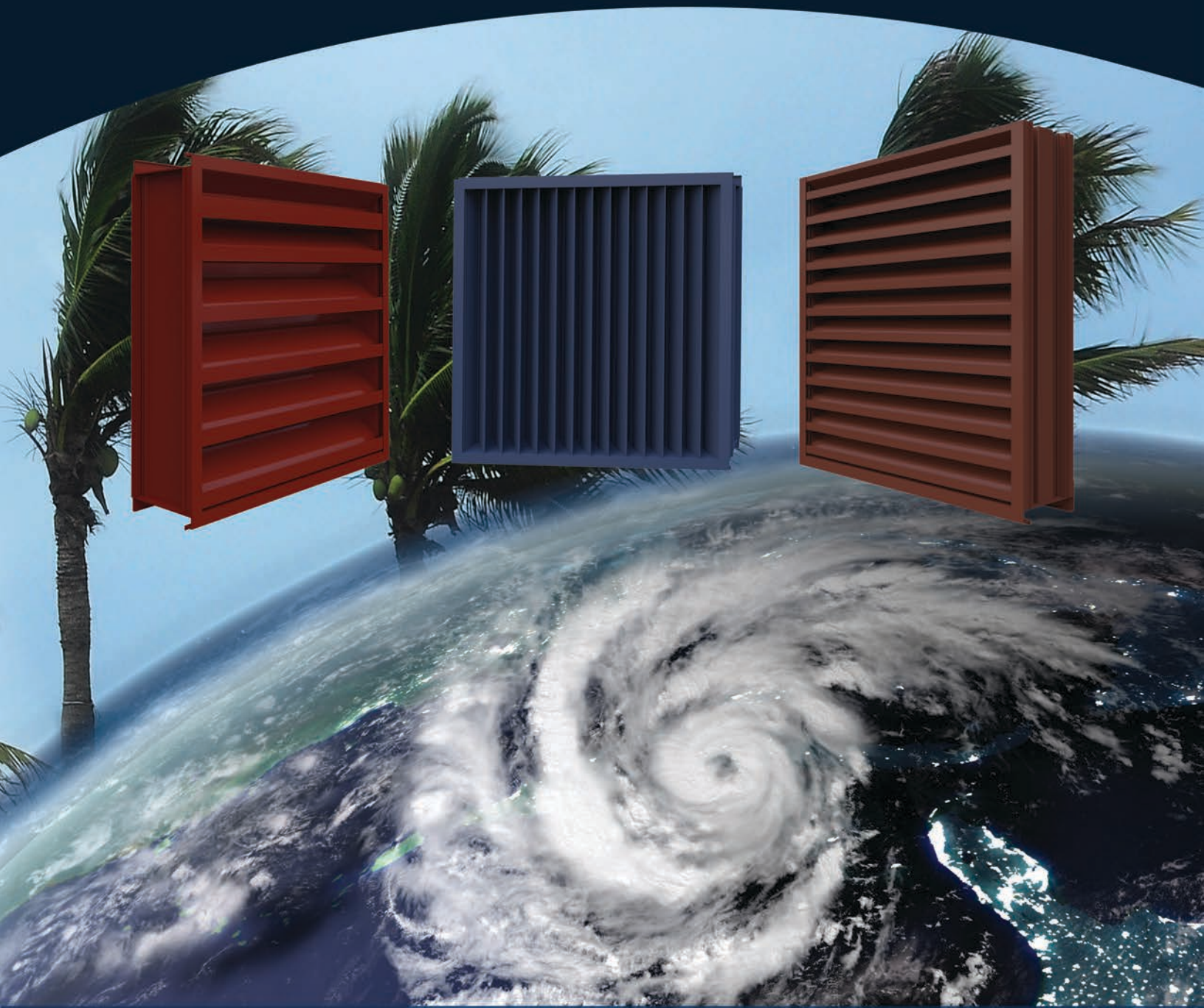
HURRICANE AND SEVERE WEATHER LOUVERS

Florida Product Approved and Miami-Dade Qualified Louvers



Nailor® Industries Inc.

FLORIDA PRODUCT APPROVED

1604DHPF

Model 1604DHPF Florida Product Approved High Performance Drainable Blade Louvers combine air intake and exhaust opening protection with pleasing aesthetics that compliment any structure's exterior styling. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). Suitable for use in exhaust and high velocity intake applications, the drainable blade design utilizes rain gutters that divert collected water down concealed side downspouts and out the sill.

- 4" (102) Deep
- Horizontal Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 48" x 120" (1219 x 3048) or 120" x 48" (3048 x 1219)

1606DHPF

Model 1606DHPF Florida Product Approved High Performance Drainable Blade Louvers combine air intake and exhaust opening protection with pleasing aesthetics that compliment any structure's exterior styling. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). Suitable for use in exhaust and high velocity intake applications, the drainable blade design utilizes rain gutters that divert collected water down concealed side downspouts and out the sill. 1606DHPF is listed to AMCA 550 High Velocity Wind-Driven Rain test with an optional Nailor 2020 High Performance Control Damper.

- 6" (152) Deep
- Horizontal Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 108" x 84" (2743 x 2134) or 84" x 120" (2134 x 3048)*
- Maximum Overall Size: Unlimited Width x 120" (3048)

1605WDF

Model 1605WDF Florida Product Approved Wind-Driven Rain Horizontal Drainable Blade Louvers provide protection for air intake and exhaust openings in exterior walls. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). With pleasing sight-proof aesthetics that compliment any structure's exterior styling, they are engineered to be architecturally appealing as well as mechanically enduring. 1605WDF is listed to AMCA 550 High Velocity Wind-Driven Rain test with an optional Nailor 2020 High Performance Control Damper.

- 5" (127) Deep
- Horizontal Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 108" x 84" (2743 x 2134) or 84" x 120" (2134 x 3048)*
- Maximum Overall Size: Unlimited Width x 120" (3048)

***Note:** Max. Single Section Size is 36" x 120" (914 x 3048) with optional Nailor 2020 High Performance Damper.

FLORIDA PRODUCT APPROVED

1606WDF

Model 1606WDF Florida Product Approved Wind-Driven Rain Horizontal Drainable Blade Louvers provide protection for air intake and exhaust openings in exterior walls. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). With pleasing sight-proof aesthetics that compliment any structure's exterior styling, they are engineered to be architecturally appealing as well as mechanically enduring.

- 5" (127) Deep
- Horizontal Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 108" x 84" (2743 x 2134) or 84" x 120" (2134 x 3048)
- Maximum Overall Size: Unlimited Width x 120" (3048)

1605WDVF

Model 1605WDVF Florida Product Approved, Wind-Driven Rain, Vertical Drainable Blade Louvers provide protection for air intake and exhaust openings in exterior walls. Approved for wind loads up to 130 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). With high performing and efficient vertical blades spaced 1.5" apart, the **1605WDVF is listed to the stringent AMCA 550 High Velocity Wind-Driven Rain test with no damper attached.**

- 5" (127) Deep
- Vertical Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 72" x 120" (1829 x 3048) or 120" x 72" (3048 x 1829)

MIAMI-DADE QUALIFIED

1606DHPM

Model 1606DHPM Miami-Dade Qualified High Performance Drainable Blade Louvers combine air intake and exhaust opening protection with pleasing aesthetics that compliment any structure's exterior styling. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). Suitable for use in exhaust and high velocity intake applications, the drainable blade design utilizes rain gutters that divert collected water down concealed side downspouts and out the sill. 1606DHPM is listed to AMCA 550 High Velocity Wind-Driven Rain test and passes TAS-100A Wind-Driven Rain test with an optional Nailor 2020 High Performance Control Damper.

- 6" (152) Deep
- Horizontal Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 72" x 120" (1829 x 3048)*
- Maximum Overall Size: Unlimited Width x 120" (3048)

***Note:** Max. Single Section Size is 36" x 120" (914 x 3048) with optional Nailor 2020 High Performance Damper.

MIAMI-DADE QUALIFIED

1605WDM

Model 1605WDM Miami-Dade Qualified Wind-Driven Rain Horizontal Drainable Blade Louvers provide protection for air intake and exhaust openings in exterior walls. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). With pleasing sight-proof aesthetics that compliment any structure's exterior styling, they are engineered to be architecturally appealing as well as mechanically enduring. 1605WDM is listed to AMCA 550 High Velocity Wind-Driven Rain test and TAS-100A Wind-Driven Rain test with an optional Nailor 2020 High Performance Control Damper.

- 5" (127) Deep
- Horizontal Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 72" x 120" (1829 x 3048)*
- Maximum Overall Size: Unlimited Width x 120" (3048)

1605WDVM

Model 1605WDVM Miami-Dade Qualified, Wind-Driven Rain, Vertical Drainable Blade Louvers provide protection for air intake and exhaust openings in exterior walls. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). With high performing and efficient vertical blades spaced 1.5" apart, the 1605WDVF is listed to the stringent AMCA 550 High Velocity Wind-Driven Rain and Florida's TAS-100A Wind-Driven Rain test with no damper attached.

- 5" (127) Deep
- Vertical Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 72" x 120" (1829 x 3048) or 120" x 72" (3048 x 1829)
- Maximum Overall Size: Unlimited Width x 120" (3048)

1675WDVM

Model 1675WDVM Miami-Dade Qualified, Wind-Driven Rain, Vertical Drainable Blade Louvers provide protection for air intake and exhaust openings in exterior walls. Approved for wind loads up to 150 PSF (size and configuration dependent, refer to Intertek Listing for size and design load rating). With high performing and efficient vertical blades spaced 0.75" apart, the 1675WDVF is listed to the stringent AMCA 550 High Velocity Wind-Driven Rain and Florida's TAS-100A Wind-Driven Rain test with no damper attached.

- 5" (127) Deep
- Vertical Blade
- Minimum Section Size: 12" x 12" (305 x 305)
- Maximum Single Section Size: 48" x 120" (1219 x 3048) or 120" x 48" (3048 x 1219)
- Maximum Overall Size: Unlimited Width x 120" (3048)

***Note:** Max. Single Section Size is 36" x 120" (914 x 3048) with optional Nailor Model 2020 High Performance Damper.

	Model 1604DHPF	Model 1606DHPF	Model 1605WDF	Model 1606WDF	Model 1605WDVF	Model 1606DHPM	Model 1605WDM	Model 1605WDVM	Model 1675WDVM
									
PERFORMANCE DATA									
Florida Product Approval #	19273.1	19273.7	19273.3	19273.10	19273.5	28078.3	28078.1	28078.2	28078.4
Miami-Dade NOA #	—	—	—	—	—	18-0117.12	18-0117.13	18-0117.14	18-0117.11
Depth	4"	6"	5"	6"	5"	6"	5"	5"	5"
Blade Orientation	Horizontal	Horizontal	Horizontal	Horizontal	Vertical	Horizontal	Horizontal	Vertical	Vertical
Blade Thickness	.095"	.100"	.080"	.080"	.060"	.100"	.080"	.060"	.063"
Frame Thickness	.120"	.120"	.080"	.080"	.080"	.120"	.080"	.080"	.080"
Wind Load Rating (PSF)	Up To 55	Up To 150	Up To 150	Up To 150	Up To 130	150	150	130	150
Free Area ft² (%) (Based on 48" x 48")	9.11 (57%)	9.65 (60%)	7.59 (47%)	7.52 (47%)	8.77 (55%)	9.65 (60%)	7.59 (47%)	8.77 (55%)	7.48 (47%)
Free Area Velocity at Beginning Point of Water Penetration (fpm)	954	1186	1250 (Max.)	1250 (Max.)	1250 (Max.)	1186	1250 (Max.)	1250 (Max.)	1250 (Max.)
Pressure Drop @ BPWP (in.w.g.)	.13	.17	.26	.22	.21	.17	.26	.21	.30
Air Volume @ BPWP/Max. Intake Volume (cfm)	8,691	11,445	9,488	9,163	10,963	11,445	9,488	10,963	9,350
Pressure Drop at 1000 fpm (in.w.g.) through free area	.15	.15	.22	.17	.18	.15	.22	.18	.24
Air Volume (cfm) @ 0.1" w.g. (ASHRAE)	13,600	13,200	10,800	12,400	12,000	13,200	10,800	12,000	9,840
TESTING									
AMCA 500-L: Water Penetration	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMCA 500-L: Air Performance	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMCA 500-L: Wind-Driven Rain	—	—	✓	✓	✓	—	✓	✓	✓
AMCA 540 Level "D": Basic Impact Resistance	✓	✓	✓	✓	✓	✓	✓	✓	✓
AMCA 540 Level "E": Enhance Impact Resistance	—	✓	✓	✓	✓	✓	✓	✓	✓
AMCA 550: High Velocity Wind-Driven Rain	—	✓*	✓*	—	✓	✓*	✓*	✓	✓
TAS-201	—	✓	✓	✓	✓	✓	✓	✓	✓
TAS-202	✓	✓	✓	✓	✓	✓	✓	✓	✓
TAS-203	—	✓	✓	✓	✓	✓	✓	✓	✓
TAS-100A	—	—	—	—	—	✓*	✓*	✓	✓

See product submittals for complete performance data.

Note: * With optional Nailor model 2020 high performance control damper attached in closed position.

FLORIDA TAS

TAS-201 LARGE MISSILE IMPACT

The TAS-201 tests a louvers ability to withstand wind-borne debris. Similar to the AMCA 540, a 9 pound 2x4 traveling at 50 ft. per second (34 mph) is shot at the louver face in varying locations including the corners, middle and the mullions. Manufacturers must test their largest listed size for this test. The TAS-201 test is a standard used for the Miami-Dade County area, and is required to receive a Miami-Dade Notice of Acceptance (NOA). This test uses a pass/fail criteria.

TAS-202 UNIFORM STATIC AIR PRESSURE TEST

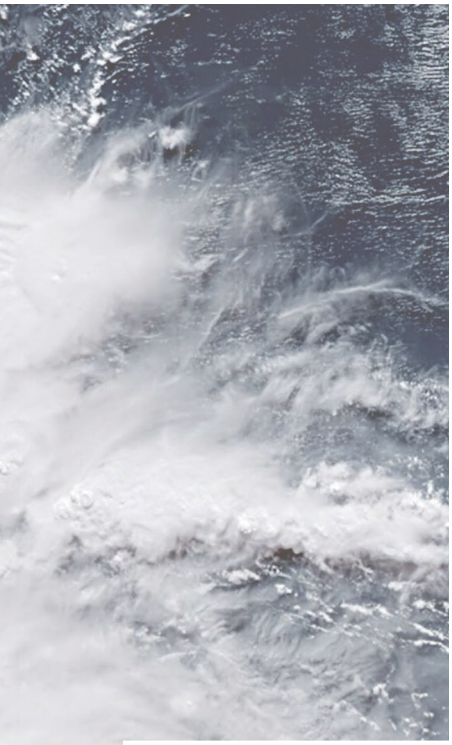
The TAS-202 test is designed to simulate both negative and positive pressure on a louver. The louver must go through 30 second intervals of positive and negative pressure cycles ranging from half to one and a half of the design load. The louver's deflection and integrity is then measured which is used as the pass or fail criteria for this test. This test is used for both Florida Product Approval (as recognized by the FBC) and for a Miami-Dade Notice of Acceptance.

TAS-203 CYCLIC WIND PRESSURE LOADING

The TAS-203 Test is designed to be done in conjunction with the AMCA 540 or TAS-201 Large Missile Impact test. Once either (or both) impact tests have been completed and passed, the louver will be subjected to negative and positive cyclic wind pressure loadings. The louver must face over 600 five-second cycles that can be as much as 1.3 times the designed wind load rating. This test is used for both Florida Product Approval (as recognized by the FBC) and for a Miami-Dade Notice of Acceptance

TAS-100A WIND-DRIVEN RAIN TEST

The TAS-100A is a Miami-Dade County standard used to test louvers to high-velocity, wind-driven rain conditions. Manufacturers must test a 48" x 48" (1219 x 1219) sample against four different wind speeds of 35, 70, 90, 110 miles per hour. At each wind speed the louvers endure 15 minutes of water spray at a rate of 8.8 inches per hour, except for the 110 mph session, which only lasts five minutes. In order to pass, the louver must reject all water at 35 and 70 mph, and only allow 0.05 percent water penetration during the 90 and 110 mph tests.

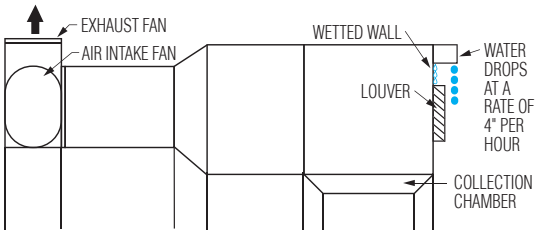


AMCA

AMCA 500-L: PRESSURE DROP

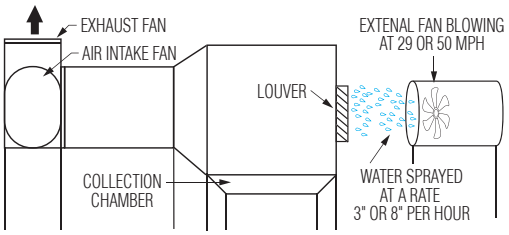
A 48" x 48" (1219 x 1219) louver sample is required to be tested for pressure drop. This test measures the pressure drop of a louver during intake and exhaust conditions. The readings are measured at specific airflows and recorded as inches water gauge.

AMCA 500-L: WATER PENETRATION



The AMCA 500-L Water Penetration test measures the beginning point of water penetration for a louver when in an operable state. At a rate of 4 inches per hour, water droplets are released in front of the louver to simulate light rainfall. At the same time 0.25 gallons per minute, per linear foot are released along the wall to replicate water coming down a wall. Meanwhile an intake fan behind the louver tries to pull the water through the louver. The beginning point of water penetration is then measured at the free area intake velocity. This occurs when 0.01 oz. of water per sq. ft. of louver free area is collected in the testing chamber. Manufacturers are required to test a 48" x 48" (1219 x 1219) louver sample.

AMCA 500-L: WIND-DRIVEN RAIN



The AMCA 500-L Water Penetration test measures a louver's ability against more intense storm conditions. Unlike the water penetration test, the wind-driven rain test has a front-facing fan to simulate storm-like winds. During testing, this fan will simulate 29 mph or 50 mph winds. Water nozzles located between the louver and the fan spray water at a rate of 3 inches per hour (at 29 mph winds) or 8 inches per hour (at 50 mph winds), for periods of 30 minutes. Measurements are then taken and recorded at different air intake points. These points are given a Class letter grade from "A" to "D", based on the amount of water the louver was able to reject. A 99 percent or higher rejection rate warrants an "A" rating, while less than 80 percent effectiveness will receives a Class "D" rating. Manufacturers must test a 39 3/8" x 39 3/8" (1000 x 1000) core size sample.

AMCA 540: LARGE MISSILE WIND-BORNE DEBRIS IMPACT TEST

The AMCA 540 test is a large missile impact test, identified as a required test for louvers in wind-borne debris region as mandated by the IBC 2018 and FBC 2018. AMCA 540 has two separate benchmarks: Missile Level D (basic protection) and Missile Level E (enhanced protection). The Level D simulation uses a 9 pound 2x4 shot at a speed of 50 ft. per second (35 mph). The level E simulation uses a 9 pound 2x4 shot at a speed of 80 ft. per second (55 mph). All Essential Facilities (as defined by the IBC & FBC) require the Enhanced Level E protection.

AMCA 550: HIGH VELOCITY, WIND-DRIVEN RAIN TEST

According to the International Mechanical Code (IMC) 2018 and Florida Mechanical Code (FMC) 2017, "Louvers that protect air intake openings in structures located in hurricane-prone regions, as defined in the International [Florida] Building Code, shall comply with AMCA 550." Using a 39 3/8" x 39 3/8" (1000 x 1000) core area test specimen, the AMCA 550 test procedure sprays water at a rate of 8.8 inches per hour, at wind speeds ranging from 35 to 110 mph. If the louver allows less than 1 percent of the total water sprayed to penetrate through it, or a louver-damper combination, the specimen then passes. This test is more lenient than the TAS-100A Wind-Driven Rain test, which uses identical testing methods, but with a penetration tolerance of only 0.05 percent.

BUILDING CODES: HURRICANE LOUVERS

International Building Code 2018 (IBC 18)

Definitions:

Hurricane-Prone Regions

– Areas vulnerable to hurricanes defined as:

1. The U.S. Atlantic Ocean and Gulf of Mexico coasts where the basic design wind speed, V, for Risk Category II buildings is greater than 115 mph (51.4 m/s);
2. Hawaii, Puerto Rico, Guam, Virgin Islands and American Samoa.

Wind-Borne Debris Region

– Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high-water line where the basic design wind speed, V, is 130 mph (58 m/s) or greater; or
2. In areas where the basic design wind speed is 140 mph (63.6 m/s) or greater.

For Risk Category II buildings and structures and Risk Category III buildings and structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3.(1). For Risk Category IV buildings and structures and Risk Category III health care facilities, the wind-borne debris region shall be based on Figure 1609.3(2).

1609.2.1 Louvers

Louvers protecting intake and exhaust ventilation ducts not assumed to be open that are located within 30 ft. of grade shall meet the requirements of AMCA 540.

1609.2.2. Application of ASTM E1996 (AMCA 540)

Unless otherwise specified, select the wind zone based on the basic design wind speed, V, as follows:

- 6.2.2.1 Wind Zone 1 – 130 mph ≤ basic design wind speed, V, < 140 mph.
- 6.2.2.2 Wind Zone 2 – 140 mph ≤ basic design wind speed, V, < 150 mph at greater than 1 mile (1.6 km) from the coastline. The coastline shall be measured from the mean high water mark.
- 6.2.2.3 Wind Zone 3 – 150 mph ≤ basic design wind speed, V, ≤ 160 mph, or 140 mph ≤ basic design wind speed, V, ≤ 160 mph and within 1 mile (1.6 km) of the coastline. The coastline shall be measured from the mean high water mark.
- 6.2.2.4 Wind Zone 4 – basic design wind speed, V, > 160 mph.

1609.3 Basic design wind speed

The basic design wind speed, V, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1) through (8). The basic design wind speed, V, for use in design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The basic design wind speed, V, for use in the design of Risk Category III buildings and structures shall be obtained from Figure 1609.3(2). The basic design wind speed, V, for use in design of Risk Category IV buildings and structures shall be obtained from Figure 1609.3(3).

INTERNATIONAL MECHANICAL CODE 2018 (IMC 18)

401.5 Intake opening protection

Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in louvers, grilles and screens shall be sized in accordance with Table 401.5, and shall be protected against local weather conditions. **Louvers that protect air intake openings in structures located in hurricane-prone regions, as defined in the International Building Code, shall comply with AMCA 550.** Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the International Building Code.

501.3.2

…Louvers the protect exhaust openings in structures located in hurricane-prone regions, as defined in the International Building Code, shall comply with the AMCA Standard 550.

BUILDING CODES: HURRICANE LOUVERS

Florida Building Code 2017

Definitions:

Hurricane-Prone Regions

– Areas vulnerable to hurricanes defined as:

1. The U.S. Atlantic Ocean and Gulf of Mexico coasts where the ultimate design wind speed, V_{ult}, for Risk Category II buildings is greater than 115 mph (51.4 m/s);
2. Hawaii, Puerto Rico, Guam, Virgin Islands and American Samoa.

Wind-Borne Debris Region

– Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed, V_{ult}, is 130 mph (58 m/s) or greater; or
2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater.

1604.5 Risk Category

According to IBC '18 and FBC '17

Risk Category I – Buildings and other structures that represent a low hazard to human life in the event of failure. Example: Agricultural facilities and minor storage facilities.

Risk Category II – Buildings and other structures except those listed in Risk Category I, III and IV. Example: Most commercial office and retail buildings.

Risk Category III – Buildings and other structures that represent a substantial hazard to human life in the event of failure. Example: Educational Buildings for students above the 12th grade with an occupant load over 500, power-generating stations, water treatment facilities.

Risk Category IV – Buildings and other structures designated as essential facilities. Examples: Fire stations, Police stations, communications and operations centers. **Louvers installed in Risk Category IV Buildings and Structures are required to be listed to AMCA 540 Level E Enhanced Protection.** (For full list of Risk Category structures see the Florida Building Code 2017 or International Building Code 2018)

1609.1.2.1 Louvers

Louvers protecting intake and exhaust ventilation ducts not assumed to be open that are located within 30 feet (9144 mm) of grade shall meet the requirements of AMCA 540 or shall be protected by an impact-resistant cover complying with the large missile test of ASTM E1996 or an approved impact-resistance standard. **Louvers required to be open for life safety purposes such as providing a breathable atmosphere shall meet the requirements of AMCA 540.**

1609.1.2.2. Application of ASTM E1996 (AMCA 540)

The text of Section 6.2.2 of ASTM E1996 shall be substituted as follows: 6.2.2 Unless otherwise specified, select the windzone based on the strength design wind speed, V_{ult}, as follows:

- 6.2.2.1 Wind Zone —130 mph ≤ ultimate design wind speed, V_{ult} < 140 mph.
- 6.2.2.2 Wind Zone 2 —140 mph ≤ ultimate design wind speed, V_{ult} < 150 mph at greater than one mile (1.6 km) from the coastline. The coastline shall be measured from the mean high water mark.
- 6.2.2.3 Wind Zone 3 —150 mph (58 m/s) ≤ ultimate design wind speed, V_{ult} ≤ 170 mph (63 m/s), or 140mph (54 m/s) ≤ultimate design wind speed, V_{ult} ≤ 170 mph (63 m/s) and within one mile (1.6 km) of the coastline. The coastline shall be measured from the mean high water mark.
- 6.2.2.4 Wind Zone 4 —ultimate design wind speed, V_{ult} > 170 mph (63 m/s).

1609.3 Ultimate design wind speed

The ultimate design wind speed, V_{ult}, in mph, for the determination of the wind loads shall be determined by Figures 1609.3(1), 1609.3(2) and 1609.3(3). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category II buildings and structures shall be obtained from Figure 1609.3(1). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category III and IV buildings and structures shall be obtained from Figure 1609.3(2). The ultimate design wind speed, V_{ult}, for use in the design of Risk Category I buildings and structures shall be obtained from Figure 1609.3(3).

FLORIDA MECHANICAL CODE 2017

401.5 Intake opening protection

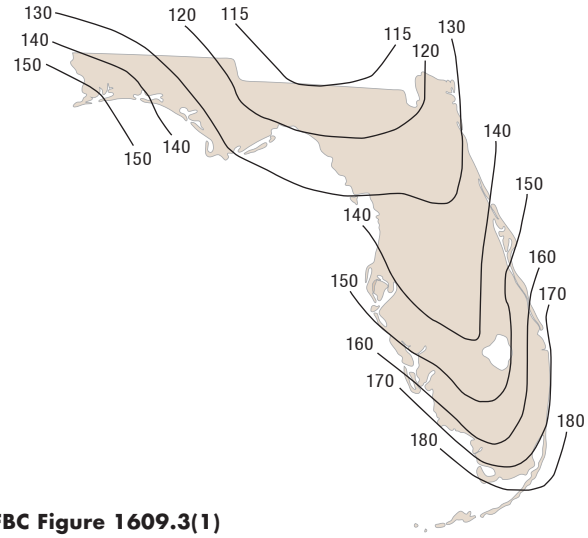
Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in louvers, grilles and screens shall be sized in accordance with Table 401.5, and shall be protected against local weather conditions. **Louvers that protect air intake openings in structures located in hurricane-prone regions, as defined in the Florida Building Code, Building, shall comply with AMCA 550.** Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the Florida Building Code, Building.

501.3.2

…Louvers the protect exhaust openings in structures located in hurricane-prone regions, as defined in the Florida Building Code, Building, shall comply with the AMCA Standard 550.

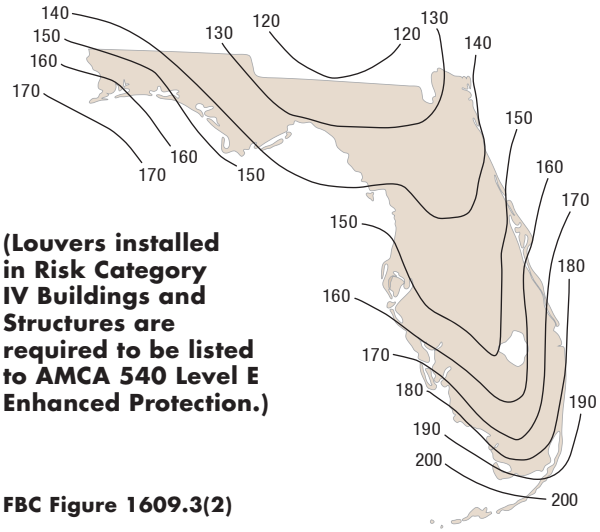
FBC MAPS (2017)

RISK CATEGORY II BUILDINGS & STRUCTURES



FBC Figure 1609.3(1)

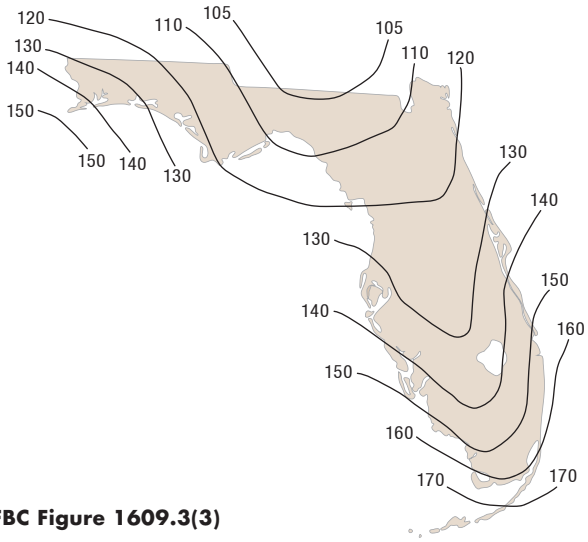
RISK CATEGORY III & IV BUILDINGS & STRUCTURES INCLUDING HEALTHCARE FACILITIES



(Louvers installed in Risk Category IV Buildings and Structures are required to be listed to AMCA 540 Level E Enhanced Protection.)

FBC Figure 1609.3(2)

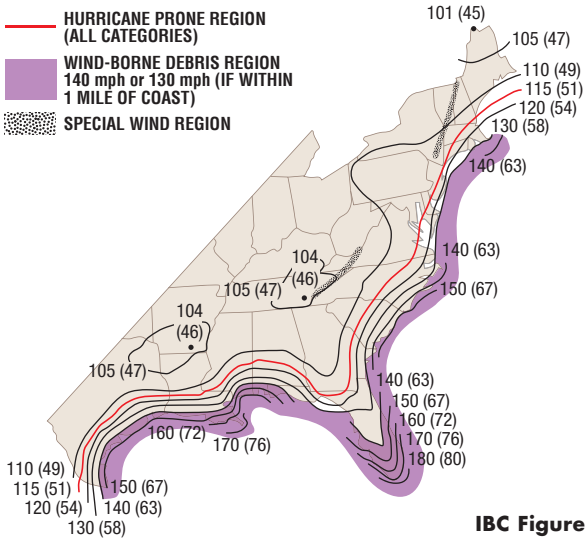
RISK CATEGORY I BUILDINGS & STRUCTURES



FBC Figure 1609.3(3)

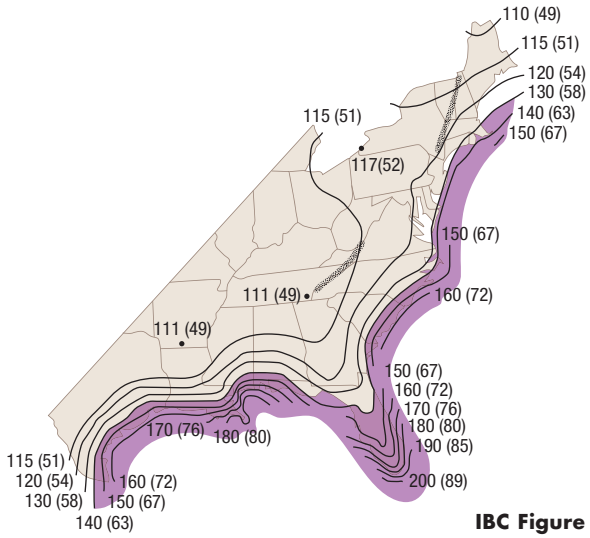
IBC MAPS (2018)

RISK CATEGORY II BUILDINGS & STRUCTURES



IBC Figure 1609.3(1)

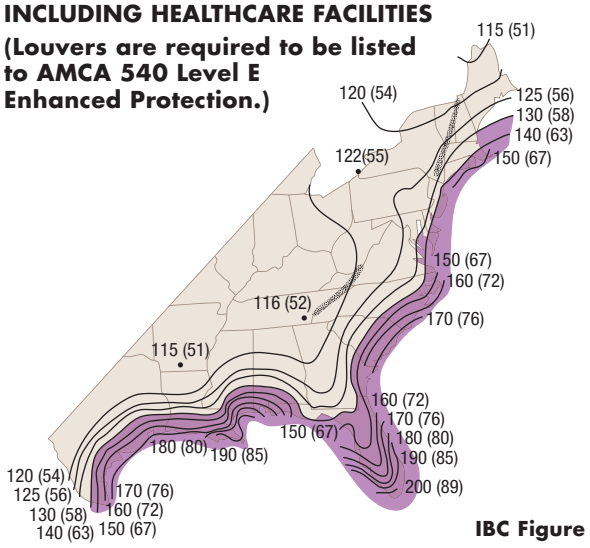
RISK CATEGORY III BUILDINGS & STRUCTURES



IBC Figure 1609.3(2)

RISK CATEGORY IV BUILDINGS & STRUCTURES INCLUDING HEALTHCARE FACILITIES

(Louvers are required to be listed to AMCA 540 Level E Enhanced Protection.)



IBC Figure 1609.3(3)

WATER/AIR/WIND DRIVEN:

Nailor Industries Inc. certifies the Models 1605WDF, 1605WDM, 1606WDF, 1605WDVF, 1605WDVM and 1675WDVM shown herein are 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, water penetration and wind driven rain performance ratings.

WATER/AIR:

Nailor Industries Inc. certifies the Models 1604DHPF, 1606DHPF and 1606DHPM shown herein are 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 ratings and water penetration ratings.

AMCA LISTED:

Nailor Industries Inc. certifies that the 1604DHPF, 1606DHPF, 1606DHPM, 1605WDF, 1605WDM, 1606WDF, 1605WDVF, 1605WDVM and 1675WDVM shown here in are 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.

Nailor® Industries Inc.

Complete Air Control and Distribution Solutions

International Group Locations:

International & United States Headquarters, Sales, Manufacturing, Research and Development and Test Laboratory:

Nailor Industries of Texas Inc.
4714 Winfield Rd.,
Houston, Texas 77039
U.S.A.
Tel: (281) 590-1172
Fax: (281) 590-3086
info@nailor.com
nailor.com

Canadian Headquarters, Sales and Manufacturing:

Nailor Industries Inc.
98 Toryork Drive,
Toronto, Ontario M9L 1X6
Canada
Tel: (416) 744-3300
Fax: (416) 744-3360

European Sales and Marketing Center, Manufacturing: (also responsible for exports to the Middle East, Asia and Australia):

Advanced Air (UK) Ltd.
Burrell Way,
Thetford, Norfolk
IP 24 3QU
England
Tel:(0)1842 765657
Fax: (0)1842 753493
sales@advancedair.co.uk
www.advancedair.co.uk

Regional Sales and Manufacturing Facilities:

Nailor Industries Inc. (Western U.S.A.)
3730 Civic Center Dr.
North Las Vegas, NV 89030
U.S.A.
Tel: (702) 648-5400
Fax: (702) 638-0400

Nailor Industries (Western) Inc.
Unit F, 4427-72nd Avenue S.E.,
Calgary, Alberta T2C 2G5
Canada
Tel: (403) 279-8619
Fax: (403) 279-5035

nailor.com