



Specifications

Very Low Range Blast Resistant Doors

(The "VLRB" Series)
Single or Pair Swing

Part I - General

1.1 Description

- a) **Product:** Provide blast-resistant swinging door system where shown on drawings and as specified herein. Nominal door size is: [] w x [] h.

1.2 Submittals

- a) **Shop Drawings and Certification:** Submit () copies of shop drawings and certified blast resistance test reports. The drawings shall show details of fabrication, installation and frame to wall anchorage. The drawings shall also fully detail and describe the latch, hinges, hardware functions and, if required, thresholds, closers and weather stripping. The certified test reports shall be from an independent laboratory.
- b) **Warranty:** Provide () copies of the manufacturer's warranty. The manufacturer shall warrant its products to be free of defects in labor and material for one year after shipment.

Part 2 - Products

2.1 Design

- a) **Design Basis and Type:** Blast resistant pre-engineered door system designs shall be based on the VLRB series as manufactured by the Overly Door Company, Greensburg, PA 15601-0070.
- b) **Design Criteria:** Pre-engineered swinging doors to be Overly Model VLRB or equal. The door, frame and restraining hardware shall be designed to withstand pressures up to [] psf seating the door into the frame and [] psf unseating the door from the frame (rebound). The door system shall be fully operable after application of the specified loads.
- c) **Testing Criteria:** The door and frame construction shall have been tested in accordance with ASTM designation F2247-03, "Standard Test Method for Metal Doors Used in Blast Resistant Applications (Equivalent Static Load Method)."
- d) **Product Description:** Doors and frames shall be constructed of 14-gauge low carbon steel. Doors shall be a nominal 1 3/4" thick, full flush, constructed and reinforced to resist the blast forces specified. Design door hardware and reinforcements to transfer all applicable loadings to frame. Design frame anchors to transfer all loadings to walls or structural sub-frame embed. Frames shall be hollow metal steel with formed stops, three sided, single or double rabbet, factory reinforced and tapped for hardware. Frame anchorage shall be [concrete expansion anchors] [tap bolts] [welded connection].
- e) **Fire rating:** Those openings scheduled as fire rated shall have been tested by and bear the labels of Underwriters Laboratories marked for 3 hour, A label for flush doors and 1

1/2 hour, B label for doors with a vision light or window (Maximum vision area: 100 square inches).

- f) **Lockset (active leaf):** The single point, mortised, lockset shall conform to ANSI Standard A156.13. The function of the lockset to be determined by the user. The lockset shall be suitable for use with project master-keyed key cylinders where specified.
- g) **Flushbolts (inactive leaf):** Top and bottom, manually operated, mortised flushbolts with modified latchbolt as required.
- h) **Door Closer:** 'Norton' No. 1604 x AL (or equivalent).
- i) **Weather stripping:** Provide [solid] [closed cell sponge] elastomer seals.
- j) **Hinges:** Hinge shall be heavy-duty ball bearing butts of sufficient size and quantity to withstand blast loadings and door weight. Hinges shall conform to ANSI Standard A156.1.

2.2 Fabrication

- a) **General:** Assemble work using all welded construction conforming to the applicable requirements of AWS D1.1 and D1.3.
- b) **Materials:** Construct from formed sheet conforming to ASTM A1008 or ASTM A1011. Steel plate and shapes for reinforcing and/or framing members shall conform to ASTM A36 and bars shall conform to ASTM A108 Grade 1018. Hardware shall be corrosion resistant steel of the appropriate design for the function intended.
- c) **Painting and Cleaning:** After fabrication, remove all tool marks and surface imperfections, and dress all welded joints smooth and coat with a rust-inhibitive primer.

Part 3 – Quality Assurance

- a) **Experience:** Provide work of this Section designed and furnished by one manufacturer. Use a manufacturer who is ISO9001:2000 certified and has been engaged in the manufacture of Blast Resistant Metal Swinging Door systems for at least five (5) years immediately prior to the start of this work, and who has a history of successful production acceptable to the Architect.

Part 4 – Execution

4.1 Site Storage & Protection of Materials

- a) **Receipt:** Upon receipt of product, all materials shall be thoroughly inspected and all discrepancies, deficiencies and/or damages shall be immediately reported to the supplier in writing.
- b) **Storage:** Store all materials on planks or dunnage in a dry location in a vertical position, spaced by blocking to permit air circulation between units. Cover all material or store in a controlled area to protect from damage.

4.2 Installation

- a) **Prior to installation,** secure the services of a qualified representative of the manufacturer to visit the job site and instruct the contractor's personnel in proper installation and adjustment of the assemblies or secure services of manufacturer's factory trained and authorized installer to perform installation of assemblies.
- b) **Install work of this Section** in strict accordance with approved shop drawings and manufacturer's recommended installation instructions. Where installations require field welding, all work must be performed by certified welders in accordance with AWS D1.1/D1.3.

- c) **Upon installation**, secure the services of a qualified representative of the manufacturer to visit the jobsite and inspect the complete installation of the door and frame assemblies, test all components thru a minimum of ten (10) cycles of operation and direct installer in correcting any non-conforming items found.