

Product Information

Square Diffuser : AS704

Caryaire Square Diffuser AS704 is an excellent architectural diffuser with multiple air outlets, placed in a single plane. It provides excellent diffusion as the air exits in all four directions and hugs the ceiling to provide efficient mixing and performance. It features a removable core which provides for easy installation and for easy access to the Plenum/damper.



Diffuser's Outer frame is manufactured from high quality Aluminium extrusion, mechanically crimped to form a robust outer plane. The Central core is manufactured from high quality precision stamped Aluminium sheet.

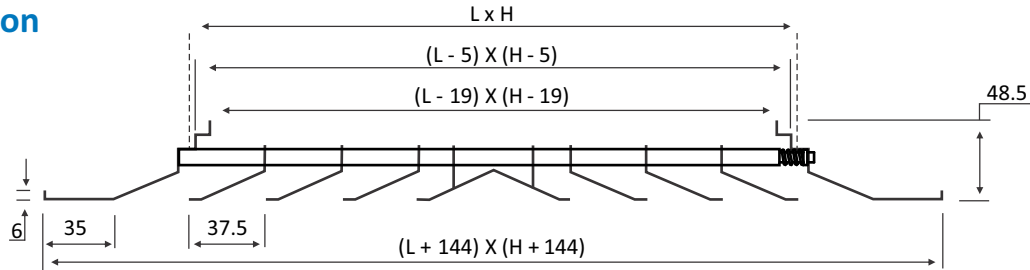
The Standard finish is Powder Coated in Caryaire White (CW) or Caryaire Off-white (CO). An optional Opposed Blade damper or Plenum may be ordered for supply applications.

AS704-Standard Sizes	
Neck Size	Outer Size
150 x 150mm	294 x 294mm
225 x 225mm	370 x 370mm
300 x 300mm	445 x 445mm
375 x 375mm	520 x 520mm
450 x 450mm	594 x 594mm
525 x 525mm *	669 x 669mm
600 x 600mm *	744 x 744mm

Material of Construction	
Outer Frame	1mm thick Extruded Aluminium Frame
Center Core	0.9mm thick Stamped Aluminium Sheet
Center Core *	0.9mm thick Stamped Aluminium Sheet and 1mm Extruded Aluminium Sections

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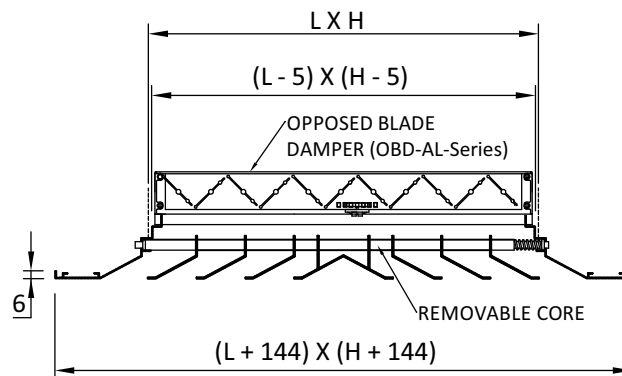
Dimension



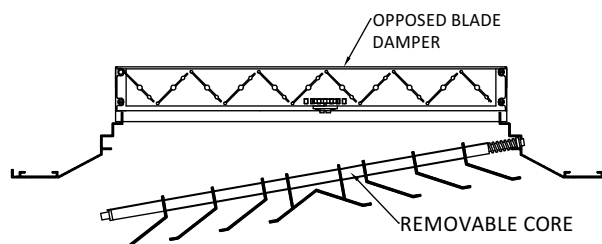
Optional Opposed Blade Volume Control Dampers

Damper Model	OBD-AL-MF	OBD-AL-BF	OBD-MS-BL
FINISH	MILL FINISH	BLACK BLADES	BLACK BLADES
TOP & BOTTOM FRAME	1.15mm Extruded Aluminium		0.8mm Mild Steel
SIDE FRAME	1.0mm Extruded Aluminium		0.8mm Mild Steel
BLADES	1.0mm Extruded Aluminium		0.6mm (0.3 x 2) Mild Steel
BLADE MOVEMENT STRIP	1.0mm Extruded Aluminium		1.5mm Mild Steel

Diffuser with Neck Mounted Opposed Blade Damper



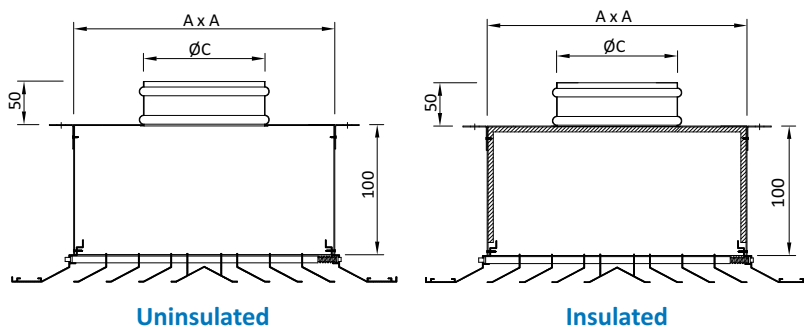
Adjustment of the Opposed Blade Damper can be made from the Room Side by removing the Diffuser Core



Product Information

For best results, a factory made optional plenum must be used. Plenum Box made with 24Ga GI, will be supplied with or without 6mm Close cell Nitrile Rubber Insulation, as required (Other optional insulation types/thickness available)

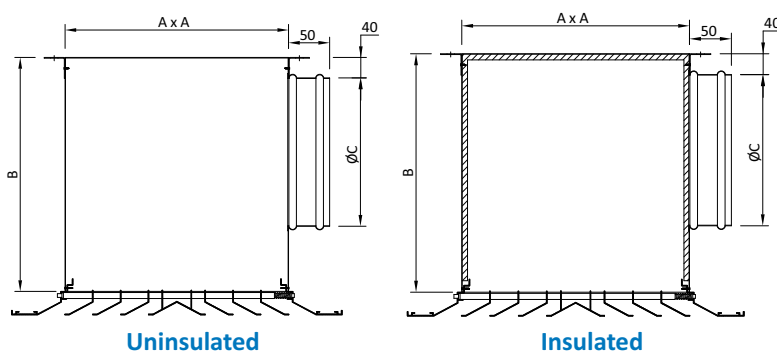
Plenum with Top Inlet



DIMENSIONS			
S. No.	Nom Size	A	ϕC
1	150 x 150	150	124
2	225 x 225	225	159
3	300 x 300	300	199
4	375 x 375	375	249
5	450 x 450	450	314
6	525 x 525	525	354
7	600 x 600	600	399

* ϕC is centered on $A \times A$

Plenum with Side Inlet



DIMENSIONS				
S. No.	Nom Size	A	B	ϕC
1	150 x 150	150	239	124
2	225 x 225	225	274	159
3	300 x 300	300	314	199
4	375 x 375	375	364	249
5	450 x 450	450	429	314
6	525 x 525	525	469	354
7	600 x 600	600	514	399

Specification

Square Ceiling Diffuser is made of 1mm Extruded Aluminium frame and precision formed Aluminium central core of 0.9mm thickness duly powder coated. The Diffuser Frame sits flush on the ceiling T or mounting frame so as to provide efficient mixing and performance. The Multiple air outlets are arranged in a single plane to form a removable Core to provide excellent diffusion as the air exits the diffuser.

The removable core provides easy access to the plenum/damper. The Core is secured with a safety cord to prevent it from falling while damper adjustments and regular maintenance is being done.

An optional opposed blade damper of Aluminium or steel construction can be mounted on the diffuser neck. Optional Plenum Box is supplied with or without 6mm Close Cell Nitrile Rubber Insulation.

The Standard finish is Powder Coated in Caryaire White (CW) or Caryaire Off-white (CO).

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Quick Selection Table

CMH	CFM		150x150	225x225	300x300	375x375	450x450	525x525	NR > 25
			6x6	9x9	12x12	15x15	18x18	21x21	
			0.0109	0.0244	0.0435	0.0679	0.0978	0.1331	
100	59	A	2.5	1.1					
		B	0.5	0.3					
		C	4.5	0.9	A	Effective Velocity in m/s			
		D	18		B	Throw in Mtrs			
120	71	A	3.1	1.4	C	Total Pressure in Pa			
		B	0.6	0.4	D	Noise Level index in dB			
		C	6.5	1.3					
		D	22	6					
140	82	A	3.6	1.6					
		B	0.7	0.5					
		C	8.9	1.8					
		D	26	9					
160	94	A	4.1	1.8	1.0				
		B	0.8	0.5	0.4				
		C	11.6	2.3	0.7				
		D	29	13					
180	106	A	4.6	2	1.1				
		B	0.9	0.6	0.4				
		C	14.7	2.9	0.9				
		D	32	16					
200	118	A	5.1	2.3	1.3				
		B	1.0	0.7	0.5				
		C	18.2	3.6	1.1				
		D	35	18	6				
250	147	A	6.4	2.8	1.6	1.0			
		B	1.2	0.8	0.6	0.5			
		C	28.4	5.7	1.8	0.7			
		D	40	24	12				
300	177	A	7.6	3.4	1.9	1.2			
		B	1.5	1.0	0.7	0.6			
		C	40.9	8.2	2.6	1.1			
		D	45	28	16	7			
350	206	A	8.9	4	2.2	1.4	1.0		
		B	1.7	1.2	0.9	0.7	0.6		
		C	56.7	11.1	3.5	1.4	0.7		
		D	49	32	20	11			
400	235	A		4.6	2.6	1.6	1.1		
		B		1.3	1.0	0.8	0.7		
		C		14.5	4.6	1.9	0.9		
		D		35	24	15	7		
450	265	A		5.1	2.9	1.8	1.3		
		B		1.5	1.1	0.9	0.7		
		C		18.4	5.8	2.4	1.1		
		D		38	27	17	10		
500	294	A		5.7	3.2	2.0	1.4		
		B		1.7	1.2	1.0	0.8		
		C		22.7	7.1	2.9	1.4		
		D		41	29	20	10		
600	353	A		6.8	3.8	2.5	1.7	1.3	
		B		2.0	1.5	1.2	1.0	0.9	
		C		32.7	10.3	4.2	2.0	1.1	
		D		45	34	25	17	11	

CMH	CFM		225x225	300x300	375x375	450x450	525x525	600x600	NR > 25
			9x9	12x12	15x15	18x18	21x21	24x24	
			0.0244	0.0435	0.0679	0.0978	0.1331	0.1739	
700	412	A	8.0	4.5	2.9	2.0	1.5	1.1	
		B	2.3	1.7	1.4	1.2	1.0	0.9	
		C	44.5	14.0	5.7	2.8	1.5	0.9	
		D	49	37	28	21	15	9	
800	471	A		5.1	3.3	2.3	1.7	1.3	
		B		2.0	1.6	1.3	1.1	1.0	
		C		18.3	7.5	3.6	2.0	1.1	
		D		41	32	24	18	12	
900	530	A		5.7	3.7	2.6	1.9	1.4	
		B		2.2	1.6	1.5	1.3	1.1	
		C		23.1	9.5	4.6	2.5	1.4	
		D		44	35	27	21	15	
1000	589	A		6.4	4.1	2.8	2.1	1.6	
		B		2.5	2.0	1.7	1.4	1.2	
		C		28.5	11.7	5.6	3.0	1.8	
		D		46	37	30	23	18	
1200	706	A		7.7	4.9	3.4	2.5	1.9	
		B		3.0	2.4	2.0	1.7	1.5	
		C		41.1	16.9	8.1	4.4	2.6	
		D		51	42	34	28	23	
1400	824	A			5.7	4.0	2.9	2.2	
		B			2.8	2.3	2.0	1.7	
		C			23.0	11.1	6.0	3.5	
		D			46	38	32	26	
1600	942	A			6.5	4.5	3.3	2.6	
		B			3.2	2.7	2.3	2.0	
		C			30.0	14.5	7.8	4.6	
		D			49	41	35	30	
1800	1059	A			7.4	5.1	3.8	2.9	
		B			3.6	3.0	2.6	2.2	
		C			38.0	18.3	9.9	5.8	
		D			52	44	38	33	
2000	1177	A				5.7	4.2	3.2	
		B				3.3	2.9	2.5	
		C				22.6	12.2	7.1	
		D				47	41	35	
2500	1471	A				7.1	5.2	4	
		B				4.2	3.6	3.1	
		C				35.3	19.1	11.2	
		D				52	46	41	
3000	1766	A					6.3	4.8	
		B					4.3	3.7	
		C					27.4	16.1	
		D					51	45	
3500	2060	A					7.3	5.6	
		B					5.0	4.4	
		C					37.3	21.9	
		D					54	49	
4000	2354	A					8.3	6.4	
		B					5.7	5.0	
		C					48.8	28.6	
		D					58	52	