

BLAST RESISTANT DOORS & FRAMES for US MILITARY PROJECTS

- The *DoD Minimum Antiterrorism Standards for Buildings* is designed to protect DoD personnel from terrorist attacks. Whether retrofitting an existing building or building a new one there are minimum blast pressure requirements that all door assemblies must meet. The specific requirements depend on building location, type, and occupancy. The October 1, 2013 version of UFC 4-010-01 makes it clear that unless a door failure in response to the applied blast load does not pose a risk to occupants (i.e. the door is intercepted by a suitably strong wall before entering an occupied area) all doors must be evaluated for blast resistance at the applicable charge weights & standoff distances
- AMBICO has an extensive blast resistant door & frame product line that was developed specifically for UFC 4-010-01 projects. AMBICO teamed up with the University of Ottawa's Hazard Mitigation and Disaster Management Research Centre to conduct an extensive research & development project involving over 55 shock tube tests, as per ASTM F-2927, of various blast door products in various configurations and sizes. Additional static pressure testing, as per ASTM F-2247, and finite element analyses were performed to develop software to verify blast door & frame performance for any charge weight, standoff, and level of protection scenario
- Where project requirements take us beyond the scope of the product line developed with the University of Ottawa's Hazard Mitigation and Disaster Management Research Centre, AMBICO's engineering department has years of experience performing blast door & frame analysis for almost any imaginable charge weight, standoff, level of protection, and door & frame configuration



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- Whether proven via testing or analysis, AMBICO evaluates and selects blast doors & frames based on project specific requirements; this ensures that the end user benefits from lightweight and cost-effective blast doors & frames that use conventional hardware

BLAST RESISTANT DOORS & FRAMES *for* INDUSTRIAL PROJECTS

- The petrochemical industry invests heavily in designing process plants to minimize the likelihood of accidental explosions. Although the probability of an accidental explosion is very low all buildings located within the range of accidental explosions are designed to be blast resistant. Other common industrial applications are flammable and/or pressurized materials storage and handling, paint booths, and ETO sterilization for medical and pharmaceutical products
- AMBICO has worked with industry leaders BakerRisk and ABS Consulting to conduct a variety of open arena and shock tube tests on AMBICO blast resistant door & frame assemblies. In addition, AMBICO has conducted many static pressure tests at our factory, all witnessed, validated, and reported on by Intertek Testing Services
- Where project requirements are outside the scope of tests that AMBICO has conducted, our engineering department has years of experience performing blast door & frame analysis for almost any imaginable blast load response, and door & frame configuration
- Whether proven via testing or analysis AMBICO evaluates and selects blast doors & frames based on project specific requirements; this ensures that the end user benefits from lightweight and cost-effective blast doors & frames that use conventional hardware where possible. When specialty multi-point hardware is required AMBICO chooses to supply this hardware factory-installed. This adds value by ensuring proper installation of a critical structural component



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- Fire ratings are increasingly being specified on blast resistant exterior openings for petrochemical projects; AMBICO offers up to 5' x 10' singles and 10' x 10' pairs with a fire rating of up to 3 hrs
- For further details on our industry leading product and service, please communicate with us at your earliest opportunity