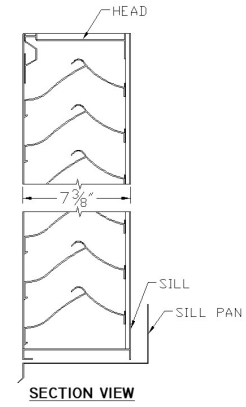
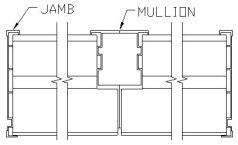
# Model BL-7709
## 7" (177.8 mm) Blast Resistant Horizontal Storm Resistant Louver

### Material:

| | |
|---|---|
| **Material:** | 6063-T6 Alloy |
| **Nominal Thickness:** | Heads: 0.063" (1.60 mm)<br>Sills: 0.081" (2.05 mm)<br>Jambs & Mullions: 0.081" (2.05 mm) |
| **Nominal Blade Thickness:** | 0.075" (1.90 mm) |
| **Furnished With:** | Birdscreen: ½" intercrimp aluminum mesh, 0.063" diameter wire removeable aluminum bird screen in an aluminum frame |
| **Additional Options (at additional cost):** | Insect screen (in lieu of bird screen),<br>Continuous clip angles for attachment<br>Sheet blank off, Insulated blank off<br>Sill pans, Flange frames<br>Integrated glazing frames |



SECTION VIEW



PLAN VIEW

### Test Summary:
### For a 4 Foot by 4 Foot Unit.
*Tested with mill finish and no screen*

- Free area = 8.00 ft² (0.743 m²)
- Percent free area = 50%
- Free area velocity at the point of beginning water penetration (@ 0.01oz. / ft² of free area based on a 15 minute interval test) = 1,240 FPM (6.30 m/s)
- To maintain a CLASS A (99%) effectiveness rating* with:
  - a 29.1 mph wind speed and rainfall rate of 3 in/hr
    - Max. intake core velocity 2.5 m/s (483 FPM)
    - Max. intake free area velocity 4.4 m/s (871 FPM)

**Discharge Coefficient**
Intake Cd = 0.35 (Class 2)
AMCA certifies the coefficient class only

### Blast Data:
Model BL-7709 is designed to withstand up to an12.6 psi blast pressure at an impulse of 77.8 psi-msec.

### Typical Blast Requirements:

| | | | | |
|---|---|---|---|---|
| **Pressure** | 4.0 psi | 6.0 psi | 8.0 psi | 12.6 psi |
| **Impulse** | 28.0 psi-msec | 42.0 psi-msec | 59.0 psi-msec | 77.8 psi-msec |

**Construction Specialties Inc. certifies that the louver model BL-7709 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 Wind Driven Rain ratings, Water Penetration Ratings and Air Performance ratings.

### Wind Driven Rain Performance: *Tested with 1m² core area, mill finish and no screen**
29.1 mph (13 m/s) & 3" (75 mm) rain per hour

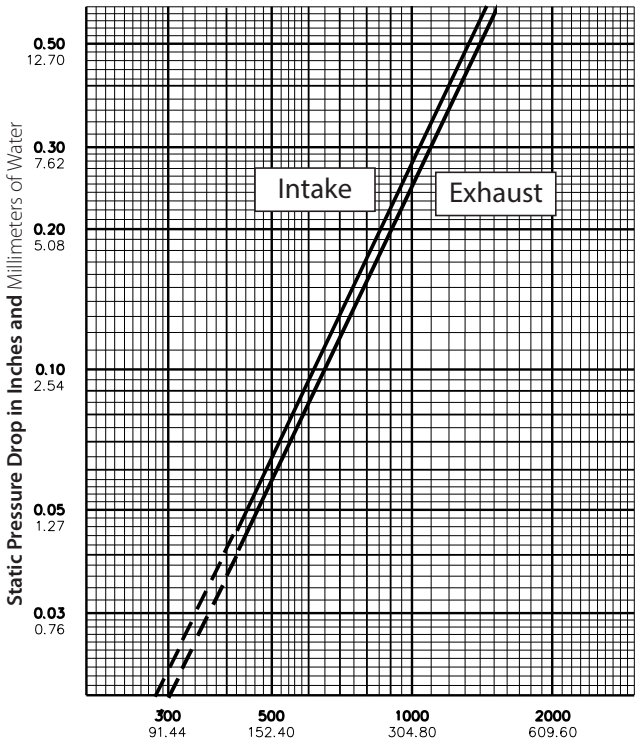
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Core Velocity Through Cal. Plate (m/s):** | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 |
| **Core Velocity Through Louver (ft/min):** | 0 | 132 | 197 | 295 | 374 | 483 | 584 | 680 | 758 | 870 | 991` |
| **Free Area Velocity (ft/min):** | 0 | 238 | 355 | 532 | 675 | 871 | 1054 | 1227 | 1368 | 1570 | 1788 |
| **Rating Effectiveness:** | A | A | A | A | A | A | B | B | B | B | C |
| **Effectiveness Ratio (%):** | 100 | 100 | 100 | 100 | 99.9 | 99.6 | 98.8 | 98.0 | 98.1 | 95.6 | 93.2 |

| | | | | |
|---|---|---|---|---|
| **Effectiveness Rating:** | A = 1 to 0.99 | B = 0.989 to 0.95 | C = 0.949 to 0.80 | D = Below 0.80 |

# Model BL-7709
# 7" (177.8 mm) Blast Resistant Horizontal Storm Resistant Louver

## Water Penetration Statement

AMCA defines the point of beginning water penetration as the free area velocity at which the AMCA water test has yielded 0.01 or less ounces of water per square foot of louver free area during a 15-minute test period.




Data corrected to standard air density.
48" x 48" louver tested to figure 5.5.

## Free Area Table (Free area in **sq.feet** and sq. meters)

For additional sizes, please visit:
https://www.c-sgroup.com/architectural-louvers/louvers-airflow-tool

**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** | **0.95** | **1.30** | **1.65** | **2.00** | **2.35** | **2.70** | **3.05** | **3.40** | **3.75** | **4.10** |
| 0.46 | 0.09 | 0.12 | 0.15 | 0.19 | 0.22 | 0.25 | 0.28 | 0.32 | 0.35 | 0.38 |
| **24** | **1.33** | **1.82** | **2.31** | **2.80** | **3.29** | **3.78** | **4.27** | **4.76** | **5.25** | **5.74** |
| 0.61 | 0.12 | 0.17 | 0.21 | 0.26 | 0.31 | 0.35 | 0.40 | 0.44 | 0.49 | 0.53 |
| **30** | **1.71** | **2.34** | **2.97** | **3.60** | **4.23** | **4.86** | **5.50** | **6.13** | **6.76** | **7.39** |
| 0.76 | 0.16 | 0.22 | 0.28 | 0.33 | 0.39 | 0.45 | 0.51 | 0.57 | 0.63 | 0.69 |
| **36** | **2.09** | **2.87** | **3.64** | **4.41** | **5.18** | **5.96** | **6.73** | **7.50** | **8.27** | **9.05** |
| 0.91 | 0.19 | 0.27 | 0.34 | 0.41 | 0.48 | 0.55 | 0.63 | 0.70 | 0.77 | 0.84 |
| **42** | **2.45** | **3.35** | **4.26** | **5.16** | **6.06** | **6.97** | **7.87** | **8.78** | **9.68** | **10.58** |
| 1.07 | 0.23 | 0.31 | 0.40 | 0.48 | 0.56 | 0.65 | 0.73 | 0.82 | 0.90 | 0.98 |
| **48** | **2.84** | **3.89** | **4.94** | **5.98** | **7.03** | **8.00** | **9.13** | **10.18** | **11.23** | **12.28** |
| 1.22 | 0.26 | 0.36 | 0.46 | 0.56 | 0.65 | 0.74 | 0.85 | 0.95 | 1.04 | 1.14 |
| **54** | **3.22** | **4.40** | **5.59** | **6.78** | **7.97** | **9.15** | **10.34** | **11.53** | **12.72** | **13.90** |
| 1.37 | 0.30 | 0.41 | 0.52 | 0.63 | 0.74 | 0.85 | 0.96 | 1.07 | 1.18 | 1.29 |
| **60** | **3.59** | **4.92** | **6.25** | **7.57** | **8.90** | **10.23** | **11.55** | **12.88** | **14.21** | **15.53** |
| 1.52 | 0.33 | 0.46 | 0.58 | 0.70 | 0.83 | 0.95 | 1.07 | 1.20 | 1.32 | 1.44 |
| **66** | **3.97** | **5.44** | **6.90** | **8.37** | **9.83** | **11.30** | **12.77** | **14.23** | **15.70** | **17.16** |
| 1.68 | 0.37 | 0.51 | 0.64 | 0.78 | 0.91 | 1.05 | 1.19 | 1.32 | 1.46 | 1.59 |
| **72** | **4.35** | **5.95** | **7.56** | **9.16** | **10.77** | **12.37** | **13.98** | **15.58** | **17.19** | **18.79** |
| 1.83 | 0.40 | 0.55 | 0.70 | 0.85 | 1.00 | 1.15 | 1.30 | 1.45 | 1.60 | 1.75 |
| **78** | **4.72** | **6.47** | **8.21** | **9.96** | **11.70** | **13.45** | **15.19** | **16.93** | **18.68** | **20.42** |
| 1.98 | 0.44 | 0.60 | 0.76 | 0.93 | 1.09 | 1.25 | 1.41 | 1.57 | 1.74 | 1.90 |
| **84** | **5.10** | **6.98** | **8.87** | **10.75** | **12.63** | **14.52** | **16.40** | **18.28** | **20.17** | **22.05** |
| 2.13 | 0.47 | 0.65 | 0.82 | 1.00 | 1.17 | 1.35 | 1.52 | 1.70 | 1.87 | 2.05 |
| **90** | **5.48** | **7.50** | **9.52** | **11.55** | **13.57** | **15.59** | **17.61** | **19.64** | **21.66** | **23.68** |
| 2.29 | 0.51 | 0.70 | 0.88 | 1.07 | 1.26 | 1.45 | 1.64 | 1.82 | 2.01 | 2.20 |
| **96** | **6.00** | **8.22** | **10.43** | **12.65** | **14.86** | **17.08** | **19.29** | **21.51** | **23.73** | **25.94** |
| 2.44 | 0.56 | 0.76 | 0.97 | 1.17 | 1.38 | 1.59 | 1.79 | 2.00 | 2.20 | 2.41 |
| **102** | **6.38** | **8.74** | **11.09** | **13.45** | **15.80** | **18.16** | **20.52** | **22.87** | **25.23** | **27.58** |
| 2.59 | 0.59 | 0.81 | 1.03 | 1.25 | 1.47 | 1.69 | 1.91 | 2.12 | 2.34 | 2.56 |
| **108** | **6.76** | **9.26** | **11.76** | **14.25** | **16.75** | **19.25** | **21.74** | **24.24** | **26.74** | **29.23** |
| 2.74 | 0.63 | 0.86 | 1.09 | 1.32 | 1.56 | 1.79 | 2.02 | 2.25 | 2.48 | 2.72 |
| **114** | **7.15** | **9.79** | **12.43** | **15.07** | **17.70** | **20.34** | **22.98** | **25.62** | **28.26** | **30.90** |
| 2.90 | 0.66 | 0.91 | 1.15 | 1.40 | 1.64 | 1.89 | 2.14 | 2.38 | 2.63 | 2.87 |
| **120** | **7.51** | **10.29** | **13.06** | **15.83** | **18.61** | **21.38** | **24.16** | **26.93** | **29.70** | **32.48** |
| 3.05 | 0.70 | 0.96 | 1.21 | 1.47 | 1.73 | 1.99 | 2.24 | 2.50 | 2.76 | 3.02 |
| **126** | **7.89** | **10.80** | **13.72** | **16.63** | **19.54** | **22.45** | **25.37** | **28.28** | **31.19** | **34.11** |
| 3.20 | 0.73 | 1.00 | 1.27 | 1.54 | 1.82 | 2.09 | 2.36 | 2.63 | 2.90 | 3.17 |
| **132** | **8.27** | **11.32** | **14.37** | **17.42** | **20.47** | **23.53** | **26.58** | **29.63** | **32.68** | **35.74** |
| 3.35 | 0.77 | 1.05 | 1.34 | 1.62 | 1.90 | 2.19 | 2.47 | 2.75 | 3.04 | 3.32 |
| **138** | **8.64** | **11.83** | **15.03** | **18.22** | **21.41** | **24.60** | **27.79** | **30.98** | **34.17** | **37.37** |
| 3.51 | 0.80 | 1.10 | 1.40 | 1.69 | 1.99 | 2.29 | 2.58 | 2.88 | 3.17 | 3.47 |
| **144** | **9.02** | **12.35** | **15.68** | **19.01** | **22.34** | **25.67** | **29.00** | **32.33** | **35.66** | **38.99** |
| 3.66 | 0.84 | 1.15 | 1.46 | 1.77 | 2.08 | 2.39 | 2.69 | 3.00 | 3.31 | 3.62 |
| **150** | **9.40** | **12.87** | **16.34** | **19.81** | **23.28** | **26.75** | **30.22** | **33.68** | **37.15** | **40.62** |
| 3.81 | 0.87 | 1.20 | 1.52 | 1.84 | 2.16 | 2.48 | 2.81 | 3.13 | 3.45 | 3.77 |
| **156** | **9.77** | **13.38** | **16.99** | **20.60** | **24.21** | **27.82** | **31.43** | **35.04** | **38.64** | **42.25** |
| 3.96 | 0.91 | 1.24 | 1.58 | 1.91 | 2.25 | 2.58 | 2.92 | 3.25 | 3.59 | 3.93 |

**Upper Numerals English Units/**Lower Numerals Metric Units

