

# C/S Blast Louver

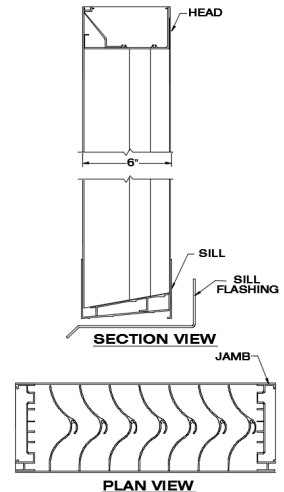
## BLAST DATA:

C/S Model BL-6809 is designed to withstand up to an 12.6 psi blast pressure at an impulse of 77.8 psi-msec.

Typical Blast Requirements	
Pressure	Impulse
4.0 psi	28.0 psi-msec
6.0 psi	42.0 psi-msec
8.0 psi	59.0 psi-msec
12.6 psi	77.8 psi-msec

## Application and Design:

BL-6809 is tested in accordance with AMCA 500-L Air Performance, Water Penetration and Wind Driven Rain. BL-6809 is tested in accordance with AMCA 550 Test Method for High Velocity Wind Driven Rain Resistant Louvers. BL-6809 is tested in accordance with AMCA 540 Test Method for Louvers Impacted by Wind Borne Debris (Basic Protection, Missile Level D and Enhanced Protection, Missile Level E). Minimum section size to be 16"x16".



## Discharge Coefficient

Intake  $C_d = 0.35$  (Class 2)

AMCA certifies the coefficient class only

## TEST DATA:

To maintain a **CLASS A (99%) effectiveness** rating with a 29.1 mph wind speed and rainfall rate of 3 in/hr

⇒ Maximum intake core velocity 5.0 m/s (1000 FPM)

⇒ Maximum intake free area velocity 10.2 m/s (2,008 FPM)

To maintain a **CLASS A (99%) effectiveness** rating with a 50 mph wind speed and rainfall rate of 8 in/hr

⇒ Maximum intake core velocity 5.0 m/s (978 FPM)

⇒ Maximum intake free area velocity 10.0 m/s (1,964 FPM)

\* louver tested with 1 m<sup>2</sup> core area, mill finish and no screen

*For a 4 Foot by 4 Foot Unit. Tested with mill finish and no screen.*

⇒ Free area = 6.14 ft<sup>2</sup> (0.570 m<sup>2</sup>)

⇒ Percent free area = 38.3%

⇒ Free area velocity at the point of beginning water penetration (@0.01oz./ft<sup>2</sup> of free area based on a 15 minute interval test) = 1,250 FPM (6.35 m/s)

⇒ Maximum recommended air intake velocity = 1050 FPM (5.3 m/s)

Air Volume @ 1050 FPM free area velocity = 6,447 CFM (3.0 m<sup>3</sup>/s)

Pressure Drop @ 1050 FPM free area velocity = 0.12 in. H<sub>2</sub>O (29.8Pa)

⇒ Maximum recommended air exhaust velocity = 2,359 FPM (12.0 m/s)

Air Volume @ 2,359 FPM free area velocity = 14,484 CFM (6.8 m<sup>3</sup>/s)

Pressure Drop @ 2,359 FPM free area velocity = 0.50 in. H<sub>2</sub>O (124.2 Pa)

## WIND DRIVEN RAIN PERFORMANCE:

The louver test was based on a 39.370" (1.0 m) x 39.370" (1.0 m) core area unit tested at a rainfall rate of 3" per hour (75 mm/hr) and with a wind directed to the face of the louver at a velocity of 29.1 mph (13 m/s) as well as a rainfall rate of 8" per hour (203 mm) and a wind velocity of 50 mph (23.3 m/s). The test data shall show the water penetration effective-

Core Ventilation Rate (m/s):	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	132	197	287	380	472	587	680	767	868	1000
Free Area Ventilation Rate (ft/min):	0	265	395	576	763	947	1178	1365	1540	1743	2008
Rating Effectiveness @ 29 & 3	A	A	A	A	A	A	A	A	A	A	A
Effectiveness Ratio @ 29 & 3 (%)									99.9	99.9	99.9
Core Ventilation Rate (ft/min):	0	96	194	284	400	496	571	679	779	865	978
Free Area Ventilation Rate (ft/min):	0	192	389	570	803	996	1146	1364	1564	1737	1964
Rating Effectiveness @ 50 & 8	A	A	A	A	A	A	A	A	A	A	A
Effectiveness Ratio @ 50 & 8 (%)									99.3	99.3	99.2
Effectiveness Rating:	A = 1 to 0.99		B = 0.989 to 0.95		C = 0.949 to 0.80		D = 0.80 to 0				



Construction Specialties Inc. certifies that the louver model BL-6809 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. The AMCA Certified Ratings Seal applies to air performance ratings, water penetration ratings, and wind driven rain ratings.



Construction Specialties Inc. certifies that the louver model BL-6809 shown herein is approved to bear the AMCA Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA Publications and comply with the requirements of the AMCA Listing Label Program. The AMCA Listing Label applies to High Velocity Wind Driven Rain Resistant Louvers. The AMCA Listing Label applies to Wind Borne Debris Impact Louvers.

## SUGGESTED SPECIFICATIONS:

**GENERAL:** Furnish and install where indicated on the drawings C/S 6 (152.4 mm) **BLAST RESISTANT VERTICAL STORM RESISTANT LOUVER MODEL BL-6809** as manufactured by Construction Specialties, Inc. Lebanon, New Jersey. Complete details shall be submitted to the architect for approval prior to fabrication.

**MATERIAL:** Heads, sills, jambs and mullions to be one piece structural members of 6063-T6 alloy with integral caulking slot and retaining beads. Mullions shall be sliding interlock with integral internal drain(s). Closed cell compression gaskets shall be provided between bottom of the mullion or jamb and the top of the sill to insure leak tight connections. Blades to be one piece extrusions with reinforcing bosses. All fasteners to be aluminum or stainless steel. All louvers to be furnished with 5/8" (15.87 mm) flattened expanded mesh, aluminum bird screen with a 0.055" (1.40 mm) thick extruded aluminum frame. Screens and screen frames to be standard mill finish.

**STRUCTURAL DESIGN:** Structural supports shall be designed and furnished by the louver manufacturer to carry a wind load of not less than \_\_\_\_\_ psf (Pascals). (Note: If this paragraph is omitted or if the design wind load is not specified, the louvers will be manufactured in self-supporting units to a maximum of 5' (1524 mm) wide by 8' (2438 mm) high. Any additional structural supports required to adequately secure these units within the opening shall be the responsibility of others.

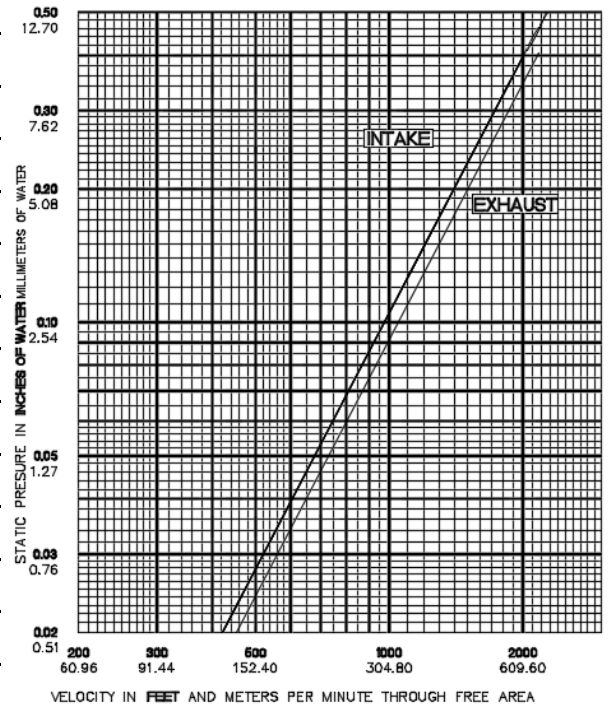
**FINISH:** All louvers shall be finished with C/S Powder Coat, a coating to be 1.5 to 3 mil. Thick full strength **100% resin Fluoropolymer coating. Finish to allow zero VOCs** to be omitted into facility of application. Finish to adhere to a 4H Hardness rating. All finishing procedures shall be one continuous operation in the plant of the manufacturer. **The coating shall meet or exceed all requirements of AAMA specification 2605** "Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels." The louver manufacturer shall supply an industry standard **20-year limited warranty against failure or excessive fading** of the Fluoropolymer Powder Coat finish. This limited warranty shall begin on the date of material shipment.

## FREE AREA TABLE

FREE AREAS IN SQ. FEET

Width in Inches and Meters

	16	18	24	30	36	42	48	54	60	66	72
	0.41	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83
16	0.36	0.42	0.59	0.77	1.01	1.19	1.37	1.55	1.72	1.96	2.14
0.41	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.14	0.16	0.18	0.20
18	0.43	0.51	0.72	0.94	1.23	1.45	1.67	1.88	2.10	2.39	2.61
0.46	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.22	0.24
24	0.67	0.78	1.11	1.45	1.89	2.23	2.56	2.90	3.23	3.68	4.01
0.61	0.06	0.07	0.10	0.13	0.18	0.21	0.24	0.27	0.30	0.34	0.37
30	0.90	1.05	1.50	1.95	2.55	3.01	3.46	3.91	4.36	4.96	5.41
0.76	0.08	0.10	0.14	0.18	0.24	0.28	0.32	0.36	0.40	0.46	0.50
36	1.14	1.32	1.89	2.46	3.22	3.78	4.35	4.92	5.49	6.24	6.81
0.91	0.11	0.12	0.18	0.23	0.30	0.35	0.40	0.46	0.51	0.58	0.63
42	1.37	1.60	2.28	2.97	3.88	4.56	5.25	5.93	6.62	7.53	8.21
1.07	0.13	0.15	0.21	0.28	0.36	0.42	0.49	0.55	0.61	0.70	0.76
48	1.60	1.87	2.67	3.47	4.54	5.34	6.14	6.94	7.74	8.81	9.61
1.22	0.15	0.17	0.25	0.32	0.42	0.50	0.57	0.65	0.72	0.82	0.89
54	1.84	2.14	3.06	3.98	5.20	6.12	7.04	7.96	8.87	10.10	11.02
1.37	0.17	0.20	0.28	0.37	0.48	0.57	0.65	0.74	0.82	0.94	1.02
60	2.07	2.41	3.45	4.48	5.86	6.90	7.93	8.97	10.00	11.38	12.42
1.52	0.19	0.22	0.32	0.42	0.54	0.64	0.74	0.83	0.93	1.06	1.15
66	2.30	2.69	3.84	4.99	6.53	7.68	8.83	9.98	11.13	12.67	13.82
1.68	0.21	0.25	0.36	0.46	0.61	0.71	0.82	0.93	1.03	1.18	1.28
72	2.54	2.96	4.23	5.50	7.19	8.46	9.72	10.99	12.26	13.95	15.22
1.83	0.24	0.27	0.39	0.51	0.67	0.79	0.90	1.02	1.14	1.30	1.41
78	2.77	3.23	4.62	6.00	7.85	9.23	10.62	12.00	13.39	15.24	16.62
1.98	0.26	0.30	0.43	0.56	0.73	0.86	0.99	1.12	1.24	1.42	1.54
84	3.00	3.50	5.01	6.51	8.51	10.01	11.51	13.02	14.52	16.52	18.02
2.13	0.28	0.33	0.47	0.60	0.79	0.93	1.07	1.21	1.35	1.53	1.67
90	3.24	3.78	5.40	7.01	9.17	10.79	12.41	14.03	15.65	17.80	19.42
2.29	0.30	0.35	0.50	0.65	0.85	1.00	1.15	1.30	1.45	1.65	1.80
96	3.47	4.05	5.78	7.52	9.83	11.57	13.30	15.04	16.78	19.09	20.82
2.44	0.32	0.38	0.54	0.70	0.91	1.07	1.24	1.40	1.56	1.77	1.93
102	3.70	4.32	6.17	8.03	10.50	12.35	14.20	16.05	17.90	20.37	22.23
2.59	0.34	0.40	0.57	0.75	0.98	1.15	1.32	1.49	1.66	1.89	2.06
108	3.94	4.59	6.56	8.53	11.16	13.13	15.10	17.06	19.03	21.66	23.63
2.74	0.37	0.43	0.61	0.79	1.04	1.22	1.40	1.59	1.77	2.01	2.20
114	4.17	4.87	6.95	9.04	11.82	13.90	15.99	18.08	20.16	22.94	25.03
2.90	0.39	0.45	0.65	0.84	1.10	1.29	1.49	1.68	1.87	2.13	2.33
120	4.41	5.14	7.34	9.54	12.48	14.68	16.89	19.09	21.29	24.23	26.43
3.05	0.41	0.48	0.68	0.89	1.16	1.36	1.57	1.77	1.98	2.25	2.46



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Upper Numerals English Units/Lower Numerals Metric Units

For assistance with overseas requirements,  
 Call C/S International (908) 236-0800

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