

**MODEL CFL-D-4 HIGH PERFORMANCE COMBINATION LOUVER/DAMPER 4" [102mm]**

**STANDARD CONSTRUCTION:**

- FRAME:** 0.081" [2.06mm] Extruded Aluminum 4.16" [106mm] deep.
- ADJUSTABLE BLADE:** 0.125" [3.18mm] Extruded Aluminum
- FIXED BLADE:** 0.081 [2.06mm] Extruded Aluminum Positioned on a 37° angle on approximately 3" [76mm] centers.
- LINKAGE:** Exposed
- BIRDSCREEN:**  
3/4" X .051" [19.05mm x 1.30mm] Flattened Aluminum in Removable Frame. Screen is mounted on inside (rear) as looking from exterior of building.
- FINISH:** Mill aluminum (std.)

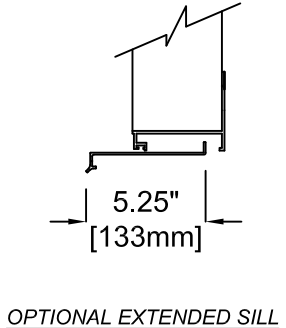
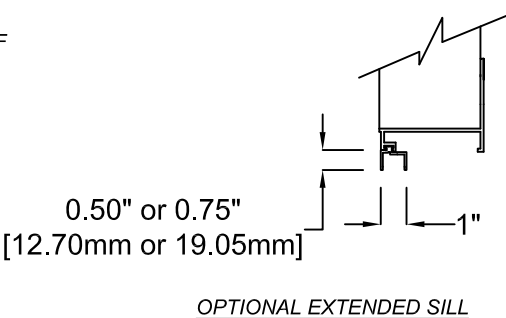
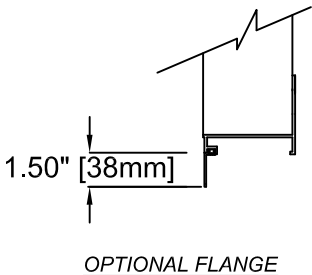
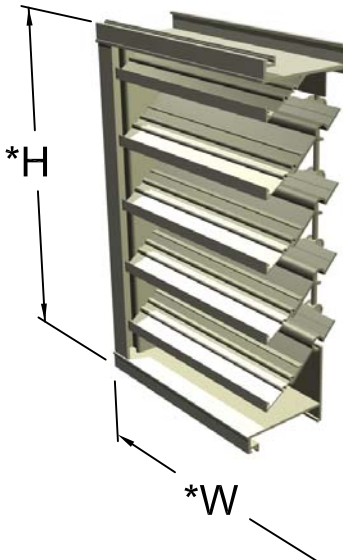
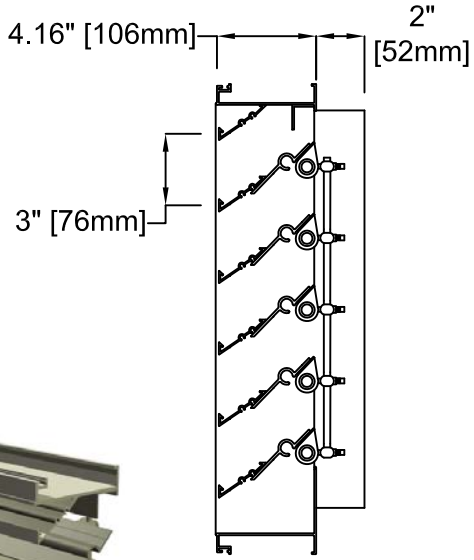
- MINIMUM SIZE:** 12"w x 12"h [305mm x 305mm]
- MAXIMUM SIZE:** Factory assembled multi-section max: 84"w x 120"h or 120"w x 84"h [2134mm x 3048mm or 3048mm x 2134mm]  
48"w x 120"h single section [1219mm x 3048mm]  
Larger sizes are field assembled.

**OPTIONS:**

- Flanged Frame (1.5" std.) [38mm]
- Custom Flange (1", 2", or 3") [ 25mm, 51mm, or 76mm]
- Glazing Adapter (0.50" [12.70mm] or 0.75" [19.05mm])
- Extended Sill
- Filter Racks (no screen)
- Hinged Sub Frame
- Welded Construction (Wind Load +/- 50 psf)
- Blank-off, Alum., non-insulated, no screen, non-removeable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removeable
- Actuator: See Actuator Selection Chart
- Blade Seals
- Jamb Seals
- Insect Screen
- Security Bars

**AVAILABLE FINISHES:**

- Powder Polyester TGIC** (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel** (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F [177° C], 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar®** (ALUM\*A\*STAR®) 2 coats by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500®** or **HYLAR® 5000** 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F [222°C], 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500®** or **HYLAR® 5000** (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat, 14 standard colors - custom colors available. Baked on at 415°F [213° C], 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize** 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize** 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize** (AA-C22A42)(>0.7 mil)
  - Clear coat available for all above finishes.
  - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
  - Kynar® 500 is a registered trademark of Arkema.
  - ALUM\*A\*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
  - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



\*Width and Height dimensions are approximately 1/4" [6.35mm] under listed size.

Due to continuing research, United Enertech reserves the right to change specifications without notice.

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<p><b>MODEL CFL-D-4 (High Performance Combination Louver/Damper 4"[102mm])</b></p>					
DRAWN BY: MMH	DATE: 6-8-10	REV. DATE: 4-12-13	REV. NO. 3	APPROVED BY: BGT	DWG. NO.: <b>A-32</b>

## Louver Selection and Application

### MODEL CFL-D-4 FREE AREA CHART (SQUARE FEET)

Louver Height Inches	Louver Width In Inches									Louver Height Inches
	12	18	24	30	36	42	48	54	60	
<b>12</b>	0.49	0.73	0.98	1.22	1.47	1.71	1.96	2.20	2.45	<b>12</b>
<b>18</b>	0.73	1.10	1.47	1.84	2.20	2.57	2.94	3.30	3.67	<b>18</b>
<b>24</b>	0.98	1.47	1.96	2.45	2.94	3.43	3.92	4.41	4.90	<b>24</b>
<b>30</b>	1.22	1.84	2.45	3.06	3.67	4.28	4.90	5.51	6.12	<b>30</b>
<b>36</b>	1.47	2.20	2.94	3.67	4.41	5.14	5.88	6.61	7.34	<b>36</b>
<b>42</b>	1.71	2.57	3.43	4.28	5.14	6.00	6.85	7.71	8.57	<b>42</b>
<b>48</b>	1.96	2.94	3.92	4.90	5.88	6.85	7.83	8.81	9.79	<b>48</b>
<b>54</b>	2.20	3.30	4.41	5.51	6.61	7.71	8.81	9.91	11.02	<b>54</b>
<b>60</b>	2.45	3.67	4.90	6.12	7.34	8.57	9.79	11.02	12.24	<b>60</b>
<b>66</b>	2.69	4.04	5.39	6.73	8.08	9.42	10.77	12.12	13.46	<b>66</b>
<b>72</b>	2.94	4.41	5.88	7.34	8.81	10.28	11.75	13.22	14.69	<b>72</b>

### CFL-D-4 Selection Examples

#### Example 1:

Airflow given as 10,000 cfm - select louver size

- A. Determine louver free area by dividing airflow by free area velocity (do not exceed 1250 fpm on intake louver application)

$$\frac{10,000 \text{ cfm}}{1250 \text{ fpm}} = 8.0 \text{ sq.ft.}$$

Airflow      F.A.V.      Req'd. Louver Free Area

- B. Select a louver with at least the required louver free area from the Free Area Chart Above.

48"W x 54"H  
8.81 sq. ft. free area  
1135 fpm free area velocity (10,000) cfm / 8.81 sq.ft. F.A.  
(Other selections available - See Free Area Chart above.)

#### Example 2:

Louver size given 42"W x 72"H intake - determine maximum airflow.

- A. Use Free Area Chart to determine  
Free Area = 10.28 sq. ft.

- B. Free Area x Free Area Velocity (do not exceed 1250 fpm on intake louver applications).

$$10.28 \text{ sq. ft.} \times 1250 \text{ fpm} = 12,850 \text{ cfm}$$

Free Area      F.A.V.      Max Airflow