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WB Air

air distribution products

form function reliability



Variable Swirl Diffusers

Model : WB-Swirl-A



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Introduction

The model WB-Swirl-A is an adjustable swirl diffuser mounted on a ceiling orientation. It is applicable for big spaces that need to be cooled quickly. The secret of swirling effect causes a quicker that normal entrainment of conditioned air into the space, hence cooling/heating an area faster than conventional ceiling diffusers. It adopts the principle of hydrokinetics by which the blade pushed the current by means of swirl with a certain initial velocity to achieve a larger throw distance, a bigger space coverage and a more efficient convection current effect.

The model WB-Swirl-A adopts a possible full horizontal full vertical air distribution pattern, hence ceiling heights of 1.5m to even 18m can be applicable.

Test are performed in 3 installation methods.

H – Plenum box inlet at the Side.

V – Collar with fan damper, inlet at the Top.



WB-Swirl-A-V:
Top collar with fan damper



WB-Swirl-A-H :
Plenum box with side collar

Dimensional Details

Model: WB-Swirl-A-00

Size	Inner neck	Outer neck	Face	Opening	Diff height
315	315	380	480	412	203
400	400	464	565	505	238
630	630	708	871	810	383

Size	Swirl-A-H		Swirl-A-V
	Total height	Box Size	Total height
315	480	435	495
400	600	500	600
630	850	750	820

Technical Specifications - Noise & Pressure Drop

Size	CMH	V Structure (Top collar)				H Structure (side collar)			
		Full Horizontal		Full Vertical		Full Horizontal		Full Vertical	
		Pa	dB	Pa	dB	Pa	dB	Pa	dB
Dia 315	540	12	20	10	17	13	17	11	14
	720	20	31	18	27	22	26	19	23
	900	25	35	22	30	28	29	24	26
	1020	32	38	28	33	35	32	31	28
	1260	46	45	40	39	51	38	44	33
Dia 400	1440	55	51	48	44	61	43	53	37
	720	6	14	5	12	6	12	6	10
	1080	12	22	10	19	13	19	11	16
	1440	20	32	18	28	22	27	19	24
	1800	32	40	28	35	35	34	31	30
Dia 630	2160	46	47	40	41	51	40	44	35
	2520	60	55	52	48	66	47	58	41
	1080	6	12	5	10	6	10	6	9
	1440	8	17	7	15	9	15	8	13
	1800	12	23	10	20	13	20	11	17
Dia 630	2520	20	35	18	30	22	29	19	26
	3240	32	41	28	36	35	35	31	31
	3960	48	51	42	44	54	43	47	37



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Technical Specifications

Throw and Velocity at FULL HORIZONTAL Mode

Terminal Velocity>>>		0.15		0.2		0.3	
Size	CMH	Spread	Vert Throw	Spread	Vert Throw	Spread	Vert Throw
Dia 315	540	2.15	2.84	1.89	2.49	1.62	2.14
	720	2.88	3.80	2.13	2.81	1.83	2.42
	900	3.62	4.78	2.66	3.51	2.06	2.72
	1020	4.77	6.30	3	3.96	2.35	3.10
	1260	5.05	6.67	3.74	4.94	2.89	3.81
	1440	5.77	7.62	4.27	5.64	3.32	4.38
Dia 400	720	2.16	2.85	2.13	2.81	1.87	2.47
	1080	3.26	4.30	2.41	3.18	2.16	2.85
	1440	4.29	5.66	3.17	4.18	2.44	3.22
	1800	5.43	7.17	3.92	5.17	3	3.96
	2160	6.47	8.54	4.72	6.23	3.6	4.75
	2520	7.6	10.03	5.52	7.29	4.22	5.57
Dia 630	1080	2.45	3.23	2.08	2.75	1.6	2.11
	1440	3.25	4.29	2.38	3.14	1.96	2.59
	1800	4	5.28	2.94	3.88	2.25	2.97
	2520	5.64	7.44	4.07	5.37	3.13	4.13
	3240	7.3	9.64	5.29	6.98	4	5.28
	3960	9	11.88	6.5	8.58	4.89	6.45

Variable Swirl Diffusers

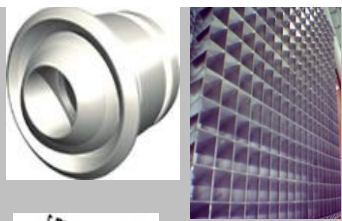
Model : WB-Swirl-A



Technical Specifications

Throw and Velocity at FULL VERTICAL Mode

Terminal Velocity>>>		0.15		0.2		0.3	
Size	CMH	Spread	Vert Throw	Spread	Vert Throw	Spread	Vert Throw
Dia 315	540	1.55	4.61	1.37	4.06	1.17	3.48
	720	2.08	6.18	1.54	4.57	1.32	3.93
	900	2.62	7.77	1.92	5.71	1.49	4.42
	1020	3.45	10.24	2.17	6.44	1.70	5.04
	1260	3.65	10.84	2.70	8.03	2.09	6.20
	1440	4.17	12.38	3.09	9.16	2.40	7.12
Dia 400	720	1.56	4.63	1.54	4.57	1.35	4.01
	1080	2.36	7.00	1.74	5.17	1.56	4.63
	1440	3.10	9.21	2.29	6.80	1.76	5.24
	1800	3.92	11.65	2.83	8.41	2.17	6.44
	2160	4.67	13.88	3.41	10.13	2.60	7.72
	2520	5.49	16.31	3.99	11.84	3.05	9.06
Dia 630	1080	1.77	5.26	1.50	4.46	1.16	3.43
	1440	2.35	6.97	1.72	5.11	1.42	4.21
	1800	2.89	8.58	2.12	6.31	1.63	4.83
	2520	4.07	12.10	2.94	8.73	2.26	6.72
	3240	5.27	15.66	3.82	11.35	2.89	8.58
	3960	6.50	19.31	4.70	13.95	3.53	10.49



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