

SEVERE STORM SHELTER DOOR UNITS
 FEMA 361 & 320 and ANSI A250.13

BLAST RESISTANT DOOR UNITS
 1.0 psi to 17.7 psi – Seated & Unseated Conditions



Deansteel Manufacturing Inc. has produced a wide range of hollow metal doors and frames since 1958. Many of our products can be **Fire Rated** and labeled with underwriting by either Underwriters Laboratories (UL) or Intertek Testing Services (WH/ITS). We have also been producing fire rated doors, frames and windows approved by the USCG to CFR specifications since 1969, and IMO specifications since 1996 for marine/offshore applications.

We began producing **Ballistic Resistant** products in 1995. Our ballistic resistance testing has been performed by Southwest Research Institute and Close Focus Research. We have products to meet all levels of resistance as specified in UL-752 as well as NIJ 0108.01, ASTM F1233, and MIL-SAMIT Part 1. In 2005, we began to supplement our ballistic products with **Blast Resistant** designs. We have had analyses and testing performed by Architectural Testing Inc., and Baker Engineering and Risk Consultants, Inc. We have door and frame units that have been analyzed and shock tube tested with pressure ratings from 1.0 psi up to 17.7 psi with impulse levels up to 2,435 psi-msec.

Our specialty products include FEMA 361 and 320 **Severe Storm** shelter door units, and ANSI A250.13 severe coastal windstorm resistant door assemblies. We also produce acoustical STC-48 rated **Sound Resistant** door units.

Deansteel Manufacturing **MULTI-HAZARD RESISTANT** units include fire rated ballistic resistant doors. Our blast resistant doors were engineered, built, and tested to 8.7 psi with ballistic resistance up to UL-752 Level 8 and fire resistance up to a 3 hour rating. We are in the process of testing our multi-hazard units to FEMA 320 or 361 requirements in order to apply the certification to our multi-hazard units. These units were conceptually designed to incorporate our diverse accredited product attributes allowing us to offer a multi-hazard resistant product. We are confident that blast resistant capability is a testimony of their extreme wind and impact mitigation capabilities and do not foresee any issues in offering a FEMA 320 and 361 severe storm shelter door unit with bullet, blast, and fire resistant capabilities.



BULLET RESISTANT
 MIL-SAMIT • UL 752 Levels 1 thru 8
 NIJ 0108.01 Levels I thru IV • ASTM F1233

FIRE RESISTANT
 Underwriters Laboratories • Intertek Testing

Safety Compliance

Deansteel Manufacturing's Blast Resistant door & frame products have been analyzed and certified by independent laboratories to meet specific blast resistance levels. Reports and supporting data are available for review.

Testing Agencies

Architectural Testing, Inc. has performed engineering analyses of our blast resistant Door & Frame assemblies.

Baker Engineering & Risk Consultants have performed both analyses and shock tube testing of our products.

Southwest Research Institute (SwRI®) and Close Focus Research have conducted ballistic testing on our door & frame designs.

Underwriters Laboratories and Intertek Testing Services has conducted fire testing on our products to meet UL 10B, 10C, & UBC 7-2 fire resistance requirements.

The Wind Science and Engineering Research Center at Texas Tech University has tested our door & frame assemblies to meet FEMA 320 & 361 requirements. They have also tested several of our blast resistant designs under static pressure loads to ascertain ultimate failure points.

American Made – American Owned – Buy American

DEANSTEEL

111 Merchant St. San Antonio, TX 78204 Tel: 1-800-825-8271 Fax: 210-226-0913



www.deansteel.com