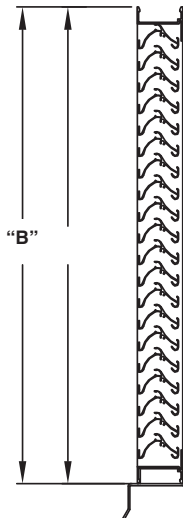
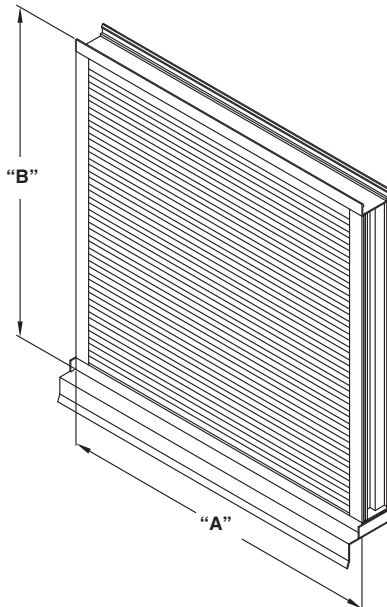




2DDWRG WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

2" (51) deep, 6063T6 extruded aluminum with .060" (1.5) nominal wall thickness.

BLADES

6063T6 extruded aluminum .045" (1.1) nominal wall thickness. Double drainable blades are sightproof.

SCREEN

5/8" x .040" (16 x 1) expanded flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

FINISH

Mill.

MINIMUM SIZE

6"w x 6"h (152 x 152).

APPROXIMATE SHIPPING WEIGHT

4 lbs. per sq. ft. (19.4 kg/m²)

MAXIMUM FACTORY ASSEMBLY SIZE

Single sections shall not exceed 120" x 90" (3048 x 2286) or 90" w x 120" h (2286 x 3048).

Louvers larger than the maximum single section size will require field assembly of smaller sections.

SUPPORTS

Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, assembly configuration or windload.

Consult Reliable for additional information.

FEATURES

- Closely spaced horizontal blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses.
- Tested in the AMCA 500-L Wind-Driven Rain Penetration Test.
- Published performance ratings based on testing in accordance with AMCA Publication 511.
- 43% Free Area.
- Excellent pressure drop performance.
- Aluminum construction for low maintenance and high resistance to corrosion.

VARIATIONS

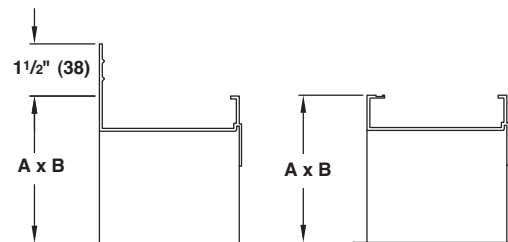
- Extended sill.
- Hinged frame.
- Front or rear security bars.
- Filter racks.
- Installation angles.
- A variety of bird and insect screens.

Finishes:

- Prime coat.
- Baked enamel (modified fluoropolymer).
- Epoxy
- Pearledize 50 & 70.
- Kynar.
- Clear and color anodize.
- Triangular and round shapes available.

Consult Reliable for other special requirements.

FRAME CONSTRUCTION




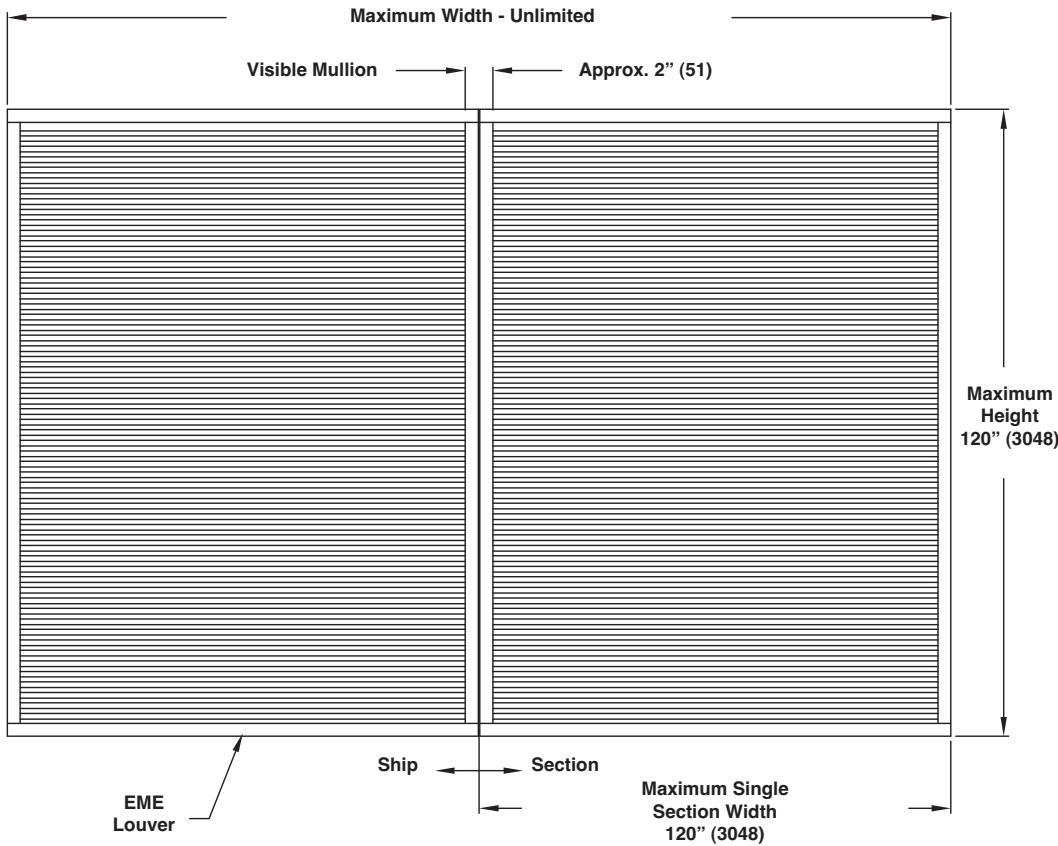
INTEGRAL FLANGE

STANDARD

NOTES:

1. Dimensions in inches, parenthesis () indicate millimeters.
2. Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	



1. Reference separate Installation Instruction sheets for installation details. It is the responsibility of the installing contractor to properly install the louvers per the appropriate detail.
2. Louvers wider than the maximum single section width will be shipped in multiple sections and will require field assembly. Field assembly is not by Reliable.

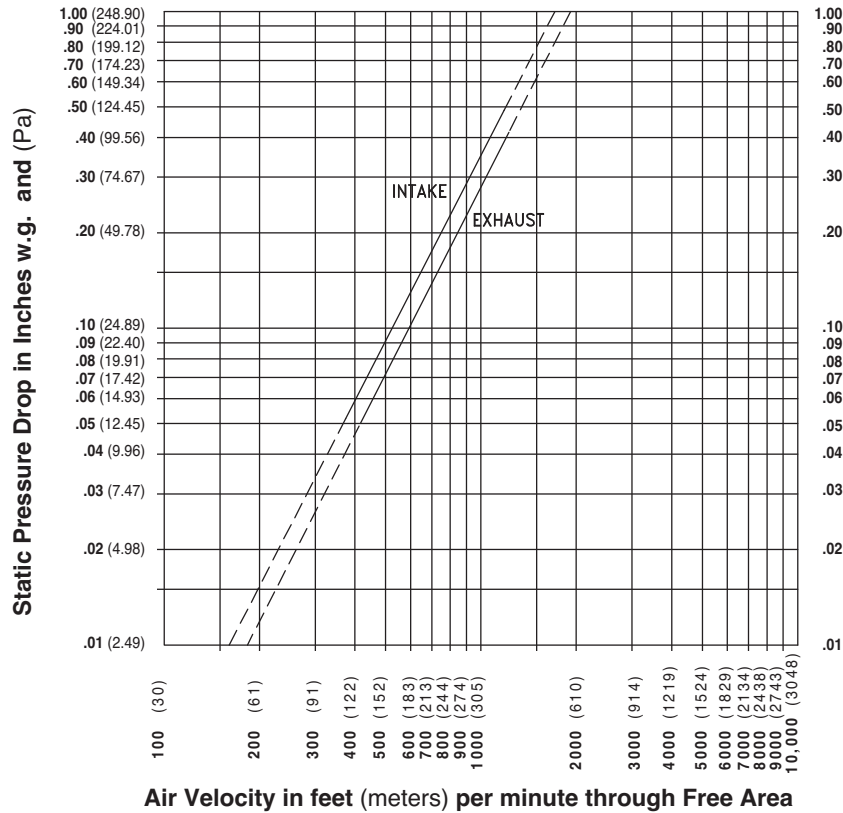
FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 2DDWRG.
Width – Inches and Meters

		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
		0.15	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
6	0.15	0.04	0.11	0.18	0.25	0.32	0.39	0.46	0.53	0.60	0.67	0.74	0.82	0.89	0.96	1.03	1.10	1.17	1.24	1.31	1.38
	0.30	0.00	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.12	0.12	0.13
12	0.30	0.10	0.28	0.46	0.64	0.82	1.00	1.18	1.36	1.54	1.72	1.90	2.08	2.26	2.44	2.62	2.80	2.98	3.16	3.34	3.52
	0.60	0.01	0.03	0.04	0.06	0.08	0.09	0.11	0.13	0.14	0.16	0.18	0.19	0.21	0.23	0.24	0.26	0.28	0.29	0.31	0.33
18	0.46	0.17	0.48	0.78	1.09	1.40	1.71	2.01	2.32	2.63	2.94	3.24	3.55	3.86	4.17	4.47	4.78	5.09	5.40	5.70	6.01
	0.66	0.02	0.04	0.07	0.10	0.13	0.16	0.19	0.22	0.24	0.27	0.30	0.33	0.36	0.39	0.42	0.44	0.47	0.50	0.53	0.56
24	0.61	0.24	0.67	1.11	1.54	1.98	2.41	2.85	3.28	3.72	4.15	4.59	5.02	5.45	5.89	6.32	6.76	7.19	7.63	8.06	8.50
	0.91	0.02	0.06	0.10	0.14	0.18	0.22	0.26	0.31	0.35	0.39	0.43	0.47	0.51	0.55	0.59	0.63	0.67	0.71	0.75	0.79
30	0.76	0.30	0.84	1.39	1.93	2.48	3.02	3.56	4.11	4.65	5.20	5.74	6.29	6.83	7.37	7.92	8.46	9.01	9.55	10.10	10.64
	0.91	0.03	0.08	0.13	0.18	0.23	0.28	0.33	0.38	0.43	0.48	0.53	0.58	0.64	0.69	0.74	0.79	0.84	0.89	0.94	0.99
36	0.91	0.37	1.04	1.71	2.38	3.05	3.73	4.40	5.07	5.74	6.41	7.08	7.76	8.43	9.10	9.77	10.44	11.11	11.78	12.46	13.13
	1.07	0.03	0.10	0.16	0.22	0.28	0.35	0.41	0.47	0.53	0.60	0.66	0.72	0.78	0.85	0.91	0.97	1.03	1.10	1.16	1.22
42	1.07	0.43	1.21	1.99	2.77	3.55	4.33	5.12	5.90	6.68	7.46	8.24	9.02	9.80	10.58	11.37	12.15	12.93	13.71	14.49	15.27
	1.22	0.02	0.05	0.08	0.11	0.14	0.17	0.20	0.23	0.26	0.29	0.32	0.36	0.39	0.42	0.45	0.48	0.51	0.54	0.57	0.60
48	1.22	0.50	1.41	2.31	3.22	4.13	5.04	5.95	6.86	7.77	8.67	9.58	10.49	11.40	12.31	13.22	14.12	15.03	15.94	16.85	17.76
	1.37	0.05	0.13	0.22	0.30	0.38	0.47	0.55	0.64	0.72	0.81	0.89	0.98	1.06	1.14	1.23	1.31	1.40	1.48	1.57	1.65
54	1.37	0.57	1.60	2.64	3.67	4.71	5.75	6.78	7.82	8.85	9.89	10.92	11.96	13.00	14.03	15.07	16.10	17.14	18.17	19.21	20.24
	1.52	0.05	0.15	0.25	0.34	0.44	0.53	0.63	0.73	0.82	0.92	1.02	1.11	1.21	1.30	1.40	1.50	1.59	1.69	1.79	1.88
60	1.52	0.63	1.77	2.92	4.06	5.21	6.35	7.50	8.65	9.79	10.94	12.08	13.23	14.37	15.52	16.66	17.81	18.95	20.10	21.24	22.39
	1.68	0.06	0.16	0.27	0.38	0.48	0.59	0.70	0.80	0.91	1.02	1.12	1.23	1.34	1.44	1.55	1.66	1.76	1.87	1.98	2.08
66	1.68	0.70	1.97	3.24	4.52	5.79	7.06	8.33	9.61	10.88	12.15	13.42	14.70	15.97	17.24	18.51	19.79	21.06	22.33	23.60	24.88
	1.83	0.06	0.18	0.30	0.42	0.54	0.66	0.77	0.89	1.01	1.13	1.25	1.37	1.49	1.60	1.72	1.84	1.96	2.08	2.20	2.31
72	1.83	0.76	2.14	3.52	4.90	6.29	7.67	9.05	10.43	11.82	13.20	14.58	15.96	17.34	18.73	20.11	21.49	22.87	24.25	25.64	27.02
	1.98	0.07	0.20	0.33	0.46	0.58	0.71	0.84	0.97	1.10	1.23	1.36	1.48	1.61	1.74	1.87	2.00	2.13	2.26	2.38	2.51
78	1.98	0.83	2.34	3.85	5.36	6.87	8.37	9.88	11.39	12.90	14.41	15.92	17.43	18.94	20.45	21.96	23.47	24.98	26.49	28.00	29.51
	2.13	0.08	0.22	0.36	0.50	0.64	0.78	0.92	1.06	1.20	1.34	1.48	1.62	1.76	1.90	2.04	2.18	2.32	2.46	2.60	2.74
84	2.13	0.90	2.53	4.17	5.81	7.44	9.08	10.72	12.35	13.99	15.63	17.26	18.90	20.54	22.17	23.81	25.45	27.08	28.72	30.36	31.99
	2.29	0.08	0.24	0.39	0.54	0.69	0.84	1.00	1.15	1.30	1.45	1.61	1.76	1.91	2.06	2.21	2.37	2.52	2.67	2.82	2.98
90	2.29	0.96	2.70	4.45	6.20	7.94	9.69	11.44	13.18	14.93	16.67	18.42	20.17	21.91	23.66	25.41	27.15	28.90	30.64	32.39	34.14
	2.44	0.09	0.25	0.41	0.58	0.74	0.90	1.06	1.23	1.39	1.55	1.71	1.88	2.04	2.20	2.36	2.53	2.69	2.85	3.01	3.17
96	2.44	1.03	2.90	4.77	6.65	8.52	10.39	12.27	14.14	16.01	17.89	19.76	21.64	23.51	25.38	27.26	29.13	31.00	32.88	34.75	36.62
	2.59	0.10	0.27	0.44	0.62	0.79	0.97	1.14	1.32	1.49	1.66	1.84	2.01	2.19	2.36	2.53	2.71	2.88	3.06	3.23	3.41
102	2.59	1.54	3.52	5.50	7.48	9.47	11.45	13.43	15.42	17.40	19.38	21.37	23.35	25.33	27.32	29.30	31.28	33.27	35.25	37.23	39.21
	2.74	0.14	0.33	0.51	0.70	0.88	1.06	1.25	1.43	1.62	1.80	1.99	2.17	2.36	2.54	2.72	2.91	3.09	3.28	3.46	3.65
108	2.74	1.16	3.27	5.38	7.49	9.60	11.71	13.82	15.93	18.04	20.15	22.26	24.37	26.48	28.59	30.70	32.81	34.92	37.03	39.14	41.25
	2.90	0.11	0.30	0.50	0.70	0.89	1.09	1.29	1.48	1.68	1.87	2.07	2.27	2.46	2.66	2.86	3.05	3.25	3.44	3.64	3.84
114	2.90	1.23	3.46	5.70	7.94	10.18	12.41	14.65	16.89	19.13	21.36	23.60	25.84	28.08	30.32	32.55	34.79	37.03	39.27	41.50	43.74
	3.05	0.11	0.32	0.53	0.74	0.95	1.15	1.36	1.57	1.78	1.99	2.20	2.40	2.61	2.82	3.03	3.24	3.44	3.65	3.86	4.07
120	3.05	1.29	3.63	5.98	8.33	10.68	13.02	15.37	17.72	20.06	22.41	24.76	27.11	29.45	31.80	34.15	36.50	38.84	41.19	43.54	45.88
	3.20	0.12	0.34	0.56	0.77	0.99	1.21	1.43	1.65	1.87	2.08	2.30	2.52	2.74	2.96	3.18	3.39	3.61	3.83	4.05	4.27

PRESSURE DROP

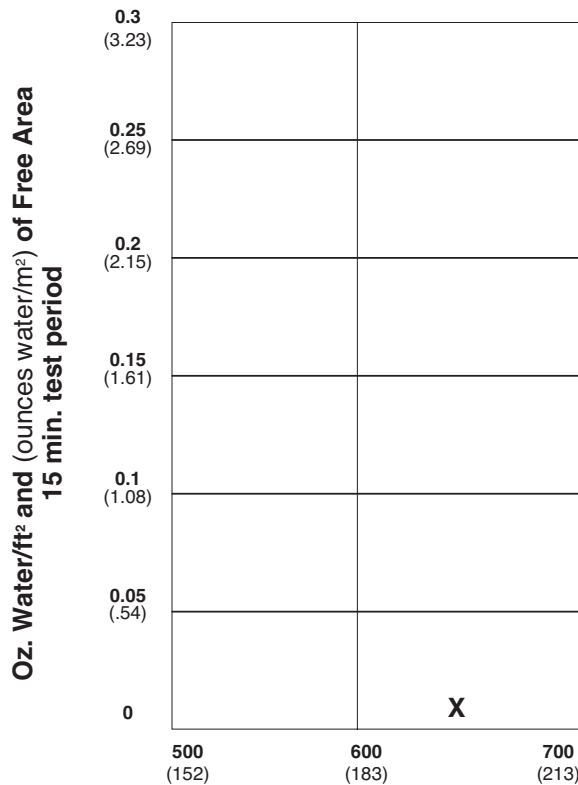
Pressure Drop testing performed on 48" x 48" (1219 x 1219) unit.



WATER PENETRATION GRAPH

Test size 48" wide x 48" high (1219 x 1219)

Beginning point of water penetration at .01 oz./sq. ft. is above 680 fpm (208 m/min).



Reliable Products certifies that the 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 ratings, water penetration ratings and wind driven rain ratings only.

Free Area Velocity in feet (meters) per minute through Free Area

Test size is 1m x 1m (39" x 39") core area, 1.04m x 1.12m (41" x 44") nominal. Free Area of test louver is 4.20 ft² (.39m²).

29 mph (75 mm/h) wind & 3" (76) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class
0	0	0	100	A
132 (.7)	1421	383	100	A
197 (1.0)	2120	505	100	A
285 (1.4)	3068	730	100	A
374 (1.9)	4031	960	99.9	A
472 (2.4)	5077	1209	99.3	A
583 (3.0)	6277	1495	97.1	B
685 (3.5)	7373	1755	96.1	B

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

- Intake Discharge Loss Class 2

Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

50 mph (202 mm/h) wind & 8" (203) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class
0	0	0	100	A
114 (.6)	1228	292	99.8	A
186 (.9)	2001	476	99.4	A
294 (1.5)	3181	757	99.3	A
398 (2.0)	4285	1020	97.8	B
494 (2.5)	5315	1265	96.2	B
568 (2.9)	6114	1456	95.4	B
691 (3.5)	7442	1772	90.9	C

Discharge Loss Classes:

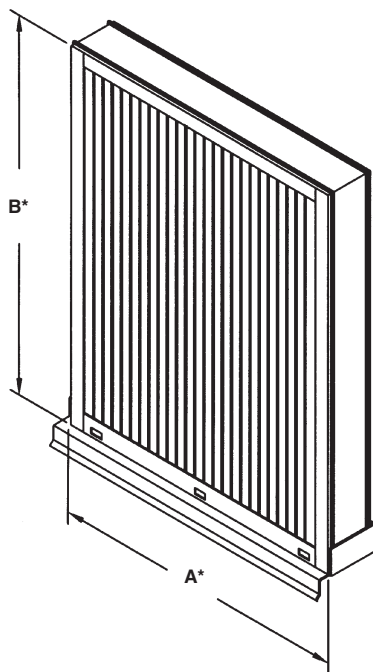
Class Discharge Loss Coefficient

- | | |
|---|-----------------|
| 1 | 0.4 and above |
| 2 | 0.3 to 0.399 |
| 3 | 0.2 to 0.299 |
| 4 | 0.199 and below |

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

- The AMCA Wind Driven Rain Test is performed in a laboratory environment and incorporates controlled wind, water and system airflow effects. In actual field installations, storms may create conditions not considered by the AMCA test. Penthouse and similar applications where wind can pass through multiple louvers in an enclosure is another condition that is not simulated by AMCA tests. These applications can create elevated water penetration rates through any louver. Because of these uncontrolled situations, it is recommended that provisions to manage water penetration through louvers be included in the building design.

3RRGV WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

3" (76) deep, 6063T5 extruded aluminum with .062" (1.6) nominal wall thickness.

BLADES

6063T5 extruded aluminum .040" (1) nominal wall thickness. Blades are mounted vertically and spaced approximately 3/4" (19) center to center.

SCREEN

1/2" x .063" (13 x 1.6) square mesh aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

EXTENDED SILL

.081" (2.1) formed aluminum with end dams.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

5 lbs. per sq. ft. (24 kg/m²)

MAXIMUM SINGLE SECTION SIZE

Shall be 48" x 96" (1219 x 2438). Lifting lugs provided on louvers 48" x 72" (1219 x 1829) and larger.

Louvers larger than the maximum factory assembly size will require field assembly of

FEATURES

- 45% Free Area.
- Closely spaced vertical blades prevent the penetration of wind-driven rain, reducing damage and additional operating expenses.
- Published performance ratings based on testing in accordance with AMCA Publication 500L.
- Excellent pressure drop performance.
- Aluminum construction for low maintenance and high resistance to corrosion.
- All welded construction.
- Visible mullion construction. Hidden mullions and continuous blade construction are not available.

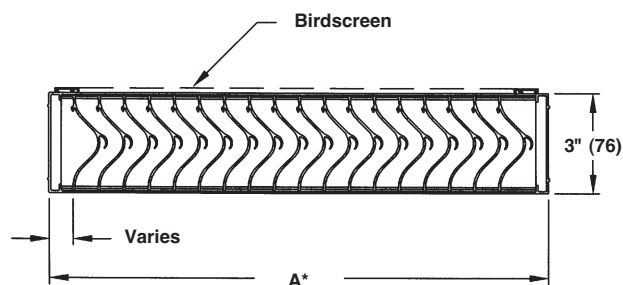
VARIATIONS

Variations to the basic design of these louvers are available at additional cost. They include:

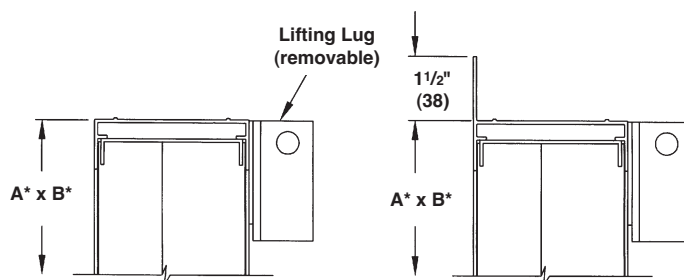
- Filter racks.
- A variety of bird and insect screens.
- Selection of finishes: baked enamel (modified fluoropolymer), epoxy, Kynar, Pearledize 50 & 70, prime coat, clear and color anodize. (Some variation in anodize color consistency is possible).

All variations are available at additional cost.

Consult Reliable for other special require-




FRAME CONSTRUCTION

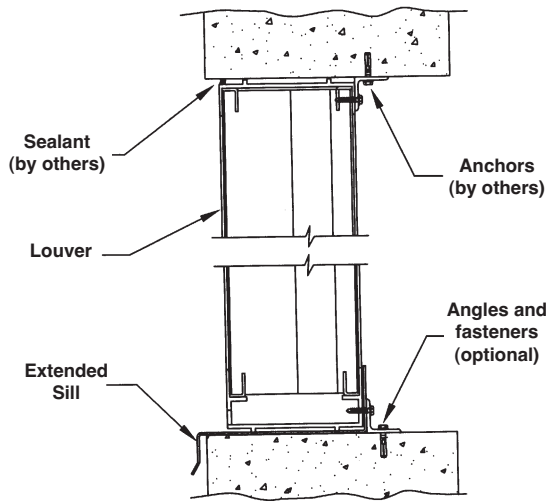


Dimensions in inches, parenthesis () indicate millimeters.

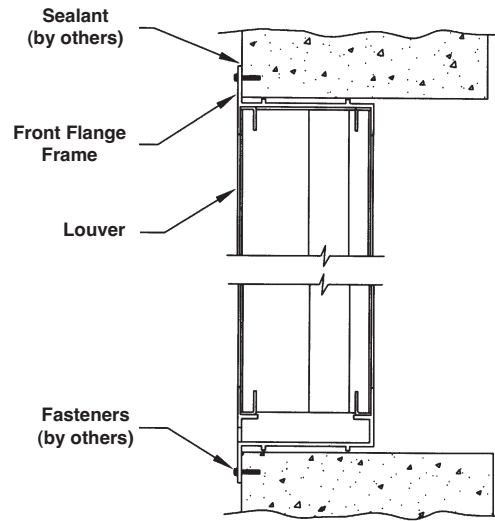
*Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

Standard Frame

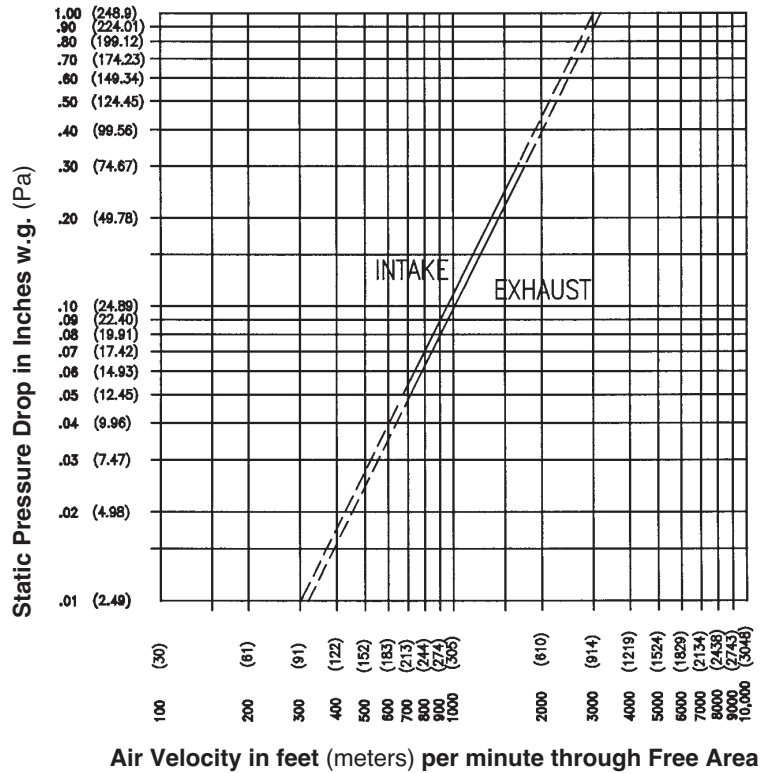


Flange Mount



Options available at additional cost.

PRESSURE DROP



FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 3RRGV.
Width – Inches and Meters

	12	18	24	30	36	42	48
	0.30	0.46	0.61	0.76	0.91	1.07	1.22
12	0.22	0.37	0.52	0.66	0.81	0.96	1.11
0.30	0.02	0.03	0.05	0.06	0.08	0.09	0.10
18	0.43	0.71	1.00	1.28	1.57	1.85	2.14
0.46	0.04	0.07	0.09	0.12	0.15	0.17	0.20
24	0.63	1.06	1.48	1.90	2.32	2.75	3.17
0.61	0.06	0.10	0.14	0.18	0.22	0.26	0.29
30	0.84	1.40	1.96	2.52	3.08	3.64	4.20
0.76	0.08	0.13	0.18	0.23	0.29	0.34	0.39
36	1.05	1.74	2.44	3.14	3.84	4.53	5.23
0.91	0.10	0.16	0.23	0.29	0.36	0.42	0.49
42	1.25	2.09	2.92	3.76	4.59	5.43	6.26
1.07	0.12	0.19	0.27	0.35	0.43	0.50	0.58
48	1.46	2.43	3.40	4.38	5.35	6.32	7.29
1.22	0.14	0.23	0.32	0.41	0.50	0.59	0.68
54	1.66	2.77	3.88	4.99	6.10	7.21	8.32
1.37	0.15	0.26	0.36	0.46	0.57	0.67	0.77
60	1.87	3.12	4.37	5.61	6.86	8.11	9.35
1.52	0.17	0.29	0.41	0.52	0.64	0.75	0.87
66	2.08	3.46	4.85	6.23	7.62	9.00	10.39
1.68	0.19	0.32	0.45	0.58	0.71	0.84	0.97
72	2.28	3.81	5.33	6.85	8.37	9.89	11.42
1.83	0.21	0.35	0.50	0.64	0.78	0.92	1.06
78	2.49	4.15	5.81	7.47	9.13	10.79	12.45
1.98	0.23	0.39	0.54	0.69	0.85	1.00	1.16
84	2.70	4.49	6.29	8.09	9.88	11.68	13.48
2.13	0.25	0.42	0.58	0.75	0.92	1.09	1.25
90	2.90	4.84	6.77	8.71	10.64	12.57	14.51
2.29	0.27	0.45	0.63	0.81	0.99	1.17	1.35
96	3.11	5.18	7.25	9.32	11.40	13.47	15.54
2.44	0.289	0.482	0.67	0.87	1.06	1.25	1.45



Reliable Products certifies that the 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 ratings and wind driven rain ratings only.

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall possess stationary vertical blades designed to prevent the penetration of wind-driven rain. Louver blades shall be contained within a 3" (76) frame. Louver components (heads, jambs, sill and blades) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall limit single section sizes to 48" x 96" (1219 x 2438) and shall withstand a wind load of 20 lbs. per sq. ft. (.96 kPa) (equivalent of a 90 mph wind [145 kph] - specifier may substitute any loading required).

Louvers shall be Reliable Model 3RRVG extruded 6063T5 aluminum alloy construction as follows:

- Frame: .062" (1.6) wall thickness, caulking surfaces provided.
- Blades: .040" (1) wall thickness, installed vertically on approximately .75" (19) centers.
- Screen: .050" x .063" (13 x 1.6) square mesh aluminum bird screen in removable frame.
- Finish: Select finish specification from Reliable Finishes Brochure.

WIND-DRIVEN RAIN PERFORMANCE

Test size is: 39" x 39" (.99 x .99) core area, 41" x 41" (1.04 x 1.04) nominal. Free Area of test louver is 5.18 ft.² (.48m²).

Wind Velocity mph (kph)	Rainfall rate in./hr. (mm/hr.)	Core Velocity FPM (m/s) ¹	Airflow cfm (m ³ /min)	Free area velocity ₂ fpm (m/s)	Effectiveness Ratio	Class _{3, 4}	Discharge Loss Class ₅ Intake
29 (46.4)	3 (76)	967 (5)	10,412 (294)	2,010 (10.0)	100%	A	1
50 (80.5)	8 (203)	974 (5)	10,484 (296)	2,024 (10.1)	100%	A	1

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver. 5 m/s is the maximum core velocity utilized in this test.
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind-Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to .095
C	0.949 to 0.80
D	Below 0.8

- The 3RRGV provides class A performance at all velocities up to and including 5 m/s core velocity.
- Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Discharge Loss Classes:

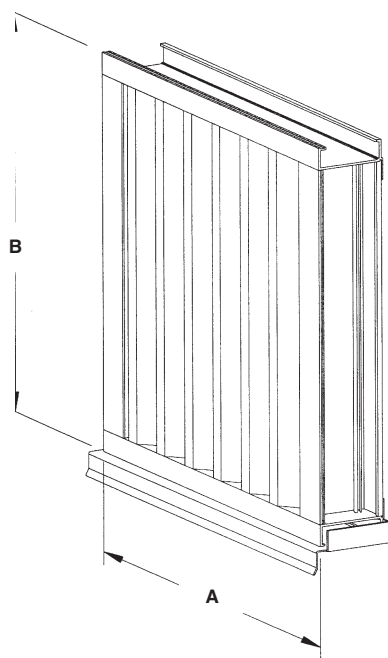
Class	Discharge Loss Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

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



4RRV WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER

EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

4" (102) deep, 6063T5 extruded aluminum with .080" (2) nominal wall thickness.

BLADES

6063T5 extruded aluminum .080" (2) nominal wall thickness. Blades are mounted vertically and spaced approximately 1 3/4" (44) center to center.

SCREEN

3/4" x .051" (19 x 1.3) expanded, flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

EXTENDED SILL

.081" (2.1) formed aluminum with end dams.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

8 lbs. per sq. ft. (39 kg/m²)

MAXIMUM SINGLE SECTION SIZE

Shall be 48" x 96" (1219 x 2438). Lifting lugs provided on louvers 48" x 72" (1219 x 1829) and larger.

Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.

FEATURES

- 41% Free Area.
- Closely spaced vertical blades prevent the penetration of wind-driven rain, reducing damage and additional operating expenses.
- Published performance ratings based on testing in accordance with AMCA Publication 500L.
- Excellent pressure drop performance.
- Aluminum construction for low maintenance and high resistance to corrosion.
- All welded construction.
- Visible mullion construction. Hidden mullions and continuous blade construction are not available.

VARIATIONS

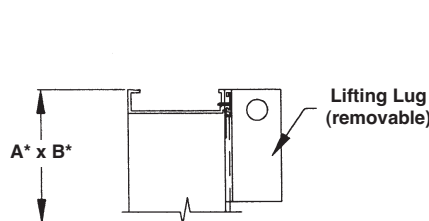
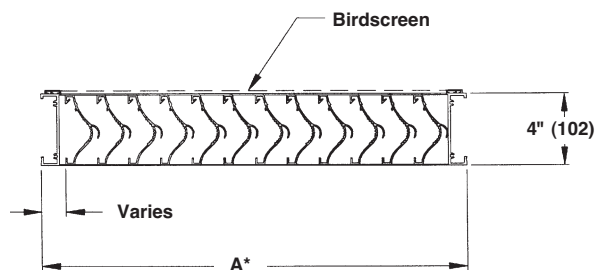
Variations to the basic design of these louvers are available at additional cost. They include:

- Filter racks.
- A variety of bird and insect screens.
- Selection of finishes: baked enamel (modified fluoropolymer), epoxy, Kynar, Pearledize 50 & 70, prime coat, clear and color anodize. (Some variation in anodize color consistency is possible).

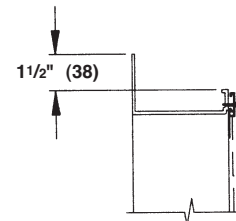
All variations are available at additional cost.

Consult Reliable for other special requirements.

FRAME CONSTRUCTION




STANDARD



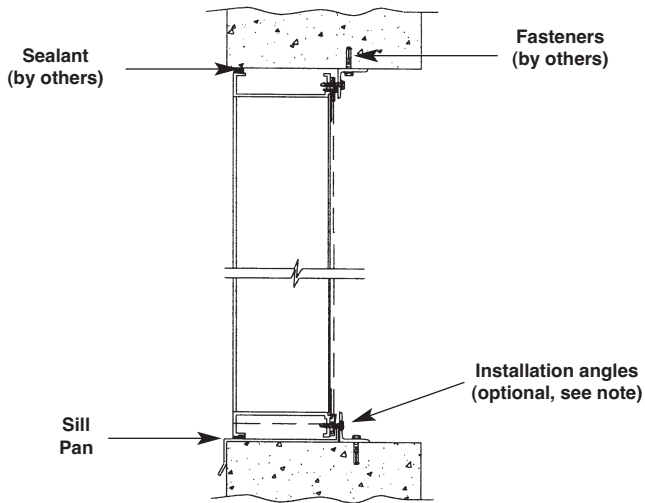
INTEGRAL FLANGE

Dimensions in inches, parenthesis () indicate millimeters.

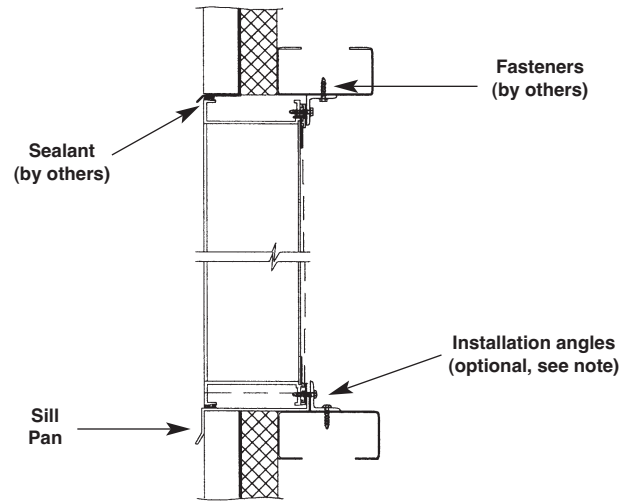
*Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A-WIDE	B-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

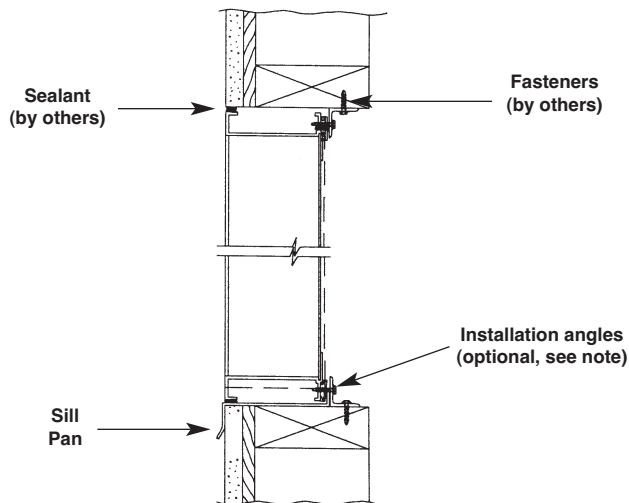
Masonry Wall



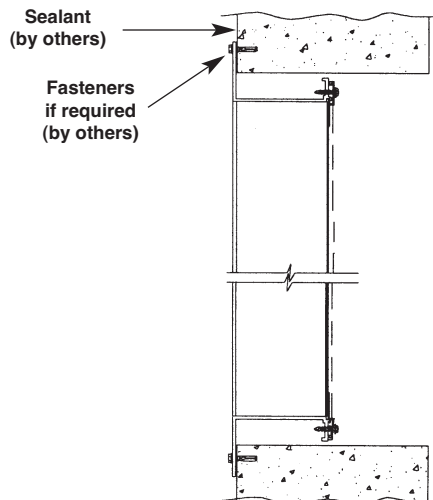
Metal Panel Wall



Wood Installation

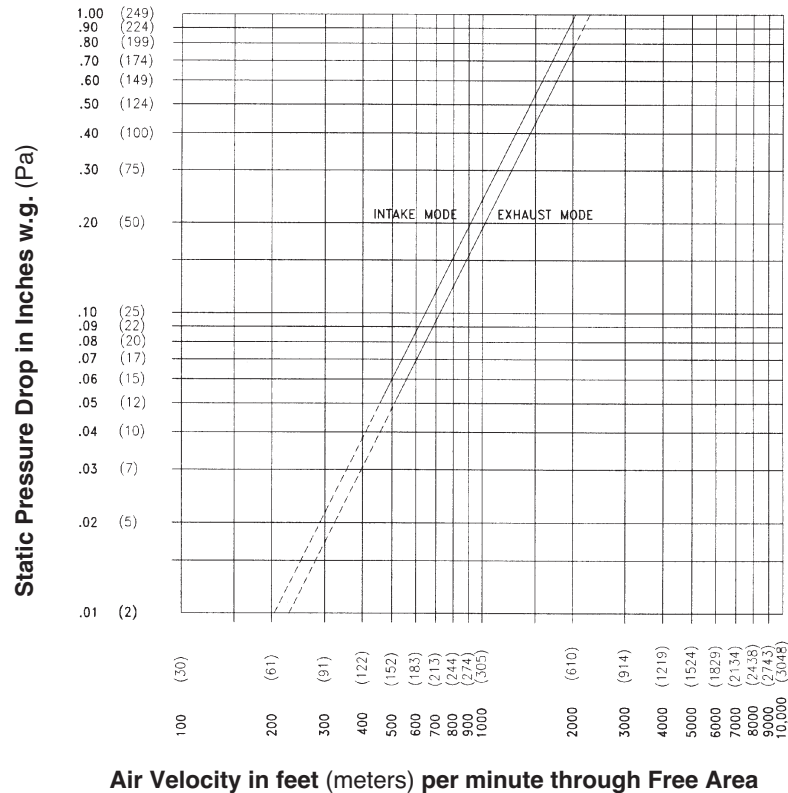


Flange Mount



INSTALLATION ANGLE NOTE: Installation clip or continuous angles are available from Reliable at additional cost. Optional clip angles are 2" long and should be installed around the perimeter no more than 6" from corners and at 24" maximum c-c between. Two screws per clip are provided for angle-to-louver connection. Optional continuous angles are provided without holes for the perimeter in full lengths when possible or in the same length as the louver sections when necessary. Screws are provided for angle-to-louver connection for installation at 6" from corners and 24" maximum c-c for continuous angles. Angles are 1 1/2" x 1 1/2" x 1/8" thick aluminum and fasteners are #10 x 1" long self-drilling plated steel screws. Fasteners to connect angles to the surrounding structure are not provided. **Installation using these angles, fasteners and spacing is adequate for windloads up to 40 psf (1.91kPa) assuming adequate connection to structure is provided (standard louver windload design is 20 psf [.96kPa], higher windload capability available, consult Reliable).** Other angle sizes and types are available at additional cost.

PRESSURE DROP



FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 4RRV.
Width – Inches and Meters

	12	18	24	30	36	42	48
	0.30	0.46	0.61	0.76	0.91	1.07	1.22
12	0.11	0.22	0.30	0.38	0.48	0.56	0.67
0.30	0.01	0.02	0.03	0.04	0.05	0.05	0.06
18	0.27	0.54	0.74	0.94	1.21	1.41	1.68
0.46	0.03	0.05	0.07	0.09	0.11	0.13	0.16
24	0.43	0.86	1.18	1.51	1.94	2.26	2.69
0.61	0.04	0.08	0.11	0.14	0.18	0.21	0.25
30	0.59	1.18	1.63	2.07	2.66	3.11	3.70
0.76	0.06	0.11	0.15	0.19	0.25	0.29	0.34
36	0.75	1.51	2.07	2.64	3.39	3.95	4.71
0.91	0.07	0.14	0.19	0.25	0.32	0.37	0.44
42	0.91	1.83	2.51	3.20	4.11	4.80	5.71
1.07	0.09	0.17	0.23	0.30	0.38	0.45	0.53
48	1.08	2.15	2.96	3.76	4.84	5.65	6.51
1.22	0.10	0.20	0.28	0.35	0.45	0.53	0.61
54	1.24	2.47	3.40	4.33	5.57	6.49	7.73
1.37	0.12	0.23	0.32	0.40	0.52	0.60	0.72
60	1.40	2.80	3.85	4.89	6.29	7.34	8.74
1.52	0.13	0.26	0.36	0.46	0.59	0.68	0.81
66	1.56	3.12	4.29	5.46	7.02	8.19	9.75
1.68	0.15	0.29	0.40	0.51	0.65	0.76	0.91
72	1.72	3.44	4.73	6.02	7.74	9.04	10.76
1.83	0.16	0.32	0.44	0.56	0.72	0.84	1.00
78	1.88	3.76	5.18	6.59	8.47	9.88	11.77
1.98	0.18	0.35	0.48	0.61	0.79	0.92	1.09
84	2.04	4.09	5.62	7.15	9.20	10.73	12.77
2.13	0.19	0.38	0.52	0.67	0.86	1.00	1.19
90	2.21	4.41	6.06	7.72	9.92	11.58	13.78
2.29	0.21	0.41	0.56	0.72	0.92	1.08	1.28
96	2.37	4.73	6.51	8.28	10.65	12.42	14.79
2.44	0.22	0.44	0.61	0.77	0.99	1.16	1.38

Ratings do not include the effect of a bird screen.



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Furnish and install as specified hereinafter where shown on plans or as described in schedules. Louvers shall possess stationary vertical blades designed to prevent the penetration of wind-driven rain. Louver blades shall be contained within a 4" (102) frame. Louver components (heads, jambs, sill and blades) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall limit single section sizes to 48" x 96" (1219 x 2438) and shall withstand a wind load of 20 lbs. per sq. ft. (.96 kPa) (equivalent of a 90 mph wind [145 kph] - specifier may substitute any loading required).

Louvers shall be Reliable Model 4RRV extruded 6063T5 aluminum alloy construction as follows:

Frame: .080" (2) wall thickness, caulking surfaces provided.
Blades: .080" (2) wall thickness, installed vertically on approximately 1.75" (44) centers.
Screen: 3/4" x .051" (19 x 1.3) expanded, flattened aluminum bird screen in removable frame.
Extended Sill: .081" (2.1) formed aluminum with end dams.
Finish: Select finish specification from Reliable Finishes Brochure.

WIND-DRIVEN RAIN PERFORMANCE

Test size is: 46" x 46" (1.17 x 1.17) core area, 48" x 48" (1.22 x 1.22) nominal. Free Area of test louver is 6.51 ft.² (.61m²).

Wind Velocity mph (kph)	Rainfall rate in./hr. (mm/hr.)	Core Velocity FPM (m/s) ¹	Airflow cfm (m ³ /min)	Free area velocity ₂ fpm (m/s)	Effectiveness Ratio	Class ₃	Discharge Loss Class ₄ Intake
29 (46.4)	3 (76)	687 (3.5)	10,095 (286)	1,551 (7.9)	100%	A	3
50 (80.5)	8 (203)	581 (3.0)	8,537 (242)	1,311 (6.7)	99.4%	A	3
50 (80.5)	8 (203)	686 (3.5)	10,080 (285)	1,548 (7.9)	98.9%	B	3

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver. 3.5 m/s is the maximum core velocity utilized in this test.
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind-Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to 99
B	0.989 to .095
C	0.949 to 0.80
D	Below 0.8

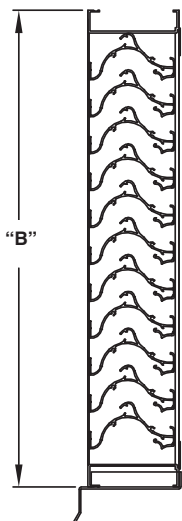
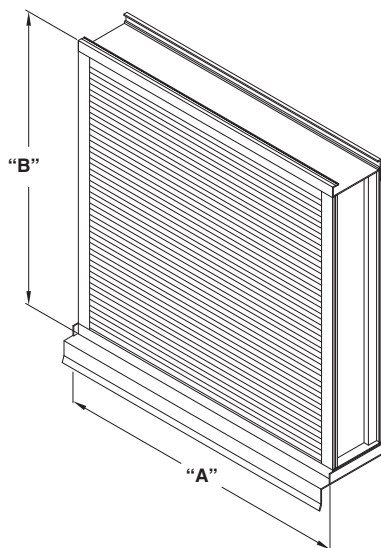
- Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Discharge Loss Classes:

Class	Discharge Loss Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

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

4DDWRG WIND-DRIVEN RAIN STATIONARY LOUVER EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

4" (102) deep, 6063T6 extruded aluminum with .081" (2.1) nominal wall thickness.

BLADES

6063T6 extruded aluminum .063" (1.6) nominal wall thickness. Double drainable blades are sightproof.

SCREEN

5/8" x .040" (16 x 1) expanded flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

FINISH

Mill.

MINIMUM SIZE

12"w x 6"h (305 x 153).

APPROXIMATE SHIPPING WEIGHT

7 lbs. per sq. ft. (34.2 kg/m²)

MAXIMUM FACTORY ASSEMBLY SIZE

Shall be 75 sq. ft. (7m²) per section. Single sections shall not exceed 120" x 90"h (3048 x 2286) or 90"w x 120"h (2286 x 3048). Louvers larger than the maximum single section size will require field assembly of smaller sections.

SUPPORTS

Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, assembly configuration or windload.

Consult Reliable for additional information.

FEATURES

- Horizontal architectural blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses.
- AMCA certified wind-driven rain results.
- Published performance ratings based on testing in accordance with AMCA Publication 511.
- 40% Free Area.
- Aluminum construction for low maintenance and high resistance to corrosion.

VARIATIONS

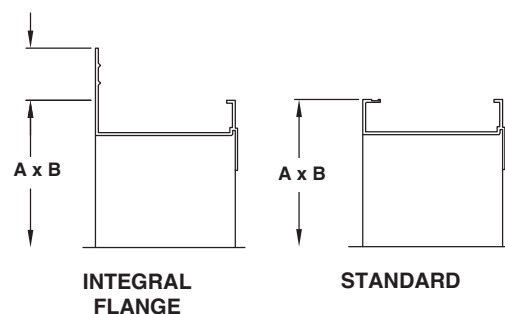
- Extended sill.
- Hinged frame.
- Front or rear security bars.
- Filter racks.
- Installation angles.
- A variety of bird and insect screens.

Finishes:

- Prime coat.
- Baked enamel (modified fluoropolymer).
- Epoxy
- Pearledize 50 & 70.
- Kynar.
- Clear and color anodize.


Consult Reliable for other special requirements.

FRAME CONSTRUCTION

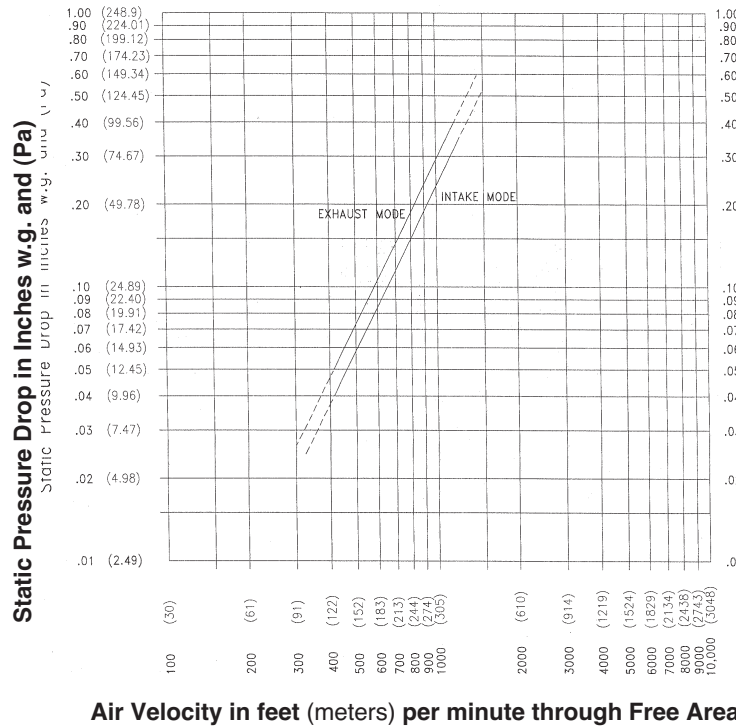


Dimensions in inches, parenthesis () indicate millimeters.

*Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

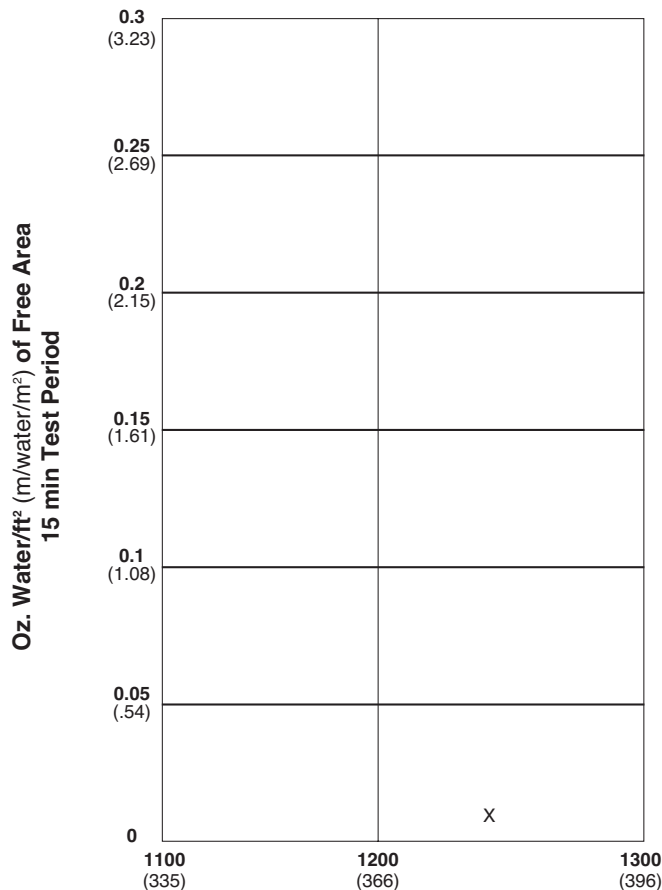
PRESSURE DROP



WATER PENETRATION GRAPH

Test size 48" x 48" (1219 x 1219)

Beginning point of water penetration at .01 oz./sq. ft. is above 1250 fpm (381 m/min.)



Ratings do not include the effect of a bird screen.



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FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 4DDWRG.
Width – Inches and Meters

Height	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
18	0.30	0.49	0.67	0.86	1.04	1.23	1.42	1.60	1.79	1.97	2.16	2.34	2.53	2.71	2.90	3.08	3.27	3.45	3.64
24	0.30	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.15	0.17	0.18	0.20	0.22	0.23	0.25	0.27	0.29	0.30	0.34
30	0.42	0.71	1.00	1.29	1.58	1.87	2.16	2.45	2.74	3.03	3.32	3.61	3.90	4.19	4.48	4.77	5.06	5.35	5.64
36	0.46	0.04	0.07	0.09	0.12	0.15	0.17	0.20	0.23	0.25	0.28	0.31	0.34	0.36	0.39	0.42	0.44	0.47	0.50
42	0.58	0.97	1.36	1.76	2.15	2.55	2.94	3.34	3.73	4.12	4.52	4.91	5.31	5.70	6.10	6.49	6.89	7.28	7.67
48	0.61	0.05	0.09	0.13	0.16	0.20	0.24	0.27	0.31	0.35	0.38	0.42	0.46	0.49	0.53	0.57	0.60	0.64	0.68
54	0.78	1.32	1.85	2.39	2.92	3.46	3.99	4.53	5.06	5.60	6.13	6.67	7.21	7.74	8.28	8.81	9.35	9.88	10.42
60	0.76	0.07	0.12	0.17	0.22	0.27	0.32	0.37	0.42	0.47	0.52	0.57	0.62	0.67	0.72	0.77	0.82	0.87	0.92
66	0.93	1.67	2.21	2.85	3.49	4.13	4.77	5.41	6.05	6.69	7.33	7.97	8.61	9.25	9.89	10.53	11.17	11.81	12.45
72	0.91	0.09	0.15	0.21	0.27	0.32	0.38	0.44	0.50	0.56	0.62	0.68	0.74	0.80	0.86	0.92	0.98	1.04	1.10
78	1.09	1.83	2.58	3.32	4.06	4.81	5.55	6.30	7.04	7.79	8.53	9.28	10.02	10.77	11.51	12.26	13.00	13.75	14.49
84	1.07	0.04	0.07	0.10	0.13	0.16	0.19	0.22	0.25	0.28	0.31	0.34	0.37	0.39	0.42	0.45	0.48	0.51	0.54
90	1.24	2.09	2.94	3.79	4.64	5.49	6.33	7.18	8.03	8.88	9.73	10.58	11.43	12.28	13.13	13.98	14.83	15.68	16.53
96	1.22	0.12	0.19	0.27	0.35	0.43	0.51	0.59	0.67	0.75	0.83	0.91	0.98	1.06	1.14	1.22	1.30	1.38	1.46
102	1.44	2.43	3.42	4.42	5.41	6.40	7.39	8.38	9.37	10.36	11.35	12.34	13.33	14.32	15.31	16.30	17.29	18.28	19.27
108	1.37	0.13	0.23	0.32	0.41	0.50	0.59	0.69	0.78	0.87	0.96	1.06	1.15	1.24	1.33	1.42	1.52	1.61	1.70
114	1.60	2.69	3.79	4.88	5.98	7.07	8.17	9.26	10.36	11.45	12.55	13.64	14.74	15.83	16.93	18.02	19.12	20.21	21.31
120	1.52	0.15	0.25	0.35	0.45	0.56	0.66	0.76	0.86	0.96	1.06	1.17	1.27	1.37	1.47	1.57	1.68	1.78	1.88
126	1.75	2.95	4.15	5.35	6.55	7.75	8.95	10.15	11.35	12.55	13.75	14.95	16.14	17.34	18.54	19.74	20.94	22.14	23.34
132	1.68	0.16	0.27	0.39	0.50	0.61	0.72	0.83	0.94	1.06	1.17	1.28	1.39	1.50	1.61	1.72	1.84	1.95	2.06
138	1.96	3.30	4.64	5.98	7.32	8.66	10.00	11.34	12.68	14.02	15.36	16.70	18.04	19.38	20.72	22.06	23.40	24.75	26.09
144	1.83	0.18	0.31	0.43	0.56	0.68	0.81	0.93	1.05	1.18	1.30	1.43	1.55	1.68	1.80	1.93	2.05	2.18	2.30
150	2.11	3.55	5.00	6.44	7.89	9.33	10.78	12.22	13.67	15.11	16.56	18.01	19.45	20.90	22.34	23.79	25.23	26.68	28.12
156	1.98	0.20	0.33	0.46	0.60	0.73	0.87	1.00	1.14	1.27	1.41	1.54	1.67	1.81	1.94	2.08	2.21	2.35	2.48
162	2.26	3.81	5.36	6.91	8.46	10.01	11.56	13.11	14.66	16.21	17.76	19.31	20.86	22.41	23.96	25.51	27.06	28.61	30.16
168	2.13	0.21	0.35	0.50	0.64	0.79	0.93	1.08	1.22	1.36	1.51	1.65	1.80	1.94	2.08	2.23	2.37	2.52	2.66
174	2.47	4.16	5.85	7.54	9.23	10.92	12.61	14.30	15.99	17.68	19.37	21.07	22.76	24.45	26.14	27.83	29.52	31.21	32.90
180	2.29	0.23	0.39	0.54	0.70	0.86	1.02	1.17	1.33	1.49	1.64	1.80	1.96	2.12	2.27	2.43	2.59	2.75	2.90
186	2.62	4.41	6.21	8.01	9.80	11.60	13.39	15.19	16.98	18.78	20.57	22.37	24.16	25.96	27.76	29.55	31.35	33.14	34.94
192	2.44	0.24	0.41	0.58	0.74	0.91	1.08	1.25	1.41	1.58	1.75	1.91	2.08	2.25	2.41	2.58	2.75	2.92	3.08
198	2.77	4.67	6.57	8.47	10.37	12.27	14.17	16.07	17.97	19.87	21.77	23.67	25.57	27.47	29.37	31.27	33.17	35.07	36.97
204	2.59	0.26	0.43	0.61	0.79	0.96	1.14	1.32	1.49	1.67	1.85	2.02	2.20	2.38	2.56	2.73	2.91	3.09	3.26
210	2.98	5.02	7.06	9.10	11.14	13.18	15.22	17.26	19.31	21.35	23.39	25.43	27.47	29.51	31.55	33.59	35.64	37.68	39.72
216	2.74	0.28	0.47	0.66	0.85	1.04	1.23	1.42	1.61	1.80	1.99	2.18	2.36	2.55	2.74	2.93	3.12	3.31	3.50
222	3.13	5.28	7.42	9.57	11.71	13.86	16.00	18.15	20.30	22.44	24.59	26.73	28.88	31.03	33.17	35.32	37.46	39.61	41.75
228	2.90	0.29	0.49	0.69	0.89	1.09	1.29	1.49	1.69	1.89	2.09	2.29	2.49	2.69	2.89	3.08	3.28	3.48	3.68
234	3.28	5.53	7.78	10.03	12.28	14.53	16.78	19.04	21.29	23.54	25.79	28.04	30.29	32.54	34.79	37.04	39.29	41.54	43.79
240	3.05	0.31	0.51	0.72	0.93	1.14	1.35	1.56	1.77	1.98	2.19	2.40	2.61	2.82	3.03	3.24	3.44	3.65	3.86

WIND-DRIVEN RAIN PERFORMANCE

Test size is 1m x 1m (39" x 39") core area, 1.04m x 1.12m (41" x 44") nominal. Free Area of test louver is 5.45 ft² (.51m²).

29 mph (13 m/s) wind & 3" (76) per hour rain conditions

50 mph (22 m/s) wind & 8" (203) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.9%	A
0 (0)	0 (0)	0 (0)	99.9%	A
0 (0)	0 (0)	0 (0)	99.9%	A
283 (1.4)	3052 (86.4)	726 (221.3)	99.9%	A
376 (1.9)	4049 (114.7)	964 (293.8)	99.9%	A
464 (2.4)	4992 (141.4)	1190 (362.7)	99.1%	A
578 (2.9)	6224 (176.3)	1482 (451.9)	96.5%	B
681 (3.5)	7334 (207.7)	1746 (532.2)	93.2%	C

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.9%	A
101 (.5)	1084 (30.7)	259 (78.9)	99.8%	A
175 (.9)	1889 (53.5)	349 (136.9)	99.7%	A
296 (1.5)	3189 (90.3)	759 (231.3)	99.3%	A
390 (2.0)	4199 (118.9)	1000 (304.8)	98.3%	B
491 (2.5)	5289 (149.8)	1259 (383.7)	97.2%	B
567 (2.9)	6104 (172.9)	1454 (443.2)	96.0%	B
687 (3.5)	7392 (209.3)	1762 (537.1)	91.6%	C

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind Driven Rain Penetration Classes:

Class Effectiveness

A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

- Intake Discharge Loss Class 3

Discharge Loss Coefficient is calculated by dividing a louver's actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Discharge Loss Classes:

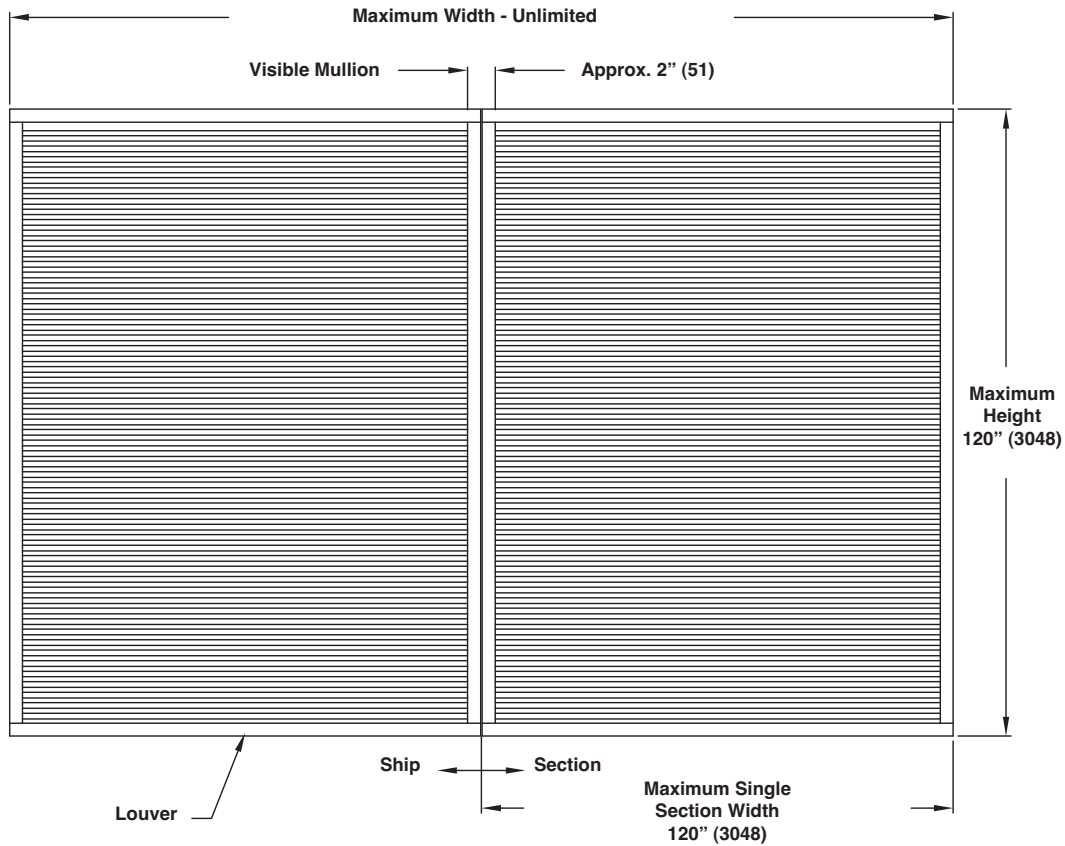
Class Discharge Loss Coefficient

- 0.4 and above
- 0.3 to 0.399
- 0.2 to 0.299
- 0.199 and below

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

5. The AMCA Wind Driven Rain Test is performed in a laboratory environment and incorporates controlled wind, water and system airflow effects. In actual field installations, storms may create conditions not considered by the AMCA test. Penthouse and similar applications where wind can pass through multiple louvers in an enclosure is another condition that is not simulated by AMCA tests. These applications can create elevated water penetration rates through any louver. Because of these uncontrolled situations, it is recommended that provisions to manage water penetration through louvers be included in the building design.

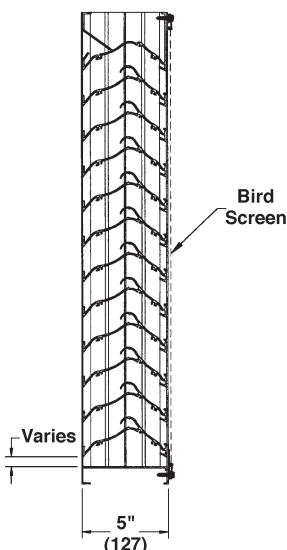
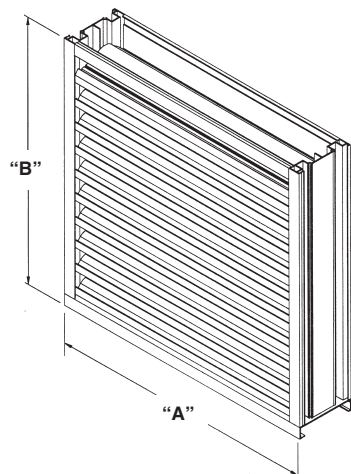
TYPICAL INSTALLATION DETAILS



1. Reference separate Installation Instruction sheets for installation details. It is the responsibility of the installing contractor to properly install the louvers per the appropriate detail.
2. Louvers wider than the maximum single section width will be shipped in multiple sections and will require field assembly. Field assembly is not by Reliable.



5DDWRG AND 5DDWR WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

5" (127) deep, 6063T5 extruded aluminum with .081" (2.1) nominal wall thickness.

BLADES

5DDWRG - .062 (1.6) blades
5DDWR - .081 (2.1) blades
6063T5 extruded aluminum .063" (1.6) nominal wall thickness. Double drainable blades are sightproof and spaced approximately 2" (51) center to center.

SCREEN

5/8" x .040" (16 x 1) expanded flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

7 lbs. per sq. ft. (34.2 kg/m²)

MAXIMUM FACTORY ASSEMBLY SIZE

Single sections shall not exceed 120" x 90" (3048 x 2286) or 90" w x 120" h (2286 x 3048). Louvers larger than the maximum single section size will require field assembly of smaller sections.

SUPPORTS

Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, assembly configuration or windload.

Consult Reliable for additional information.

FEATURES

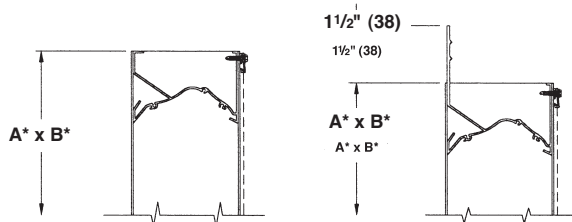
- Closely spaced horizontal blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses.
- Tested in the AMCA 5DD-L Wind-Driven Rain Penetration Test.
- Published performance ratings based on testing in accordance with AMCA Publication 511.
- 44% Free Area.
- Excellent pressure drop performance.
- Aluminum construction for low maintenance and high resistance to corrosion.

VARIATIONS

- Extended sill.
- Hinged frame.
- Front or rear security bars.
- Filter racks.
- Installation angles.
- A variety of bird and insect screens.
- Selection of finishes: prime coat, baked enamel (modified fluoropolymer), epoxy, Pearledize 50 & 70, Kynar, clear and color anodize. (Some variation in anodize color consistency is possible).

Consult Reliable for other special requirements.

FRAME CONSTRUCTION



Dimensions in inches, parenthesis () indicate millimeters.

*Units furnished 1/4" (6) smaller than given opening dimensions.

LEED Material Information

VOC Content (g/l) - 0

Manufacturing Locations


(MR 5.1)

Geneva, AL 36340

Recycled Content
(MR 4.1 & 4.2)

10% Post Consumer

30% Pre-Consumer

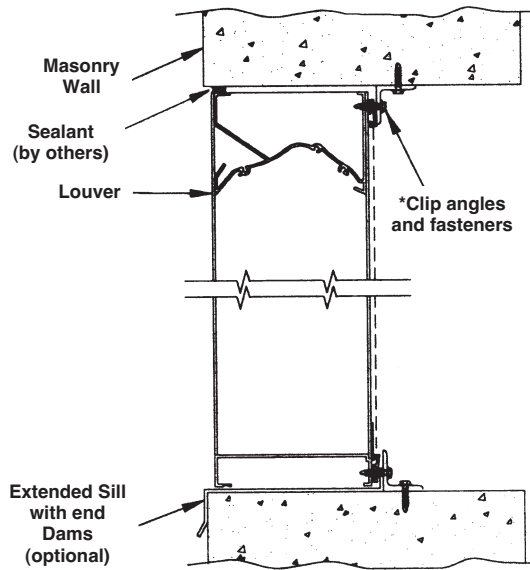
TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

TYPICAL INSTALLATION DETAILS

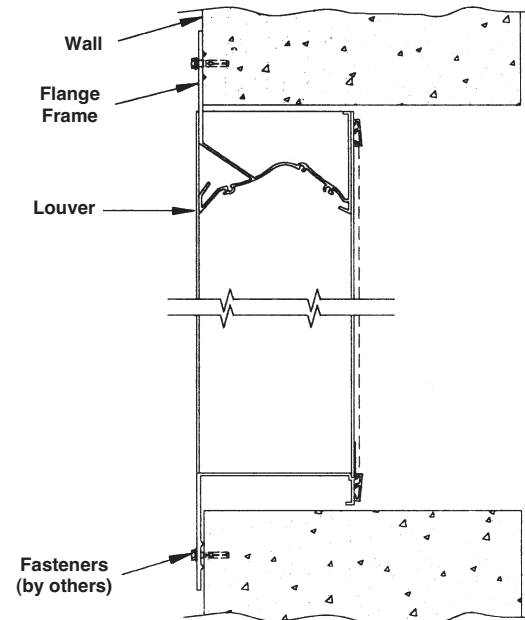
5DDWRG

5DDWR

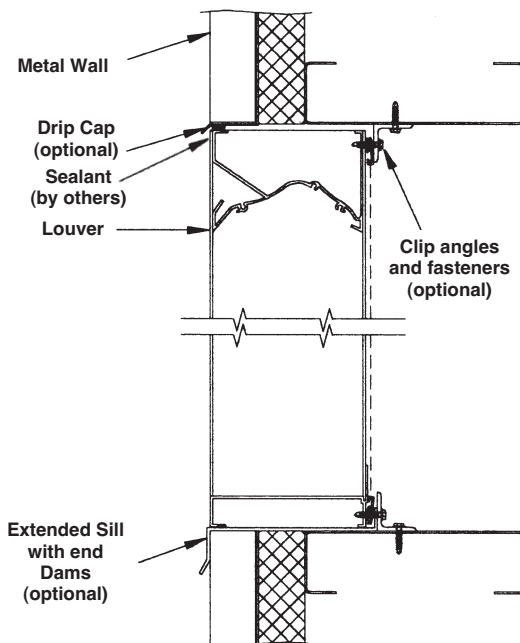
Masonry Wall



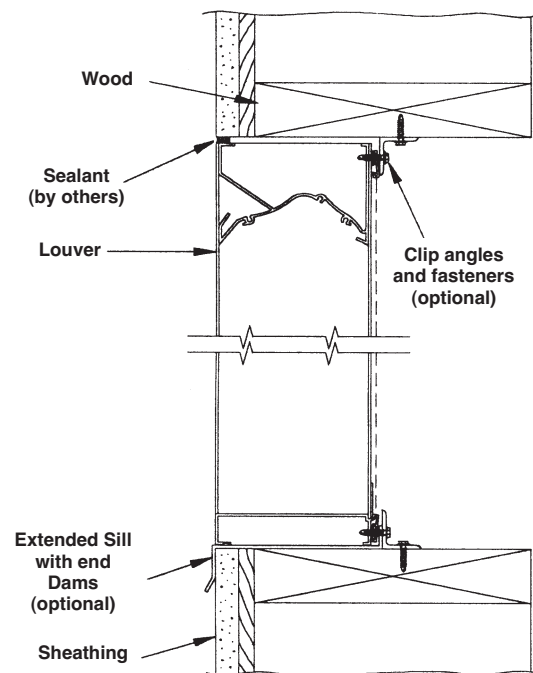
Flange Mount



Metal Panel Wall

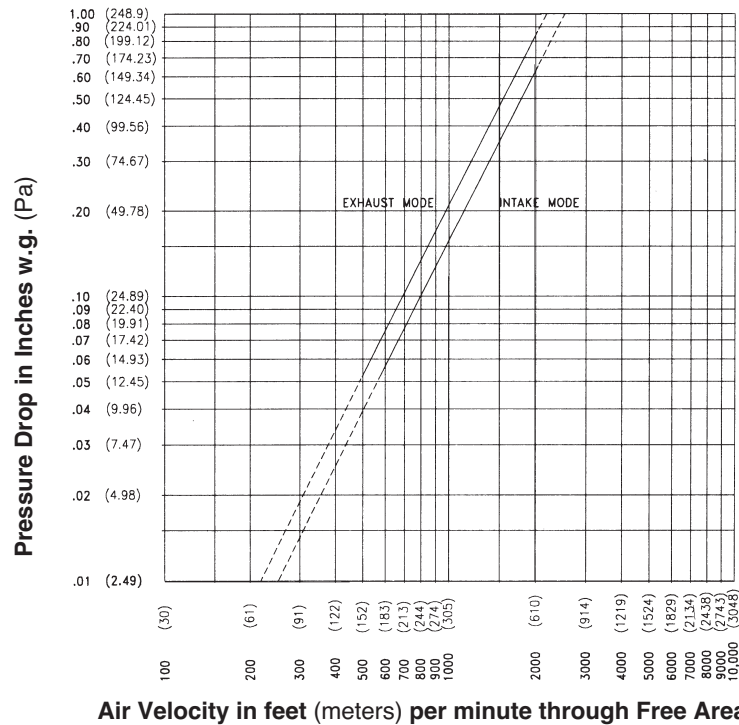


Wood Installation



PRESSURE DROP

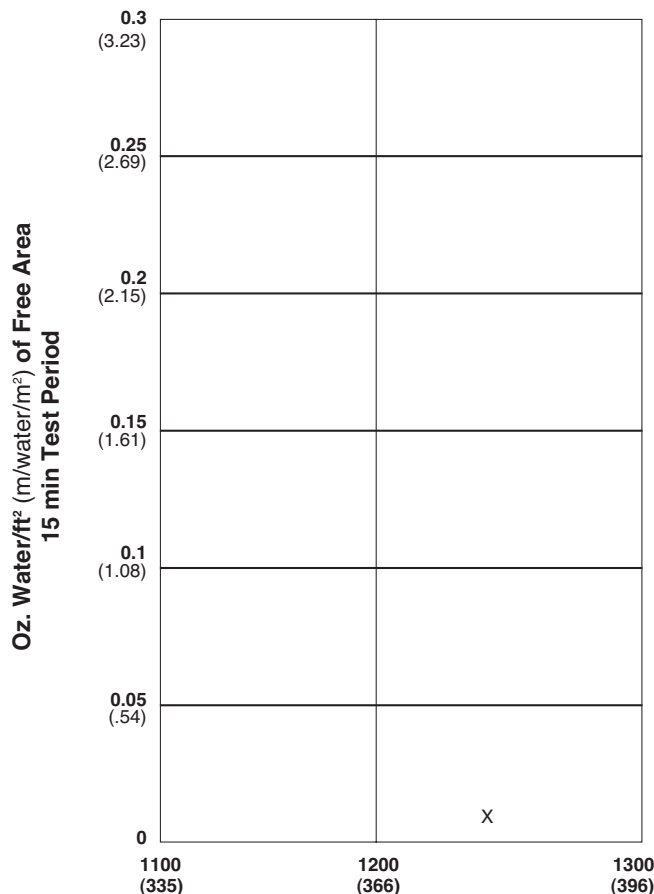
Test size 48" wide x 48" high (1219 x 1219).



Ratings do not include the effect of a bird screen.

WATER PENETRATION GRAPH

Test size 48" x 48" (1219 x 1219)
Beginning point of water penetration at .01 oz./sq. ft. is above 1250 fpm (381 m/min.)



Reliable Products certifies that the 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 ratings, water penetration ratings and wind driven rain ratings only.

5DDWRG
5DDWR
WIND-DRIVEN RAIN PERFORMANCE

Test size is 1m x 1m (39" x 39") core area, 1.04m x 1.12m (41" x 44") nominal. Free Area of test louver is 5.45 ft² (.51m²).

29 mph (47 kph) wind & 3" (76) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.9%	A
98 (.5)	1060 (30)	226 (1.1)	99.9%	A
197 (1.0)	2119 (60)	389 (2.0)	99.9%	A
287 (1.5)	3179 (90)	583 (3.0)	99.9%	A
381 (1.9)	4239 (120)	778 (4.0)	99.9%	A
476 (2.4)	5299 (150)	972 (4.9)	99.9%	A
586 (3.0)	6358 (180)	1167 (5.9)	99.8%	A
673 (3.4)	7418 (210)	1361 (6.9)	99.7%	A
763 (3.9)	8478 (240)	1556 (7.9)	98.9%	B
882 (4.5)	9537 (270)	1750 (8.9)	97.3%	B
987 (5.0)				B

50 mph (80 kph) wind & 8" (203) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.4%	A
106 (.5)	1060 (30)	226 (1.1)	99.3%	A
184 (.9)	2119 (60)	389 (2.0)	99.2%	A
282 (1.4)	3179 (90)	583 (3.0)	99.0%	A
408 (1.9)	4239 (120)	778 (4.0)	99.0%	A
495 (2.5)	5299 (150)	972 (4.9)	98.9%	B
567 (2.9)	6358 (180)	1167 (5.9)	98.9%	B
680 (3.5)	7418 (210)	1361 (6.9)	98.3%	B
791 (4.0)	8478 (240)	1556 (7.9)	97.2%	B
882 (4.5)	9537 (270)	1750 (8.9)	95.1%	B
982 (5.0)				D

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
- Free Area of test size is calculated per AMCA standard 5DD-L.
- Wind Driven Rain Penetration Classes:

Class Effectiveness

- A 1 to .99
- B 0.989 to 0.95
- C 0.949 to 0.80
- D Below 0.8

- Intake Discharge Loss Class 2

Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics. Discharge Loss Classes:

Class Discharge Loss Coefficient

- 1 0.4 and above
- 2 0.3 to 0.399
- 3 0.2 to 0.299
- 4 0.199 and below

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

- The AMCA Wind Driven Rain Test is performed in a laboratory environment and incorporates controlled wind, water and system airflow effects. In actual field installations, storms may create conditions not considered by the AMCA test. Penthouse and similar applications where wind can pass through multiple louvers in an enclosure is another condition that is not simulated by AMCA tests. These applications can create elevated water penetration rates through any louver. Because of these uncontrolled situations, it is recommended that provisions to manage water penetration through louvers be included in the building design.

FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 5DDWRG - 5DDWR. Width – Inches and Meters

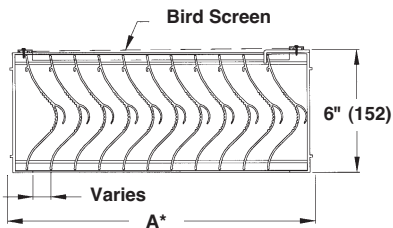
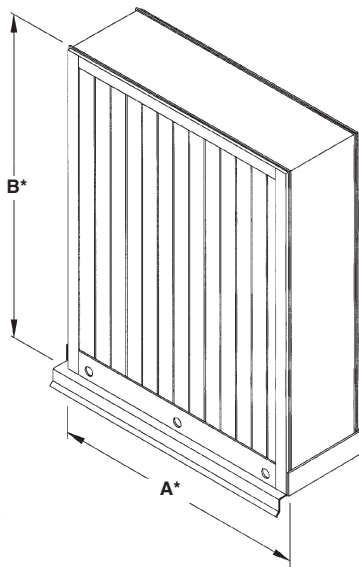
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
12	0.24	0.39	0.55	0.70	0.85	1.00	1.15	1.31	1.46	1.61	1.76	1.92	2.07	2.22	2.37	2.52	2.68	2.83	2.98
0.30	0.02	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.15	0.16	0.18	0.19	0.21	0.22	0.23	0.25	0.26	0.28
18	0.44	0.72	1.00	1.29	1.57	1.85	2.13	2.41	2.69	2.97	3.25	3.53	3.81	4.09	4.37	4.65	4.93	5.21	5.49
0.46	0.04	0.07	0.09	0.12	0.15	0.17	0.20	0.22	0.25	0.28	0.30	0.33	0.35	0.38	0.41	0.43	0.46	0.48	0.51
24	0.65	1.06	1.46	1.87	2.28	2.69	3.10	3.51	3.92	4.33	4.73	5.14	5.55	5.96	6.37	6.78	7.19	7.60	8.00
0.61	0.06	0.10	0.14	0.17	0.21	0.25	0.29	0.33	0.36	0.40	0.44	0.48	0.52	0.55	0.59	0.63	0.67	0.71	0.74
30	0.85	1.39	1.92	2.46	3.00	3.53	4.07	4.61	5.15	5.68	6.22	6.76	7.29	7.83	8.37	8.90	9.44	9.98	10.52
0.76	0.08	0.13	0.18	0.23	0.28	0.33	0.38	0.43	0.48	0.53	0.58	0.63	0.68	0.73	0.78	0.83	0.88	0.93	0.98
36	1.05	1.72	2.38	3.05	3.71	4.38	5.04	5.71	6.37	7.04	7.70	8.37	9.04	9.70	10.37	11.03	11.70	12.36	13.03
0.91	0.10	0.16	0.22	0.28	0.35	0.41	0.47	0.53	0.59	0.65	0.72	0.78	0.84	0.90	0.96	1.03	1.09	1.15	1.21
42	1.26	2.05	2.84	3.64	4.43	5.22	6.02	6.81	7.60	8.40	9.19	9.98	10.78	11.57	12.36	13.16	13.95	14.74	15.54
1.07	0.12	0.19	0.26	0.34	0.41	0.49	0.56	0.63	0.71	0.78	0.85	0.93	1.00	1.08	1.15	1.22	1.30	1.37	1.45
48	1.46	2.38	3.30	4.22	5.15	6.07	6.99	7.91	8.83	9.75	10.68	11.60	12.52	13.44	14.36	15.28	16.21	17.13	18.05
1.22	0.14	0.22	0.31	0.39	0.48	0.56	0.65	0.74	0.82	0.91	0.99	1.08	1.16	1.25	1.34	1.42	1.51	1.59	1.68
54	1.66	2.71	3.76	4.81	5.86	6.91	7.96	9.01	10.06	11.11	12.16	13.21	14.26	15.31	16.36	17.41	18.46	19.51	20.56
1.37	0.15	0.25	0.35	0.45	0.55	0.64	0.74	0.84	0.94	1.03	1.13	1.23	1.33	1.42	1.52	1.62	1.72	1.81	1.91
60	1.87	3.04	4.22	5.40	6.58	7.76	8.93	10.11	11.29	12.47	13.65	14.82	16.00	17.18	18.36	19.54	20.72	21.89	23.07
1.52	0.17	0.28	0.39	0.50	0.61	0.72	0.83	0.94	1.05	1.16	1.27	1.38	1.49	1.60	1.71	1.82	1.93	2.04	2.15
66	2.07	3.37	4.68	5.99	7.29	8.60	9.91	11.21	12.52	13.83	15.13	16.44	17.74	19.05	20.36	21.66	22.97	24.28	25.58
1.68	0.19	0.31	0.44	0.56	0.68	0.80	0.92	1.04	1.16	1.29	1.41	1.53	1.65	1.77	1.89	2.01	2.14	2.26	2.38
72	2.27	3.71	5.14	6.58	8.01	9.44	10.88	12.31	13.75	15.18	16.62	18.05	19.49	20.92	22.36	23.79	25.23	26.66	28.09
1.83	0.21	0.34	0.48	0.61	0.74	0.88	1.01	1.15	1.28	1.41	1.55	1.68	1.81	1.95	2.08	2.21	2.35	2.48	2.61
78	2.47	4.04	5.60	7.16	8.73	10.29	11.85	13.41	14.98	16.54	18.10	19.67	21.23	22.79	24.35	25.92	27.48	29.04	30.61
1.98	0.23	0.38	0.52	0.67	0.81	0.96	1.10	1.25	1.39	1.54	1.68	1.83	1.97	2.12	2.26	2.41	2.56	2.70	2.85
84	2.68	4.37	6.06	7.75	9.44	11.13	12.82	14.52	16.21	17.90	19.59	21.28	22.97	24.66	26.35	28.04	29.73	31.43	33.12
2.13	0.25	0.41	0.56	0.72	0.88	1.04	1.19	1.35	1.51	1.66	1.82	1.98	2.14	2.29	2.45	2.61	2.77	2.92	3.08
90	2.88	4.70	6.52	8.34	10.16	11.98	13.80	15.62	17.44	19.25	21.07	22.89	24.71	26.53	28.35	30.17	31.99	33.81	35.63
2.29	0.27	0.44	0.61	0.78	0.94	1.11	1.28	1.45	1.62	1.79	1.96	2.13	2.30	2.47	2.64	2.81	2.98	3.14	3.31





6RRSV WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER

EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

6" (152) deep, 6063T5 extruded aluminum with .095" (2.4) nominal wall thickness.

BLADES

6063T5 extruded aluminum .063" (1.6) nominal wall thickness. Blades are mounted vertically and spaced approximately 1 1/2" (38) center to center.

SCREEN

1/2" x .063" (13 x 1.6) square mesh aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

EXTENDED SILL

.081" (2.1) formed aluminum.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

10 lbs. per sq. ft. (49 kg/m²)

MAXIMUM SINGLE SECTION SIZE

Shall be 48" x 96" (1219 x 2438). Lifting lugs provided on louvers 48" x 48" (1219 x 1219) and larger.

Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.

FEATURES

The 6RRSV offers:

- 42% free area.
- Closely spaced vertical blades prevent the penetration of wind-driven rain, reducing damage and additional operating expenses.
- Published performance ratings based on testing in accordance with AMCA Publication 511.
- Excellent pressure drop performance.
- Withstands 30 psf (1.4 kPa) windload.
- Aluminum construction for low maintenance and high resistance to corrosion.
- All welded construction.
- Visible mullion construction. Hidden mullions and continuous blade construction are not available.

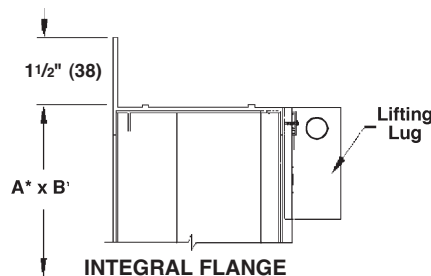
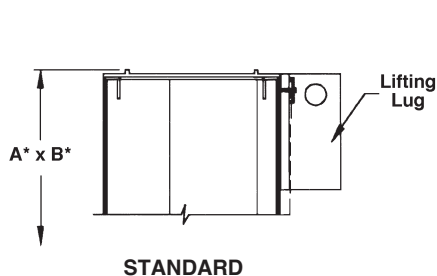
VARIATIONS

Variations to the basic design of this louver are available at additional cost. They include:

- Filter racks.
- A variety of bird and insect screens.
- Selection of finishes: baked enamel (modified fluoropolymer), epoxy, Kynar, Pearle-dize 50 & 70, prime coat, integral color and clear anodize. (Some variation in anodize color consistency is possible).

Consult Reliable for other special requirements.

FRAME CONSTRUCTION



LEED Material Information

VOC Content (g/l) - 0

Manufacturing Locations
(MR 5.1)


Geneva, AL 36340

Recycled Content
(MR 4.1 & 4.2)

10% Post Consumer
30% Pre-Consumer

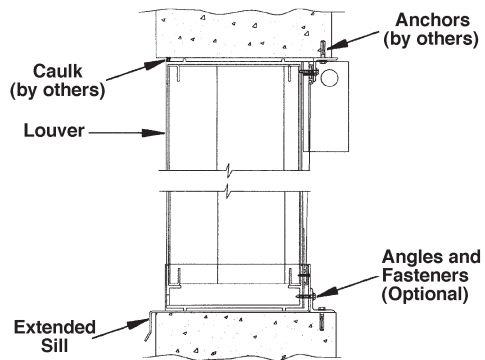
Dimensions in inches, parenthesis () indicate millimeters.

*Units furnished 1/4" (6) smaller than given opening dimensions.

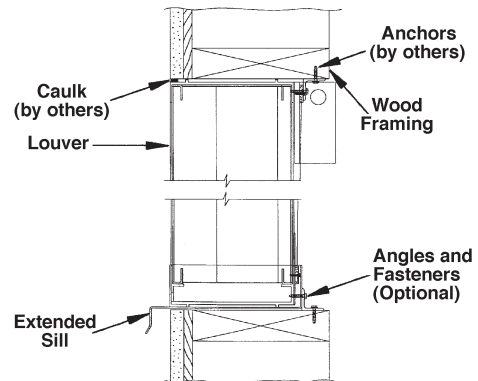
TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

TYPICAL INSTALLATION DETAILS

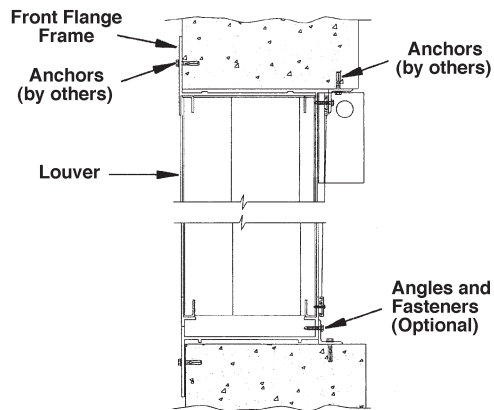
Masonry Wall



Wood Installation

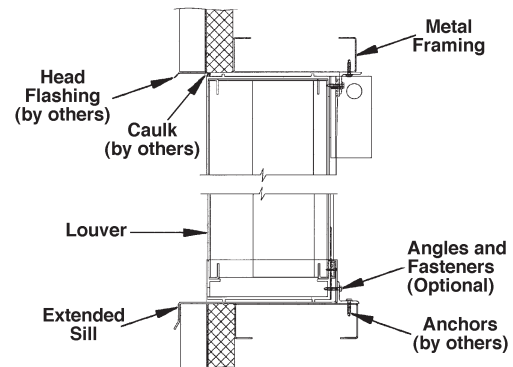


Flange Mount

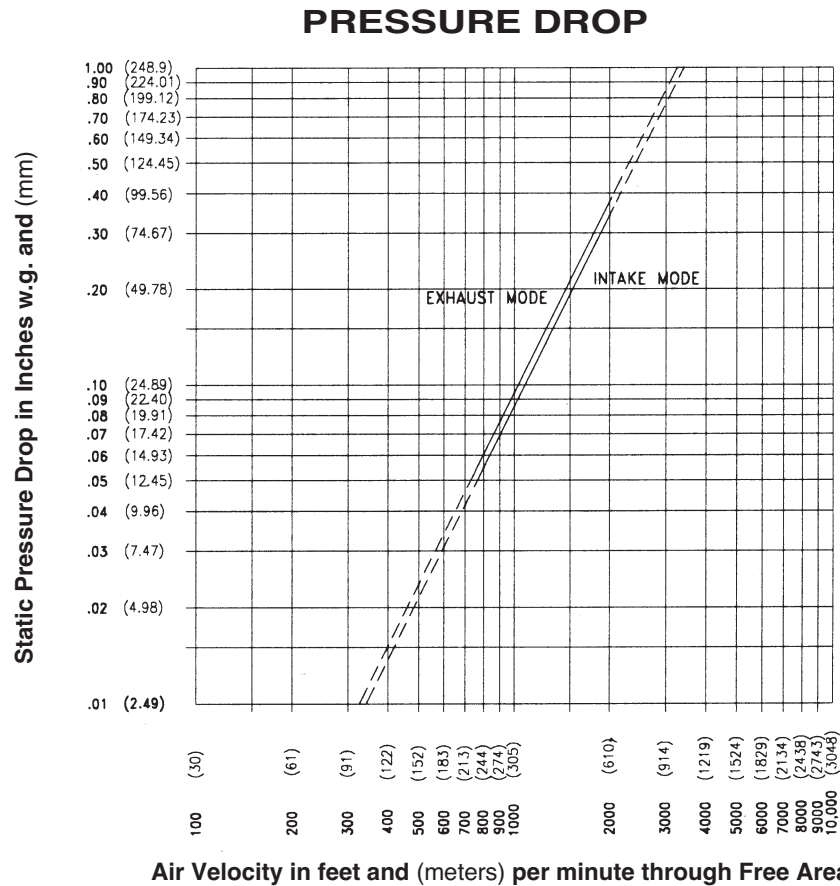


(No Extended Sill provided with Flange Frame)

Metal Panel Wall



Options available at additional cost.



Ratings do not include the effect of a bird screen.

FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 6RRSV.
Width – Inches and Meters

Height – Inches and Meters

	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
12	0.11	0.18	0.25	0.32	0.39	0.45	0.52	0.59	0.66	0.73	0.80	0.87	0.94	1.01	1.07	1.14	1.21	1.28	1.35
0.30	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09	0.10	0.11	0.11	0.12	0.13
18	0.33	0.54	0.74	0.95	1.16	1.36	1.57	1.78	1.98	2.19	2.40	2.60	2.81	3.02	3.22	3.43	3.64	3.84	4.05
0.46	0.03	0.05	0.07	0.09	0.11	0.13	0.15	0.17	0.18	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38
24	0.55	0.89	1.24	1.58	1.93	2.27	2.62	2.96	3.31	3.65	4.00	4.34	4.68	5.03	5.37	5.72	6.06	6.41	6.75
0.61	0.05	0.08	0.12	0.15	0.18	0.21	0.24	0.28	0.31	0.34	0.37	0.40	0.44	0.47	0.50	0.53	0.56	0.60	0.63
30	0.77	1.25	1.73	2.22	2.70	3.18	3.66	4.15	4.63	5.11	5.59	6.08	6.56	7.04	7.52	8.01	8.49	8.97	9.45
0.76	0.07	0.12	0.16	0.21	0.25	0.30	0.34	0.39	0.43	0.48	0.52	0.57	0.61	0.65	0.70	0.74	0.79	0.83	0.88
36	0.99	1.61	2.23	2.85	3.47	4.09	4.71	5.33	5.95	6.57	7.19	7.81	8.43	9.05	9.67	10.29	10.91	11.53	12.15
0.91	0.09	0.15	0.21	0.27	0.32	0.38	0.44	0.50	0.55	0.61	0.67	0.73	0.78	0.84	0.90	0.96	1.01	1.07	1.13
42	1.21	1.97	2.73	3.48	4.24	5.00	5.76	6.52	7.27	8.03	8.79	9.55	10.31	11.06	11.82	12.58	13.34	14.10	14.85
1.07	0.11	0.18	0.25	0.32	0.39	0.46	0.54	0.61	0.68	0.75	0.82	0.89	0.96	1.03	1.10	1.17	1.24	1.31	1.38
48	1.43	2.32	3.22	4.12	5.01	5.91	6.80	7.70	8.60	9.49	10.39	11.28	12.18	13.08	13.97	14.87	15.76	16.66	17.56
1.22	0.13	0.22	0.30	0.38	0.47	0.55	0.63	0.72	0.80	0.88	0.97	1.05	1.13	1.22	1.30	1.38	1.47	1.55	1.63
54	1.65	2.68	3.72	4.75	5.78	6.82	7.85	8.88	9.92	10.95	11.99	13.02	14.05	15.09	16.12	17.15	18.19	19.22	20.26
1.37	0.15	0.25	0.35	0.44	0.54	0.63	0.73	0.83	0.92	1.02	1.11	1.21	1.31	1.40	1.50	1.60	1.69	1.79	1.88
60	1.87	3.04	4.21	5.38	6.55	7.73	8.90	10.07	11.24	12.41	13.58	14.76	15.93	17.10	18.27	19.44	20.61	21.79	22.96
1.52	0.17	0.28	0.39	0.50	0.61	0.72	0.83	0.94	1.05	1.15	1.26	1.37	1.48	1.59	1.70	1.81	1.92	2.03	2.13
66	2.09	3.40	4.71	6.02	7.33	8.64	9.94	11.25	12.56	13.87	15.18	16.49	17.80	19.11	20.42	21.73	23.04	24.35	25.66
1.68	0.19	0.32	0.44	0.56	0.68	0.80	0.92	1.05	1.17	1.29	1.41	1.53	1.66	1.78	1.90	2.02	2.14	2.26	2.39
72	2.31	3.76	5.20	6.65	8.10	9.54	10.99	12.44	13.89	15.33	16.78	18.23	19.67	21.12	22.57	24.02	25.46	26.91	28.36
1.83	0.21	0.35	0.48	0.62	0.75	0.89	1.02	1.16	1.29	1.43	1.56	1.70	1.83	1.96	2.10	2.23	2.37	2.50	2.64
78	2.53	4.11	5.70	7.28	8.87	10.45	12.04	13.62	15.21	16.79	18.38	19.96	21.55	23.13	24.72	26.30	27.89	29.47	31.06
1.98	0.24	0.38	0.53	0.68	0.82	0.97	1.12	1.27	1.41	1.56	1.71	1.86	2.00	2.15	2.30	2.45	2.59	2.74	2.89
84	2.75	4.47	6.19	7.92	9.64	11.36	13.08	14.81	16.53	18.25	19.98	21.70	23.42	25.15	26.87	28.59	30.31	32.04	33.76
2.13	0.26	0.42	0.58	0.74	0.90	1.06	1.22	1.38	1.54	1.70	1.86	2.02	2.18	2.34	2.50	2.66	2.82	2.98	3.14
90	2.97	4.83	6.69	8.55	10.41	12.27	14.13	15.99	17.85	19.71	21.57	23.44	25.30	27.16	29.02	30.88	32.74	34.60	36.46
2.29	0.28	0.45	0.62	0.80	0.97	1.14	1.31	1.49	1.66	1.83	2.01	2.18	2.35	2.53	2.70	2.87	3.04	3.22	3.39

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall possess stationary vertical blades designed to prevent the penetration of wind driven rain. Louver blades shall be contained within a 6" (152) frame. Extended sill shall be provided to capture and drain water to exterior of building. Louver components (heads, jambs, sill and blades) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate visible mullions on units larger than 48" x 96" (1219 x 2438). Louvers shall withstand a wind load of 30 lbs. per sq. ft. (1.4kPa) (specifier may substitute any loading required).

Louvers shall be Reliable Model 6RRSV extruded 6063T5 aluminum alloy construction as follows:

Frame:	.045" (2.4) wall thickness, caulking surfaces provided.
Blades:	.063" (1.6) wall thickness, installed vertically on approximately 1 1/2" (38) centers.
Extended Sill:	.081" (2.1) wall thickness, with upturned side panels to prevent water leakage.
Screen:	1/2" x .063" (13 x 1.6) square mesh aluminum bird screen in removable frame.
Finish:	Select finish specification from Reliable Finishes Brochure.

WIND-DRIVEN RAIN PERFORMANCE AMCA 500-L WIND-DRIVEN RAIN TEST

Test size is 1m x 1m (39" x 39") core area, 1.05m x 1.08m (41 1/4" x 42 5/16") nominal. Free Area of test louver is 4.86 ft² (.45m²).

Wind Velocity mph (kph)	Rain Fall Rate In./hr. (mm/hr.)	Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class _{3, 4}	Discharge Loss Class ₅ Intake
29 (46.4)	3 (76)	970 (5)	10,444 (295)	2,149 (10.9)	99.9%	A	2
50 (80.5)	8 (203)	982 (5)	10,570 (298)	2,175 (11.0)	99.8%	A	2

NOTES

- Core area is the open area of the louver face (face area less louver frames).
Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m). 5 m/s is the maximum core velocity utilized in this test.
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind Driven Rain Penetration Classes:

Class Effectiveness

A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

- The 6RRSV provides class A performance at all velocities up to and including 5 m/s core velocity.
- Discharge Loss Coefficient is calculated by dividing a louver's actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louver's airflow characteristics.

Class Discharge Loss Coefficient

1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

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

6. The AMCA Wind Driven Rain Test is performed in a laboratory environment and incorporates controlled wind, water and system airflow effects. In actual field installations, storms may create conditions not considered by the AMCA test. Penthouse and similar applications where wind can pass through multiple louvers in an enclosure is another condition that is not simulated by AMCA tests. These applications can create elevated water penetration rates through any louver. Because of these uncontrolled situations it is recommended that provisions to manage water penetration through louvers be included in the building design.

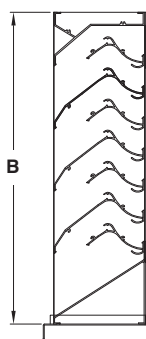
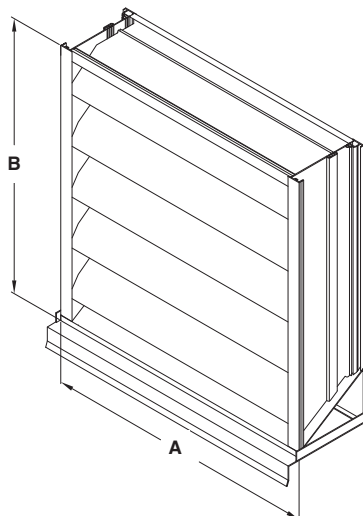


Reliable Products certifies that the Louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings and wind driven rain ratings only.



7375WR WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER

EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

Single frame design produced from 6063T6 extruded aluminum with .080" (2.1) nominal wall thickness. Frame depth is 7" (178).

BLADES

Sight-proof double blade design produced from 6063T6 extruded aluminum with .080" (2.1) nominal wall thickness. Blades are 7" (178) deep, positioned at 37 1/2" angle and spaced at approximately 43/4" (121) center to center. Interior blades are 3" (76) deep and positioned at approximately 23/8" (60) center to center alternating with full depth blades.

SCREEN

5/8" x .040" (16 x 1) expanded flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

EXTENDED SILL

.081" (2.1) formed aluminum with end dams. Not provided with front flange frame.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

8 lbs. per sq. ft. (39 kg/m²)

MAXIMUM FACTORY ASSEMBLY SIZE

Shall be 60 sq. ft. (3.5m²) per section, not to exceed 120" x 72"h (3048 x 1829) or 72"w x 120"h (1829 x 3048).

Louvers larger than the maximum single factory assembly size will require field assembly of smaller sections.

SUPPORTS

Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, assembly configuration or windload.

Consult Reliable for additional information.

FEATURES

- Two-piece horizontal alternating blade design. Provides protection from wind-driven rain penetration, reducing damage and additional operating expenses.
- 7" (102) deep exterior blades are continuous style without visible mullions.
- May be ordered without interior blades and frames at areas that are inactive or do not need wind-driven rain protection.
- Tested in the AMCA 500-L Wind-Driven Rain Penetration Test.
- Published performance ratings based on testing in accordance with AMCA Publication 500L.
- 45% Free Area.
- Aluminum construction for low maintenance and high resistance to corrosion.

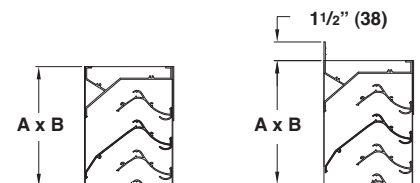
VARIATIONS

- Insulated or sheet blank-off panels
- Front or rear security bars.
- Filter racks.
- Installation angles.
- A variety of bird and insect screens.

Finishes:

- Prime coat.
- Baked enamel (modified fluoropolymer).
- Epoxy
- Pearledize 50 & 70.
- Kynar.
- Clear and color anodize.

Consult Reliable for other special requirements.




STANDARD

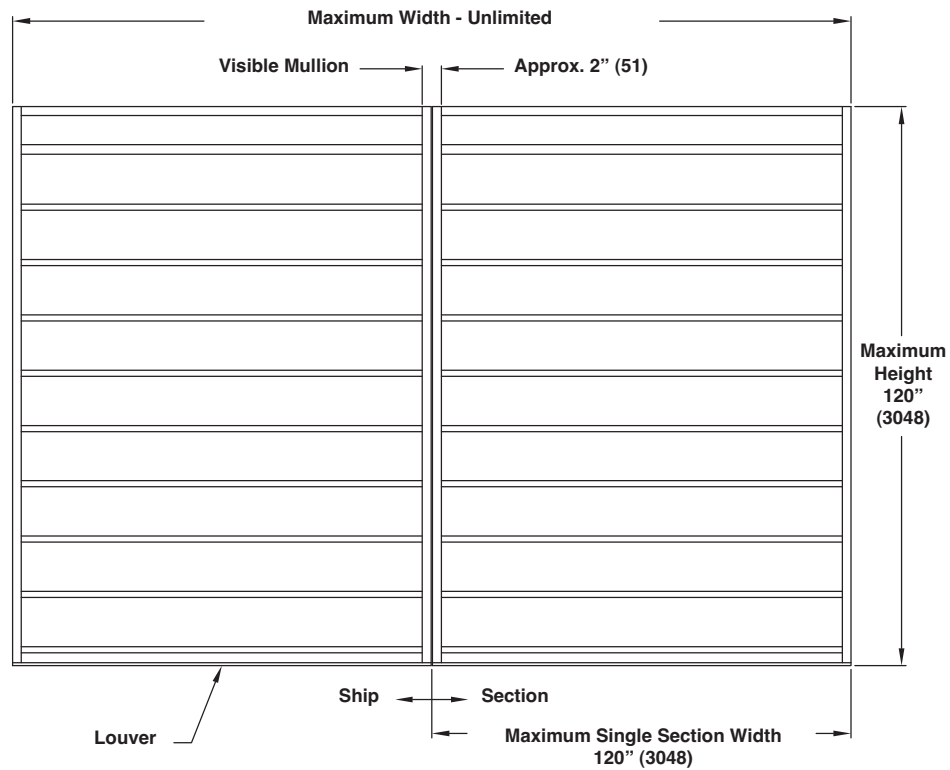
INTEGRAL FLANGE

Dimensions in inches, parenthesis () indicate millimeters.

*Units furnished 1/4" (6) smaller than given opening dimensions.

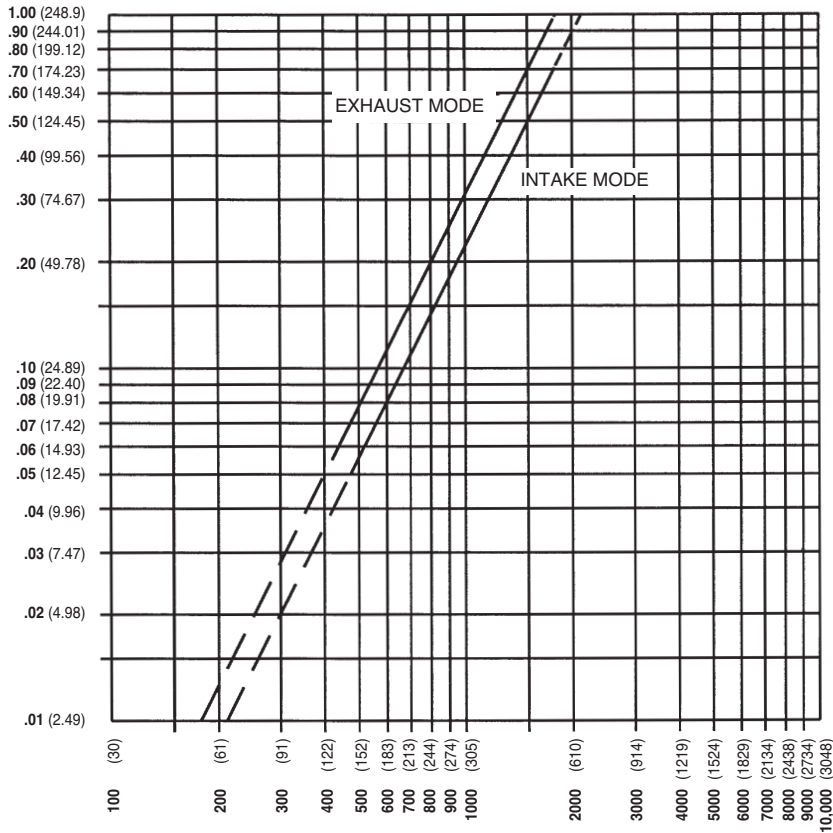
TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
<div><div>PROJECT ARCH./ENGR. REPRESENTATIVE</div><div> WebREPS 1-800-810-3280</div><div>LOCATION CONTRACTOR DATE</div></div>					

TYPICAL INSTALLATION DETAILS



1. Reference separate installation instruction sheets for installation details. It is the responsibility of the installing contractor to properly install the louvers per the appropriate detail.
2. Louvers wider than the maximum single section width will be shipped in multiple sections and will require field assembly. Field assembly is not by Reliable.

PRESSURE DROP

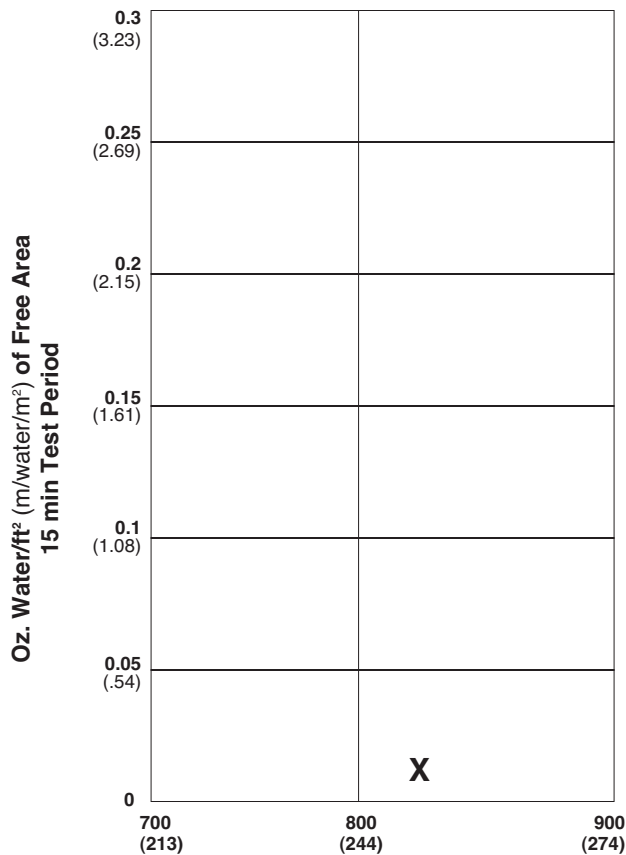


Ratings do not include the effect of a bird screen.

WATER PENETRATION GRAPH

Test size 48" x 48" (1219 x 1219)

Beginning point of water penetration at .01 oz./sq. ft. is 815 fpm (248 m/min.)



Reliable Products certifies that the 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 ratings and wind-driven rain ratings only.

Test size is 1m x 1m (39" x 39") core area, 1.04m x 1.12m (41" x 44") nominal. Free Area of test louver is 5.35 ft² (.50m²).

29 mph (47 kph) wind & 3" (76) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	99.9%	A
0 (0)	0 (0)	0 (0)	99.9%	A
198 (1.0)	2129 (603)	398 (2.0)	99.8%	A
284 (1.4)	3060 (86.7)	572 (2.9)	99.7%	A
370 (1.9)	3988 (113.0)	745 (3.8)	99.3%	A
468 (2.4)	5042 (142.8)	942 (4.8)	97.5%	B
605 (3.1)	6513 (184.4)	1217 (6.2)	79.2%	D
681 (3.5)	7335 (207.7)	1371 (7.0)	45.4%	D

50 mph (80 kph) wind & 8" (203) per hour rain conditions

Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class ₃
0 (0)	0 (0)	0 (0)	95.7%	B
99	1066	199	94.2%	C
191	2051	383	92.3%	C
279	3001	561	90.1%	C
400	4309	805	86.5%	C
505	5435	1016	82.3%	C
561	6041	1129	78.0%	D
672	7239	1353	65.0%	D

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

- Intake Discharge Loss Class 3

Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Discharge Loss Classes:

Class Discharge Loss Coefficient

1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

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

- The AMCA Wind Driven Rain Test is performed in a laboratory environment and incorporates controlled wind, water and system airflow effects. In actual field installations, storms may create conditions not considered by the AMCA test. Penthouse and similar applications where wind can pass through multiple louvers in an enclosure is another condition that is not simulated by AMCA tests. These applications can create elevated water penetration rates through any louver. Because of these uncontrolled situations, it is recommended that provisions to manage water penetration through louvers be included in the building design.

FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 7375WR.

Width – Inches and Meters

	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
12	0.14	0.23	0.32	0.41	0.50	0.59	0.67	0.76	0.85	0.94	1.03	1.12	1.21	1.29	1.38	1.47	1.56	1.65	1.74
0.30	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.10	0.11	0.12	0.13	0.14	0.15	0.15	0.16
18	0.46	0.75	1.04	1.32	1.61	1.90	2.19	2.47	2.76	3.05	3.34	3.62	3.91	4.20	4.48	4.77	5.06	5.35	5.63
0.46	0.04	0.07	0.10	0.12	0.15	0.18	0.20	0.23	0.26	0.28	0.31	0.34	0.36	0.39	0.42	0.44	0.47	0.50	0.52
24	0.60	0.97	1.35	1.72	2.09	2.47	2.84	3.22	3.59	3.96	4.34	4.71	5.08	5.46	5.83	6.20	6.58	6.95	7.33
0.61	0.06	0.09	0.13	0.16	0.19	0.23	0.26	0.30	0.33	0.37	0.40	0.44	0.47	0.51	0.54	0.58	0.61	0.65	0.68
30	0.92	1.49	2.06	2.64	3.21	3.78	4.35	4.93	5.50	6.07	6.64	7.22	7.79	8.36	8.93	9.50	10.08	10.65	11.22
0.76	0.09	0.14	0.19	0.25	0.30	0.35	0.40	0.46	0.51	0.56	0.62	0.67	0.72	0.78	0.83	0.88	0.94	0.99	1.04
36	1.06	1.72	2.37	3.03	3.69	4.35	5.01	5.67	6.33	6.98	7.64	8.30	8.96	9.62	10.28	10.94	11.60	12.25	12.91
0.91	0.10	0.16	0.22	0.28	0.34	0.40	0.47	0.53	0.59	0.65	0.71	0.77	0.83	0.89	0.96	1.02	1.08	1.14	1.20
42	1.38	2.23	3.09	3.95	4.81	5.66	6.52	7.38	8.24	9.09	9.95	10.81	11.66	12.52	13.38	14.24	15.09	15.95	16.81
1.07	0.13	0.21	0.29	0.37	0.45	0.53	0.61	0.69	0.77	0.85	0.93	1.01	1.08	1.16	1.24	1.32	1.40	1.48	1.56
48	1.51	2.46	3.40	4.34	5.29	6.23	7.18	8.12	9.06	10.01	10.95	11.89	12.84	13.78	14.73	15.67	16.61	17.56	18.50
1.22	0.14	0.23	0.32	0.40	0.49	0.58	0.67	0.76	0.84	0.93	1.02	1.11	1.19	1.28	1.37	1.46	1.55	1.63	1.72
54	1.65	2.68	3.71	4.74	5.77	6.80	7.83	8.86	9.89	10.92	11.95	12.98	14.01	15.04	16.07	17.10	18.13	19.16	20.19
1.37	0.15	0.25	0.35	0.44	0.54	0.63	0.73	0.82	0.92	1.02	1.11	1.21	1.30	1.40	1.49	1.59	1.69	1.78	1.88
60	1.97	3.20	4.43	5.66	6.89	8.11	9.34	10.57	11.80	13.03	14.26	15.49	16.72	17.94	19.17	20.40	21.63	22.86	24.09
1.52	0.18	0.30	0.41	0.53	0.64	0.75	0.87	0.98	1.10	1.21	1.33	1.44	1.55	1.67	1.78	1.90	2.01	2.13	2.24
66	2.11	3.42	4.74	6.05	7.37	8.68	10.00	11.31	12.63	13.94	15.26	16.57	17.89	19.20	20.52	21.83	23.15	24.46	25.78
1.68	0.20	0.32	0.44	0.56	0.69	0.81	0.93	1.05	1.17	1.30	1.42	1.54	1.66	1.79	1.91	2.03	2.15	2.28	2.40
72	2.43	3.94	5.46	6.97	8.48	10.00	11.51	13.02	14.54	16.05	17.57	19.08	20.59	22.11	23.62	25.13	26.65	28.16	29.68
1.83	0.23	0.37	0.51	0.65	0.79	0.93	1.07	1.21	1.35	1.49	1.63	1.77	1.92	2.06	2.20	2.34	2.48	2.62	2.76
78	2.57	4.17	5.77	7.37	8.97	10.57	12.17	13.77	15.37	16.97	18.57	20.17	21.77	23.37	24.97	26.57	28.17	29.77	31.37
1.98	0.24	0.39	0.54	0.69	0.83	0.98	1.13	1.28	1.43	1.58	1.73	1.88	2.02	2.17	2.32	2.47	2.62	2.77	2.92
84	2.89	4.68	6.48	8.28	10.08	11.88	13.68	15.48	17.28	19.07	20.87	22.67	24.47	26.27	28.07	29.87	31.67	33.46	35.26
2.13	0.27	0.44	0.60	0.77	0.94	1.10	1.27	1.44	1.61	1.77	1.94	2.11	2.28	2.44	2.61	2.78	2.94	3.11	3.28
90	3.02	4.91	6.79	8.68	10.56	12.45	14.33	16.22	18.10	19.99	21.87	23.76	25.64	27.53	29.41	31.30	33.18	35.07	36.95
2.29	0.28	0.46	0.63	0.81	0.98	1.16	1.33	1.51	1.68	1.86	2.03	2.21	2.38	2.56	2.74	2.91	3.09	3.26	3.44





745WR WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER

EXTRUDED ALUMINUM

STANDARD CONSTRUCTION

FRAME

Double frame design produced from 6063T5 extruded aluminum with .081" (2.1) nominal wall thickness. Exterior frame depth is 4" (102) and interior frame depth is 3" (76). Overall combined frame depth is 7" (178) nominal.

BLADES

Sight-proof double blade design produced from 6063T5 extruded aluminum with .081" (2.1) nominal wall thickness. Exterior blades are 4" (102) deep, positioned at 37¹/₂° angle and spaced at approximately 4³/₄" (121) center to center. Interior blades are 3" deep (76) and positioned at approximately 2³/₈" (60) center to center.

SCREEN

5/8" x .040" (16 x 1) expanded, flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

EXTENDED SILL

.081" (2.1) formed aluminum with end dams. Not provided with front flange frame.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

8 lbs. per sq. ft. (39 kg/m²)

MAXIMUM FACTORY ASSEMBLY SIZE

Standard 745WR – Shall be 37¹/₂ sq. ft. (3.5m²) per section, not to exceed 90"w x 60"h (2286 x 1524) or 60"w x 90"h (1524 x 2286). Exterior 4" Deep Frame & Blade Only – shall be 75 sq. ft. (7m²) per section, not to exceed 120"w x 90"h (3048 x 2286) or 90"w x 120"h (2286 x 3048).

Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.

SUPPORTS

Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, assembly configuration or windload.

Consult Reliable for additional information.

FEATURES

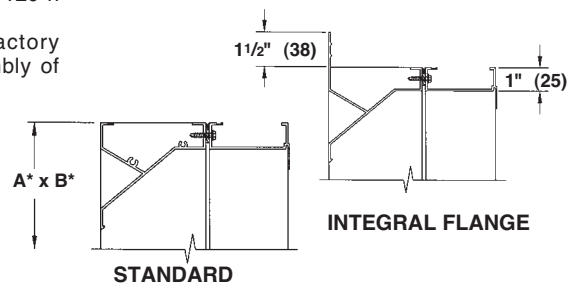
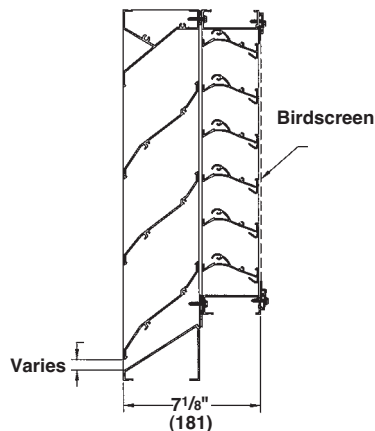
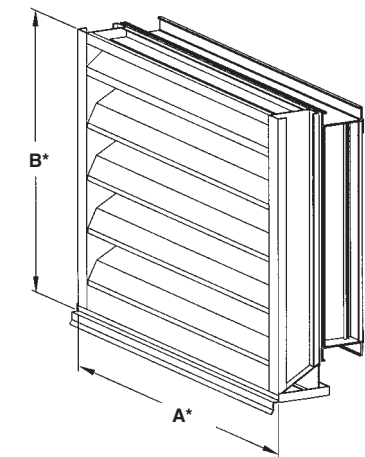
- Two-piece horizontal blade design provides protection from wind-driven rain penetration, reducing damage and additional operating expenses.
- 4" (102) deep exterior blades are continuous style without visible mullions.
- May be ordered without interior blades and frames at areas that are inactive or do not need wind-driven rain protection.
- Tested in the AMCA 500-L Wind-Driven Rain Penetration Test.
- Published performance ratings based on testing in accordance with AMCA Publication 500L.
- 49% Free Area.
- Aluminum construction for low maintenance and high resistance to corrosion.

VARIATIONS

- Insulated or sheet blank-off panels.
- Front or rear security bars.
- Filter racks.
- Installation angles.
- A variety of bird and insect screens.
- Selection of finishes: prime coat, baked enamel (modified fluoropolymer), epoxy, Pearledize 50 & 70, Kynar, clear and color anodize. (Some variation in anodize color consistency is possible).


Consult Reliable for other special requirements.

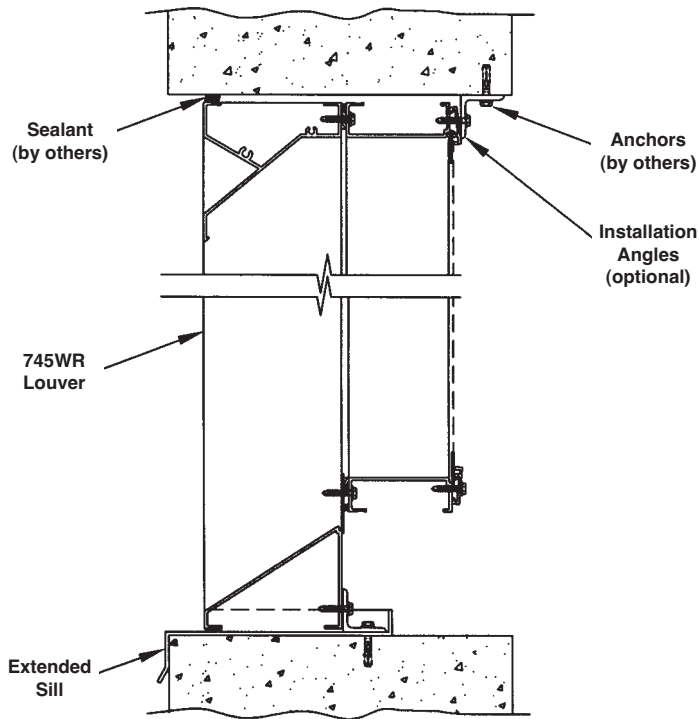
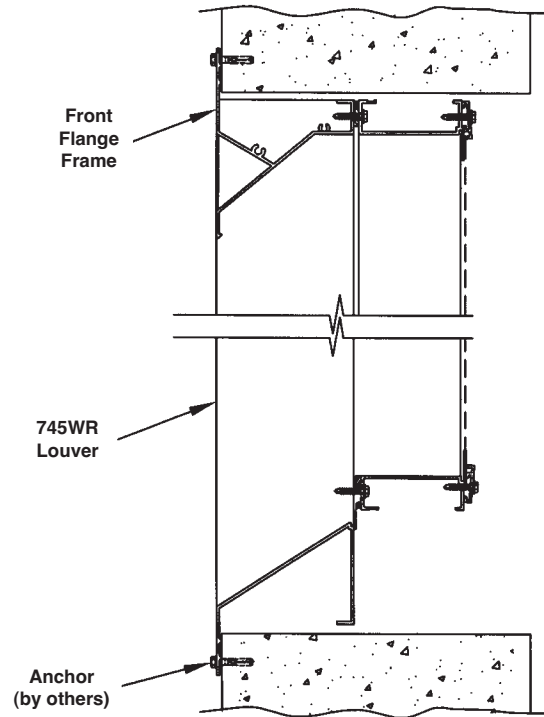
FRAME CONSTRUCTION



Dimensions in inches, parenthesis () indicate millimeters.

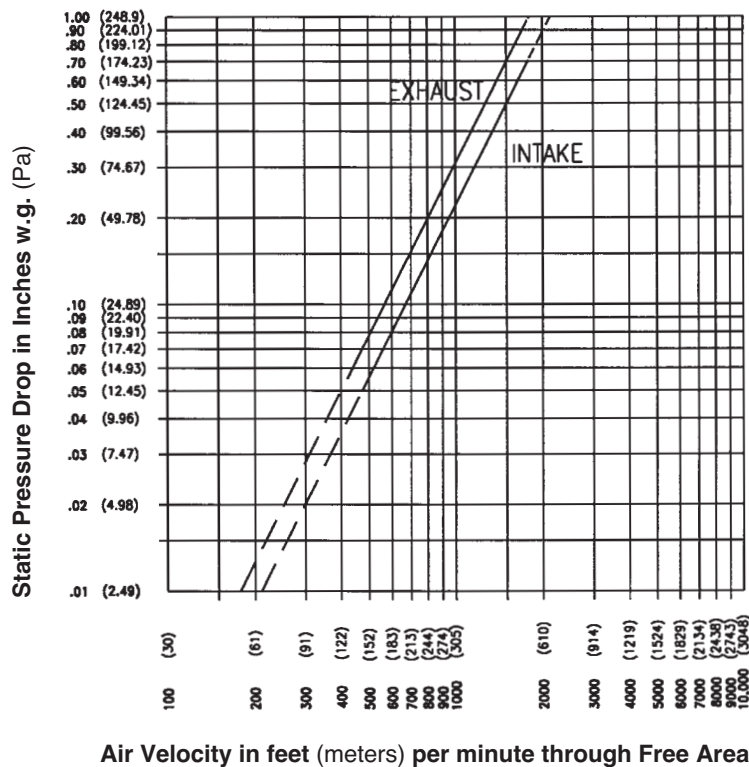
*Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

Masonry Wall**Flange Mount**

Optional items are available at additional cost. Anchors or other fasteners securing installation angles to substrate are by others.

PRESSURE DROP



Ratings do not include the effect of a bird screen.

FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 745WR.
Width – Inches and Meters

	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
12	0.27	0.47	0.68	0.88	1.08	1.28	1.49	1.69	1.89	2.10	2.30	2.50	2.71	2.91	3.11	3.31	3.52	3.72	3.92
0.30	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.19	0.21	0.23	0.25	0.27	0.29	0.31	0.33	0.35	0.36
18	0.49	0.85	1.21	1.58	1.94	2.31	2.67	3.04	3.40	3.77	4.13	4.49	4.86	5.22	5.59	5.95	6.32	6.68	7.04
0.46	0.05	0.08	0.11	0.15	0.18	0.21	0.25	0.28	0.32	0.35	0.38	0.42	0.45	0.49	0.52	0.55	0.59	0.62	0.66
24	0.64	1.11	1.59	2.06	2.54	3.02	3.49	3.97	4.45	4.92	5.40	5.88	6.35	6.83	7.31	7.78	8.26	8.74	9.21
0.61	0.06	0.10	0.15	0.19	0.24	0.28	0.32	0.37	0.41	0.46	0.50	0.55	0.59	0.64	0.68	0.72	0.77	0.81	0.86
30	0.85	1.49	2.13	2.76	3.40	4.04	4.68	5.32	5.95	6.59	7.23	7.87	8.51	9.15	9.78	10.42	11.06	11.70	12.34
0.76	0.08	0.14	0.20	0.26	0.32	0.38	0.44	0.49	0.55	0.61	0.67	0.73	0.79	0.85	0.91	0.97	1.03	1.09	1.15
36	1.07	1.87	2.67	3.46	4.26	5.06	5.86	6.66	7.46	8.26	9.06	9.86	10.66	11.46	12.26	13.06	13.86	14.66	15.46
0.91	0.10	0.17	0.25	0.32	0.40	0.47	0.55	0.62	0.69	0.77	0.84	0.92	0.99	1.07	1.14	1.21	1.29	1.36	1.44
42	1.28	2.24	3.20	4.16	5.13	6.09	7.05	8.01	8.97	9.93	10.89	11.85	12.81	13.77	14.74	15.70	16.66	17.62	18.58
1.07	0.12	0.21	0.30	0.39	0.48	0.57	0.66	0.74	0.83	0.92	1.01	1.10	1.19	1.28	1.37	1.46	1.55	1.64	1.73
48	1.43	2.50	3.58	4.65	5.72	6.80	7.87	8.94	10.02	11.09	12.16	13.24	14.31	15.38	16.46	17.53	18.60	19.67	20.75
1.22	0.13	0.23	0.33	0.43	0.53	0.63	0.73	0.83	0.93	1.03	1.13	1.23	1.33	1.43	1.53	1.63	1.73	1.83	1.93
54	1.65	2.88	4.12	5.35	6.58	7.82	9.05	10.29	11.52	12.76	13.99	15.23	16.46	17.70	18.93	20.17	21.40	22.64	23.87
1.37	0.15	0.27	0.38	0.50	0.61	0.73	0.84	0.96	1.07	1.19	1.30	1.42	1.53	1.65	1.76	1.88	1.99	2.11	2.22
60	1.86	3.26	4.65	6.05	7.45	8.84	10.24	11.63	13.03	14.43	15.82	17.22	18.62	20.01	21.41	22.80	24.20	25.60	26.99
1.52	0.17	0.30	0.43	0.56	0.69	0.82	0.95	1.08	1.21	1.34	1.47	1.60	1.73	1.86	1.99	2.12	2.25	2.38	2.51
66	2.08	3.63	5.19	6.75	8.31	9.87	11.42	12.98	14.54	16.10	17.65	19.21	20.77	22.33	23.88	25.44	27.00	28.56	30.11
1.68	0.19	0.34	0.48	0.63	0.77	0.92	1.06	1.21	1.35	1.50	1.64	1.79	1.93	2.08	2.22	2.37	2.51	2.66	2.80
72	2.23	3.90	5.57	7.24	8.91	10.58	12.25	13.92	15.58	17.25	18.92	20.59	22.26	23.93	25.60	27.27	28.94	30.61	32.28
1.83	0.21	0.36	0.52	0.67	0.83	0.98	1.14	1.29	1.45	1.60	1.76	1.92	2.07	2.23	2.38	2.54	2.69	2.85	3.00
78	2.44	4.27	6.10	7.94	9.77	11.60	13.43	15.26	17.09	18.92	20.75	22.59	24.42	26.25	28.08	29.91	31.74	33.57	35.41
1.98	0.23	0.40	0.57	0.74	0.91	1.08	1.25	1.42	1.59	1.76	1.93	2.10	2.27	2.44	2.61	2.78	2.95	3.12	3.29
84	2.66	4.65	6.64	8.64	10.63	12.62	14.61	16.61	18.60	20.59	22.59	24.58	26.57	28.56	30.56	32.55	34.54	36.53	38.53
2.13	0.25	0.43	0.62	0.80	0.99	1.17	1.36	1.54	1.73	1.92	2.10	2.29	2.47	2.66	2.84	3.03	3.21	3.40	3.58
90	2.87	5.03	7.18	9.34	11.49	13.64	15.80	17.95	20.11	22.26	24.42	26.57	28.72	30.88	33.03	35.19	37.34	39.50	41.65
2.29	0.27	0.47	0.67	0.87	1.07	1.27	1.47	1.67	1.87	2.07	2.27	2.47	2.67	2.87	3.07	3.27	3.47	3.67	3.87

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall possess stationary horizontal blades designed to prevent the penetration of wind-driven rain. Louver blades shall be contained within a 7" (178) frame. Extended sill shall be provided to capture and drain water to exterior of building. Louver components (heads, jambs, sill and blades) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall have continuous blades without visible mullions and shall withstand a wind load of 20 lbs. per sq. ft. (.96 kPa) (equivalent of a 90 mph wind [145 kph] - specifier may substitute any loading required).

Louvers shall be Reliable Model 745WR extruded 6063T5 aluminum alloy construction as follows:

- Frame: .081" (2.1) wall thickness, caulking surfaces provided.
- Blades: .081" (2.1) wall thickness, exterior 4" deep blades positioned at 37¹/₂° and spaced at approximately 4³/₄" (121) c-c. Interior blades are 3" deep (76) and positioned at approximately 2³/₈" (60) centers.
- Extended Sill: .081" (2.1) wall thickness, with upturned side panels to prevent water leakage.
- Screen: 5/8" x .040" (16 x 1) expanded, flattened aluminum bird screen in removable frame.
- Finish: Select finish specification from Reliable Finishes Brochure.

WIND-DRIVEN RAIN PERFORMANCE AMCA 500-L WIND-DRIVEN RAIN TEST

Test size is: 457/8" x 431/4" (1.16m x 1.10m) core area, 48" x 48" (1.22 x 1.22) nominal. Free Area of test louver is 7.87 ft.² (.73m²).

Wind Velocity mph (kph)	Rainfall Rate in./hr. (mm/hr.)	Core Velocity fpm (m/sec)	Airflow cfm (m ³ /min)	Free Area Velocity, fpm (m/sec)	Effectiveness Ratio	Class ₃	Discharge Loss Class ₄ Intake
29 (46.4)	3 (76)	0	0	0	99.4%	A	2
29 (46.4)	3 (76)	102 (.5)	1406 (40)	179 (.9)	99.3%	A	2
29 (46.4)	3 (76)	205 (1)	2825 (80)	360 (1.8)	98.5%	B	2
29 (46.4)	3 (76)	294 (1.5)	4051 (115)	517 (2.6)	98.2%	B	2
29 (46.4)	3 (76)	394 (2)	5429 (154)	693 (3.5)	98.0%	B	2
29 (46.4)	3 (76)	497 (2.5)	6849 (194)	874 (4.4)	96.2%	B	2
29 (46.4)	3 (76)	593 (3)	8172 (231)	1042 (5.3)	86.3%	C	2
29 (46.4)	3 (76)	665 (3.5)	9164 (260)	1169 (5.9)	74.3%	D	2

NOTES

- Core area is the open area of the louver face (face area less louver frames). Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
- Free Area of test size is calculated per AMCA standard 500-L.
- Wind-Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to .095
C	0.949 to 0.80
D	Below 0.8

- Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Discharge Loss Classes:

Class	Discharge Loss Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

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

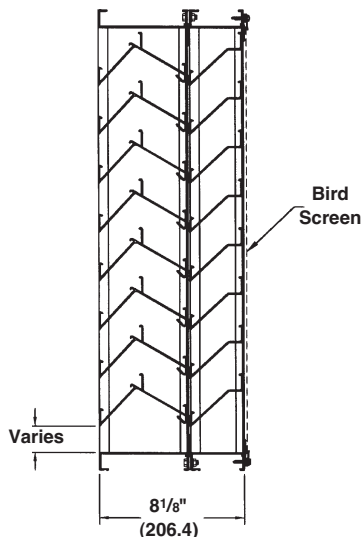
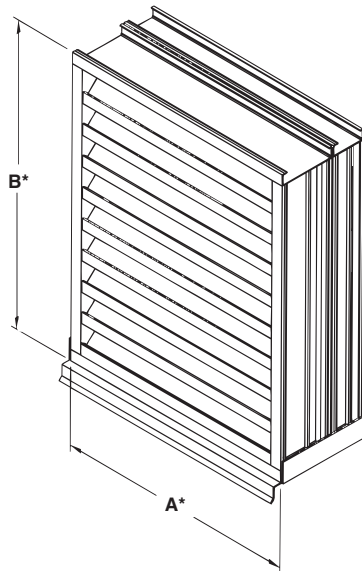


Reliable Products certifies that the louver shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings and wind-driven rain ratings only.



8DDWRG WIND-DRIVEN RAIN STATIONARY LOUVER

EXTRUDED ALUMINUM



STANDARD CONSTRUCTION

FRAME

8" (203) deep, 6063T5 extruded aluminum with .081" (2.1) nominal wall thickness. Downspouts and caulking surfaces provided.

BLADES

6063T5 extruded aluminum, .060" (1.5) nominal wall thickness. Drainable blades are spaced approximately 2³/₄" (70) center to center.

SCREEN

5/8" x .040" (16 x 1) expanded, flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

EXTENDED SILL

.081" (2.1) formed aluminum with end dams.

FINISH

Mill.

MINIMUM SIZE

12"w x 12"h (305 x 305).

APPROXIMATE SHIPPING WEIGHT

8 lbs. per sq. ft.

MAXIMUM FACTORY ASSEMBLY SIZE

Shall be 60 sq. ft. (6m²) per section, not to exceed 120"w x 72"h (3048 x 1829) or 72"w x 120"h (1829 x 3048).

Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.

SUPPORTS

Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, assembly configuration or windload.

Consult Reliable for additional information.

FEATURES

The 8DDWRG offers:

- 46% Free Area.
- Special blade profile prevents wind driven rain penetration.
- Rain penetration test performed under the European (HEVAC) Simulated Rain Testing Method.
- Drain gutter in each blade; downspouts in jams and mullions to drain water from louver for minimum water cascade from blade to blade.
- Aluminum extended finished to match louver is provided.
- All aluminum construction for low maintenance and high resistance to corrosion.

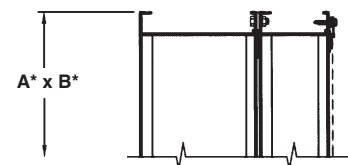
VARIATIONS

Variations to the basic design of the louver are available at additional cost. They include:

- Front or rear security bars.
- Filter racks.
- A variety of bird and insect screens.
- Selection of finishes: prime coat, baked enamel (modified fluoropolymer), epoxy, Pearldize, Kynar, clear and color anodize. (Some variation in anodize color consistency is possible.)

Consult Reliable for other special requirements.


FRAME CONSTRUCTION



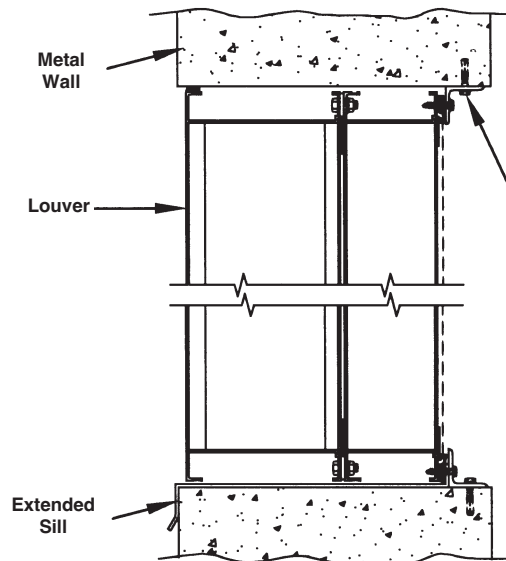
STANDARD

Dimensions in inches, parenthesis () indicate millimeters.

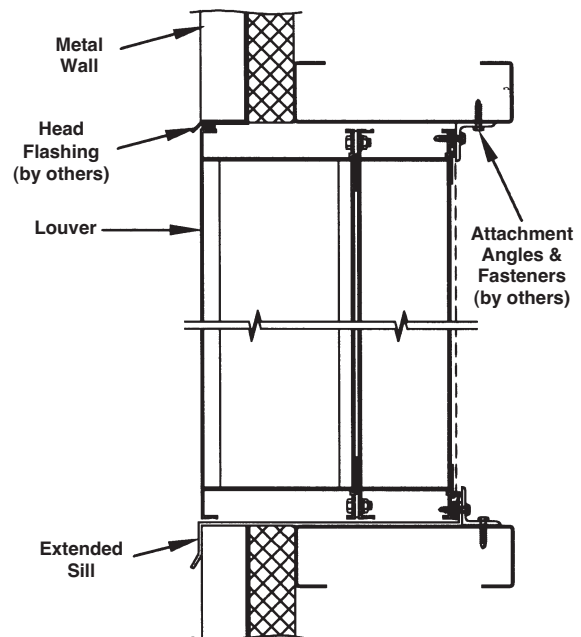
*Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE		 WebREPS 1-800-810-3280		LOCATION CONTRACTOR DATE	

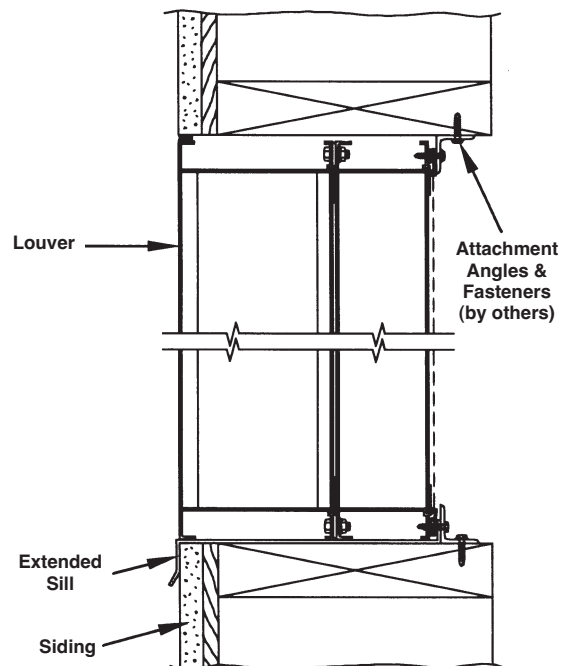
Masonry Wall



Metal Panel Wall

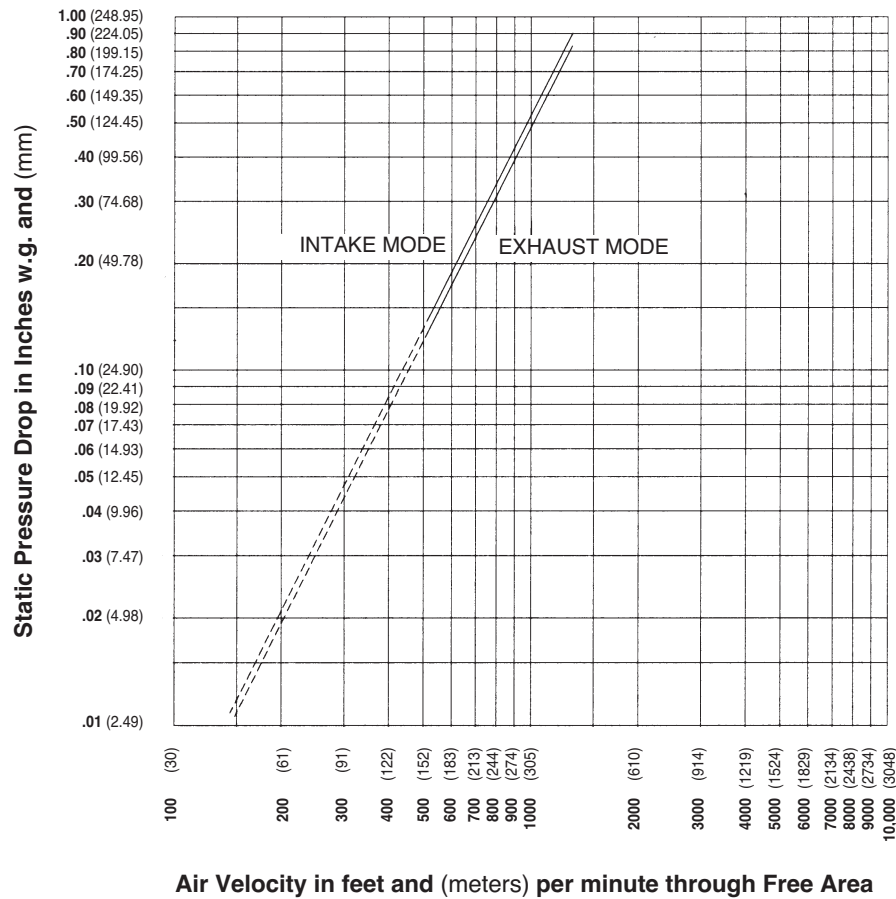


Wood Installation



Accessories at additional cost.

PRESSURE DROP



FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of 8DDWRG.
Width – Inches and Meters

Height – Inches and Meters		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	
		0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05	
	12	0.30	0.23	0.37	0.50	0.64	0.78	0.91	1.05	1.19	1.32	1.42	1.60	1.74	1.88	2.01	2.15	2.29	2.43	2.56	2.70
			0.02	0.03	0.05	0.06	0.07	0.08	0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.19	0.20	0.21	0.23	0.24	0.25
	18	0.46	0.44	0.70	0.97	1.23	1.50	1.76	2.03	2.29	2.55	2.73	3.08	3.34	3.61	3.87	4.14	4.40	4.67	4.93	5.19
			0.04	0.07	0.09	0.11	0.14	0.16	0.19	0.21	0.24	0.25	0.29	0.31	0.34	0.36	0.38	0.41	0.43	0.46	0.48
	24	0.61	0.65	1.04	1.43	1.82	2.22	2.60	3.00	3.39	3.77	4.04	4.56	4.95	5.34	5.74	6.13	6.52	6.91	7.29	7.69
			0.06	0.10	0.13	0.17	0.21	0.24	0.28	0.32	0.35	0.38	0.42	0.46	0.50	0.53	0.57	0.61	0.64	0.68	0.71
	30	0.76	0.86	1.38	1.90	2.41	2.93	3.44	3.98	4.49	5.00	5.35	6.04	6.55	7.07	7.60	8.12	8.63	9.15	9.66	10.18
			0.08	0.13	0.18	0.22	0.27	0.32	0.37	0.42	0.46	0.50	0.56	0.61	0.66	0.71	0.75	0.80	0.85	0.90	0.95
	36	0.91	1.07	1.72	2.36	3.00	3.65	4.29	4.95	5.59	6.22	6.66	7.52	8.16	8.81	9.46	10.10	10.74	11.39	12.03	12.68
			0.10	0.16	0.22	0.28	0.34	0.40	0.46	0.52	0.58	0.62	0.70	0.76	0.82	0.88	0.94	1.00	1.06	1.12	1.18
	42	1.07	1.39	2.23	3.06	3.89	4.73	5.55	6.42	7.24	8.06	8.63	9.74	10.57	11.41	12.25	13.09	13.91	14.76	15.58	16.42
			0.13	0.21	0.28	0.36	0.44	0.52	0.60	0.67	0.75	0.80	0.91	0.98	1.06	1.14	1.22	1.29	1.37	1.45	1.53
	48	1.22	1.60	2.56	3.53	4.48	5.45	6.40	7.39	8.34	9.28	9.94	11.22	12.17	13.14	14.11	15.07	16.03	17.00	17.94	18.91
			0.15	0.24	0.33	0.42	0.51	0.59	0.69	0.78	0.86	0.92	1.04	1.13	1.22	1.31	1.40	1.49	1.58	1.67	1.76
54	1.37	1.82	2.90	3.99	5.07	6.17	7.24	8.37	9.44	10.51	11.25	12.70	13.78	14.87	15.97	17.06	18.14	19.24	20.31	21.41	
		0.17	0.27	0.37	0.47	0.57	0.67	0.78	0.88	0.98	1.05	1.18	1.28	1.38	1.48	1.59	1.68	1.79	1.89	1.99	
60	1.52	2.03	3.24	4.46	5.66	6.89	8.08	9.34	10.54	11.73	12.57	14.18	15.38	16.61	17.83	19.05	20.26	21.48	22.68	23.90	
		0.19	0.30	0.41	0.53	0.64	0.75	0.87	0.98	1.09	1.17	1.32	1.43	1.54	1.66	1.77	1.88	2.00	2.11	2.22	
66	1.68	2.34	3.75	5.15	6.55	7.97	9.35	10.80	12.19	13.57	14.53	16.41	17.79	19.21	20.62	22.03	23.43	24.84	26.23	27.65	
		0.22	0.35	0.48	0.61	0.74	0.87	1.00	1.13	1.26	1.35	1.52	1.65	1.79	1.92	2.05	2.18	2.31	2.44	2.57	
72	1.83	2.56	4.09	5.62	7.14	8.69	10.19	11.78	13.29	14.79	15.84	17.89	19.39	20.94	22.49	24.02	25.54	27.09	28.60	30.14	
		0.24	0.38	0.52	0.66	0.81	0.95	1.09	1.24	1.37	1.47	1.66	1.80	1.95	2.09	2.23	2.37	2.52	2.66	2.80	

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall possess stationary horizontal blades designed to prevent the penetration of wind driven rain. Louver blades shall be contained within a 8" (203) frame. Extended sill shall be provided to capture and drain water to exterior of building. Louver components (heads, jambs, sills, blades) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall limit span between visible mullions to 10 ft. (3) and shall withstand a wind load of 20 lbs. per sq. ft. (.96kPa) (equivalent of a 90 mph wind [145 KPH] - specifier may substitute any loading required).

Louvers shall be Reliable Model 8DDWRG extruded 6063T5 aluminum alloy construction as follows:

- Frame: .081" (2.1) wall thickness, caulking surfaces provided.
- Blades: .060" (1.5) wall thickness. Drainable blades positioned at 54° angle and spaced approximately 2³/₄" (170) center to center.
- Extended Sill: .081" (2.1) wall thickness, with upturned side panels to prevent water leakage.
- Screen: 3/4" x .051" (19 x 1.3) expanded, flattened aluminum bird screen in removable frame.
- Finish: Select finish specification from Reliable Finishes Brochure.

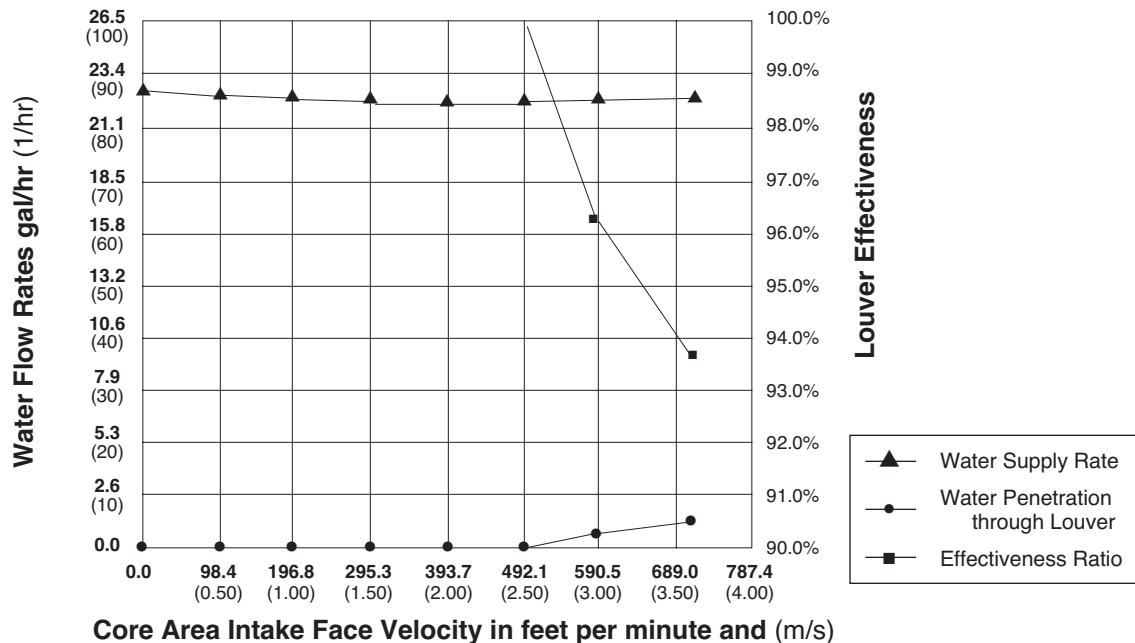
RAIN PENETRATION PERFORMANCE

HEVAC Simulated Rain Test (See Test Description Below)

Test size 39³/₈" wide x 39³/₈" high (1m x 1m)

Wind mph (m/s)	Rainfall In/Hr (mm/hr)	Intake Air			Effectiveness Ratio
		Volume CFM (m/s)	Free Area Velocity FPM (m/s)	Core Area Face Velocity* FPM (m/s)	
29.1 (13)	2.95 (75)	3560 (1.68)	834 (4.24)	394 (2.00)	99.91%
29.1 (13)	2.95 (75)	4450 (2.10)	1041 (5.29)	492 (2.50)	99.95%
29.1 (13)	2.95 (75)	4662 (2.20)	1091 (5.54)	516 (2.62)	99%

*Intake air velocity measured at the front face (exterior) of the louver across the core area (louver face area less frames and waterstops).



TEST DESCRIPTION

Performance data shown are test results from the HEVAC "Laboratory Testing and Rating of Weather Louvres When Subjected to Simulated Rain, 4th Edition" procedure conducted by BSRIA, Berkshire, England. The test subjects the exterior face of a 39.4" x 39.4" (1 x 1) louver to 29.1 mph wind and 2.95" (75) per hour simulated rainfall while intake air is pulled through the unit. Individual tests of at least 30 minutes in duration are conducted at

decreasing intake airflow rates. Testing is discontinued when the difference in water penetration through the louver during consecutive iterations becomes insignificant. Tests are also conducted with a test plate which has an opening equivalent in size to the louver core area. The Effectiveness Ratio is the percentage of water rejected by the louver that would penetrate the test plate under the same conditions.