 x 300	0.045 (0.0160)	Throw Distance (0.25 m/s), m	-	2.7	3.5	4.5	8.8	-	-	-	-
		Face Velocity, m/s	-	2.6	3.5	4.3	8.7	-	-	-	-
		Total Pressure Loss, Pa	-	4.0	7.0	12	38	-	-	-	-
		Noise Rating (NR)	-	<20	24	28	45	-	-	-	-
		Temperature Quotient	-	0.04	0.017	-	-	-	-	-	-
		Induction Ratio	-	27	-	-	-	-	-	-	-
150 x 375	0.0563 (0.0202)	Throw Distance (0.25 m/s), m	-	2.5	3.3	4.0	8.2	-	-	-	-
		Face Velocity, m/s	-	2.0	2.8	3.5	6.9	-	-	-	-
		Total Pressure Loss, Pa	-	2.3	4.5	7.0	25	-	-	-	-
		Noise Rating (NR)	-	<20	21	25	42	-	-	-	-
		Temperature Quotient	-	0.06	0.037	0.025	-	-	-	-	-
		Induction Ratio	-	21	27	-	-	-	-	-	-
225 x 300	0.0675 (0.0239)	Throw Distance (0.25 m/s), m	-	-	3.0	3.8	7.5	12	-	-	-
		Face Velocity, m/s	-	-	2.3	2.9	5.8	9.3	-	-	-
		Total Pressure Loss, Pa	-	-	3.2	5.0	17	45	-	-	-
		Noise Rating (NR)	-	-	<20	22	38	48	-	-	-
		Temperature Quotient	-	-	0.05	0.03	-	-	-	-	-
		Induction Ratio	-	-	13	-	-	-	-	-	-
225 x 450	0.1013 (0.0359)	Throw Distance (0.25 m/s), m	-	-	-	3.2	6.0	9.7	13	-	-
		Face Velocity, m/s	-	-	-	1.9	3.9	6.2	7.7	-	-
		Total Pressure Loss, Pa	-	-	-	2.0	8.0	22	30	-	-
		Noise Rating (NR)	-	-	-	<20	32	43	46	-	-
		Temperature Quotient	-	-	-	0.065	-	-	-	-	-
		Induction Ratio	-	-	-	19	-	-	-	-	-
225 x 525	0.1181 (0.0409)	Throw Distance (0.25 m/s), m	-	-	-	2.8	5.7	9.0	12	-	-
		Face Velocity, m/s	-	-	-	1.7	3.4	5.4	6.8	-	-
		Total Pressure Loss, Pa	-	-	-	<2	7.0	16	25	-	-
		Noise Rating (NR)	-	-	-	<20	27	40	44	-	-
		Temperature Quotient	-	-	-	0.09	-	-	-	-	-
		Induction Ratio	-	-	-	15	-	-	-	-	-

Supply - 2 Way Square Diffuser (Type B)

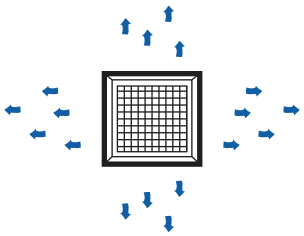
						NR25		NR45		
300 x 300	0.09 (0.0320)	Throw Distance (0.25 m/s), m	-	-	-	3.5	6.5	11	13	-	-
		Face Velocity, m/s	-	-	-	2.2	4.3	6.9	8.7	-	-
		Total Pressure Loss, Pa	-	-	-	3.5	10	27	38	-	-
		Noise Rating (NR)	-	-	-	<20	34	44	49	-	-
		Temperature Quotient	-	-	-	0.05	-	-	-	-	-
		Induction Ratio	-	-	-	24	-	-	-	-	-
300 x 375	0.1125 (0.0386)	Throw Distance (0.25 m/s), m	-	-	-	2.8	5.7	9.0	12	-	-
		Face Velocity, m/s	-	-	-	1.8	3.6	5.7	7.2	-	-
		Total Pressure Loss, Pa	-	-	-	<2	7.0	18	27	-	-
		Noise Rating (NR)	-	-	-	<20	27	40	44	-	-
		Temperature Quotient	-	-	-	0.09	-	-	-	-	-
		Induction Ratio	-	-	-	15	-	-	-	-	-
300 x 450	0.135 (0.0471)	Throw Distance (0.25 m/s), m	-	-	-	-	5.3	8.3	11	16	-
		Face Velocity, m/s	-	-	-	-	3.0	4.7	5.9	8.9	-
		Total Pressure Loss, Pa	-	-	-	-	5.0	13	19	40	-
		Noise Rating (NR)	-	-	-	-	25	36	41	50	-
		Temperature Quotient	-	-	-	-	-	-	-	-	-
		Induction Ratio	-	-	-	-	-	-	-	-	-

							NR25		NR45		
375 x 375	0.1407 (0.0489)	Throw Distance (0.25 m/s), m	-	-	-	-	5.3	8.3	11	16	-
		Face Velocity, m/s	-	-	-	-	3.0	4.7	5.9	8.9	-
		Total Pressure Loss, Pa	-	-	-	-	5.0	13	19	40	-
		Noise Rating (NR)	-	-	-	-	25	36	41	50	-
		Temperature Quotient	-	-	-	-	-	-	-	-	-
		Induction Ratio	-	-	-	-	-	-	-	-	-

							NR25		NR35	NR45	
450 x 450	0.2025 (0.0713)	Throw Distance (0.25 m/s), m	-	-	-	-	4.5	7.0	8.2	13	17
		Face Velocity, m/s	-	-	-	-	2.0	3.1	3.9	5.9	7.8
		Total Pressure Loss, Pa	-	-	-	-	2.2	5.5	9.0	20	30
		Noise Rating (NR)	-	-	-	-	<20	28	33	42	49
		Temperature Quotient	-	-	-	-	0.065	-	-	-	-
		Induction Ratio	-	-	-	-	19	-	-	-	-

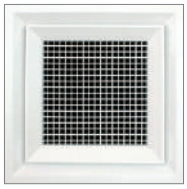
								NR25	NR35		NR45
525 x 525	0.2757 (0.0958)	Throw Distance (0.25 m/s), m	-	-	-	-	-	6.0	7.8	12	15
		Face Velocity, m/s	-	-	-	-	-	2.3	2.9	4.3	5.7
		Total Pressure Loss, Pa	-	-	-	-	-	3.0	5.0	12	17
		Noise Rating (NR)	-	-	-	-	-	24	27	36	45
		Temperature Quotient	-	-	-	-	-	-	-	-	-
		Induction Ratio	-	-	-	-	-	-	-	-	-

Supply - DDCD Diffuser



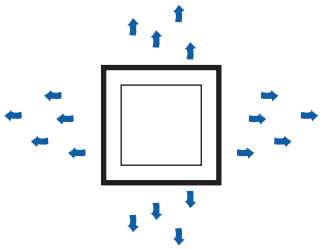
* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.



Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr Unit Volume Flowrate, l/s	110 31	165 46	220 62	275 77	550 154	880 246	1100 308	2200 616	3300 924
			NR25	NR35	NR40			NR45			
150 x 150	0.0225 (0.0100)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	1.2 3.0 5.0 20 0.12 13	1.8 4.6 13 30 0.05 23	2.4 6.2 22 36 0.027 >30	3.0 7.7 32 42 0.022 >30	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
225 x 225	0.0506 (0.0222)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	1.2 2.1 2.5 <20 0.23 8.0	1.6 2.8 4.7 22 0.13 11	2.1 3.5 7.0 26 0.08 16	4.0 6.9 26 42 0.025 >30	- - - - - -	- - - - - -	- - - - - -	- - - - - -
300 x 300	0.09 (0.0397)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	1.2 1.5 <2.0 <20 >0.25 5.0	1.5 1.9 2.2 <20 0.23 7.5	3.0 3.9 8.2 32 0.07 18	4.8 6.2 22 42 0.035 >30	5.8 7.7 32 47 <0.03 >30	- - - - - -	- - - - - -
375 x 375	0.1406 (0.0618)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	1.3 1.2 <2.0 <20 >0.25 4.0	2.4 2.5 3.5 24 0.14 11	3.9 4.0 9.0 34 0.065 20	4.8 5.0 14 38 0.045 25	9.0 9.9 55 >50 - -	- - - - - -
450 x 450	0.2025 (0.0886)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	2.1 1.7 <2.0 <20 >0.25 6.5	3.5 2.7 4.2 27 0.11 13	4.0 3.4 7.0 32 0.09 16	8.0 6.9 27 47 - -	- - - - - -
525 x 525	0.2756 (0.1207)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	1.8 1.3 <2.0 <20 >0.25 2.7	2.7 2.0 2.2 22 0.23 7.5	3.5 2.5 3.5 26 0.15 11	7.0 5.1 15 43 - -	10 7.6 32 >50 - -

Supply - CDP Diffuser



* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr Unit Volume Flowrate, l/s	100 28	150 42	200 56	300 83	500 139	800 224	1000 280	1500 417	2000 556
			NR25		NR35						
350 x 350	0.1225 (0.0530)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	3.6 2.3 8 36 - -	3.9 2.5 9 37 - -	4.2 2.7 10 38 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
400 x 400	0.16 (0.0265)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	3.2 2.1 8 30 - -	3.7 2.4 9 32 - -	4.5 3.0 11 35 - -	3.8 4.0 16 44 - -	- - - - - -	- - - - - -	- - - - - -
450 x 450	0.2025 (0.0876)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	3.6 2.4 9 28 - -	4.6 3.2 13 35 - -	5.3 3.7 15 40 - -	7.1 4.9 21 45 - -	- - - - - -
500 x 500	0.25 (0.1081)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	3.7 2.6 11 28 - -	4.3 3.0 12 32 - -	5.8 4.0 17 37 - -	7.1 5.0 22 45 - -
550 x 550	0.3025 (0.1308)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	3.1 2.1 9 23 - -	3.6 2.5 10 27 - -	4.8 3.3 14 30 - -	5.9 4.1 18 37 - -
600 x 600	0.36 (0.1557)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	2.1 1.5 6 16 - -	2.4 1.7 7 18 - -	3.3 2.3 10 20 - -	4.1 2.8 13 25 - -

ALUMINIUM CEILING DIFFUSERS TECHNICAL SPECIFICATION

Frame Construction
1. Frame to be in extruded aluminium. Frame thickness should be in minimum 1.0mm thick, unless otherwise stated.
2. The margin to be in 66mm from the neck height to the edge.
3. Frame height to be in 50mm.
4. The corner of the frame should be pressed with a 90° corner piece to ensure the frames are in 90°.
5. Core to be able to remove from the frame to adjust the damper.

Core Construction
1. Vanes to be in extruded aluminium.
2. Vanes to be in 0.9mm thick. 6 layer of vanes with fixed pattern for directional air distribution, unless otherwise stated.

Finishing
1. Finishing should be white powder coated, oven baked as standard RAL 9010 SG or HY-1001/A127. Others available upon request.

Performance
1. Effective area of the grill to be in 40%.
2. Fixed pattern multi-vanes for directional air distribution.
3. Ceiling Diffusers are designed to be ceiling mounted, square opposed blade damper or round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.

GALVANIZED STEEL CEILING DIFFUSERS TECHNICAL SPECIFICATION

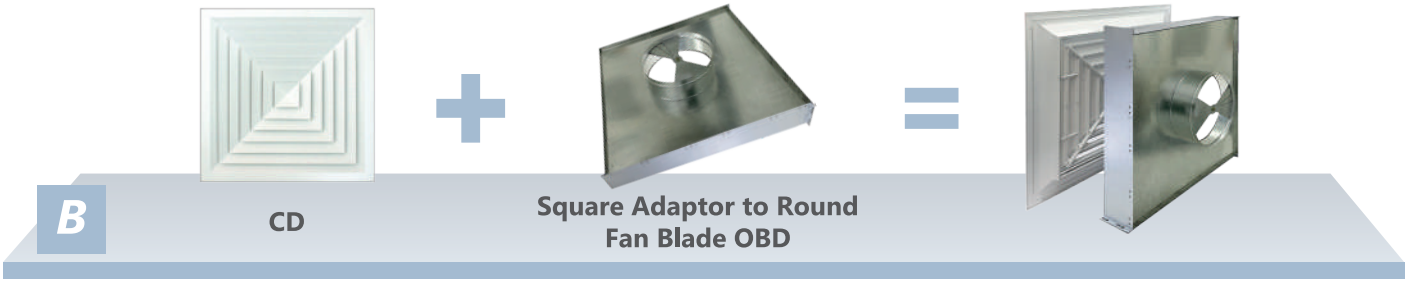
Frame Construction
1. Frame to be in galvanized steel. Frame thickness should be in minimum 0.6mm thick, unless otherwise stated.
2. The margin to be in 75mm from the neck height to the edge.
3. Frame height to be in 50mm.
4. Core to be able to remove from the frame to adjust the damper.

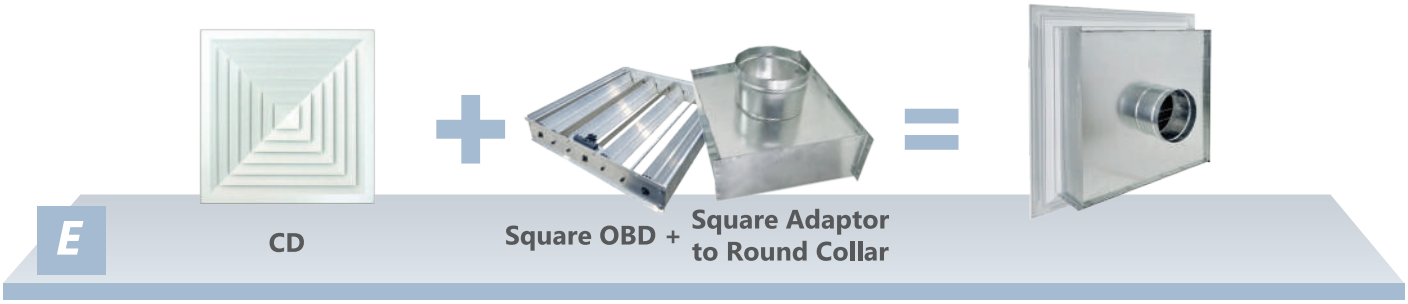
Core Construction
1. Vanes to be in galvanized steel.
2. Vanes to be in 0.5mm thick. 6 layer of vanes with fixed pattern for directional air distribution, unless otherwise stated.

Finishing
1. Finishing should be white powder coated, oven baked as standard RAL 9010 SG or HY-1001/A127. Others available upon request.

Performance
1. Effective area of the grill to be in 40%.
2. Fixed pattern multi-vanes for directional air distribution.
3. Ceiling Diffusers are designed to be ceiling mounted, square opposed blade damper or round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.

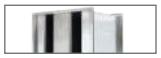
DIFFUSER + ACCESSORIES COMBINATION





CD | Ceiling Diffuser

Products Range

- Grilles 
- Diffusers 
- Dampers 
- Fire & Smoke Protection 
- VAV 
- Others 
- Accessories 

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