



EXTRUDED ALUMINUM ADJUSTABLE LOUVER
4" (102) DEEP • DRAINABLE BLADE
MODEL: 1604AD

Model 1604AD adjustable, drainable blade type louver combines superior weather protection and architecturally pleasing aesthetics with airflow control including tight shut-off. Suitable for use in exhaust and low to medium velocity intake applications, the design features a drainable blade with rain gutters that divert collected water down concealed side downspouts and out the sill. The blades can be operated manually or with an actuator to provide tight shut-off when desired. Blades are reinforced with full length integral bosses for superior strength and the design exhibits low pressure drop characteristics throughout the airflow range. Model 1604AD provides adjustable flexibility as well as maximum protection against the elements.

STANDARD CONSTRUCTION:

- FRAME:** 4" (102) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE SPACING:** Approx. 3 1/4" (83) on centers, at 41° angle (fully open).
- JAMB SEALS:** Compression type cambered metal.
- AXLES:** 1/2" (13) dia. plated steel.
- BEARINGS:** 1/2" (13) dia. Celcon®.
- LINKAGE:** Plated steel. 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:** 48" W x 96" H (1219 x 2438) (With Blade and/or Jamb Seals). 60" W x 120" H (1524 x 3048) (Without Seals). Larger sizes will be manufactured in sections with visible mullion side frame (downspouts are concealed) for field assembly.

OPTIONS:

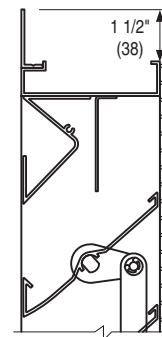
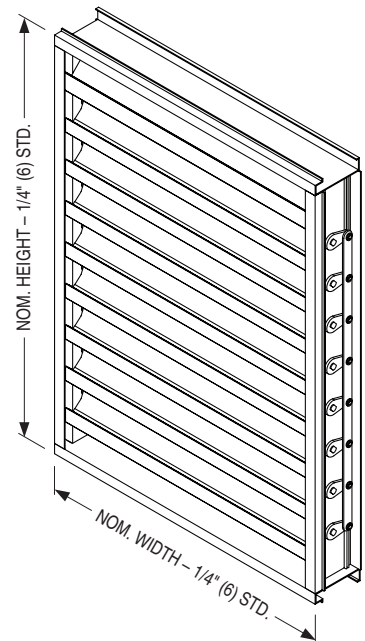
- FL15** Flanged Frame, 1 1/2" (38).
- FL20** Flanged Frame, 2" (51).
- BPV** PVC Blade Seals.
- JSN** No Jamb Seals.
- BSSS** Type 304 S. S. Bird Screen.
- BSN** No Bird Screen.
- ISA** Aluminum Insect Screen.
- ISSS** Type 304 S. S. Insect Screen.
- WE** Welded Construction.
- ESI** Extended Sill.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

OPTIONAL FINISHES:

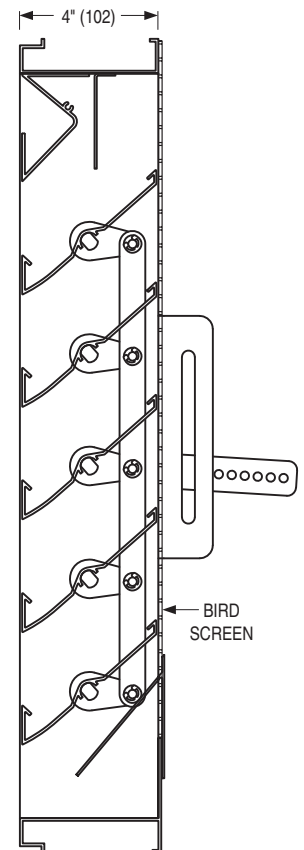
- PC3** Powder Coat AAMA 2603. Color: _____ .
 - PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____ .
 - PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____ .
 - PCC** Prime Coat.
 - AN04** Clear Anodized 204-R1.
 - AN15** Clear Anodized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

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

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



OPT. FLANGED FRAME (FL15 STD.)



BIRD SCREEN

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 7 - 24	1600	8 - 11 - 22	1604AD



**EXTRUDED ALUMINUM ADJUSTABLE LOUVER
4" (102) DEEP • DRAINABLE BLADE
PERFORMANCE DATA
MODEL: 1604AD**

FREE AREA in Square Feet and Square 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
Height in Inches and Meters	12 0.3	0.22 0.02	0.36 0.03	0.49 0.05	0.62 0.06	0.76 0.07	0.89 0.08	1.03 0.10	1.16 0.11	1.30 0.12
	18 0.46	0.55 0.05	0.89 0.08	1.23 0.11	1.57 0.15	1.90 0.18	2.24 0.21	2.58 0.24	2.92 0.27	3.25 0.30
	24 0.61	0.81 0.08	1.30 0.12	1.80 0.17	2.29 0.21	2.78 0.26	3.28 0.30	3.77 0.35	4.26 0.40	4.76 0.44
	30 0.76	1.06 0.10	1.71 0.16	2.36 0.22	3.01 0.28	3.66 0.34	4.31 0.40	4.96 0.46	5.61 0.52	6.26 0.58
	36 0.36	1.32 0.12	2.13 0.20	2.93 0.27	3.74 0.35	4.54 0.42	5.35 0.50	6.15 0.57	6.96 0.65	7.76 0.72
	42 1.07	1.58 0.15	2.54 0.24	3.50 0.32	4.46 0.41	5.42 0.50	6.38 0.59	7.34 0.68	8.30 0.77	9.26 0.86
	48 1.22	1.91 0.18	3.08 0.29	4.25 0.39	5.41 0.50	6.58 0.61	7.75 0.72	8.47 0.79	10.08 0.94	11.25 1.04
	54 1.37	2.16 0.20	3.48 0.32	4.80 0.45	6.12 0.57	7.44 0.69	8.76 0.81	10.08 0.94	11.40 1.06	12.72 1.18
	60 1.52	2.42 0.22	3.89 0.36	5.37 0.50	6.85 0.64	8.32 0.77	9.80 0.91	11.27 1.05	12.75 1.18	14.22 1.32
	66 1.68	2.67 0.25	4.31 0.40	5.94 0.55	7.57 0.70	9.20 0.85	10.83 1.01	12.46 1.16	14.09 1.31	15.73 1.46
	72 1.83	2.93 0.27	4.72 0.44	6.50 0.60	8.29 0.77	10.08 0.94	11.87 1.10	13.65 1.27	15.44 1.43	17.23 1.60
	78 1.98	3.19 0.30	5.13 0.48	7.07 0.66	9.01 0.84	10.96 1.02	12.90 1.20	14.84 1.38	16.79 1.56	18.73 1.74
	84 2.13	3.44 0.32	5.54 0.51	7.64 0.71	9.74 0.90	11.84 1.10	13.94 1.29	16.03 1.49	18.13 1.68	20.23 1.88
	90 2.29	3.70 0.34	5.95 0.55	8.21 0.76	10.46 0.97	12.72 1.18	14.97 1.39	17.22 1.60	19.48 1.81	21.73 2.02
	96 2.44	4.03 0.37	6.49 0.60	8.94 0.83	11.40 1.06	13.86 1.29	16.32 1.52	18.78 1.74	21.23 1.97	23.69 2.20
	102 2.59	4.29 0.40	6.90 0.64	9.51 0.88	12.13 1.13	14.74 1.37	17.35 1.61	19.97 1.85	22.58 2.10	25.19 2.34
108 2.74	4.51 0.42	7.25 0.67	10.00 0.93	12.75 1.18	15.50 1.44	18.25 1.70	21.00 1.95	23.75 2.21	26.49 2.46	
114 2.9	4.76 0.44	7.67 0.71	10.57 0.98	13.47 1.25	16.38 1.52	19.28 1.79	22.19 2.06	25.09 2.33	28.00 2.60	
120 3.05	5.06 0.47	8.15 0.76	11.24 1.04	14.33 1.33	17.42 1.62	20.50 1.90	23.59 2.19	26.68 2.48	29.77 2.77	

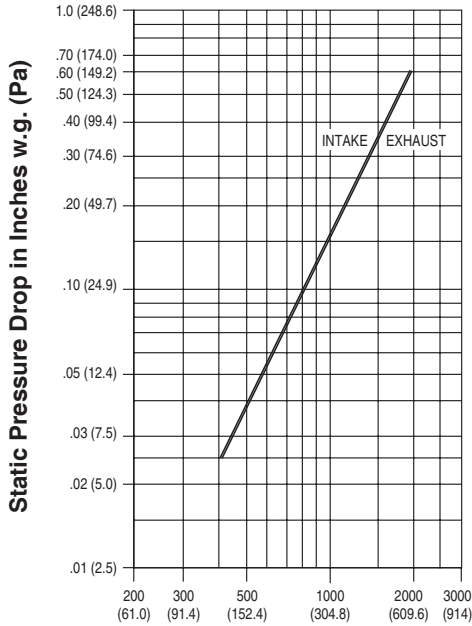


SCHEDULE TYPE:	Page 2 of 3			
PROJECT:	Dimensions are in inches (mm).			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 7 - 24	1600	8 - 11 - 22	1604AD



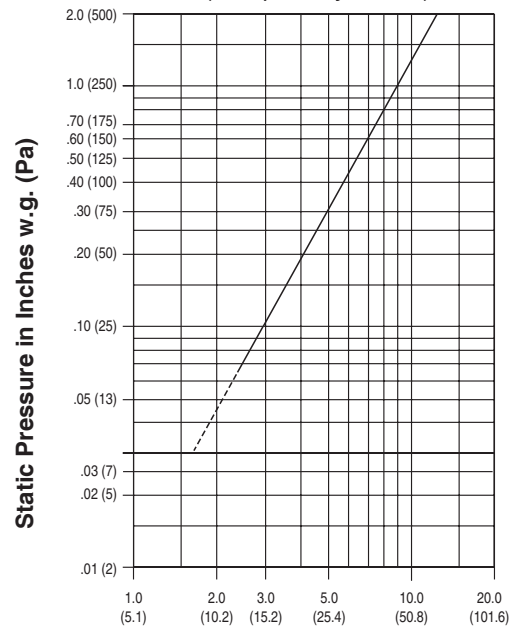
EXTRUDED ALUMINUM ADJUSTABLE LOUVER
4" (102) DEEP • DRAINABLE BLADE
PERFORMANCE DATA
MODEL: 1604AD

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)
 with blade and jamb seals.

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

Free Area %	53%
Free Area sq. ft. (sq. m.)	8.47 (0.79)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1026 fpm (313 m/min.)
Air Volume at 1026 fpm	8690 cfm
Free Area Velocity	(4101 l/s)
Pressure Drop @ 1026 fpm	.17 in. w.g. (42 Pa)

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



Nailor Industries Inc. certifies that the Model 1604AD 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			
PROJECT:	Dimensions are in inches (mm).			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 7 - 24	1600	8 - 11 - 22	1604AD

Model 1606AD adjustable, drainable blade type louver combines superior weather protection and architecturally pleasing aesthetics with airflow control including tight shut-off. Suitable for use in exhaust and low to medium velocity intake applications, the design features a drainable blade with rain gutters that divert collected water down concealed side downspouts and out the sill. The blades can be operated manually or with an actuator to provide tight shut-off when desired. Blades are reinforced with full length integral bosses for superior strength and the design exhibits low pressure drop characteristics throughout the airflow range. Model 1606AD provides adjustable flexibility as well as maximum protection against the elements.

STANDARD CONSTRUCTION:

- FRAME:** 6" (152) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE SPACING:** Approx. 6" (152) on centers, at 37 1/2° angle (fully open).
- JAMB SEALS:** Compression type cambered metal.
- AXLES:** 1/2" (13) dia. plated steel.
- BEARINGS:** 1/2" (13) dia. Celcon[®].
- LINKAGE:** Plated steel. 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:** 48" W x 96" H (1219 x 2438) (With Blade and/or Jamb Seals). 60" W x 120" H (1524 x 3048) (Without Seals). Larger sizes will be manufactured in sections with visible mullion side frame (downspouts are concealed) for field assembly.

OPTIONS:

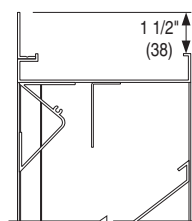
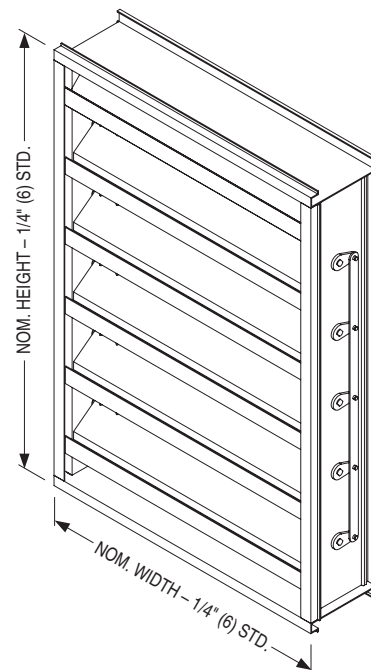
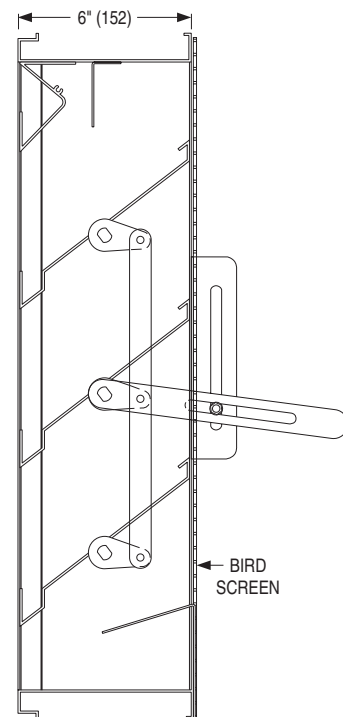
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|--|---|
| <input type="checkbox"/> FL Flanged Frame. | <input type="checkbox"/> ESI Extended Sill. |
| <input type="checkbox"/> BPV PVC Blade Seals. | <input type="checkbox"/> FR1 1" (25) Filter Rack. |
| <input type="checkbox"/> JSN No Jamb Seals. | <input type="checkbox"/> FR2 2" (51) Filter Rack. |
| <input type="checkbox"/> BSSS Type 304 S. S. Bird Screen. | <input type="checkbox"/> PAC Perimeter Anchor Clips. |
| <input type="checkbox"/> BSN No Bird Screen. | <input type="checkbox"/> ACT Electric or Pneumatic Actuator. |
| <input type="checkbox"/> ISA Aluminum Insect Screen. | Specify: _____ |
| <input type="checkbox"/> ISSS Type 304 S. S. Insect Screen. | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> WE Welded Construction. | |

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:
- | | |
|--|---|
| <input type="checkbox"/> ANLB Light Bronze. | <input type="checkbox"/> ANMB Medium Bronze. |
| <input type="checkbox"/> ANDB Dark Bronze. | <input type="checkbox"/> ANBK Black. |

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

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


FLANGED FRAME (FL)
(OPTIONAL)

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Page 1 of 2
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 10 - 22	1600	5 - 30 - 19	1606AD

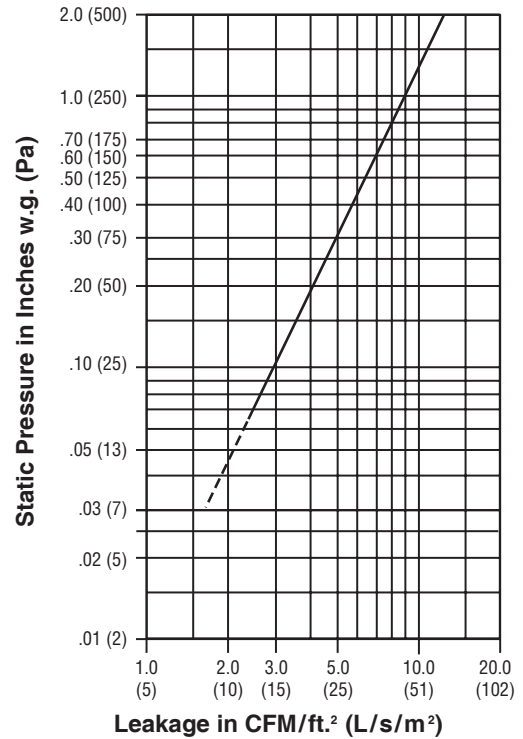


EXTRUDED ALUMINUM ADJUSTABLE LOUVER
6" (152) DEEP • DRAINABLE BLADE
PERFORMANCE DATA
MODEL: 1606AD

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters									
		12	18	24	30	36	42	48	54	60	
Height in Inches and Meters	12	0.28	0.45	0.62	0.79	0.96	1.13	1.30	1.47	1.65	
	0.3	0.03	0.04	0.06	0.07	0.09	0.11	0.12	0.14	0.15	
	18	0.54	0.87	1.20	1.54	1.87	2.20	2.53	2.86	3.19	
	0.46	0.05	0.08	0.11	0.14	0.17	0.20	0.23	0.27	0.30	
	24	0.78	1.25	1.73	2.20	2.67	3.15	3.62	4.10	4.57	
	0.61	0.07	0.12	0.16	0.20	0.25	0.29	0.34	0.38	0.42	
	30	1.01	1.63	2.25	2.86	3.48	4.10	4.72	5.33	5.95	
	0.76	0.09	0.15	0.21	0.27	0.32	0.38	0.44	0.50	0.55	
	36	1.34	2.16	2.98	3.80	4.62	5.43	6.25	7.07	7.89	
	0.36	0.12	0.20	0.28	0.35	0.43	0.50	0.58	0.66	0.73	
	42	1.59	2.56	3.53	4.50	5.47	6.44	7.41	8.38	9.35	
	1.07	0.15	0.24	0.33	0.42	0.51	0.60	0.69	0.78	0.87	
	48	1.75	2.82	3.88	4.95	6.02	7.08	8.15	9.22	10.29	
	1.22	0.16	0.26	0.36	0.46	0.56	0.66	0.76	0.86	0.96	
	54	2.09	3.36	4.63	5.90	7.17	8.44	9.72	10.99	12.26	
	1.37	0.19	0.31	0.43	0.55	0.67	0.78	0.90	1.02	1.14	
60	2.33	3.75	5.17	6.59	8.02	9.44	10.86	12.28	13.70		
1.52	0.22	0.35	0.48	0.61	0.74	0.88	1.01	1.14	1.27		
66	2.56	4.12	5.68	7.24	8.80	10.36	11.92	13.48	15.04		
1.68	0.24	0.38	0.53	0.67	0.82	0.96	1.11	1.25	1.40		
72	2.83	4.55	6.28	8.00	9.72	11.45	13.17	14.90	16.62		
1.83	0.26	0.42	0.58	0.74	0.90	1.06	1.22	1.38	1.54		
78	3.10	4.98	6.87	8.76	10.65	12.54	14.42	16.31	18.20		
1.98	0.29	0.46	0.64	0.81	0.99	1.16	1.34	1.52	1.69		
84	3.36	5.41	7.46	9.50	11.55	13.60	15.65	17.70	19.75		
2.13	0.31	0.50	0.69	0.88	1.07	1.26	1.45	1.64	1.83		
90	3.59	5.79	7.98	10.17	12.36	14.55	16.74	18.94	21.13		
2.29	0.33	0.54	0.74	0.94	1.15	1.35	1.56	1.76	1.96		
96	3.83	6.16	8.50	10.83	13.17	15.50	17.84	20.17	22.51		
2.44	0.36	0.57	0.79	1.01	1.22	1.44	1.66	1.87	2.09		
102	4.16	6.69	9.23	11.77	14.30	16.84	19.37	21.91	24.44		
2.59	0.39	0.62	0.86	1.09	1.33	1.56	1.80	2.04	2.27		
108	4.41	7.09	9.78	12.47	15.15	17.84	20.53	23.21	25.90		
2.74	0.41	0.66	0.91	1.16	1.41	1.66	1.91	2.16	2.41		
114	4.65	7.49	10.33	13.17	16.01	18.84	21.68	24.52	27.36		
2.9	0.43	0.70	0.96	1.22	1.49	1.75	2.01	2.28	2.54		
120	4.90	7.89	10.88	13.87	16.86	19.85	22.84	25.83	28.82		
3.05	0.46	0.73	1.01	1.29	1.57	1.84	2.12	2.40	2.68		

AIR LEAKAGE (Damper fully closed)



Louver test size: 48" x 48" (1219 x 1219 mm) with blade and jamb seals.

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

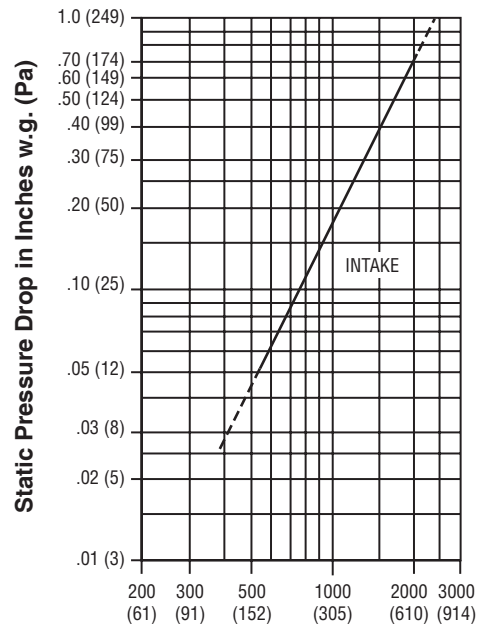
Free Area %	51%	
Free Area sq. ft. (sq. m.)	8.15 (0.76)	
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	970 fpm (296 m/min.)
	Air Volume at 970 fpm	7906 cfm (3731 l/s)
	Free Area Velocity	
	Pressure Drop @ 970 fpm	.17 in. w.g. (42 Pa)

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



Nailor Industries Inc. certifies the Model 1606AD 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 ratings and water penetration ratings.

PRESSURE DROP



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.

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 10 - 22	1600	5 - 30 - 19	1606AD

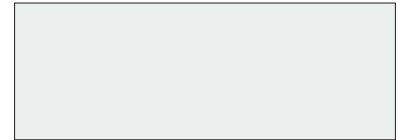
Page 2 of 2
Dimensions are in inches (mm).


 Slate Blue **LF01**

 Medium Bronze **LF02**

 Sandstone **LF03**

 Light Gray **LF04**

 Charcoal **LF05**

 Bone White **LF06**

 Western Tan **LF07**

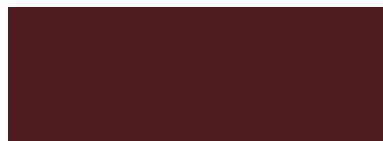
 Architectural Bronze **LF08**

 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, Corafalon® 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.

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