PrudentAire®

CD Ceiling Diffuser

CD | Ceiling Diffuser

Introduction

With wide range of flow deflection designs, Ceiling Diffusers (CD/DDCD/CDP) are capable of providing excellent air distribution (horizontal /angled/veritcal 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).

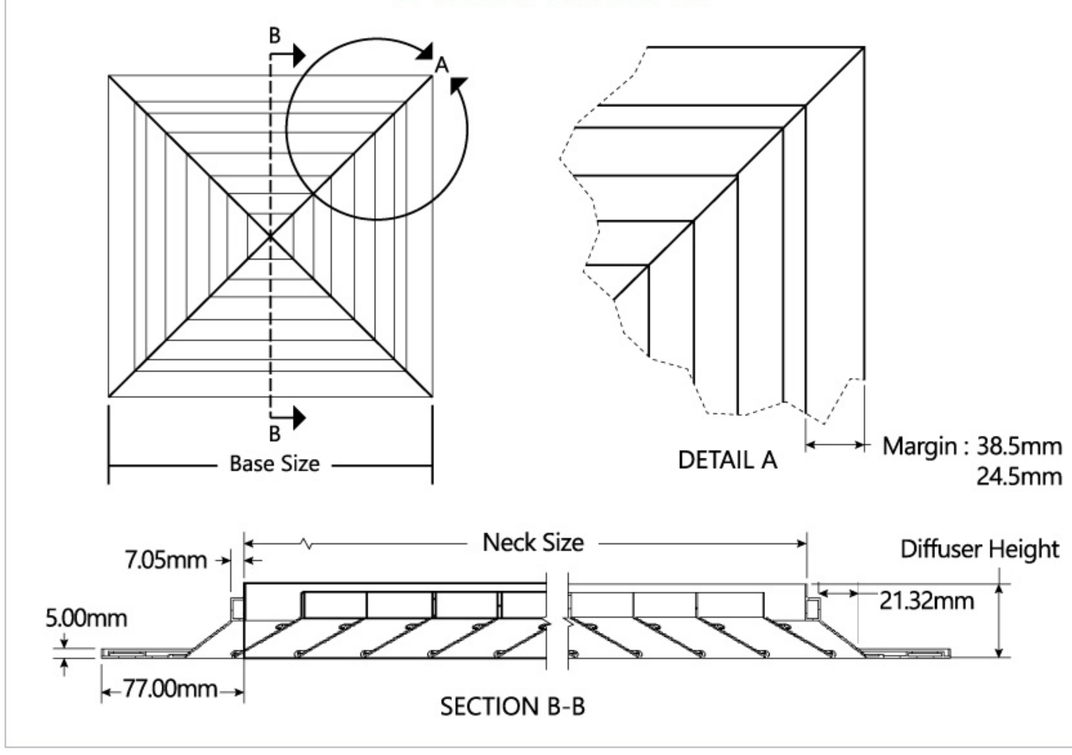
CONSTRUCTIONS & MATERIALS

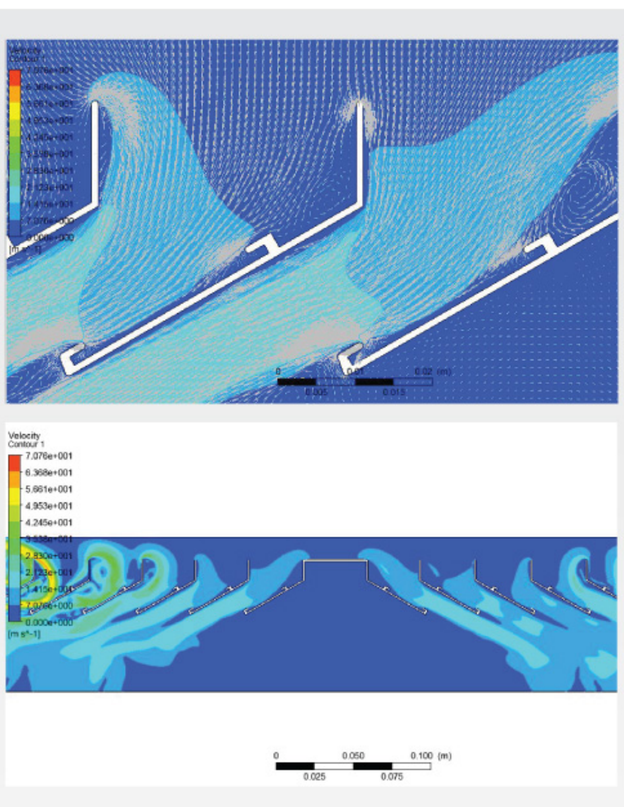
- 1-4 way flow directions
- Adjustable throw directions (Plate deflector)
- Customizable throw (Horizontal/Angled, Upon request)
- Removable center cores (Upon request)
- Highly customizable designs

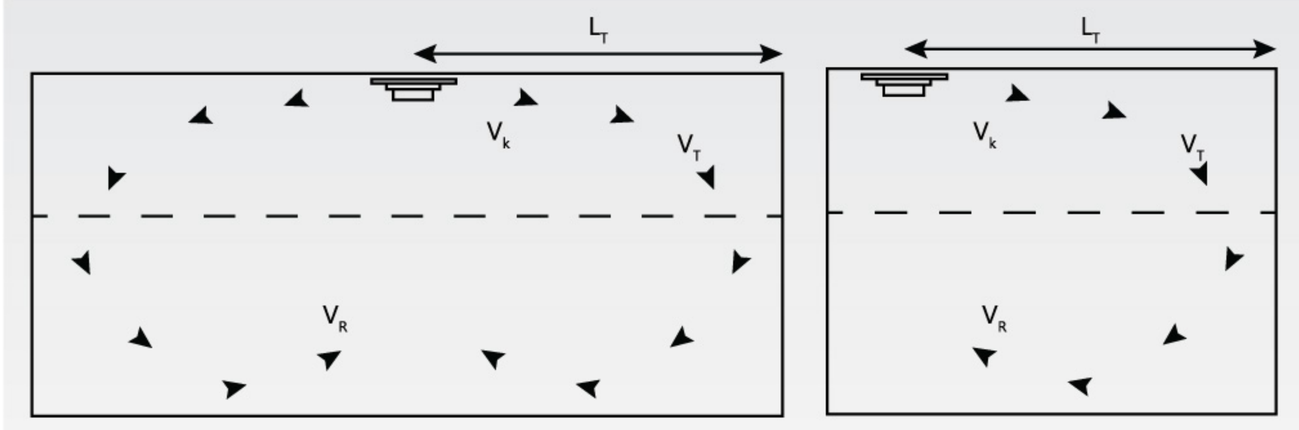
Frames			Vanes		
AL 1.2mm	GI 0.6mm	SS 1.0mm	AL 1.2mm	GI 0.5mm	SS 1.0mm
Extruded Aluminium	Galvanized Steel Stainless Steel*	Stainless Steel	Extruded Aluminium	Galvanized Steel Stainless Steel*	Stainless Steel

* Upon request

DIMENSIONS

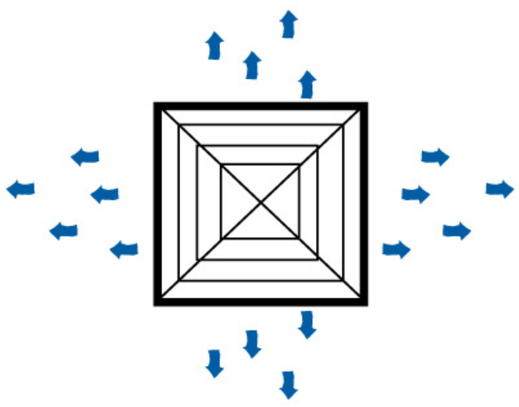






TECHNICAL PERFORMANCE DATA

Supply - 4 Way Square Diffuser



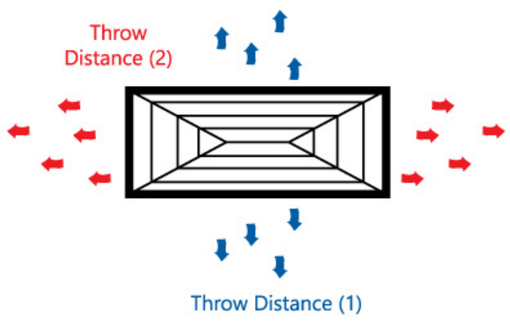
* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

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

NR25 | NR35 | NR40 | NR45

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	2000 / 560	3000 / 840
150 x 150	0.0225 (0.009)	Throw Distance (0.37 m/s), m	1.2	1.8	3.0	-	-	-	-	-	-
		Face Velocity, m/s	3.0	4.6	7.7	-	-	-	-	-	-
		Total Pressure Loss, Pa	5.0	13	32	-	-	-	-	-	-
		Noise Rating (NR)	20	30	42	-	-	-	-	-	-
		Temperature Quotient	0.12	0.05	0.022	-	-	-	-	-	-
		Induction Ratio	13	23	>30	-	-	-	-	-	-
150 x 150	0.0506 (0.02)	Throw Distance (0.37 m/s), m	-	1.2	1.6	2.1	4.0	-	-	-	-
		Face Velocity, m/s	-	2.1	2.8	3.5	6.9	-	-	-	-
		Total Pressure Loss, Pa	-	2.5	4.7	7.0	26	-	-	-	-
		Noise Rating (NR)	-	<20	22	26	42	-	-	-	-
		Temperature Quotient	-	0.23	0.13	0.08	0.025	-	-	-	-
		Induction Ratio	-	8.0	11	16	>30	-	-	-	-
300 x 300	0.09 (0.036)	Throw Distance (0.37 m/s), m	-	-	1.2	1.5	3.0	4.8	5.8	-	-
		Face Velocity, m/s	-	-	1.5	1.9	3.9	6.2	7.7	-	-
		Total Pressure Loss, Pa	-	-	<2.0	2.2	8.2	22	32	-	-
		Noise Rating (NR)	-	-	<20	<20	32	42	47	-	-
		Temperature Quotient	-	-	>0.25	0.23	0.07	0.035	<0.03	-	-
		Induction Ratio	-	-	5.0	7.5	18	>30	>30	-	-
375 x 375	0.141 (0.056)	Throw Distance (0.37 m/s), m	-	-	-	1.3	2.4	3.9	4.8	9.0	-
		Face Velocity, m/s	-	-	-	1.2	2.5	4.0	5.0	9.9	-
		Total Pressure Loss, Pa	-	-	-	<2.0	3.5	9.0	14	55	-
		Noise Rating (NR)	-	-	-	<20	24	34	38	>50	-
		Temperature Quotient	-	-	-	>0.25	0.14	0.065	0.045	-	-
		Induction Ratio	-	-	-	4.0	11	20	25	-	-
450 x 450	0.2025 (0.081)	Throw Distance (0.37 m/s), m	-	-	-	-	2.1	3.5	4.0	8.0	-
		Face Velocity, m/s	-	-	-	-	1.7	2.7	3.4	6.9	-
		Total Pressure Loss, Pa	-	-	-	-	<2.0	4.2	7.0	27	-
		Noise Rating (NR)	-	-	-	-	<20	27	32	47	-
		Temperature Quotient	-	-	-	-	>0.25	0.11	0.09	-	-
		Induction Ratio	-	-	-	-	6.5	13	16	-	-
525 x 525	0.276 (0.110)	Throw Distance (0.37 m/s), m	-	-	-	-	1.8	2.7	3.5	7.0	10
		Face Velocity, m/s	-	-	-	-	1.3	2.0	2.5	5.1	7.6
		Total Pressure Loss, Pa	-	-	-	-	<2.0	2.2	3.5	15	32
		Noise Rating (NR)	-	-	-	-	<20	22	26	43	>50
		Temperature Quotient	-	-	-	-	>0.25	0.23	0.15	-	-
		Induction Ratio	-	-	-	-	2.7	7.5	11	-	-

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.

NR25 | NR40 / NR35 | NR45

Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	100 / 56	250 / 70	400 / 112	500 / 140	600 / 168	800 / 224	1000 / 280	2000 / 560	2500 / 700
150 x 225	0.03375 (0.014)	Throw Distance (1) (0.37 m/s), m	2.2	2.7	4.5	5.5	-	-	-	-	-
		Throw Distance (2) (0.37m/s), m	1.6	2.0	3.2	4.0	-	-	-	-	-
		Face Velocity, m/s	4.0	5.0	8.0	10	-	-	-	-	-
		Total Pressure Loss, Pa	9.0	14	37	55	-	-	-	-	-
		Noise Rating (NR)	27	33	44	>50	-	-	-	-	-
		Temperature Quotient (1,2)	0.05/0.1	0.04/0.06	0.02/0.03	-	-	-	-	-	-
		Induction Ratio (1,2)	21/14	27/19	>30	-	-	-	-	-	-
150 x 300	0.045 (0.018)	Throw Distance (1) (0.37 m/s), m	2.0	2.6	4.2	5.0	6.0	-	-	-	-
		Throw Distance (2) (0.37m/s), m	1.2	1.6	2.5	3.0	3.8	-	-	-	-
		Face Velocity, m/s	3.0	3.9	6.2	7.7	9.3	-	-	-	-
		Total Pressure Loss, Pa	5.0	9.0	22	30	50	-	-	-	-
		Noise Rating (NR)	22	27	37	44	>50	-	-	-	-
		Temperature Quotient (1,2)	0.09/0.22	0.05/0.13	0.02/0.04	0.01/0.04	-	-	-	-	-
		Induction Ratio (1,2)	16/8.0	22/11	-/20	-/27	-	-	-	-	-

NR25 | NR35 | NR40 / NR45

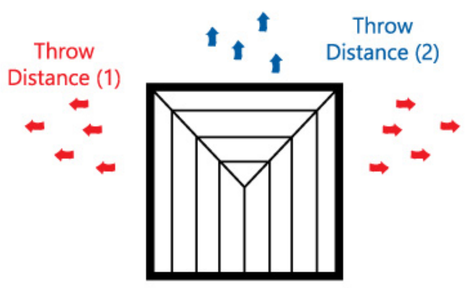
Grille Neck Size, mm	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	100 / 56	250 / 70	400 / 112	500 / 140	600 / 168	800 / 224	1000 / 280	2000 / 560	2500 / 700
225 x 300	0.0675 (0.027)	Throw Distance (1) (0.37 m/s), m	1.5	2.0	3.0	3.9	4.5	6.0	-	-	-
		Throw Distance (2) (0.37m/s), m	1.3	1.6	2.5	3.0	3.5	4.7	-	-	-
		Face Velocity, m/s	2.0	2.6	4.1	5.1	6.2	8.2	-	-	-
		Total Pressure Loss, Pa	2.2	4.0	9.0	15	22	40	-	-	-
		Noise Rating (NR)	<20	20	31	36	40	47	-	-	-
		Temperature Quotient (1,2)	0.19/0.25	0.11/0.18	0.05/0.08	0.03/0.06	0.03/0.04	-	-	-	-
		Induction Ratio (1,2)	8.5/8.0	13/9.0	22/17	30/22	-/27	-	-	-	-
225 x 375	0.0844 (0.034)	Throw Distance (1) (0.37 m/s), m	-	1.7	3.0	3.5	4.5	5.5	7.0	-	-
		Throw Distance (2) (0.37m/s), m	-	1.3	2.0	2.5	2.7	3.5	4.7	-	-
		Face Velocity, m/s	-	2.0	3.3	4.1	4.9	6.5	8.2	-	-
		Total Pressure Loss, Pa	-	2.2	6.0	9.0	14	22	37	-	-
		Noise Rating (NR)	-	<20	26	32	36	43	47	-	-
		Temperature Quotient (1,2)	-	0.18/-	0.07/0.14	0.06/0.1	0.04/0.09	-/0.06	-/0.03	-	-
		Induction Ratio (1,2)	-	9.0/6.0	18/11	22/14	30/16	-/23	-	-	-
225 x 450	0.1013 (0.041)	Throw Distance (1) (0.37 m/s), m	-	-	2.7	3.5	5.2	5.2	6.5	-	-
		Throw Distance (2) (0.37m/s), m	-	-	1.7	2.2	3.2	3.2	3.8	-	-
		Face Velocity, m/s	-	-	2.7	3.4	5.4	5.4	6.8	-	-
		Total Pressure Loss, Pa	-	-	4.5	7.0	17	17	25	-	-
		Noise Rating (NR)	-	-	23	26	38	38	44	-	-
		Temperature Quotient (1,2)	-	-	0.09/0.2	0.06/0.14	-/0.07	-/0.07	-/0.05	-	-
		Induction Ratio (1,2)	-	-	16/8	23/11	-/20	-/20	-/23	-	-

TECHNICAL PERFORMANCE DATA

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 (0.045)	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	0.135 (0.054)	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 (0.063)	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 (0.068)	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 (0.079)	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 (0.095)	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



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 (0.009)	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 -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
				NR25 NR35	NR40 NR45						
150 x 300	0.045 (0.018)	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 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -

* 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.

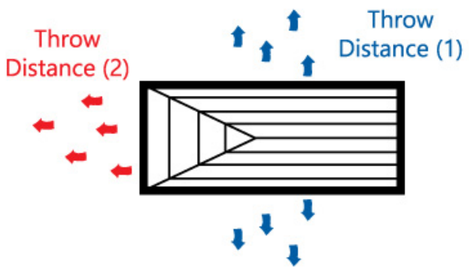
* Neck size given are in Height x Length.

TECHNICAL PERFORMANCE DATA

Grille Neck Size, mm	Neck Area (Eff. Area) m²	Unit Volume Flowrate, m³/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 (0.020)	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 (0.027)	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 (0.034)	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 (0.036)	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 (0.045)	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 (0.054)	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 (0.056)	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 (0.068)	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 (0.081)	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 - -

TECHNICAL PERFORMANCE DATA

Supply - 3 Way Rectangular Diffuser



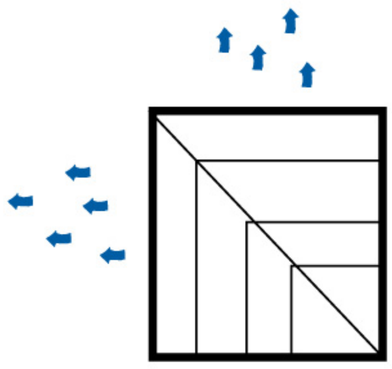
* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* 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	200 56	250 70	400 112	500 140	600 168	800 224	1000 280	2000 560	2500 700
			NR25		NR35	NR40	NR45				
150 x 225	0.0338 (0.014)	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)	2.7 1.8 4.0 9.0 27 0.04/0.08 27/17	3.5 2.4 5.0 14 33 0.03/0.05 -/24	5.5 3.7 7.9 32 44 - -	7.0 4.8 9.9 52 48 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
150 x 300	0.045 (0.018)	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)	2.6 <1.5 3.1 5.5 23 0.05/- 22/-	3.5 1.8 3.9 9.0 27 0.04/0.09 27/14	5.2 3.0 6.2 22 38 -/0.04 -/26	6.2 3.7 7.7 32 44 -/0.03 -	7.6 4.3 9.3 48 46 - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
			NR25		NR35	NR40 NR45					
225 x 300	0.0675 (0.027)	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 <1.5 2.0 2.3 <20 0.11/- 12.5/-	2.6 1.7 2.6 4.0 20 0.07/0.14 17/10	4.1 2.7 4.1 10 31 0.03/0.07 -/17	5.0 3.4 5.1 13 35 -/0.05 -/26	6.1 4.2 6.2 22 40 - -	8.0 5.6 8.2 36 47 - -	- - - - - - -	- - - - - - -	- - - - - - -
225 x 375	0.0844 (0.034)	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 <1.5 2.0 2.3 <20 0.12/- 13/-	3.7 2.6 3.3 6.0 26 0.05/0.09 24/15	4.5 2.7 4.1 10 30 0.04/0.09 -/16	5.3 3.4 4.9 14 35 -/0.05 -/23	7.0 4.3 6.5 23 42 -/0.035 -/30	9.0 5.7 8.2 33 47 - -	- - - - - - -	- - - - - - -
225 x 525	0.1181 (0.046)	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)	- - - - - - -	- - - - - - -	3.2 1.6 2.4 3.4 22 0.08/0.25 17/7	4.2 2.0 3.0 7.0 26 0.05/0.17 26/9.5	4.8 2.4 3.6 7.5 30 0.04/0.13 27/12	6.2 3.2 4.8 13 37 -/0.08 -/16.5	8.0 4.0 6.0 23 42 -/0.05 23	- - - - - - -	- - - - - - -
			NR25			NR35	NR40	NR45			
300 x 375	0.1125 (0.046)	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)	- - - - - - -	- - - - - - -	2.9 2.2 2.4 3.4 22 0.09/0.16 15.5/10	3.9 2.7 3.0 7.0 26 0.06/0.11 23/16	4.4 3.2 3.6 7.5 30 0.04/0.08 26/17	6.0 4.2 4.8 13 37 -/0.05 -/24	7.2 5.5 6.0 23 42 - -	- - - - - - -	- - - - - - -
300 x 450	0.135 (0.054)	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)	- - - - - - -	- - - - - - -	2.8 1.8 2.1 2.5 <20 0.12/0.22 13/7.5	3.6 2.3 2.6 4.0 23 0.08/0.17 18/9.5	4.4 2.6 3.1 5.0 27 0.06/0.14 23/11	5.8 3.8 4.1 9.0 34 -/0.07 -/19	7.2 4.7 5.1 15 38 -/0.05 -/24	- - - - - - -	- - - - - - -
							NR25		NR35		
375 x 450	0.1688 (0.068)	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 2.0 2.2 <20 0.12/0.18 13/7.7	3.8 2.8 2.5 3.5 24 0.08/0.12 17/11.5	5.0 3.8 3.3 6.0 30 0.05/0.1 23/16.5	6.1 4.7 4.1 9.0 35 -/0.06 -/22	13 9..0 8.2 35 50 - -	- - - - - - -
							NR25	NR35	NR45		
450 x 525	0.2363 (0.095)	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)	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	4.0 3.0 2.3 3.0 24 0.07/0.12 17/12.5	5.6 4.1 3.0 5.0 29 -/0.06 -/18	10 7.5 5.8 17 44 - -	14 10 7.3 27 50 - -

Supply - 2 Way Square Diffuser (Type A)

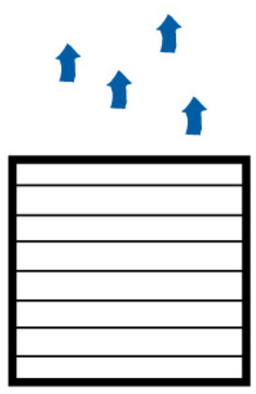


* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* 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
			NR25	NR35		NR45					
150 x 225	0.0225 (0.008)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	2.6 3.5 7.0 22 <0.015 >30	4.0 5.2 16 31 <0.015 >30	5.2 6.9 27 37 <0.015 >30	6.5 8.7 37 42 <0.015 >30	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
225 x 225	0.0506 (0.018)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	2.6 2.3 3.0 <20 0.052 23	3.5 3.1 5.5 23 0.03 >30	4.5 3.9 8.0 28 0.022 >30	8.5 7.7 30 44 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
300 x 300	0.09 (0.032)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	3.2 2.2 2.5 <20 0.055 21	6.5 4.3 10 32 - -	10.5 6.9 27 43 - -	13 8.7 38 49 - -	- - - - - -	- - - - - -
375 x 375	0.141 (0.050)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	5.2 2.8 4.5 25 - -	8.2 4.4 13 36 - -	11 5.6 17 41 - -	16 8.3 33 50 - -	- - - - - -
450 x 450	0.2025 (0.071)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	4.5 2.0 2.2 <20 0.065 19	7.0 3.1 5.5 28 - -	9.0 3.9 9.0 34 - -	13 5.9 20 43 - -	17 7.8 30 50 - -
525 x 525	0.276 (0.100)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	6.2 2.2 2.7 23 - -	7.5 2.8 4.5 28 - -	12 4.2 10 37 - -	14.5 5.6 16 43 - -

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
			NR25		NR35	NR40	NR45				
150 x 225	0.0338 (0.012)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	2.1 2.3 3.0 <20 0.05 24	3.2 3.5 7.0 24 0.022 -	4.2 4.6 12 30 0.015 -	5.2 5.8 17 35 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
150 x 300	0.045 (0.016)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	2.7 2.6 4.0 <20 0.04 27	3.5 3.5 7.0 24 0.017 -	4.5 4.3 12 28 - -	8.8 8.7 38 45 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
150 x 375	0.0563 (0.020)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	2.5 2.0 2.3 <20 0.06 21	3.3 2.8 4.5 21 0.037 27	4.0 3.5 7.0 25 0.025 -	8.2 6.9 25 42 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
225 x 300	0.0675 (0.024)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	3.0 2.3 3.2 <20 0.05 13	3.8 2.9 5.0 22 0.03 -	7.5 5.8 17 38 - -	12 9.3 45 48 - -	- - - - - -	- - - - - -	- - - - - -
225 x 450	0.09 (0.036)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	3.2 1.9 2.0 <20 0.065 19	6.0 3.9 8.0 32 - -	9.7 6.2 22 43 - -	13 7.7 30 46 - -	- - - - - -	- - - - - -
225 x 525	0.1181 (0.041)	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	2.8 1.7 <2 <20 0.09 15	5.7 3.4 7.0 27 - -	9.0 5.4 16 40 - -	12 6.8 25 44 - -	- - - - - -	- - - - - -

TECHNICAL PERFORMANCE DATA

Supply - 2 Way Square Diffuser (Type B)

							NR25		NR45		
300 x 300	0.09 (0.032)	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 (0.039)	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 (0.047)	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	-	-	-	-	-	-	-	-	-

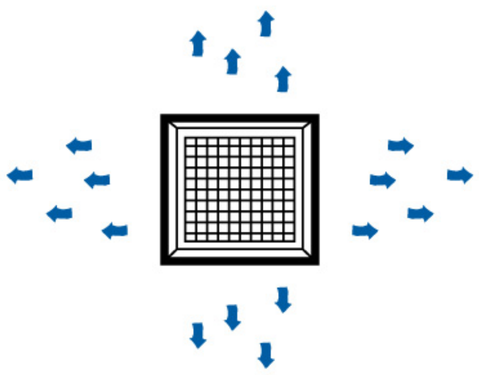
							NR25		NR45		
375 x 375	0.1406 (0.049)	Throw Distance (0.25 m/s), m	-	-	-	-	5.3	8.3	11	16	-
		Face Velocity, m/s	-	-	-	-	3.0	4.7	5.9	8.9	-
		Total Pressure Loss, Pa	-	-	-	-	5.0	13	19	40	-
		Noise Rating (NR)	-	-	-	-	25	36	41	50	-
		Temperature Quotient	-	-	-	-	-	-	-	-	-
		Induction Ratio	-	-	-	-	-	-	-	-	-

							NR25		NR35	NR45	
450 x 450	0.2025 (0.071)	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	0.2756 (0.097)	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	-	-	-	-	-	-	-	-	-

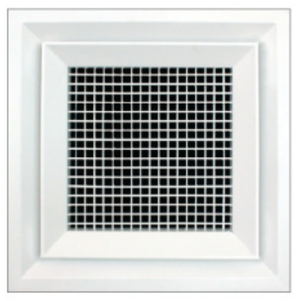
TECHNICAL PERFORMANCE DATA

Supply - DDCD Diffuser



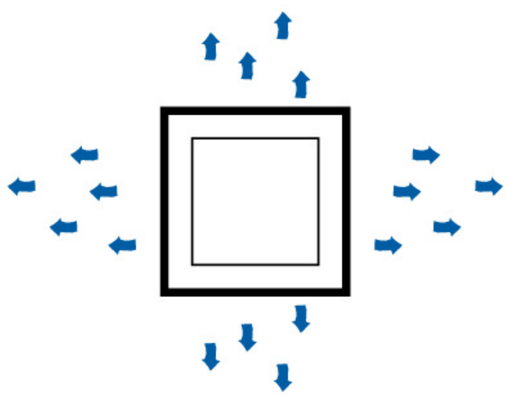
* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

* 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) m²	Unit Volume Flowrate, m³/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 (0.010)	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 (0.022)	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 (0.041)	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	0.141 (0.064)	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 (0.089)	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	0.276 (0.121)	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) m²	Unit Volume Flowrate, m³/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 (0.0692)	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 1.2mm thick, unless otherwise stated.
2. The margin to be in 75mm from the neck height to the edge.
3. Frame height to be in 25mm.
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 1.2mm thick. 6 layer of vanes with fixed pattern for directional air distribution, unless otherwise stated.

Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

Performance

1. Free 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

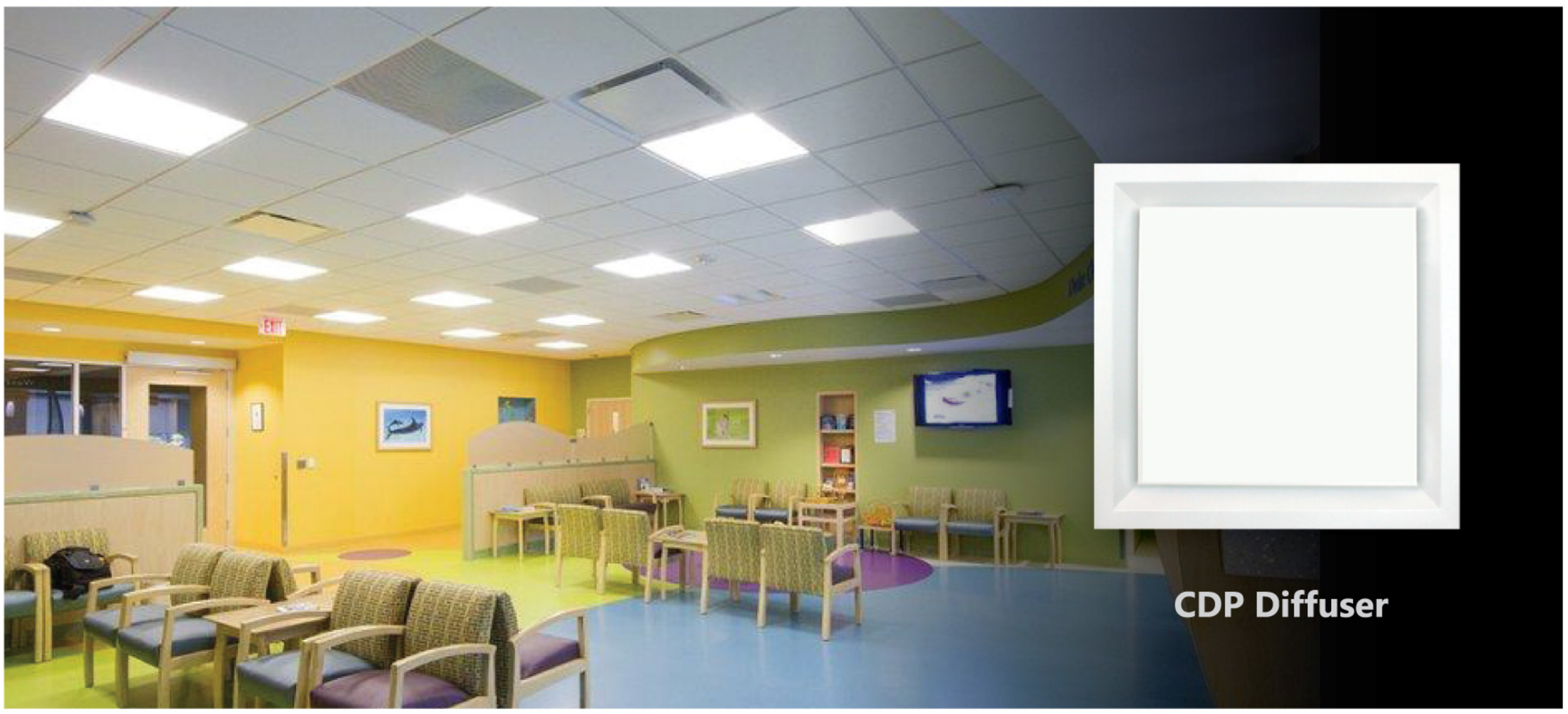
1. Vanes to be in galvanized steel.
2. Vanes to be in 0.6mm thick. 6 layer of vanes with fixed pattern for directional air distribution, unless otherwise stated.

Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

Performance

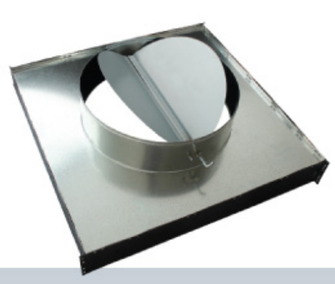
1. Free area of the grill to be in 40%.
2. Fixed pattern multi-vanes for directional air distribution.
3. Ceiling Diffusers are designed to be ceiling mounted, square opposed blade damper or round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose,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

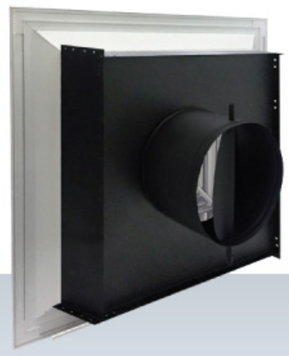


DIFFUSER + ACCESSORIES COMBINATION

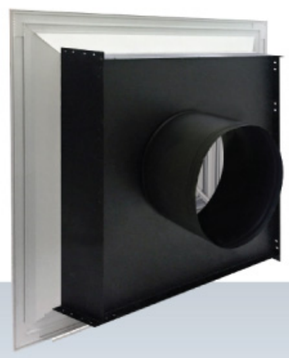
A CD + Square OBD =

B CD + Round Radial OBD =

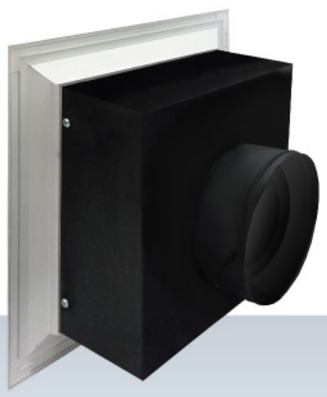




C CD + Round Butterfly OBD =



D CD + Round Collar =



E CD + Square OBD + Round Collar =

CD | Ceiling Diffuser

Products Range

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

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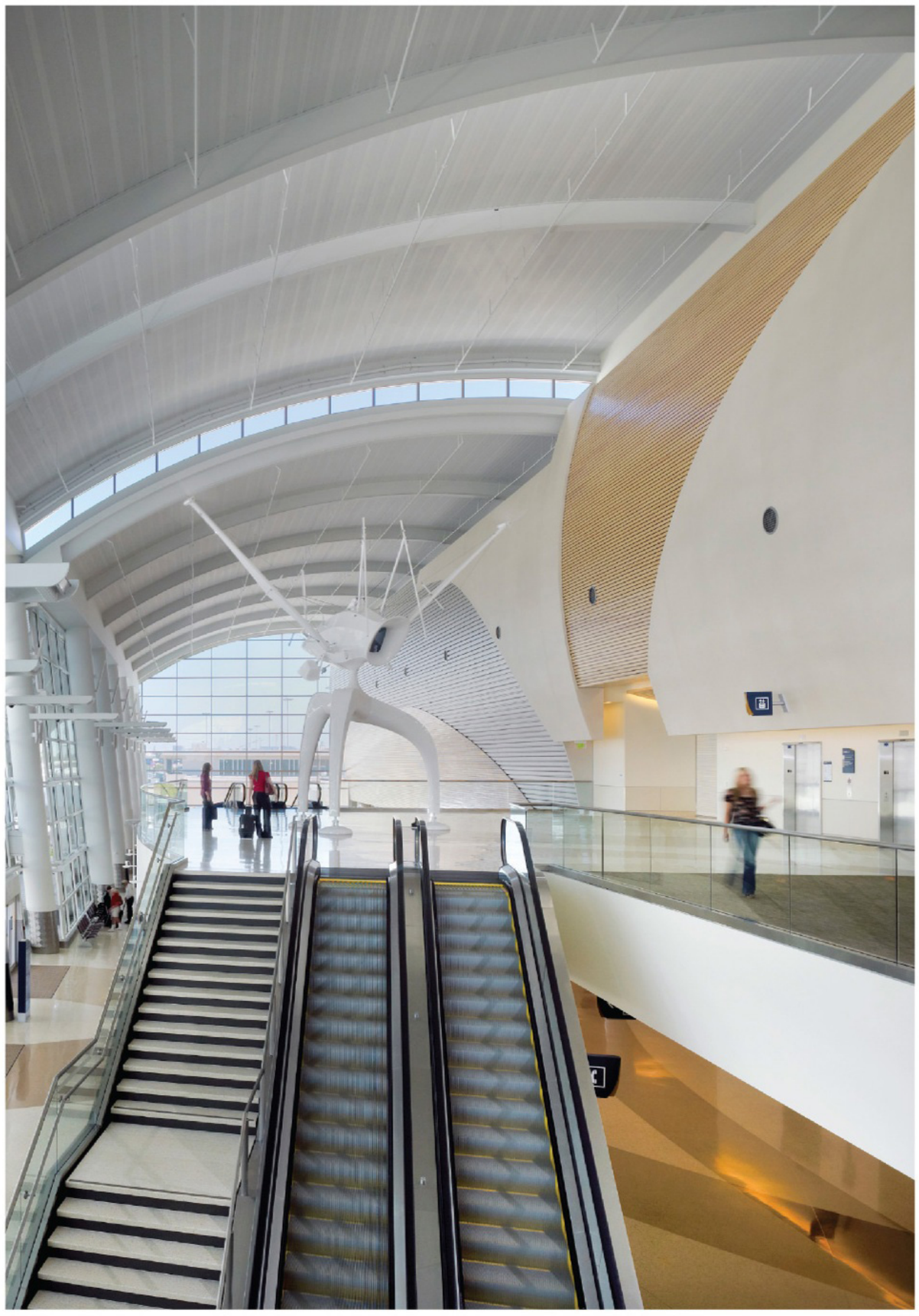


JD Jet Diffuser

JD | Jet Diffuser

Introduction

Commonly used in wide open spaces where duct work is not possible but requiring proper ventilation, the Jet Diffuser (JDA/S) is able to deliver air to localised targeted area over large distance up to 50 m.

Depending on model type, the air flow direction is adjustable in either one plane or two planes (4-way diffuser).With its aerodynamic design, the Jet Diffuser is able to produces airflow at high outlet velocities without compromising noise level.

With is fully rotatable center core, the Jet Diffuser is able to provide both the narrow and wide throw configurations depending on the application requirements (the wider throw provides better induction but at a shorter throw distance).

CONSTRUCTIONS & MATERIALS

- One-piece components with no seam joints
- Design configurations:
  - i) 4-way configuration
- Adjustable flow deflection in two planes
- Throw distance up to 50 m
- GI material upon request and custom made

Outer Cone

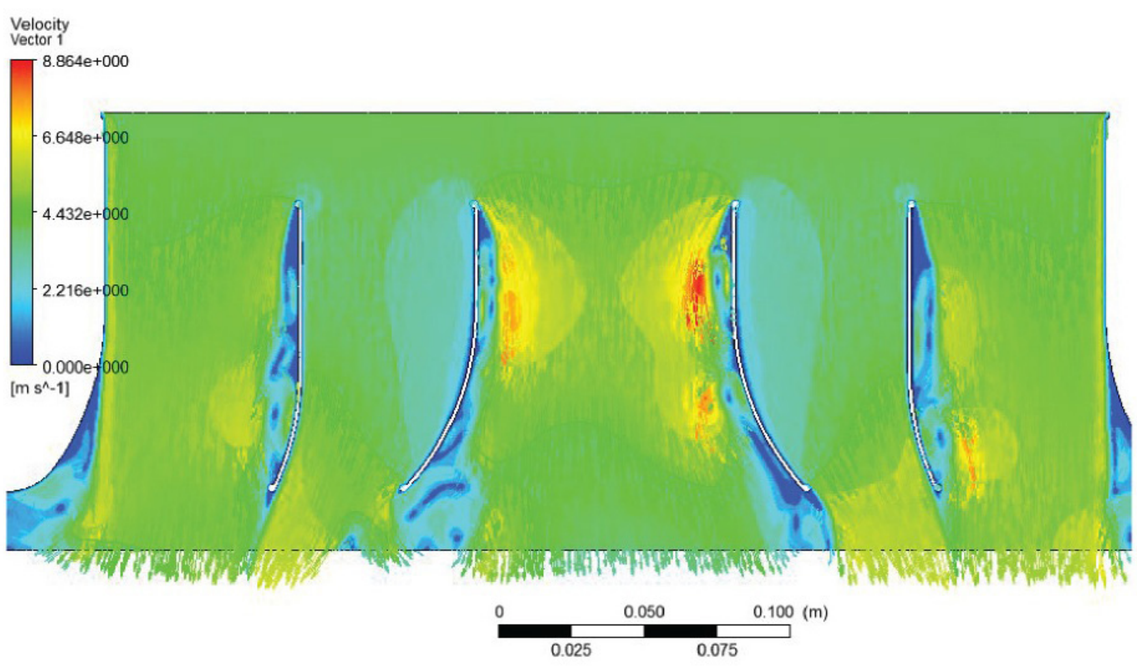
AL 1.0mm

Aluminium

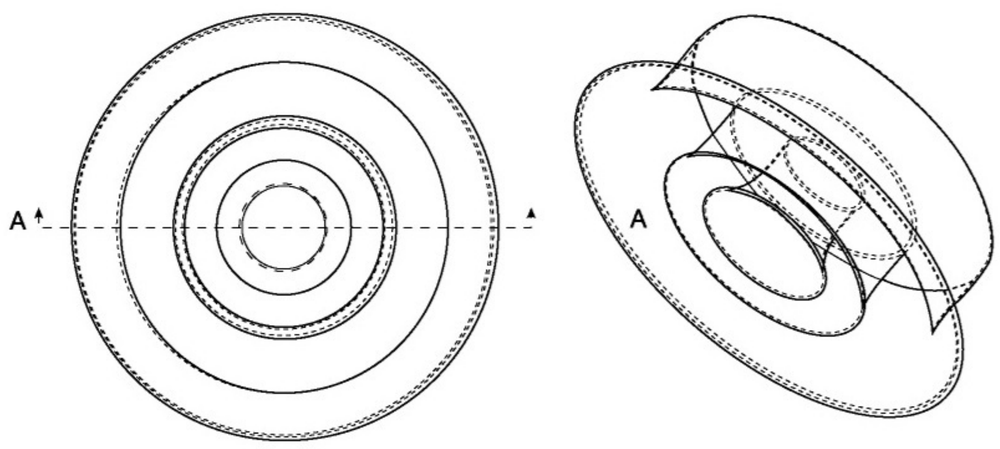
Inner Core Cones

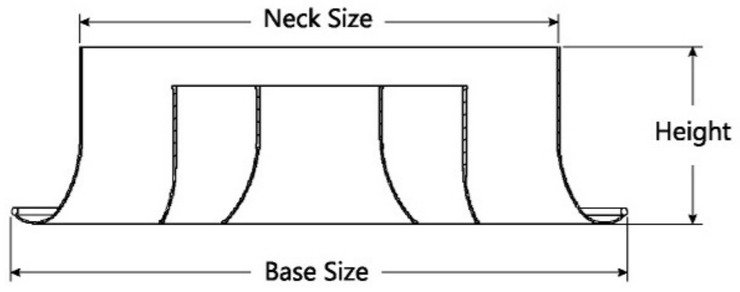
AL 1.0mm

Aluminium



DIMENSIONS



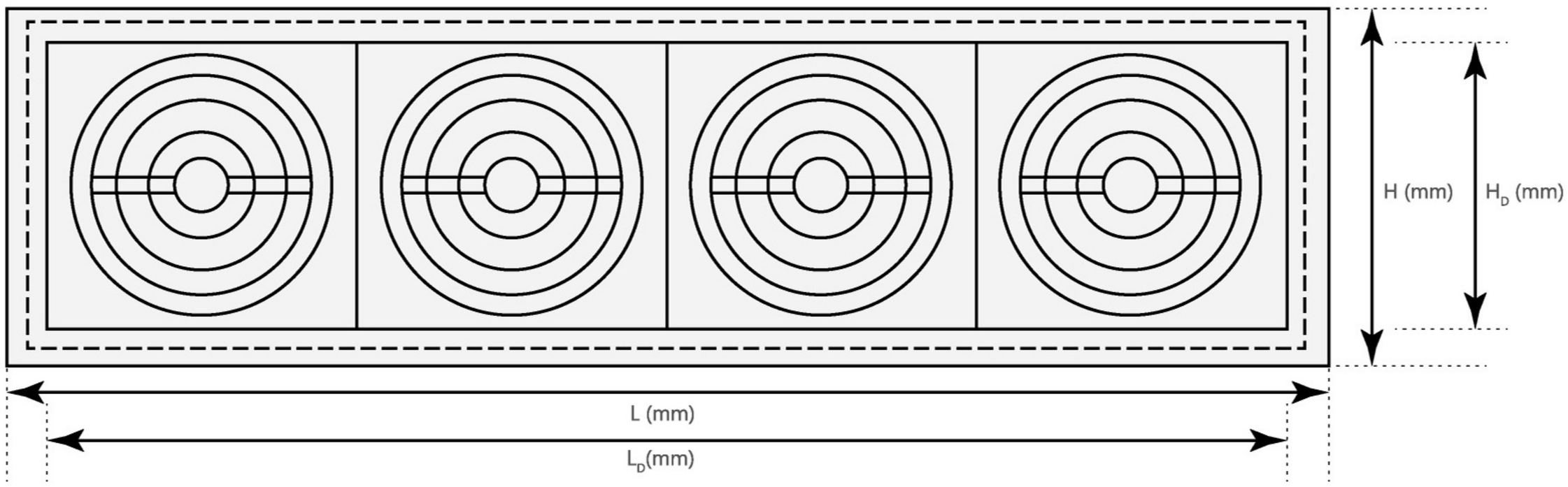


SECTION A-A

Dimensions

Order Size (Inch)	Neck Size (mm)	Base Size (mm)	Height (mm)
8.0	198	280	140
10.0	248	330	140
12.0	298	380	140
14.0	348	430	140

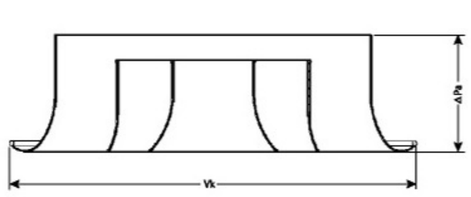
TECHNICAL PERFORMANCE DATA



Base and Duct Sizes of Modular Assembly

SIZE (mm)	1				2				3				4			
	L	H	L_D	H_D	L	H	L_D	H_D	L	H	L_D	H_D	L	H	L_D	H_D
200	370	370	320	320	690	370	640	320	1010	370	960	320	1330	370	1280	320
250	420	420	370	370	790	420	740	370	1160	420	1110	370	1530	420	1480	370
300	470	470	420	420	890	420	840	420	1310	470	1260	420	1730	470	1680	420
350	520	520	470	470	990	520	940	470	1460	520	1410	470	1930	520	1880	470

Supply - Wide/Narrow Throw

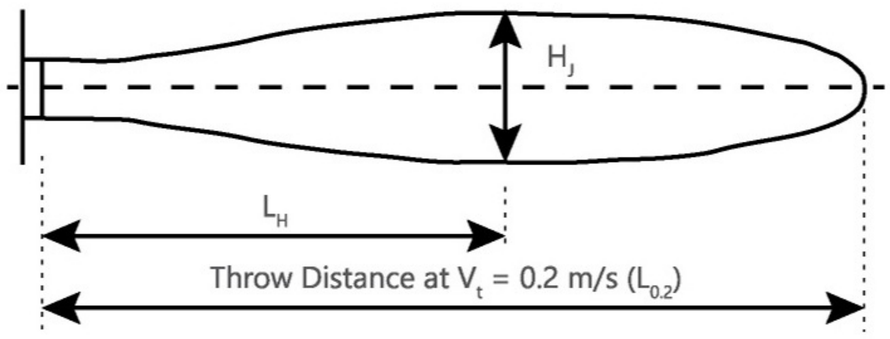


Throw correction factor for multiple jet diffusers installed within 1.5 m apart

Number of Diusers	2	3	4
Correction Factor	LT x 1.4	LT x 1.7	LT x 1.9

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

* The throw length values quoted in the diagrams are valid for isothermal supply air. Throw lengths depend considerably on; the temperature of the supply air, whether the diffusers are grouped together.



Spread

	L_H	H_J
Narrow Jet	$L_{0.2}$ x 0.45	$L_{0.2}$ x 0.12
Wide Jet	$L_{0.2}$ x 0.45	$L_{0.2}$ x 0.5

Order Size, inch	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	800 224	1000 280	1400 392	1600 448	2000 560
8.0	0.0308	Throw Distance (0.2 m/s), m (1)	9.5	12	3.0	-	-	-	-	-	-
		Throw Distance (0.2 m/s), m (2)	<8.0	<8.0	7.7	13.0	-	-	-	-	-
		Total Pressure Loss, Pa (1)	19	30	32	-	-	-	-	-	-
		Total Pressure Loss, Pa (2)	8.0	13	42	55	-	-	-	-	-
		Noise Rating (NR) (1)	<25	29	0.022	-	-	-	-	-	-
		Noise Rating (NR) (2)	<25	<25	>30	36	-	-	-	-	-
10.0	0.0483	Throw Distance (0.2 m/s), m (1)	<8.0	9.8	15.5	20.0	-	-	-	-	-
		Throw Distance (0.2 m/s), m (2)	-	<8.0	8.0	10.0	-	20	-	-	-
		Total Pressure Loss, Pa (1)	7.5	12	31	50	-	-	-	-	-
		Total Pressure Loss, Pa (2)	-	5.0	13	20	-	80	-	-	-
		Noise Rating (NR) (1)	<25	<25	32	37	-	-	-	-	-
		Noise Rating (NR) (2)	-	<25	<25	25	-	>45	-	-	-
12.0	0.0697	Throw Distance (0.2 m/s), m (1)	-	-	11.0	15.0	25.0	29	-	-	-
		Throw Distance (0.2 m/s), m (2)	-	-	<8.0	8.0	13.0	16	22	26	-
		Total Pressure Loss, Pa (1)	-	-	11	16	45	65	-	-	-
		Total Pressure Loss, Pa (2)	-	-	5.0	8.0	21	33	65	90	-
		Noise Rating (NR) (1)	-	-	<25	<25	37	43	-	-	-
		Noise Rating (NR) (2)	-	-	<25	<25	30	36	45	>45	-
14.0	0.0951	Throw Distance (0.2 m/s), m (1)	-	-	10.0	13.0	21.0	25.0	35.0	42.0	-
		Throw Distance (0.2 m/s), m (2)	-	-	-	<8.0	11.0	14.0	20.0	20.0	28.0
		Total Pressure Loss, Pa (1)	-	-	5.5	9.0	23	33	62	90	-
		Total Pressure Loss, Pa (2)	-	-	-	5.0	12	19	37	50	75
		Noise Rating (NR) (1)	-	-	<25	<25	27	33	33	>45	-
		Noise Rating (NR) (2)	-	-	-	<25	<25	28	40	43	>45

xxx (1) Values for narrow throw xxx (2) Values for wide throw

VOLUME CONTROL DAMPER TECHNICAL SPECIFICATION

Frame Construction
1. Frame to be in extruded aluminium. Frame thickness should be in minimum 1.0mm thick, unless otherwise stated.
2. Frame height to be in 140mm.

Core Construction
1. Cores to be in extruded aluminium.
2. Cores to be in 1.0mm thick. 2 layer of vanes to be adjustable for directional air distribution, unless otherwise stated.

Finishing
1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

Performance
1. Diffusers core are adjustable for directional air distribution.
2. Jet Diffusers are designed to be high wall mounted, round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.
3. Jet Diffuser's aerodynamic design is able to produces a jet throw without compromising noise level.

DIFFUSER + ACCESSORIES COMBINATION

JD

OBD Radial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Sino Group
反斗車王大派對
日期：12月25日(星期一)
時間：下午3時至4時
Welcome to
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JD | Jet Diffuser

Products Range

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

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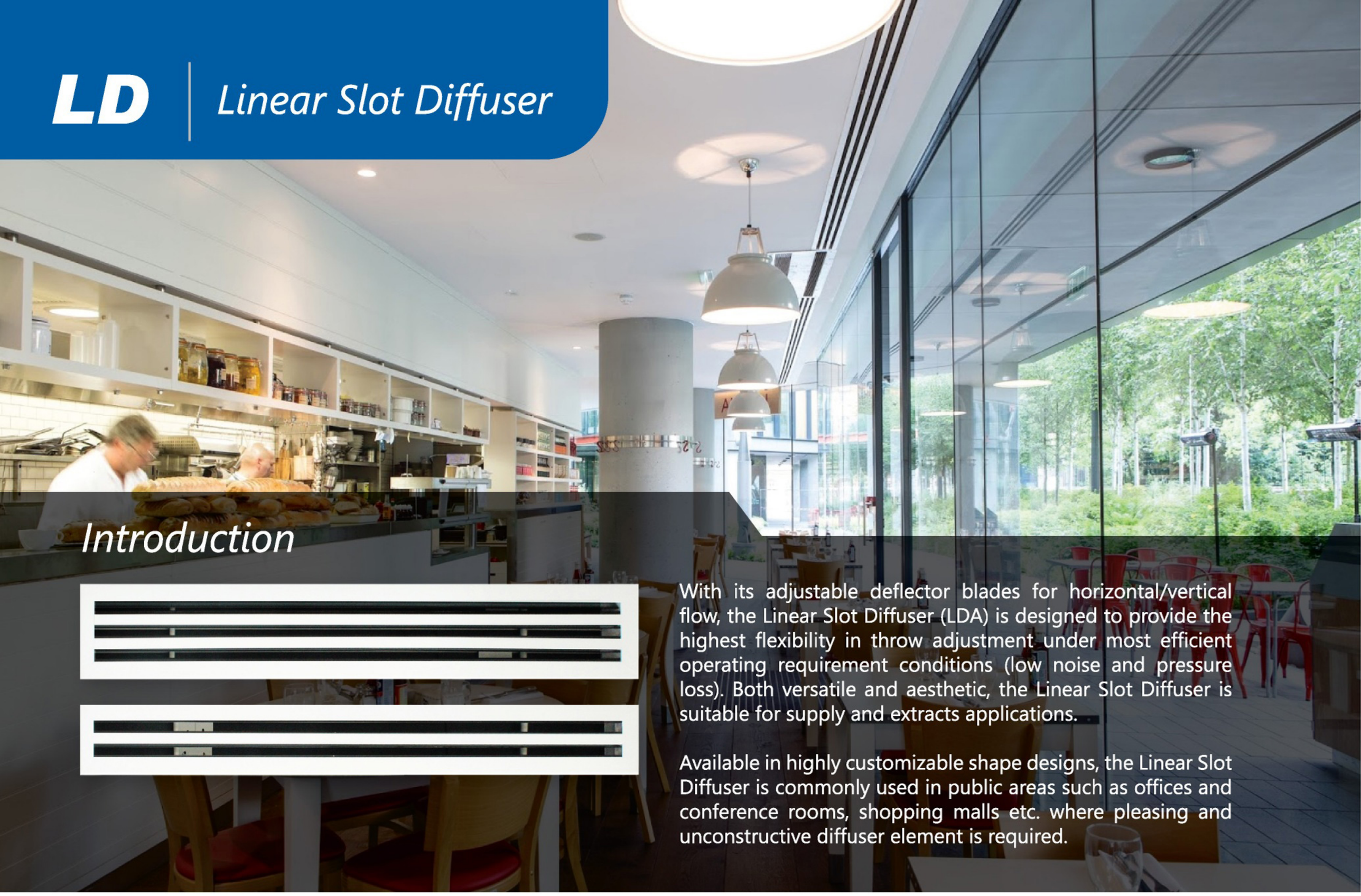
LD Linear Slot Diffuser

LD | Linear Slot Diffuser



Introduction

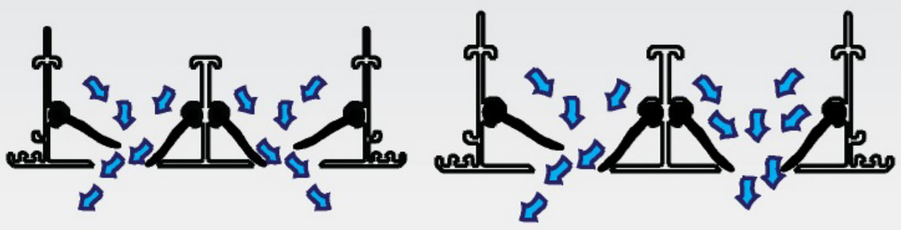
With its adjustable deflector blades for horizontal/vertical flow, the Linear Slot Diffuser (LDA) is designed to provide the highest flexibility in throw adjustment under most efficient operating requirement conditions (low noise and pressure loss). Both versatile and aesthetic, the Linear Slot Diffuser is suitable for supply and extracts applications.

Available in highly customizable shape designs, the Linear Slot Diffuser is commonly used in public areas such as offices and conference rooms, shopping malls etc. where pleasing and unconstructive diffuser element is required.

CONSTRUCTIONS & MATERIALS

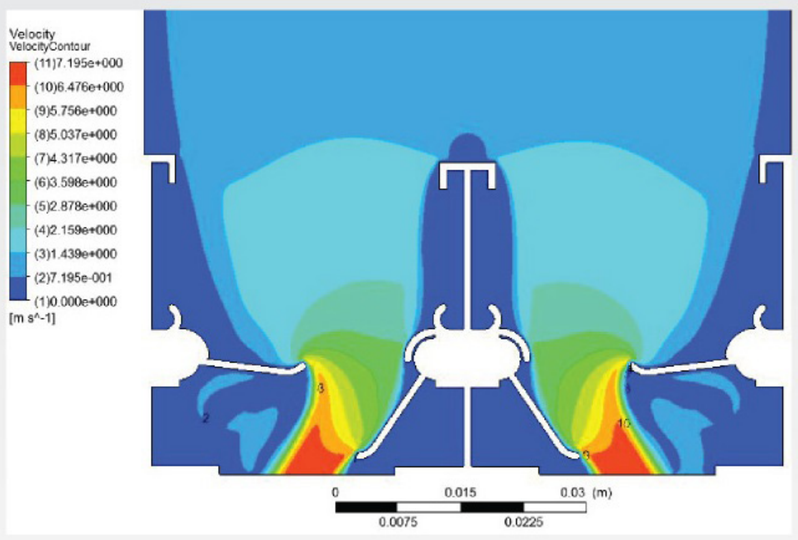
- Avaliable in 1-8 slot configurations
- Standard length of 1200 mm (avaliable in multiple modules)
- Highly customizable shape profile
- Standard slot width 21 mm (customizable upon request)
- Wood construction available

Frame Construction	Deflector Construction	Surface Finishing
AL 1.2mm	AL 1.0mm	RAL 9010 SG
Extruded Aluminium	Extruded Aluminium	White (Matt)



Opposed Sides

Vertical & Side Throw



DIMENSIONS

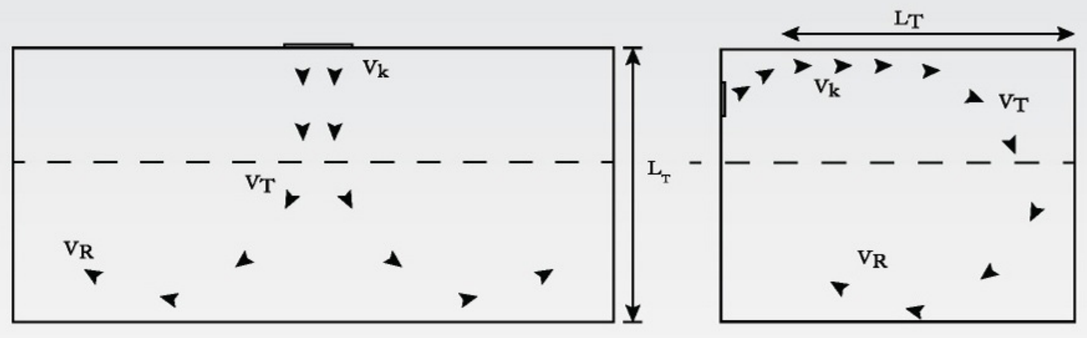
DETAIL A

SECTION B-B

Ø 600.00mm

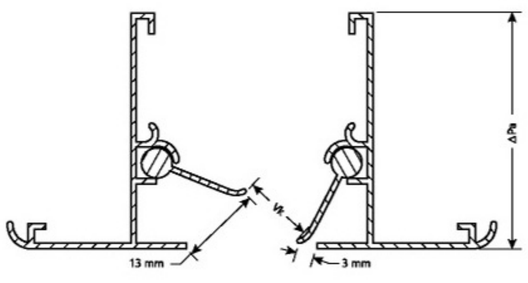
Dimensions

Number of Slots	Base Height (mm)	Neck Height (mm)
1	79	40
2	118	79
3	157	118
4	196	157
5	235	196
6	279	235
7	313	274
8	352	313



TECHNICAL PERFORMANCE DATA

Supply



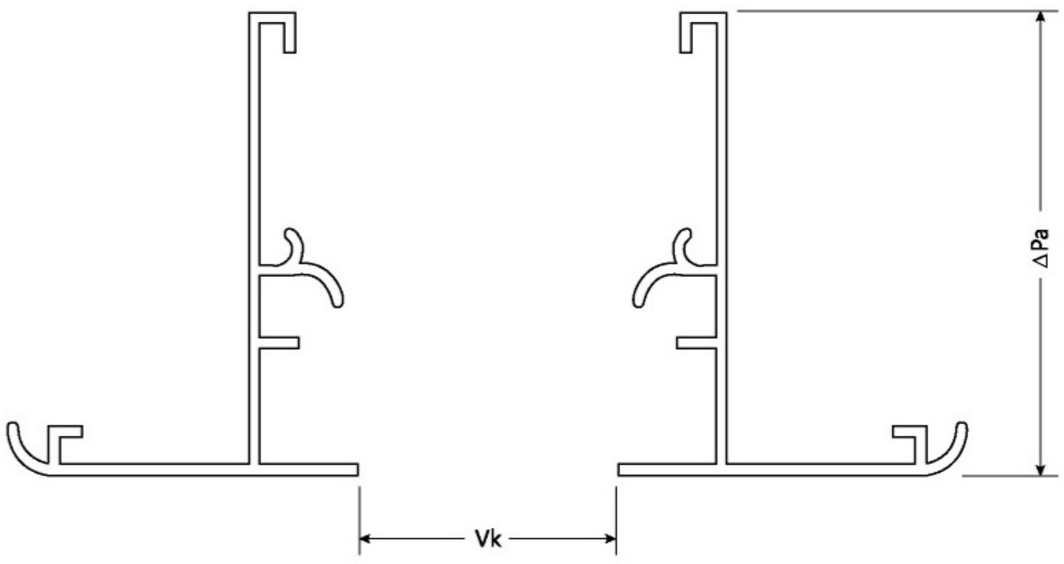
* For optimized horizontal throw distance (with Coanda effect), users are recommended to set the blade distance as shown in the illustration.

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

Order Size, inch	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, $m^3/hr/m$ Unit Volume Flowrate, l/s/m	NR20		NR30	NR40				NR50
			107 30	143 40	214 60	357 100	536 150	714 200	893 250	1071 300	1250 350
1 Slot x 300 mm	0.012 (0.00219)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	32.1 0.7 4.1 13 7 0.18 5.5	42.9 1.2 5.4 22 14 0.16 6.5	64.2 2.4 8.1 46 23 0.13 8.2	107 4 13.6 116 37 0.1 10	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
1 Slot x 1200 mm	0.048 (0.00876)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	128 1.4 4.1 13 10 0.14 7	172 2.4 5.4 22 17 0.125 8	257 4.8 8.1 46 26 0.09 11	428 7.2 13.6 116 40 <0.09 >11	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
1 Slot x 2400 mm	0.096 (0.01752)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	257 1.6 4.1 13 16 0.14 7	344 2.8 5.4 22 20 0.13 9	514 5.52 8.1 46 29 <0.09 >11	856 8.3 13.6 116 43 <0.09 >11	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -	- - - - - - -
2 Slot x 300 mm	0.0237 (0.00438)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	32.1 <0.2 2.0 <6 <6 - -	42.9 0.2 2.7 6 6 - -	64.2 0.7 4.1 13 15 0.18 5.5	107 2.4 6.8 33 26 0.13 8.2	161 3.3 10.2 75 36 0.13 8.2	214 5 13.6 116 44 0.12 8.5	- - - - - - -	- - - - - - -	- - - - - - -
2 Slot x 1200 mm	0.0948 (0.01752)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	128 <0.2 2.0 <6 <10 - -	172 0.4 2.7 6 9 - -	257 1.4 4.1 13 18 0.19 5.2	428 4.9 6.8 33 29 0.12 8.5	643 >7 10.2 75 39 <0.12 >8.5	857 >7 13.6 116 47 <0.12 >8.5	- - - - - - -	- - - - - - -	- - - - - - -
2 Slot x 2400 mm	0.1896 (0.03504)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	257 <0.2 2.0 <6 <10 - -	344 0.46 2.7 6 12 - -	514 1.61 4.1 13 21 0.18 5.7	856 5.6 6.8 33 32 <0.12 >8.5	1286 >7 10.2 75 42 <0.12 >8.5	1714 >7 13.6 116 50 <0.12 >8.5	- - - - - - -	- - - - - - -	- - - - - - -
3 Slot x 300 mm	0.0354 (0.00657)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	32.1 <0.2 1.4 <6 <10 - -	42.9 <0.2 1.8 <6 <10 - -	64.2 0.2 2.7 6 11 - -	107 1.4 4.5 15 22 0.23 4.3	161 3.0 6.8 33 30 0.18 5.5	214 >5.0 9.0 57 35 <0.14 >7	268 >5.0 11.3 85 42 <0.14 >7	- - - - - - -	- - - - - - -
3 Slot x 1200 mm	0.1416 (0.02628)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	128 <0.4 1.4 <6 <10 - -	172 <0.4 1.8 <6 <10 - -	257 0.4 2.7 6 14 - -	428 3.0 4.5 15 25 0.18 5.5	643 6.0 6.8 33 33 <0.14 >7	857 >7.0 9.1 57 38 <0.14 >7	1072 >7.0 11.3 85 45 <0.14 >7	- - - - - - -	- - - - - - -
3 Slot x 2400 mm	0.2832 (0.05256)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	257 <0.5 1.4 <6 <10 - -	344 <0.5 1.8 <6 <10 - -	514 0.5 2.7 6 17 - -	856 3.45 4.5 15 28 0.17 5.8	1286 7 6.8 33 35 <0.14 >7	1714 >7.0 9.1 57 41 <0.14 >7	2143 >7.0 11.3 85 48 <0.14 >7	- - - - - - -	- - - - - - -
4 Slot x 300 mm	0.0471 (0.00876)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	32.1 <0.15 1.0 <4 <8 - -	42.9 <0.15 1.4 <4 <8 - -	64.2 0.15 2.0 4 8 - -	107 1.0 3.4 9 19 0.33 3.1	161 2.5 5.1 20 27 0.22 4.3	214 3.5 6.8 33 34 0.2 5	268 >5.0 8.5 40 39 <0.14 >7	321 >5.0 10.2 75 42 <0.14 >7	375 >5.0 11.9 90 45 <0.14 >7
4 Slot x 1200 mm	0.1884 (0.03504)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	128 <0.3 1.0 <4 <10 - -	172 <0.3 1.4 <4 <10 - -	257 0.3 2.0 4 11 - -	428 1.9 3.4 9 22 0.24 4	643 5.2 5.1 20 30 <0.14 >7	857 >7.0 6.8 33 37 <0.14 >7	1072 >7.0 8.5 40 42 <0.14 >7	1285 >7.0 10.2 75 45 <0.14 >7	1500 >7.0 11.9 90 48 <0.14 >7
4 Slot x 2400 mm	0.3768 (0.07008)	Total Volume Flowrate, m^3/hr Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	257 <0.35 1.0 <4 <10 - -	344 <0.35 1.4 <4 <10 - -	514 0.35 2.0 4 14 - -	856 2.2 3.4 9 25 0.23 4.3	1286 6.0 5.1 20 33 <0.14 >7	1714 >8.0 6.8 33 40 <0.14 >7	2143 >8.0 8.5 40 45 <0.14 >7	2570 >8.0 10.2 75 48 <0.14 >7	3000 >8.0 11.9 90 51 <0.14 >7

TECHNICAL PERFORMANCE DATA

Exhaust



* Performance data recorded in per meter unit length.

* Exhaust air capacity is based on slot diffuser without deflectors. When a pattern deflector is used, the effective area will be reduced by estimated value of 34%.

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

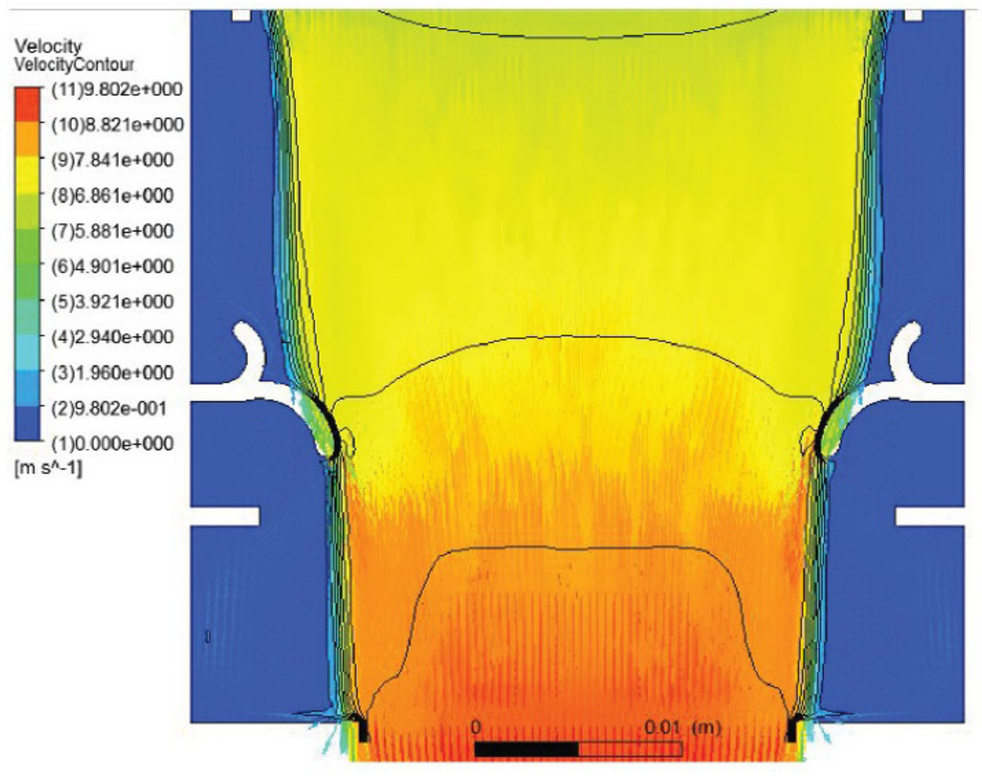
Diffuser Size mm	Estimated Effective Area, m^2	Unit Volume Flowrate, $m^3/hr/m$ Unit Volume Flowrate, l/s/m	107 30	143 40	214 60	357 100	536 150	714 200	893 250	1071 300	1250 350
					NR20		NR40	NR50			
1 Slot	0.0159	Face Velocity, m/s Total Pressure Loss, Pa	1.9 <5	2.5 <5	3.7 6	6.2 17	9.4 36	12.5 60	- -	- -	- -
2 Slot	0.0318	Face Velocity, m/s Total Pressure Loss, Pa	0.9 <5	1.2 <5	1.9 <5	3.1 <5	4.7 10	6.2 17	7.8 27	9.4 36	10.9 47
3 Slot	0.0478	Face Velocity, m/s Total Pressure Loss, Pa	0.6 <5	0.8 <5	1.2 <5	2.1 <5	3.1 <5	4.1 7	5.2 12	6.2 17	7.3 23
4 Slot	0.0634	Face Velocity, m/s Total Pressure Loss, Pa	0.5 <5	0.6 <5	0.9 <5	1.6 <5	2.3 <5	3.1 6	3.9 7	4.7 10	5.5 13

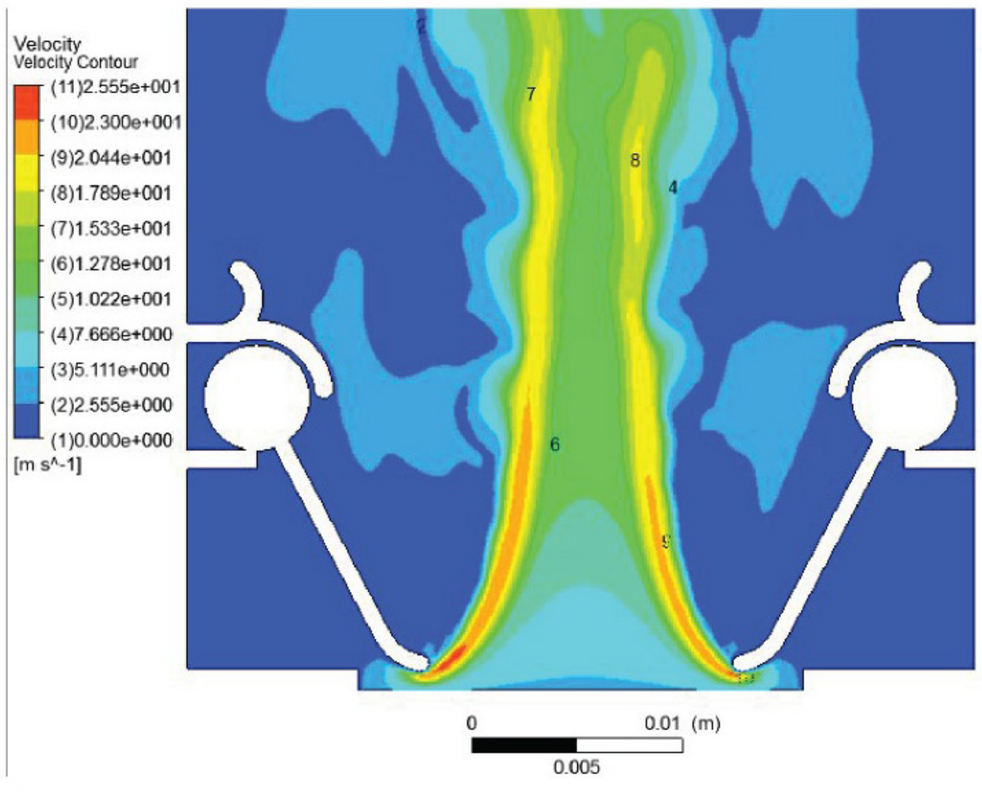
Note: For Linear Slot Diffuser (Exhaust), customer to indicate option of :

1) With Deflectors (Standard Issue)
2) Without Deflectors (Upon Request)

NON STANDARD PRODUCTS

Prudent Aire provide highly customizable product designs to address any onsite woes. Started off as modest contractor firm and progressed to being one of the leading supplier of air handling units in Malaysia, Prudent Aire understands the need of providing flexible grille/diffuser designs without comprimising grille performance.





ALUMINIUM CEILING DIFFUSERS TECHNICAL SPECIFICATION

Frame Construction

1. Frame to be in extruded aluminium. Frame thickness should be in minimum 1.2mm thick, unless otherwise stated.
2. The margin to be in 28mm from the neck height to the edge.
3. Frame height to be in 40mm.
4. The corner of the frame should be pressed with a 90° corner piece to ensure the frames are in 90°.
5. Diffusers shall be constructed in modular units to be installed in total lengths as required.

Slot Construction

1. Individual slot vane to be had 2 deflector to control air volume and air throw direction.
2. The air throw direction should be able adjust from 90° to 45° in vertical planes at right angles to the slots and should be adjustable from the face of the diffusers.
3. Single slot gap to be with 21mm.

Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

Performance

1. Free area of the diffuser to be minimum 20%.
2. Fixed pattern multi-vanes for directional air distribution.
3. Linear Slot Diffusers are designed to be ceiling mounted, Plenum Box with round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.
4. Where linear slot return and exhaust inlet devices are used, these shall be similar to the above specifications for diffusers.

DIFFUSER + ACCESSORIES COMBINATION

A LD PB Side Opening

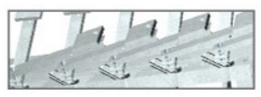
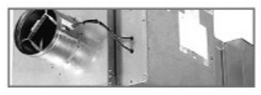
B LD PB Top Opening

C LD Square OBD

D LD PB 2 Collar

LD | *Linear Slot Diffuser*

Products Range

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

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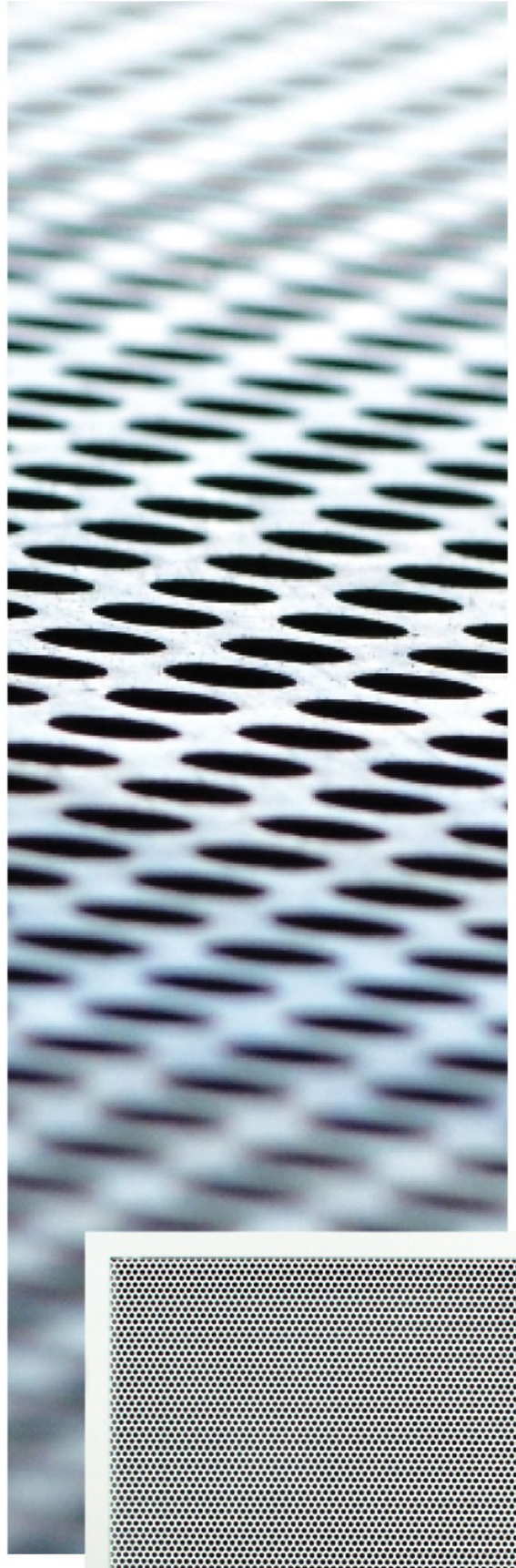
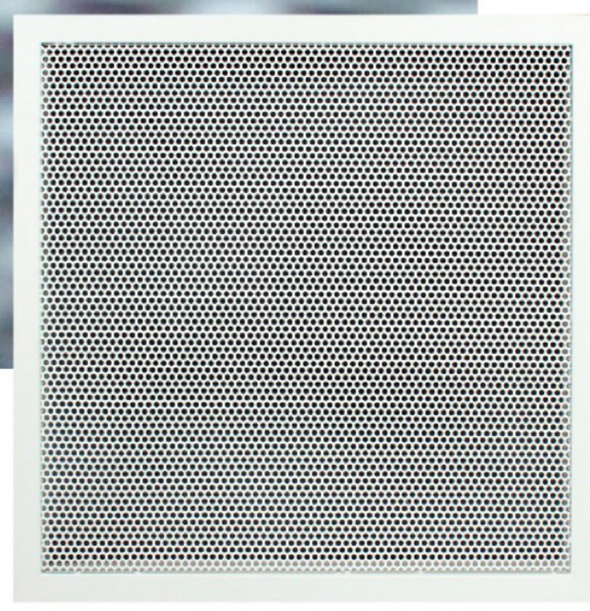
PrudentAire®

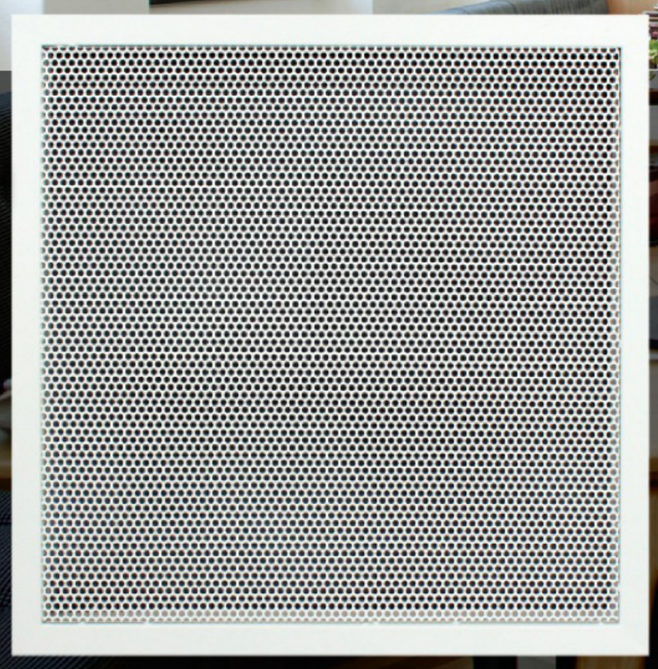




PD Perforated Diffuser

MADE IN MALAYSIA

PD | Perforated Diffuser



Introduction

Designed for delivering large laminarized air flow, the Perforated Diffuser provides an effective area of about 40% (see-through area of >70%). With Prudent Aire's proprietary Radial OBD design, the Perforated Diffuser is capable of providing multiple directional configurations (up to five possible directional configurations) with minimal pressure loss. Available in both T-bar and flush ceiling installation, efficient induction of secondary air occurs right at diffuser's faceplate (available in both fixed and removable configurations) and thus providing a well mixed air distribution systems.

Used for both supply and exhaust functionalities, the Perforated Diffuser is best suited in facilities with high ceiling height (up to 4 m).

CONSTRUCTIONS & MATERIALS

- Average effective area of 40%
- Hole pitch: 8 mm
- Hole diameter: 6 mm
- Adjustable multi-directional air flow
- Fixed/removable faceplate configurations
- Different material construction available

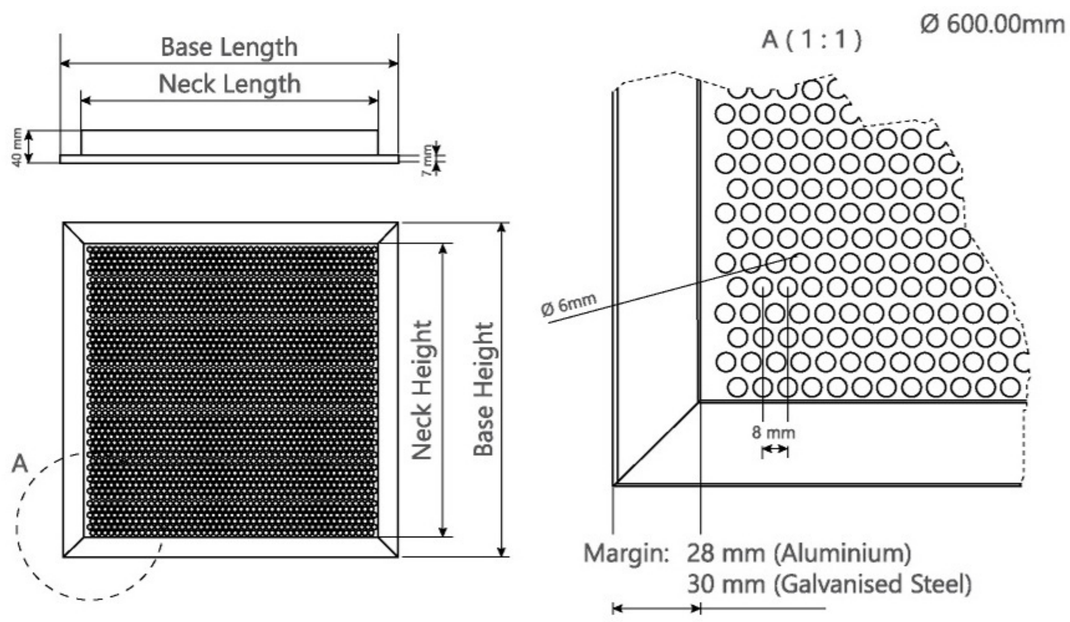
Frames Construction

AL 1.0mm	GI 0.6mm	SS
Aluminium	Galvanized Steel	Stainless Steel

Diffuser Faceplate

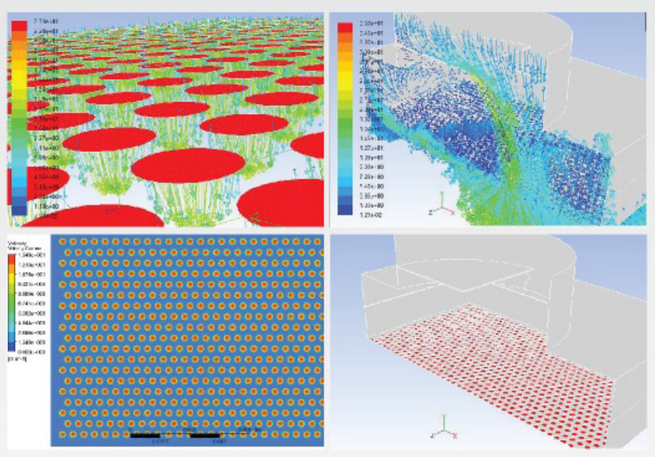
AL 0.8mm	GI 0.6mm	SS
Aluminium	Galvanized Steel	Stainless Steel

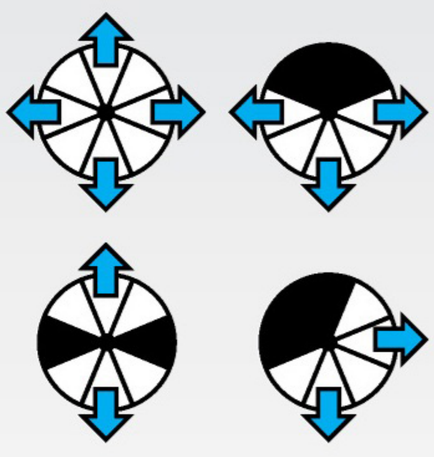
DIMENSIONS

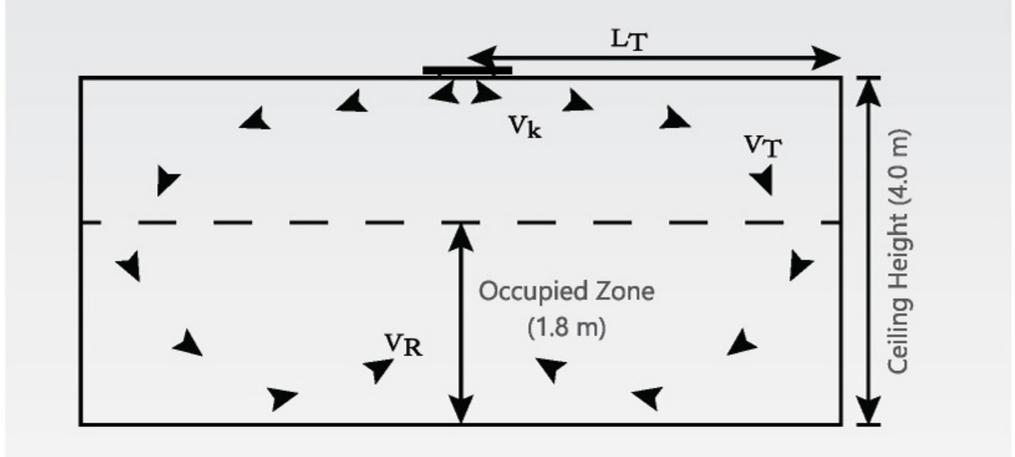


Dimensions

Neck Size (mm)	Al Base Size (mm)	GI Base Size (mm)
240 x 240	296 x 296	300 x 300
340 x 340	396 x 396	400 x 400
440 x 440	496 x 496	500 x 500
540 x 540	596 x 596	600 x 600
1080 x 1080	1136 x 1136	1140 x 1140
1080 x 540	1136 x 596	1140 x 600

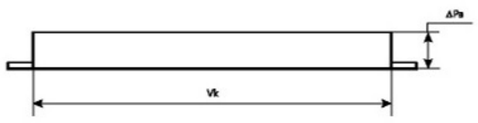






TECHNICAL PERFORMANCE DATA

Supply

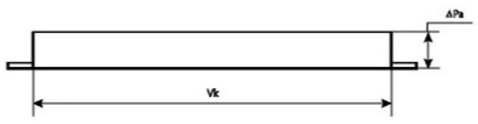


* Diffuser performance data factored in Coanda effect & fully opened Radial OBD conditions.

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

Order Size, inch	Neck Area (Eff. Area) m²	Unit Volume Flowrate, m³/hr Unit Volume Flowrate, l/s	NR25 250 70	NR35 300 84	NR40 400 112	 500 140	NR50 600 168	 800 224	 1000 280	 1400 392	 1600 448
240 x 240	0.0576 (0.023)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	<1.5 3.0 14 30 0.16 10	1.6 3.6 19 36 0.14 12	2.2 4.8 35 44 0.08 18	2.7 6.0 55 50 0.06 25	3.2 7.2 82 >50 0.045 30	- - - - - -	- - - - - -	- - - - - -	- - - - - -
340 x 340	0.1156 (0.046)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	1.6 2.4 9 <25 0.19 7.5	1.8 3.0 14 28 0.17 9	2.3 3.6 19 34 0.13 12	3.0 4.8 35 41 0.09 16	3.8 6.0 55 48 0.07 22	- - - - - -	- - - - - -
390 x 390	0.1521 (0.061)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	1.7 2.3 9 <25 0.24 7	2.2 2.7 12 26 0.17 9	2.7 3.6 19 35 0.13 12	3.3 4.6 30 42 0.11 14	4.5 6.4 65 50 0.07 22	>5.0 7.3 85 >50 <0.06 >25
440 x 440	0.1936 (0.076)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	1.8 2.2 9 <25 0.27 5.5	2.4 2.9 14 29 0.2 8	3.0 3.7 20 35 0.15 11	4.0 5.1 40 43 0.1 15	4.5 5.8 52 47 0.085 18
540 x 540	0.2916 (0.11)	Throw Distance (0.37 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	2.0 2.0 8 <25 - -	2.4 2.5 9 26 - -	3.2 3.5 19 34 - -	3.8 4.0 25 38 - -

Exhaust



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

Diffuser Neck Size, mm	Neck Area (Eff. Area) m²	Unit Volume Flowrate, m³/hr Unit Volume Flowrate, l/s	NR25 200 56	 300 84	NR35 400 112	 500 140	NR45 600 168	NR50 800 224	 1000 280	 1500 420	 2000 560
240 x 240	0.0576 (0.023)	Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR)	2.3 6.5 <25	3.5 9 28	4.6 15 36	5.8 28 43	6.9 >40 47	- - -	- - -	- - -	- - -
340 x 340	0.1156 (0.046)	Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR)	1.2 <5 <25	1.7 <5 <25	2.3 6.5 <25	2.9 8 29	3.5 9 32	4.6 15 38	5.8 28 45	- - -	- - -
390 x 390	0.1521 (0.061)	Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR)	0.9 <5 <25	1.3 <5 <25	1.8 <5 <25	2.2 6 27	2.7 7.5 30	3.5 9 33	4.5 15 38	6.7 40 >50	- - -
440 x 440	0.1936 (0.076)	Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR)	0.7 <5 <25	1.1 <5 <25	1.4 <5 <25	1.8 <5 <25	2.1 6 <25	2.8 7.5 32	3.5 9 34	5.3 22 44	7.0 >40 >50
540 x 540	0.2916 (0.11)	Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR)	0.5 <5 <25	0.7 <5 <25	0.9 <5 <25	1.2 <5 <25	1.4 <5 <25	1.9 5.5 28	2.3 6.5 32	3.5 9.0 36	4.6 15 >50

PERFORATED DIFFUSERS TECHNICAL SPECIFICATION

Frame Construction

1. Frame to be in extruded aluminum. Frame thickness should be in minimum 1.2mm thick, unless otherwise stated.
2. The margin to be in 28mm from the neck height to the edge.
3. Frame height to be in 40mm.
4. The corner of the frame should be pressed with a 90° corner piece to ensure the frames are in 90°.

Core Construction

1. Diffusers core to be perforated surface with 6mm holes diameter, 8mm holes pitch.
2. Diffusers core should be removable at the surface to permit access to cleaning without removing the diffuser.

Finishing

1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

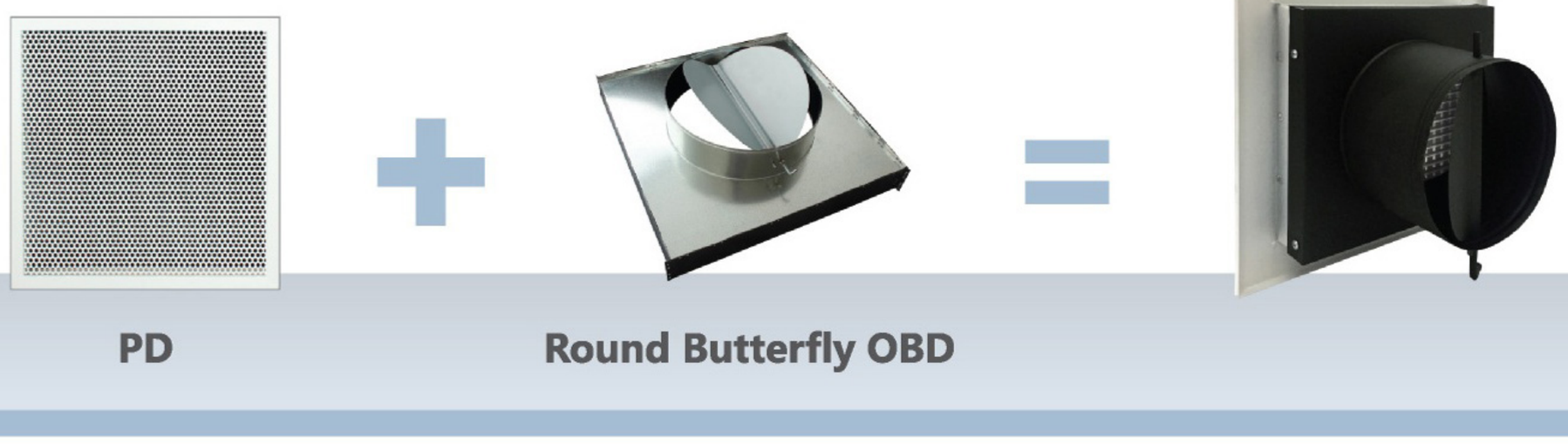
Performance

1. Free area of the diffuser to be minimum 40%.
2. Perforated surface to laminar the air flow.
3. Perforated Diffusers are designed to be ceiling mounted, round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.
4. Where perforated diffuser return and exhaust inlet devices are used, these shall be similar to the above specifications for diffusers.

DIFFUSER + ACCESSORIES COMBINATION

A PD + Square OBD =

B PD + Round Radial OBD =

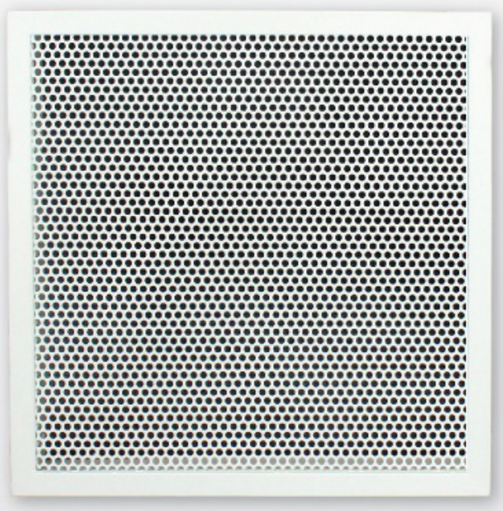


C PD + Round Butterfly OBD =

D PD + Round Collar =

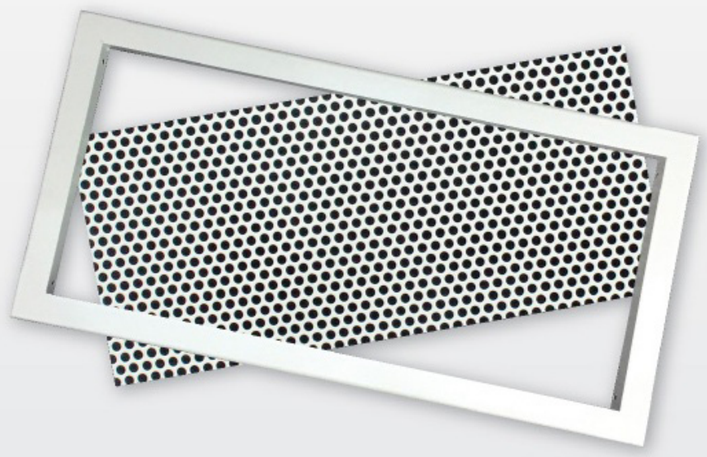
E PD + Square OBD + Round Collar =

AVAILABLE TYPES



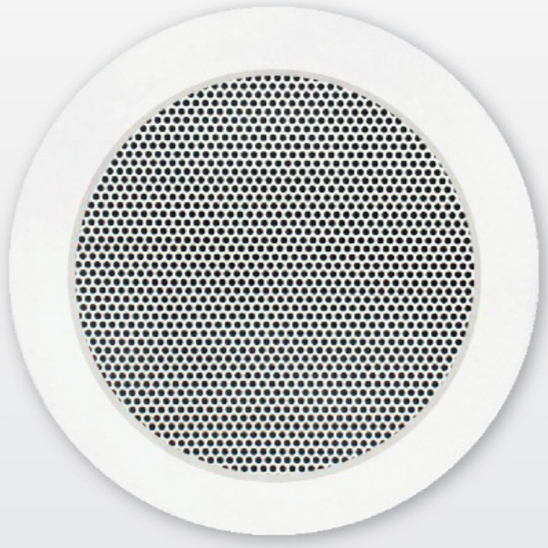
Fixed

Double Margin

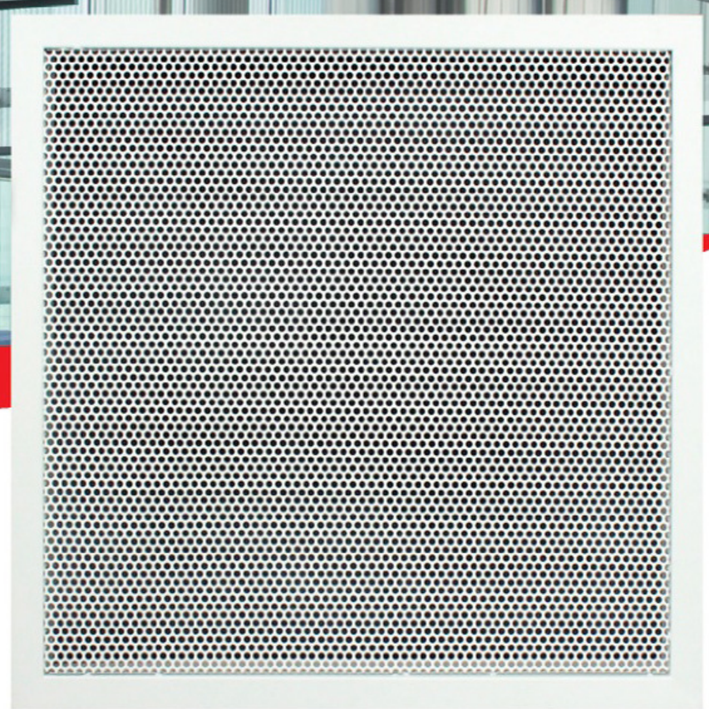


Push & Sit Down

Removable

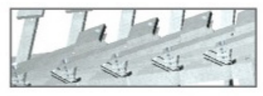
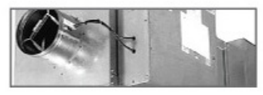


Round



PD | *Perforated Diffuser*

Products Range

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

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PrudentAire®

RD Round Diffuser

BMTRADA ISO 9001 012 · UKAS MANAGEMENT SYSTEMS 012 · MALAYSIA Power Brand 2011 MARK OF QUALITY · MADE IN MALAYSIA

RD | Round Diffuser

Introduction

The Round Diffuser (RDA/RDPA/RPDA) has a verstile design to provide a wide range of flow, ceiling height and supply temperature. Due to its design, the Round Diffuser is suitable for use in wide variety of buildings and applications. The multicore design is mainly for high flow requirements and the single plate/perforated core is mainly suited for high-end interior designs, albeit lower flow.

The Round diffuser is also suited for both ceiling and exposed duct installation. For switching between horizontal and vertical throw, it is adjusted via rotation of the center core (clockwise/anti-clockwise rotation).

Due to the air flow adjustment flexibility, the Round Diffuser is suitable for use in individual, conventional uniform zone or with VAV terminals.

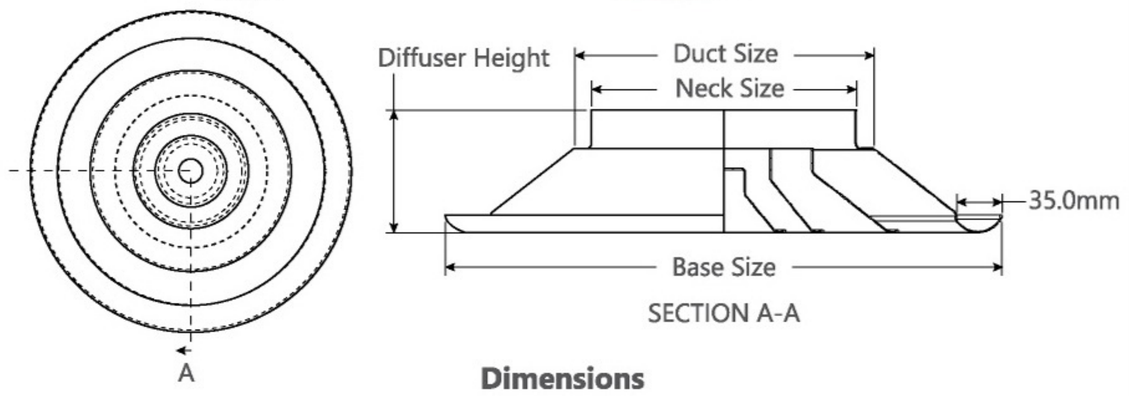
CONSTRUCTIONS & MATERIALS

- Avaliable in multiple/single core configurations
- Adjustable flow direction
- Removable center cores
- Standard sizes of 8", 10", 12" & 14"

Outer Cone Construction	Outer Cone Construction	Surface Finishing
AL 1.2mm	AL 1.0mm	RAL 9010 SG
Extruded Aluminium	Extruded Aluminium	White (Matt)

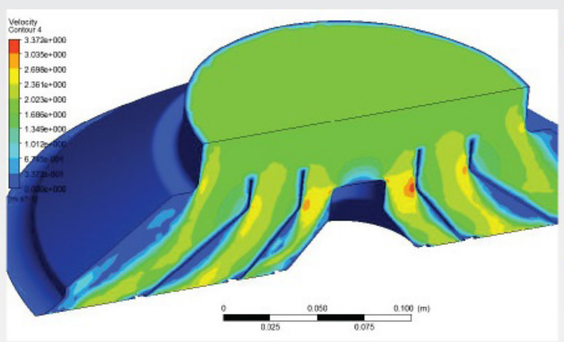
FOR SINGLE CORE PLATE DEFLECTOR

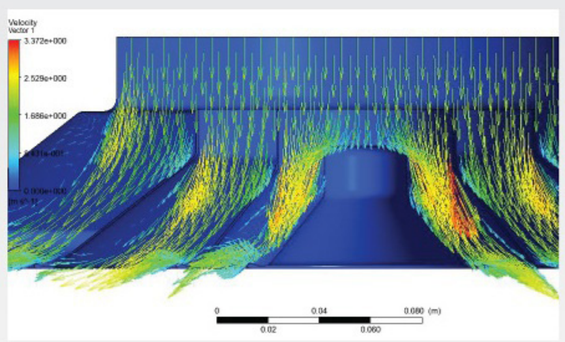
DIMENSIONS

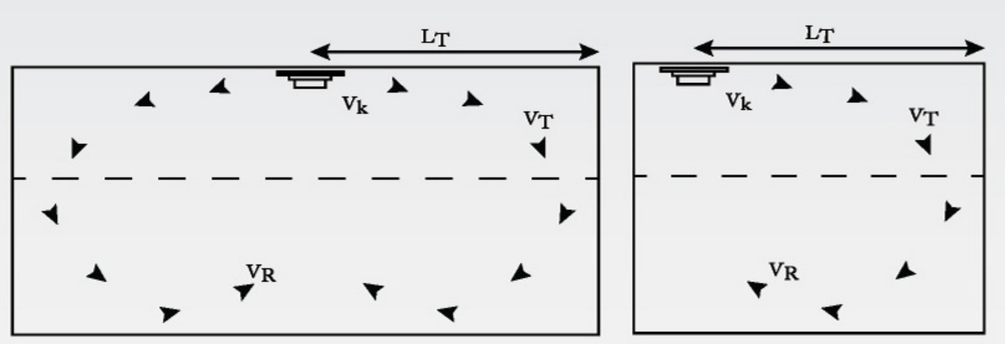


Dimensions

Order Size (Inch)	Neck Size (mm)	Base Size (mm)	Duct Size (mm)	Height (mm)
8.0	196	412	234	90
10.0	240	476	290	85
12.0	296	508	323	96
14.0	346	600	378	100







TECHNICAL PERFORMANCE DATA

RD (Cone Type)

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

* Table values obtained below are for horizontal supply performance.

* For vertical flow orientation, the throws are 70% of the table values below.

Order Size inch	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	250 / 70	400 / 112	500 / 140	800 / 224	1000 / 280	1400 / 392	1600 / 448	2000 / 560	2500 / 700
			NR20		NR30	NR40					
8.0	0.030 (0.026)hor (0.019)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	1.7 2.7 7.0 <20 0.14 10.0	2.8 4.3 17.0 <20 0.065 19.0	3.5 5.3 25.0 21 0.045 25	5.6 8.5 65.0 35 - -	6.8 10.7 >90.0 41 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
10.0	0.048 (0.042)hor (0.027)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	2.2 2.6 7.0 <20 0.14 11.0	2.7 3.3 9.5 <20 0.095 14.0	4.5 5.3 24.0 23 0.045 26.0	5.5 6.6 37.0 29 - -	7.7 9.3 80 38 - -	8.6 10.6 >90 42 - -	- - - - - -	- - - - - -
12.0	0.069 (0.062)hor (0.043)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	3.7 3.6 12.0 <20 0.09 16.0	4.8 4.5 18.0 25 0.055 22.0	6.7 6.3 32.0 34 - -	7.7 7.2 45.0 38 - -	9.4 9.0 70.0 44 - -	- - - - - -
14.0	0.094 (0.085)hor (0.058)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	- - - - - -	3.8 3.3 9.5 <20 0.11 13.0	5.1 4.6 18.5 24 0.07 20.0	5.9 5.2 23.0 27 - -	7.6 6.5 35.0 33 - -	9.4 8.2 60.0 39 - -

RDP (Plate Type)

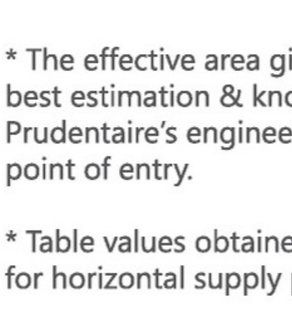
* The effective area given is to the best estimation & knowledge of Prudentaire's engineers at the point of entry.

* Table values obtained below are for horizontal supply performance.

* For vertical flow orientation, the throws are 70% of the table values below.

Order Size inch	Neck Area (Eff. Area) m^2	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	250 / 70	400 / 112	500 / 140	800 / 224	1000 / 280	1400 / 392	1600 / 448	2000 / 560	2500 / 700
			NR20		NR30	NR40					
8.0	0.030 (0.017)hor (0.013)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	1.7 4.1 9.0 <20 - -	2.7 6.5 22.0 22 - -	3.5 8.1 32.0 30 - -	5.6 13.0 >50 40 - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -	- - - - - -
10.0	0.048 (0.027)hor (0.017)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	2.2 4.1 9.0 <20 - -	2.7 5.1 14.0 21 - -	4.5 8.2 32.0 32 - -	5.5 10.3 >50 38 - -	7.7 14.4 >50 47 - -	- - - - - -	- - - - - -	- - - - - -
12.0	0.069 (0.043)hor (0.030)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	2.3 3.2 5.2 <20 - -	3.7 5.2 14.5 22 - -	4.7 6.5 23.0 27 - -	6.7 9.0 40.0 36 - -	7.6 10.3 >50 41 - -	9.4 12.9 >50 46 - -	- - - - - -
14.0	0.094 (0.068)hor (0.046)vert	Throw Distance (0.25 m/s), m Face Velocity, m/s Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - - -	- - - - - -	- - - - - -	3.0 3.3 5.5 <20 - -	3.8 4.1 9.0 <20 - -	5.2 5.7 17.0 25 - -	5.9 6.5 23.0 29 - -	7.6 8.2 32.0 35 - -	9.4 10.2 >50 42 - -

RDPR (Perforated Type)



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

* Table values obtained below are for horizontal supply performance.

* For vertical flow orientation, the throws are 70% of the table values below.

Order Size, inch	Unit Volume Flowrate, m^3/hr / Unit Volume Flowrate, l/s	250 / 70	400 / 112	500 / 140	800 / 224	1000 / 280	1400 / 392	1600 / 448	2000 / 560	2500 / 700
		NR20	NR30	NR40						
8.0	Throw Distance (0.25 m/s), m Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	2.5 12.8 <20 - -	4.2 42.0 26 - -	5.5 65.8 33 - -	9.4 >150 >45 - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
10.0	Throw Distance (0.25 m/s), m Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - -	3.0 19.0 <20 - -	4.2 35.3 21 - -	7.2 91.4 37 - -	11.5 136.2 >45 - -	- - - - -	- - - - -	- - - - -	- - - - -
12.0	Throw Distance (0.25 m/s), m Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - -	- - - - -	3.0 17.5 <20 - -	5.1 46.3 25 - -	6.5 65.5 34 - -	9.3 104 >45 - -	- - - - -	- - - - -	- - - - -
14.0	Throw Distance (0.25 m/s), m Total Pressure Loss, Pa Noise Rating (NR) Temperature Quotient Induction Ratio	- - - - -	- - - - -	- - - - -	4.9 33.0 23 - -	5.0 43.0 32 - -	5.2 63.0 >45 - -	- - - - -	- - - - -	- - - - -

VOLUME CONTROL DAMPER TECHNICAL SPECIFICATION

Frame Construction:

1. Frame to be in extruded aluminium. Frame thickness should be in minimum 1.2mm thick, unless otherwise stated.
2. Frame height to be in 85mm – 100mm depends on size.

Core Construction:

1. Vanes to be in extruded aluminium.
2. Vanes to be in 1.0mm thick. 3 layer of vanes to be fix pattern for 360o directional air distribution.

Finishing:

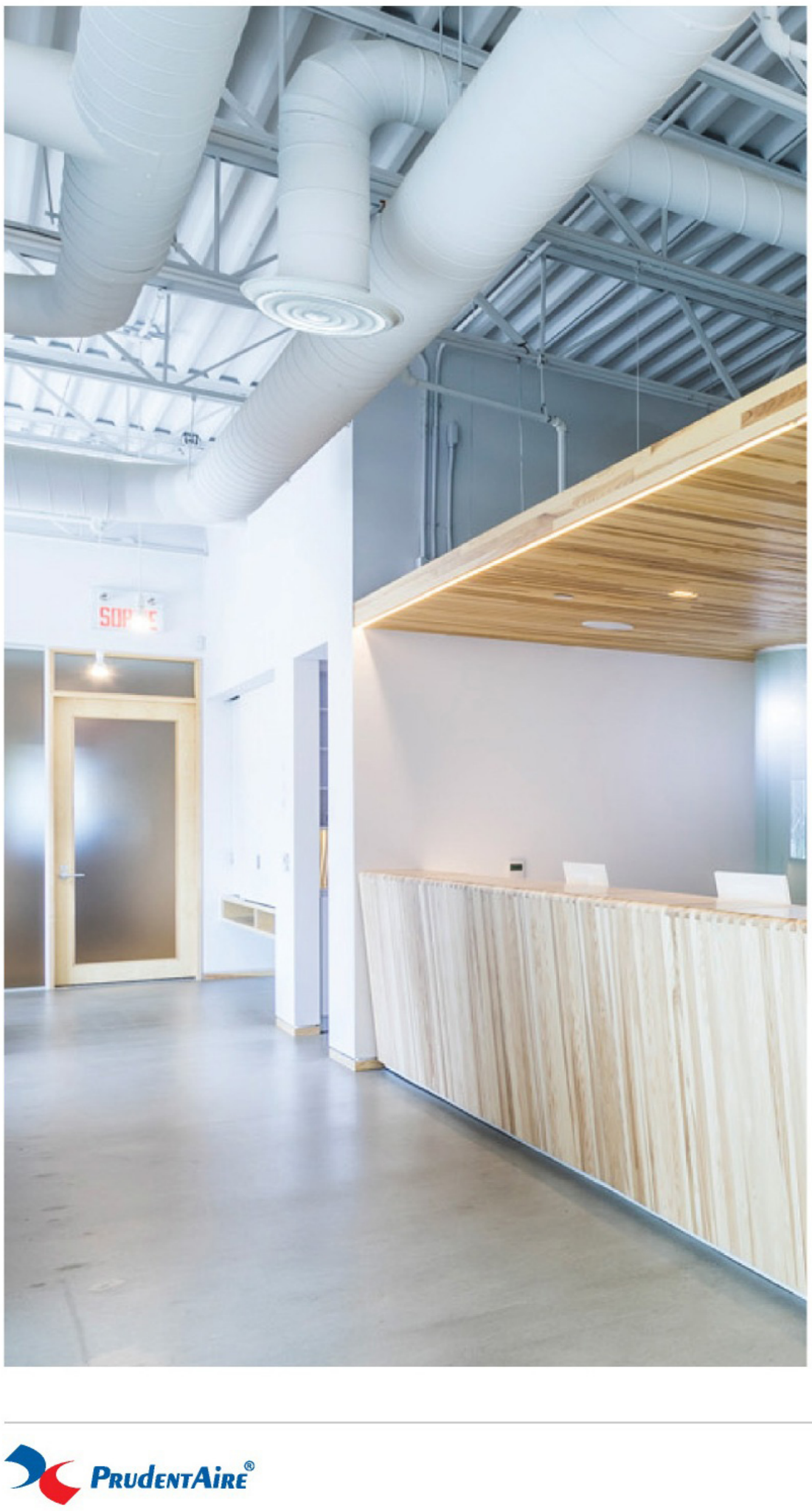
1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

Performance:

1. Free area of the Round Diffuser should be not less than 56%.
2. Jet Diffusers are designed to be ceiling mounted, 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

RD + OBD Radial =

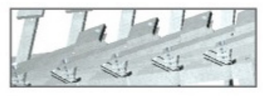


RD | *Round Diffuser*

Products Range

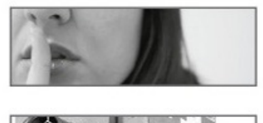
Grilles 

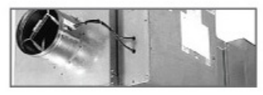
Diffusers 

Dampers 

Fire & Smoke Protection 

VAV 

Others 

Accessories 

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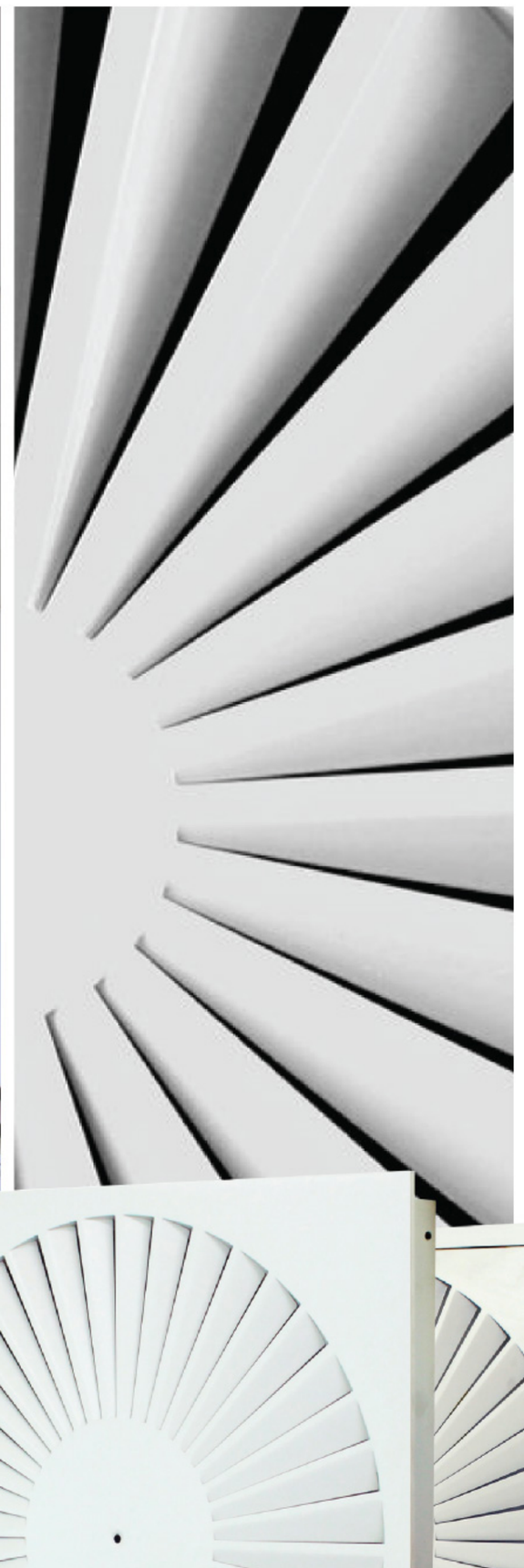


SF Swirl Diffuser

SF | Swirl Diffuser

Introduction

Suitable to operate with VAV system, the Swirl Diffuser can operate over a wide range of varying airflow without effects of dumping. Mainly used in areas with high heat loading and high air change requirements, the Swirl Diffuser can also be used for return and exhaust applications.

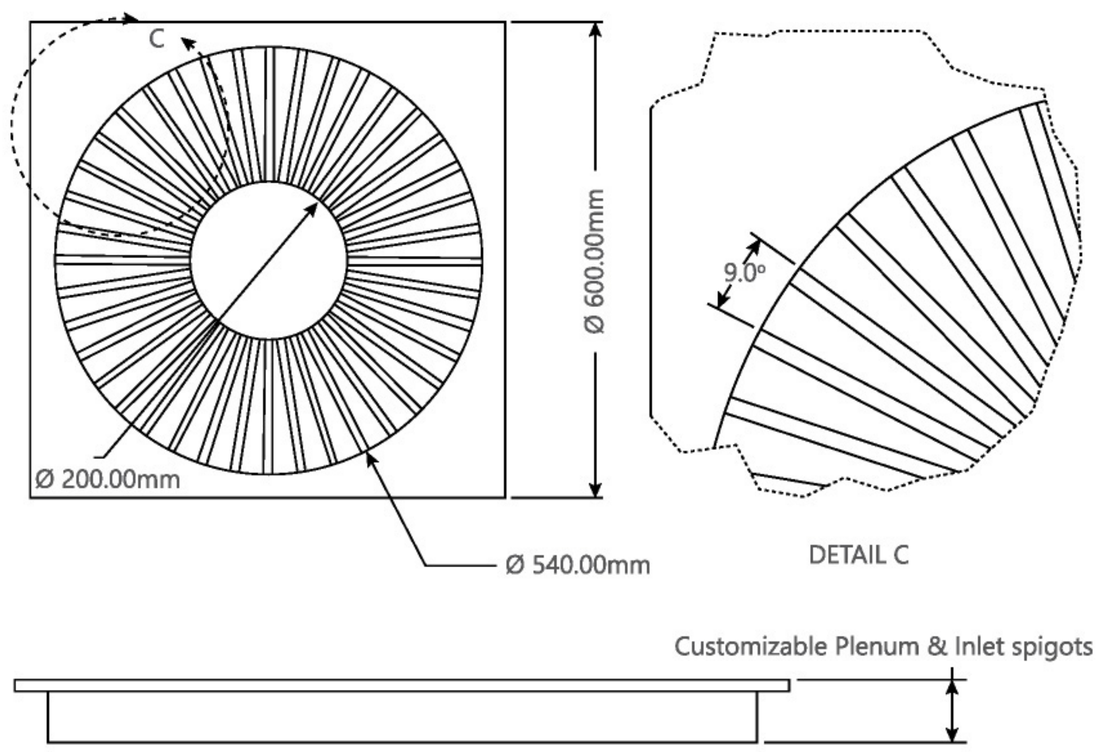
Air is introduced into an occupied space in a swirl vortex motion, thus achieving high induction, high velocity and temperature decay. This result in the supply air quickly to mix with the room air, creating a uniform and comfortable environment in the shortest time possible. Therefore with its high induction effects, the Swirl Diffuser is capable of eliminating drafts, stratification, concentrated cold areas.

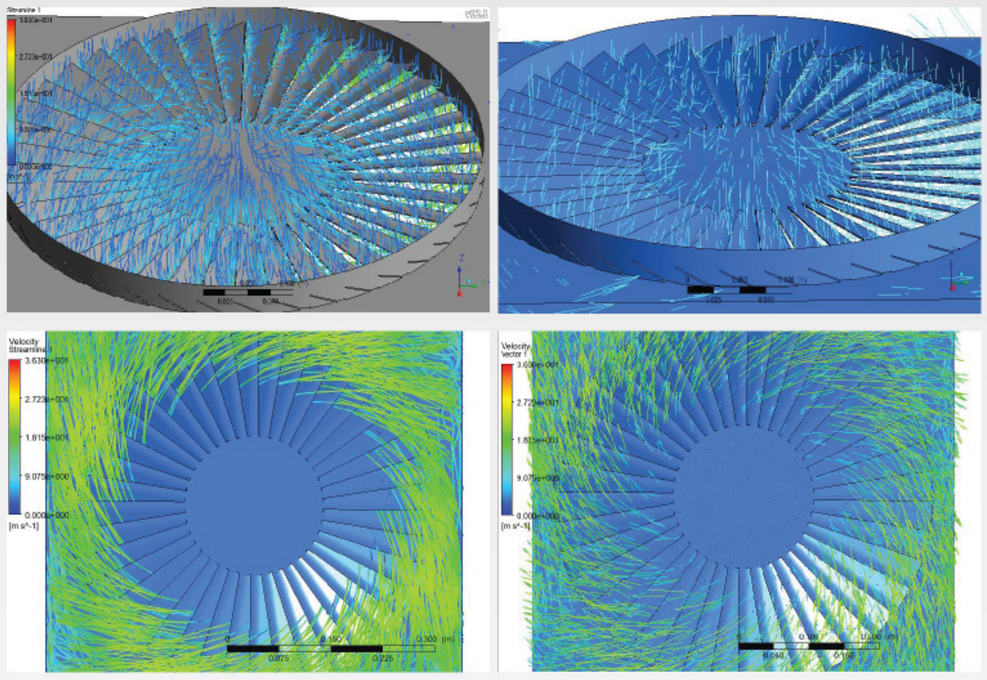
CONSTRUCTIONS & MATERIALS

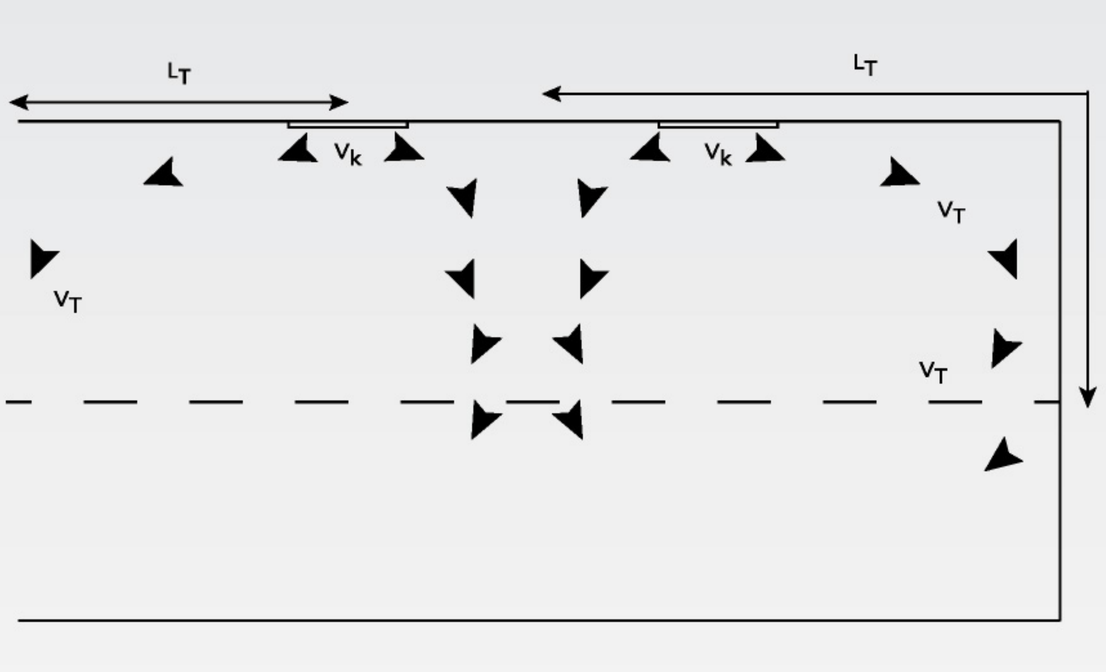
- Standard sizes of:
  1) 2' x 2'
  2) 600mm x 600mm
- Square and Round swirl diffuser face configurations avaliable
- Highly customizable plenum & inlet spigot
- Avaliable in fixed and removable configurations

Frame Construction	Deflector Construction	Surface Finishing
GI 0.7mm	GI 1.0mm	RAL 9010 SG
Galvanized Steel	Galvanized Steel	White (Matt) Customizable Colors

DIMENSIONS







TECHNICAL PERFORMANCE DATA

Supply

NR20 NR30

Inlet Dia (mm)	Supply Neck Velocity, m/s	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
200	Volume Flowrate, m^3/hr	226	283	339	395	452	509	565	679
	Flowrate, 1/s	63	79	94	110	126	141	157	188
	Face Velocity, m/s	1.1	1.4	1.7	2.0	2.2	2.5	2.8	3.4
	Throw Distance-1. (0.5 m/s), m	0.53	0.70	0.87	1.0	1.2	1.4	1.5	1.9
	Throw Distance-2. (0.5 m/s), m	0.42	0.56	0.69	0.8	0.96	1.1	1.2	1.5
	Total Pressure Loss, Pa	<10	<10	<10	<10	11	15.1	19.1	26.0
	Noise Rating (NR)	<20	<20	<20	<20	20	21	23	26
250	Volume Flowrate, m^3/hr	353	442	530	619	707	795	884	1060
	Flowrate, 1/s	98	123	147	172	196	221	245	295
	Face Velocity, m/s	1.8	2.2	2.6	3.1	3.5	3.9	4.4	5.3
	Throw Distance-1. (0.5 m/s), m	0.63	1.2	1.44	1.71	1.94	2.18	2.45	2.93
	Throw Distance-2. (0.5 m/s), m	0.51	0.96	1.15	1.37	1.55	1.74	1.96	2.34
	Total Pressure Loss, Pa	<10	11	16.6	22.8	26.9	31.5	40.4	55.87
	Noise Rating (NR)	<20	20	22	24	27	31	34	40
300	Volume Flowrate, m^3/hr	509	636	763	891	1018	1145	1272	1527
	Flowrate, 1/s	141	177	212	247	283	318	353	424
	Face Velocity, m/s	2.5	3.2	3.8	4.4	5.0	5.7	6.3	7.6
	Throw Distance-1. (0.5 m/s), m	1.38	1.76	2.1	2.5	2.81	2.90	3.5	4.2
	Throw Distance-2. (0.5 m/s), m	1.10	1.41	1.68	2.0	2.25	2.32	2.8	3.3
	Total Pressure Loss, Pa	15.1	24.0	29.0	42.0	52.2	55	74.2	96.3
	Noise Rating (NR)	21	25	30	35	39	40	47	>50

xxx (1) Throw Distance With Ceiling Effect
xxx (2) Throw Distance Without Ceiling Effect

TECHNICAL SPECIFICATION

Frame Construction
1. Frame to be in galvanizes steel. Frame thickness should be in minimum 0.7mm thick, unless otherwise stated.
2. The margin to be in 12mm from the neck height to the edge.
3. Standard size of the diffuser to be with 2' x 2' or 600mm x 600mm only. The size larger than 600mm to be supplied in modular.

Swirl Construction
1. Diffusers core to be radially fixed a stamped galvanizes steel sheet face plated.
2. The blade arrangement should be in 540mm diameter and supported by 200mm diameter plate.
3. Blade should be arranged in 9° to generate a swirl vortex motion.

Finishing
1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

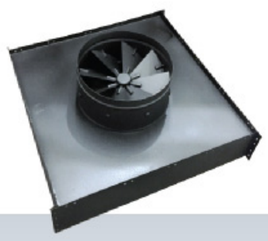
Performance
1. Air change rated of up to 30 air changes per hours with temperature differentials of 10°C.
2. Perforated surface to laminar the air flow.
3. Swirl Diffusers are designed to be ceiling mounted, round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.

DIFFUSER + ACCESSORIES COMBINATION

A

SF

+



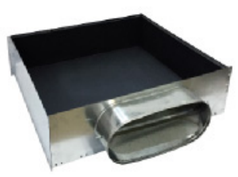
Round Radial OBD

=

B

SF

+



Side-Opening +6'' height adapter with
3mm PE Form internal Insulation

=

SF | *Swirl Diffuser*

Products Range

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

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PrudentAire®

SFD Swirl Flow Diffuser

BMTRADA ISO 9001 SYSTEM CERTIFICATION · UKAS MANAGEMENT SYSTEMS 012 · MALAYSIA Power Brand 2011 MARK OF QUALITY · MADE IN MALAYSIA

SFD | Swirl Floor Diffuser

Introduction

Floor Diffuser is designed for usage in raised access floor air distribution systems, whereby the floor space beneath is used as a pressurized supply air plenum.

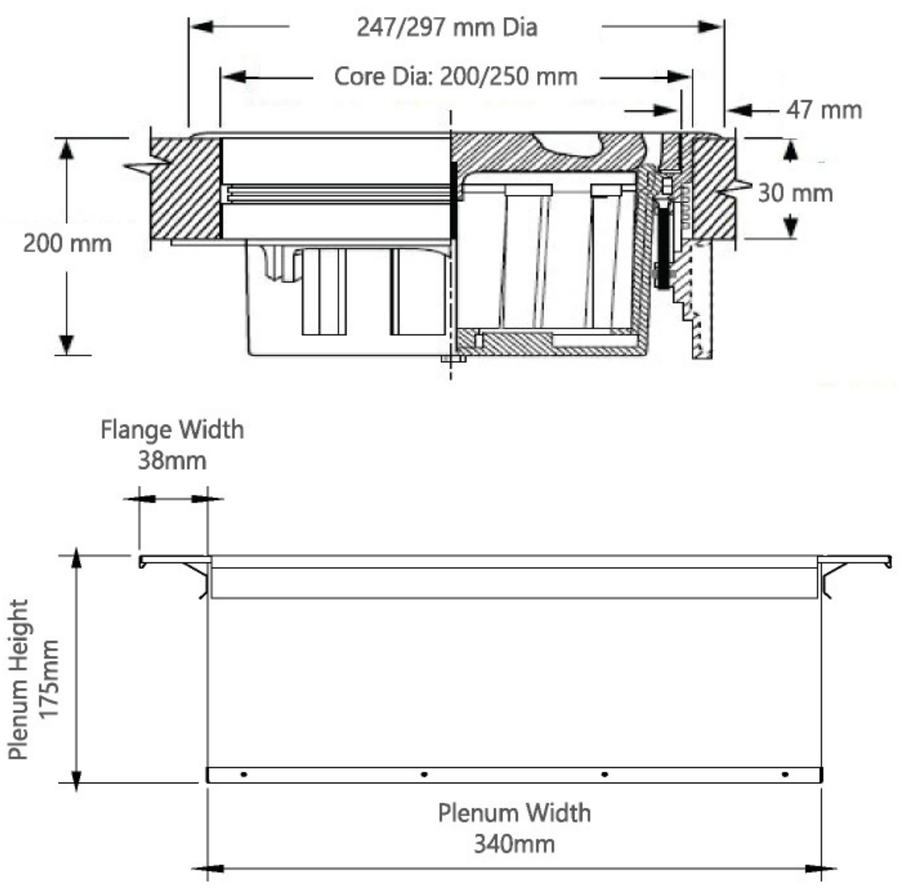
Diffuser's designs are optimized to provide the most comfortable and energy efficient air discharge possible into the space, by complimenting upward convection streams present in the occupied space. Therefore targeting the local hear loads directly.

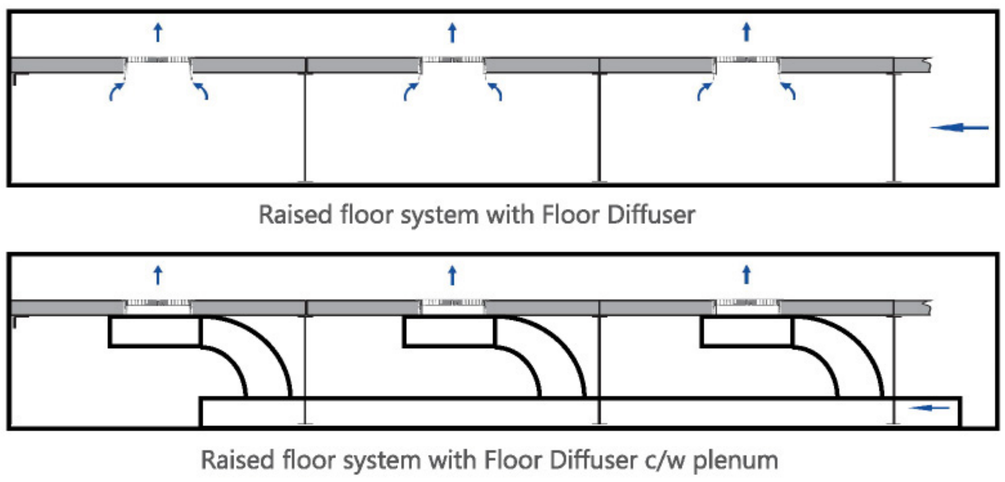
CONSTRUCTIONS & MATERIALS

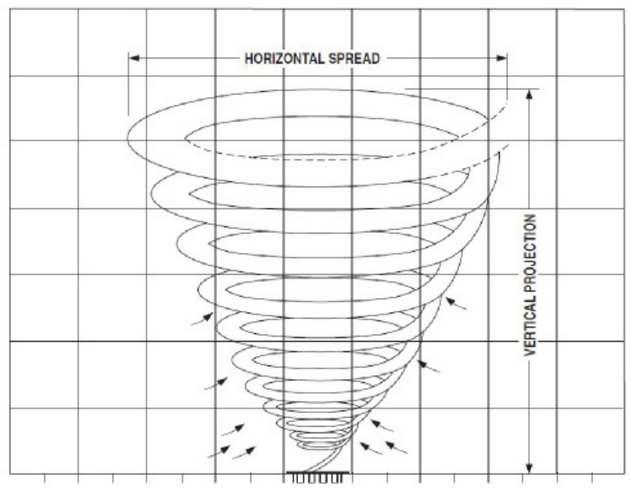
- 3 Model available:
  i) Swirl floor diffuser (SFD)
  ii) Swirl floor diffuser with plenum (SFD-P)
  iii) Swirl floor diffuser with plenum & fan (SFD-F)
- Size available with 8" & 10"
- Basket are available for all the sizes and models to catches dust & dirt fall through diffuser face & is easy removable for cleaning.
- Diffuser cores are easy assembly and remove for maintanance and cleaning purpose.
- Optional remote control for fan powerded model only.

Diffuser Core & Outer Ring	Plenum & Basket
AL / Cast	GI / 0.7mm
Aluminium Die Casting	Galvanized Steel 0.7mm

DIMENSIONS







Performance Note:

- Projection and Spread data were determined in a room with a 3m ceiling height and with non-isothermal air.
- Vertical projection (throw) is the maximum height above the floor where terminal velocity of 0.5m/s were observed.
- Horizontal Spread is the total width of the isovel where terminal velocity of 0.5m/s
- Noise Rating based on 10dB room absorption. Dash (-) in space denotes an NR value of less than 15.
- Pressure is in Pa.
- Tests conducted with Basket/damper installed. Damper fully open.
- Data derived from in-house tests conducted in accordance with ANSI/ASHARE Standard 70-2006.

PrudentAire®

TECHNICAL PERFORMANCE DATA

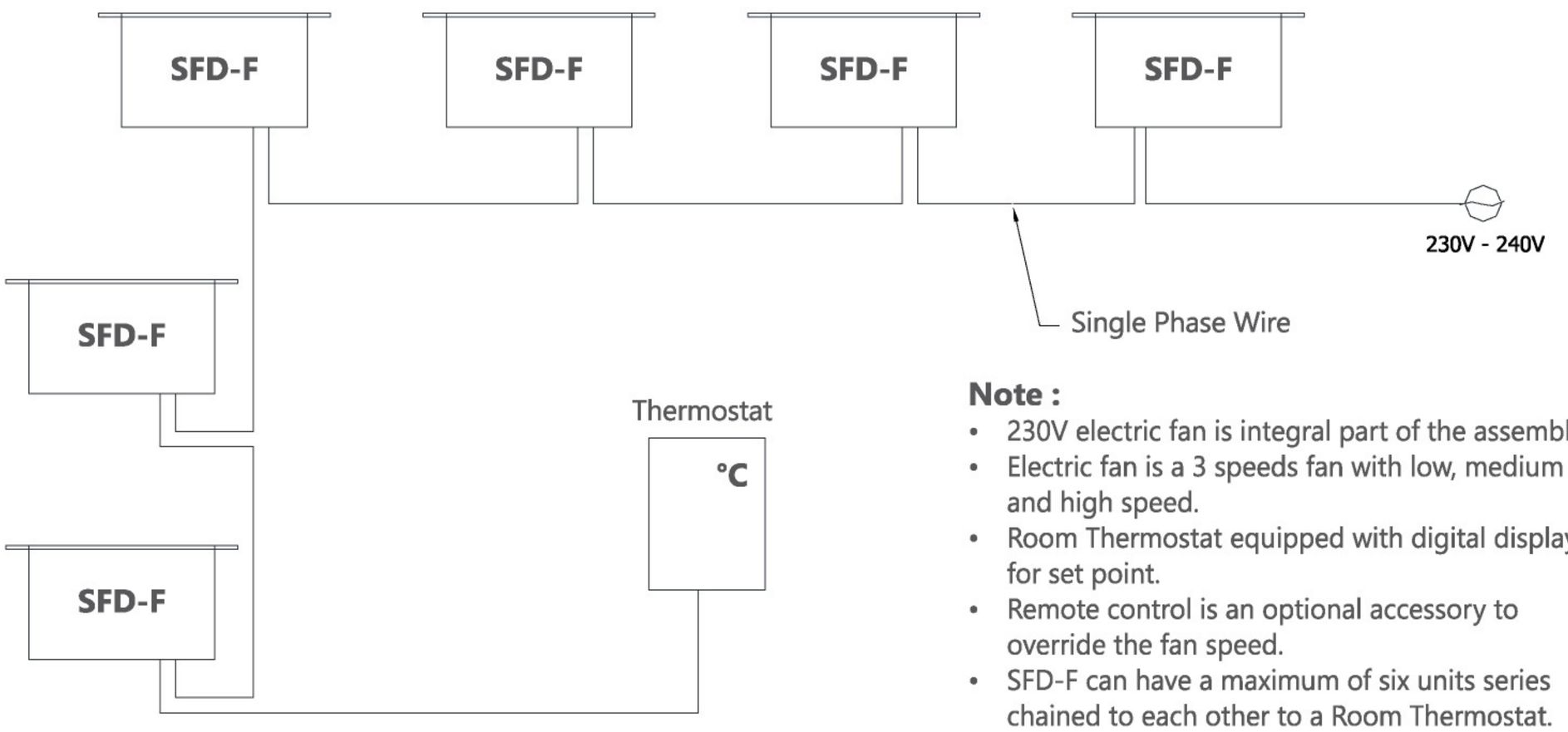
MODEL SFD AND SFD-P

8 " / 200mm	Air Flow (CMH)	50	70	90	100	120	170	190	200
	Pressre Drop (Pa)	3	5	7	10	13	24	26	31
	Vertical Proj (m)	0.4	0.6	0.9	1.1	1.3	1.8	1.9	2.0
	Horizontal Proj (m)	0.5	0.6	0.8	1.3	1.7	1.7	1.7	1.7
	Noise Rating (NR)	-	-	-	-	-	15	19	20
10 " / 250mm	Air Flow (CMH)	100	150	190	220	240	270	290	-
	Pressre Drop (Pa)	4	5	8	12	16	24	28	-
	Vertical Proj (m)	0.9	1.6	2.1	2.4	2.6	2.8	3.0	-
	Horizontal Proj (m)	0.8	1.6	2.3	2.2	2.2	2.2	2.2	-
	Noise Rating (NR)	-	-	-	-	17	20	22	-

MODEL SFD-F

8 " / 200mm	Air Flow (CMH)	190	215	240
	Pressre Drop (Pa)	22	24	26
	Vertical Proj (m)	2.1	2.3	2.5
	Horizontal Proj (m)	2.0	2.1	2.2
	Noise Rating (NR)	26	29	32
10 " / 250mm	Air Flow (CMH)	210	235	260
	Pressre Drop (Pa)	18	20	23
	Vertical Proj (m)	2.3	2.5	2.7
	Horizontal Proj (m)	2.2	2.3	2.5
	Noise Rating (NR)	24	27	30

MULTIPLE SFD-F WITH SINGLE THERMOSTAT



Note :

- 230V electric fan is integral part of the assembly.
- Electric fan is a 3 speeds fan with low, medium and high speed.
- Room Thermostat equipped with digital display for set point.
- Remote control is an optional accessory to override the fan speed.
- SFD-F can have a maximum of six units series chained to each other to a Room Thermostat.

SPECIFICATION GUIDE

1. The diffuser core and outer ring shall be constructed of high strength cast aluminum.
2. The core design shall produce the required helical "swirl" discharge air pattern, maximizing induction and comfortable level in an occupied zone.
3. The diffusers shall incorporate a removable dust collection basket to capture any form of contaminants falling through the diffuser face.
4. A flow regulator, adjustable without the need of diffuser core removal.
5. Adjustable mounting clamps shall be provided to permit installation from above the floor without removal of the floor panel.

SFD | *Swirl Flow Diffuser*

Products Range

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

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PrudentAire®

DL Drum Louver Diffuser

MADE IN MALAYSIA

DL | Drum Louvre Diffuser

Introduction

Drum Louver Diffuser are designed for high capacity supply air outlet with adjustable blades for jet or diffused air patterns and vertical directional control and able to deliver air with extremely long throw with low noise.

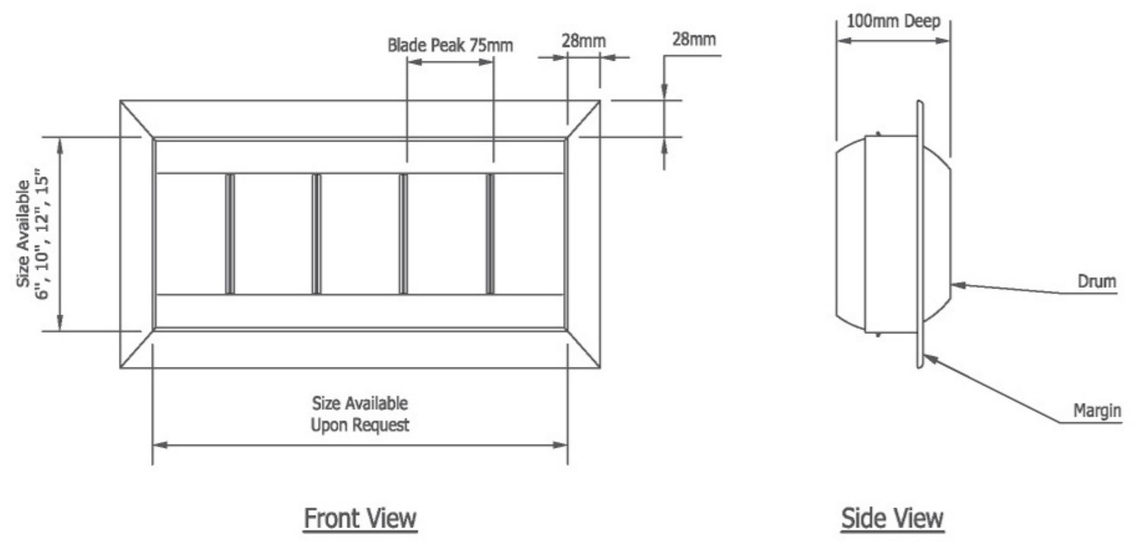
With the rotational drum (30° up from centerline to 30° down), DL are facilitate complete air coverage in the occupied area and DL are suited for accurate directional control of conditioned air within large spaces such as mall, exhibit halls, and large office building entrances.

CONSTRUCTIONS & MATERIALS

- Adjustable vanes within a rotatable drum
- Drum is adjustable through 60°
- Felt seal between drum and frame to minimized leakage
- Optional Opposed blade damper available

Frame	Drum	Vanes
AL 1.0mm	AL 1.5mm	AL 1.5mm
Extruded Aluminium	Extruded Aluminium	Extruded Aluminium

DIMENSIONS



STANDARD SIZE AVAILABLE

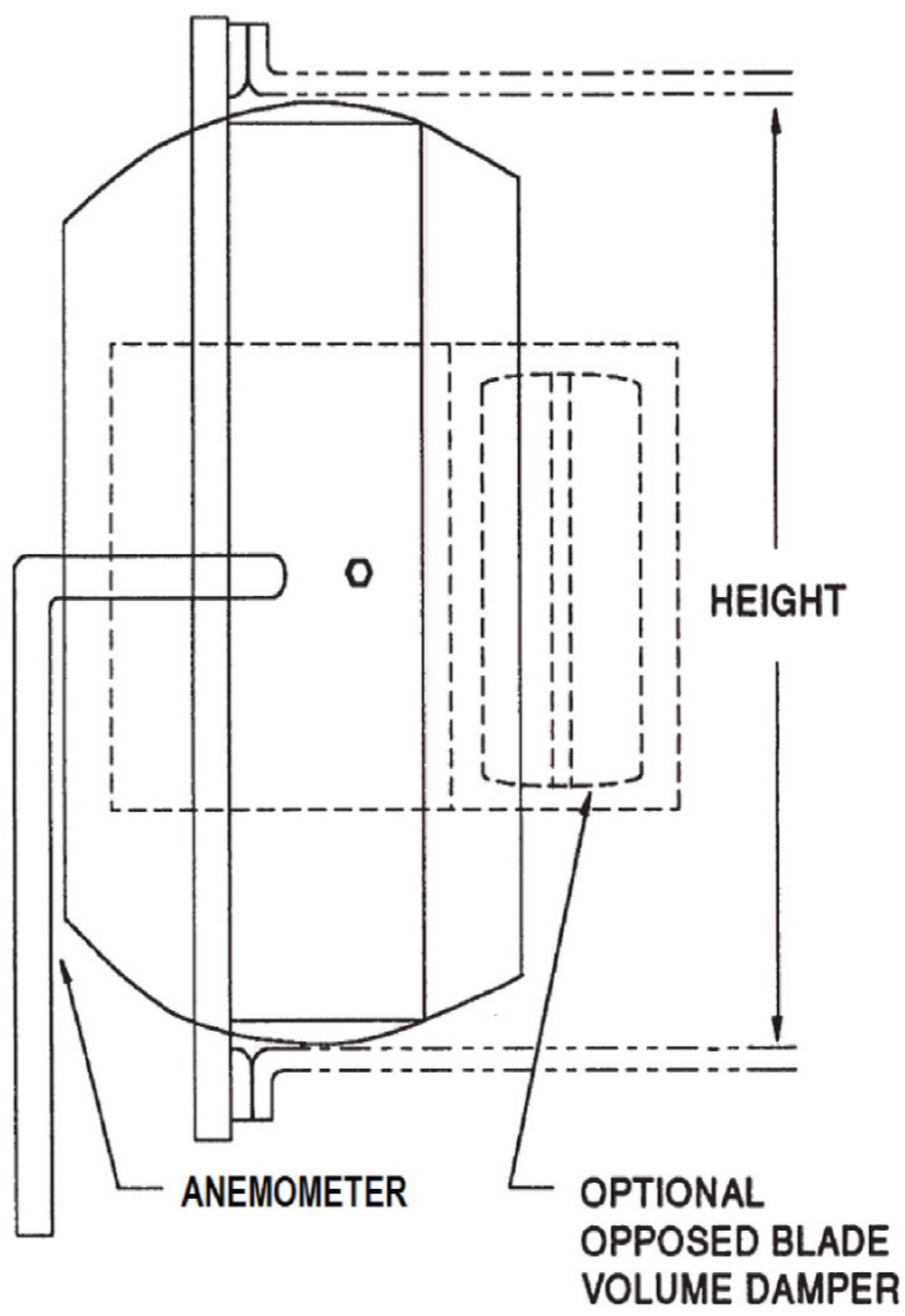
6"	10"	12"	15"
Width x Height			
250 x 150	500 x 250	500 x 300	375 x 375
300 x 150	650 x 250	650 x 300	500 x 375
450 x 150	750 x 250	750 x 300	650 x 375
600 x 150	900 x 250	900 x 300	750 x 375
750 x 150	1000 x 250	1000 x 300	1000 x 375
900 x 150	1200 x 250	1200 x 300	1250 x 375
1200 x 150	1500 x 250	1250 x 300	1500 x 375
1500 x 150	1500 x 250	1500 x 300	1750 x 375
-	1750 x 250	1750 x 300	-

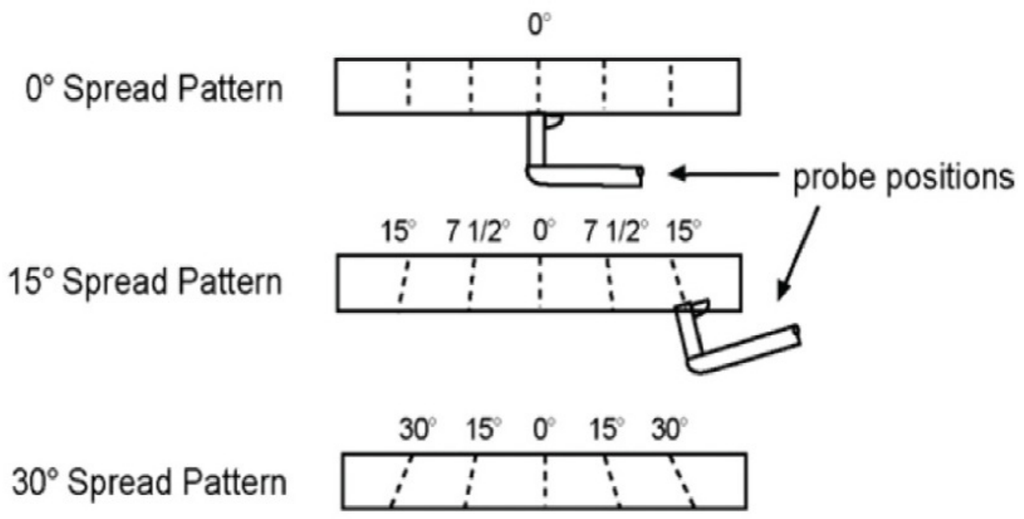
AIR FLOW MEASUREMENTS

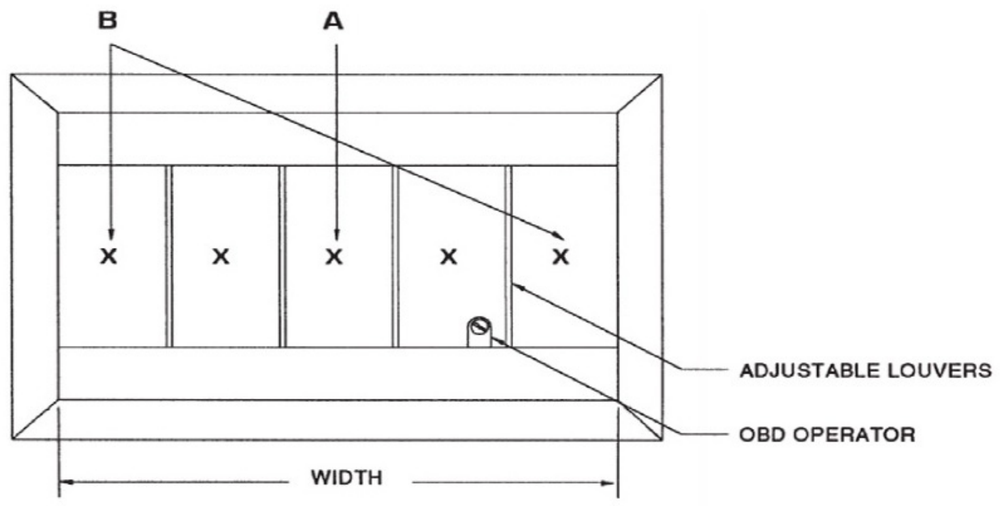
1. An anemometer is required for balancing the Drum Louver.
2. Measure velocity at the center louver opening (A) and at the two end louver openings (B). Hold probe perpendicular and centered on the louver opening.
3. Use the maximum velocity measured at each probe location. If velocity measurements are within 5%, calculate the average face velocity using the three measurements. If velocity measurements are not within 5%, take additional measurements at each louver opening and calculate the average face velocity using all measurements.
4. From the table for the spread angle used, determined the balancing factor (Ak) using the size of the grille.
5. Calculate the air volume (CFM) by multiplying the average face velocity (Vk, ft/min) and the balancing factor (Ak, sq.ft).

CFM = Vk x Ak

Size	Spread Pattern (Degrees)		
	0°	15°	30°
250 x 150	0.15	0.15	0.13
300 x 150	0.20	0.19	0.17
450 x 150	0.31	0.29	0.25
600 x 150	0.41	0.39	0.33
750 x 150	0.51	0.48	0.42
900 x 150	0.61	0.58	0.50
1200 x 150	0.81	0.77	0.67
1500 x 150	1.02	0.96	0.83
500 x 250	0.58	0.55	0.48
650 x 250	0.72	0.69	0.59
750 x 250	0.87	0.83	0.71
900 x 250	1.01	0.96	0.83
1000 x 250	1.16	1.1	0.95
1250 x 250	1.45	1.38	1.19
1500 x 250	1.74	1.65	1.42
1750 x 250	2.03	1.93	1.66
500 x 300	0.64	0.61	0.53
650 x 300	0.80	0.76	0.66
750 x 300	0.96	0.91	0.79
900 x 300	1.12	1.07	0.92
1000 x 300	1.28	1.22	1.05
1250 x 300	1.60	1.52	1.31
1500 x 300	1.92	1.83	1.58
1750 x 300	2.24	2.13	1.84







TECHNICAL PERFORMANCE DATA

PERFORMANCE DATA: DL 6" HEIGHT (150MM)

		200	400	600	800	1000	1500	2000	3000	4000
250 x 150	Face Velocity (m/s)	1.4	2.7	4.2	5.6	-	-	-	-	-
	Diff. Pressure (Pa)	10	47	107	186	-	-	-	-	-
	Throw Disc. @ 0.5m/s (m)	1.1	3.7	5.6	7	-	-	-	-	-
	Noise Rating (NR)	10	24	42	59	-	-	-	-	-
450 x 150	Face Velocity (m/s)	-	1.4	2.1	2.8	3.6	-	-	-	-
	Diff. Pressure (Pa)	-	11	29	51	79	-	-	-	-
	Throw Disc. @ 0.5m/s (m)	-	3.7	5.8	6.8	7.5	-	-	-	-
	Noise Rating (NR)	-	12	15	28	38	-	-	-	-
750 x 150	Face Velocity (m/s)	-	-	1.2	1.7	2.2	3.3	4.4	-	-
	Diff. Pressure (Pa)	-	-	8	18	29	65	116	-	-
	Throw Disc. @ 0.5m/s (m)	-	-	6	6.9	7.6	9.2	10.6	-	-
	Noise Rating (NR)	-	-	<10	11	15	32	45	-	-
1500 x 150	Face Velocity (m/s)	-	-	-	-	1.1	1.6	2.2	3.3	4.4
	Diff. Pressure (Pa)	-	-	-	-	3	16	29	67	119
	Throw Disc. @ 0.5m/s (m)	-	-	-	-	7.8	9.4	10.8	13	15.2
	Noise Rating (NR)	-	-	-	-	<10	14	22	40	53

PERFORMANCE DATA: DL 10" HEIGHT (250MM)

		800	1000	1500	2000	3000	4000	5000	6000	8000
500 x 250	Face Velocity (m/s)	1.6	2.0	3.0	4.1	-	-	-	-	-
	Diff. Pressure (Pa)	12	17	38	67	-	-	-	-	-
	Throw Disc. @ 0.5m/s (m)	6.7	7.5	9.5	11	-	-	-	-	-
	Noise Rating (NR)	13	16	32	45	-	-	-	-	-
1000 x 250	Face Velocity (m/s)	-	1.2	1.8	2.4	3.7	5.0	-	-	-
	Diff. Pressure (Pa)	-	<10	12	30	66	90	-	-	-
	Throw Disc. @ 0.5m/s (m)	-	8.5	9.7	10.9	13.3	15.7	-	-	-
	Noise Rating (NR)	-	<10	16	24	40	56	-	-	-
1250 x 250	Face Velocity (m/s)	-	-	-	1.6	2.5	3.3	4.2	5.0	-
	Diff. Pressure (Pa)	-	-	-	12	26	46	71	103	-
	Throw Disc. @ 0.5m/s (m)	-	-	-	10.9	13.5	15	16.7	18.3	-
	Noise Rating (NR)	-	-	-	14	28	40	51	59	-
1750 x 250	Face Velocity (m/s)	-	-	-	-	1.8	2.3	3.0	3.6	4.8
	Diff. Pressure (Pa)	-	-	-	-	14	23	38	52	94
	Throw Disc. @ 0.5m/s (m)	-	-	-	-	13.1	15	17	18.5	21.5
	Noise Rating (NR)	-	-	-	-	17	28	38	45	58

TECHNICAL PERFORMANCE DATA

PERFORMANCE DATA: DL 12” HEIGHT (300MM)

		1000	1500	2000	3000	4000	5000	6000	8000	10000
500 x 300	Face Velocity (m/s)	1.7	2.5	3.4	5.2	-	-	-	-	-
	Diff. Pressure (Pa)	11	26	45	100	-	-	-	-	-
	Throw Disc. @ 0.5m/s (m)	7.6	9.5	10.7	13.1	-	-	-	-	-
	Noise Rating (NR)	13	25	38	57	-	-	-	-	-
1000 x 300	Face Velocity (m/s)	-	1.2	1.7	2.6	3.5	4.4	-	-	-
	Diff. Pressure (Pa)	-	6	11	27	46	72	-	-	-
	Throw Disc. @ 0.5m/s (m)	-	9.3	10.6	13.2	15.3	17.1	-	-	-
	Noise Rating (NR)	-	<10	15	29	42	52	-	-	-
1250 x 300	Face Velocity (m/s)	-	-	1.4	2.2	3.0	3.8	4.6	-	-
	Diff. Pressure (Pa)	-	-	5	20	35	56	77	-	-
	Throw Disc. @ 0.5m/s (m)	-	-	11.7	13.3	15.3	17	18.7	-	-
	Noise Rating (NR)	-	-	11	23	35	45	55	-	-
1750 x 300	Face Velocity (m/s)	-	-	-	1.5	2.0	2.5	2.9	4.0	5.0
	Diff. Pressure (Pa)	-	-	-	8	15	24	47	61	95
	Throw Disc. @ 0.5m/s (m)	-	-	-	13.4	7.8	16.8	18.4	21.3	23.8
	Noise Rating (NR)	-	-	-	11	22	31	39	51	61

PERFORMANCE DATA: DL 15” HEIGHT (375MM)

		1000	1500	2000	3000	4000	6000	8000	10000	12000
375 x 375	Face Velocity (m/s)	1.8	2.7	4.3	5.5	-	-	-	-	-
	Diff. Pressure (Pa)	1.0	24	57	94	-	-	-	-	-
	Throw Disc. @ 0.5m/s (m)	7.5	9.3	11.2	12.9	-	-	-	-	-
	Noise Rating (NR)	14	27	48	60	-	-	-	-	-
750 x 375	Face Velocity (m/s)	-	1.0	1.2	2.0	2.8	4.4	-	-	-
	Diff. Pressure (Pa)	-	<10	<10	<10	24	55	-	-	-
	Throw Disc. @ 0.5m/s (m)	-	10.1	11.1	12.9	14.7	18.3	-	-	-
	Noise Rating (NR)	-	18	22	30	38	54	-	-	-
1250 x 375	Face Velocity (m/s)	-	-	1.2	1.7	2.2	3.4	4.5	-	-
	Diff. Pressure (Pa)	-	-	<10	<10	16	37	37	-	-
	Throw Disc. @ 0.5m/s (m)	-	-	11.2	13.1	15.0	18.4	18.4	-	-
	Noise Rating (NR)	-	-	<10	15	26	42	55	-	-
1750 x 375	Face Velocity (m/s)	-	-	-	-	1.6	2.4	3.2	4.1	4.8
	Diff. Pressure (Pa)	-	-	-	-	<10	19	34	52	75
	Throw Disc. @ 0.5m/s (m)	-	-	-	-	15.3	18.5	21.5	23.8	26.0
	Noise Rating (NR)	-	-	-	-	14	30	42	52	60

- All data is based on tests conducted in accordance with ANSI/ASHARE Standard 70-2006
- Throw distance is based on isothermal air 0.5 m/s terminal velocity.
- Listed size is slightly less than the minimum allowed duct dimensions.
- Each NR value represents the noise rating that will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th. Each NR value is based on a room absorption of 10dB, re 10-12 watts.
- Throw distance is based on a 15° upward deflection. For 0° upward deflection multiply throw values shown by 1.2. For 30° upward deflection multiply throw vales shown by 0.8.

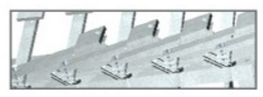
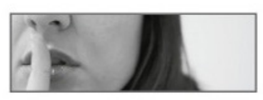
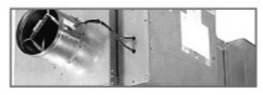
Variable Air Volume Applications

Deflection	Throw Dis	Diff Pressure	NR
0°	1.2	0.8	-4
30°	0.8	1.43	+4

- All Prudent Aire supply grilles can be applied to variable air volume systems with excellent result. For detailed selection methods, consult your Prudent Aire representative.

DL | Drum Louvre Diffuser

Products Range

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

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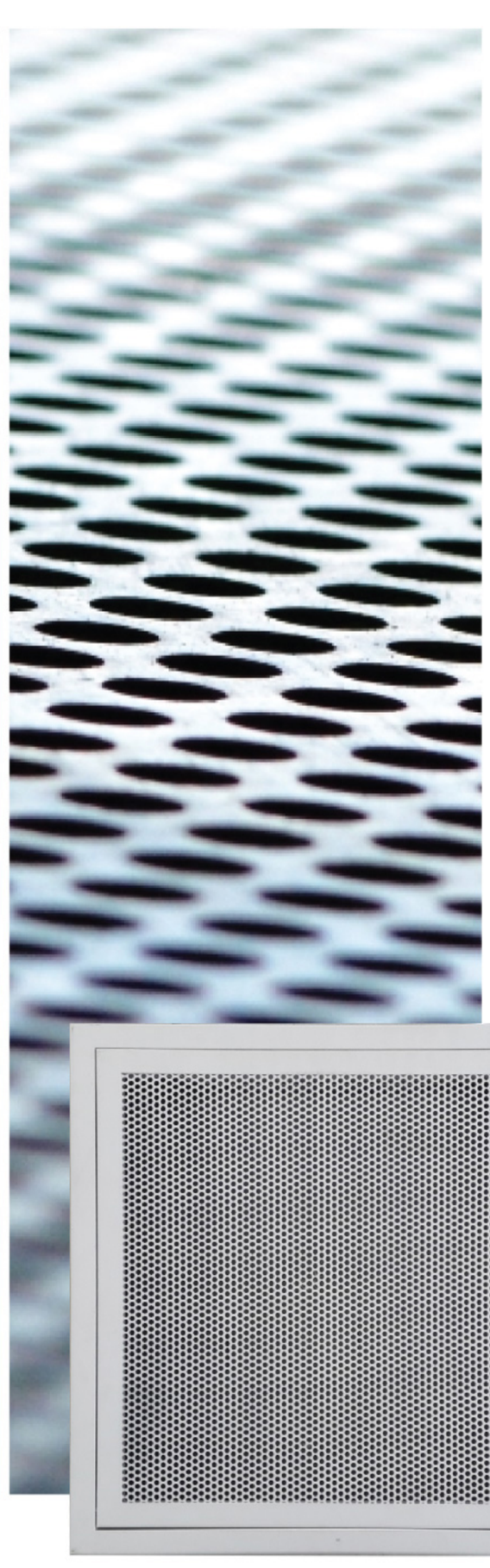
PrudentAire®



LFD *Laminar Flow Diffuser*

BMTRADA ISO 9001 · UKAS Management Systems 012 · Malaysia Power Brand 2011 Mark of Quality · MADE IN MALAYSIA

LFD | Laminar Flow Diffuser

Introduction

Laminar flow diffuser mainly used at hospital's operation room and clean room such as: semiconductor manufacturing, biotechnology, the life sciences and others which required clean environment.

Laminar flow diffusers have been engineered to produce a non-aspirating, low velocity, uniformly downward moving "piston" of conditioned air. The laminar flow diffuser introduces clean supply air with unidirectional flow to minimize air induction, reducing the opportunity for contaminated air to be re-entrained and pollute a clean airstream.

CONSTRUCTIONS & MATERIALS

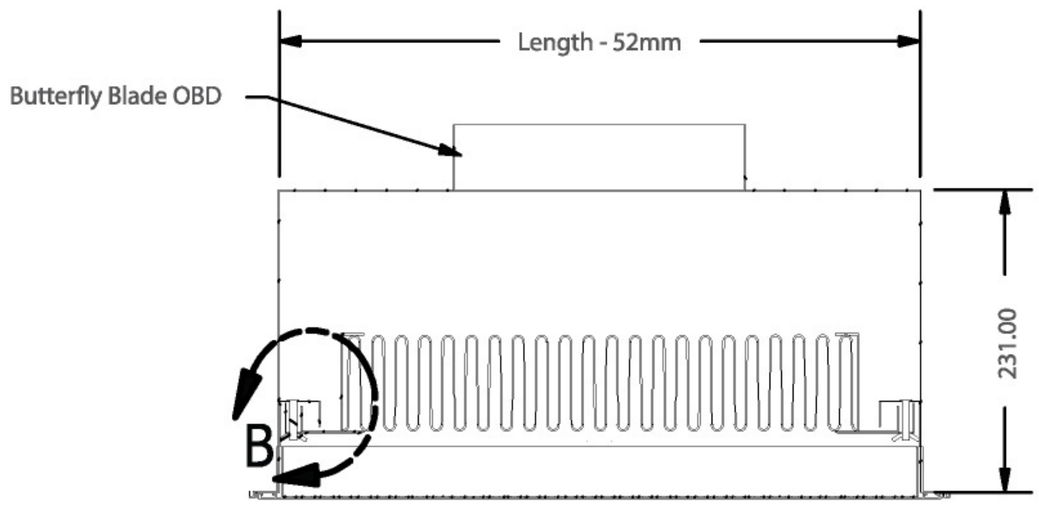
- Perforated hole pitch: 8 mm
- Perforated hole diameter: 6 mm
- Filter can be easily removed and replaced
- Face plate is attached with fasteners and easily removable

Plenum	AL 1.0mm	GI	SS
	Extruded Aluminium	Galvanized Steel Upon Request	Stainless Steel Upon Request
Perforated Surface	AL 1.2mm	GI	SS
	Extruded Aluminium	Galvanized Steel Upon Request	Stainless Steel Upon Request

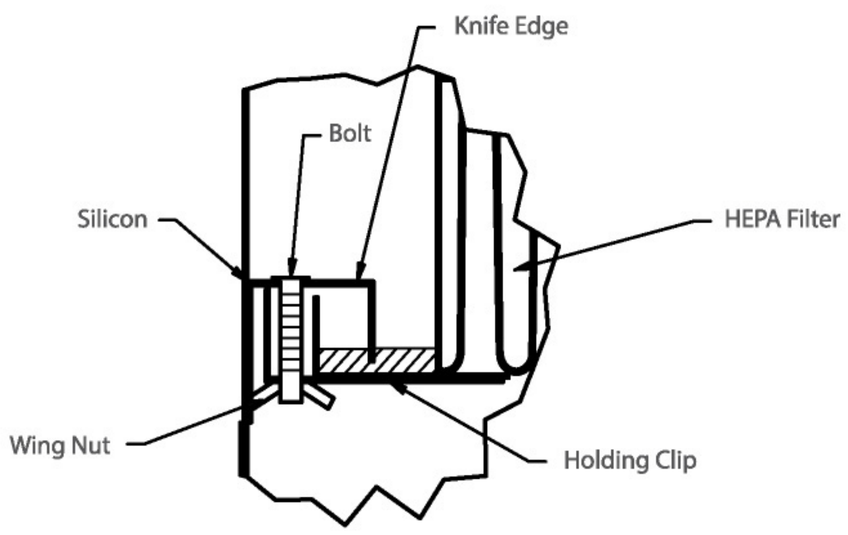
SIZE AVAILABLE

Module Size		Knife Edge Dimension	Collar Size Available
Inch	mm	Inch	Inch
24 x 12	600 x 300	$17\ _{3/8}$ x $5\ _{3/8}$	6, 8
48 x 12	1200 x 300	$41\ _{3/8}$ x $5\ _{3/8}$	6, 8
60 x 12	1500 x 300	$53\ _{3/8}$ x $5\ _{3/8}$	6, 8
24 x 24	600 x 300	$17\ _{3/8}$ x $17\ _{3/8}$	6, 8, 10, 12
36 x 24	900 x 300	$29\ _{3/8}$ x $17\ _{3/8}$	6, 8, 10, 12
48 x 24	1200 x 300	$41\ _{3/8}$ x $17\ _{3/8}$	6, 8, 10, 12
60 x 24	1500 x 300	$53\ _{3/8}$ x $17\ _{3/8}$	6, 8, 10, 12

DIMENSIONS



Section A-A
Scale 0.14 : 1



Detail B
Scale 1 / 1.8

PrudentAire®

TECHNICAL PERFORMANCE DATA

48'' x 12'' / 1200mm x 300mm 8'' Round Inlet				
CMH	TP	SP	NC	Throw
150	32.0	28.2	-	0.15-0.30-0.43
200	57.7	57.4	16	0.15-0.30-0.87
250	91.0	88.5	20	0.36-0.51-1.22
300	137.0	132.0	25	0.46-0.76-1.52
350	179.7	173.9	28	0.65-1.11-1.61
400	234.7	225.3	31	0.87-1.33-2.06
450	295.1	286.5	34	0.98-1.44-2.33
500	362.9	353.9	37	1.43-1.89-2.86

60'' x 12'' / 1500mm x 300mm 8'' Round Inlet				
CMH	TP	SP	NC	Throw
150	20.0	20.0	-	0.06-0.30-0.43
200	38.4	36.2	16	0.28-0.30-0.87
250	60.1	57.6	19	0.30-0.51-1.22
300	86.2	81.6	23	0.30-0.73-1.34
350	116.9	111.2	26	0.61-1.11-1.57
400	153.5	146.0	29	0.84-1.22-1.92
450	193.8	183.9	33	0.98-1.52-2.20
500	237.9	227.9	37	1.22-1.95-2.65

24'' x 24'' / 600mm x 600mm Diffuser 8'' Round Inlet				
CMH	TP	SP	NC	Throw
150	32.0	29.7	-	0.15-0.30-0.61
200	57.8	55.2	17	0.15-0.32-0.90
250	88.5	85.9	20	0.36-0.51-1.22
300	129.2	124.6	24	0.46-0.73-1.47
350	174.7	168.9	27	0.65-1.11-1.83
400	227.8	220.3	30	0.87-1.33-2.06
450	289.5	279.0	34	0.98-1.44-2.33
500	352.7	340.2	37	1.34-1.80-2.69

36'' x 24'' / 900mm x 600mm Diffuser 8'' Round Inlet				
CMH	TP	SP	NC	Throw
150	12.9	12.9	-	0.10-0.15-0.46
200	24.0	24.0	15	0.10-0.30-0.61
250	38.4	35.9	19	0.17-0.41-0.97
300	55.1	50.5	23	0.30-0.61-1.32
350	76.6	69.2	27	0.61-0.91-1.57
400	98.6	91.2	30	0.61-1.03-1.79
450	124.3	116.2	33	0.79-1.41-2.20
500	151.8	141.9	35	0.91-1.52-2.44

36'' x 24'' / 900mm x 600mm 10'' Round Inlet				
CMH	TP	SP	NC	Throw
250	28.5	28.5	-	0.30-0.61-0.91
300	43.1	41.0	17	0.30-0.61-1.32
350	58.5	55.9	20	0.61-0.91-1.57
400	76.8	72.4	23	0.61-1.03-1.79
450	95.7	92.6	26	0.80-1.29-2.20
500	119.4	114.5	29	0.91-1.52-2.44
550	143.0	137.6	32	1.22-1.71-2.62
600	170.7	164.8	35	1.41-2.02-2.84

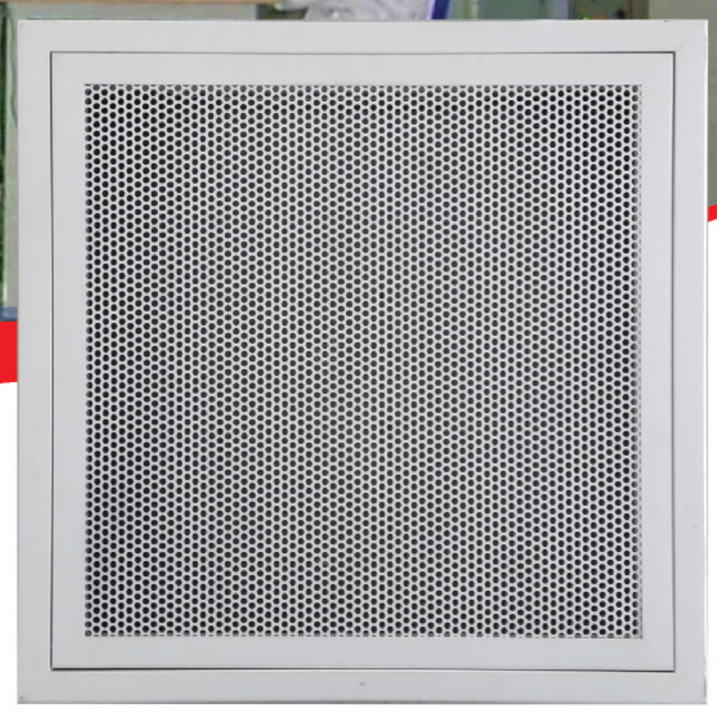
48'' x 24'' / 1200mm x 600mm 8'' Round Inlet				
CMH	TP	SP	NC	Throw
150	9.6	7.1	-	0.10-0.15-0.46
200	16.8	14.3	-	0.15-0.30-0.61
250	25.0	21.7	18	0.20-0.35-0.81
300	36.1	31.1	22	0.30-0.58-1.17
350	47.7	42.8	26	0.35-0.65-1.52
400	64.4	57.4	29	0.57-0.87-1.76
450	80.1	72.1	32	0.61-1.26-2.02
500	97.9	87.9	35	0.85-1.50-2.13

48'' x 24'' / 1200mm x 600mm 10'' Round Inlet				
CMH	TP	SP	NC	Throw
250	32.0	16.7	-	0.30-0.30-0.61
300	32.0	24.0	15	0.30-0.55-1.17
350	32.0	31.4	18	0.35-0.65-1.52
400	32.0	40.6	21	0.57-0.87-1.76
450	32.0	51.6	25	0.61-1.26-2.02
500	32.0	64.4	28	0.82-1.37-2.13
550	32.0	76.5	31	0.96-1.45-2.47
600	32.0	91.2	34	1.41-2.02-2.69

48'' x 24'' / 1200mm x 600mm 12'' Round Inlet				
CMH	TP	SP	NC	Throw
400	42.8	40.3	16	0.35-0.70-1.87
500	63.9	61.4	20	0.66-1.27-2.18
600	91.8	88.6	24	1.26-1.72-2.48
700	126.4	121.4	27	1.58-2.19-2.96
750	144.4	139.4	29	1.74-2.35-3.16
800	163.9	158.9	31	1.88-2.49-3.41
850	184.4	179.4	32	2.03-2.64-3.56
900	206.3	201.3	33	2.18-2.79-3.71

60'' x 24'' / 1500mm x 600mm 10'' Round Inlet				
CMH	TP	SP	NC	Throw
250	13.3	10.9	-	0.30-0.30-0.71
300	17.0	14.5	-	0.30-0.56-1.17
350	23.9	21.4	18	0.35-0.65-1.52
400	31.2	26.8	22	0.57-0.87-1.75
450	38.6	33.6	25	0.61-1.26-2.02
500	47.6	42.6	28	0.82-1.48-2.13
550	56.1	51.1	31	0.96-1.57-2.46
600	67.1	62.2	34	1.41-2.02-02.69

60'' x 24'' / 1500mm x 600mm 12'' Round Inlet				
CMH	TP	SP	NC	Throw
400	27.1	26.4	16	0.39-0.70-1.83
500	41.1	40.7	20	0.66-1.27-2.18
600	59.9	57.4	24	1.26-1.72-2.37
700	82.1	78.6	27	1.58-2.10-2.80
750	94.3	89.3	29	1.74-2.35-3.01
800	107.4	101.5	31	1.83-2.49-3.25
850	122.1	114.6	32	1.88-2.59-3.40
900	136.7	129.2	33	2.03-2.63-3.56



LFD | *Laminar Flow Diffuser*

Products Range

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

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www.prudentaire.com

PrudentAire®

JN Jet Nozzle

Introduction

Used in large occupied areas where ceiling or ducting installations are unsuitable, the Jet Nozzle is capable to direct and deliver up high flow rate over distance up to 30m.

It is suited for locations with ever-changing environments and operating parameters. Designed to be aerodynamically contoured, Jet Nozzle is able to operate with minimum noise, pressure loss and turbulence.

Flow direction can be easily adjusted up to 30° multi-directional.

CONSTRUCTIONS & MATERIALS

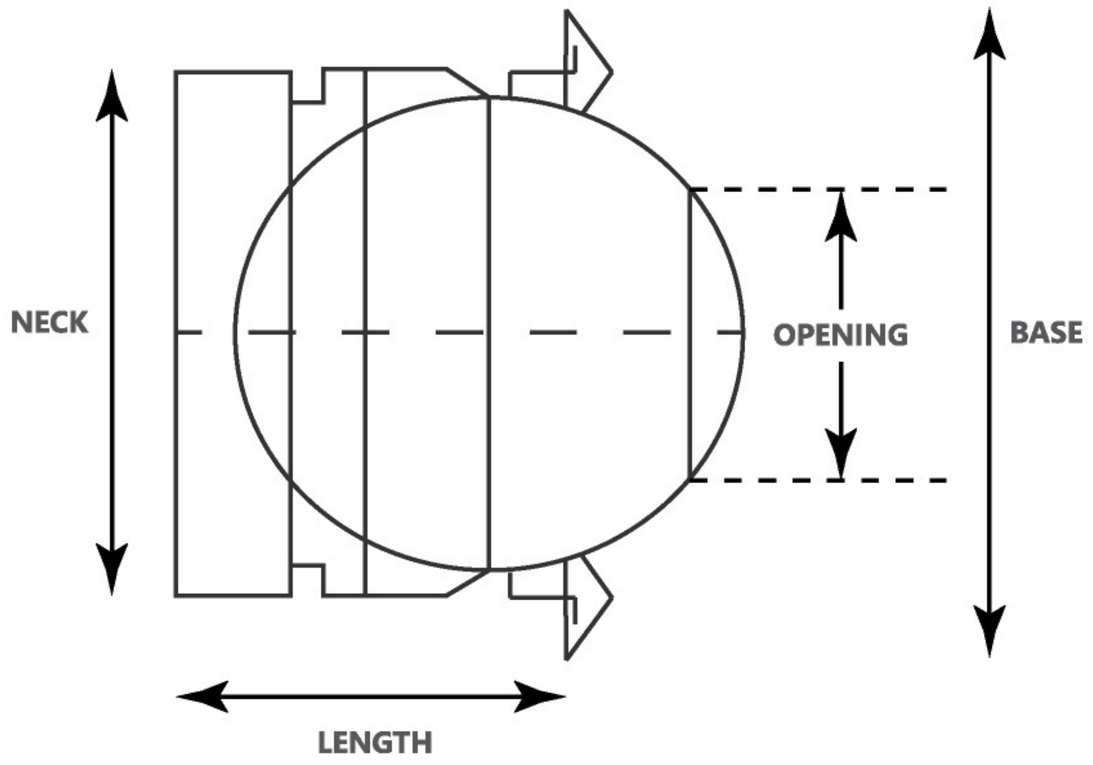
- Capability of:
  i) High volume flowrate
  ii) Long throw up to 30m
- Adjustable flow deflection up to 30° multi-directional

Nozzle Construction

AL
1.0mm

Extruded Aluminium

DIMENSIONS



Opening Dimensions

Order Size (Inch)	Neck Size (mm)	Base Size (mm)	Opening (mm)	Length (mm)
6″	158	212	82	100
8″	199	255	105	120
10″	247	303	134	144
12″	311	380	184	155
16″	397	465	230	180

PrudentAire®

TECHNICAL PERFORMANCE DATA

Order Size		V_T	L_T= 10 m			L_T= 20 m			L_T= 30 m		
mm	inch		V	NC	ΔP_T	V	NC	ΔP_T	V	NC	ΔP_T
160	6.0	0.25	23	-	10	46	-	45	69	35	100
200	8.0		29	-	-	61	-	28	85	27	60
250	10.0		37	-	-	76	-	20	106	22	35
315	12.0		50	-	-	98	-	11	150	20	25
400	16.0		65	-	-	129	-	-	195	-	12
160	6.0	0.5	46	-	45	92	44	175	138	55	100
200	8.0		61	-	28	121	38	100	182	50	250
250	10.0		76	-	20	152	34	70	229	45	125
315	12.0		98	-	11	195	28	45	293	40	90
400	16.0		129	-	-	258	20	20	387	33	45
160	6.0	1.0	92	44	175	-	-	-	-	-	-
200	8.0		121	38	100	242	-	400	-	-	-
250	10.0		152	34	70	305	53	240	-	-	-
315	12.0		195	28	45	390	48	150	585	53	330
400	16.0		258	20	20	516	42	80	773	53	180

Label	Description
L_T	Throw distance, m
V	Volume Flowrate, L/s
NC	Noise Criteria
ΔP_T	Total Pressure Loss, Pa

TECHNICAL SPECIFICATION

Frame Construction

1. Frame to be in extruded aluminum. Frame thickness should be in minimum 1.0mm thick.

Nozzle Construction

1. Nozzle to be in extruded aluminum.
2. Nozzle internal aerodynamic designed to compress the airflow to create a jet throw performance.
3. Nozzle to be adjustable up to 30° multi-direction.

Finishing

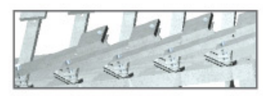
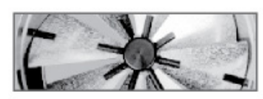
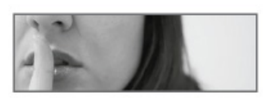
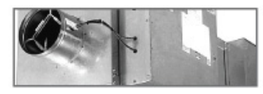
1. Finishing should be in powder coated RAL 9010 SG white matt, unless otherwise stated.

Performance

1. Nozzle core are adjustable for directional air distribution.
2. Jet Diffusers are designed to be high wall mounted or ceiling mounted. Round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.
3. Jet Nozzle's aerodynamic design is able to produces a jet throw without compromising noise level.

JN | Jet Nozzle

Products Range

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

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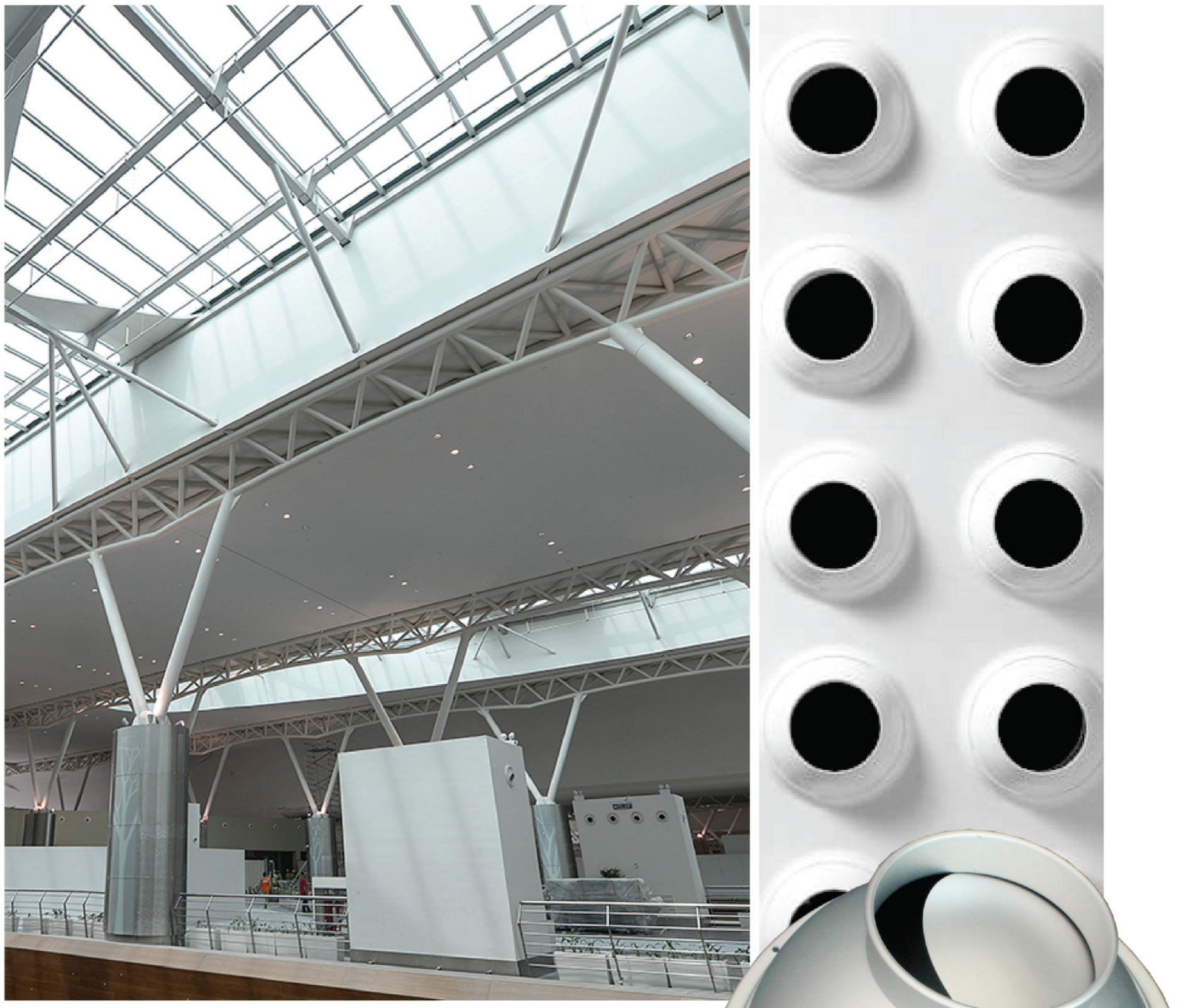


BJD Ball Jet Diffuser

MADE IN MALAYSIA

BJD | Ball Jet Diffuser

Introduction

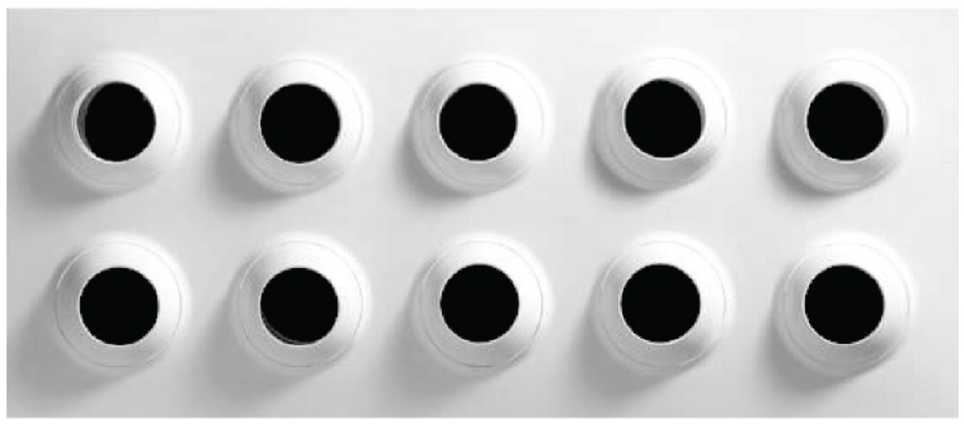
Used in areas where ceiling air distribution solutions are impossible, Ball Jet Diffuser (BJD) is capable in directing large volume of air over longer distances. Design primary for spot cooling and high/long air throw, the jet comes with adjustable flow deflection up to 45° multi-directional and a built-in hit-and-mass damper.

CONSTRUCTIONS & MATERIALS

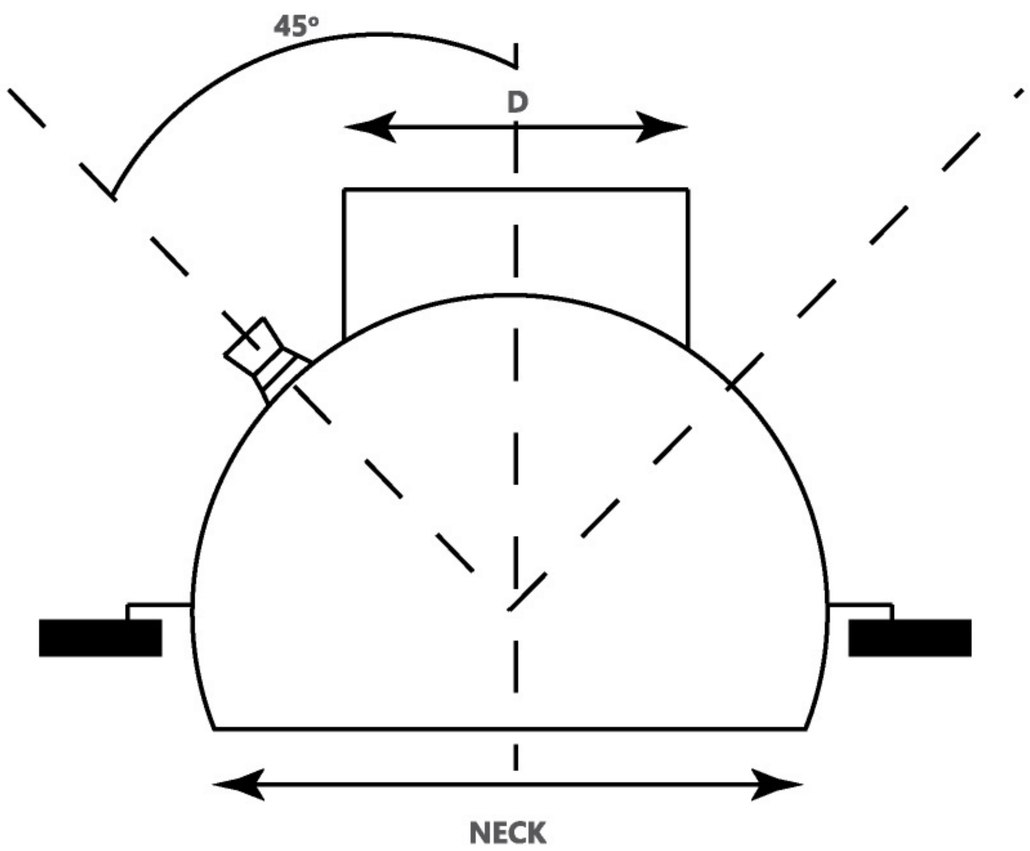
- Capability of :
  i) Spot cooling
  ii) High/long air throw
- Adjustable flow deflection up to 45° multi-directional

AL
1.0mm

Extruded Aluminium



DIMENSIONS



Opening Dimensions

Order Size (Inch)	Neck Size (mm)	Base Size (mm)	Opening (mm)	D (mm)
6″	116	175	150	79
8″	140	220	195	100
10″	200	295	270	128
12″	250	345	320	150

PrudentAire®

TECHNICAL PERFORMANCE DATA

Grille Neck Size, mm	Air Velocity, m/s	2.0	3.0	4.0	5.0	6.0	7.0	8.0	10.0
		NR20		NR30	NR40		NR50		
6" Dia	Airflow Volume, m^3/hr	130	196	262	323	393	460	525	655
	Throw Distance, m	2.6	4.0	5.5	5.8	8.2	9.6	11	15.2
	Total Pressure Loss, Pa	7	15	17	25	32	48	66	86
	Noise Rating (NR)	-	26	30	36	43	49	53	56
8" Dia	Airflow Volume, m^3/hr	233	350	467	583	700	816	933	1166
	Throw Distance, m	3.8	5.6	7.4	9.2	11	13	14.7	20.5
	Total Pressure Loss, Pa	7	15	17	25	32	48	66	86
	Noise Rating (NR)	-	26	30	36	43	49	53	56
10" Dia	Airflow Volume, m^3/hr	365	548	730	913	1095	1280	1460	1825
	Throw Distance, m	4.6	7.0	9.5	11.6	13.8	16.2	18.5	25.4
	Total Pressure Loss, Pa	7	15	17	25	32	48	66	86
	Noise Rating (NR)	-	24	28	33	38	42	46	50
12" Dia	Airflow Volume, m^3/hr	526	790	1052	1315	1580	1842	2105	2632
	Throw Distance, m	5.6	8.4	11.2	14	16.8	19.5	22.2	31
	Total Pressure Loss, Pa	7	15	17	25	32	48	66	86
	Noise Rating (NR)	-	24	29	33	38	42	46	50

TECHNICAL SPECIFICATION

Frame Construction

1. Frame to be in extruded aluminum. Frame thickness should be in minimum 1.0mm thick.

Nozzle Construction

1. Nozzle to be in extruded aluminum. Thickness should be in minimum 1.0mm thick.
2. Nozzle internal aerodynamic designed to compress the airflow to create a jet throw performance.
3. Nozzle to be adjustable up to 45° multi-direction.

Finishing

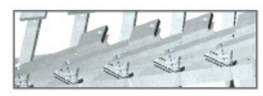
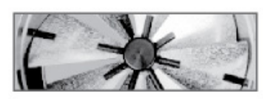
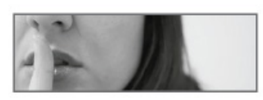
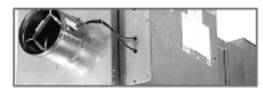
1. Finishing should be in anodized aluminum, unless otherwise stated.

Performance

1. Ball Jet Diffuser's cores are adjustable for directional air distribution.
2. Ball Jet Diffusers are designed to be high wall mounted or ceiling mounted. Round duct connection with damper should to be installed at the neck of the diffuser for volume control purpose, unless otherwise stated.
3. Jet Diffuser's aerodynamic design is able to produces a jet throw without compromising noise level.

BJD | Ball Jet Diffuser

Products Range

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

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JS Jet Slot Diffuser

JS | Jet Slot Diffuser

Introduction

Prudent Aire Jet Slot Diffusers are designed to maximises engineering performance without sacrificing aesthetic considerations for the designer. The Wide array of slot width allow for more airflow while minimising noise and pressure loss.

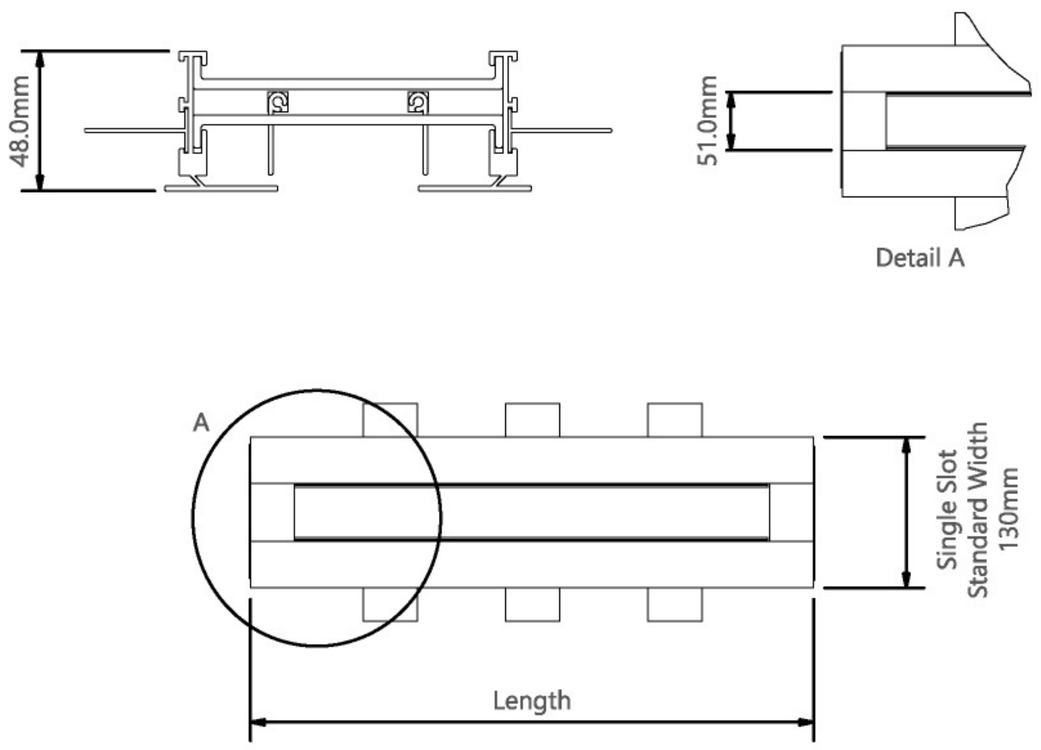
The Jet Slot Diffuser's vanes allow the airstream to be jetted directly to meet required comfort conditions. Jet Slot Diffuser is an excellent choise for high bay applications, perimeter zones requiring vertical projection and for side wall applications requiring extended throw.

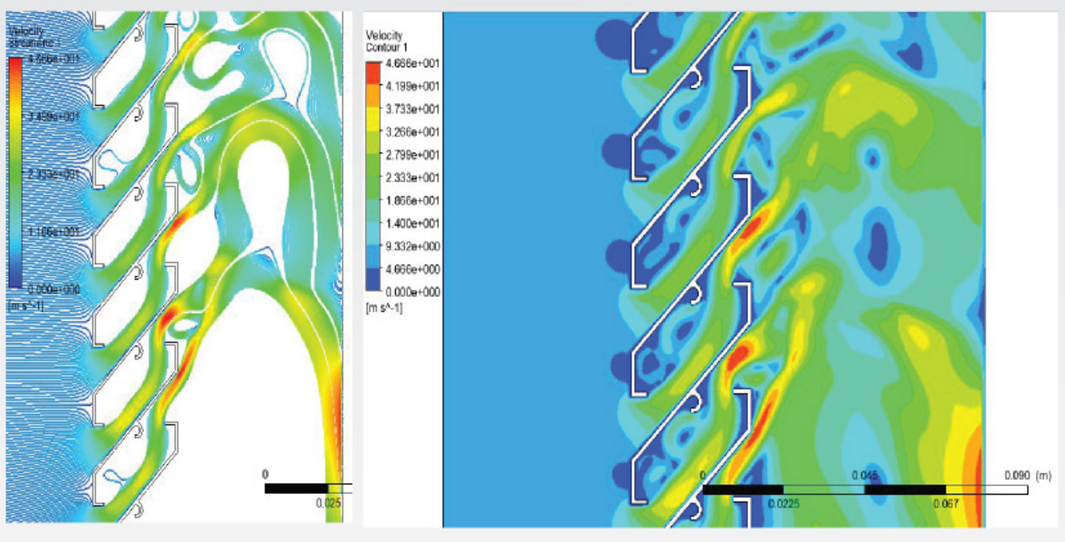
CONSTRUCTIONS & MATERIALS

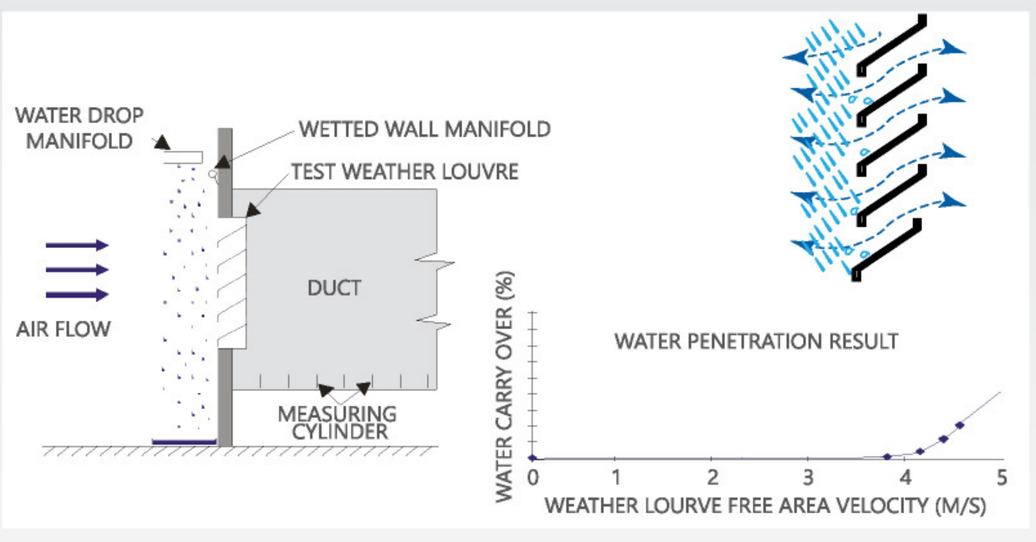
- Standard slot width 51mm.
- 2 Vanes are adjustable to control airstream.
- Allow to have a large airflow with low noise.
- Standard finish is flat black for interior surfaces exposed to view and matt white for seposed flanges.

Frame Construction	Deflector Construction	Surface Finishing
AL	AL	RAL
Extruded Aluminium	Extruded Aluminium	White (Matt)

DIMENSIONS







TECHNICAL PERFORMANCE DATA

Single Slot with Plenum

Size (mm)	Descriptions	200	400	600	800	1000	1200	1400	1600	1800
600mm	Pressure Drop (Pa)	6	19	44	77	109	142	-	-	-
	Noise Rating (NR)	<10	14	27	37	47	57	-	-	-
	Throw Distance (m)	2.1	4.2	5.8	6.7	7.6	8.5	-	-	-
900mm	Pressure Drop (Pa)	-	13	28	49	77	132	159	-	-
	Noise Rating (NR)	-	13	23	32	40	55	63	-	-
	Throw Distance (m)	-	3.6	5.2	6.4	7.3	9.1	10.0	-	-
1200mm	Pressure Drop (Pa)	-	6	12	22	34	64	154	-	-
	Noise Rating (NR)	-	11	20	28	34	40	59	-	-
	Throw Distance (m)	-	3.1	4.6	6.1	7.3	8.1	9.5	-	-
1500mm	Pressure Drop (Pa)	-	-	7	13	21	29	40	52	64
	Noise Rating (NR)	-	-	18	26	32	38	42	46	50
	Throw Distance (m)	-	-	4.0	5.4	6.8	8.7	8.7	9.4	10.1

Single Slot without Plenum

Size (mm)	Descriptions	200	400	800	1200	1500	1750	2000	2250	2500
600mm	Pressure Drop (Pa)	6	20	80	166	-	-	-	-	-
	Noise Rating (NR)	14	19	41	41	-	-	-	-	-
	Throw Distance (m)	2.2	4.9	6.8	8.6	-	-	-	-	-
900mm	Pressure Drop (Pa)	-	10	36	80	123	159	-	-	-
	Noise Rating (NR)	-	21	32	43	48	53	-	-	-
	Throw Distance (m)	-	3.4	6.7	8.2	9.2	10.1	-	-	-
1200mm	Pressure Drop (Pa)	-	6	20	45	70	96	123	-	-
	Noise Rating (NR)	-	17	22	36	42	46	50	-	-
	Throw Distance (m)	-	2.9	3.8	7.8	8.7	9.5	10.2	-	-
1500mm	Pressure Drop (Pa)	-	3	13	29	45	61	80	101	123
	Noise Rating (NR)	-	16	27	33	38	42	46	49	51
	Throw Distance (m)	-	3.1	6.0	9.0	10.3	11.1	11.9	12.7	13.4

- All pressures are given in Pascal
- Pressure drop data assumes a duct velocity less than 4 m/s in the inlet duct
- Isothermal throw values are given for terminal velocity of 0.3 m/s
- Each NR value represents the noise rating curve which will not be exceeded by the sound pressure in any of the octave bands, 2nd through 7th. with a room absorption of 10dB, re 10-12 Watts.
- Data was obtained from test conducted in accordance with ANSI / ASHARE Standard 70-2006, “Method of Testing for Rating the Performance of Air Outlets.”
- Throw values for the units are based on a 1-way discharge from the slot.
- Throws listed are for the 1-way air pattern. For divide airflow, select the airflow in each direction according to the number of slotsaimed in that direction, with the total airflow apportioned between slots.

JS | Jet Slot Diffuser

Products Range

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

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