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5DDWRDC WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER

MIAMI-DADE APPROVED

MIAMI-DADE COUNTY, FLORIDA NOTICE OF ACCEPTANCE NUMBER: 16-0217.04 (EXPIRES 2/23/2021)

STANDARD CONSTRUCTION

FRAME

Box frame, 5" (127) deep, 6063T6 extruded aluminum with .081" (2.1) nominal wall thickness. Downspouts and caulking provided. Universal Installation Frame: Same material and gages as above with flange.

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.

FINISH

Mill.

MINIMUM SIZE

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

APPROXIMATE SHIPPING WEIGHT

10 lbs. per sq. ft. (49 kg/m²)

MAXIMUM FACTORY ASSEMBLY SIZE

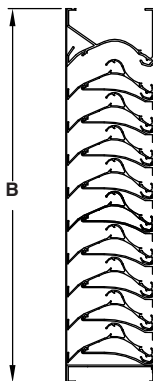
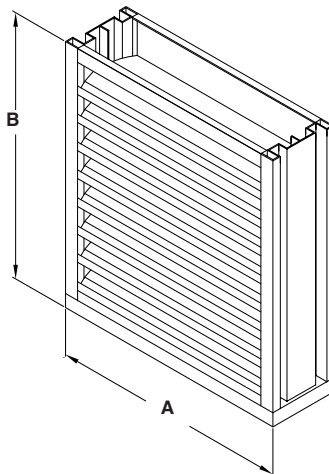
Single section: 87¹⁵/₁₆" w x 144" h (2234 x 3658) actual size.

Field Assembly: Unlimited width x 144" h (3658). Multiple section louvers will be shipped in single sections and must be joined together in the field by the installer. Section joint splice hardware is provided. **Sections may not be stacked in height.** Openings taller than the maximum louver height will need to be divided into multiple openings with suitable structural members. Structural members are not designed or provided by Reliable.

INSTALLATION

The 5DDWRDC must be installed per the appropriate Installation Detail. Reference the appropriate separate Installation Instruction Sheet.

Consult Reliable for additional information.



FEATURES

- Box Frame construction for use in cast-in-place concrete, grout filled CMU, Wood and steel installations.
- Maximum windload ±120 PSF (5.75 kPa).
- Closely spaced horizontal blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses.
- Universal Flange Frame allows installation in walls up to 10" (254) deep and in any wall material. Also available for walls up to 15" (381) deep with UFF15 frame.
- 47% Free Area.
- Published performance ratings based on testing in accordance with AMCA Publication 511.
- Excellent pressure drop performance.
- Aluminum construction for low maintenance and high resistance to corrosion.

VARIATIONS

- Universal Flange Frame construction when fasteners penetrating the wall are not utilized.
- Universal Flange Frame allows installation in walls up to 10" (254) deep and in any wall material. Also available for walls up to 15" (381) deep with UFF15 frame.
- Extended sill.
- Front or rear security bars.
- Filter racks.
- A variety of bird and insect screens.
- Selection of finishes: prime coat, 50% PVDF (modified fluoropolymer), epoxy, Pearledize 50 & 70, 70% PVDF, clear and color anodize. (Some variation in anodize color consistency is possible).

Consult Reliable for other special requirements.

5DDWRDC meets the requirements for the following:

- Miami Dade NOA Approval 16-0217.04



IMPACT RESISTANT LOUVER
Basic Protection

See AMCA 512 for AMCA Listing
See AMCA 511 for AMCA Certification
See www.AMCA.org for all certified or listed products

This label does not imply AMCA airflow performance certification.

Reliable Products certifies that the 5DDWRDC shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program.

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

Please provide Rough Opening dimensions for A & B dimensions. Unless ordered as actual size, louver will be provided 1/4" (6) smaller than the "A" and "B" dimensions provided.

Dimensions in inches, parenthesis () indicate millimeters.

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

SUGGESTED SPECIFICATION

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 4" (102) 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 limit single span between visible mullions to 10' (3048).

Louvers shall be Reliable Model 5DDWRDC extruded 6063T6 aluminum alloy construction as follows:

MATERIAL

Frame: .081" (2.1) wall thickness, caulking surfaces provided.
 Blades: .081" (2.1) wall thickness.
 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.

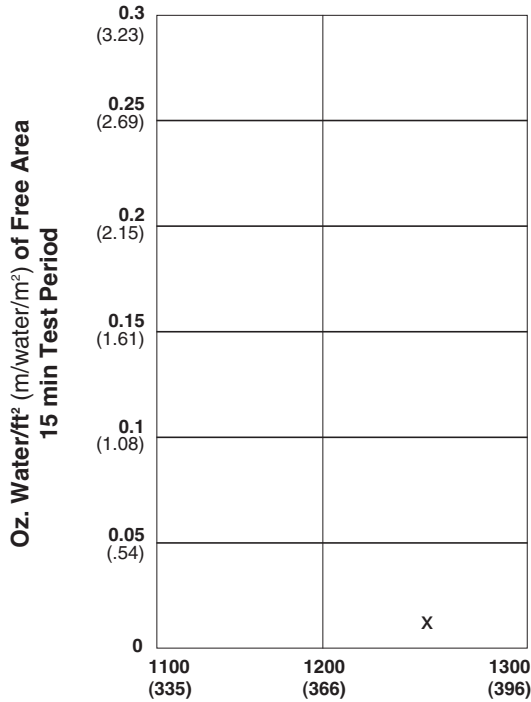
STRUCTURAL DESIGN

Integral structural supports shall be designed and furnished by the louver manufacturer to carry a wind load of not less than ± 120 psf (6.7 kPa).

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.

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).

Wind Velocity mph (kph)	Rain Fall Rate in./hr. (mm/hr.)	Core Velocity ₁ fpm (m/s)	Airflow cfm (m³/min)	Free Area Velocity ₂ fpm (m/sec.)	Effectiveness Ratio	Class _{3, 4}
29 (46.4)	3 (76)	672 (3.5)	7236 (204)	1327 (6.6)	99.7%	A
50 (80.0)	8 (203)	408 (1.9)	4239 (120)	778 (4.0)	99.0%	A

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	C 0.949 to 0.80
B	0.989 to 0.95	D Below 0.8

FREE AREA GUIDE

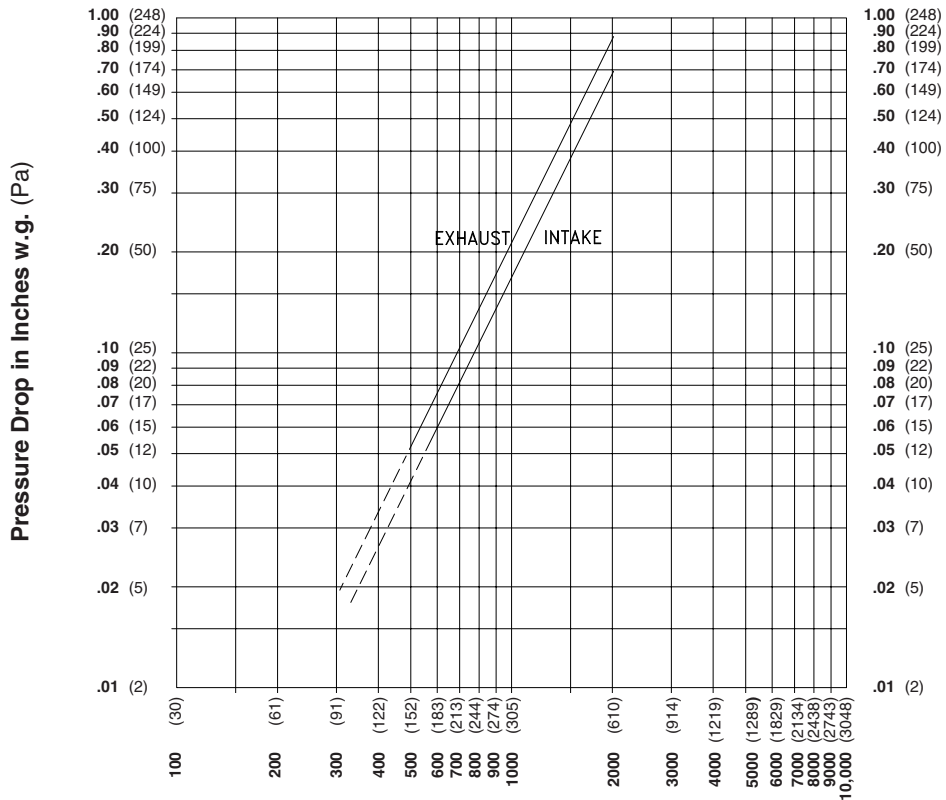
Free Area Guide shows free area in ft² and m² for various sizes of 5DDWRDC.
Width – Inches and Meters

	12	18	24	30	36	42	48	54	60	66	72	78	84	88
12	0.28	0.49	0.70	0.97	1.18	1.39	1.60	1.81	2.09	2.30	2.51	2.71	2.92	3.06
0.30	0.03	0.05	0.07	0.09	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.27	0.28
0.46	0.04	0.07	0.10	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.38	0.41	0.44	0.46
24	0.62	1.09	1.56	2.19	2.66	3.13	3.60	4.07	4.69	5.16	5.63	6.10	6.57	6.88
0.61	0.06	0.10	0.14	0.20	0.25	0.29	0.33	0.38	0.44	0.48	0.52	0.57	0.61	0.64
30	0.80	1.40	1.99	2.79	3.39	3.99	4.59	5.19	5.99	6.59	7.19	7.79	8.39	8.79
0.76	0.07	0.13	0.18	0.26	0.31	0.37	0.43	0.48	0.56	0.61	0.67	0.72	0.78	0.82
36	0.97	1.70	2.43	3.40	4.13	4.86	5.59	6.32	7.29	8.02	8.75	9.48	10.21	10.70
0.91	0.09	0.16	0.23	0.32	0.38	0.45	0.52	0.59	0.68	0.75	0.81	0.88	0.95	0.99
42	1.14	2.00	2.86	4.01	4.87	5.73	6.59	7.45	8.60	9.46	10.32	11.18	12.04	12.61
1.07	0.11	0.19	0.27	0.37	0.45	0.53	0.61	0.69	0.80	0.88	0.96	1.04	1.12	1.17
48	1.31	2.30	3.29	4.62	5.61	6.60	7.59	8.58	9.90	10.89	11.88	12.87	13.86	14.52
1.22	0.12	0.21	0.31	0.43	0.52	0.61	0.71	0.80	0.92	1.01	1.10	1.20	1.29	1.35
54	1.49	2.61	3.73	5.22	6.34	7.46	8.58	9.70	11.20	12.32	13.44	14.56	15.68	16.43
1.37	0.14	0.24	0.35	0.48	0.59	0.69	0.80	0.90	1.04	1.14	1.25	1.35	1.46	1.53
60	1.66	2.91	4.16	5.83	7.08	8.33	9.58	10.83	12.50	13.75	15.00	16.25	17.50	18.34
1.52	0.15	0.27	0.39	0.54	0.66	0.77	0.89	1.01	1.16	1.28	1.39	1.51	1.63	1.70
66	1.83	3.21	4.59	6.44	7.82	9.20	10.58	11.96	13.80	15.18	16.56	17.95	19.33	20.25
1.68	0.17	0.30	0.43	0.60	0.73	0.85	0.98	1.11	1.28	1.41	1.54	1.67	1.80	1.88
72	2.00	3.52	5.03	7.04	8.55	10.07	11.58	13.09	15.10	16.62	18.13	19.64	21.15	22.16
1.83	0.19	0.33	0.47	0.65	0.79	0.94	1.08	1.22	1.40	1.54	1.68	1.82	1.96	2.06
78	2.18	3.82	5.46	7.65	9.29	10.93	12.57	14.22	16.41	18.05	19.69	21.33	22.97	24.07
1.98	0.20	0.35	0.51	0.71	0.86	1.02	1.17	1.32	1.52	1.68	1.83	1.98	2.13	2.24
84	2.35	4.12	5.89	8.26	10.03	11.80	13.57	15.34	17.71	19.48	21.25	23.02	24.79	25.98
2.13	0.22	0.38	0.55	0.77	0.93	1.10	1.26	1.43	1.65	1.81	1.97	2.14	2.30	2.41
90	2.52	4.43	6.33	8.86	10.77	12.67	14.57	16.47	19.01	20.91	22.81	24.72	26.62	27.89
2.29	0.23	0.41	0.59	0.82	1.00	1.18	1.35	1.53	1.77	1.94	2.12	2.30	2.47	2.59
96	2.70	4.73	6.76	9.47	11.50	13.54	15.57	17.60	20.31	22.34	24.38	26.41	28.44	29.79
2.44	0.25	0.44	0.63	0.88	1.07	1.26	1.45	1.64	1.89	2.08	2.26	2.45	2.64	2.77
102	2.87	5.03	7.19	10.08	12.24	14.40	16.57	18.73	21.61	23.77	25.94	28.10	30.26	31.70
2.59	0.27	0.47	0.67	0.94	1.14	1.34	1.54	1.74	2.01	2.21	2.41	2.61	2.81	2.95
108	3.04	5.33	7.63	10.68	12.98	15.27	17.56	19.86	22.91	25.21	27.50	29.79	32.09	33.61
2.74	0.28	0.50	0.71	0.99	1.21	1.42	1.63	1.85	2.13	2.34	2.55	2.77	2.98	3.12
114	3.21	5.64	8.06	11.29	13.71	16.14	18.56	20.98	24.21	26.64	29.06	31.48	33.91	35.52
2.90	0.30	0.52	0.75	1.05	1.27	1.50	1.72	1.95	2.25	2.47	2.70	2.92	3.15	3.30
120	3.39	5.94	8.49	11.90	14.45	17.00	19.56	22.11	25.52	28.07	30.62	33.18	35.73	37.43
3.05	0.31	0.55	0.79	1.11	1.34	1.58	1.82	2.05	2.37	2.61	2.84	3.08	3.32	3.48
126	3.56	6.24	8.93	12.51	15.19	17.87	20.56	23.24	26.82	29.50	32.19	34.87	37.55	39.34
3.20	0.33	0.58	0.83	1.16	1.41	1.66	1.91	2.16	2.49	2.74	2.99	3.24	3.49	3.65
132	3.73	6.55	9.36	13.11	15.93	18.74	21.55	24.37	28.12	30.93	33.75	36.56	39.38	41.25
3.35	0.35	0.61	0.87	1.22	1.48	1.74	2.00	2.26	2.61	2.87	3.14	3.40	3.66	3.83
138	3.90	6.85	9.79	13.72	16.66	19.61	22.55	25.50	29.42	32.37	35.31	38.25	41.20	43.16
3.51	0.36	0.64	0.91	1.27	1.55	1.82	2.09	2.37	2.73	3.01	3.28	3.55	3.83	4.01
144	4.08	7.15	10.23	14.33	17.40	20.47	23.55	26.62	30.72	33.80	36.87	39.95	43.02	45.07
3.66	0.38	0.66	0.95	1.33	1.62	1.90	2.19	2.47	2.85	3.14	3.43	3.71	4.00	4.19

Height – Inches and Millimeters

PRESSURE DROP

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

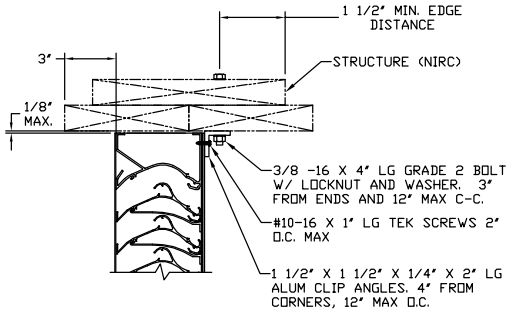


Ratings do not include the effect of a bird screen.

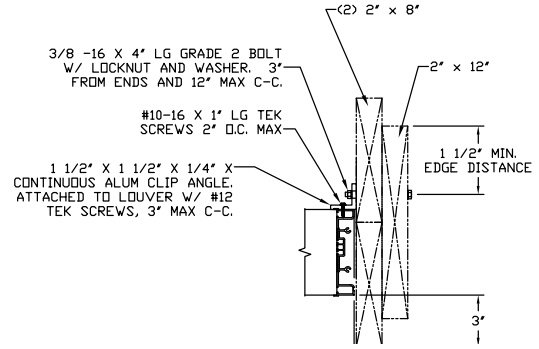
Air Velocity in feet and (meters) per minute through Free Area

(Data corrected to standard air density and AMCA figure tested to 5.5)

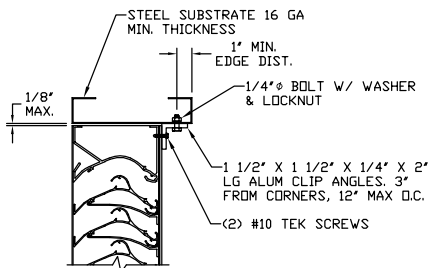
FRAME CONSTRUCTION



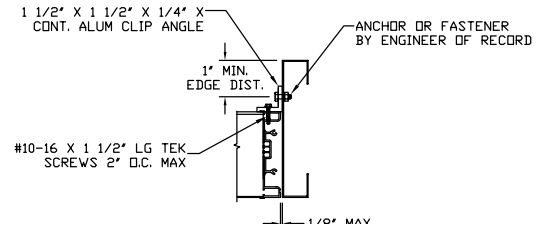
1 HEAD & SILL DETAIL: WOOD INSTALL
N.T.S.



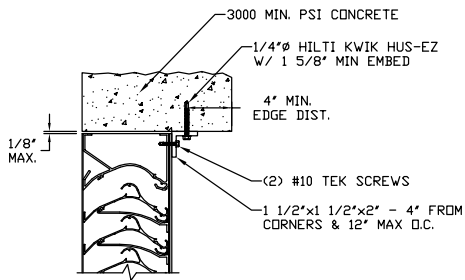
2 JAMB DETAIL: WOOD INSTALL
N.T.S.



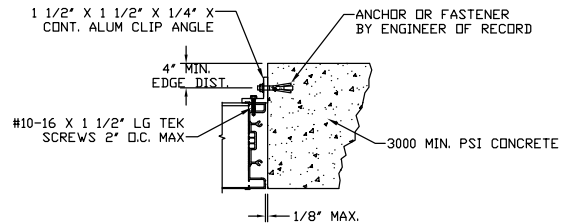
3 HEAD & SILL DETAIL: STEEL INSTALL
N.T.S.



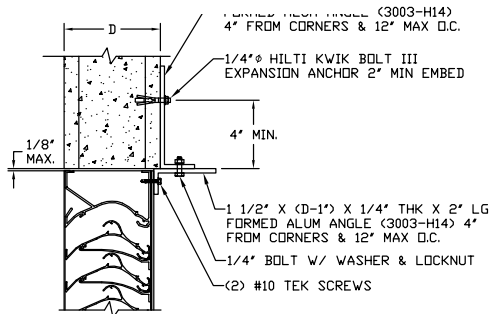
4 JAMB DETAIL: STEEL INSTALL
N.T.S.



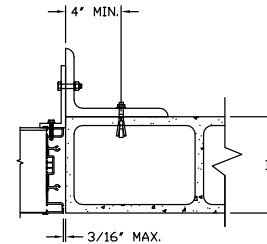
5 HEAD & SILL DETAIL: CONCRETE INSTALL
N.T.S.



6 JAMB DETAIL: CONCRETE INSTALL
N.T.S.

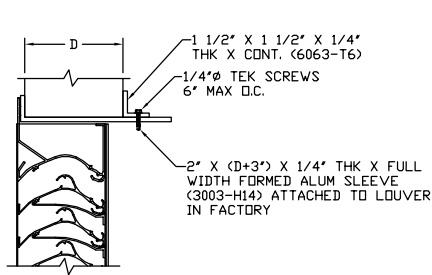


7 HEAD & SILL DETAIL: CMU BLOCK INSTALL
N.T.S.

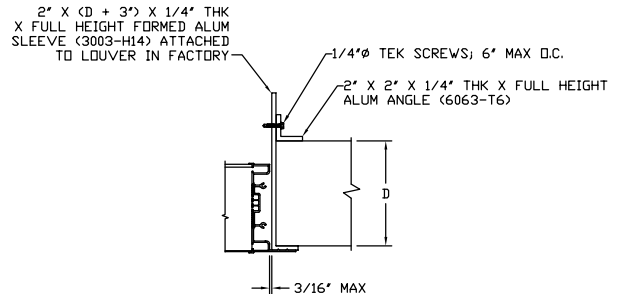


8 JAMB DETAIL: CMU BLOCK INSTALL
N.T.S.

FRAME CONSTRUCTION

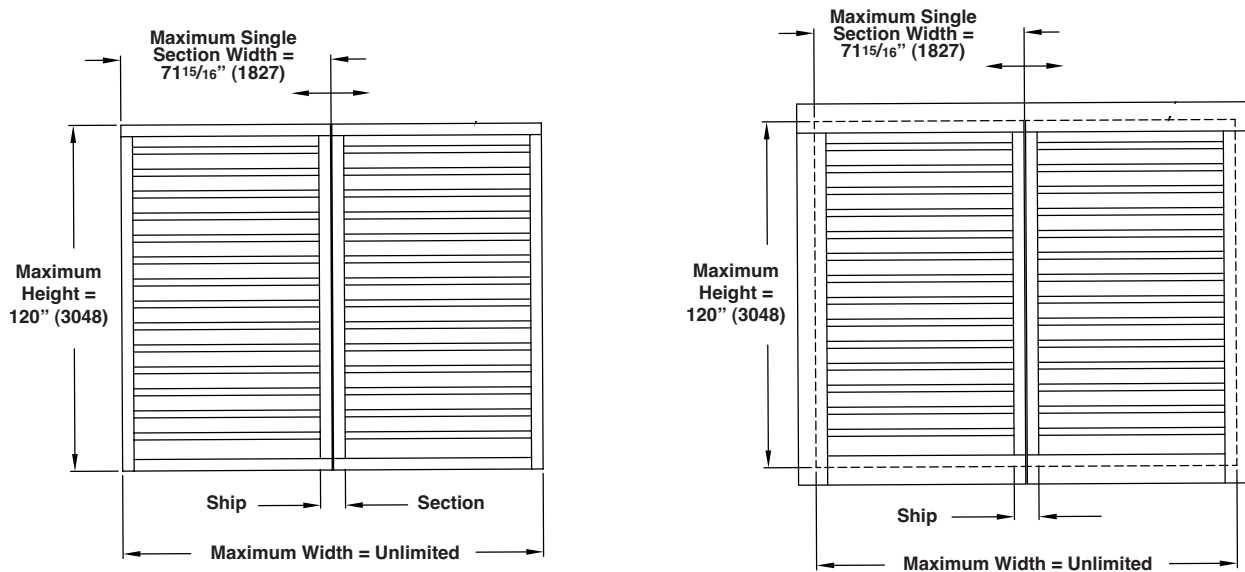


9 HEAD & SILL DETAIL: UNIVERSAL FLANGE FRAME
N.T.S.



10 JAMB DETAIL: UNIVERSAL FLANGE FRAME
N.T.S.

FRAME CONSTRUCTION ELEVATION



FRONT ELEVATION OF 5DDWRDC LOUVER WITH UFF FRAME

GENERAL NOTES:

1. Reference separate Installation Instruction Sheet for the proper installation method. Miami-Dade and Florida product approvals are contingent upon proper installation. It is the installing contractor's responsibility to ensure that the louvers are installed properly.
2. Some orders may require special submittal and/or shop drawings provided by Reliable. Reference these drawings for additional installation information.
3. Continuous angles and fasteners are supplied and are shipped loose.
4. Louvers are provided with steel channel supports to be installed behind the visible mullions.
5. Louvers wider than the maximum single section width will be shipped in multiple sections and will require field assembly.