

**Wind Driven Rain Resistant Louver in 4" thick design - Model WDL-04**

**Design Features** – High Performance patented design allowing maximum airflow with minimum outside element or water penetration.

**STANDARD CONSTRUCTION**

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

**FRAME**

WDL-04 – 4" deep, .081" wall thickness  
extruded aluminum in style #3.

**BLADES**

WDL-04 – 4" deep, .081" wall thickness extruded  
aluminum and spaced approx. 1-1/2" (38) on center.

**MAXIMUM SIZE**

Unlimited, with mullions, structural bracing supplied by SAFE-AIR/DOWCO

**MAXIMUM FACTORY ASSEMBLY SIZE**

48" x 96"

**MINIMUM SIZE**

12" x 12"

**UNDERSIZED**

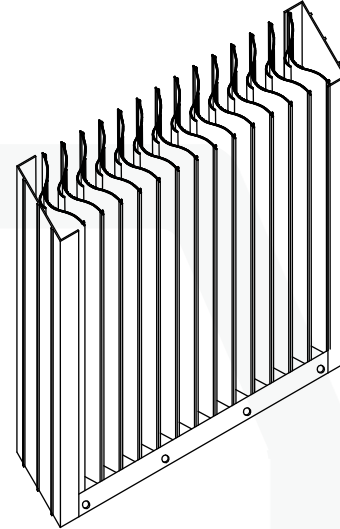
1/4" under ordered size unless specified Exact or Actual

**SCREEN**

3/4" x .051" flattened expanded aluminum bird screen  
in extruded aluminum frame.

**FINISH**

Mill

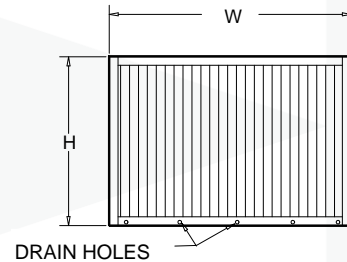


**OPTIONAL CONSTRUCTION**

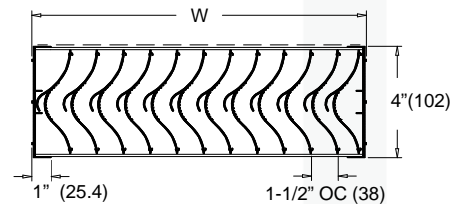
**SCREEN** - Many styles available please consult screen listing

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

**MULLION** – Invisible for architectural preference



DRAIN HOLES



**SPECIAL PURPOSE CONSTRUCTION**

Special shapes: Triangle, Round, Trapezoid, etc.  
Combined with Model ECO-06 control damper in common sleeve  
(under separate submittal sheet)

Fully welded construction

Security bars

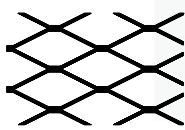
Hinged as walk through door or swing out access

Filter racks

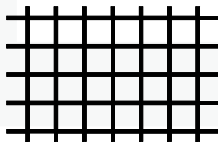
Sleeved for ductwork connection

Consult SAFE-AIR/DOWCO for additional technical information.

**TYPICAL SCREEN STYLES**



Expanded Aluminum  
Standard



Wire Mesh

**PERFORMANCE**

**Rainfall in/Hr:** 8" (203mm)  
**Wind Velocity:** 30mph (48.30 kph)  
**Point of Water Penetration:** 1196 FPM  
**Efficiency:** 99.90 %  
**Free Area:** 50.7% - 48 x 48 unit (1219 x 1219)  
**Pressure Drop:** 0.085" wg @ 1000 fpm  
(2.03mm wg. @ 5.08 mps)

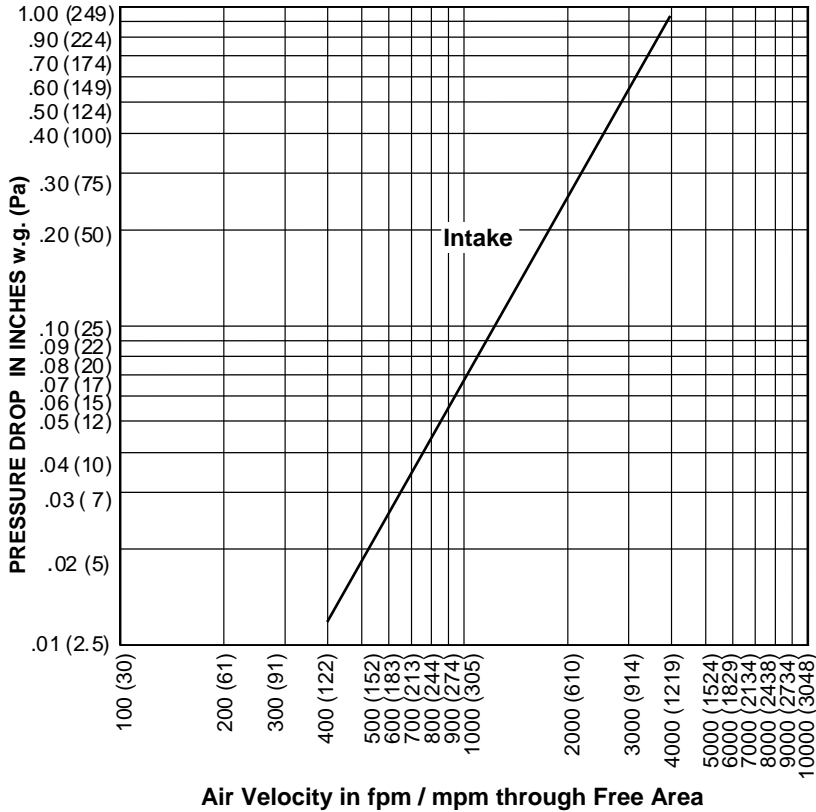
DATE	ARCHITECT/ENGINEER		CUSTOMER		
PROJECT					
ITEM	QTY	W	H	DESCRIPTION	



A division of Safe Air of Illinois  
DEPENDABLE PRODUCTS SINCE 1955  
**DOWCO PRODUCTS GROUP**  
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, water penetration and wind driven rain test.

## AIR PERFORMANCE

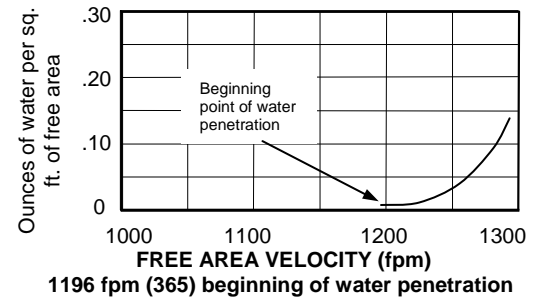


Based upon a given flow rate (in CFM), the flowing pressure loss may be determined from the "air performance" graph, knowing the sq. ft. of free area of the louver. Alternately, the free area may be determined based upon a volumetric flow rate and a maximum pressure loss utilizing the "air performance"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

### Calculation Pressure Loss

Based upon a give flow rate in (CFM), the flowing pressure loss may be determined from the "air performance" graph, knowing the sq. ft. or sq. meters 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.

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)
	1196	1209	1262	1275	N/A	N/A (fpm)



This test was produced on a wind velocity of 30 mph (13 m/s) directly at the face of the louver, with a rainfall rate of 3" per hour (75 mm/hr). The data illustrates the water penetration effectiveness rating at their given ventilation rate.

## WIND DRIVEN RAIN PERFORMANCE

Ventilation Air Velocity (m/s)	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Core Ventilation Rate (ft/min)	0	101	203	298	402	485	598	687	782	902	998
Free Area Ventilation Rate (ft/min)	0	172	353	512	676	795	1009	1187	1293	1498	1684
Rating Effectiveness	A	A	A	A	A	A	A	A	B	B	B
Effectiveness Rating	A = 1 - 0.99			B = 0.989 - 0.95			C = 0.949 - 0.80			D = 0.80 - 0	

## WIDTH

## FREE AREA CALCULATIONS IN SQUARE FEET

Inches	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.38	0.60	0.83	1.06	1.28	1.51	1.73	1.96	2.19	2.41	2.64	2.86	3.09	3.32	3.54	3.77	3.99	4.22	4.45
18	0.61	0.97	1.34	1.70	2.07	2.43	2.80	3.16	3.53	3.89	4.25	4.62	4.98	5.35	5.71	6.08	6.44	6.81	7.17
24	0.84	1.34	1.85	2.35	2.85	3.36	3.86	4.36	4.87	5.37	5.87	6.38	6.88	7.38	7.89	8.39	8.89	9.39	9.90
30	1.07	1.71	2.35	3.00	3.64	4.28	4.92	5.56	6.21	6.85	7.49	8.13	8.77	9.41	10.06	10.70	11.34	11.98	12.62
36	1.30	2.08	2.86	3.64	4.42	5.20	5.98	6.76	7.54	8.33	9.11	9.89	10.67	11.45	12.23	13.01	13.79	14.57	15.35
42	1.53	2.45	3.37	4.29	5.21	6.13	7.05	7.97	8.88	9.80	10.72	11.64	12.56	13.48	14.40	15.32	16.24	17.16	18.08
48	1.76	2.82	3.88	4.94	5.99	7.05	8.11	9.17	10.22	11.28	12.34	13.40	14.46	15.51	16.57	17.63	18.69	19.74	20.80
54	1.99	3.19	4.39	5.58	6.78	7.98	9.17	10.37	11.56	12.76	13.96	15.15	16.35	17.55	18.74	19.94	21.13	22.33	23.53
60	2.22	3.56	4.89	6.23	7.56	8.90	10.23	11.57	12.90	14.24	15.57	16.91	18.24	19.58	20.91	22.25	23.58	24.92	26.25
66	2.46	3.93	5.40	6.88	8.35	9.82	11.30	12.77	14.24	15.72	17.19	18.66	20.14	21.61	23.08	24.56	26.03	27.51	28.98
72	2.69	4.30	5.91	7.52	9.14	10.75	12.36	13.97	15.58	17.20	18.81	20.42	22.03	23.64	25.26	26.87	28.48	30.09	31.70
78	2.92	4.67	6.42	8.17	9.92	11.67	13.42	15.17	16.92	18.67	20.42	22.18	23.93	25.68	27.43	29.18	30.93	32.68	34.43
84	3.15	5.04	6.93	8.82	10.71	12.60	14.48	16.37	18.26	20.15	22.04	23.93	25.82	27.71	29.60	31.49	33.38	35.27	37.16
90	3.38	5.41	7.44	9.46	11.49	13.52	15.55	17.58	19.60	21.63	23.66	25.69	27.71	29.74	31.77	33.80	35.83	37.85	39.88
96	3.61	5.78	7.94	10.11	12.28	14.44	16.61	18.78	20.94	23.11	25.28	27.44	29.61	31.78	33.94	36.11	38.27	40.44	42.61