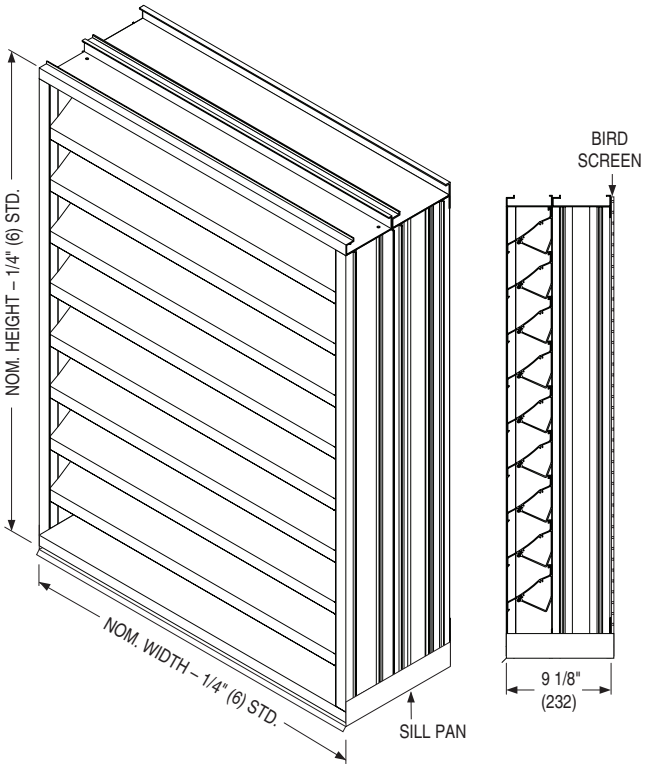
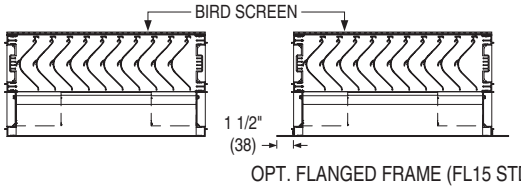
Nailor® Industries Inc.

EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
MODEL: 1609H

QUALIFICATIONS:

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





OPT. FLANGED FRAME (FL15 STD.)

STANDARD CONSTRUCTION:

FRAME:	**Front:** 4" (102) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral caulking slot provided. **Rear:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts provided.
BLADES:	**Front:** Horizontal Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses. J style. Fixed at 37 degrees. **Rear:** Vertical Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.
BLADE SPACING:	**Front:** Approximately 4" (102) on centers. **Rear:** Approximately 1 1/2" (38) on centers.
BLADE SUPPORT	**Front:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. **Rear:** 2.5" (64) strap every 60" (1524) or less in height.
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).
SILL PAN:	Aluminum sill pan with end dams. (louver width undersized an additional 1/4" (6) to accommodate sill pan).
FINISH:	Mill.
MINIMUM SIZE:	12" W x 12" H (305 x 305).
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).

OPTIONS:

- ❑ **BSSS** Type 304 S.S. Bird Screen.
- ❑ **BSN** No Bird Screen.
- ❑ **ISSS** Type 304 S.S. Insect Screen.
- ❑ **ISA** Aluminum Insect Screen.
- ❑ **FL15** Flanged Frame, 1 1/2" (38).
- ❑ **FL20** Flanged Frame, 2" (51).
- ❑ **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: _____ .
- ❑ **PCC** Prime Coat.
- ❑ **AN04** Clear Anodized 204-R1.
- ❑ **AN15** Clear Anodized 215-R1.
- ❑ **ANLB** Light Bronze.
- ❑ **ANMB** Medium Bronze.
- ❑ **ANDB** Dark Bronze.
- ❑ **ANBK** Black.

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

SCHEDULE TYPE:	Page 1 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**5 - 28 - 25**	**1600M**	**7 - 6 - 21**	**1609H**

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HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609H

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	**0.21** 0.02	**0.39** 0.04	**0.56** 0.05	**0.73** 0.07	**0.90** 0.08	**1.07** 0.10	**1.24** 0.12	**1.41** 0.13	**1.58** 0.15
18 0.46	**0.42** 0.04	**0.76** 0.07	**1.10** 0.10	**1.44** 0.13	**1.78** 0.17	**2.12** 0.20	**2.46** 0.23	**2.80** 0.26	**3.13** 0.29
24 0.61	**0.63** 0.06	**1.14** 0.11	**1.65** 0.15	**2.15** 0.20	**2.66** 0.25	**3.17** 0.29	**3.67** 0.34	**4.18** 0.39	**4.69** 0.44
30 0.76	**0.84** 0.08	**1.52** 0.14	**2.19** 0.20	**2.87** 0.27	**3.54** 0.33	**4.21** 0.39	**4.89** 0.45	**5.56** 0.52	**6.24** 0.58
36 0.36	**1.05** 0.10	**1.89** 0.18	**2.74** 0.25	**3.58** 0.33	**4.42** 0.41	**5.26** 0.49	**6.10** 0.57	**6.95** 0.65	**7.79** 0.72
42 1.07	**1.26** 0.12	**2.27** 0.21	**3.28** 0.30	**4.29** 0.40	**5.30** 0.49	**6.31** 0.59	**7.32** 0.68	**8.33** 0.77	**9.34** 0.87
48 1.22	**1.47** 0.14	**2.65** 0.25	**3.83** 0.36	**5.00** 0.46	**6.18** 0.57	**7.36** 0.68	**8.53** 0.79	**9.71** 0.90	**10.89** 1.01
54 1.37	**1.68** 0.16	**3.03** 0.28	**4.37** 0.41	**5.72** 0.53	**7.06** 0.66	**8.41** 0.78	**9.75** 0.91	**11.09** 1.03	**12.44** 1.16
60 1.52	**1.89** 0.18	**3.40** 0.32	**4.92** 0.46	**6.43** 0.60	**7.94** 0.74	**9.45** 0.88	**10.97** 1.02	**12.48** 1.16	**13.99** 1.30
66 1.68	**2.10** 0.20	**3.78** 0.35	**5.46** 0.51	**7.14** 0.66	**8.82** 0.82	**10.50** 0.98	**12.18** 1.13	**13.86** 1.29	**15.54** 1.44
72 1.83	**2.31** 0.21	**4.16** 0.39	**6.01** 0.56	**7.85** 0.73	**9.70** 0.90	**11.55** 1.07	**13.40** 1.24	**15.24** 1.42	**17.09** 1.59
78 1.98	**2.52** 0.23	**4.53** 0.42	**6.55** 0.61	**8.57** 0.80	**10.58** 0.98	**12.60** 1.17	**14.61** 1.36	**16.63** 1.54	**18.64** 1.73
84 2.13	**2.73** 0.25	**4.91** 0.46	**7.10** 0.66	**9.28** 0.86	**11.46** 1.06	**13.64** 1.27	**15.83** 1.47	**18.01** 1.67	**20.19** 1.88
90 2.29	**2.94** 0.27	**5.29** 0.49	**7.64** 0.71	**9.99** 0.93	**12.34** 1.15	**14.69** 1.36	**17.04** 1.58	**19.39** 1.80	**21.75** 2.02
96 2.44	**3.15** 0.29	**5.67** 0.53	**8.19** 0.76	**10.70** 0.99	**13.22** 1.23	**15.74** 1.46	**18.26** 1.70	**20.78** 1.93	**23.30** 2.16
102 2.59	**3.36** 0.31	**6.04** 0.56	**8.73** 0.81	**11.42** 1.06	**14.10** 1.31	**16.79** 1.56	**19.47** 1.81	**22.16** 2.06	**24.85** 2.31
108 2.74	**3.57** 0.33	**6.42** 0.60	**9.27** 0.86	**12.13** 1.13	**14.98** 1.39	**17.84** 1.66	**20.69** 1.92	**23.54** 2.19	**26.40** 2.45
114 2.90	**3.78** 0.35	**6.80** 0.63	**9.82** 0.91	**12.84** 1.19	**15.86** 1.47	**18.88** 1.75	**21.91** 2.04	**24.93** 2.32	**27.95** 2.60
120 3.05	**3.99** 0.37	**7.18** 0.67	**10.36** 0.96	**13.55** 1.26	**16.74** 1.56	**19.93** 1.85	**23.12** 2.15	**26.31** 2.44	**29.50** 2.74

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amca INTERNATIONAL LISTED

HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND IMPACT RESISTANT LOUVER
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

SCHEDULE TYPE:	Page 2 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	**DATE**	**B SERIES**	**SUPERSEDES**	**DRAWING NO.**
CONTRACTOR:	**5 - 28 - 25**	**1600M**	**7 - 6 - 21**	**1609H**

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EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609H

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

Free Area %		53%
Free Area sq. ft. (sq. m.)		8.53 (0.79)
INTAKE	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1011 fpm (308 m/min.)
	Air Volume at 1011 fpm Free Area Velocity	8,624 cfm (4070 l/s)
	Pressure Drop @ 1011 fpm	.34 in. w.g. (85 Pa)

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

WIND DRIVEN RAIN PERFORMANCE

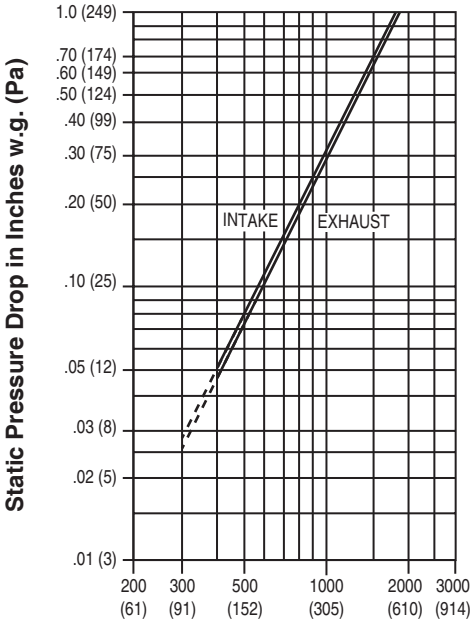
Core Ventilation Rate in fpm (m/s)	0 (0.00)	99 (0.50)	198 (1.01)	297 (1.51)	393 (2.00)	494 (2.51)	590 (3.00)	690 (3.51)	789 (4.01)	889 (4.52)	985 (5.00)
Free Area Ventilation Rate in fpm (m/s)	0 (0.00)	187 (0.95)	374 (1.90)	560 (2.84)	742 (3.77)	932 (4.73)	1113 (5.65)	1302 (6.61)	1489 (7.56)	1677 (8.52)	1858 (9.44)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	99.9
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s).**
DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation Rate in fpm (m/s)	0 (0.00)	96 (0.49)	197 (1.00)	288 (1.46)	396 (2.01)	482 (2.45)	593 (3.01)	691 (3.51)	793 (4.03)	894 (4.54)	988 (5.02)
Free Area Ventilation Rate in fpm (m/s)	0 (0.00)	181 (0.92)	372 (1.89)	543 (2.76)	747 (3.79)	909 (4.62)	1119 (5.68)	1304 (6.62)	1496 (7.60)	1687 (8.57)	1864 (9.47)
Effectiveness Ratio (%)	100	100	100	100	100	100	99.8	99.6	99.1	98.5	97.9
Penetration Class	A	A	A	A	A	A	A	A	A	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s).**
DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

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.

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Nailor Industries Inc. certifies that the Model 1609H 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, Wind Driven Rain, and Air Performance ratings.

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

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Nailor Industries Inc. certifies that the 1609H shown herein is approved to bear the AMCA International 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 International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for 'Enhanced Protection' and +/- 70PSF with a minimum blade span of 12 in. (305mm) and a maximum unsupported blade span of 59 in. (1499 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

Dimensions are in inches (mm).

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 28 - 25	1600M	7 - 6 - 21	1609H