

C/S Blast Louver

BLAST DATA:

C/S Model BL-6709 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

TEST DATA:

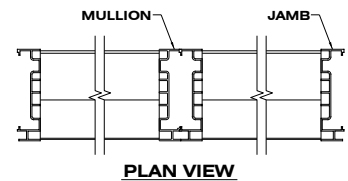
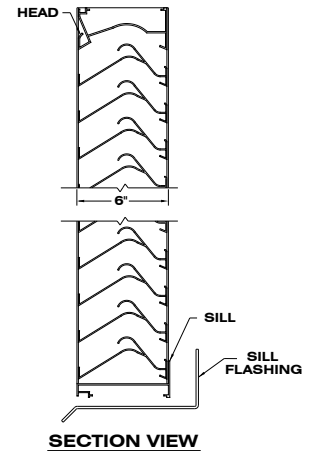
To maintain a **CLASS A (99%) effectiveness** rating with a 29.1 mph wind speed and rainfall rate of 3 in/hr

- ⇒ Maximum intake core velocity 3.5 m/s (679 FPM)
- ⇒ Maximum intake free area velocity 6.7 m/s (1,311FPM)
- ⇒ Intake pressure drop 91.9 Pa (0.37 in H₂O)
- ⇒ Intake capacity 3.5 m³/s (7,308 CFM)

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 3.5 m/s (674 FPM)
- ⇒ Maximum intake free area velocity 6.7 m/s (1302 FPM)
- ⇒ Intake pressure drop 90.4 Pa (0.36 in H₂O)
- ⇒ Intake capacity 3.5 m³/s (7,257 CFM)

* louver tested with 1 m² core area, mill finish and no screen



Discharge Coefficient

Intake C_d = 0.28 (Class 3)

AMCA certifies the coefficient class only

Data corrected to standard air density

Tested to AMCA fig. 5.5

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

- ⇒ Free area = 7.46 ft² (0.70 m²)
- ⇒ Percent free area = 46.6%
- ⇒ Free area velocity at the point of beginning water penetration (@0.01oz. /ft² of free area based on a 15 minute interval test) = 1,250 FPM (6.4 m/s)
- ⇒ Maximum recommended air intake velocity = 1050 FPM (5.3 m/s)
- ⇒ Air Volume @ 1050 FPM free area velocity = 7,833 CFM (3.7 m³/s)
- ⇒ Pressure drop @ 1050 FPM intake velocity = 0.24 in. H₂O (58.9 Pa)
- ⇒ Maximum recommended air exhaust velocity = 1,468 FPM (7.5 m/s)
- ⇒ Air Volume @ 1,468 FPM free area velocity = 10,951 CFM (5.2 m³/s)
- ⇒ Pressure Drop @ 1,468 FPM free area velocity = 0.50 in. H₂O (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 effectiveness rating at each corresponding ventilation rate.

Core Ventilation Rate (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	132	197	287	380	482	591	679	783	846	997	
Free Area Velocity (ft/min):	0	255	380	554	734	931	1141	1311	1512	1634	1925	
Rating Effectiveness @ 29 & 3:	A	A	A	A	A	A	A	A	B	B	C	
Effectiveness Ratio @ 29 & 3:							99.9	99.9	99.4	97.1	95.7	91.0
Core Ventilation Rate (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	96	194	284	401	495	567	674	793	878	965	
Free Area Velocity (ft/min):	0	185	375	548	774	956	1095	1302	1531	1695	1864	
Rating Effectiveness @ 50 & 8:	A	A	A	A	A	A	A	A	B	C	C	
Effectiveness Ratio @ 50 & 8:							99.2	99.1	99.2	97.5	94.6	91.0
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-6709 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.

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.

SUGGESTED SPECIFICATIONS:

GENERAL: Furnish and install where indicated on the drawings C/S 6" (152.4 mm) **BLAST RESISTANT HORIZONTAL STORM RESISTANT LOUVER MODEL BL-6709** 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). Heads to be one piece extrusion with gutter(s) designed to catch and direct water to jamb and mullion drains. 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.

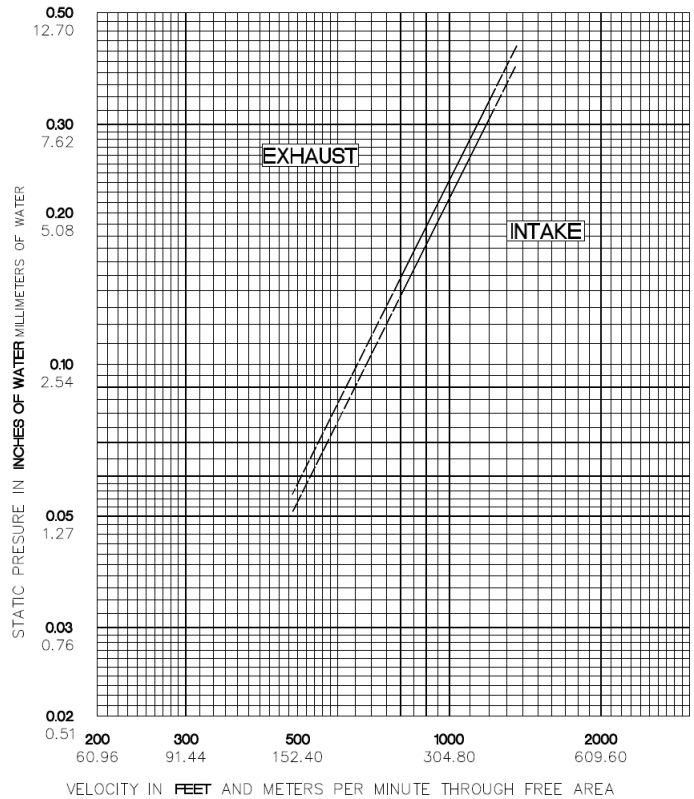
STRUCTURAL DESIGN: Structural supports shall be designed and furnished by the louver manufacturer to carry a wind load of not less than _____ psf (Pascals). (Note: If this paragraph is omitted or if the design wind load is not specified, the louvers will be manufactured in self-supporting units to a 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.

FREE AREA TABLE

FREE AREAS IN SQ. FEET AND SQ. METERS

Width in Inches and Meters

Height in Inches and Meters	18	24	30	36	42	48	54	60	66	72
	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83
18	0.73	1.00	1.27	1.55	1.82	2.10	2.37	2.64	2.92	3.19
0.46	0.07	0.09	0.12	0.14	0.17	0.19	0.22	0.25	0.27	0.30
24	1.08	1.49	1.90	2.31	2.72	3.13	3.54	3.95	4.36	4.77
0.61	0.10	0.14	0.18	0.21	0.25	0.29	0.33	0.37	0.40	0.44
30	1.45	2.00	2.55	3.10	3.65	4.20	4.75	5.30	5.85	6.40
0.76	0.14	0.19	0.24	0.29	0.34	0.39	0.44	0.49	0.54	0.59
36	1.85	2.55	3.25	3.95	4.65	5.35	6.05	6.75	7.45	8.15
0.91	0.17	0.24	0.30	0.37	0.43	0.50	0.56	0.63	0.69	0.76
42	2.25	3.10	3.95	4.80	5.65	6.49	7.34	8.19	9.04	9.89
1.07	0.21	0.29	0.37	0.45	0.52	0.60	0.68	0.76	0.84	0.92
48	2.60	3.59	4.57	5.55	6.54	7.46	8.50	9.49	10.47	11.46
1.22	0.24	0.33	0.42	0.52	0.61	0.70	0.79	0.88	0.97	1.06
54	2.96	4.08	5.20	6.31	7.43	8.55	9.67	10.79	11.91	13.03
1.37	0.27	0.38	0.48	0.59	0.69	0.79	0.90	1.00	1.11	1.21
60	3.32	4.57	5.83	7.08	8.34	9.59	10.85	12.10	13.36	14.61
1.52	0.31	0.42	0.54	0.66	0.77	0.89	1.01	1.12	1.24	1.36
66	3.70	5.10	6.50	7.90	9.30	10.70	12.10	13.49	14.89	16.29
1.68	0.34	0.47	0.60	0.73	0.86	0.99	1.12	1.25	1.38	1.51
72	4.10	5.65	7.20	8.74	10.29	11.84	13.39	14.94	16.49	18.04
1.83	0.38	0.52	0.67	0.81	0.96	1.10	1.24	1.39	1.53	1.68
78	4.48	6.17	7.87	9.56	11.26	12.95	14.64	16.34	18.03	19.72
1.98	0.42	0.57	0.73	0.89	1.05	1.20	1.36	1.52	1.68	1.83
84	4.84	6.67	8.49	10.32	12.15	13.98	15.81	17.63	19.46	21.29
2.13	0.45	0.62	0.79	0.96	1.13	1.30	1.47	1.64	1.81	1.98
90	5.19	7.16	9.12	11.08	13.05	15.01	16.97	18.93	20.90	22.86
2.29	0.48	0.66	0.85	1.03	1.21	1.39	1.58	1.76	1.94	2.12
96	5.55	7.65	9.75	11.85	13.95	16.05	18.14	20.24	22.34	24.44
2.44	0.52	0.71	0.91	1.10	1.30	1.49	1.69	1.88	2.08	2.27
102	5.95	8.20	10.45	12.69	14.94	17.19	19.44	21.69	23.94	26.19
2.59	0.55	0.76	0.97	1.18	1.39	1.60	1.81	2.01	2.22	2.43
108	6.35	8.74	11.14	13.54	15.94	18.34	20.74	23.13	25.53	27.93
2.74	0.59	0.81	1.04	1.26	1.48	1.70	1.93	2.15	2.37	2.59
114	6.71	9.25	11.79	14.33	16.87	19.40	21.94	24.48	27.02	29.56
2.90	0.62	0.86	1.10	1.33	1.57	1.80	2.04	2.27	2.51	2.75
120	7.07	9.74	12.42	15.09	17.76	20.43	23.11	25.78	28.45	31.12
3.05	0.66	0.91	1.15	1.40	1.65	1.90	2.15	2.39	2.64	2.89
126	7.43	10.24	13.04	15.85	18.66	21.47	24.27	27.08	29.89	32.70
3.20	0.69	0.95	1.21	1.47	1.73	1.99	2.26	2.52	2.78	3.04
132	7.80	10.75	13.70	16.64	19.59	22.54	25.49	28.44	31.38	34.33
3.35	0.72	1.00	1.27	1.55	1.82	2.09	2.37	2.64	2.92	3.19
138	8.20	11.29	14.39	17.49	20.59	23.69	26.78	29.88	32.98	36.08
3.51	0.76	1.05	1.34	1.62	1.91	2.20	2.49	2.78	3.06	3.35
144	8.59	11.84	15.09	18.34	21.58	24.83	28.08	31.33	34.58	37.82
3.66	0.80	1.10	1.40	1.70	2.01	2.31	2.61	2.91	3.21	3.51



For a 48" x 48" sized louver
Tested to AMCA Figure 5.5
Data corrected to standard air density

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Upper Numerals English Units/Lower Numerals Metric Units

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