

**Storm Resistant Louver in 7" thick frame design - Model TCM-27**

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

**STANDARD CONSTRUCTION**

**ALL MATERIAL** – Extruded alum. alloy (6063-T5), (6063-T6) or (6061-T6)

**FRAME**

07" (178) thick, is .081 (2.1) extruded alum. in style #8.

**BLADES**

02" (51) Exterior blades @ 2-1/2" (64) & Interior blades @ 2" (51) oc.

**MAXIMUM SIZE**

Unlimited, with mullions, structural bracing supplied by others

**MAXIMUM FACTORY ASSEMBLY SIZE**

120" w x 84 H" or 84" w x 120" H (3048 x 2124) or (2134 x 3048)  
(allows for best handling)  
(Type of finish may limit maximum single section)

**MULLION**

Visible

**MINIMUM SIZE**

12" w x 12" H (305 x 305)

**UNDERSIZED**

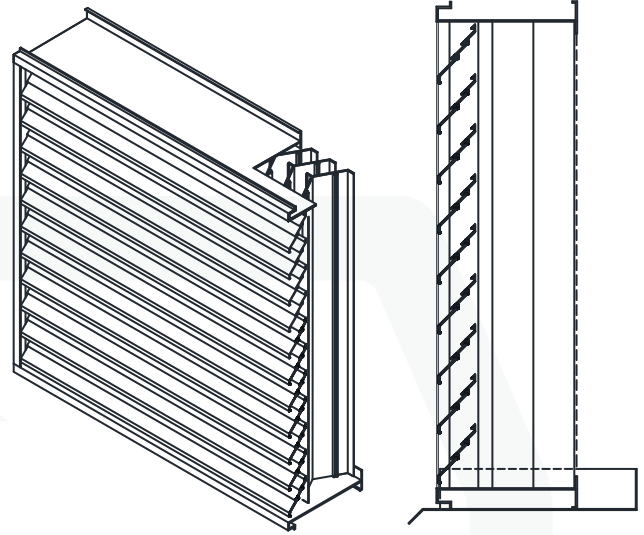
1/4" (6) under ordered size unless specified Exact or Actual

**SCREEN**

3/4" .051" (19 x 1.3) expanded aluminum bird screen no frame

**FINISH**

Mill



SECTION VIEW

**OPTIONAL CONSTRUCTION**

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

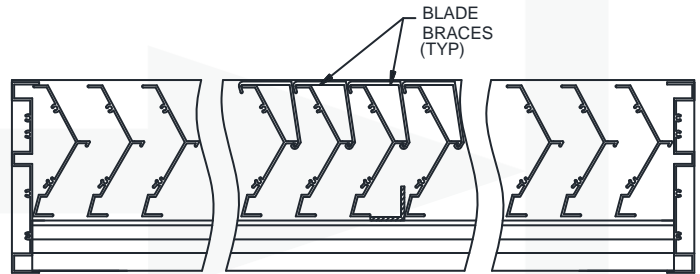
**BLADES** – Available in a heavier extrusion of .125" (3.2)

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

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

Baked epoxy, powder coat Anodize or Kynar.

**MULLION** – Visible for architectural preference



PLAN VIEW

**SPECIAL PURPOSE CONSTRUCTION**

Special Shapes; Triangle, Trapezoid, etc.

Fully welded construction

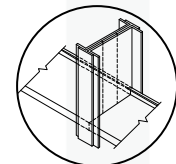
Security bars

Filter racks

Hinged as walk through door or for swing out access

Sleeved for ductwork connection

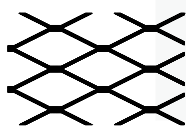
**MULLION STYLES**



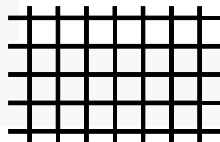
Visible

PERFORMANCE
Point of water penetration 1250 fpm (381)
Free area 48 x 48 section 40%

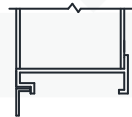
**TYPICAL SCREEN STYLES**



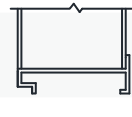
Expanded Aluminum Standard



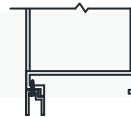
Wire Mesh



1- Flange (1.5")



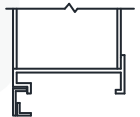
3 - Box



4 - Glazing Adapter



8- Box with Sill Extension



9 - Flange w/ Sub Frame

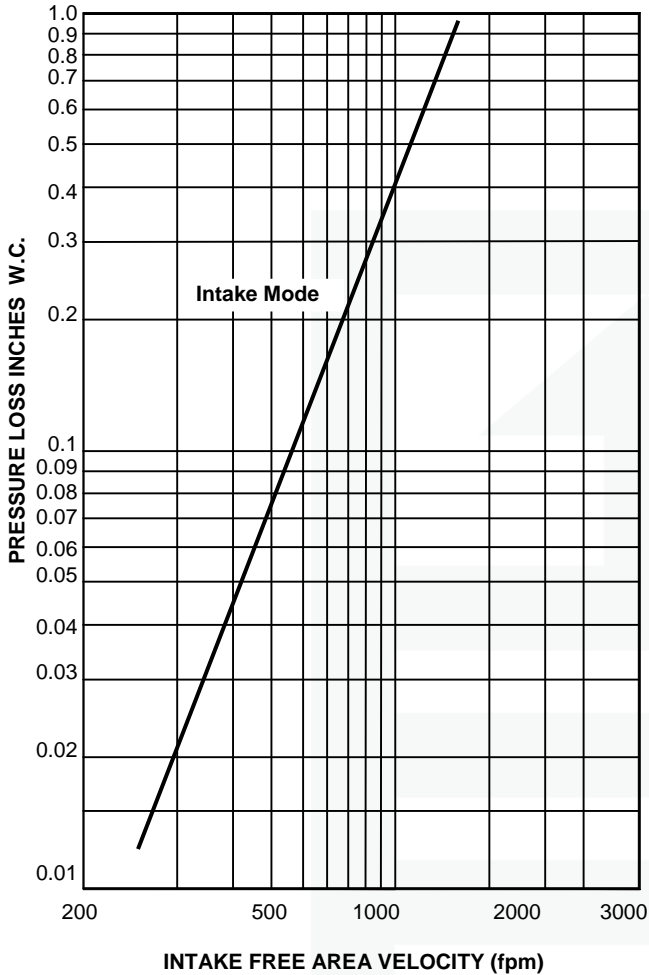
**FRAME STYLE**

DATE	ARCHITECT/ENGINEER		CUSTOMER	
PROJECT				
ITEM	QTY	W	H	DESCRIPTION

## TCM-27 PERFORMANCE SPECIFICATIONS

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

### AIR PERFORMANCE

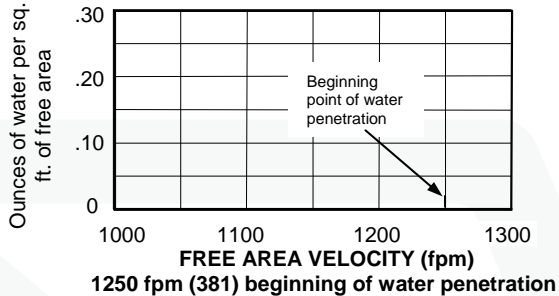


Rating Effectiveness			
A	B	C	D
1 - 0.99	0.989 - 0.95	0.949 - 0.80	.79 - 0

### MAXIMUM AIRFLOW BEFORE WATER PENETRATION

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)
1250	n/a	n/a	n/a	n/a	n/a (fpm)



### WIND DRIVEN RAIN PERFORMANCE

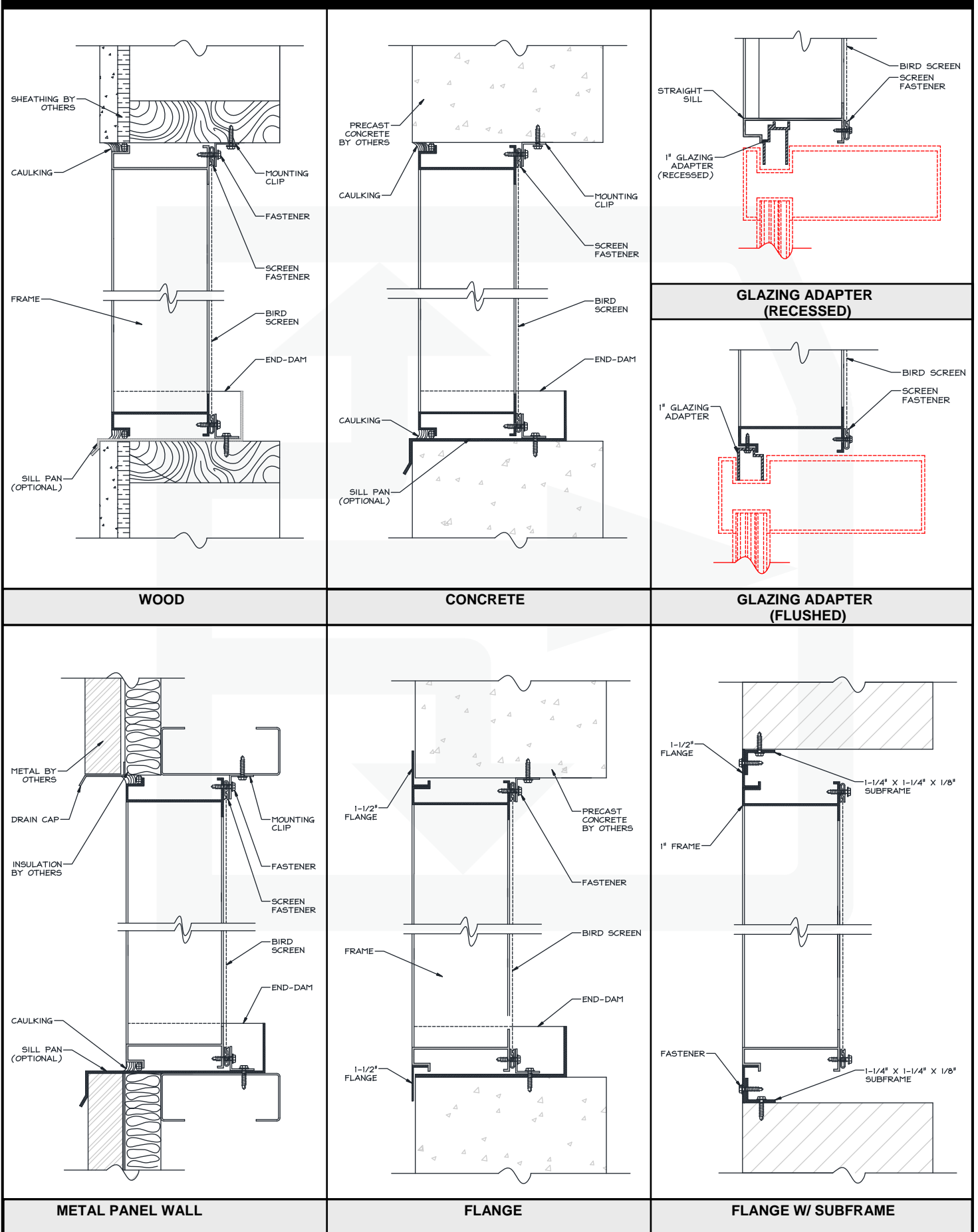
Wind velocity of 30 mph (13 m/s) directly at the face of the louver, with a rainfall rate of 3" per hour (75 mm/hr). Test data shows water penetration effectiveness at a given velocity rate.				Wind velocity of 50 mph (22 m/s) directly at the face of the louver, with a rainfall rate of 8" per hour (200 mm/hr). Test data shows water penetration effectiveness at a given velocity rate.			
Core Ventilation Air Velocity (m/s)	Core Ventilation Air Velocity (ft/min)	Free Area Velocity (ft/min)	Rating Effectiveness	Core Ventilation Air Velocity (m/s)	Core Ventilation Rate (ft/min)	Free Area Velocity (ft/min)	Rating Effectiveness
0.0	0	0		0.0	0	0	
0.5	101	246		0.5	101	246	
1.0	203	481		1.0	203	481	
1.5	298	721		1.5	298	721	
2.0	401	1001		2.0	401	1001	
2.5	499	1194		2.5	499	1194	
3.0	594	1452		3.0	594	1452	
3.5	692	1671	A	3.5	686	1659	A
4.0	796	1911	C	4.0	803	1931	C
4.5	891	2119	D	4.4	868	2048	D
5.0	990	2397	D	5.0	975	2321	D

### WIDTH

### FREE AREA CALCULATIONS IN SQ. FT.

Inches	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
12	0.45	0.72	0.99	1.26	1.53	1.81	2.08	2.35	2.62	2.89	3.16	3.43	3.70	3.97	4.24	4.51	4.78	5.06	5.33
18	0.54	0.86	1.18	1.51	1.83	2.15	2.48	2.80	3.12	3.44	3.77	4.09	4.41	4.74	5.06	5.38	5.70	6.03	6.35
24	0.73	1.17	1.60	2.04	2.48	2.92	3.35	3.79	4.23	4.67	5.10	5.54	5.98	6.42	6.85	7.29	7.73	8.17	8.60
30	0.95	1.53	2.10	2.67	3.25	3.82	4.39	4.97	5.54	6.11	6.68	7.26	7.83	8.40	8.98	9.55	10.12	10.69	11.27
36	1.13	1.81	2.48	3.16	3.84	4.51	5.19	5.87	6.55	7.22	7.90	8.58	9.25	9.93	10.61	11.28	11.96	12.64	13.32
42	1.22	1.94	2.67	3.40	4.13	4.86	5.59	6.32	7.05	7.78	8.51	9.24	9.97	10.69	11.42	12.15	12.88	13.61	14.34
48	1.41	2.25	3.09	3.94	4.78	5.63	6.47	7.31	8.16	9.00	9.84	10.69	11.53	12.38	13.22	14.06	14.91	15.75	16.59
54	1.63	2.61	3.59	4.57	5.55	6.53	7.51	8.49	9.47	10.44	11.42	12.40	13.38	14.36	15.34	16.32	17.30	18.28	19.26
60	1.81	2.89	3.97	5.06	6.14	7.22	8.31	9.39	10.47	11.56	12.64	13.72	14.81	15.89	16.97	18.06	19.14	20.22	21.31
66	1.89	3.03	4.16	5.30	6.43	7.57	8.70	9.84	10.98	12.11	13.25	14.38	15.52	16.65	17.79	18.92	20.06	21.19	22.33
72	2.08	3.33	4.58	5.83	7.08	8.33	9.58	10.83	12.08	13.33	14.58	15.83	17.08	18.33	19.58	20.83	22.08	23.33	24.58
78	2.31	3.69	5.08	6.47	7.85	9.24	10.62	12.01	13.39	14.78	16.16	17.55	18.93	20.32	21.70	23.09	24.48	25.86	27.25
84	2.48	3.97	5.46	6.95	8.44	9.93	11.42	12.91	14.40	15.89	17.38	18.87	20.36	21.85	23.34	24.83	26.32	27.81	29.30
90	2.57	4.11	5.65	7.19	8.74	10.28	11.82	13.36	14.90	16.44	17.99	19.53	21.07	22.61	24.15	25.69	27.24	28.78	30.32
96	2.76	4.42	6.07	7.73	9.39	11.04	12.70	14.35	16.01	17.67	19.32	20.98	22.64	24.29	25.95	27.60	29.26	30.92	32.57

HEIGHT



## SUGGESTED SPECIFICATIONS

### LOUVER MODEL: TCM-27/ SERIES

#### GENERAL:

Furnish and install at locations where indicated on the drawings or as described in schedules with high performance weather-resistant louver Model TCM-27/series as manufactured by DOWCO Products Group, 1855 South 54<sup>th</sup> Ave., Cicero, IL. 60804. Tel. 708-652-9100, Fax 708-652-9158 ([www.safeair-dowco.com/contact.asp](http://www.safeair-dowco.com/contact.asp)). All louvers shall be manufactured under ARRA – American Recovery Reinvestment Act, “Buy American Stimulus Provision” and shall have a factory certified Union Label. Submit complete submittals or shop drawings to the architect/engineer for approval. All opening sizes shall be field verified prior to fabrication.

#### MATERIAL:

Frames and blades thickness shall be .081" (2.96mm) extruded aluminum alloy 6063-T5, T52 or T6. Blades shall be designed to collect and drain water to the jamb frames then down to the sill frame exterior at sill by means of channels in the jambs. Sill and jamb frames shall be caulked to prevent water penetration to interior wall construction. Blades are attached to jamb frames by means of plated steel screws. All fasteners to be aluminum, plated carbon steel, or stainless steel. Frames shall have integral caulking slot and retaining beads. Stationary louvers shall be furnished with bird and / or insect screens, supports and finishes as specified and as required for a complete installation.

#### PERFORMANCE:

Louvers shall be tested in accordance with AMCA Standard 500-L for both air performance and water penetration. The louvers shall have a minimum of 6.47 ft<sup>2</sup>. (0.601 m<sup>2</sup>) (40%) free area on a 48 inch x 48 inch (1219 x 1219) louver. The rating shall show a maximum water penetration of .01 oz. at an air flow of 1250 FPM (6.35 m/s) free area velocity based on a 15 minute test duration. The Static Pressure Loss shall not be more than 0.43 in. H<sup>2</sup>O of water gauge (0.11 kPa) at an air flow of 1000 FPM (5.08 m/s) free area velocity.

#### STRUCTURAL DESIGN CRITERIA:

Louvers shall be designed and furnished with all the supports required to withstand a negative and positive wind load of 25 psf (1.20 kPa) @ delta L/180 deflection based on the maximum single section of 120 x 84 (3048 x 2135) or 84 x 120 (2135 x 3048). Larger sizes and higher wind loads require additional structural supports. Due to the variation of job requirements and local building codes, structural supports shall be analyzed on a job to job basis.

#### FINISH:

All louvers shall be finished with DOWCO's Kynar 500 with 100% resin Fluoropolymer coating. Finish to adhere to a 4H hardness rating. All finishing procedures shall be one continuous operation and the coating shall meet or exceed all requirements of AAMA Specification 2605-05 "Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels." Manufacturer shall supply a standard 5-year limited warranty against failure and excessive fading or upon request a 20-year limited warranty against failure and excessive fading.