



# EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER

## 4" (102) DEEP • DRAINABLE BLADE

### OPERABLE DAMPER

#### MODEL: 1604CD

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

#### STANDARD CONSTRUCTION:

- FRAME:** 4" (102) deep, Type 6063-T5 extruded aluminum, .060" (1.3) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Front stationary blades: Drainable, Type 6063-T5 extruded aluminum, .060" (1.5) nominal wall thickness. Rear adjustable blades: Type 6063-T5 extruded aluminum, 0.80" (2.03) nominal wall thickness.
- BLADE ANGLE:** Front blades fixed at 45 degrees.
- BLADE SPACING:** Approx. 4 1/2" (114) on centers.
- BLADE SEALS:** Silicone. Mechanically locked in place.
- JAMB SEALS:** Cambered stainless steel.
- BEARINGS:** 1/2" (13) dia. Oilite® self-lubricating bronze.
- AXLES:** 1/2" (13) dia. plated steel double bolted to blades.
- LINKAGE:** Concealed in frame.
- SCREEN:** 3/4" x .051 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- ACTUATOR:** Hand locking louver quadrant.
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 48" W x 96" H (1219 x 2438). Larger sizes will be manufactured in sections with visible mullion side frame (downspouts are concealed) for field assembly.

#### OPTIONS:

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

#### OPTIONAL FINISHES:

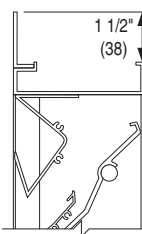
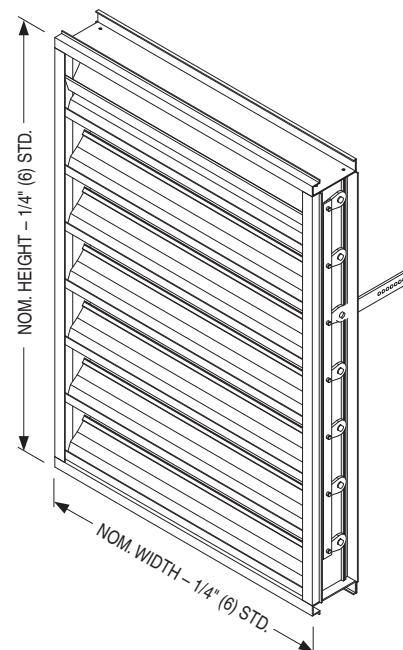
- ☐ **PC3** Powder Coat AAMA 2603. Color: \_\_\_\_\_.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: \_\_\_\_\_.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: \_\_\_\_\_.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.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

Color Anodized:

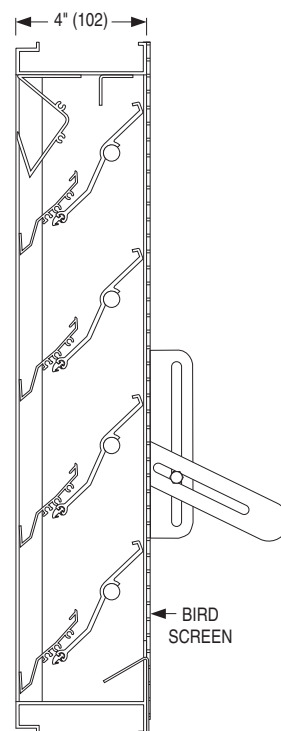
- |                                                    |                                                     |
|----------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> <b>ANLB</b> Light Bronze. | <input type="checkbox"/> 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

3 - 11 - 14

1600

NEW

1604CD

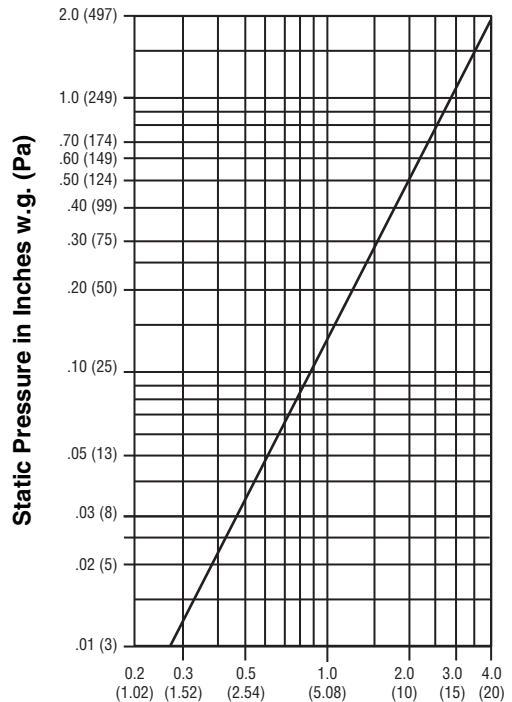


**EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER**  
**4" (102) DEEP • DRAINABLE BLADE**  
**OPERABLE DAMPER**  
**PERFORMANCE DATA**  
**MODEL: 1604CD**

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

|                             |      | Width in Inches and Meters |      |      |      |      |       |       |
|-----------------------------|------|----------------------------|------|------|------|------|-------|-------|
|                             |      | 12                         | 18   | 24   | 30   | 36   | 42    | 48    |
| Height in Inches and Meters | 12   | 0.21                       | 0.34 | 0.46 | 0.59 | 0.72 | 0.85  | 0.98  |
|                             | .30  | 0.02                       | 0.03 | 0.04 | 0.06 | 0.07 | 0.08  | 0.09  |
|                             | 18   | 0.38                       | 0.61 | 0.85 | 1.08 | 1.32 | 1.55  | 1.79  |
|                             | .46  | 0.04                       | 0.06 | 0.08 | 0.10 | 0.12 | 0.14  | 0.17  |
|                             | 24   | 0.52                       | 0.85 | 1.17 | 1.50 | 1.82 | 2.15  | 2.47  |
|                             | .61  | 0.05                       | 0.08 | 0.11 | 0.14 | 0.17 | 0.20  | 0.23  |
|                             | 30   | 0.81                       | 1.32 | 1.82 | 2.33 | 2.83 | 3.34  | 3.85  |
|                             | .76  | 0.08                       | 0.12 | 0.17 | 0.22 | 0.26 | 0.31  | 0.36  |
|                             | 36   | 0.96                       | 1.55 | 2.15 | 2.74 | 3.34 | 3.94  | 4.53  |
|                             | .91  | 0.09                       | 0.14 | 0.20 | 0.25 | 0.31 | 0.37  | 0.42  |
|                             | 42   | 1.10                       | 1.79 | 2.47 | 3.16 | 3.85 | 4.53  | 5.22  |
|                             | 1.07 | 0.10                       | 0.17 | 0.23 | 0.29 | 0.36 | 0.42  | 0.48  |
|                             | 48   | 1.36                       | 2.22 | 3.07 | 3.92 | 4.77 | 5.62  | 6.19  |
|                             | 1.22 | 0.13                       | 0.21 | 0.28 | 0.36 | 0.44 | 0.52  | 0.58  |
|                             | 54   | 1.54                       | 2.49 | 3.45 | 4.41 | 5.36 | 6.32  | 7.28  |
|                             | 1.37 | 0.14                       | 0.23 | 0.32 | 0.41 | 0.50 | 0.59  | 0.68  |
|                             | 60   | 1.68                       | 2.73 | 3.77 | 4.82 | 5.87 | 6.91  | 7.96  |
|                             | 1.52 | 0.16                       | 0.25 | 0.35 | 0.45 | 0.55 | 0.64  | 0.74  |
|                             | 66   | 1.94                       | 3.15 | 4.36 | 5.57 | 6.78 | 7.99  | 9.21  |
|                             | 1.68 | 0.18                       | 0.29 | 0.41 | 0.52 | 0.63 | 0.74  | 0.86  |
|                             | 72   | 2.11                       | 3.43 | 4.75 | 6.07 | 7.38 | 8.70  | 10.02 |
|                             | 1.83 | 0.20                       | 0.32 | 0.44 | 0.56 | 0.69 | 0.81  | 0.93  |
|                             | 78   | 2.26                       | 3.67 | 5.07 | 6.48 | 7.89 | 9.30  | 10.71 |
|                             | 1.98 | 0.21                       | 0.34 | 0.47 | 0.60 | 0.73 | 0.86  | 0.99  |
|                             | 84   | 2.52                       | 4.09 | 5.66 | 7.24 | 8.81 | 10.38 | 11.95 |
|                             | 2.13 | 0.23                       | 0.38 | 0.53 | 0.67 | 0.82 | 0.96  | 1.11  |
|                             | 90   | 2.69                       | 4.37 | 6.05 | 7.73 | 9.41 | 11.09 | 12.76 |
|                             | 2.29 | 0.25                       | 0.41 | 0.56 | 0.72 | 0.87 | 1.03  | 1.19  |
|                             | 96   | 2.85                       | 4.63 | 6.41 | 8.19 | 9.97 | 11.75 | 13.53 |
|                             | 2.44 | 0.27                       | 0.43 | 0.60 | 0.76 | 0.93 | 1.09  | 1.26  |

**AIR LEAKAGE (damper fully closed)**



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

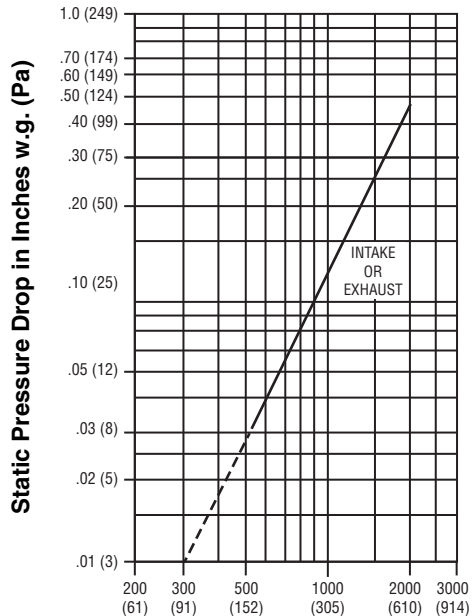
|                            |                                                                                                                    |                       |
|----------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------|
| Free Area %                |                                                                                                                    | 39%                   |
| Free Area sq. ft. (sq. m.) |                                                                                                                    | 6.19 (0.58)           |
| I<br>N<br>T<br>A<br>K<br>E | Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration) | 1130 fpm (344 m/min.) |
|                            | Air Volume at 1130 fpm                                                                                             | 6995 cfm (3301 l/s)   |
|                            | Free Area Velocity                                                                                                 |                       |
|                            | Pressure Drop @ 1130 fpm                                                                                           | .12 in. w.g. (30 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 1604CD 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 (damper fully open)**



**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

**DATE**

**B SERIES**

**SUPERSEDES**

**DRAWING NO.**

3 - 11 - 14

1600

NEW

1604CD