



*Today, most people involved in the HVAC industry around the world are familiar with Nailor Industries Inc. and our comprehensive line of Air Distribution, Air Control and Air Terminal Unit products. However, many may not know that the company had humble beginnings.*

*The company commenced operations at a small facility in Toronto, Canada manufacturing a single air control device. Michael T. Nailor (President and CEO) started with the founding principle that the company would be customer focused and service orientated, dedicated to fulfilling the need for high quality, competitively priced products, delivered to our customers on schedule.*

*Nailor management has maintained strict adherence to the 'Superior Customer Service' philosophy for over 40 years and as a result, the company has been rewarded with a continually increasing demand for our products. An ever expanding product offering includes air control and fire/smoke dampers, a complete line of grilles, registers and diffusers as well as fan coil units, fan powered terminal units, silencers, and electric duct heaters that exceed industry standard design and performance specifications.*

*Nailor International Group has expanded their already outstanding repertoire of companies with Advanced Air, Nailor GTA, Engineered Acoustics, Engineered Comfort, Thermal Corporation, Heatmasters and Manufactured Air Products – a complete line of top quality air distribution and air control products that are available through stocking wholesalers across North America.*

*Today, with Group International Headquarters in Houston, Texas, the company has manufacturing plants strategically located in three countries to service the North American, European, Middle Eastern and Asian Pacific markets. An international distribution network of representatives in most major cities work together to not only meet but exceed the expectations of clients, engineers and customers around the world.*

*As a private company, employing a staff of dedicated professionals, Nailor Industries Inc. is prepared to set new benchmarks for service and quality as the company continues to grow and remain the source for your . . .*

**"Complete Air Control and Distribution Solutions."**

**[www.nailor.com](http://www.nailor.com)**

**MODEL 1612QS  
FORMED ALUMINUM (OR STEEL) LOUVERS  
ACOUSTICAL, SIGHTPROOF**

Nailor Model 1612QS Acoustical Louver combines effective sound attenuation and good airflow performance with protection from the elements in an architecturally pleasing design. Acoustical blade insulation provides outstanding sound absorption qualities and the closely centered multiple formed J blade design is sight-proof, providing additional protection from vandalism in ground level applications. Available in channel or flanged type, the 12" (305) deep frame installs easily in most common wall configurations. Suitable for either intake or exhaust applications. Nailor Model 1612QS is AMCA Licensed for Water Penetration, Sound and Air Performance.



Model 1612QS



Models 1704J and 1706J

**MODELS 1704J & 1706J  
FORMED STEEL LOUVERS  
ARCHITECTURAL BLADE**

Nailor Models 1704J and 1706J are architecturally styled louvers utilizing J style blades, designed with smooth, clean lines that visually compliment any structure's exterior styling. Galvanized steel construction is economical, durable and can withstand the most demanding conditions. The blade design features a rear water baffle and provides good protection against general weather conditions, with low pressure drop characteristics and a high free area. Suitable for use in ventilation, exhaust and low to medium velocity intake applications. Available in channel or flanged type, the 4" (102) or 6" (152) deep frame installs easily in most common wall configurations.

**MODELS 1704JD & 1706JD  
FORMED STEEL LOUVERS  
DRAINABLE HEAD, DRAINABLE BLADE**

Nailor Models 1704JD and 1706JD are architecturally styled louvers combining J style blades with a drainable head feature that utilizes a top rain gutter to collect cascading water and channel it out through concealed downspouts in the side frame, preventing it from entering into the building. Durable galvanized steel construction, good weather protection and great air performance result in an outstanding functional louver at an affordable cost. Suitable for use in ventilation, exhaust and low to medium velocity intake applications where water penetration is a concern. Available in channel or flanged type, the 4" (102) or 6" (152) deep frame installs easily in most common wall configurations.



Models 1704JD and 1706JD

**MODELS 1704D & 1706D  
FORMED STEEL LOUVERS  
DRAINABLE BLADE**

Nailor Models 1704D and 1706D provide extraordinary weather protection with great air performance and pleasing aesthetics that compliment any structure's exterior styling. The drainable blade design features a rain gutter that diverts collected water down concealed side downspouts and out through the sill. Suitable for use in exhaust and low to medium velocity intake applications where water penetration concerns are a priority. Nailor Model 1706D is AMCA Licensed for Water Penetration and Air Performance.



Models 1704D and 1706D



Models 1704DHP and 1706DHP

**MODELS 1704DHP & 1706DHP  
FORMED STEEL LOUVERS  
HIGH PERFORMANCE, DRAINABLE BLADE**

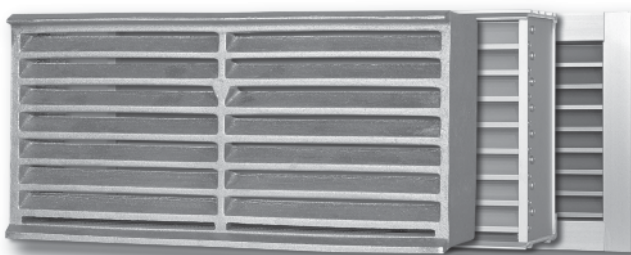
Nailor Models 1704DHP and 1706DHP combine exceptional air performance and excellent weather protection with smooth, clean lines that visually compliment any structure's exterior styling. The drainable blade design, constructed of durable galvanized steel, utilizes a rain gutter that prevent water from cascading from blade to blade and entering the air stream. Suitable for use in exhaust and low to medium velocity intake applications where water infiltration is a concern, the design also provides excellent air performance at higher velocities through its large free area. Nailor's high performance steel louvers are engineered to be durable, architecturally pleasing and cost effective.

**MODELS 1704AD & 1706AD  
FORMED STEEL LOUVERS  
ADJUSTABLE DRAINABLE BLADE**

Nailor Models 1704AD and 1706AD offer exceptional air performance and weather protection, architecturally pleasing aesthetics, and airflow control in one single unit. The economical and durable galvanized steel adjustable drainable blade design utilizes a rain gutter that diverts collected water down concealed side downspouts and out through the sill. Low torque concealed linkage blade control can be operated manually or with an actuator to provide tight shut-off when desired. Suitable for use in exhaust and low to medium velocity intake applications. Nailor's adjustable steel louvers are engineered to be aesthetically appealing as well as mechanically enduring.



Models 1704AD and 1706AD



Models 16BVC, 16BVE and 16BFV

**MODELS 16BVC, 16BVE & 16BFV  
CAST & EXTRUDED ALUMINUM • BRICK VENTS**

Nailor 16BV Series Brick Vents provide a permanent, secure means of ventilating foundations, crawl spaces and other utility areas. All models, designed with a louvered face, incorporate a rear water stop and full width weepage openings for minimal water penetration during severe weather. High corrosion resistant alloy cast or quality extruded aluminum construction resists potential damage due to vandalism, allowing for installation in accessible exterior areas. Suitable for load bearing applications, ideal for new construction. Standard insect screen prevents unwanted pests from entering through the vent.

## APPLICATIONS AND SIZING GUIDE

Selection of a louver for a specific application is determined by many variables including: aesthetic requirements, wall type/depth, pressure loss criteria and water penetration criteria. After determining the relative importance of each variable, a louver style and model can be selected by comparing individual design details and performance data, all included within this catalog. Use the following Applications Guide to assist in determining the appropriate louver type for your application:

Louver Application	Louver Type	Model
<b>EXTRUDED ALUMINUM - 1600 Series Louvers by Application</b>		
Decorative, A/C units, Curtain wall, Ventilation, Exhaust, Low to medium velocity intake	Thinline Frame Louver	1602J, 1602K
Decorative, Specialty Shapes, Ventilation, Exhaust, Low to medium velocity intake	Architectural Blade Louver	1604J, 1606J
Light to moderate rain, Ventilation, Exhaust, Low to medium velocity intake	Drainable Head, Architectural J Blade Louver	1604JD, 1606JD
Light to moderate rain w/ light wind, Exhaust, Low to medium velocity intake	Drainable Head, K Blade Louver	1604KD, 1606KD
Light to moderate rain, Exhaust, Low to medium velocity intake, Low pressure loss	Drainable Blade Louver	1602D, 1604D, 1606D
Moderate to heavy rain, Exhaust, Medium to high velocity intake, Low pressure loss	Dual Drainable Blade Louver	1604DD, 1606DD
Moderate to high winds w/ moderate to heavy rain, Exhaust, Higher velocity intake	Wind Driven Rain Louver	1605WD
Air Control & Shut-off, Light to moderate rain, Exhaust, Low to medium velocity intake	Combination & Adjustable, Drainable Blade Louver	1606CDAF, 1604AD, 1606AD
Sound control, Ventilation, Exhaust, Low to medium velocity intake	Acoustical Louver	1612QS
Visual screen, Vandalism concerns, Ventilation, Exhaust, Low to medium velocity intake	Sightproof Louver	1604Y
Foundation, Crawl space & utility area ventilation, Exhaust, Low to medium velocity intake	Brick Vent	16BVC, 16BVE, 16BVF
<b>FORMED STEEL - 1700 Series Louvers by Application</b>		
Decorative, General weather conditions, Ventilation, Exhaust, Low to medium velocity intake	Architectural Blade Louver	1704J, 1706J
Decorative, Light to moderate rain, Exhaust, Low to medium velocity intake	Drainable Head, Architectural Blade Louver	1704JD, 1706JD
Light to moderate rain, Exhaust, Low to medium velocity intake	Drainable Blade Louver	1704D, 1706D
Light to moderate rain, Exhaust, High velocity intake	Drainable Blade High Performance Louver	1704DHP, 1706DHP
Air Control, Ventilation, Exhaust, Intake	Adjustable, Drainable Blade Louver	1704AD, 1706AD

## HOW TO SIZE LOUVERS

The prime factor involved in sizing a louver is the velocity of the air through its free area. The free area is the actual unobstructed area of a louver through which air can travel. Other factors such as pressure drop and amount of water penetration are dependent upon the free area velocity and can be determined by using the respective performance charts provided for each specific louver model.

### 1. Select Model:

Choose the louver model that is the best suited for the specific application. Use the Applications Guide and 'Quick-Select' Model Guide to assist in making a selection, if so desired.

### 2. Select Free area Velocity:

Select optimum free area velocity for the specific application, checking Pressure Drop and Water Penetration charts for acceptable performance. For 'exhaust only' applications, water penetration data generally does not need to be considered. For extra weather protection, select a free air velocity that is below the beginning point of water penetration.

As a rule of thumb, ASHRAE suggests 400 fpm (122 m/min.) for intake applications and 500 fpm (152 m/min.) for exhaust applications.

### 3. Determine Required Louver Free Area:

Divide given AIRFLOW (cfm) by the selected FREE AREA VELOCITY (fpm) to determine the required louver free area. Using the Free Area Chart for the specific louver model chosen, select a louver size that provides the required Free Area. If, in the application, the louver size is given, the maximum practical airflow can be determined by working backwards from the free area chart.

## SIZING EXAMPLES:

**Example A:**  
**AIRFLOW GIVEN: DETERMINE LOUVER SIZE**

- Determine required louver free area by dividing AIRFLOW by acceptable FREE AREA VELOCITY. (Use performance charts to assist in selecting Free Area Velocity):  
 $\text{_____ cfm} \div \text{_____ fpm} = \text{_____ sq. ft. Free Area.}$
- Using the Free Area Chart for chosen model; select a louver size with at least the required free area:  
 $\text{_____ wide} \times \text{_____ high} = \text{_____ sq. ft. Free Area.}$

**Example B:**  
**LOUVER SIZE GIVEN: DETERMINE MAXIMUM AIRFLOW**

- Given louver size: \_\_\_\_\_ W x \_\_\_\_\_ H. Use the Free Area Chart for chosen model to determine the area.
- Multiply FREE AREA x acceptable FREE AREA VELOCITY to determine maximum airflow:  
 $\text{_____ sq. ft.} \times \text{_____ fpm} = \text{_____ cfm maximum airflow.}$
- Using the Pressure Drop Chart for chosen model; check the pressure drop at the determined airflow rate and resulting free area velocity.

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

## 'QUICK-SELECT' MODEL GUIDE

Model	Depth	Blade Style/Angle	Free Area Sq. Ft. (Sq. Meters)	Free Area %	Beginning Point of Water Penetration
<b>Extruded Aluminum • Stationary • Non-Drainable • Thinline Frame</b>					
1602J	2" (51)	J/30°	7.14 (0.66)	45%	549 fpm (167 m/min.)
1602K	2" (51)	K/30°	7.55 (0.70)	47%	401 fpm (122 m/min.)
<b>Extruded Aluminum • Stationary • Architectural Blade</b>					
1604J	4" (102)	J/37°	8.62 (0.80)	54%	722 fpm (220 m/min.)
1606J	6" (152)	J/37°	8.13 (0.76)	51%	1029 fpm (314 m/min.)
<b>Extruded Aluminum • Stationary • Drainable Head</b>					
1604JD	4" (102)	J/37°	8.57 (0.80)	54%	961 fpm (293 m/min.)
1606JD	6" (152)	J/37°	7.45 (0.69)	47%	1250 fpm (381 m/min.)
1604KD	4" (102)	K/37°	7.51 (0.70)	47%	892 fpm (272 m/min.)
1606KD	6" (152)	K/37°	7.93 (0.74)	50%	1017 fpm (310 m/min.)
<b>Extruded Aluminum • Stationary • Drainable Head &amp; Drainable Blade</b>					
1602D	2" (51)	Drainable/45°	6.91 (0.64)	43%	1123 fpm (342 m/min.)
1604D	4" (102)	Drainable/37°	8.26 (0.77)	52%	906 fpm (272 m/min.)
1606D	6" (152)	Drainable/37°/45°	7.99 (0.74)	50%	1195 fpm (364 m/min.)
1604DD	4" (102)	Dual Drainable/37°	8.14 (0.76)	51%	1000 fpm (305 m/min.)
1606DD	6" (152)	Dual Drainable/37°	7.92 (0.74)	50%	1193 fpm (364 m/min.)
<b>Extruded Aluminum • Stationary • Wind-Driven Rain Resistant</b>					
1605WD	5" (127)	Drainable/30°	8.64 (0.80)	54%	1025 fpm (313 m/min.)
<b>Extruded Aluminum • Adjustable • Drainable Blade</b>					
1604AD	4" (102)	Adjustable, Drainable/37 1/2°	7.10 (0.66)	44%	953 fpm (290 m/min.)
1606AD	6" (152)	Adjustable, Drainable/37 1/2°	8.15 (0.76)	51%	970 fpm (296 m/min.)
<b>Extruded Aluminum • Combination Louver/Damper • Drainable Blade</b>					
1606CDAF	6" (152)	Airfoil, Drainable/45°	6.89 (0.64)	43%	1142 fpm (348 m/min.)
<b>Extruded Aluminum • Stationary • Sightproof</b>					
1604Y	4" (102)	Inverted Y/45°	4.67 (0.43)	29%	—
<b>Formed Aluminum (or Steel) • Acoustical</b>					
1612QS	12" (305)	Insulated, J Sightproof/45°	4.72 (0.44)	30%	826 fpm (252 m/min.)
<b>Formed Steel • Stationary • Architectural Blade</b>					
1704J	4" (102)	J/45°	8.53 (0.79)	53%	869 fpm (265 m/min.)
1706J	6" (152)	J/45°	8.53 (0.79)	53%	938 fpm (286 m/min.)
<b>Formed Steel • Stationary • Drainable Head</b>					
1704JD	4" (102)	J/45°	8.38 (0.78)	52%	1123 fpm (342 m/min.)
1706JD	6" (152)	J/45°	7.85 (0.73)	49%	1250 fpm (381 m/min.)
<b>Formed Steel • Stationary • Drainable Blade</b>					
1704D	4" (102)	Drainable/45°	8.44 (0.78)	53%	976 fpm (298 m/min.)
1706D	6" (152)	Drainable/45°	8.02 (0.75)	50%	1250 fpm (381 m/min.)
1704DHP	4" (102)	Drainable/37 1/2°	8.55 (0.79)	53%	896 fpm (273 m/min.)
1706DHP	6" (152)	Drainable/37 1/2°	9.05 (0.84)	56%	988 fpm (301 m/min.)
<b>Formed Steel • Adjustable • Drainable Blade</b>					
1704AD	4" (102)	Adjustable, Drainable/37 1/2°	8.03 (0.75)	50%	991 fpm (302 m/min.)
1706AD	6" (152)	Adjustable, Drainable/37 1/2°	8.80 (0.82)	55%	977 fpm (298 m/min.)

- Dimensions are in inches (mm).
- Free Area shown are for 48" x 48" (1219 x 1219).
- Beginning point of Water Penetration: 0.01 oz./sq. ft. (3 ml/sq. m), 15 minute test duration.

- THINLINE FRAME
- PLEASING AESTHETICS
- EXCELLENT PERFORMANCE
- LOW PRESSURE DROP

**Models:**

- 1602J 2" (51) Deep, J Blade
- 1602K 2" (51) Deep, K Blade
- 1602D 2" (51) Deep, Drainable Blade



Model 1602J

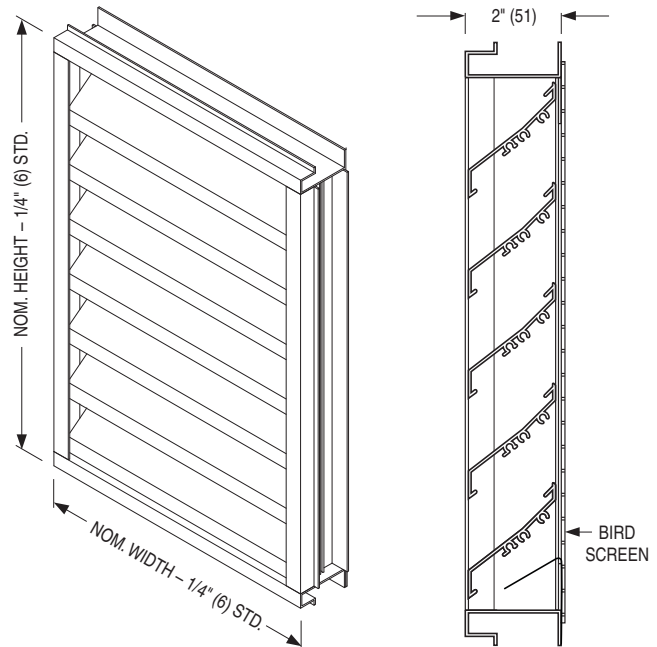
Model 1602K

**Model 1602J**

Model 1602J Thinline Frame Louvers combine performance with pleasing aesthetics, incorporating stationary J style architectural blades, designed with smooth lines that enhance any structure's exterior styling. Blending weather protection, air performance and low pressure drop, this architecturally styled louver delivers outstanding performance when a standard 4" (102) or 6" (152) louver is not practical. Standard concealed architectural mullions allow for a continuous look. Reinforcing bosses run the full length of each blade for superior strength. Suitable for use in ventilation, exhaust and low to medium velocity intake applications, ideal for use in thin wall and curtain wall applications or A/C units where a full depth louver cannot be used. Available in channel, flanged, or glazing adaptor type, the 2" (51) deep frame installs easily in most common wall and mechanical configurations. Nailor's thinline frame louvers are engineered to be aesthetically appealing as well as mechanically enduring.

**STANDARD CONSTRUCTION:**

- Frame:** 2" (51) deep, Type 6063-T5 extruded aluminum, .060" (1.5) nominal wall thickness. Integral caulking slot provided.
- Blades:** Type 6063-T5 extruded aluminum, .060" (1.5) nominal wall thickness, with reinforcing bosses. J style.
- Blade Angle:** Fixed at 30 degrees.
- Blade Spacing:** Approximately 2" (51) on centers.
- Blade Support Brackets:** Concealed type, factory installed on rear of louver on maximum 48" (1219) centers. Reinforced with 1" x 1" (25 x 25) angle (adds approx. 1" [25] to overall louver depth).
- Mullions:** Concealed architectural style allowing continuous line appearance.
- 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).
- Finish:** Mill.
- Minimum Size:** 8" W x 8" H (203 x 203).
- Maximum Single Section Size:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H (2134 x 3048). 70 sq. ft. (6.5 m<sup>2</sup>). Larger louvers will require field assembly of smaller sections.



MODEL 1602J

**COMMON OPTIONS:**

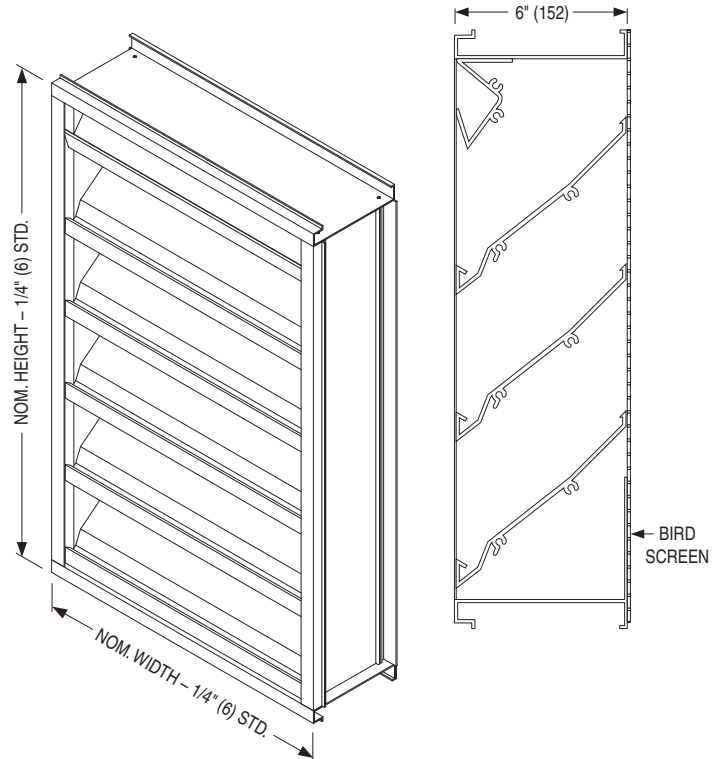
- Flanged or Glazing Adaptor Frame styles.
- Aluminum or Type 304 Stainless Steel Insect Screens.
- Extended Sills.
- Aluminum Installation Clips or Continuous Angles.
- Variety of Standard and High Performance Powder Coat finishes available in a multitude of colors. Custom color matching available.
- Clear or Color Anodized finishes.

## Model 1606D

Model 1606D is designed to provide excellent weather protection in non-wind driven rain conditions with great air performance and pleasing aesthetics that compliment any structure's exterior styling. The drainable head feature is enhanced by the drainable blade design which utilizes additional rain gutters that divert collected water through concealed side downspouts and out the sill, effectively preventing water from infiltrating the space. Blades are reinforced with full length integral bosses for superior strength. Suitable for use in exhaust and low to medium velocity intake applications where water penetration concerns are a priority. Available in channel, flanged, or glazing adaptor type, the 6" (152) deep frame installs easily in most common wall configurations. Model 1606D is AMCA Licensed for Water Penetration and Air Performance.

### STANDARD CONSTRUCTION:

- Frame:** 6" (152) deep, Type 6063-T5 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- Blades:** Type 6063-T5 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- Blade Angle:** Fixed at 37/45 degrees.
- Blade Spacing:** Approximately 5 1/2" (140) on centers.
- Blade Support Brackets:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. Reinforced with 1 1/2" x 2" (38 x 51) angle (adds approx. 2" [51] to overall louver depth).
- Mullions:** Concealed type allowing continuous line appearance up to 120" (3048) wide. Larger assemblies require separate visible frames with downspouts.
- 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).
- Finish:** Mill.
- Minimum Size:** 12" W x 12" H (305 x 305).
- Maximum Single Section Size:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H (2134 x 3048). 70 sq. ft. (6.5 m<sup>2</sup>). Larger louvers will require field assembly of smaller sections.



MODEL 1606D

### COMMON OPTIONS:

- Flanged or Glazing Adaptor Frame styles.
- Aluminum or Type 304 Stainless Steel Insect Screens.
- Extended Sills.
- Aluminum Installation Clips or Continuous Angles.
- Variety of Standard and High Performance Powder Coat finishes available in a multitude of colors. Custom color matching available.
- Clear or Color Anodized finishes.



**PERFORMANCE DATA:**

**MODEL: 1604D**

**FREE AREA in Square Feet and Square Meters**

**LOUVERS**

		Width in Inches and Meters																		
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
<b>Height in Inches and Meters</b>	<b>12</b>	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
	0.30	0.31	0.50	0.68	0.87	1.06	1.24	1.43	1.62	1.80	1.99	2.18	2.36	2.55	2.74	2.92	3.11	3.30	3.48	3.67
	0.46	0.54	0.87	1.20	1.52	1.85	2.18	2.50	2.83	3.16	3.48	3.81	4.14	4.47	4.79	5.12	5.45	5.77	6.10	6.43
	0.61	0.78	1.24	1.71	2.18	2.64	3.11	3.58	4.04	4.51	4.98	5.44	5.91	6.38	6.85	7.31	7.78	8.25	8.71	9.18
	0.76	1.06	1.69	2.33	2.97	3.60	4.24	4.87	5.51	6.14	6.78	7.41	8.05	8.69	9.32	9.96	10.59	11.23	11.86	12.50
	0.91	1.29	2.07	2.84	3.62	4.39	5.17	5.95	6.72	7.50	8.27	9.05	9.82	10.60	11.37	12.15	12.93	13.70	14.48	15.25
	1.07	1.57	2.52	3.46	4.41	5.35	6.30	7.24	8.18	9.13	10.07	11.02	11.96	12.91	13.85	14.79	15.74	16.68	17.63	18.57
	1.22	1.81	2.89	3.98	5.06	6.14	7.23	8.26	9.40	10.48	11.57	12.65	13.74	14.82	15.90	16.99	18.07	19.16	20.24	21.33
	1.37	2.04	3.27	4.49	5.71	6.94	8.16	9.39	10.61	11.84	13.06	14.28	15.51	16.73	17.96	19.18	20.41	21.63	22.86	24.08
	1.52	2.32	3.72	5.11	6.50	7.89	9.29	10.68	12.07	13.47	14.86	16.25	17.65	19.04	20.43	21.83	23.22	24.61	26.01	27.40
	1.68	2.56	4.09	5.62	7.15	8.69	10.22	11.75	13.29	14.82	16.35	17.89	19.42	20.95	22.49	24.02	25.55	27.09	28.62	30.15
	1.83	2.84	4.54	6.24	7.94	9.64	11.35	13.05	14.75	16.45	18.15	19.86	21.56	23.26	24.96	26.66	28.37	30.07	31.77	33.47
	1.98	3.07	4.91	6.75	8.60	10.44	12.28	14.12	15.96	17.81	19.65	21.49	23.33	25.17	27.02	28.86	30.70	32.54	34.38	36.23
	2.13	3.30	5.29	7.27	9.25	11.23	13.21	15.20	17.18	19.16	21.14	23.12	25.11	27.09	29.07	31.05	33.03	35.02	37.00	38.98
	2.29	3.58	5.74	7.89	10.04	12.19	14.34	16.49	18.64	20.79	22.94	25.09	27.24	29.39	31.55	33.70	35.85	38.00	40.15	42.30
	2.44	3.82	6.11	8.40	10.69	12.98	15.27	17.56	19.85	22.15	24.44	26.73	29.02	31.31	33.60	35.89	38.18	40.47	42.76	45.05
	2.59	4.10	6.56	9.02	11.48	13.94	16.40	18.86	21.32	23.78	26.24	28.70	31.16	33.62	36.08	38.53	40.99	43.45	45.91	48.37
	2.74	4.33	6.93	9.53	12.13	14.73	17.33	19.93	22.53	25.13	27.73	30.33	32.93	35.53	38.13	40.73	43.33	45.93	48.53	51.13
	2.90	4.57	7.31	10.05	12.79	15.53	18.26	21.00	23.74	26.48	29.22	31.96	34.70	37.44	40.18	42.92	45.66	48.40	51.14	53.88
	3.05	4.85	7.76	10.66	13.57	16.48	19.39	22.30	25.21	28.12	31.02	33.93	36.84	39.75	42.66	45.57	48.48	51.38	54.29	57.20

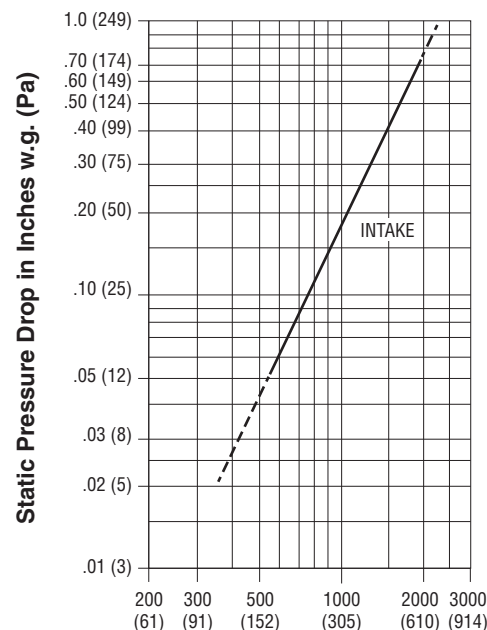
**AIRFLOW/ WATER PENETRATION DATA**

for 48" x 48" (1219 x 1219) Louver Size

<b>Model</b>	<b>1604D</b>	
Free Area %	52%	
Free Area sq. ft. (sq. m.)	8.26 (0.77)	
<b>INTAKE</b>	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	906 fpm (272 m/min.)
	Air Volume at Free Area Velocity shown	7484 cfm (3532 l/s)
	Pressure Drop at Free Area Velocity shown	.15 in. w.g. (37 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/ft<sup>3</sup>.  
 Tested to AMCA Fig. 5.5 – 6.5.



Nailor Industries Inc. certifies the Model 1604D, 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 and Water Penetration ratings.



PERFORMANCE DATA:

MODEL: 1606D

FREE AREA in Square Feet and Square Meters

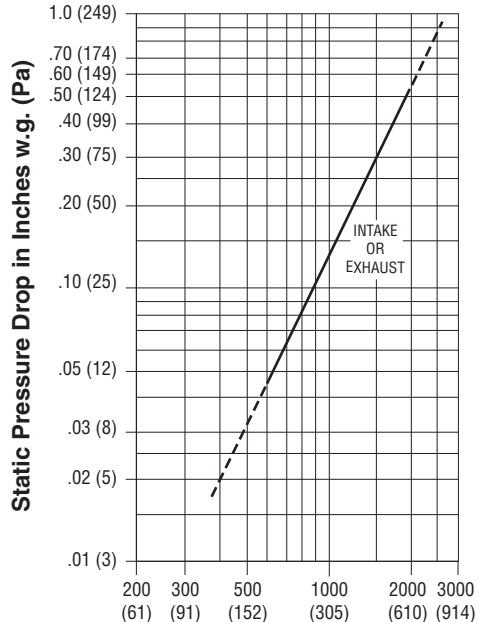
Height in Inches and Meters	Width in Inches and Meters																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.24	0.39	0.54	0.70	0.85	1.00	1.15	1.30	1.45	1.60	1.75	1.90	2.05	2.20	2.36	2.51	2.66	2.81	2.96
18	0.41	0.67	0.93	1.19	1.45	1.70	1.96	2.22	2.48	2.74	2.99	3.25	3.51	3.77	4.03	4.28	4.54	4.80	5.06
24	0.68	1.10	1.53	1.95	2.38	2.80	3.23	3.65	4.07	4.50	4.92	5.35	5.77	6.20	6.62	7.04	7.47	7.89	8.32
30	0.93	1.51	2.09	2.67	3.25	3.83	4.40	4.98	5.56	6.14	6.72	7.30	7.88	8.46	9.04	9.62	10.20	10.78	11.35
36	1.09	1.77	2.45	3.13	3.81	4.49	5.17	5.85	6.53	7.21	7.89	8.58	9.26	9.94	10.62	11.30	11.98	12.66	13.34
42	1.44	2.34	3.23	4.13	5.03	5.92	6.82	7.72	8.61	9.51	10.41	11.30	12.20	13.10	13.99	14.89	15.79	16.68	17.58
48	1.69	2.74	3.79	4.84	5.89	6.94	7.99	9.05	10.10	11.15	12.20	13.25	14.30	15.35	16.40	17.46	18.51	19.56	20.61
54	1.94	3.15	4.36	5.57	6.78	7.99	9.20	10.41	11.62	12.83	14.04	15.25	16.46	17.67	18.88	20.09	21.30	22.51	23.72
60	2.19	3.56	4.93	6.30	7.67	9.04	10.40	11.77	13.14	14.51	15.88	17.24	18.61	19.98	21.35	22.72	24.08	25.45	26.82
66	2.45	3.98	5.50	7.03	8.55	10.08	11.61	13.13	14.66	16.19	17.71	19.24	20.77	22.29	23.82	25.34	26.87	28.40	29.92
72	2.70	4.39	6.07	7.76	9.45	11.13	12.82	14.50	16.19	17.87	19.56	21.24	22.93	24.61	26.30	27.98	29.67	31.35	33.04
78	2.96	4.80	6.65	8.49	10.33	12.18	14.02	15.86	17.71	19.55	21.40	23.24	25.08	26.93	28.77	30.61	32.46	34.30	36.14
84	3.21	5.22	7.22	9.22	11.22	13.23	15.23	17.23	19.23	21.24	23.24	25.24	27.24	29.25	31.25	33.25	35.25	37.26	39.26
90	3.47	5.63	7.79	9.95	12.11	14.27	16.44	18.60	20.76	22.96	25.08	27.24	29.40	31.57	33.73	35.89	38.05	40.21	42.37
96	3.72	6.04	8.36	10.68	13.00	15.32	17.64	19.96	22.29	24.61	26.93	29.25	31.57	33.89	36.21	38.53	40.85	43.17	45.49
102	3.98	6.46	8.94	11.41	13.89	16.37	18.85	21.33	23.81	26.29	28.77	31.25	33.73	36.20	38.68	41.16	43.64	46.12	48.60
108	4.23	6.87	9.51	12.15	14.78	17.42	20.06	22.70	25.33	27.97	30.61	33.25	35.89	38.52	41.16	43.80	46.44	49.08	51.71
114	4.51	7.31	10.12	12.93	15.74	18.55	21.36	24.16	26.97	29.78	32.59	35.40	38.21	41.02	43.82	46.63	49.44	52.25	55.06
120	4.74	7.70	10.66	13.61	16.57	19.52	22.48	25.44	28.39	31.35	34.31	37.26	40.22	43.17	46.13	49.09	52.04	55.00	57.96

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

Model	1606D
Free Area %	50%
Free Area sq. ft. (sq. m.)	7.99 (0.74)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1195 fpm (364 m/min.)
Air Volume at Free Area Velocity shown	9452 cfm (4460 l/s)
Pressure Drop at Free Area Velocity shown	.18 in. w.g. (45 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/ft<sup>3</sup>. Tested to AMCA Fig. 5.5 - 6.5.



Nailor Industries Inc. certifies the Model 1606D, 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 and Water Penetration ratings.

## HOW TO SPECIFY

## MODEL 1604D

## EXTRUDED ALUMINUM DRAINABLE BLADE LOUVERS

**SUGGESTED SPECIFICATION:**

Provide and install, as shown on plans and/or schedules, extruded aluminum louvers meeting or exceeding the following criteria: Frame shall be 4" (102) deep channel type (**or specifier to select:** flanged type **or** glazing adapter type), 1/4" (6.3) undersize (**or specifier to select:** exact size **or** 3/8" [9.5] undersize **or** 1/2" [12.7] undersize), with integral caulking slots (and **specifier to select, if required:** extended sill), constructed from ASTM B211 Alloy 6063-T5 extruded aluminum of .080" (2.03) nominal wall thickness. Blades shall be stationary drainable style, with drain gutter in each blade and gutter in head frame, constructed from type 6063-T5 extruded aluminum of .080" (2.03) nominal wall thickness with reinforcing bosses, fixed at 37 degrees on approximately 4" (102) centers and shall be supported by angle reinforced concealed brackets as required to withstand a wind force of not less than 25 pounds per square foot (100 miles per hour). Concealed downspouts in jambs to drain water from louver for minimum water cascade from blade to blade. Factory assembled louver components to be mechanically fastened (**or specifier to select:** welded construction). Concealed type mullions for louvers up to 120" (3048) wide allowing continuous line appearance. Large louvers that require multiple sections for shipping shall be constructed with visible frames with downspouts when installed together on site. Louvers shall be equipped with removable 3/4" x .051 (19 x 1.3) expanded, flattened aluminum bird screen (**or specifier to select:** type 304 stainless steel bird screen **and/or** aluminum insect screen **and/or** type 304 stainless steel insect screen **or** no screen).

Finish shall be standard mill (**or specifier to select:** prime coat **or** 204-R1 clear anodized to a min. depth of 0.4 mil, with 1 year warranty **or** 215-R1 clear anodized to a min. depth of 0.7 mil, with 5 year warranty **or** color anodized; color to be selected from standard Nailor anodizing colors **or** AAMA 2603 thermosetting polyester powder coat, with 1 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** AAMA 2604 high performance polyester powder coat, with 5 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** AAMA 2605 FEVE fluoropolymer powder coat, with 10 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** Kynar 500/Hylar 5000 70% PVDF coating, with 5 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** Kynar 500/Hylar 5000 50% PVDF coating, with 10 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color).

Furnish where indicated on plans and/or schedules, blank-off panels fabricated by the louver manufacturer. Blank-off panels to be 0.040" (1.02) thick aluminum sheet (**or specifier to select:** 0.040" [1.02] thick aluminum sheet with 1" [25] insulation **or** 0.040" [1.02] thick aluminum sheet with 2" [51] insulation **or** 20 ga. [1.0] galvanized steel **or** 20 ga. [1.0] galvanized steel with 1" [25] insulation **or** 20 ga. [1.0] galvanized steel with 2" [51] insulation). Blank-off panels to be finished to match louvers.

Performance data must be licensed by AMCA under the AMCA 511 Certified Ratings Program and shall bear the AMCA Certified Ratings seal for water penetration and air performance. Free area, water penetration and pressure drop data submitted shall be equal to or better than specified model. Standard of acceptance: Nailor Industries, Inc. Model 1604D.

## MODEL 1606D

## EXTRUDED ALUMINUM DRAINABLE BLADE LOUVERS

**SUGGESTED SPECIFICATION:**

Provide and install, as shown on plans and/or schedules, extruded aluminum louvers meeting or exceeding the following criteria: Frame shall be 6" (152) deep channel type (**or specifier to select:** flanged type **or** glazing adapter type), 1/4" (6.3) undersize (**or specifier to select:** exact size **or** 3/8" [9.5] undersize **or** 1/2" [12.7] undersize), with integral caulking slots (and **specifier to select, if required:** extended sill), constructed from ASTM B211 Alloy 6063-T5 extruded aluminum of .080" (2.03) nominal wall thickness. Blades shall be stationary drainable style, with drain gutter in each blade and gutter in head frame. Concealed downspouts in jambs to drain water from louver for minimum water cascade from blade to blade. Constructed from type 6063-T5 extruded aluminum of .080" (2.03) nominal wall thickness, fixed at 37/45 degrees on approximately 5 1/2" (140) centers and shall be supported by angle reinforced concealed brackets as required to withstand a wind force of not less than 25 pounds per square foot (100 miles per hour). Factory assembled louver components to be mechanically fastened (**or specifier to select:** welded construction). Concealed type mullions for louvers up to 120" (3048) wide allowing continuous line appearance. Large louvers that require multiple sections for shipping shall be constructed with visible frames with downspouts when installed together on site. Louvers shall be equipped with removable 3/4" x .051 (19 x 1.3) expanded, flattened aluminum bird screen (**or specifier to select:** type 304 stainless steel bird screen **and/or** aluminum insect screen **and/or** type 304 stainless steel insect screen **or** no screen).

Finish shall be standard mill (**or specifier to select:** prime coat **or** 204-R1 clear anodized to a min. depth of 0.4 mil, with 1 year warranty **or** 215-R1 clear anodized to a min. depth of 0.7 mil, with 5 year warranty **or** color anodized; color to be selected from standard Nailor anodizing colors **or** AAMA 2603 thermosetting polyester powder coat, with 1 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** AAMA 2604 high performance polyester powder coat, with 5 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** AAMA 2605 FEVE fluoropolymer powder coat, with 10 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** Kynar 500/Hylar 5000 70% PVDF coating, with 5 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color) **or** Kynar 500/Hylar 5000 50% PVDF coating, with 10 year warranty; color to be (**specifier to select:** selected from Nailor standard color chart **or** custom color).

Furnish where indicated on plans and/or schedules, blank-off panels fabricated by the louver manufacturer. Blank-off panels to be 0.040" (1.02) thick aluminum sheet (**or specifier to select:** 0.040" [1.02] thick aluminum sheet with 1" [25] insulation **or** 0.040" [1.02] thick aluminum sheet with 2" [51] insulation **or** 20 ga. [1.0] galvanized steel **or** 20 ga. [1.0] galvanized steel with 1" [25] insulation **or** 20 ga. [1.0] galvanized steel with 2" [51] insulation). Blank-off panels to be finished to match louvers.

Performance data must be licensed by AMCA under the AMCA 511 Certified Ratings Program and shall bear the AMCA Certified Ratings seal for water penetration and air performance. Free area, water penetration and pressure drop data submitted shall be equal to or better than specified model. Standard of acceptance: Nailor Industries, Inc. Model 1606D.

- AMCA LICENSED
- DUAL DRAINABLE BLADE
- DRAINABLE HEAD
- PROTECTS AGAINST HEAVY RAIN
- SUPERIOR PERFORMANCE

**Models:**

**1604DD 4" (102) Deep**

**1606DD 6" (152) Deep**



Model 1604DD

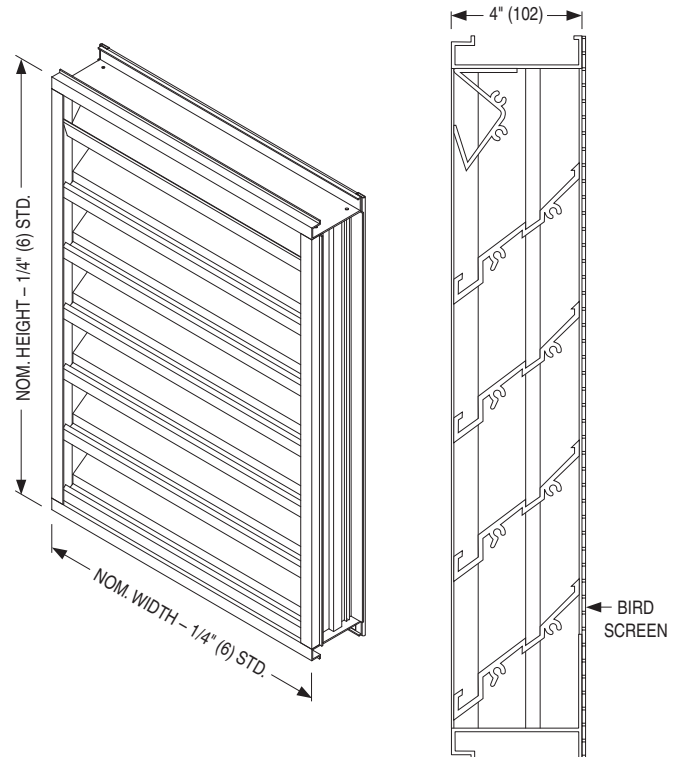
Model 1606DD

**Model 1604DD**

Model's 1604DD combines exceptional weather protection during the most enduring non-wind driven rain conditions, great air performance through a large free area and pleasing aesthetics that enhance any structure's exterior design. Complemented by a drainable head, the dual drainable blade design utilizes double rain gutters that divert collected water down concealed side downspouts and out through the sill, preventing water from infiltrating the space. Blades are reinforced with full length integral bosses for superior strength. Suitable for use in exhaust and medium to high velocity intake applications where water penetration concerns are a top priority. Available in channel, flanged, or glazing adaptor type, the 4" (102) deep frame installs easily in most common wall configurations. Model 1604DD is AMCA Licensed for Water Penetration and Air Performance.

**STANDARD CONSTRUCTION:**

- Frame:** 4" (102) deep, Type 6063-T5 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- Blades:** Type 6063-T5 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- Blade Angle:** Fixed at 37 degrees.
- Blade Spacing:** Approximately 4" (102) on centers.
- Blade Support Brackets:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. Reinforced with 1 1/2" x 2" (38 x 51) angle (adds approx. 2" [51] to overall louver depth).
- Mullions:** Concealed type allowing continuous line appearance up to 120" (3048) wide. Larger assemblies require separate visible frames with downspouts.
- 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).
- Finish:** Mill.
- Minimum Size:** 12" W x 12" H (305 x 305).
- Maximum Single Section Size:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H (2134 x 3048). 70 sq. ft. (6.5 m<sup>2</sup>). Larger louvers will require field assembly of smaller sections.



MODEL 1604DD

**COMMON OPTIONS:**

- Flanged or Glazing Adaptor Frame styles.
- Aluminum or Type 304 Stainless Steel Insect Screens.
- Extended Sills.
- Aluminum Installation Clips or Continuous Angles.
- Variety of Standard and High Performance Powder Coat finishes available in a multitude of colors. Custom color matching available.
- Clear or Color Anodized finishes.

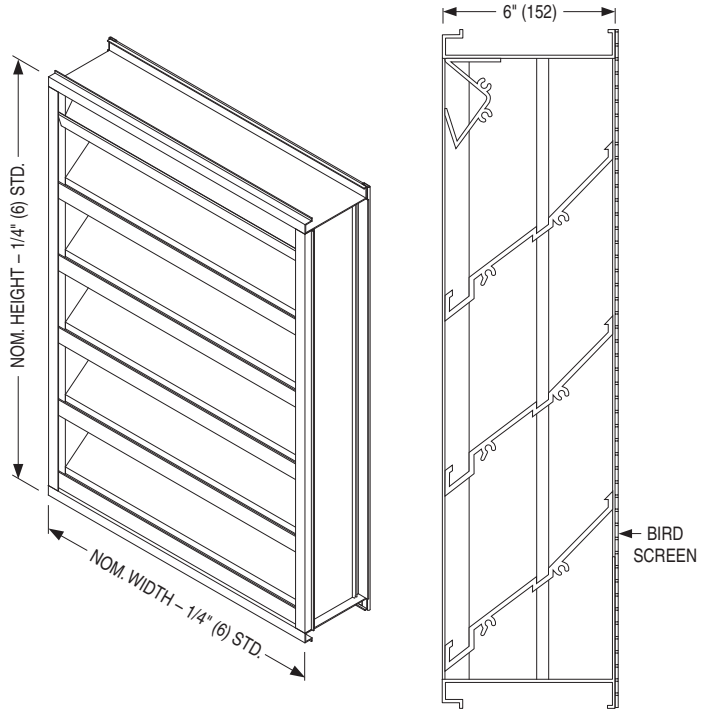


## Model 1606DD

Model 1606DD combines exceptional weather protection during the most enduring non-wind driven rain conditions, great air performance through a large free area and a clean look that will enhance the exterior of any structure. Complemented by a drainable head, the dual drainable blade design features double rain gutters that divert cascading water running down the building's face down concealed side downspouts and out through the sill, preventing water from infiltrating the space. Blades are reinforced with full length integral bosses for superior strength. Suitable for use in exhaust and medium to high velocity intake applications where water penetration concerns are a top priority. Available in channel, flanged, or glazing adapter type, the 6" (152) deep frame installs easily in most common wall configurations. Model 1606DD is AMCA Licensed for Water Penetration and Air Performance.

### STANDARD CONSTRUCTION:

- Frame:** 6" (152) deep, Type 6063-T5 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- Blades:** Type 6063-T5 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- Blade Angle:** Fixed at 37 degrees.
- Blade Spacing:** Approximately 6" (152) on centers.
- Blade Support Brackets:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. Reinforced with 1 1/2" x 2" (38 x 51) angle (adds approx. 2" [51] to overall louver depth).
- Mullions:** Concealed type allowing continuous line appearance up to 120" (3048) wide. Larger assemblies require separate visible frames with downspouts.
- 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).
- Finish:** Mill.
- Minimum Size:** 12" W x 12" H (305 x 305).
- Maximum Single Section Size:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H (2134 x 3048). 70 sq. ft. (6.5 m<sup>2</sup>). Larger louvers will require field assembly of smaller sections.



**MODEL 1606DD**

### COMMON OPTIONS:

- Flanged or Glazing Adaptor Frame styles.
- Aluminum or Type 304 Stainless Steel Insect Screens.
- Extended Sills.
- Aluminum Installation Clips or Continuous Angles.
- Variety of Standard and High Performance Powder Coat finishes available in a multitude of colors. Custom color matching available.
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