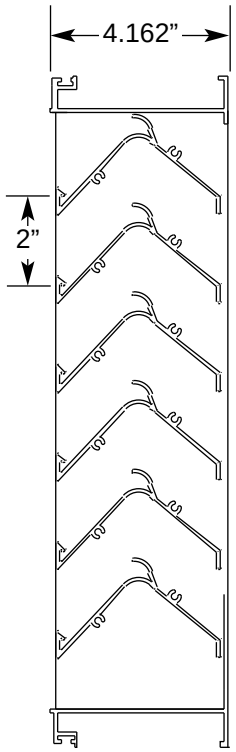
Extruded Aluminum Sight Proof 4” Deep Louver (Fixed Sight Proof Y Blades, Wind Driven Rain Rated)

Model: FYYB Channel Frame, FZYB Flanged Frame



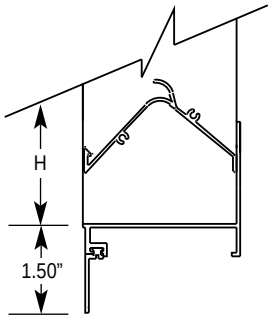
Section View

Model FYYB

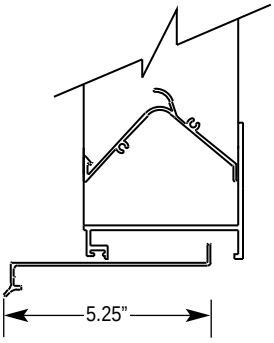
▼ Standard Specifications

Frame: .081 extruded aluminum 4” deep
Blades: .081 extruded aluminum on approximately 2” centers
Screen: 3/4” x .051 flattened aluminum in removable frame. Screen is mounted as standard on inside (rear) as looking from exterior of building.
Finish: mill aluminum (standard)
Maximum Panel Size: 120”w x 84”h or 84”w x 120”h
Minimum Panel Size: 12”w x 12”h

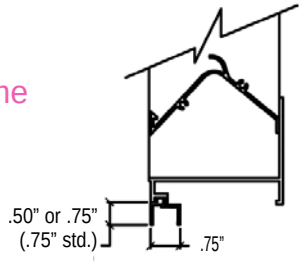
Note: Drainable blade louvers should be limited to 10’ maximum section widths (no more than 10’ between vertical downspouts) to enable the drainable design to function effectively.



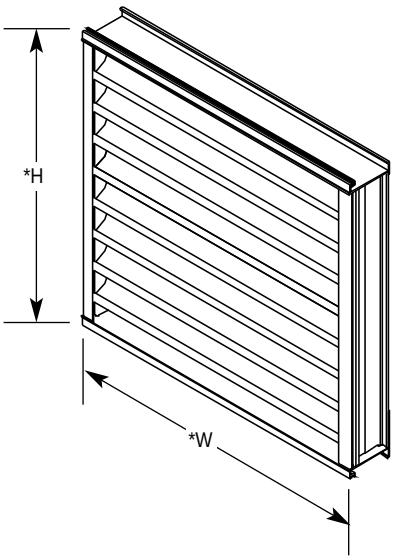
Flanged Frame Optional



Extended Sill Optional



Glazing Adapter Optional



*Width and height dimensions are approximately 1/4” under listed size.

amca CERTIFIED RATINGS
WATER PENETRATION
AIR PERFORMANCE
WIND DRIVEN RAIN
AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

The Carnes Company certifies that the model FYYB/FZYB louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance, water penetration and wind driven rain ratings.

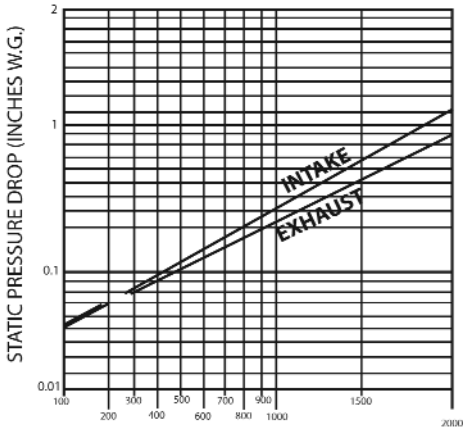
Model FYYB and FZYB

FYYB Specifications

Furnish and install louver as hereinafter specified where shown on plans or as described in schedules. Louver shall be stationary type with horizontal rain resistant style blades positioned on approximately 2" centers within 4.162" deep frame. Louver frame and blade materials to be .081" thick 6063-T5 extruded aluminum. Sections up to maximum of 60"w x 96"h shall withstand wind loading of 30lbs/sq.ft. (110 mph wind equivalent). Consult factory for welded construction and higher wind speeds.

Louver shall meet the performance requirements established by the AMCA 500L test procedure and shall be licensed to bear the AMCA certified ratings seal for water penetration, air performance, and wind driven rain. Louver shall have a maximum static pressure drop of .23" (exhaust) and .31" (intake) water gage based on 1000 FPM free area intake velocity. Louver shall carry a Class C water penetration classification based on a ventilation core of 573 FPM at a rainfall rate of 3" per hour and a 29 mph simulated wind velocity. Louver shall carry a class D water penetration classification based on a ventilation core of 294 FPM at a rainfall rate of 8" per hour and a 50mph simulated wind velocity.

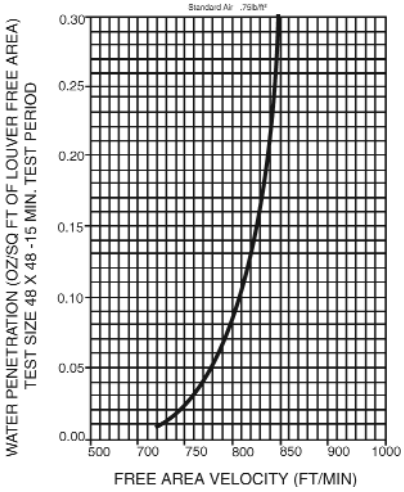
Pressure Drop



FREE AREA VELOCITY (ft/min)

Based on standard air -.075 lbs per cu ft
Ratings do not include the effects of screen
Tested on a 48" x 48"

Water Penetration



Beginning point of WATER PENETRATION is 722 fpm free area velocity at .01 oz. of water penetration

	75 mm/h (3 in/h) Rainfall & 13 m/s (29 mph) Wind Velocity	
Ventilation Air Core Velocity m/s (fpm)	Water Penetration Effectiveness %	*Water Penetration Classification
0.0 (0)	90.7	C
0.48 (95)	90.1	C
0.99 (195)	86.7	C
1.47 (289)	85.7	C
1.92 (378)	82.0	C
2.47 (486)	79.5	C
2.91 (573)	76.1	C
3.39 (669)	70.2	D

* AMCA Classes for maximum allowable water penetrations

	75 mm/h (3 in/h) Rainfall & 13 m/s (50 mph) Wind Velocity	
Ventilation Air Core Velocity m/s (fpm)	Water Penetration Effectiveness %	*Water Penetration Classification
0.0 (0)	83.3	C
0.54 (106)	79.7	C
1.08 (214)	76.7	C
1.49 (294)	74.9	D
1.96 (386	72.8	D
2.39 (470)	71.0	D
2.91 (573)	65.9	D
3.44 (678)	58.7	D

* AMCA Classes for maximum allowable water penetrations

Wind Driven Rain Penetration Classes	
Class	Effectiveness
A	1 to 0.99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

* Discharge Loss Intake	
Wind Velocity (mph)	Class
29	4
50	4

* Discharge loss coefficient is the theoretical air flow of an opening divided by the actual flow rate of a louver the same size.

Class	Discharge Loss Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	.199 and below

(the higher the coefficient, the less resistance to airflow)

Wind Driven Rain Performance AMCA 500-L

Test Size 1m x 1m (39" x 39") core
41-1/2"w x 41"h Nominal (1.05m x 1.04m)

Model FYYB and FZYB

Free Area in Square Feet

HEIGHT INCHES	WIDTH IN INCHES																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.18	0.29	0.4	0.51	0.62	0.73	0.84	0.95	1.05	1.16	1.27	1.38	1.49	1.6	1.71	1.82	1.93	2.04	2.15
18	0.44	0.7	0.96	1.23	1.49	1.76	2.02	2.29	2.55	2.82	3.08	3.35	3.61	3.88	4.14	4.41	4.67	4.93	5.2
24	0.63	1.01	1.39	1.77	2.15	2.53	2.91	3.29	3.67	4.05	4.43	4.81	5.19	5.57	5.95	6.33	6.71	7.09	7.47
30	0.89	1.43	1.97	2.52	3.06	3.6	4.14	4.68	5.22	5.77	6.31	6.85	7.39	7.93	8.47	9.02	9.56	10.1	10.64
36	1.1	1.76	2.43	3.09	3.76	4.43	5.09	5.76	6.43	7.09	7.76	8.42	9.09	9.76	10.42	11.09	11.75	12.42	13.09
42	1.26	2.03	2.79	3.56	4.32	5.09	5.85	6.62	7.39	8.15	8.92	9.68	10.45	11.21	11.98	12.74	13.51	14.28	15.04
48	1.36	2.19	3.02	3.84	4.67	5.5	6.32	7.15	7.98	8.81	9.63	10.46	11.29	12.11	12.94	13.77	14.59	15.42	16.25
54	1.56	2.5	3.45	4.4	5.34	6.29	7.23	8.18	9.13	10.07	11.02	11.96	12.91	13.86	14.8	15.75	16.69	17.64	18.59
60	1.82	2.93	4.03	5.14	6.24	7.35	8.46	9.56	10.67	11.77	12.88	13.99	15.09	16.2	17.3	18.41	19.52	20.62	21.73
66	2.01	3.23	4.45	5.67	6.89	8.12	9.34	10.56	11.78	13	14.22	15.44	16.66	17.88	19.11	20.33	21.55	22.77	23.99
72	2.13	3.42	4.72	6.01	7.3	8.6	9.89	11.18	12.48	13.77	15.06	16.36	17.65	18.94	20.24	21.53	22.82	24.12	25.41
78	2.27	3.65	5.04	6.42	7.8	9.18	10.56	11.94	13.32	14.7	16.08	17.47	18.85	20.23	21.61	22.99	24.37	25.75	27.13
84	2.41	3.87	5.33	6.8	8.26	9.72	11.18	12.65	14.11	15.57	17.03	18.5	19.96	21.42	22.88	24.35	25.81	27.27	28.74
90	2.54	4.09	5.63	7.18	8.72	10.27	11.81	13.36	14.9	16.45	17.99	19.54	21.08	22.62	24.17	25.71	27.26	28.8	30.35
96	2.73	4.38	6.04	7.7	9.35	11.01	12.67	14.32	15.98	17.63	19.29	20.95	22.6	24.26	25.92	27.57	29.23	30.89	32.54
102	2.87	4.61	6.36	8.1	9.85	11.59	13.33	15.08	16.82	18.57	20.31	22.05	23.8	25.54	27.29	29.03	30.77	32.52	34.26
108	2.98	4.8	6.61	8.42	10.24	12.05	13.86	15.68	17.49	19.3	21.12	22.93	24.74	26.55	28.37	30.18	31.99	33.81	35.62
114	3.09	4.97	6.84	8.72	10.6	12.48	14.35	16.23	18.11	19.99	21.86	23.74	25.62	27.5	29.37	31.25	33.13	35.01	36.88
120	3.22	5.18	7.13	9.09	11.05	13	14.96	16.92	18.87	20.83	22.78	24.74	26.7	28.65	30.61	32.57	34.52	36.48	38.44

FYYB Selection and Examples

Example 1:
Airflow given as 10,000 cfm – select louver size.

A. Determine louver free area by dividing airflow by free area velocity (do not exceed 812 fpm on intake louver application).

10,000 cfm ÷ 722 fpm = 13.85 sq. ft.
Airflow F.A.V. Req'd Louver Free Area

B. Select a louver with at least the required louver free area from the Free Area Chart above.

90"w x 54"h
13.86 ft. free area
721 fpm free area velocity (10,000) cfm ÷ 13.86 sq. ft. F.A.V.
(Other selections available - see Free Area Chart above.)

C. Check the pressure drop of the selected louver at the selected louver given airflow (Airflow Resistance Chart on previous page).

Δ P at 722 fpm = 0.14 in w.g.
F.A.V. Pressure Drop

Example 2:
Louver size given 42"w x 72"h intake - determine maximum airflow.

A. Use Free Area Chart to determine.

Free Area = 8.60 sq. ft.

B. Mulitple Free Area x Free Area Velocity (do not exceed 722 fpm on intake louver applications).

8.60 sq. ft. x 722 fpm = 6,209 cfm
Free Area F.A.V. Max. Airflow

C. Check the pressure drop of the selected louver at the given airflow (Airflow Resistance Chart on previous page).

Δ P at 722 fpm = 0.14 in w.g.
F.A.V. Pressure Drop