



Products of WB Air



WB Air

air distribution products

form function reliability



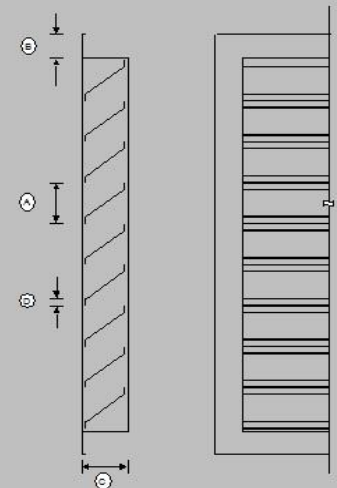
Fabricated Louvres

Fixed Louvres 35mm height WB - FL35

Fixed Louvres 50mm height WB - FL50

Weatherproof Fixed Louvres 50mm height WB - WL50

V-SHAPED LOUVRE WB-VL50



FABRICATED LOUVRES

INTRO

Model : WB - FL35 and WB - FL50

Generally used in areas where rain protection is not a requirement . For exhaust , return and even fresh air applications .

Model : WB - WL50

Generally used in areas where rain protection is a requirement . The WL50 is a weather louvre designed to protect air intake and exhaust openings in building exterior walls . The design incorporates an additional 'rain hook' in each blade which is intended to provide extra protection against water penetration while providing minimum resistance to airflow .

OPTIONS

- Opposed blade damper	Model	D
- Aluminum insect screen	Model	SB
- Removable washable filter	Model	F
- Removable core spring mechanism	Model	RS
- Removable core hinge mechanism	Model	RH
- A variety of finish : anodised or powder coated		

LOUVRE SELECTION AND APPLICATION

Applications of any louvre involves selecting an airflow velocity through the louvre free area (free area velocity in m/s) that produces an acceptable pressure drop and for intake applications minimises carry through of normally encountered rain water .

No manufacturer warrants their louvres to prevent water penetration under all possible combinations wind and rain . Water penetration through Model WB-WL50 begins at about 3.5m/s free area velocity . Intake air louvre selection using free area velocity below 3.5m/s is recommended .

Louvre selection involves the following two steps , and depending on given conditions , either step may come first .

1 Select free area velocity

Use airflow resistance chart .

select a free area velocity that produces an acceptable pressure drop with minimal water penetration .
(Note : Water penetration may not be considered when selecting exhaust louvres)

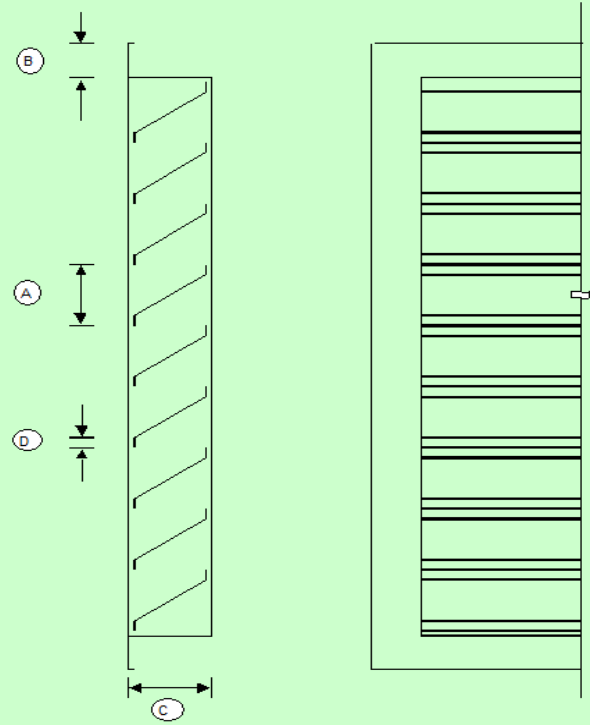
2 Determine louvre free area

Use physical free area chart .

Using the free area velocity and total cmh,determine louvre free area required by dividing airflow over velocity . Using physical free area chart , select a louvre with at least the required free area . These sizes are 1meter length . If the height , due to site constrains is to be restricted to a certain dimension , use required free area divided by tabulated physical free area of that height . That will give the length of the louvre .

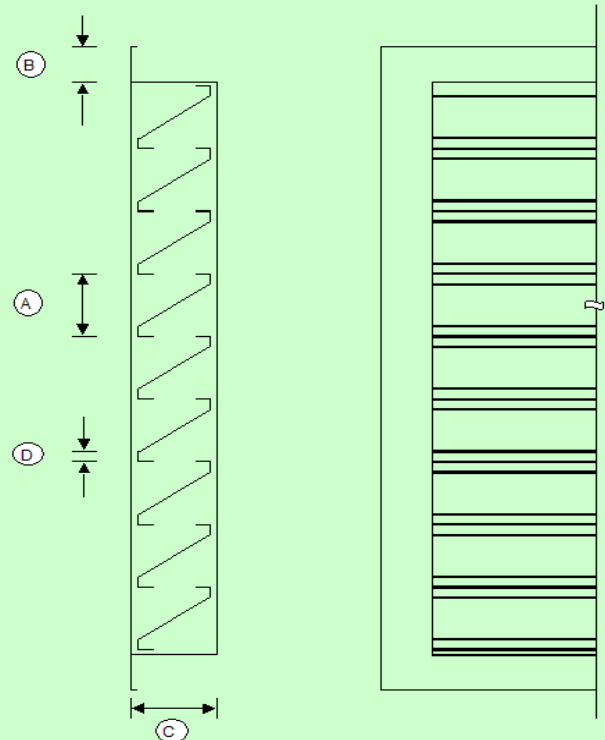
FABRICATED FIXED LOUVRES

MODEL :WB - FL35 and WB - FL50



Model	A	B	C	D	K factor	Ce / Cd
WB - FL35	35	30	34	6	11.89	0.29
WB - FL50	50	30	43	10	13.02	0.274

MODEL :WB - WL50



Model	A	B	C	D	K factor	Ce / Cd
WB - WL50	50	30	43	10	14.35	0.264

TABULATION OF PHYSICAL FREE AREA

MODEL : WB - FL50 , WB - WL50

Louvre Height(mm)	Number of Blades	Neck Area (sqm)	Number of Spacings	Smallest gap Space (mm)	Physical Free Area (sqm)	% of actual free area vs Grille neck size
100	2	0.1	1	28.28	0.02828	28.28
150	3	0.15	2	56.56	0.05656	37.71
200	4	0.2	3	84.84	0.08484	42.42
250	5	0.25	4	113.12	0.11312	45.25
300	6	0.3	5	141.4	0.1414	47.13
350	7	0.35	6	169.68	0.16968	48.48
400	8	0.4	7	197.96	0.19796	49.49
450	9	0.45	8	226.24	0.22624	50.28
500	10	0.5	9	254.52	0.25452	50.90
550	11	0.55	10	282.8	0.2828	51.42
600	12	0.6	11	311.08	0.31108	51.85
650	13	0.65	12	339.36	0.33936	52.21
700	14	0.7	13	367.64	0.36764	52.52
750	15	0.75	14	395.92	0.39592	52.79
800	16	0.8	15	424.2	0.4242	53.03
850	17	0.85	16	452.48	0.45248	53.23
900	18	0.9	17	480.76	0.48076	53.42
950	19	0.95	18	509.04	0.50904	53.58
1000	20	1	19	537.32	0.53732	53.73
1050	21	1.05	20	565.6	0.5656	53.87
1100	22	1.1	21	593.88	0.59388	53.99
1150	23	1.15	22	622.16	0.62216	54.10
1200	24	1.2	23	650.44	0.65044	54.20
1250	25	1.25	24	678.72	0.67872	54.30
1300	26	1.3	25	707	0.707	54.38
1350	27	1.35	26	735.28	0.73528	54.47
1400	28	1.4	27	763.56	0.76356	54.54
1450	29	1.45	28	791.84	0.79184	54.61
1500	30	1.5	29	820.12	0.82012	54.67
1550	31	1.55	30	848.4	0.8484	54.74
1600	32	1.6	31	876.68	0.87668	54.79
1650	33	1.65	32	904.96	0.90496	54.85
1700	34	1.7	33	933.24	0.93324	54.90
1750	35	1.75	34	961.52	0.96152	54.94
1800	36	1.8	35	989.8	0.9898	54.99
1850	37	1.85	36	1018.08	1.01808	55.03
1900	38	1.9	37	1046.36	1.04636	55.07
1950	39	1.95	38	1074.64	1.07464	55.11
2000	40	2	39	1102.92	1.10292	55.15
2050	41	2.05	40	1131.2	1.1312	55.18

MODEL : WB - FL35

70	2	0.07	1	21.21	0.02	30.30
105	3	0.105	2	42.42	0.04	40.40
140	4	0.14	3	63.63	0.06	45.45
175	5	0.175	4	84.84	0.08	48.48
210	6	0.21	5	106.05	0.11	50.50
245	7	0.245	6	127.26	0.13	51.94
280	8	0.28	7	148.47	0.15	53.03
315	9	0.315	8	169.68	0.17	53.87
350	10	0.35	9	190.89	0.19	54.54
385	11	0.385	10	212.10	0.21	55.09
420	12	0.42	11	233.31	0.23	55.55
455	13	0.455	12	254.52	0.25	55.94
490	14	0.49	13	275.73	0.28	56.27
525	15	0.525	14	296.94	0.30	56.56
560	16	0.56	15	318.15	0.32	56.81
595	17	0.595	16	339.36	0.34	57.04
630	18	0.63	17	360.57	0.36	57.23
665	19	0.665	18	381.78	0.38	57.41
700	20	0.7	19	402.99	0.40	57.57
735	21	0.735	20	424.20	0.42	57.71
770	22	0.77	21	445.41	0.45	57.85
805	23	0.805	22	466.62	0.47	57.97
840	24	0.84	23	487.83	0.49	58.08
875	25	0.875	24	509.04	0.51	58.18
910	26	0.91	25	530.25	0.53	58.27
945	27	0.945	26	551.46	0.55	58.36
980	28	0.98	27	572.67	0.57	58.44
1015	29	1.015	28	593.88	0.59	58.51
1050	30	1.05	29	615.09	0.62	58.58
1085	31	1.085	30	636.30	0.64	58.65
1120	32	1.12	31	657.51	0.66	58.71
1155	33	1.155	32	678.72	0.68	58.76
1190	34	1.19	33	699.93	0.70	58.82
1225	35	1.225	34	721.14	0.72	58.87

Length of unit is 1000mm

Blades are spaced at 35mm centers for FL35 and 50mm for FL/WL50.

Any variations to spacings will result in a differences in values .

TECHNICAL PERFORMANCE DATA**MODEL : WB-FL50 , WB-WL50**

Size (m2)	Flow (l/s)	20	30	40	50	60	70	80	90
	Flow (cmh)	72	108	144	58	216	252	288	324
0.02	P.D	11.6	26.0	47.0	73.0	105			
	NR	19.0	34.0	44.0	51.0	58.0			
0.03	P.D	9.0	23.0	42.0	64.0	95.0	108.0		
	NR	15.0	26.0	32.0	39.0	48.0	51.0		
0.05	P.D		4.5	7.0	11.5	16.5	22.5	29.0	37.0
	NR		<10	11.5	19.5	26.0	31.0	36.0	40.0
0.1	P.D						6.0	7.5	9.0
	NR						10.0	12.5	16.5
Size (m2)	Flow (l/s)	100	200	300	400	500	600	700	800
	Flow (cmh)	360	720	1080	1440	1800	2160	2520	2880
0.1	P.D	11.5	46.0						
	NR	19.5	44.0						
0.2	P.D	3.0	11.5	26.0	46.0	72.5			
	NR	<10	20.5	34.0	44.5	52.5			
0.4	P.D		3.0	6.5	11.5	18.0	26.0	35.5	46.0
	NR		<10	15.5	22.5	29.0	35.0	40.0	44.5
0.6	P.D			3.0	4.0	5.5	8.0	11.5	15.5
	NR			<10	10.5	13.5	19.5	23.5	28.0
0.8	P.D				3.0	4.5	6.5	9.0	11.5
	NR				<10	13.5	17.5	21.5	25.0
1.00	P.D					3.0	4.5	6.0	7.5
	NR					8.5	12.5	16.5	19.5
1.50	P.D								3.0
	NR								12.5
Size (m2)	Flow (l/s)	900	1000	2000	3000	4000	5000		
	Flow (cmh)	3240	3600	7200	10800	14400	18000		
0.4	P.D	59.0							
	NR	48.5							
0.6	P.D	20.5	25.5	52.5					
	NR	32.0	36.0	47.0					
0.8	P.D	14.5	18.0	46.0					
	NR	28.0	31.0	42.0					
1.00	P.D	9.0	11.5	36.5	83.0				
	NR	22.5	26.0	40.0	63.0				
1.50	P.D	4.5	5.5	20.5	46.0	82.0			
	NR	14.5	16.5	36.0	47.5	59.0			
2.00	P.D		3.0	11.5	26.0	46.0	72.0		
	NR		14.5	29.0	41.0	49.5	56.5		
3.00	P.D			5.5	11.5	20.5	32.0		
	NR			25.0	34.0	40.0	45.5		

Size (m2) is based on actual louvre size tested in a square module. (i.e 0.02sqm is a 140mmx140mm and not a 200mmx100mm)

P.D Static Pressure Drops in Pascal

NR Noise rating in dB re 10 -12 watts. Based on 10 db Room Absorption (calibrated to NC values)

Data of performance are based on independent tests conducted in accordance to ADC 1062 . GRD-84

TECHNICAL PERFORMANCE DATA

MODEL : WB-VL50

Size (m2)	Flow (l/s)	20	30	40	50	60	70	80	90
	Flow (cmh)	72	108	144	58	216	252	288	324
0.02	P.D	17.4	39.0	70.5	109.5	157.5			
	NR	23.8	42.5	55.0	63.8	72.5			
0.03	P.D	13.5	34.5	63.0	96.0	142.5	162.0		
	NR	18.8	32.5	40.0	48.8	60.0	63.8		
0.05	P.D		6.8	10.5	17.3	24.8	33.8	43.5	55.5
	NR		12.5	14.4	24.4	32.5	38.8	45.0	50.0
0.1	P.D						7.5	9.4	11.3
	NR						10.0	12.5	16.5
Size (m2)	Flow (l/s)	100	200	300	400	500	600	700	800
	Flow (cmh)	360	720	1080	1440	1800	2160	2520	2880
0.1	P.D	17.3	69.0						
	NR	24.4	55.0						
0.2	P.D	4.5	17.3	39.0	69.0	108.8			
	NR	12.5	25.6	42.5	55.6	65.6			
0.4	P.D		4.5	9.8	17.3	27.0	39.0	53.3	69.0
	NR		12.5	19.4	28.1	36.3	43.8	50.0	55.6
0.6	P.D			4.5	6.0	8.3	12.0	17.3	23.3
	NR			12.5	13.1	16.9	24.4	29.4	35.0
0.8	P.D				4.5	6.8	9.8	13.5	17.3
	NR				12.5	16.9	21.9	26.9	31.3
1.00	P.D					4.5	6.8	9.0	11.3
	NR					10.6	15.6	20.6	24.4
1.50	P.D								4.5
	NR								15.6
Size (m2)	Flow (l/s)	900	1000	2000	3000	4000	5000		
	Flow (cmh)	3240	3600	7200	10800	14400	18000		
0.4	P.D	88.5							
	NR	60.6							
0.6	P.D	30.8	38.3	78.8					
	NR	40.0	45.0	58.8					
0.8	P.D	21.8	27.0	69.0					
	NR	35.0	38.8	52.5					
1.00	P.D	13.5	17.3	54.8	124.5				
	NR	28.1	32.5	50.0	78.8				
1.50	P.D	6.8	8.3	30.8	69.0	123.0			
	NR	18.1	20.6	45.0	59.4	73.8			
2.00	P.D		4.5	17.3	39.0	69.0	108.0		
	NR		18.1	36.3	51.3	61.9	70.6		
3.00	P.D			8.3	17.3	30.8	48.0		
	NR			31.3	42.5	50.0	56.9		

Size (m2) is based on actual louvre size tested in a square module. (i.e 0.02sqm is a 140x140mm and not a 200x100mm)

P.D Static Pressure Drops in Pascal

NR Noise rating in dB re 10 -12 watts. Based on 10 db Room Absorption (calibrated to NC values)

Data of performance are based on independent tests conducted in accordance to ADC 1062 . GRD-84

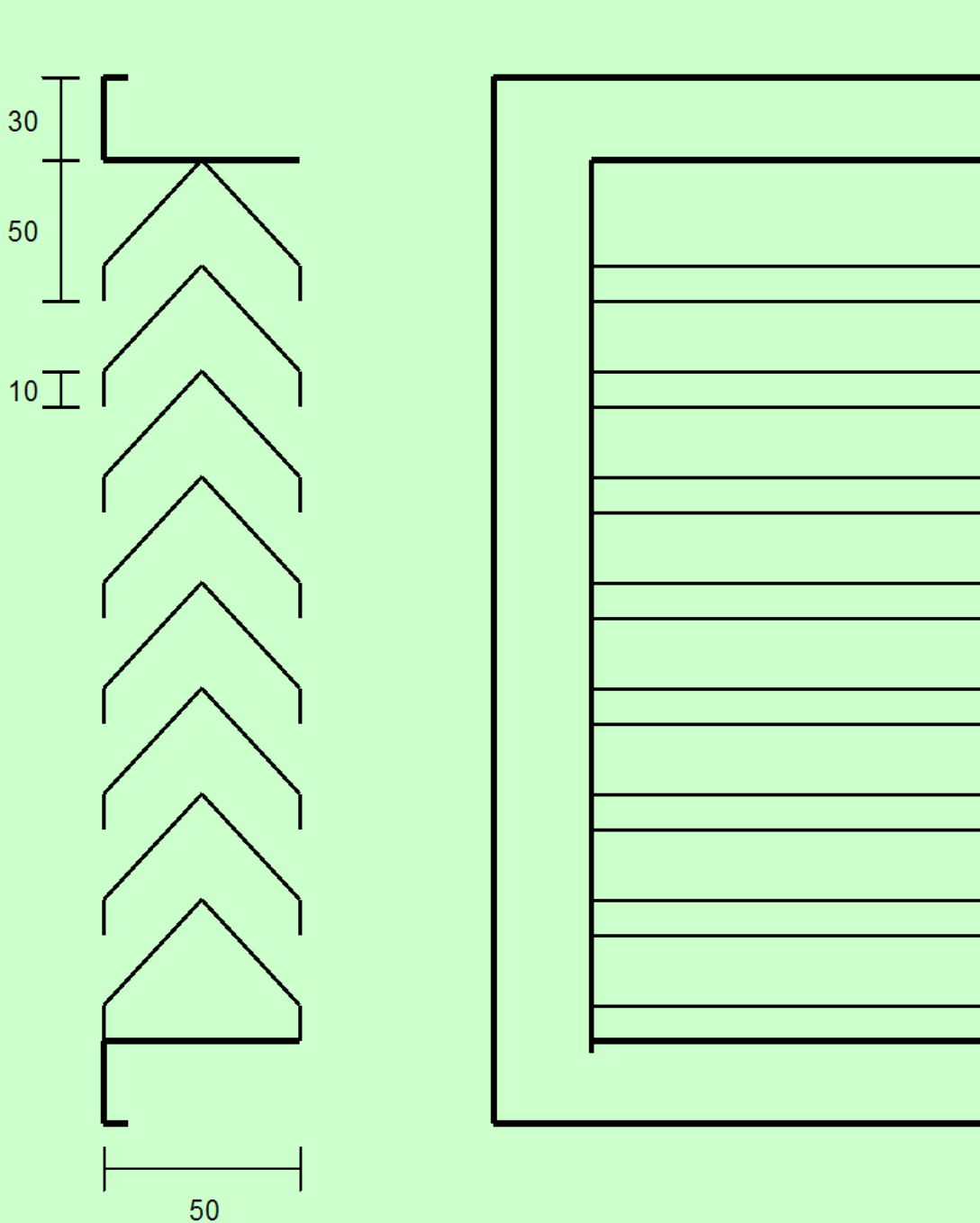
FIXED LOUVRES - vision proof

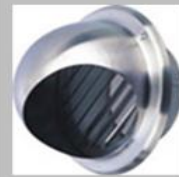
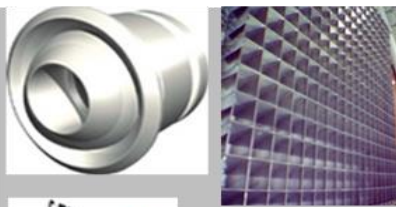
MODEL : WB - VL50

INTRO

Model : WB - VL50

Generally used in areas where vision proof is a requirement . For exhaust , return and even transfer of fresh air . Also used as a transfer grille through doors and partitions.





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