BL520DD

Blast Resistant Stationary Louver

Extruded Aluminum

RUSKIN
AUTHORITY IN AIR CONTROL

APPLICATION

The BL520DD is a 5" deep mechanically fastened, extruded aluminum double drainable stationary horizontal louver designed to protect air intake and exhaust openings in exterior walls. This louver offers exceptional protection against wind-driven rain under the most severe conditions. This louver is designed with a drainable gutter system channeling water from the blades to downspouts in the jambs, where water is exhausted out of the front of the louver.

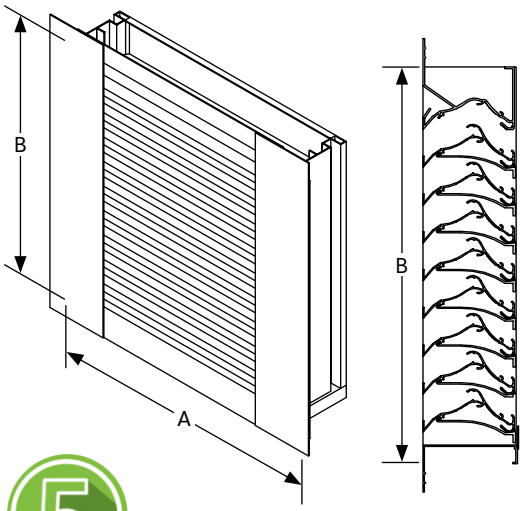
STANDARD CONSTRUCTION

Frame	5" (127) deep, 6063T6 extruded aluminum with .081" (2.1) nominal wall thickness.
Blades	6063T6 extruded aluminum .063" (1.6) nominal wall thickness.
Screen	5/8" x .040" (16 x 1) expanded flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.
Finish	Mill.
Minimum Size	12"w x 12"h (305 x 305).
Approximate Shipping Weight	7 lbs. per sq. ft. (34.2 kg/m^2)
Maximum Factory Assembly Size	Single sections shall not exceed 60"w x 120"h (1524 x 3048). Louvers larger than the maximum single section size will require field assembly of smaller sections. **Field Assembly:** Unlimited width x 120"h (3048). Multiple section louvers will be shipped in single sections and must be joined together in the field by the installer. Section joint splice hardware is provided. **Sections may not be stacked in height.** Openings taller than the maximum louver height will need to be divided into multiple openings with suitable structural members. Structural members are not designed or provided by Ruskin.
Installation	The BL520DD must be installed per the appropriate Installation Detail. Reference the appropriate separate Installation Instruction Sheet.
Supports	Louvers may be provided with rear mounted blade supports that increase overall louver depth depending on louver size, ssembly configuration, windload or blastload.

Consult Ruskin for additional information.

FEATURES

- Withstands up to 16.6 psi peak pressure and repeatedly at 11.5 psi peak pressure and an impulse of 95 psi-ms
- Closely spaced horizontal blades minimize the penetration of wind-driven rain, reducing damage and additional operating expenses
- Tested in the AMCA 500-L Wind-Driven Rain Penetration Test
- 39% Free Area
- Excellent pressure drop performance
- Aluminum construction for low maintenance and high resistance to corrosion



5 YEAR LIMITED WARRANTY

ISO9001 CERTIFIED

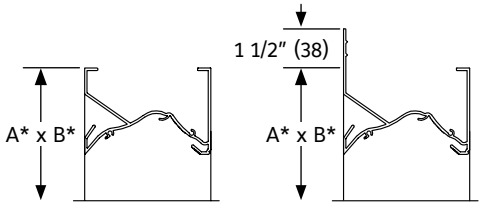
TYPICAL BLAST REQUIREMENTS	
Pressure	**Impulse**
4 psi	28 psi-ms
6 psi	42 psi-ms
8 psi	59 psi-ms
10 psi	90 psi-ms

VARIATIONS

- Front or rear security bars
- A variety of bird and insect screens
- Selection of finishes: prime coat, 50% PVDF (modified fluoropolymer), epoxy, Pearledize 50 & 70, 70% PVDF, clear and color anodize. (Some variation in anodize color consistency is possible)

Consult Ruskin for other special requirements.

FRAME CONSTRUCTION



STANDARD INTEGRAL FLANGE

NOTES:
- Dimensions in inches, parenthesis ( ) indicate millimeters.
- Units furnished 1/4" (6) smaller than given opening dimensions.

FREE AREA GUIDE

Free Area Guide shows free area in ft² and m² for various sizes of BL520DD.

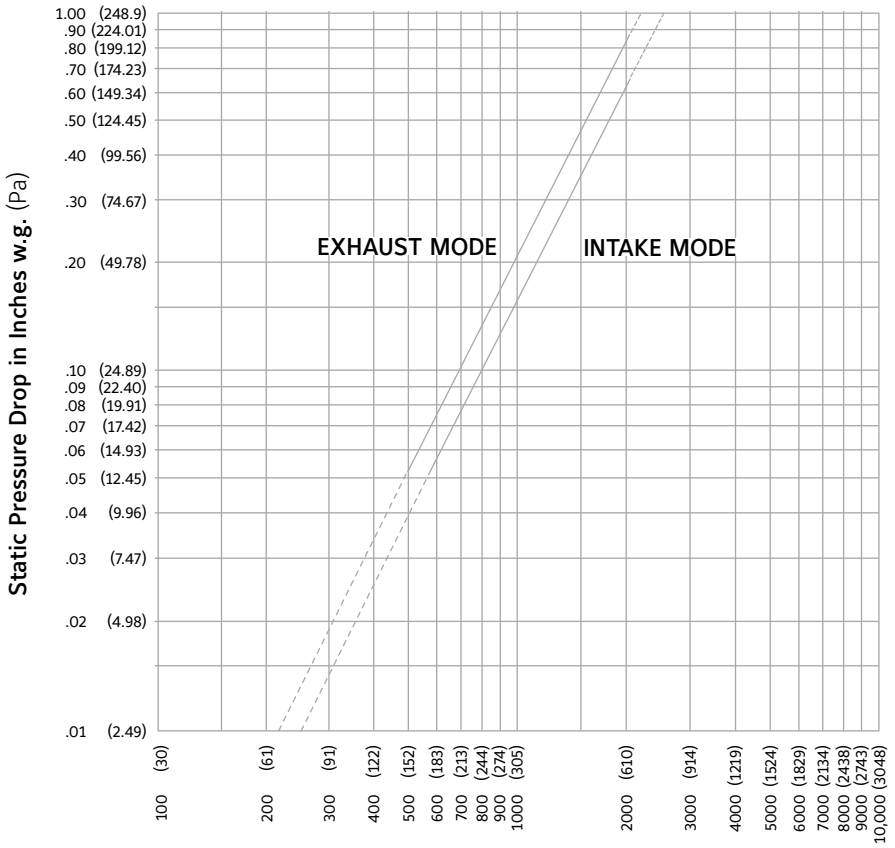
Width – Inches and Meters

Height – Inches and Meters

	12 0.30	**18** 0.45	**24** 0.60	**30** 0.75	**36** 0.90	**42** 1.05	**48** 1.20
18 0.45	**0.49** 0.05	**0.79** 0.07	**1.09** 0.10	**1.40** 0.13	**1.70** 0.16	**2.00** 0.19	**2.31** 0.21
24 0.60	**0.70** 0.06	**1.13** 0.10	**1.56** 0.15	**2.00** 0.19	**2.43** 0.23	**2.86** 0.27	**3.30** 0.31
30 0.75	**0.90** 0.10	**1.47** 0.16	**2.03** 0.22	**2.60** 0.27	**3.16** 0.33	**3.72** 0.39	**4.29** 0.45
36 0.90	**1.11** 0.10	**1.81** 0.17	**2.50** 0.23	**3.20** 0.30	**3.89** 0.36	**4.58** 0.43	**5.28** 0.49
42 1.05	**1.32** 0.12	**2.15** 0.20	**2.97** 0.28	**3.79** 0.35	**4.62** 0.43	**5.44** 0.51	**6.27** 0.58
48 1.20	**1.60** 0.15	**2.60** 0.24	**3.60** 0.33	**4.59** 0.43	**5.59** 0.52	**6.59** 0.61	**7.59** 0.71
54 1.35	**1.81** 0.17	**2.94** 0.27	**4.07** 0.38	**5.19** 0.48	**6.32** 0.59	**7.45** 0.69	**8.58** 0.80
60 1.50	**2.02** 0.19	**3.28** 0.30	**4.54** 0.42	**5.79** 0.54	**7.05** 0.66	**8.31** 0.77	**9.57** 0.89
66 1.65	**2.23** 0.21	**3.62** 0.34	**5.00** 0.47	**6.39** 0.59	**7.78** 0.72	**9.17** 0.85	**10.56** 1.98
72 1.80	**2.44** 0.23	**3.96** 0.37	**5.47** 0.51	**6.99** 0.65	**8.51** 0.79	**10.03** 0.93	**11.55** 1.07
78 1.95	**2.72** 0.25	**4.41** 0.41	**6.10** 0.57	**7.79** 0.72	**9.49** 0.88	**11.18** 1.04	**12.87** 1.20
84 2.10	**2.92** 0.27	**4.75** 0.44	**6.57** 0.61	**8.39** 0.78	**10.22** 0.95	**12.04** 1.12	**13.86** 1.29
90 2.25	**3.13** 0.29	**5.09** 0.47	**7.04** 0.65	**8.99** 0.84	**10.95** 1.02	**12.90** 1.20	**14.85** 1.38
96 2.40	**3.34** 0.31	**5.43** 0.50	**7.51** 0.70	**9.59** 0.89	**11.68** 1.09	**13.76** 1.28	**15.84** 1.47

PRESSURE DROP

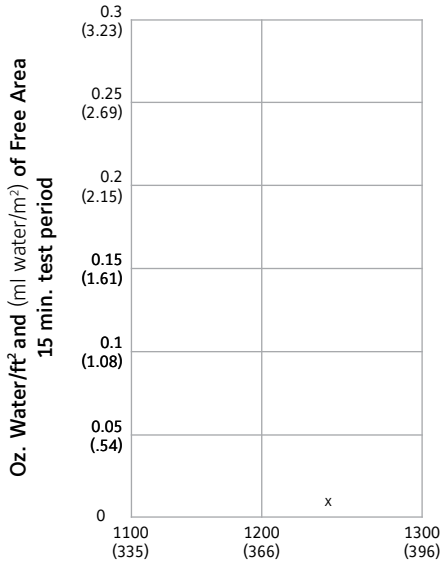
Pressure Drop Testing Performed 48″ x 48″ (1219 x 1219) unit.



Rating do not include the effect of a bird screen.

WATER PENETRATION GRAPH

Test size 48″ wide X 48″ high (1219 X 1219)
Beginning point of water penetration at .01 oz./sq. ft. is above 1250 fpm (381 m/min).



WIND-DRIVEN RAIN PERFORMANCE

Test size is 1m x 1m (39" x 39") core area, 1.04m x 1.12m (41" x 44") nominal. Free Area of test louver is 5.45 ft² (.51m²).

29 mph (47 kph) wind & 3" (76) per hour rain conditions				
Core Velocity[1] fpm (m/s)	Airflow cfm (m³/min)	Free Area Velocity[2] fpm (m/sec.)	Effectiveness Ratio	Class[3]
0 (0)	0 (0)	0 (0)	99.9%	A
98 (.5)	1060 (30)	226 (1.1)	99.9%	A
197 (1.0)	2119 (60)	389 (2.0)	99.9%	A
287 (1.5)	3179 (90)	583 (3.0)	99.9%	A
381 (1.9)	4239 (120)	778 (4.0)	99.9%	A
476 (2.4)	5299 (150)	972 (4.9)	99.9%	A
586 (3.0)	6358 (180)	1167 (5.9)	99.8%	A
673 (3.4)	7418 (210)	1361 (6.9)	99.7%	A
763 (3.9)	8478 (240)	1556 (7.9)	98.9%	B
882 (4.5)	9537 (270)	1750 (8.9)	97.3%	B
987 (5.0)	10597 (300)	1944 (9.9)	95.3%	B

50 mph (80 kph) wind & 8" (203) per hour rain conditions				
Core Velocity[1] fpm (m/s)	Airflow cfm (m³/min)	Free Area Velocity[2] fpm (m/sec.)	Effectiveness Ratio	Class[3]
0 (0)	0 (0)	0 (0)	99.4%	A
106 (.5)	1060 (30)	226 (1.1)	99.3%	A
184 (.9)	2119 (60)	389 (2.0)	99.2%	A
282 (1.4)	3179 (90)	583 (3.0)	99.0%	A
408 (1.9)	4239 (120)	778 (4.0)	99.0%	A
495 (2.5)	5299 (150)	972 (4.9)	98.9%	B
567 (2.9)	6358 (180)	1167 (5.9)	98.9%	B
680 (3.5)	7418 (210)	1361 (6.9)	98.3%	B
791 (4.0)	8478 (240)	1556 (7.9)	97.2%	B
882 (4.5)	9537 (270)	1750 (8.9)	95.1%	B
982 (5.0)	10597 (300)	1944 (9.9)	23.9%	D

NOTES:

1. Core area is the open area of the louver face (face area less lover frames). Core Velocity is the airflow velocity through the Core Area of the louver (1m x 1m).
2. Free Area of test size is calculated per AMCA standard 500-L.
3. Wind Driven Rain Penetration Classes:

Class	Effectiveness
A	1 to .99
B	0.989 to 0.95
C	0.949 to 0.80
D	Below 0.8

4. Intake Discharge Loss Class 2
   Discharge Loss Coefficient is calculated by dividing a louvers' actual airflow rate vs. a theoretical airflow for the opening. It provides an indication of the louvers' airflow characteristics.

Discharge Loss Classes:

Class	Discharge Loss Coefficient
1	0.4 and above
2	0.3 to 0.399
3	0.2 to 0.299
4	0.199 and below

(The higher the coefficient, the less resistance to airflow.)

5. The AMCA Wind Driven Rain Test is performed in a laboratory environment and incorporates controlled wind, water and system airflow effects. In actual field installations, storms may create conditions not considered by the AMCA test. Penthouse and similar applications where wind can pass through multiple louvers in an enclosure is another condition that is not simulated by AMCA tests. These applications can create elevated water penetration rates through any louver. Because of these uncontrolled situations, it is recommended that provisions to manage water penetration through louvers be included in the building design.

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary drainable type with drain gutters in each blade and downspouts in jambs and mullions. Louvers shall have a minimum of 47% free area based on a 48" wide x 48" high (1219 x 1219) size. Stationary drainable blades shall be contained within a 5" (127) frame. Louver components (heads, jambs, sills, blades, & mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall limit span between visible mullions to 10 feet (3) and shall incorporate structural supports required to withstand a windload of 30 lbs. per sq. ft. (1.44KPa) (equivalent of a 110 mph wind [177 KPH] wind–specifier may substitute any loading required).

Louvers shall be Ruskin model BL520DD extruded 6063T6 aluminum construction as follows:

Frame: 5" (127) deep, .094" (2.4) wall thickness.

Blades: .080" (2.0) nominal wall thickness.

Screen: 5/8" x .040" (16 x 1) expanded, flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

Finish: Select finish specification from Ruskin/Valspar Finishes Brochure.

LINKS TO IMPORTANT DOCUMENTS

Document Title
Paint Finishes and Color Guide
Limited Warranty Document

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AUTHORITY IN AIR CONTROL

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