

4DDWRG

Wind-Driven Rain Stationary Louver

Horizontal Blade



APPLICATION

The 4DDWRG is a 4" deep mechanically fastened, extruded aluminum double drainable stationary horizontal louver designed to protect air intake and exhaust openings in exterior walls. This louver offers exceptional protection against wind driven rain under the most severe conditions. This louver is designed with a drainable gutter system channeling water from the blades to downspouts in the jambs, where water is exhausted out of the front of the louver.

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/m ²).
Maximum Factory Assembly Size	Shall be 75 sq. ft. (7m ²) 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.

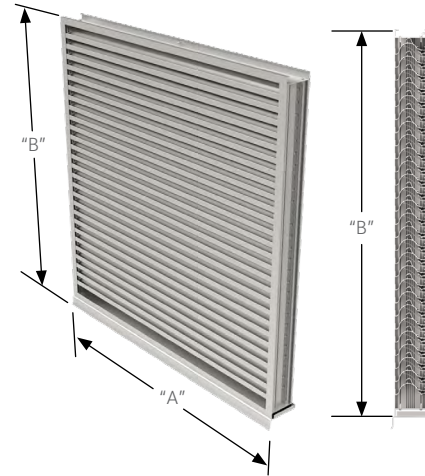
Consult Reliable for additional information.

FEATURES

- Horizontal architectural blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses
- AMCA 540 Basic Protection
- 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
- TAS203 Cycle Pressure-120psf

Note:

- Dimensions in inches, parenthesis () indicate millimeters.
- Units can be furnished actual size or with size deducts.



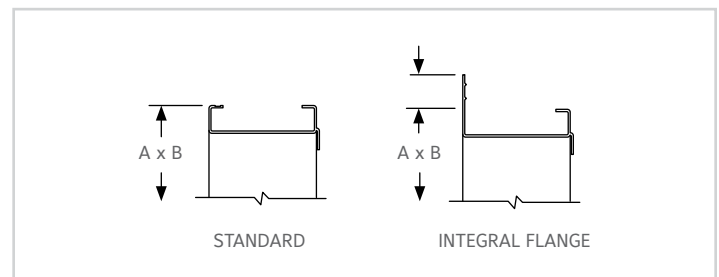
This logo does not imply AMCA's endorsement of the product.

VARIATIONS

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

Consult Reliable for other special requirements.

FRAME CONSTRUCTION OPTIONS



Please reference our website www.Reliable.com for up to date LEED® information

PERFORMANCE DATA



IMPACT RESISTANT LOUVER
Basic Protection Level D

See www.AMCA.org for all certified or listed products

The label does not signify AMCA window performance certification.



CYCLE TESTED PER AMCA 540

See www.AMCA.org for all certified or listed products

The label does not signify AMCA window performance certification.

Reliable products certifies that the 4DDWRG shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication and comply with the requirements of the AMCA Listing Label Program.

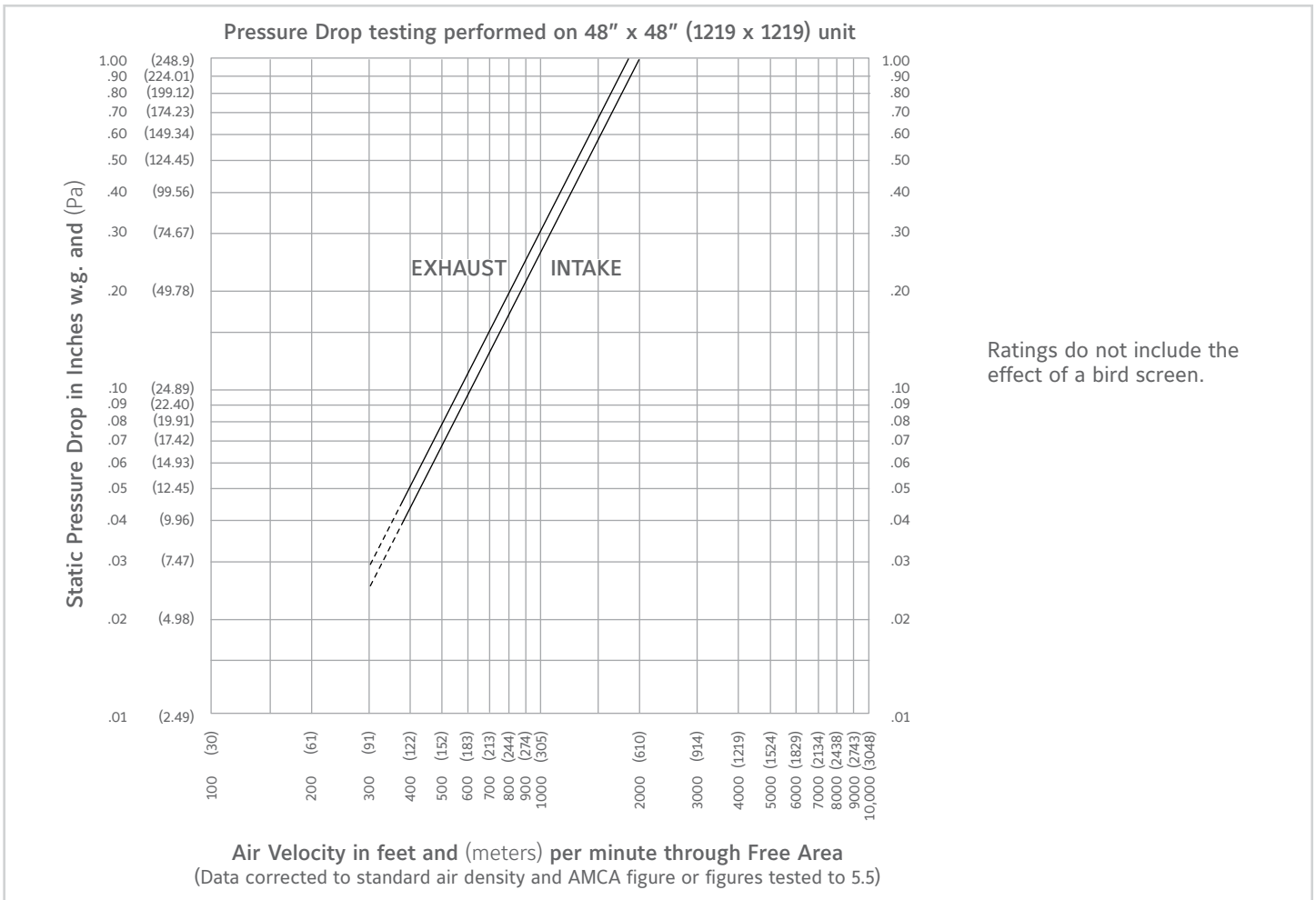
The AMCA Listing Label applies to Wind Borne Debris Impact Resistant Louvers.

FREE AREA GUIDE

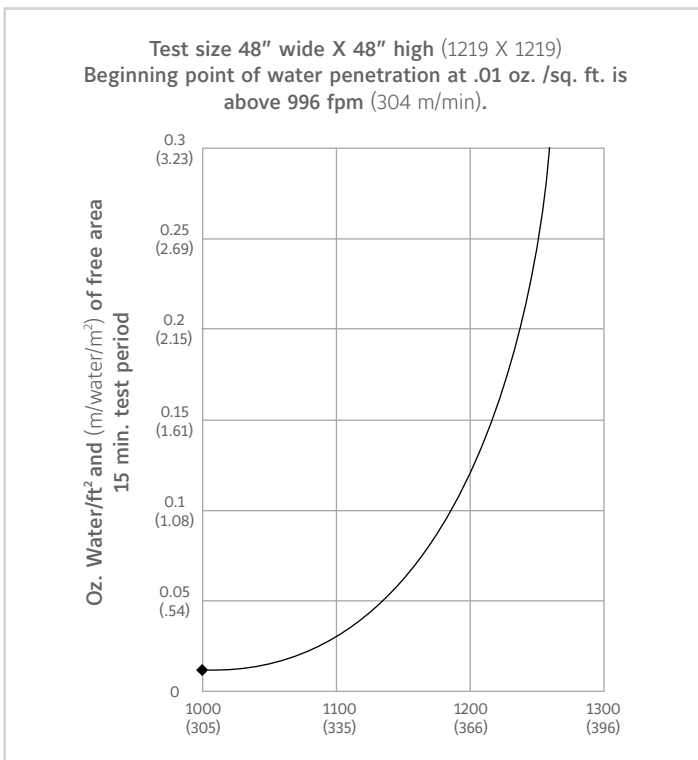
Free Area Guide shows free area in ft² and m² for various sizes of 4DDWRG.

		Width – Inches and Meters																			
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	
Height – Inches and Meters	12	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	3.00	
	12	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.17	0.18	0.18
	18	0.03	0.05	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.23	0.25	0.28	0.30	0.32	0.34	0.36	0.39	0.41	0.43	0.43
	24	0.05	0.09	0.12	0.15	0.19	0.22	0.26	0.29	0.33	0.36	0.40	0.43	0.47	0.50	0.54	0.57	0.61	0.64	0.68	0.68
	30	0.06	0.11	0.15	0.20	0.24	0.29	0.33	0.37	0.42	0.46	0.51	0.55	0.60	0.64	0.68	0.73	0.77	0.82	0.86	0.86
	36	0.08	0.14	0.20	0.25	0.31	0.37	0.42	0.48	0.54	0.59	0.65	0.71	0.77	0.82	0.88	0.94	0.99	1.05	1.11	1.11
	42	0.10	0.17	0.24	0.31	0.38	0.45	0.52	0.59	0.66	0.73	0.80	0.87	0.94	1.00	1.07	1.14	1.21	1.28	1.35	1.35
	48	0.12	0.19	0.27	0.35	0.43	0.51	0.59	0.67	0.75	0.83	0.90	0.98	1.06	1.14	1.22	1.30	1.38	1.46	1.54	1.54
	54	0.13	0.23	0.32	0.41	0.50	0.59	0.68	0.77	0.87	0.96	1.05	1.14	1.23	1.32	1.42	1.51	1.60	1.69	1.78	1.78
	60	0.15	0.26	0.36	0.46	0.57	0.67	0.78	0.88	0.99	1.09	1.19	1.30	1.40	1.51	1.61	1.72	1.82	1.92	2.03	2.03
	66	0.17	0.28	0.39	0.51	0.62	0.73	0.85	0.96	1.08	1.19	1.30	1.42	1.53	1.64	1.76	1.87	1.98	2.10	2.21	2.21
	72	0.18	0.31	0.44	0.56	0.69	0.82	0.94	1.07	1.19	1.32	1.45	1.57	1.70	1.83	1.95	2.08	2.21	2.33	2.46	2.46
	78	0.20	0.34	0.48	0.62	0.76	0.90	1.04	1.18	1.31	1.45	1.59	1.73	1.87	2.01	2.15	2.29	2.43	2.56	2.70	2.70
	84	0.22	0.37	0.52	0.68	0.83	0.98	1.13	1.28	1.43	1.59	1.74	1.89	2.04	2.19	2.34	2.49	2.65	2.80	2.95	2.95
	90	0.23	0.40	0.56	0.72	0.88	1.04	1.20	1.36	1.52	1.68	1.85	2.01	2.17	2.33	2.49	2.65	2.81	2.97	3.13	3.13
	96	0.25	0.43	0.60	0.77	0.95	1.12	1.30	1.47	1.64	1.82	1.99	2.16	2.34	2.51	2.69	2.86	3.03	3.21	3.38	3.38
102	0.27	0.46	0.64	0.83	1.02	1.20	1.39	1.58	1.76	1.95	2.14	2.32	2.51	2.69	2.88	3.07	3.25	3.44	3.63	3.63	
108	0.29	0.48	0.68	0.87	1.07	1.26	1.46	1.66	1.85	2.05	2.24	2.44	2.64	2.83	3.03	3.22	3.42	3.61	3.81	3.81	
114	0.30	0.51	0.72	0.93	1.14	1.35	1.55	1.76	1.97	2.18	2.39	2.60	2.81	3.01	3.22	3.43	3.64	3.85	4.06	4.06	
120	0.32	0.54	0.76	0.99	1.21	1.43	1.65	1.87	2.09	2.31	2.53	2.75	2.98	3.20	3.42	3.64	3.86	4.08	4.30	4.30	

PRESSURE DROP



WATER PENETRATION GRAPH



Reliable Company 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.

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				
Core Velocity ₁ fpm (m/s)	Airflow cfm (m ³ /min)	Free Area Velocity ₂ fpm (m/sec.)	Effective-ness 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

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.)	Effective-ness 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 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.

LINKS TO IMPORTANT DOCUMENTS

Document Title
Finishes and Color Guide
Limited Warranty Document



1300 Enterprise Road, P.O. Box
580, Geneva, Alabama 36340
Tel: 334-684-3621
Tel: 800-624-3914
Fax: 800-508-1469