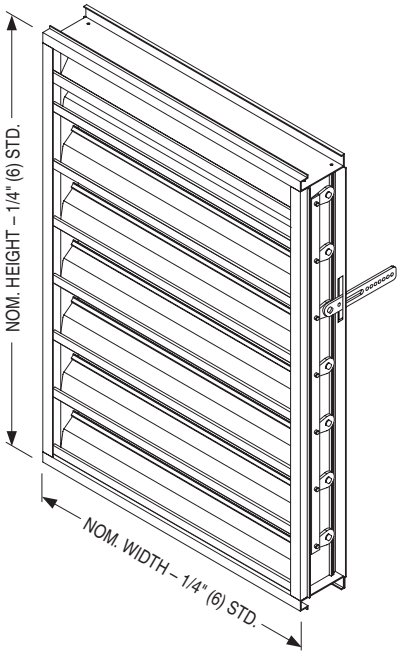
EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
4" (102) DEEP • DRAINABLE BLADE
OPERABLE DAMPER
MODEL: 1604CD

Nailor Industries Inc.

Nailor Model 1604CD is an extruded aluminum combination louver and damper that incorporates front stationary drainable blades and rear adjustable blades all within a single frame. The design provides efficient air performance and aesthetics that compliment any building exterior, while providing tight shut-off when no airflow is required. The drainable blades provide excellent weather protection for exhaust and low to medium velocity intake air applications by utilizing rain gutters to divert collected water down concealed side downspouts and out the sill. Blades are reinforced with full length integral bosses for strength. Model 1604CD is available with channel or flanged type frame to suit most installation requirements and is licensed by AMCA for assured performance.



STANDARD CONSTRUCTION:

FRAME:	4" (102) deep, Type 6063-T6 extruded aluminum, .060" (1.3) nominal wall thickness. Integral downspouts and caulking slot provided.
BLADES:	Front stationary blades: Drainable, Type 6063-T6 extruded aluminum, .060" (1.5) nominal wall thickness. Rear adjustable blades: Type 6063-T6 extruded aluminum, 0.80" (2.03) nominal wall thickness.
BLADE ANGLE:	Front blades fixed at 45 degrees.
BLADE SPACING:	Approx. 4 1/2" (114) on centers.
BLADE SEALS:	Santoprene. Mechanically locked in place.
JAMB SEALS:	Cambered stainless steel.
BEARINGS:	1/2" (13) dia. Celcon®.
AXLES:	1/2" (13) dia. plated steel double bolted to blades.
LINKAGE:	Concealed in frame.
SCREEN:	3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
ACTUATOR:	Hand locking louver quadrant.
FINISH:	Mill.
MINIMUM SIZE:	12" W x 12" H (305 x 305).
MAX. SINGLE SECTION SIZE:	48" W x 96" H (1219 x 2438). Larger sizes will be manufactured in sections with visible mullion side frame (downspouts are concealed) for field assembly.

OPTIONS:

- ❑ **FL15** Flanged Frame, 1 1/2" (38)
- ❑ **FL20** Flanged Frame, 2" (51)
- ❑ **BSSS** Type 304 S. S. Bird Screen.
- ❑ **BSN** No Bird Screen.
- ❑ **ISA** Aluminum Insect Screen.
- ❑ **ISSS** Type 304 S. S. Insect Screen.
- ❑ **WE** Welded Construction.
- ❑ **ESI** Extended Sill.
- ❑ **FR1** 1" (25) Filter Rack.
- ❑ **FR2** 2" (51) Filter Rack.
- ❑ **PACA** Perimeter Anchor Clips.
- ❑ **PASI** Sill Pan.
- ❑ **ACT** Electric Actuator. Specify: _____ .
- ❑ Other: _____ .

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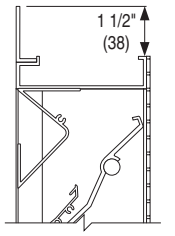
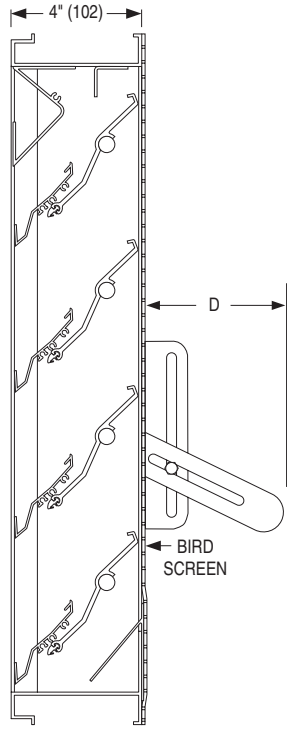


OPT. FLANGED FRAME
(FL15 STD.)



D = 6" (152) with Manual HLLQ
D = 9" (229) with Actuactor

OPTIONAL FINISHES:

- ❑ **PC3** Powder Coat AAMA 2603. Color: _____ .
- ❑ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____ .
- ❑ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____ .
- ❑ **PCC** Prime Coat.
- ❑ **AN04** Clear Anodized 204-R1.
- ❑ **AN15** Clear Anodized 215-R1.

Color Anodized:

- ❑ **ANLB** Light Bronze.
- ❑ **ANDB** Dark Bronze.
- ❑ **ANMB** Medium Bronze.
- ❑ **ANBK** Black.

OPTIONAL W x H SIZING (1/4" [6.5] Undersize standard):

- ❑ **U00** Exact Size.
- ❑ **U50** Undersize 1/2" (12.7).
- ❑ **U38** Undersize 3/8" (9.5).

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600**	**5 - 8 - 24**	**1604CD**

Dimensions are in inches (mm).

Nailor® Industries Inc.

EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
4" (102) DEEP • DRAINABLE BLADE
OPERABLE DAMPER
PERFORMANCE DATA
MODEL: 1604CD

FREE AREA in Square Feet and Square Meters

Height in Inches and Meters	Width in Inches and Meters						
	12 0.30	**18** 0.46	**24** 0.61	**30** 0.76	**36** 0.91	**42** 1.07	**48** 1.22
12 0.30	**0.17** 0.02	**0.28** 0.03	**0.39** 0.04	**0.49** 0.05	**0.60** 0.06	**0.70** 0.07	**0.81** 0.08
18 0.46	**0.41** 0.04	**0.66** 0.06	**0.91** 0.08	**1.16** 0.11	**1.41** 0.13	**1.66** 0.15	**1.90** 0.18
24 0.61	**0.58** 0.05	**0.94** 0.09	**1.30** 0.12	**1.65** 0.15	**2.01** 0.19	**2.37** 0.22	**2.72** 0.25
30 0.76	**0.71** 0.07	**1.15** 0.11	**1.59** 0.15	**2.02** 0.19	**2.46** 0.23	**2.89** 0.27	**3.33** 0.31
36 0.91	**0.94** 0.09	**1.52** 0.14	**2.09** 0.19	**2.67** 0.25	**3.24** 0.30	**3.81** 0.35	**4.39** 0.41
42 1.07	**1.13** 0.10	**1.81** 0.17	**2.50** 0.23	**3.19** 0.30	**3.88** 0.36	**4.56** 0.42	**5.25** 0.49
48 1.22	**1.26** 0.12	**2.03** 0.19	**2.80** 0.26	**3.56** 0.33	**4.33** 0.40	**5.10** 0.47	**5.93** 0.55
54 1.37	**1.48** 0.14	**2.39** 0.22	**3.30** 0.31	**4.20** 0.39	**5.11** 0.47	**6.01** 0.56	**6.92** 0.64
60 1.52	**1.67** 0.16	**2.69** 0.25	**3.71** 0.34	**4.73** 0.44	**5.74** 0.53	**6.76** 0.63	**7.78** 0.72
66 1.68	**1.80** 0.17	**2.90** 0.27	**4.00** 0.37	**5.10** 0.47	**6.20** 0.58	**7.30** 0.68	**8.40** 0.78
72 1.83	**2.03** 0.19	**3.26** 0.30	**4.50** 0.42	**5.74** 0.53	**6.97** 0.65	**8.21** 0.76	**9.45** 0.88
78 1.98	**2.21** 0.21	**3.56** 0.33	**4.91** 0.46	**6.26** 0.58	**7.61** 0.71	**8.96** 0.83	**10.31** 0.96
84 2.13	**2.35** 0.22	**3.78** 0.35	**5.21** 0.48	**6.64** 0.62	**8.07** 0.75	**9.50** 0.88	**10.93** 1.02
90 2.29	**2.57** 0.24	**4.14** 0.38	**5.71** 0.53	**7.27** 0.68	**8.84** 0.82	**10.41** 0.97	**11.97** 1.11
96 2.44	**2.76** 0.26	**4.44** 0.41	**6.12** 0.57	**7.80** 0.72	**9.48** 0.88	**11.16** 1.04	**12.84** 1.19

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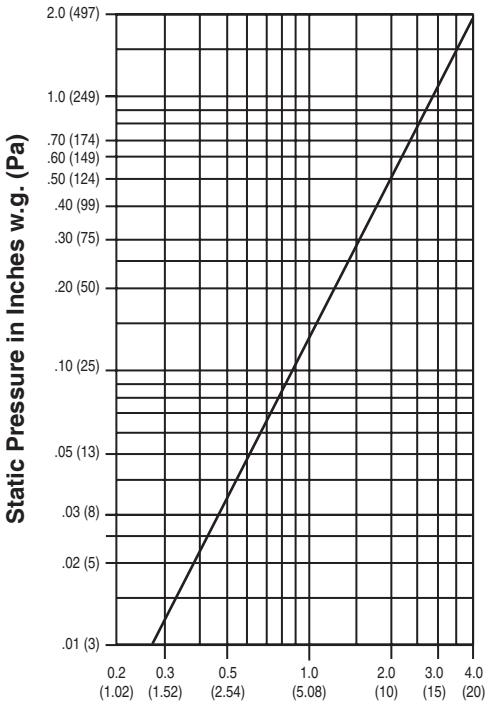
Nailor® Industries Inc.

EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
4" (102) DEEP • DRAINABLE BLADE
OPERABLE DAMPER
PERFORMANCE DATA
MODEL: 1604CD

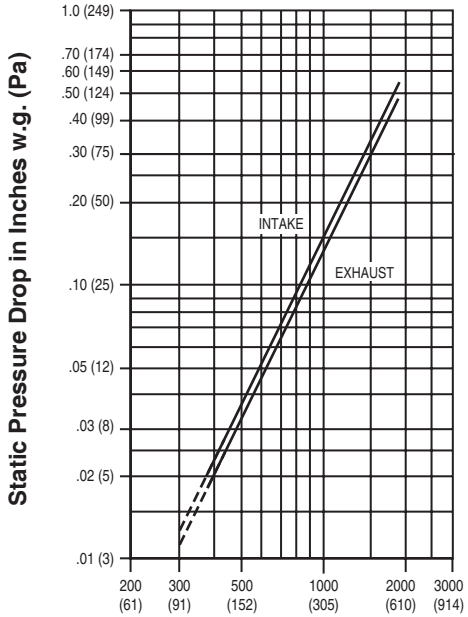
AIR LEAKAGE (damper fully closed)



Leakage in CFM/ft.² (L/s/m²)

Louver test size: 48" x 48" (1219 x 1219 mm).

PRESSURE DROP (damper fully open)



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).

Standard air density @ 0.075 lbs/ft³.

Tested to AMCA Fig. 5.5 – 6.5.

AIRFLOW/ WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

	Free Area % Free Area sq. ft. (sq. m.)	37% 5.93 (0.55)
INTAKE	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm Free Area Velocity	7413 cfm (3499 l/s)
	Pressure Drop @ 1250 fpm	.24 in. w.g. (60 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the point of beginning water penetration. *Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

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Nailor Industries Inc. certifies that the Model 1604CD shown herein is licensed to bear the AMCA Certified Ratings Program 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 Program seal applies to Water Penetration and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.

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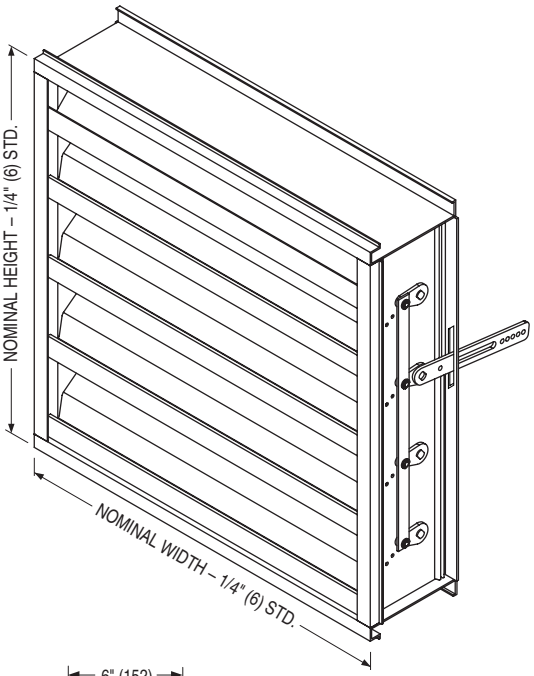
SCHEDULE TYPE:	Page 3 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600**	**5 - 8 - 24**	**1604CD**

Nailor® Industries Inc.

EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
6" (152) DEEP • DRAINABLE BLADE • OPERABLE AIRFOIL DAMPER
MODEL: 1606C

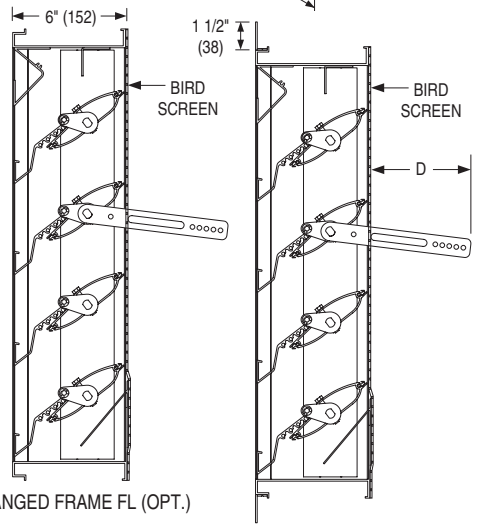
QUALIFICATIONS:

- **AMCA 500-L (Water Penetration, Air Performance).**
- **AMCA 540 (Wind-Borne Debris Impact Test [Basic "Level D" Protection]).**
- **AMCA 550 (High Velocity Wind-Driven Rain Resistance Test [with blades closed]).**
- **Wind load rating +/- 70 PSF**



STANDARD CONSTRUCTION:

FRAME:	6" (152) deep, Type 6063-T6 extruded aluminum, 0.120" (3.05) nominal wall thickness. Integral downspouts and caulking slot provided.
BLADES:	Front Stationary Blades: Drainable style, Type 6063-T6 extruded aluminum, 0.080" (2.03) nominal wall thickness. Fixed at 37.5 degrees. Rear Operable Blades: Airfoil style, Type 6063-T6 extruded aluminum, 0.080" (2.03) nominal wall thickness.
BLADE SPACING:	Approximately 4.84" (123) on centers.
BLADE SEALS:	Santoprene. Mechanically locked in place.
JAMB SEALS:	Cambered stainless steel.
BEARINGS:	1/2" (13) dia. Celcon®.
AXLES:	1/2" (13) dia. plated steel double bolted to blades.
LINKAGE:	Concealed in frame.
SCREEN:	3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
ACTUATOR:	Hand locking louver quadrant.
FINISH:	Mill.
MINIMUM SIZE:	12" W x 16" H (305 x 406).
MAX. SINGLE SECTION SIZE:	60" W x 120" H (1524 x 3048). 50 sq. ft. (4.6 m^2). Larger louvers will require field assembly of smaller sections.
MAXIMUM SIZE:	Unlimited Width x 120" H (3048).



FLANGED FRAME FL (OPT.)

D = 6" (152) with Manual HLLQ
D = 9" (229) with Actuactor

OPTIONS:

- ❑ **BSSS** Type 304 S.S. Bird Screen.
- ❑ **BSN** No Bird Screen.
- ❑ **ISA** Aluminum Insect Screen.
- ❑ **ISSS** Type 304 S.S. Insect Screen.
- ❑ **FL15** 1 1/2" (38) Flanged Frame.
- ❑ **ESI** Extended Sill.
- ❑ **PASI** Sill Pan.
- ❑ **ACT** Electric Actuator. Specify: _____ .
- ❑ **PAAA** Perimeter Anchor Angles (Aluminum, Continuous).
- ❑ Other: _____ .

OPTIONAL FINISHES:

- ❑ **PC3** Powder Coat AAMA 2603. Color: _____ .
- ❑ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____ .
- ❑ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____ .
- ❑ **PPC** Prime Coat.
- ❑ **AN04** Clear Anodized 204-R1.
- ❑ **AN15** Clear Anodized 215-R1.
- ❑ **ANLB** Light Bronze.
- ❑ **ANMB** Medium Bronze.
- ❑ **ANDB** Dark Bronze.
- ❑ **ANBK** Black.

amca INTERNATIONAL LISTED — HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY CLOSED AND IMPACT RESISTANT LOUVER *Basic Protection Level D* See www.AMCA.org for all certified or listed products. This label does not signify AMCA airflow performance certification.

amca WORLDWIDE CERTIFIED RATINGS — WATER PENETRATION — AIR PERFORMANCE — AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC. — www.amca.org

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600M**	**8 - 2 - 23**	**1606C**

Dimensions are in inches (mm).

Nailor® Industries Inc.

EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
6" (152) DEEP • DRAINABLE BLADE • OPERABLE AIRFOIL DAMPER
PERFORMANCE DATA
MODEL: 1606C

FREE AREA in Square Feet and Square Meters

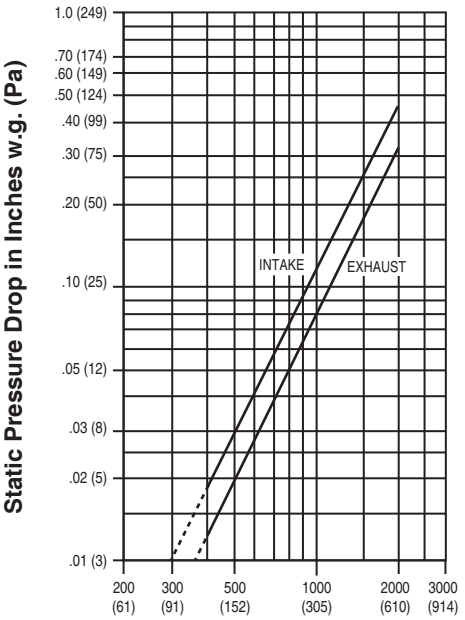
Height in Inches and Meters	Width in Inches and Meters								
	12 0.30	**18** 0.46	**24** 0.61	**30** 0.76	**36** 0.91	**42** 1.07	**48** 1.22	**54** 1.37	**60** 1.52
12 0.30	**0.19** 0.02	**0.30** 0.03	**0.41** 0.04	**0.53** 0.05	**0.64** 0.06	**0.76** 0.07	**0.87** 0.08	**0.98** 0.09	**1.10** 0.10
18 0.46	**0.37** 0.03	**0.60** 0.06	**0.83** 0.08	**1.06** 0.10	**1.28** 0.12	**1.51** 0.14	**1.74** 0.16	**1.97** 0.18	**2.20** 0.20
24 0.61	**0.85** 0.08	**1.36** 0.13	**1.88** 0.17	**2.40** 0.22	**2.91** 0.27	**3.43** 0.32	**3.94** 0.37	**4.46** 0.41	**4.98** 0.46
30 0.76	**1.03** 0.10	**1.66** 0.15	**2.29** 0.21	**2.92** 0.27	**3.55** 0.33	**4.18** 0.39	**4.81** 0.45	**5.44** 0.51	**6.07** 0.56
36 0.36	**1.22** 0.11	**1.96** 0.18	**2.71** 0.25	**3.45** 0.32	**4.20** 0.39	**4.94** 0.46	**5.68** 0.53	**6.43** 0.60	**7.17** 0.67
42 1.07	**1.41** 0.13	**2.26** 0.21	**3.12** 0.29	**3.98** 0.37	**4.84** 0.45	**5.70** 0.53	**6.55** 0.61	**7.41** 0.69	**8.27** 0.77
48 1.22	**1.59** 0.15	**2.56** 0.24	**3.53** 0.33	**4.50** 0.42	**5.47** 0.51	**6.44** 0.60	**7.40** 0.69	**8.38** 0.78	**9.35** 0.87
54 1.37	**1.94** 0.18	**3.12** 0.29	**4.30** 0.40	**5.49** 0.51	**6.67** 0.62	**7.85** 0.73	**9.04** 0.84	**10.22** 0.95	**11.40** 1.06
60 1.52	**2.15** 0.20	**3.47** 0.32	**4.78** 0.44	**6.09** 0.57	**7.41** 0.69	**8.72** 0.81	**10.03** 0.93	**11.35** 1.05	**12.66** 1.18
66 1.68	**2.34** 0.22	**3.77** 0.35	**5.19** 0.48	**6.62** 0.62	**8.05** 0.75	**9.48** 0.88	**10.90** 1.01	**12.33** 1.15	**13.76** 1.28
72 1.83	**2.53** 0.23	**4.07** 0.38	**5.61** 0.52	**7.15** 0.66	**8.69** 0.81	**10.23** 0.95	**11.77** 1.09	**13.32** 1.24	**14.86** 1.38
78 1.98	**2.90** 0.27	**4.67** 0.43	**6.44** 0.60	**8.21** 0.76	**9.98** 0.93	**11.75** 1.09	**13.51** 1.26	**15.28** 1.42	**17.05** 1.58
84 2.13	**3.09** 0.29	**4.97** 0.46	**6.85** 0.64	**8.74** 0.81	**10.62** 0.99	**12.50** 1.16	**14.38** 1.34	**16.27** 1.51	**18.15** 1.69
90 2.29	**3.27** 0.30	**5.27** 0.49	**7.27** 0.68	**9.26** 0.86	**11.26** 1.05	**13.26** 1.23	**15.25** 1.42	**17.25** 1.60	**19.25** 1.79
96 2.44	**3.46** 0.32	**5.57** 0.52	**7.68** 0.71	**9.79** 0.91	**11.90** 1.11	**14.01** 1.30	**16.12** 1.50	**18.23** 1.69	**20.34** 1.89
102 2.59	**3.65** 0.34	**5.87** 0.55	**8.10** 0.75	**10.32** 0.96	**12.54** 1.17	**14.77** 1.37	**16.99** 1.58	**19.22** 1.79	**21.44** 1.99
108 2.74	**4.02** 0.37	**6.47** 0.60	**8.93** 0.83	**11.38** 1.06	**13.83** 1.28	**16.28** 1.51	**18.73** 1.74	**21.19** 1.97	**23.64** 2.20
114 2.90	**4.21** 0.39	**6.77** 0.63	**9.34** 0.87	**11.91** 1.11	**14.47** 1.34	**17.04** 1.58	**19.60** 1.82	**22.17** 2.06	**24.74** 2.30
120 3.05	**4.39** 0.41	**7.07** 0.66	**9.75** 0.91	**12.43** 1.16	**15.11** 1.40	**17.79** 1.65	**20.47** 1.90	**23.15** 2.15	**25.83** 2.40

AIRFLOW/ WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %		46 %
Free Area sq. ft. (sq. m.)		7.40 (0.69)
INTAKE	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1178 fpm (359 m/min.)
	Air Volume at 1178 fpm Free Area Velocity	8717 cfm (4114 l/s)
	Pressure Drop @ 1178 fpm	0.16 in. w.g. (40 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.

PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.

Nailor Industries Inc. certifies the Model 1606C 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. Seal applies to air performance and water penetration ratings.

HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY CLOSED AND IMPACT RESISTANT LOUVER
Basic Protection Level D
See www.AMCA.org for all certified or listed products
This label does not signify AMCA airflow performance certification.

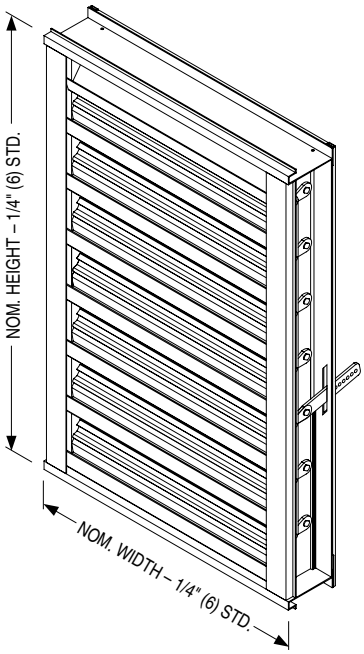
Nailor Industries Inc. certifies that the 1606C shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant Louvers. The AMCA Listing Label applies to High Velocity Wind Driven Rain Resistant Louvers.

SCHEDULE TYPE:	Page 2 of 2 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600M**	**8 - 2 - 23**	**1606C**

EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
6" (152) DEEP • DRAINABLE BLADE
OPERABLE AIRFOIL DAMPER
MODEL: 1606CDAF

Nailor Industries Inc.

Nailor Model 1606CDAF is an extruded aluminum combination louver and damper that incorporates front stationary drainable blades and rear adjustable airfoil blades all within a single frame. The design provides efficient air performance and aesthetics that compliment any building exterior, while providing tight shut-off when no airflow is required. The drainable blades provide excellent weather protection for exhaust and low to medium velocity intake air applications by utilizing rain gutters to divert collected water down concealed side downspouts and out the sill. Blades are reinforced with full length integral bosses for strength. Model 1606CDAF is available with channel or flanged type frame to suit most installation requirements, and is licensed by AMCA for assured performance.



STANDARD CONSTRUCTION:

FRAME: 6" (152) deep type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.

BLADES: Front stationary blades: drainable style, type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Rear operable blades: Airfoil style, type 6063-T6 extruded aluminum.

BLADE ANGLE: Front blades fixed at 45 degrees.

BLADE SPACING: Approx. 5 1/2" (140) on centers.

BLADE SEALS: Santoprene. Mechanically locked in place.

JAMB SEALS: Cambered stainless steel.

BEARINGS: 1/2" (13) dia. Celcon®.

AXLES: 1/2" (13) dia. plated steel double bolted to blades.

LINKAGE: Concealed in frame.

SCREEN: 3/4" x .051 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).

ACTUATOR: Hand locking louver quadrant.

FINISH: Mill.

MINIMUM SIZE: 12" W x 12" H (305 x 305).

MAX. SINGLE SECTION SIZE: 60" W x 120" H (1524 x 3048). Larger sizes will be manufactured in sections with visible mullion side frame (downspouts are concealed) for field assembly.

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OPTIONS:

- ❑ **FL15** Flanged Frame, 1 1/2" (38) std.
- ❑ **FL20** Flanged Frame, 2" (51).
- ❑ **BSSS** Type 304 S.S. Bird Screen.
- ❑ **BSN** No Bird Screen.
- ❑ **ISA** Aluminum Insect Screen.
- ❑ **ISSS** Type 304 S.S. Insect Screen.
- ❑ **WE** Welded Construction.
- ❑ **ESI** Extended Sill.
- ❑ **FR1** Filter Rack, 1" (25).
- ❑ **FR2** Filter Rack, 2" (51).
- ❑ **PAC** Perimeter Anchor Clips.
- ❑ **PASI** Sill Pan.
- ❑ **ACT** Electric Actuator. Specify: _____ .
- ❑ Other: _____ .

OPTIONAL FINISHES:

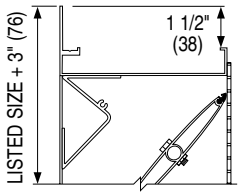
- ❑ **PC3** Powder Coat AAMA 2603. Color: _____ .
- ❑ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____ .
- ❑ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____ .
- ❑ **PCC** Prime Coat.
- ❑ **AN04** Clear Anodized 204-R1.
- ❑ **AN15** Clear Anodized 215-R1.

Color Anodized:

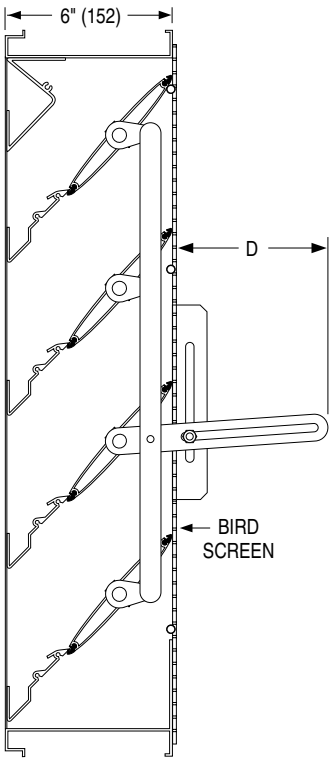
- ❑ **ANLB** Light Bronze.
- ❑ **ANDB** Dark Bronze.
- ❑ **ANMB** Medium Bronze.
- ❑ **ANBK** Black.

OPTIONAL W x H SIZING (1/4" [6.5] Undersize standard):

- ❑ **U00** Exact Size.
- ❑ **U50** Undersize 1/2" (12.7).
- ❑ **U38** Undersize 3/8" (9.5).



OPT. FLANGED FRAME (FL15 STD.)



D = 6" (152) with Manual HLLQ
D = 9" (229) with Actuactor

SCHEDULE TYPE:	Page 1 of 3			
PROJECT:	Dimensions are in inches (mm).			
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600**	**1 - 19 - 24**	**1606CDAF**

Nailor® Industries Inc.

EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
6" (152) DEEP • DRAINABLE BLADE
OPERABLE AIRFOIL BLADE
PERFORMANCE DATA
MODEL: 1606CDAF

FREE AREA in Square Feet and Square Meters

Height in Inches and Meters	Width in Inches and Meters								
	12 0.30	**18** 0.46	**24** 0.61	**30** 0.76	**36** 0.91	**42** 1.07	**48** 1.22	**54** 1.37	**60** 1.52
12 0.30	**0.27** 0.03	**0.44** 0.04	**0.61** 0.06	**0.78** 0.07	**0.95** 0.09	**1.12** 0.10	**1.28** 0.12	**1.45** 0.14	**1.62** 0.15
18 0.46	**0.48** 0.04	**0.78** 0.07	**1.09** 0.10	**1.39** 0.13	**1.69** 0.16	**1.99** 0.18	**2.29** 0.21	**2.59** 0.24	**2.90** 0.27
24 0.61	**0.69** 0.06	**1.13** 0.10	**1.56** 0.15	**2.00** 0.19	**2.43** 0.23	**2.87** 0.27	**3.30** 0.31	**3.73** 0.35	**4.17** 0.39
30 0.76	**0.95** 0.09	**1.54** 0.14	**2.13** 0.20	**2.72** 0.25	**3.31** 0.31	**3.91** 0.36	**4.50** 0.42	**5.09** 0.47	**5.68** 0.53
36 0.36	**1.19** 0.11	**1.93** 0.18	**2.68** 0.25	**3.42** 0.32	**4.17** 0.39	**4.91** 0.46	**5.66** 0.53	**6.40** 0.59	**7.15** 0.66
42 1.07	**1.33** 0.12	**2.16** 0.20	**2.99** 0.28	**3.83** 0.36	**4.66** 0.43	**5.49** 0.51	**6.32** 0.59	**7.16** 0.66	**7.99** 0.74
48 1.22	**1.58** 0.15	**2.56** 0.24	**3.55** 0.33	**4.53** 0.42	**5.52** 0.51	**6.50** 0.60	**7.33** 0.68	**8.47** 0.79	**9.46** 0.88
54 1.37	**1.79** 0.17	**2.91** 0.27	**4.02** 0.37	**5.14** 0.48	**6.26** 0.58	**7.38** 0.69	**8.50** 0.79	**9.62** 0.89	**10.73** 1.00
60 1.52	**2.03** 0.19	**3.30** 0.31	**4.58** 0.43	**5.85** 0.54	**7.12** 0.66	**8.39** 0.78	**9.66** 0.90	**10.93** 1.02	**12.21** 1.13
66 1.68	**2.28** 0.21	**3.70** 0.34	**5.13** 0.48	**6.55** 0.61	**7.98** 0.74	**9.40** 0.87	**10.83** 1.01	**12.25** 1.14	**13.68** 1.27
72 1.83	**2.52** 0.23	**4.10** 0.38	**5.68** 0.53	**7.26** 0.67	**8.84** 0.82	**10.42** 0.97	**11.99** 1.11	**13.57** 1.26	**15.15** 1.41
78 1.98	**2.60** 0.24	**4.23** 0.39	**5.86** 0.54	**7.49** 0.70	**9.11** 0.85	**10.74** 1.00	**12.37** 1.15	**14.00** 1.30	**15.63** 1.45
84 2.13	**2.81** 0.26	**4.57** 0.42	**6.33** 0.59	**8.10** 0.75	**9.86** 0.92	**11.62** 1.08	**13.38** 1.24	**15.14** 1.41	**16.90** 1.57
90 2.29	**3.03** 0.28	**4.92** 0.46	**6.81** 0.63	**8.70** 0.81	**10.60** 0.98	**12.49** 1.16	**14.38** 1.34	**16.28** 1.51	**18.17** 1.69
96 2.44	**3.45** 0.32	**5.61** 0.52	**7.77** 0.72	**9.92** 0.92	**12.08** 1.12	**14.24** 1.32	**16.40** 1.52	**18.56** 1.72	**20.72** 1.92
102 2.59	**3.64** 0.34	**5.92** 0.55	**8.20** 0.76	**10.48** 0.97	**12.76** 1.19	**15.04** 1.40	**17.32** 1.61	**19.60** 1.82	**21.88** 2.03
108 2.74	**3.89** 0.36	**6.32** 0.59	**8.75** 0.81	**11.19** 1.04	**13.62** 1.27	**16.05** 1.49	**18.49** 1.72	**20.92** 1.94	**23.35** 2.17
114 2.90	**4.13** 0.38	**6.72** 0.62	**9.31** 0.86	**11.89** 1.10	**14.48** 1.35	**17.07** 1.59	**19.65** 1.83	**22.24** 2.07	**24.83** 2.31
120 3.05	**4.38** 0.41	**7.12** 0.66	**9.86** 0.92	**12.60** 1.17	**15.34** 1.43	**18.08** 1.68	**20.82** 1.93	**23.56** 2.19	**26.30** 2.44

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SCHEDULE TYPE:	Page 2 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600**	**1 - 19 - 24**	**1606CDAF**

Nailor® Industries Inc.

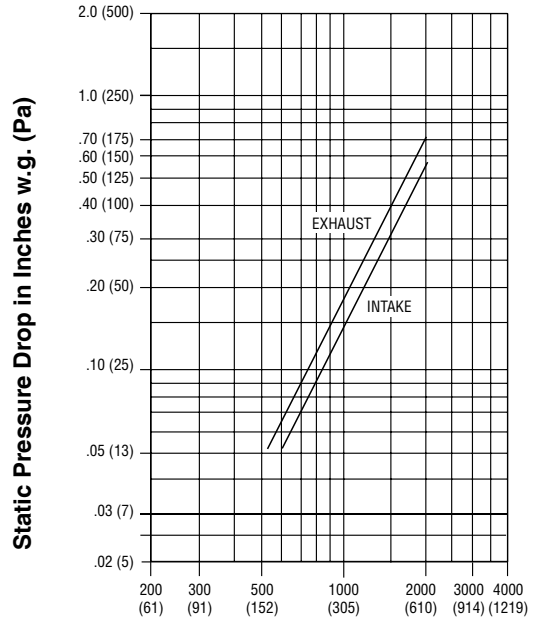
EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER
6" (152) DEEP • DRAINABLE BLADE
OPERABLE AIRFOIL BLADE
PERFORMANCE DATA
MODEL: 1606CDAF

AIRFLOW/ WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

	Free Area % Free Area sq. ft. (sq. m.)	46% 7.34 (0.68)
INTAKE	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1144 fpm (349 m/min.)
	Air Volume at 1144 fpm / Free Area Velocity	8397 cfm (3963 l/s)
	Pressure Drop @ 1144 fpm	.19 in. w.g. (47 Pa)

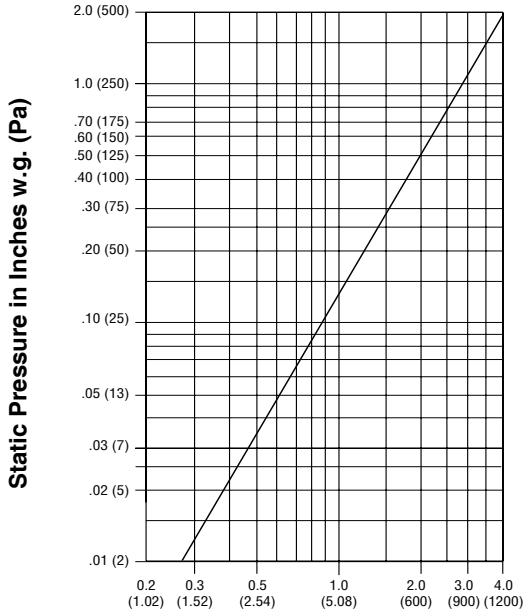
NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the point of beginning water penetration.

PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area
Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.

AIR LEAKAGE (Damper fully closed)



Leakage in CFM/ft.² (L/s/m²)
Louver test size: 48" x 48" (1219 x 1219 mm).

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Nailor Industries Inc. certifies that the Model 1606CDAF shown herein is licensed to bear the AMCA Certified Ratings Program 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 Program seal applies to Water Penetration and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.

SCHEDULE TYPE:	Page 3 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**6 - 10 - 25**	**1600**	**1 - 19 - 24**	**1606CDAF**

Nailor® Industries Inc.

Louver Finishes & Color Guide

Slate Blue **LF01**	Medium Bronze **LF02**	Sandstone **LF03**
Light Gray **LF04**	Charcoal **LF05**	Bone White **LF06**
Western Tan **LF07**	Architectural Bronze **LF08**	Regal Blue **LF09**
Forest Green **LF10**	Surrey Beige **LF11**	Royal Brown **LF12**
Barn Red **LF13**	Burgundy **LF14**	Clay **LF15**
Almond **LF16**	Coastal White **LF17**	Vista Green **LF18**
Black **LF19**	Gloss Black **LF20**	Campus Green **LF21**

Nailor offers 21 standard paint colors selected for architectural exterior use which meet or exceed AAMA specifications and performance requirements for color retention, chalk resistance, gloss retention, erosion, corrosion and chemical resistance as well as dry film thickness and hardness. Our state-of-the-art powder coat system provides an environment friendly finishing solution with more uniform coverage and coating thickness. The result is an exceptional finish that better resists scratching, fading and general wear. Additional liquid coat facilities for special requirements complete our ability to provide unmatched beauty and durability for any application.

Custom color matching is also available upon request. Contact your local Nailor representative.

Available Finishes

FINISH TYPE	DESCRIPTION	STANDARD WARRANTY
Fluoropolymer Powder Coat AAMA 2605-Superior Finish (AKA: Powdura® 5000, Coraflon® Powder, Interpon® D3000-Fluoromax, IFS 500FP)	**"Ultimate"** - A next generation hyper durable powder coating, based on FEVE fluoropolymer resins and ceramic pigmentation that the industry has acknowledged as the foundation for superior performance coatings. They provide a hard surface that is resistant to scratching and scuffing, with superior color and gloss retention, when applied to a variety of exterior architectural applications. This technology represents the "ultimate" in environmentally friendly finishes, with Zero-VOC emissions. A superior alternative to traditional 70% Kynar 500® / Hylar 500® PVDF fluoropolymer liquid coatings.	10 years (Consult Nailor for availability of extended warranty)
High Performance Powder Coat AAMA 2604 - High Performance Finish (AKA: Powdura® 4000, Envirocron® Ultra Durable Powder, Dynadure™ 400, Interpon® D2000, IFS 400SD)	**"Better"** - A high performance polyester powder coating, based on "super durable" resins that utilize infrared reflective pigments, which provides excellent resistance to outdoor weathering. A harder and more environmentally friendly coating than other liquid paint counterparts and with Zero-VOC emissions. A good alternative to 50% Kynar 500® / Hylar 5000® liquid coatings.	5 years
Durable Powder Coat AAMA 2603 - Pigmented Organic Coatings (AKA: Powdura® 3000, Envirocron® Durable Powder, Dynadure™ 300, Interpon® D1000, IFS 300SP)	**"Good"** - A durable powder coat based on thermosetting polyester resin technology. Provides a good economical combination of physical and chemical resistance properties. Environmentally superior to liquid spray paints and Zero – VOC emissions.	1 year
Clear Anodize 215-R1 AA-M10C22A41 (0.7 mil. min.)	Architectural Class I. Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. Recommended for severely corrosive and abrasive atmospheric exposure.	5 years
Clear Anodize 204-R1 AA-M10C22A31 (0.4 - 0.7 mil.)	Architectural Class II. Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. Recommended for normal weather exposure.	1 year
Color Anodize AA-M10C22A44 (0.7 mil. min.)	Architectural Class I. "Two-step" aluminum coating process. Following a standard anodizing procedure, a second electrolytic process deposits colored metallic pigments which penetrate the aluminum oxide pores, producing a corrosion resistant, colorfast finish. Available in light, medium, dark bronze and black.	5 years
Prime Coat	Prime coat provides a stable base for painting of louvers in the field. Surface pretreatment includes degreasing and a chemical cleaning before an epoxy prime coat is applied. Finish coat should be field applied as soon as possible for best adhesion, after a thorough cleaning for dust etc. that can contaminate the final finish and cause premature flaking or peeling.	N/A

Paint finish warranties are not applicable to steel products.

SUPPLEMENTARY INSTALLATION INSTRUCTIONS • CAULKING HURRICANE LOUVERS MODEL SERIES: 1600

I. General Notes

1. The following guidelines provide basic caulking instruction for Nailor Industries' Florida Product Approved and Miami-Dade Qualified Hurricane Louvers.
2. Hurricane louvers have been designed and tested to meet the stringent criteria established by the Florida Building Code and protocols called for use in Miami-Dade and Broward counties. Our louvers are certified to AMCA 500-L, AMCA 540 and AMCA 550, and have been tested to TAS 100-A, TAS-201, TAS-202 and TAS-203.
3. Maximum louver sizes are unlimited width x 120" (3048) high. However, louvers larger than the maximum single section size require field assembly from smaller louver sections to meet the overall louver width requirements.

II. General Installation Requirements

1. Structural members, mounting angles, clips, fasteners, and some installation hardware will be provided by the manufacturer. Other necessary installation hardware shall be provided by the installing contractor.
2. Refer to the model specific installation instructions and drawings for FL19273, for Florida Product and FL28078, for the Miami-Dade Qualified Hurricane Louvers.

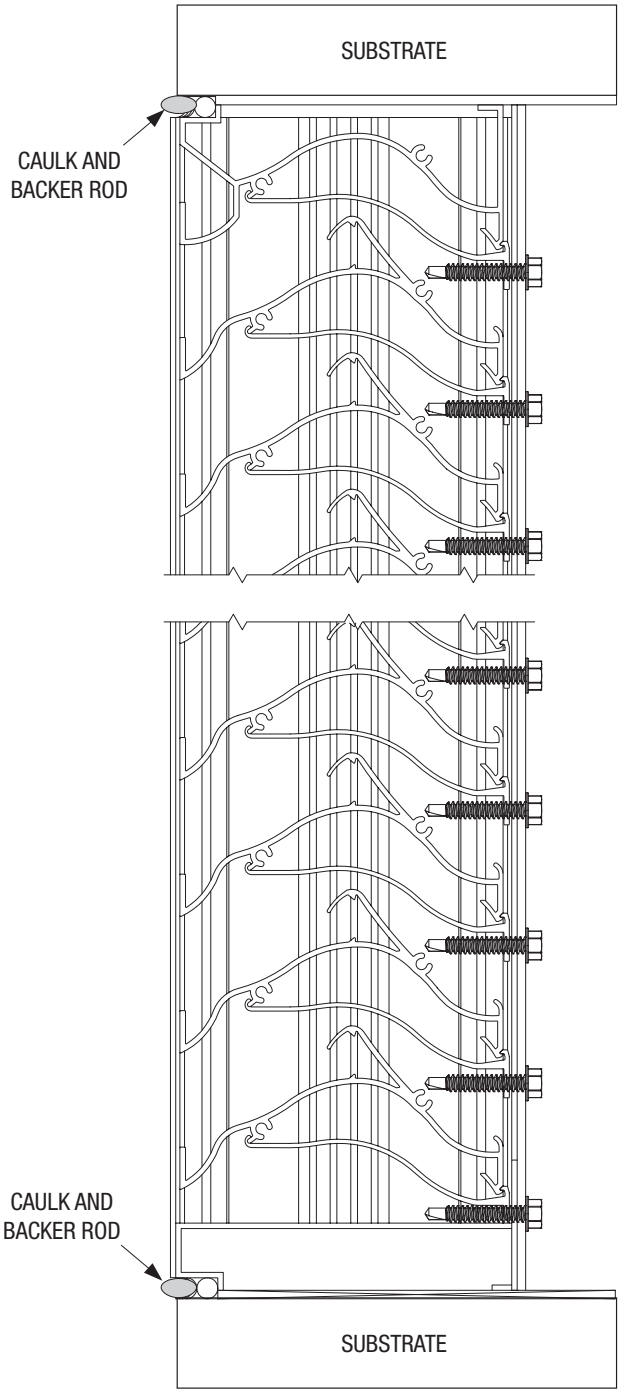
II. REFERENCE TABLE

NAILOR LOUVER MODEL	FLORIDA APPLICATION #	MIAMI-DADE NOA #
1604DHPF	FL19273.1	Not Applicable
1605WDF	FL19273.2	Not Applicable
1605WDVF	FL19273.3	Not Applicable
1606DHPF	FL19273.4	Not Applicable
1606WDF	FL19273.5	Not Applicable
1605WDM	FL28078.1	21-0630.11
1605WDVM	FL28078.2	21-0630.12
1606DHPM	FL28078.3	21-0630.10
1675WDVM	FL28078.4	21-0630.09
1609HM	FL41947.1	23-0823.05
1606CM	FL41947.2	23-0823.04
1605WDV	Not Applicable	Not Applicable
1609H	Not Applicable	Not Applicable
1606C	Not Applicable	Not Applicable

III. Perimeter Caulking Requirements

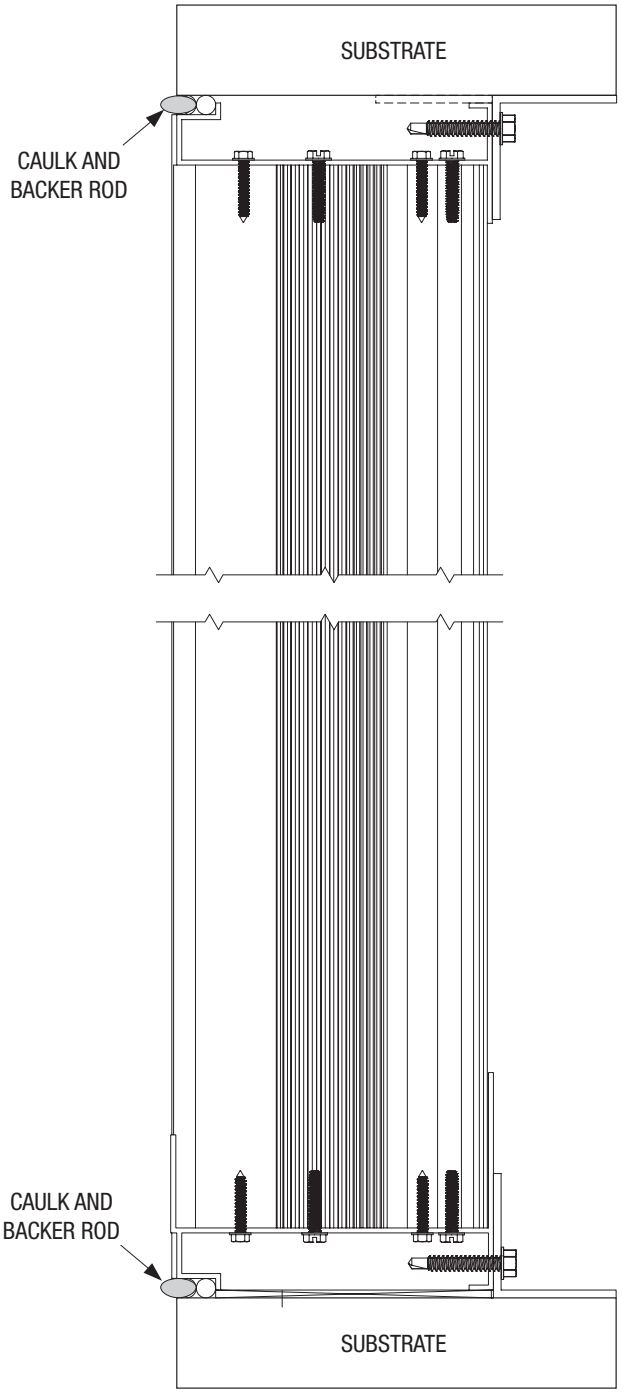
1. Install backer rod and caulk around the entire perimeter of the louver, as required. (Backer rod and caulk are by others). This is required for all single section and multiple section units. Refer to Section IV for multiple section caulking at the mullion covers.

FIGURE 1 - HORIZONTAL SINGLE SECTION



TYPICAL HORIZONTAL BLADE LOUVER

FIGURE 2 - VERTICAL SINGLE SECTION



TYPICAL VERTICAL BLADE LOUVER

IV. Multiple Section Louver/Mullion Cover Caulking Requirements

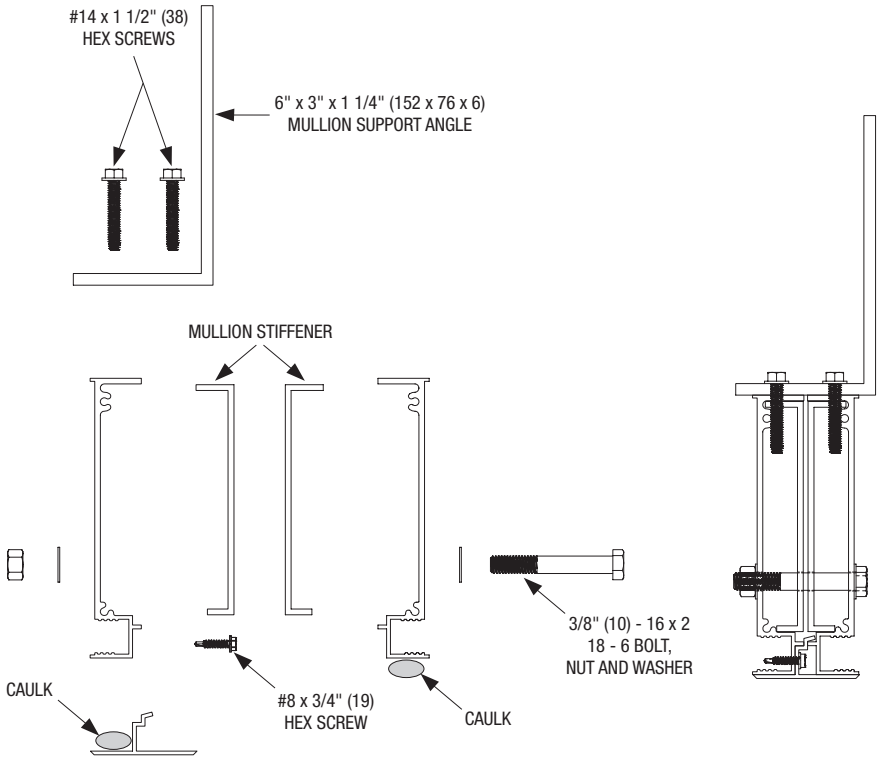
1. Nailor Hurricane Louvers have two different types of mullion covers, depending on the era of the original design. Each detail will be demonstrated in the figures below. Type A is an extruded "T" shape that is fastened to the inside of the louver frame. Type B is a flat bar that is fastened to the front of the louver frame. **WARNING:** Identify your mullion covers prior to multiple section installation.
2. **MULLION COVER REFERENCE TABLE:** The table below identifies which type of mullion cover is required by model.

MULLION COVER REFERENCE TABLE

NAILOR LOUVER MODEL	FIGURE # TYPE
1604DHPF	Figure 3 - Type A
1605WDF	Figure 3 - Type A
1606DHPF	Figure 3 - Type A
1606WDF	Figure 3 - Type A
1606DHPM	Figure 3 - Type A
1609HM	Figure 3 - Type A
1606CM	Figure 3 - Type A
1609H	Figure 3 - Type A
1606C	Figure 3 - Type A
1605WDVF	Figure 4 – Type B
1605WDM	Figure 4 – Type B
1605WDVM	Figure 4 – Type B
1675WDVM	Figure 4 – Type B
1605WDV	Figure 4 – Type B
1605WDV	Figure 4 – Type B

3. **Type A:** Apply a bead of caulk to rear of the mullion cover and apply caulk to the pre-punched holes on the mullion cover. Install mullion to the left side of the louver using #8 x 3/4" (19) metal hex screws. This will be the rightmost section of the louver.
4. Apply a bead of caulk to the exposed surface of the next louver panel frame prior to installation.
5. Continue installing louver panels using the same procedure. The leftmost louver panel has no mullion cover.
6. Ensure that the entire perimeter is caulked as referenced in **Section III PERIMETER CAULKING REQUIREMENTS**.

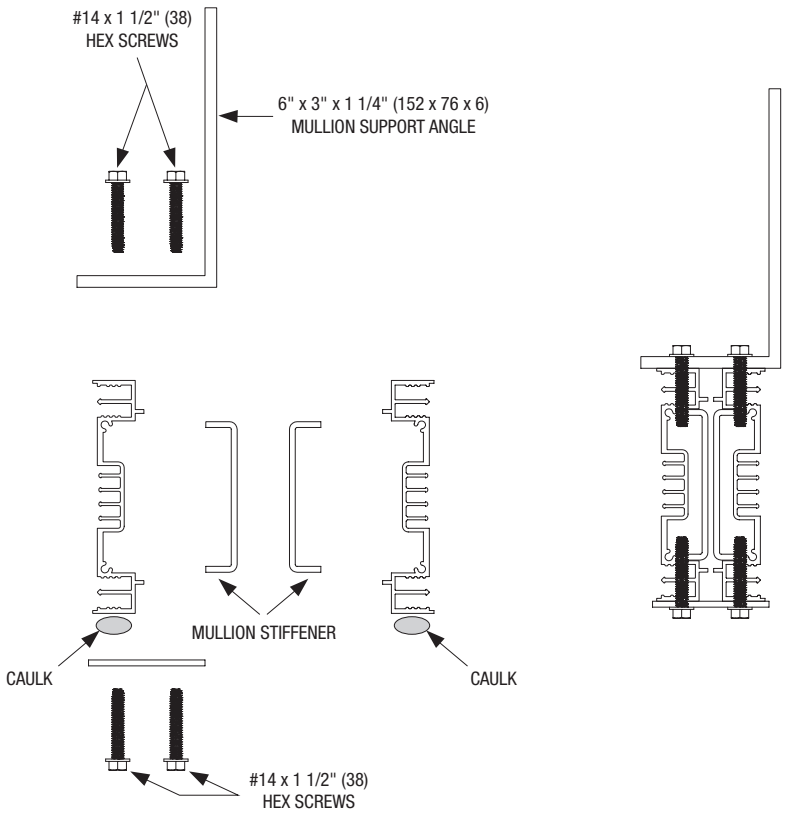
FIGURE 3 - TYPE A MULLION COVER CAULKING



IV. Multiple Section Louver/Mullion Cover Caulking Requirements (continued)

8. **Type B:** Apply a bead of caulk to exterior surface of each louver panel frame prior to installing the mullion cover. The mullion cover shall be attached in accordance with the installation instructions referenced in **Section II General Installation Instructions**.
9. Apply a bead of caulk to the interior surface of each louver panel frame prior to installing the louver support angle.
10. Continue installing louver panels using the same procedure. The leftmost louver panel has no mullion cover.
11. Ensure that the entire perimeter is caulked as referenced in **Section III PERIMETER CAULKING REQUIREMENTS**.

FIGURE 4 - TYPE B MULLION COVER CAULKING



Dimensions are in inches (mm).

Nailor® Industries Inc.

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