| Architectural Louvers

Suggested Specifications | Section 08 90 00
Model: BL-5609

PART 2 PRODUCTS

2.01 Manufacturers

A. Basis of Design – manufactured by Construction Specialties subject to compliance with requirements listed. The louvers and related materials herein specified and indicated on the drawings shall be manufactured by: Construction Specialties, 3 Werner Way, Lebanon, NJ 08833. Tel: 800.233.8493. Email: cet@c-sgroup.com. No substitutions.
B. Drawings and specifications are based on manufacturer's literature from Construction Specialties, Inc. drawings and specifications unless otherwise indicated. Other manufacturers must be approved equal by Architect/Owner.

2.02 Materials

A. Aluminum Extrusions: ASTM B211, Alloy 6063-T5, 6063-T6 or 6061-T6.
B. Aluminum Sheet: ASTM B3209, Alloy 1100, 3003 or 5005.

2.03 Fabrication, General

A. Provide CS louver models, bird screens, blank-off panels, structural supports, and accessories as specified and/or shown on the drawings. Materials, sizes, depths, arrangements, and material thickness to be as indicated or as required for optimal performance with respect to strength; durability; and uniform appearance.
B. Louvers to be mechanically assembled using stainless steel or aluminum fasteners.
C. Include supports, anchorage, and accessories required for complete assembly.

2.04 Louver Models

A. CS 5" (127mm) Deep Storm Resistant Fixed Vertical Blast Louver Model BL-5609
    1. Material: Heads, sills, jambs and mullions to be one-piece structural aluminum members. Louver to consist of vertical blades in a drainable frame. Louvers to be supplied with 4" (101.6mm) high by full depth sill flashings formed from minimum 0.050" (1.27mm) thick aluminum. Sill flashings to have welded side panels. Louvers and sill flashings to be installed in accordance with the manufacturer's recommended procedures to ensure complete water integrity performance of the louver system. Material thickness to be as follows: Heads, sills, jambs and mullions: Determined by Blast Load. Blades: Determined by Blast Load.

2. Blast Design Loads: Louvers to conform to project blast design, and be supported with blast calculations signed and sealed from an engineer to withstand up to a 4 psi Blast Pressure (P) at an Impulse (I) of 28 psi-msec.

OR

2. Blast Design Loads: Louvers to conform to project blast design, and be supported with blast calculations signed and sealed from an engineer to withstand up to a 6 psi Blast Pressure (P) at an Impulse (I) of 42 psi-msec.

OR

2. Blast Design Loads: Louvers to conform to project blast design, and be supported with blast calculations signed and sealed from an engineer to withstand up to an 8 psi Blast Pressure (P) at an Impulse (I) of 59 psi-msec.

OR

2. Blast Design Loads: Louvers to conform to project blast design, and be supported with blast calculations signed and sealed from an engineer to withstand up to a 12.6 psi Blast Pressure (P) at an Impulse (I) of 77.8 psi-msec.

OR

2. Blast Design Loads: Louvers to conform to project blast design, and be supported with blast calculations signed and sealed from an engineer to withstand up to a_____ psi Blast Pressure (P) at an Impulse (I) of _____ psi-msec. (Architect to define Blast Pressure (P) and Impulse (I) Project Specific Requirements in blanks above)

3. AMCA Performance: A 4' x 4' unit shall conform to the following:

Free Area	9.46 sq. ft. (0.88 sq. m.)
Intake Pressure drop at 1000 fpm free area velocity	0.10 in. H_2O (24.8 Pa)

4. Wind Driven Rain Performance: AMCA certified and licensed to bear the AMCA seal. The louver test was based on a 39.370"(1.00m) x 39.370" (1.00 m) core area. Unit tested at a rainfall rate of 8.0 inches per hour (75 mm/hr) with a wind directed at the face of the louver at a velocity of 50 mph (13 m/s). The test data shall show the water penetration effectiveness rating at each corresponding ventilation rate.

Wind Driven Rain Performance: *Tested with 1m² core area, mill finish and no screen**
50 mph (22.3 m/s) & 8" (203 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	98	197	295	394	492	591	689	787	886	984
Free Area Velocity (ft/min):	0	149	300	450	601	750	901	1051	1200	1351	1500
Rating Effectiveness:	A	A	A	A	A	A	A	A	A	A	A
Effectiveness Ratio (%):									100.0	99.9	99.9
Effectiveness Rating:	A = 1 to 0.99			B = 0.989 to 0.95			C = 0.949 to 0.80			D = Below 0.80	

2.05 Finishes

A. General: Comply with NAAMM "Metal Finishes Manual" for finish designations and application recommendations, except as otherwise indicated. Apply finishes in factory. Protect finishes on exposed surfaces prior to shipment. Remove scratches and blemishes from exposed surfaces that will be visible after completing finishing process. Provide color as indicated or, if not otherwise indicated, as selected by architect.

B. 100% Fluoropolymer Resin Powder Coat System complying with AAMA-2605-5 standards for gloss and color retention. Finish thickness to be 1.5 to 3.0 mils.

1. Finish to allow zero VOCs to be emitted into facility of application or at job site.
2. Finish to adhere to a 4H Hardness rating.
3. Furnish manufacturers twenty (20) year warranty for finish for gloss and color retention.

OR

B. Wood Grain Powder Coat Finish is durable, with superior scratch and fade resistance. Available in 15 standard wood grain patterns with textured finish.

1. Pretreatment: E-CLPS Chrome Free five stage aluminum pretreatment system. Complies with AAMA 2603 AAMA 2604 and AAMA 2605 Superior Performance Standard and meets EPA, OSHA, State and Local environmental requirements and contains no chromates, cyanides or other heavy metals. Waste treatment is usually a simple pH neutralization and disposal to the sanitary sewer.

2. Bonded Sublimated Film Finishes: Wood finish use a polyurethane powder coat with ink based wood grain patterns sublimated into the base powder effectively tattooing the powder. The combined effect creates all the aesthetic aspects of real wood while offering the same environmental advantages of powder coated finishes.

3. Furnish manufacturers ten (10) year warranty for finish for gloss and color retention.

OR

B. Three Coat Fluorocarbon Coating

1. Louvers to be finished with a minimum 1.4 mil (0.035mm) thick full strength 70% resin, 3 coat Fluoropolymer system.
2. All aluminum shall be thoroughly cleaned, etched, and given a chromated conversion pre-treatment before application of the Kynar/Hylar coating. The coating shall consist of a primer, a high metallic color coat and a clear PVF2 topcoat. It shall receive a bake cycle of 17 minutes at 450°F. All finishing procedures shall be one continuous operation in the plant of the manufacturer.
3. Manufacturer to furnish an extended 20 limited warranty for the Kynar/Hylar coating. This limited warranty shall begin on the date of material shipment.

OR

B. Two Coat Fluorocarbon Coating

1. Louvers to be finished with a minimum 1.0 mil (0.025mm) thick full strength 70% resin, 2 coat Fluoropolymer system.
2. All aluminum shall be thoroughly cleaned, etched and given a chromated conversion pre-treatment before application of the MICA II coating. The coating shall consist of a primer and a pearlescent pigmented PFV2 topcoat. It shall receive a bake cycle of 17 minutes at 450°F. All finishing procedures shall be one continuous operation in the plant of the manufacturer.
3. Manufacturer to furnish an extended 20 limited warranty for the Kynar/Hylar coating. This limited warranty shall begin on the date of material shipment.

OR

B. Clear Anodize

1. Louvers to be given a one-hour 215R1 Architectural Class I anodic coating of 0.7 mil (0.018mm) thickness (Aluminum Association designation AA-C22A41).
2. The thickness of the coating shall be tested in accordance with ASTM B244-68.
3. The coating shall be sealed to pass the ASTM B136-77 Modified Dye Stain Test.

OR

B. Bronze Anodic

1. Louvers to be given a Bronze Anodic Architectural Class 1 coating of 0.7 mil (0.018mm) minimum thickness; and a minimum weight of 27 mg. per sq. in.
2. The thickness of the coating shall be tested in accordance with ASTM B244-68.
3. The coating shall be sealed to pass the ASTM B136-77 Modified Dye Stain Test.

2.06 Bird Screens

A. Unless otherwise indicated, all louvers to be furnished with mill finish bird or insect screens.

B. Screens to be 1/2" (12.7mm) mesh, 0.063" (1.60mm) thick expanded and flattened aluminum bird screen secured within 0.055" (1.40mm) thick extruded aluminum frames. Frames to have mitered corners and corner locks.

OR

B. Screens to be 18 x 16 aluminum mesh 0.011" (0.279mm) diameter wire insect screens secured within 0.055" (1.40mm) thick extruded aluminum frames. Frames to have mitered corners and corner locks.

2.07 Blank Offs

A. Furnish as specified and where indicated on the drawings. Blank- off panel systems to be fabricated and installed on the louver by the louver manufacturer.

B. Custom fabricated blank- off panels' factory sealed and quality tested. Includes independent 0.50" aluminum sheet forming the primary air and water seal, which is adhered with butyl tape and whose perimeter is fully sealed and tooled with weather silicone. Any insulated blank-off panels are to be fastened independently to the rear side of the louver, through dry zones of the framing and NOT penetrating any part of the primary sealing sheet.

Bird/insect screen shall be installed directly the back of the louver frame in between the louver and Blank- off system.

Includes in-house quality control testing.

C. 0.050" (1.27mm) thick aluminum sheet blank-off (uninsulated) panels, model SO. Panels to be finished with standard black Kynar 500 minimum 1 mil (0.025mm) thick full strength 70% resin Fluoropolymer coating unless otherwise specified.

D. 1" (25.4mm) thick insulated blank-off panels model IBO-1S, fabricated with hydrophobic fire rated mineral wool core having an R-value of 4 per inch ($^{0}F*ft^{2}*h/Btu$), faced on both sides with 0.032" (0.81 mm) thick aluminum sheet. Panel perimeter frame to be 0.080" (2.03 mm) thick-formed aluminum channels. Panel frame to be mitered at the corners. Panels to be finished with standard black Kynar 500 minimum 1 mil (0.025mm) thick full strength 70% resin Fluoropolymer coating unless otherwise specified.

OR

2" (50.8mm) thick insulated blank-off panels model IBO-2S, fabricated with hydrophobic fire rated mineral wool core having an R-value of 4 per inch ($^{0}F*ft^{2}*h/Btu$), faced on both sides with 0.032" (0.81 mm) thick aluminum sheet. Panel perimeter frame to be 0.080" (2.03mm) thick-formed

aluminum channels. Panel frame to be mitered at the corners. Panels to be finished with standard black Kynar 500 minimum 1 mil (0.025mm) thick full strength 70% resin Fluoropolymer coating unless otherwise specified.

OR

3" (76.2mm) thick insulated blank-off panels model IBO-3S, fabricated with hydrophobic fire rated mineral wool core having an R-value of 4 per inch ($^{0}F*ft^{2}*h/Btu$), faced on both sides with 0.032" (0.81 mm) thick aluminum sheet. Panel perimeter frame to be 0.080" (2.03mm) thick-formed aluminum channels. Panel frame to be mitered at the corners. Panels to be finished with standard black Kynar 500 minimum 1 mil (0.025mm) thick full strength 70% resin Fluoropolymer coating unless otherwise specified.

End of Section