**SECTION 08 34 53**

Kontek BR DOOR AND FRAME ASSEMBLY – ALUMINUM

(**Specifier Note**: The purpose of this guide specification is to assist the Specifier in correctly specifying bullet resistant aluminum framing assemblies with their installation as security doors.

The Specifier must edit this guide specification to fit the needs of each specific project.

Throughout the guide specification, there are Specifier Notes to assist in the editing of the file. Brackets have been used to indicate when a selection is required. Contact a Kontek representative for further assistance with appropriate product selections.)

**PART 1 - GENERAL**

* + - 1. SECTION INCLUDES
				1. Bullet resistant aluminum door and frame assembly.
			2. REFERENCES
				1. Underwriters Laboratory UL 752-Standard for Bullet Resisting Equipment.
				2. ASTM C 1172 - Standard Specification for Laminated Architectural Flat Glass.
				3. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
				4. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
				5. National Institute of Justice (NIJ) Standard 0108.01

1.3 ACTION SUBMITTALS

* + - * 1. Refer to Section[01 33 00 Submittal Procedures] [Insert section number and title].
				2. Product Data: For each type of framing [and glass] including manufacturer recommended installation instructions.
				3. Shop Drawings: Include plans, elevations, sections, details, attachment to other work.
				4. Samples: For each exposed finish.

1.4 INFORMATION SUBMITTALS

* + - * 1. Product Test Reports: Indicating compliance with requirements
				2. Warranty: Sample of finish warranty
	1. CLOSEOUT SUBMITTALS
		+ - 1. Punchlist.
				2. Maintenance data.

1.6 DELIVERY, STORAGE AND HANDLING

* + - * 1. Deliver materials to the project site with the manufacturer’s UL Listed Labels intact and legible. Handle the materials with care to prevent damage. Store materials inside and under cover, stack flat and off floor. Project conditions (temperature, humidity, and ventilation) shall be within the maximum limit recommendations provided by manufacturer. Do not install products stored in conditions outside manufacturer’s recommended limits.

1.7 WARRANTY

(**Specifier Note**: The 5 year finish warranty applies to the Class I anodic finishes and the 10 year applies to the 70% PVDF coating finish.)

##### Workmanship Warranty: All materials shall be warranted against defects for a period of[1] year for the date of receipt at the project site. Provide certificates of manufacturer’s standard limited warranty with closeout documents.

* + - * 1. Finish Warranty: Manufacturer’s warranty against deterioration of factory finishes for the period of [5]years from the date of Substantial Completion.

(Specifier Note: Product information is proprietary to Kontek If additional products are required for competitive procurement, contact Kontek for assistance in listing competitive products that may be available.)

**PART 2 - PRODUCTS**

2.1 MANUFACTURED UNITS

* + - * 1. Basis of Design:

Subject to compliance with requirements, provide products by the following:

Kontek Industries, Inc., 805 McCombs Ave, Kannpolis NC 28083

Subject to compliance with requirements, manufacturers of products of equivalent design may be acceptable if approved.

(**Specifier Note**: Unlike most other doors, a bullet- or blast-resistant door is provided by one manufacturer as a complete assembly including the door, frame, hardware, and accessories. This must be done because items such as the door, frame, latches, and hinges are of special manufacture and are interdependent parts of resistance.

* + - * 1. Design Performance:

Kontek bullet resistant aluminum doors are manufactured from standard aluminum shapes 6061-T6, custom aluminum extrusions 6061-T6, stainless steel 304 sheet, and hard armor components.

Tee junctions in door and window framing members connected with either formed aluminum connectors or formed stainless steel connectors.

All joints and connections shall be tight, providing hairline points and true alignment of adjacent members.

Panels shall not be removable from threat side.

Door assembly swing: [right hand] [eft hand] [reverse swing].

* + - * 1. Door and Frame Assembly Dimensions: As indicated on the Drawings.
				2. Door and Frame Performance:

Standard door and frame assembly shall be manufactured to defeat ballistic assaults from a .44 magnum superpower small arms handgun, in accordance with UL Standard 752, Level 3.

Door stiles and frame can be lined with hard armor plates to achieve up to and including UL 752 Level 8 compliance, or NIJ III or NIJ IV.

* + - * 1. Standard Aluminum Doors:

Top rail center stile: 4” or 6”

Bottom rail: 4”, 6”, 8” or 10” depending on customer requirements

Extruded Window Frames: 3” tall

**(Specifier Note:** Door can be glazed to meet levels 1-8 per UL standards. Edit Item 4 as required for project specifics.)

Glazing: LP-1250 Polycarbonate/Acrylic Laminate, 1-1/4” thick, 7.7lbs/sf to comply with UL 752, Level 3 protection.

Door Hardware:

Hinges: Select SL-11HD continuous aluminum gear hinge or equivalent

Deadlock: Adams Rite MS1850 deadlock or equivalent

Thumb Turn: Adams Rite 4510 Series mortise thumb turn or equivalent

Keyed Mortise Cylinder: Adams Rite 4510 Series or equivalent

Door Pull and Push Bar: Aluminum pull handle and door width push bar as selected by Architect from manufacturer’s standard options.

Door Closer: LCN 400 series Heavy Duty.

(Specifier Note: Contact Kontek for optional door hardware upgrades.)

Optional Door Hardware Upgrades: exit devices, electric strike plate, and custom security hardware, as selected by Architect from manufacturer’s standard options.

* + - * 1. Door Frame Construction:

Frame assembly shall provide UL Level 3 protection level [Or selected UL or NIJ Level] to match bullet resistance of door.

Non-ricochet type, ballistic extruded aluminum in 6061-T6 alloy, aluminum finish.

Sizes: 2" thick door standard, window frames may protrude into safe side for UL 752 Levels 5-8 and NIJ III and IV ratings.

* + - * 1. Factory-applied finish:

(**Specifier Note**: SELECT the project specific finish from the following.)

[**Clear Anodic Finish**]: Architectural Class I, clear coating AA-M10C22A41 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum"

[**Color Anodic Finish**]: Architectural Class I, color coating AA-M10C22A42/A44 Mechanical Finish Chemical Finish: etched, medium matte; 0.70 mils minimum complying with AAMA 611 "Voluntary Specification for Anodized Architectural Aluminum".

Color: Dark Bronze.

**[Baked-Enamel or Powder-Coat Finish]:** [AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm). Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.]

Color and Gloss: **[As selected by Architect from manufacturer's full range].**

* + - * 1. Field alterations to the construction of the assembly fabricated under the acceptable standards are not allowed unless approved in writing by the manufacturer and the Architect.
				2. Standard manufacturing tolerances +/- 1/16" shall be maintained.
	1. PERFORMANCE CRITERIA

(**Specifier Note**: DELETE Ballistic and Blast resistance requirements that are not project specific.)

A. Ballistic Resistant:

Level 1 2 3 4 5 6 7 8 in accordance with UL 752 – Testing for Ballistic Resistance for the complete assembly including framing, glazing and panels.

NIJ Level III

NIJ Level IV

2.3 FABRICATION

* + - * 1. Aluminum sections to be manufactured in accordance with ASTM B209, Extruded aluminum alloy 6061 T6 Anodized to match the existing décor and be free of sharp edges or burrs when in place.
				2. Tolerances: All joints and connections shall be tight, providing hairline joints and true alignment of adjacent members

2.4 ACCESSORIES

* + - * 1. Anchors: Fully concealed manufacturer recommended.

**PART 3 - EXECUTION**

3.1 PREPARATION

* + - * 1. Prior to beginning installation, verify that all supports have been installed as required by the Contract Documents and architectural drawings, and Shop Drawings have been approved.
				2. Notify Architect of any unsatisfactory preparation that is responsibility of others.
				3. Clean and prepare all surfaces per manufacturers recommendations as required for achieving the best results for the substrate under the project conditions.
				4. Verify field dimensions of openings prior to fabrication of framing.
				5. Coordinate structural requirements to ensure proper attachment and support.
				6. Do not begin installation of material until all unsatisfactory conditions have been resolved and approved by Architect.
	1. INSTALLATION
		+ - 1. Do not begin installation until openings have been verified and surfaces properly prepared in accordance with Drawings.
				2. Install in accordance with manufacturer’s instructions and UL 752. Set all equipment plumb.
				3. All products shall be installed per installation instructions provided by manufacturer.

* + - * 1. Door and frame assembly shall arrive on site completely pre-fabricated to field dimensions approved by Shop Drawings.
				2. Install framing and secure to structure in accordance with manufacturer's recommendations and approved shop drawings.
				3. Provide required support and securely fasten and set doors and frame plumb, square, and level without twist or bow.
				4. Apply sealant in accordance with manufacturer's recommendations as indicated in installation instructions.
				5. Remove excess sealant and leave exposed surfaces clean and smooth

3.3 PROTECTION

* + - * 1. Clean and protect door and frame assembly from damage during ongoing construction operations. If damage occurs, remove and replace as required to provide assembly in their original, undamaged condition.
				2. Inspection and Cleaning: Verify installation is complete and complies with manufacturer’s requirements.
				3. Provide final cleaning of product and accessories, removing excess sealant, labels and protective covers.
				4. Touch-up, repair or replace damaged products prior to Substantial Completion.

**END OF SECTION**