

## Combination Fixed / Adjustable Dual Drainable Blade Louver Model C-DDE-46

**Design Features** – Combination feature gives a hidden effect and superior shut off quality to competitive designs. Useful applications are high static pressure systems or where tightest possible seal is required.

### STANDARD CONSTRUCTION

ALL MATERIAL – EXTRUDED ALUMINUM 6063-T5 (KB-45)

**FRAME**

6" (152) Deep, .081" (2.1) extruded aluminum in style #3

**BLADES**

Fixed - Dual drainable design .081" (2.1) extruded aluminum @ 5-1/2" (140) @ 45°  
Adjustable - .125" thk. (3.2) extruded aluminum

**BLADE AXLES & BEARINGS**

Axles – 7/16" (11) plated steel hex  
Bearings –Bronze oilite

**LINKAGE**

Plated steel concealed in jamb

**BLADE & JAMB SEALS**

Vinyl blade edge and flexible metal jamb seals

**MAXIMUM SIZE**

Unlimited, with mullions, structural bracing supplied by others

**MAXIMUM SINGLE SECTION**

60" W x 96"H (1524 X 2438) (Over 60" (1524) wide will have double linkage)

**MULLION**

Visible

**MINIMUM SIZE**

12"w x 12"h (305 X 305)

**UNDERSIZED**

1/4" (6) under ordered size unless specified Exact or Actual

**SCREEN**

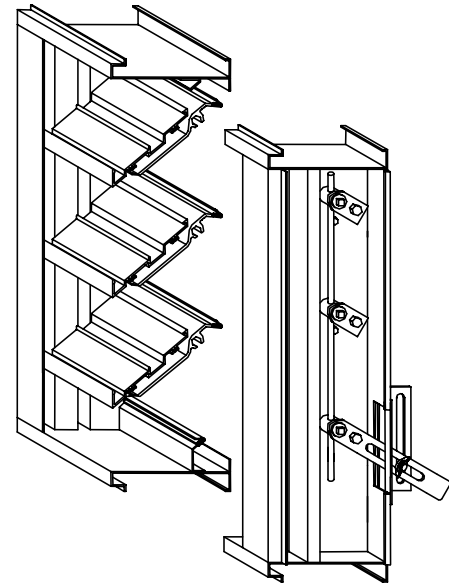
3/4" x .051" (19 X 1.3) flattened expanded aluminum bird screen in frame

**FINISH**

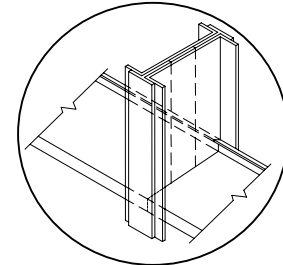
Mill

**OPERATOR**

Wing-nut adjustable



MULLION STYLE



Visible

### OPTIONAL CONSTRUCTION

**FRAME** – Available in a heavier extrusion of .125" (3.2)

**BLADES** - Available in a heavier extrusion of .125" (3.2)

**SCREEN** - Many styles available please consult screen listing

**FINISH** – Air-dry primer, polyurethane, epoxy, or enamel, baked epoxy or enamel, Anodize or Kynar.

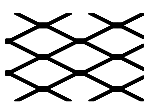
**OPERATOR** – Manual, Electric or Pneumatic

### SPECIAL PURPOSE CONSTRUCTION

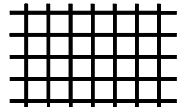
- Welded linkage
- Security bars
- Filter racks
- Sleeved for ductwork connection
- Jackshaft when required

\*\* Consult SAFE-AIR/DOWCO for additional technical information.

### TYPICAL SCREEN STYLES

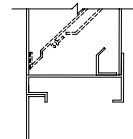


Expanded Aluminum Standard

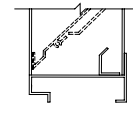


Wire Mesh

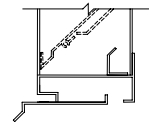
### FRAME STYLES



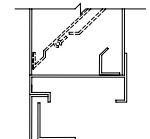
(1) - Flange 1-1/2"



(3) - Box Standard



(8) - Box and Sill Extension



(9) - Flange w/ sub frame

DATE		ARCHITECT			CUSTOMER	
PROJECT						
ITEM	QTY	W	H	DESCRIPTION		



DEPENDABLE PRODUCTS SINCE 1955

**SAFE-AIR OF ILLINOIS INC.**

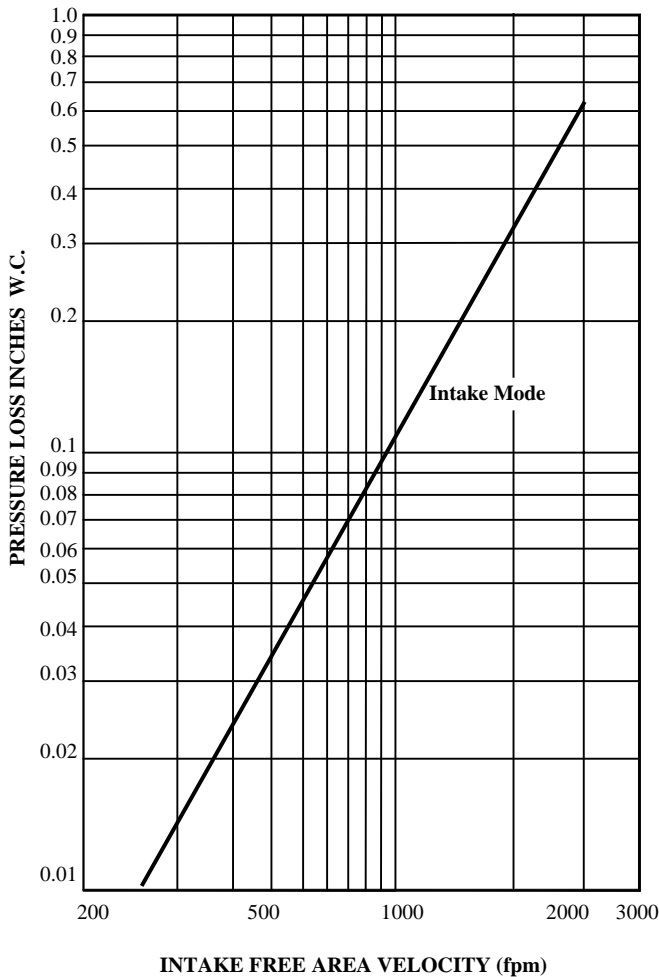
Engineering and General Offices

1855 South 54<sup>th</sup> Avenue, Cicero, Illinois 60804

Phone 708-652-9100 FAX 708-652-9158

All tests performed at an independent laboratory and based on AMCA standard 511 – 91 for air performance and water penetration.

### AIR PERFORMANCE



### CALCULATING PRESSURE LOSS

Based upon a given flow rate (in CFM), the flowing pressure loss may be determined from the “air performance” graph, knowing the sq. ft. of free area of the louver. Alternately, the free area may be determined based upon a volumetric flow rate and a maximum pressure loss. Utilizing the “air performance” graph.

\_\_\_\_\_ in. W.C. Max. Pressure Loss Intake or Exhaust  
 \_\_\_\_\_ FPM (Free Area Velocity From “Air Performance” Graph)  
 \_\_\_\_\_ CFM / \_\_\_\_\_ FPM Free Area Velocity = \_\_\_\_\_ Sq. Ft. Free Area

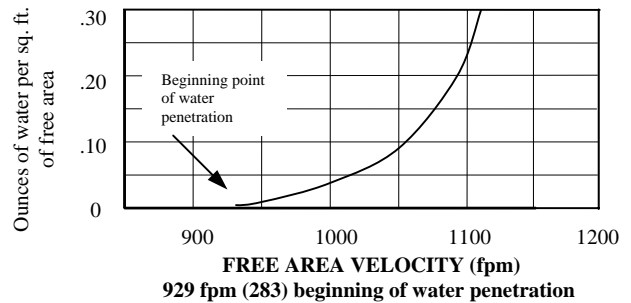
### CALCULATING MAXIMUM AIRFLOW BEFORE WATER PENETRATION

The “free area flow rate” at which water penetration commences (.01 oz. of water) is established at, 929 fpm (283) for C-DDE-46, and will vary depending upon actual weather conditions. The “water penetration” graph illustrates the results of actual laboratory test on a 48” x 48” (1219 x 1219) test sample subjected to hypothetical rainfall conditions. To determine the free area (in sq. ft.) based on upon a known volumetric flow rate in CFM;

\_\_\_\_\_ CFM / \_\_\_\_\_ FPM = \_\_\_\_\_ SQ. FT. FREE AREA  
 (System Requirements)

Water Penetration Graph  
 in oz. of water per sq. ft. of free area over a 15 min. test period

	.01	.02	.05	.1	.2	.3 (H2O)
	929	967	1017	1055	1093	1115 (fpm)



### FREE AREA CALCULATIONS IN SQ. FT.

#### WIDTH

HEIGHT	WIDTH									
	Inches	12	18	24	30	36	42	48	54	60
12		0.19	0.33	0.47	0.61	0.74	0.88	1.02	1.16	1.29
18		0.41	0.70	0.99	1.28	1.57	1.86	2.15	2.45	2.74
24		0.63	1.07	1.52	1.96	2.40	2.85	3.29	3.73	4.18
30		0.85	1.44	2.04	2.64	3.23	3.83	4.43	5.02	5.62
36		1.06	1.81	2.56	3.31	4.06	4.81	5.56	6.31	7.06
42		1.28	2.18	3.09	3.99	4.89	5.79	6.70	7.60	8.50
48		1.50	2.55	3.61	4.66	5.72	6.78	7.83	8.89	9.95
54		1.71	2.92	4.13	5.34	6.55	7.76	8.97	10.18	11.39
60		1.93	3.29	4.65	6.02	7.38	8.74	10.10	11.47	12.83
66		2.15	3.66	5.18	6.69	8.21	9.72	11.24	12.76	14.27
72		2.36	4.03	5.70	7.37	9.04	10.71	12.38	14.04	15.71
78		2.58	4.40	6.22	8.05	9.87	11.69	13.51	15.33	17.15
84		2.80	4.77	6.75	8.72	10.70	12.67	14.65	16.62	18.60
90		3.01	5.14	7.27	9.40	11.53	13.65	15.78	17.91	20.04
96		3.23	5.51	7.79	10.07	12.36	14.64	16.92	19.20	21.48