

Specification Section 08394

Low Range Horizontal Sliding Blast Resistant Door Model DB-100-SL

PART 1 - GENERAL

1.2 Scope:

Furnish, and if required, install blast resistant sliding door assembly where indicated on door schedule and specified. Unit shall include steel door panel, blast restraints and sliding door hardware to resist the design requirements specified.

1.5 Submittals:

Before fabrication is started, manufacturer shall furnish _____ complete sets of submittal drawings, and if required, analysis calculations showing conformance or blast loading certification for Architect's approval. Drawings shall detail door size and all dimensions necessary for proper installation, door pulls, track, hangers, trolleys, door stop, stay rollers, weatherstripping, restraint conditions, field splicing arrangement, and if required, power operator and controls. (*Optional:* Calculations shall bear the stamp and signature of a Registered Professional Engineer.)

1.6 Warranty:

Manufacturer shall warrant its products to be free of defects in labor and material for one year after shipment.

PART 2 - PRODUCT

2.1 Design Basis:

Low range horizontal sliding blast resistant door systems as shown on drawings shall be Sonicbar® series Model DB-100-SL manufactured by Protective Door Industries, Harvey, IL 60426 at 708/331-2515 or prior approved equal. Door manufacturer shall submit evidence of having been engaged in the successful design and manufacture of blast resistant door assemblies for a minimum of 10 years.

2.2 Design Criteria:

Door system shall be designed to resist a positive blast force of up to 1.5 PSI static equivalent loading at _____ % rebound (if not specified, 100% rebound percentage will be used) with the positive pressure acting to _____ (seat the door into the wall or unseat the door against the restraints). Door system shall be undamaged and fully operable after application of the specified blast load.

Steel material shall conform to the standards of the American Institute of Steel Construction. All work shall be assembled using all welded construction per the standards of AWS D1.1 and D1.3. Welds to be of a size and type as required per the blast load analysis criteria.

Fire rating: Where indicated on the door schedule, manufacturer shall submit certification that the doors are constructed of noncombustible construction for the degree of protection specified.

2.3 Fabrication:

2.3.1 Shop Assembly:

Blast doors shall be of fireproof construction, fiberglass insulated, 2 3/4" thk. and fabricated of steel sheet with internal stiffeners for reinforcement to resist the stresses resulting from the blast loading specified. On oversized openings and where shipping constraints mandate size, door leaf shall be field spliced with each door panel prepared for proper set-up and alignment.

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Structural channel frame or steel embeds shall be furnished and installed by others as specified in Section 05121, Structural Steel, and shall be designed to support the loads impacting the opening.

2.3.2 Track System:

Sliding door unit shall be top-hung with heavy-duty hardware suitable to door weight and blast load. Door system shall include a track, track hanger brackets, four-wheel ball bearing type trolleys, trolley pendant, door stop and stay roller assembly. Track supports shall be furnished with anchorage bolts and steel shims necessary for proper alignment. Unseating blast load restraints shall be included.

2.3.3 Hardware:

Manual or electric power operation shall be specified. The electric operation shall consist of an industrial chain drive operator of type NEMA 1 or NEMA 12 and if specified, can be modified for NEMA 7/9 explosion proof and/or NEMA 4 weatherproof enclosure. The unit shall be mounted on an angle iron frame and consist of a 460V AC, 3-phase, single speed motor of sufficient horsepower with low voltage controls and an emergency disconnect pin for manual operation in case of power failure. A rotary limit switch shall stop the door in the full *open* or *closed* position. Starter shall be magnetic reversing type and controlled by either a 3-button pushbutton station, pull cord or remote control device at each side. A fusible link self-closing device shall be standard on a fire door operator. The leading edge of the door shall be equipped with a reversing safety edge.

The door panel shall have a recessed pull on the wall side and a surface mounted bow handle on the exterior side.

2.3.4 Vision Panel:

Openings marked on the door schedule to contain a vision panel shall be equipped with a blast resistant 10-inch x 10-inch (clear opening) vision lite. The door leaf will have factory prepared cut-outs and reinforcements. Suitable glass and glazing materials, either wire or laminated glass shall be included, with the glass composite and thickness determined by the blast door manufacturer.

2.4 Finish:

All tool marks and imperfections shall be removed and exposed welded joints dressed smooth. Surfaces shall be cleaned and/or ground smooth for maximum paint adhesion. Exposed surfaces shall be factory prime painted with the manufacturer's standard rust inhibitive prime paint.

PART 3 - EXECUTION

3.1 Storage:

Prior to installation, cover and store all materials in a dry, protected location to prevent damage.

3.2 Installation:

Installation of materials shall be performed by Contractor's skilled mechanics or by manufacturer's trained personnel. Installation shall be in strict accordance with installation instructions and approved installation drawings provided by the door manufacturer. Doors shall be finished painted as applicable under another referenced section.