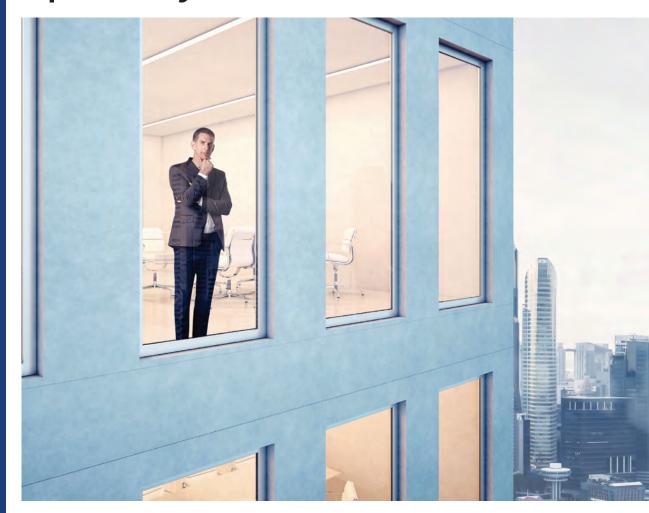


# **Specialty Products**





Ceco is considered a leading manufacturer of steel doors and frames for commercial, industrial, and institutional construction. With manufacturing plants totaling over half a million square feet Ceco operates some of the largest production facilities in the industry. Using only the highest quality materials and manufacturing techniques, Ceco produces metal doors and frames to meet the full range of safety, security, and aesthetic requirements. Ceco is also today's premier provider for specialty door and frame solutions including acoustical, stainless steel, blast, bullet, lead-lined, RF shielded, water resistant, flood, tornado, hurricane, attack resistant, and forced entry bullet resistant.

#### Sustainability is a Natural Part of What We Do

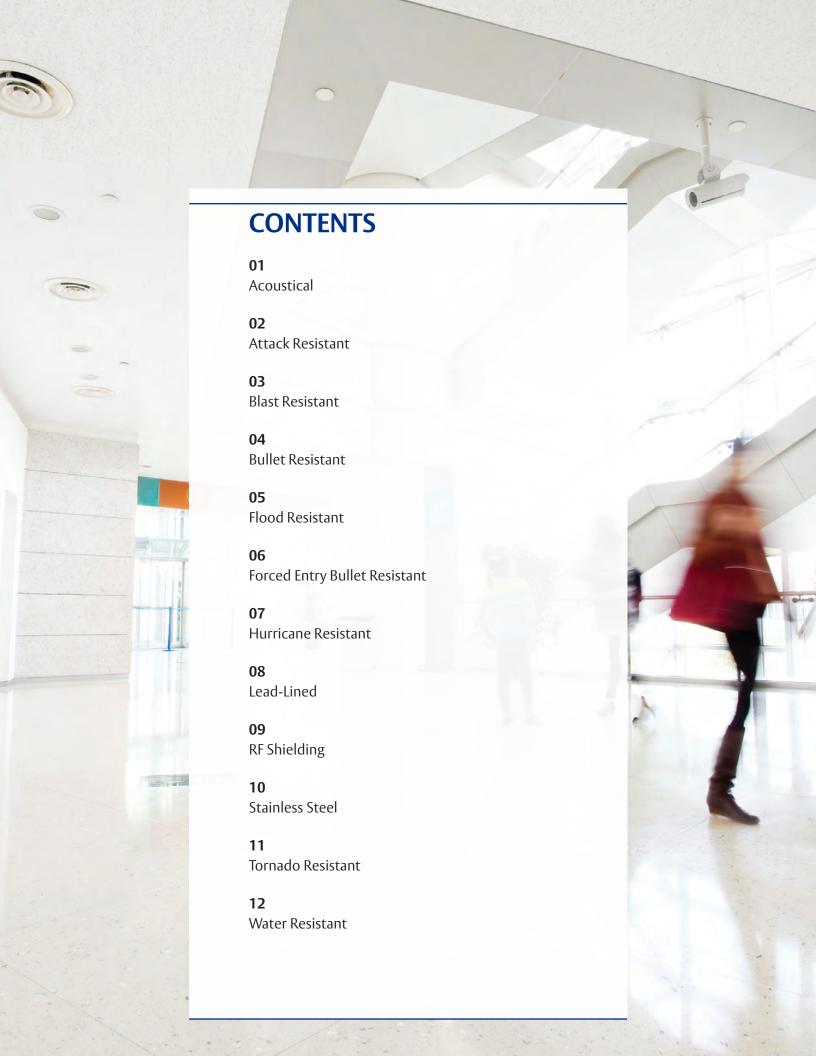
Ceco is also committed to implementing sustainable manufacturing processes that provide:

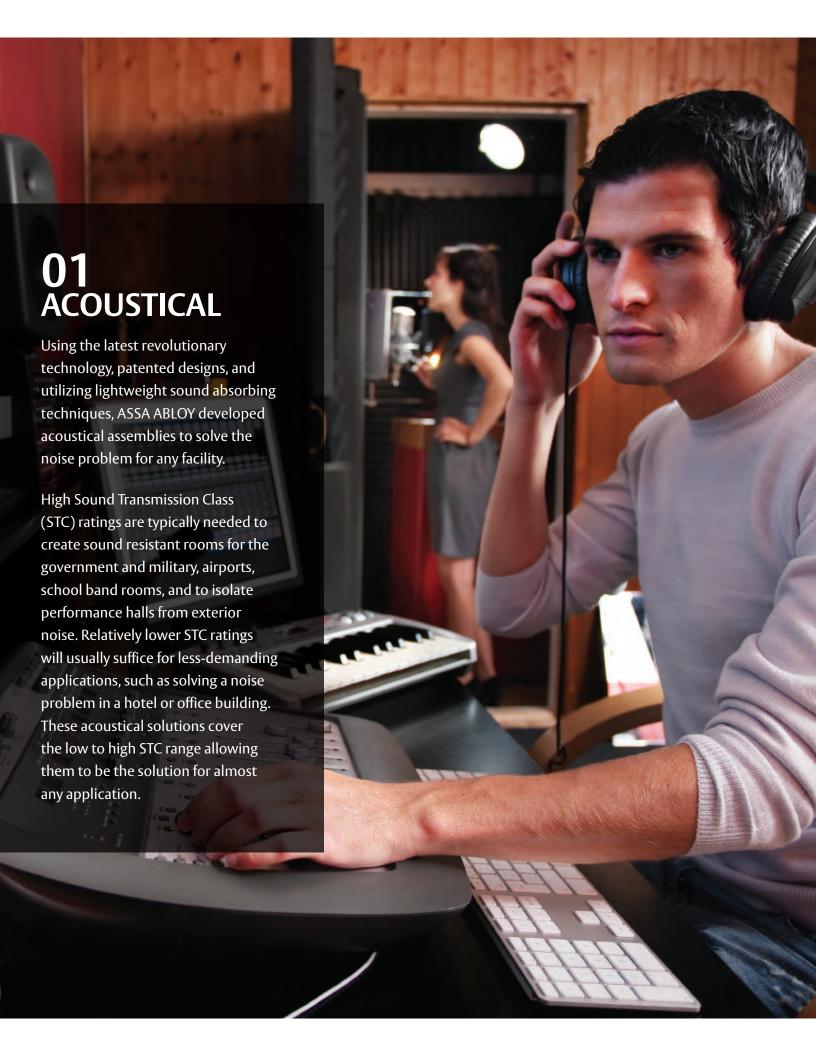
Lower operating costs — many products far exceed ANSI/SDI standards, translating to longer product life and easier maintenance (plus less waste in landfills).

Energy conservation — a clear result of our energy-efficient doors and frames.

Healthier and safer for occupants — comes from our using non-hazardous materials and providing effective life-safety solutions.

Our goal is to make sustainability a central part of our business philosophy and culture, but even more important is the job of integrating sustainability into our business strategy.









- Enhances learning in classrooms
- Promotes healing in healthcare environments
- Provides security and PRIVACY
- All STC values are operable assemblies
- Assemblies have been third-party tested

#### **Applications**

- Education
- Healthcare
- Government
- Military
- Hospitality
- Transportation centers
- Commercial offices and conference areas
- Sports arenas

## **Technical Options**

#### **Doors**

- 3-hour fire rating by Underwriters Laboratories (UL) and ITS fire ratings vary with STC rating
- Wood doors available in several attractive finishes
- Seals, thresholds, and door bottoms (when required) are shipped with the doors along with the attached STC rating label

Acoustical Door Assembles				
	НМ	Wood	Laminate	
Single – Flush	Up to 66	Up to 53	Up to 66	
Single – Glazed	Up to 52	Up to 51	Up to 52	
Borrowed Lite – Glazed	Up to 57			
Sliders – Flush	Up to 54			
Single – Deco*	Up to 48			
Pairs – Flush	Up to 49			
Pairs – Glazed	Up to 47			

\*Stile and Rail or Embossed Panel (s)

#### **Frames**

- Some acoustical assemblies can be used with a standard single or double rabbet frame with welded corners.
- Higher acoustical rated assemblies require a custom acoustical frame. Frames need to be backfilled with appropriate sound deadening material.

#### Hardware

- Locks: Cylindrical, mortise, mortise deadlocks, military
- Hinges: Standard weight 4-1/2", 5", continuous, and cam lift - specific hinges may be required depending on the STC rating
- Exit Devices: Surface vertical exit devices
- ElectroLynx™ option available for electrified hardware

## **Testing**

Acoustical assemblies are third-party, independently tested under the ASTM E90, ASTM E1332, ASTM E2235, ASTM E413, SDI 128, and HMMA 865 criteria.



# 02 ATTACK RESISTANT SOULUTIONS

Attack Resistant Solutions provided by ASSA ABLOY are either a complete opening or retrofit solution intent on delaying access to an attacker and suppressing unauthorized entry until first responders are able to arrive.

These products has been tested according to the 5-aa10 test standards based on the FBI's Active Shooter Report to set standards for forced entry for new construction, specifically hollow metal doors, frames, hardware, structures and systems.

The door or glass will not stop a bullet. However, the opening or glass will not weaken and will stay intact if shot at and physically attacked for at least 4 minutes.



- Attack Resistant Solutions provide at least 4 minutes of resistance to physical attack
- Meets test standards for forced entry and ballistic resistant levels of protection for various threats set forth based on the FBI's Active Shooter Report

#### **Applications**

- Schools and Universities
- · Healthcare facilities
- Commercial offices and conference areas
- Computer data processing security centers
- Military secure facilities
- Financial centers

## **Complete Attack Resistant Opening**

#### **Doors**

• Ceco Legion door with 16 ga. face sheets (14 ga. optional)

#### **Frames**

- 16 gauge frames (14 optional)
- Knock down or welded
- Welded sidelights and borrowed lights available

#### Glass and Glazing

- School Guard Glass™ SG5™
- Narrow light and half glass sizes
- Door glass is factory installed Sidelight and Borrowed light glass is provided to be field installed by others

#### **Assembly Hardware**

#### **Lock Options**

- SARGENT 8200 series mortise lock with Latchbolt, deadbolt and LS escutheon
- Corbin Russwin ML2000 Series mortise lock with VR(Vandal Resistant) Escutcheon and lever trim\*
- Yale SL8800 series mortise lock with SL (Security) escutcheon and lever trim\*
  - \*equivaglent hardware not tested

#### Hinge Options

- 3 or 4 each 4-1/2" x 4-1/2" standard weight McKinney hinges
- Pemko steel continuous hinges

#### **Attack Resistant Retrofit Options**

#### Light Kit and Glass Sizes:

- Type 2 light kit for existing hollow metal doors
- Type 10 light kit for existing wood doors
- Several standard sizes in vision, narrow light and half glass configurations

Vision	Narrow Light		Half Glass
10x10	3x33	6x16	23-13/16x28 (3068)*
12x12	4x24	6x24	23-13/16x32 (3070)*
	4x25	6x30	23-13/16x34 (3072)*
	5x20	6x36	*Type 2 kit sizes shown

• Custom sizes available (min of 3 sq. ft.)

#### Glass and glazing

- School Guard Glass SG5 attack resistant glass
- Dow 995 silicone glazing compound (10.3 oz tube)
- Tremco 440 butyl tape to be applied to the glass kit interior and exterior sides

# Glass and Glazing for Existing Sidelights and Borrowed Lights

#### Sidelights

• 6" x 10" - 47" x 92-3/4"

#### **Borrowed Lights**

- 3" x 10" 95" x 47" glass horizontal oriented
- 3" x 10" 47" x 95" glass vertical oriented Custom sizes available (3 sq ft min)

#### **Testing**

5-aa10 test standard sets requirements and testing methods to certify forced entry and ballistic systems. This standard is intended for use by schools and other public or private facilities that use commercial grade wood and hollow metal entrance doors, framing, hardware, structures and systems as well as glass, fixed sidelight, and borrowed light framing system.

- 30 shots (7.62 mm / .308 caliber) fired at door glass, 30 shots (7.62 mm / .308 caliber) fired at door hardware in a 6"x 6" area and 30 shots (7.62 mm / .308 caliber) fired at door sidelight in a 6"x 6" area\*. Door then remained closed and sidelights prevented assailant entry after 4 minutes of attack by single assailant using hand tools of various types as allowed in test
- ASTM C1036 Standard Specification-Flat Glass
- ASTM C1172 Standard Specification for Laminated Architectural Flat Glass
- ANSI Z97.1 Safety Materials Used in Buildings
- UL 972 Standard for Burglar Resistant Glazing Material



<sup>\*</sup> Glass and door assembly does not stop bullets from penetrating the opening, but will stay intact and locked throughout the physical attack.



## **Technical Options**

#### **Blast Assemblies**

Blast resistant up to 100+ psi. Additional ratings available. Seated and unseated assemblies are available for requirements beyond limits listed above. For more, contact the factory for available options, and blast test standards criteria.

## **Testing**

Third-Party tested (or calculated) to the following criteria:

- Categories I, II and III
- ASTM 1642 & ASTM 2927
- UFC 4-010-01 ver. 2012 DoD Minimum Antiterrorism Standards for Buildings
- GSA TS-01 Level C & D
- US Department or Veterans Affairs
- PIP STC 01018

Blast products are designed to meet project specific requirements. Contact the factory for details.

#### **Advantages**

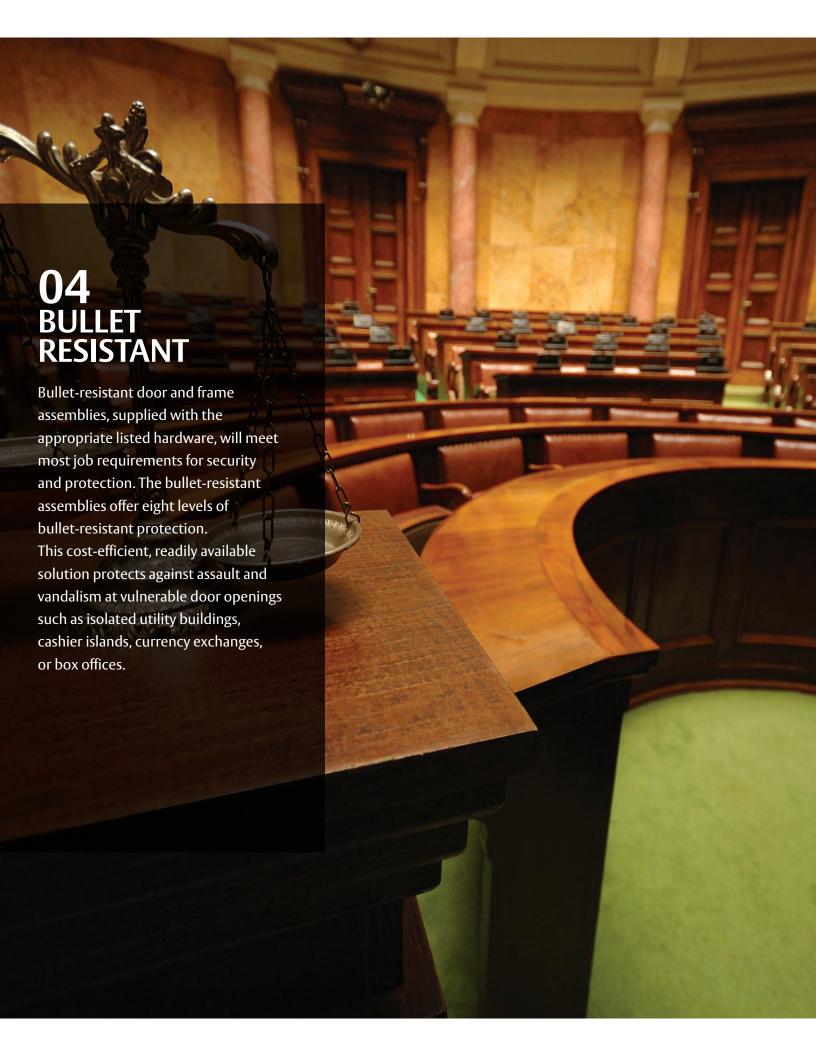
- Meets stringent performance requirements from governing agency's
- Available in stainless steel finishes
- · Optional sound ratings available
- Bullet resistant ratings available

## **Applications**

- Chemical storage areas
- Courthouses
- Embassies
- Government facilities
- Hospitals, e.g., oxygen storage areas
- Laboratories, research areas
- Military facilities
- Pharmaceutical companies
- Police and fire stations











- · Cost efficient openings
- Hollow metal, PLAM veneered hollow metal, and solid wood doors available to match any design requirement
- Bullet-resistant glazing available

## **Applications**

- Public utility field buildings
- Cashier stands
- Remote electrical panels
- Guard shacks
- Government facilities
- Police and fire stations

UL 752 Bullet Protection Ratings		
Level 1	9 mm (3 shots)	
Level 2	.357 Magnum (3 shots)	
Level 3	.44 Magnum (3 shots)	
Level 4	.30 Caliber Rifle (1 Shot)	
Level 5	7.62 mm Rifle (1 shot)	
Level 6	9 mm (5 shots)	
Level 7	5.56 mm Rifle (5 shots)	
Level 8	7.62 mm Rifle (5 shots)	
Level 9	.30-06 caliber rifle, steel core, lead point filler, FMJ (APM2)	
Level 10	.50 caliber rifle, lead core FMCJ Military Ball (M2)	

## **Technical Options**

- Made with a proprietary ballistic armor shield core
- Certified and third-party tested in accordance with UL752 and NIJ standards
- Bullet-protection ratings for UL752 levels 1-10 (levels 1-3 handguns, levels 4-10 rifles)
- Available with welded seamless door edge; continuously welded frames
- Standard gauge; A60 galvannealed steel (stainless available) frames
- Fire rated assemblies tested to UL 10C are available
- UL 752 levels 4–8 Wood Doors available

## **Testing**

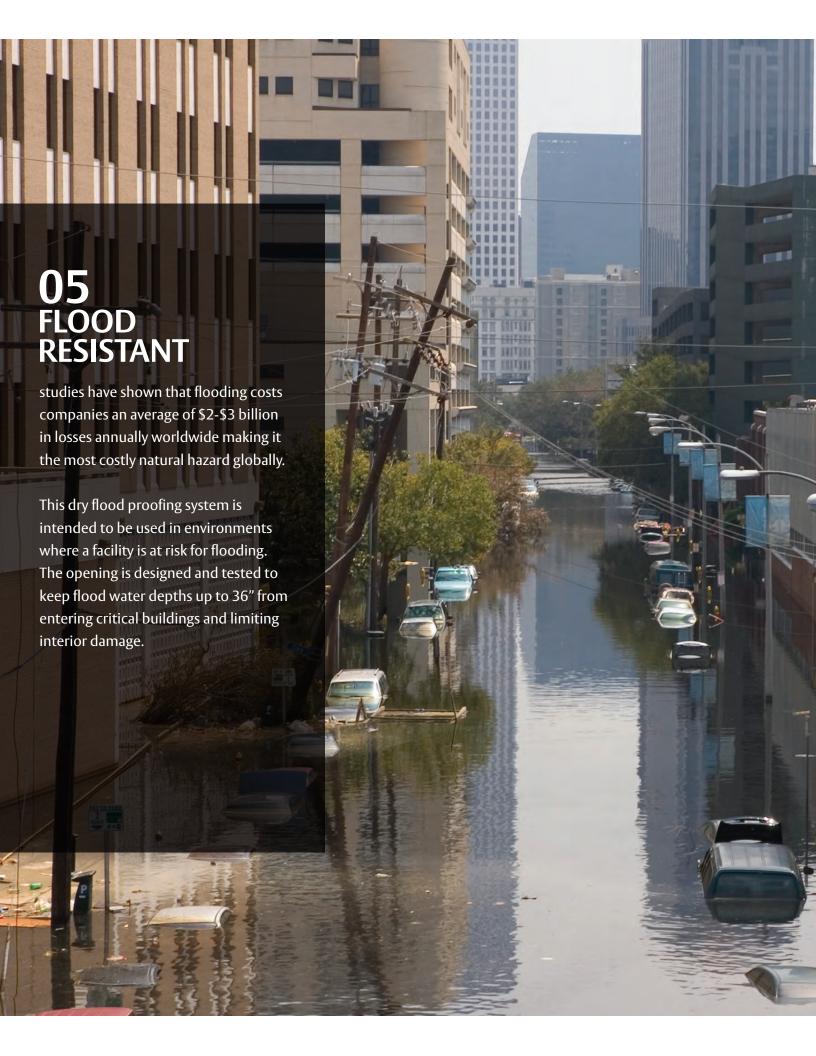
Bullet resistant doors and frames are fabricated with the finest UL listed armor panels that meet or the UL 752 Standard for bullet resistant materials in addition to NIJ standards.

All doors and frames are designed to provide the best practical protection for threat levels 1 through 10.

# Bullet Resistant Speaker Port and Deal Tray



- Level 3 bullet resistant stainless steel speaker port
- Glass is factory prepped to receive the speaker port
- Speaker port is installed flush with the glass surface
- Stainless steel deal tray is bullet resistant up to level 8
- Bullet resistant door louvers





## **Testing**

The Flood Resistant Opening has been tested to the American National Standard for Flood Abatement Equipment ANSI/FM Approvals 2510-2014 section 4.3.3.

This is a passive system that can protect against flood waters at any time while closed. Flood openings should be installed in a seated position (water pressure against the pull side of the door).

## **Advantages**

- Tested for water depths up to and including 36" to standards set forth by ANSI/FM Approvals 2510-2014 (section 4.3.3.) not exceeding maximum allowable water
- Up to and including 3'0"x7'0" size openings
- Passive flood assembly consists of flood resistant door, frame and perimeter seal system and 1 year warranty

#### **Applications**

- Pump rooms
- Mechanical and electrical rooms
- Flood prone areas
- Metro transit
- Marinas
- Aquariums
- Waste water treatment

#### **Technical Options**

#### **Doors**

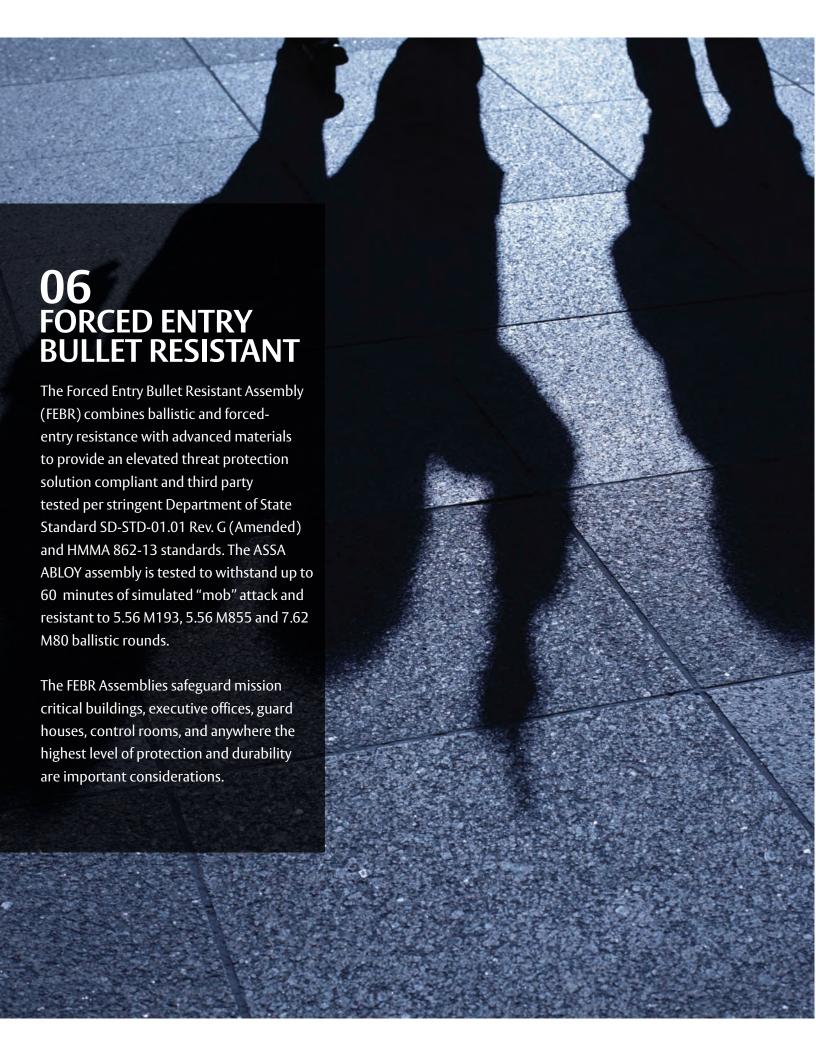
- Single flush steel stiffened with continuously welded edge seams
- 16 12 gauge face sheets with A60 steel standard or G90 steel optional
- Optional stainless steel construction also available
- 10" x 10" vision light available

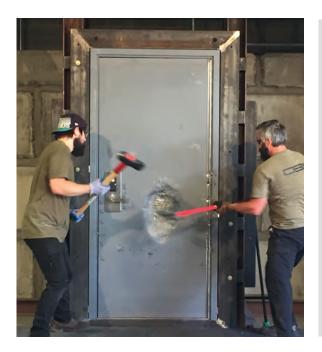
#### **Frames**

- 4 sided continuously welded
- 14 12 gauge frames with A60 steel standard or G90 steel optional
- Stainless steel also available
- Must be fully grouted and caulked by others

#### Hardware/Seal System Options

- Tested with cylindrical lock and three heavy weight hinges. Other hardware preps are available.
   Hardware by others.
- EDPM adjustable rubber perimeter seal system with retainer clips included with the assembly





- UL 752 level 8 bullet resistant construction
- Factory installed hardware available
- Complies with Department of State SD STD-01.01 Rev G (amended) and HMMA 862-13 standards as tested by 3rd party independent laboratory

#### **Applications**

- Government facilities
- Guard houses
- Control rooms
- Executive offices

## **Technical Options**

- Multiple sizes and configurations available including singles, pairs and glazed openings
- Forced entry up to 60 minutes of attack
- Forced entry bullet resistant up to 60 minutes of attack and level 8 bullet resistance
- Many hardware variations available depending on the level of attack including factory installed options

Contact the factory for additional configurations.

#### **Test Methods and Standards**

 Forced Entry and Ballistic Resistance of Structural Systems – Doors were tested per DoS ST-STD.01.01 shot with 5.56 and 7.62 rounds and then attacked by a six man Concentrated Assault Team up to 60 minutes on the lock edge, 60 minutes on hinge edge, 60 minutes on the center of the door

#### Certified:

5, 15, 60 minute singles and pairs,

5, 15 - glazing options, full, half, double

5, 15 - stainless steel

4'0" x 8'0"

#### Add ons:

5, 15 windows and borrowed lights

60 minute louvers

60 minute escape/roof hatch

#### Locking:

Manual forced entry locks

3 and 5 point exit device electrified. Fire egress.

Fire rated up to 3 hr.

Blast criteria options

- UL 752: Standard for Bullet-Resisting Equipment
- ANSI/BHMA A156.1: Butts and Hinges
- ASTM F3038-14: Standard test method for timed evaluation of Forced Entry Resistant Systems
- Complies with Department of State SD STD-01.01 Rev G (amended) and HMMA 862-13 standards as tested by certified 3rd party independent laboratory







- 3rd party certified openings
- UL and ITS/WH fire rated
- Texas Department of Insurance (TDI) evaluation reports available
- Glazed openings available
- Water infiltration protection

## **Applications**

• For use with any building in Florida or other coastal areas requiring hurricane wind protection



## **Technical Options**

#### **Doors**

- Design Pressure: +/- 50 psf to +/- 150 psf
- Water Infiltration: +/- 50 psf to +/- 60 psf
- 2'8" x 6'8" to 8'0" x 8'0" available
- Polystyrene, polyurethane, honeycomb, temperature rise, steel stiffened cores
- Glazing options available

#### Frames

- Single and paired openings
- Sidelite options up to 12'10" x 8'0"
- Transom options up to 6'0" x 10'0"

#### **Hardware Options**

 Multiple hardware configurations including brands, Corbin Russwin, McKinney, RIXSON, SARGENT, Yale and more.

## **Testing**

Hurricane Resistant products have been third-party tested by UL and ITS/WH certified to the following test standards:

- ANSI A250.13
- ASTM E330/E1886/E1996
- TAS201, TAS202, TAS203



- Wood doors available to match most design requirements
- Sound ratings available
- RF Shielding options available
- Stainless steel options available

## **Applications**

- Microwave transmission rooms
- Airports
- Defense, military, and security environments
- X-ray and imaging rooms
- Medical schools
- Nuclear power plants

## **Technical Options**

- Lead sheets, available in 1/32" to 1" thickness, integrated into door and frame for strength and vandal resistance (lead thicknesses beyond 1/4" available upon request)
- Vertically steel stiffened doors for added strength and durability
- Consult factory for available fire ratings
- Standard 1-3/4" thick doors accommodate standard hardware
- Continuously welded, seamless door edge and lead lined frame
- Standard 16-gauge steel; 14-12 gauge available
- Fire rated assemblies tested to UL 10C available
- Wood doors available with 1/32" 1/8" lead thicknesses







Radio-frequency shielding in a healthcare, commercial, or government application is critical in controlled environment testing. As the testing is in a contained environment, the RF-shielded enclosure allows for accuracy in equipment function, procedures, and results. The RF-shielded enclosure prevents outside interference, thus allowing for accurate test data.

RF-shielding solutions help ensure sensitive and confidential information is contained.

RF openings have been third-party tested in accordance with NSA-94-106, providing greater than 40 decibels (dB) shielding attenuation for electric fields over the 10 kilohertz (kHz) to 10 gigahertz (GHz) frequency range. Conductive perimeter seals, Pemko threshold, and caulk are included with each assembly.



- Sound rating up to STC 50
- Bullet rating available to level 8
- Blast openings available
- Lead Lined openings available

## **Applications**

- Healthcare facilities
- Business offices
- Test labs
- Emergency call centers
- Sensitive electronic installations
- Computer data processing security centers
- Military secure facilities
- Financial centers
- RFID scanning areas

## **Technical Options**

Assembly includes:

Door, frame, conductive perimeter seals, copper primer, threshold and conductive caulk

- 2'6" x 6'8" up to 4'0" x 8'0"
- Flush only
- Single swing
- Standard frame anchors
- Consult factory for available fire ratings







- Provides easy maintenance and long-term strength and durability
- Water tight/sanitary design
- Continuously seamless welded door edge (key for corrosive environments) and seamless top and bottom option

#### **Applications**

- High style architectural environments
- Commercial or institutional projects
- Health care facilities
- Exterior in coastal areas
- Pharmaceutical plants
- Research laboratories
- · Food processing
- Water treatment
- Chemical plants

## **Technical Options**

#### **Doors**

- Available with 18-gauge through 12-gauge face skins
- Polystyrene core standard with optional steel stiffened and honeycomb cores
- Seamless lock and hinge edge design
- Fire rated up to 3 hours

#### Frames

- Available in 16-gauge through 12-gauge
- Welded corner conditions
- Standard and custom frame profiles available
- Custom frame elevations (side-lights, borrowed lites, and transom units)

#### Alloy

- No. 304, the most commonly used stainless alloy
- No. 316, for installation in extremely corrosive environments

#### **Finishes**

- No. 4 (Brushed Satin)
- No. 6 (Fine Satin)
- No. 8 (Mirror)
- No. 2B (Mill)
- XLB (XL Blend)

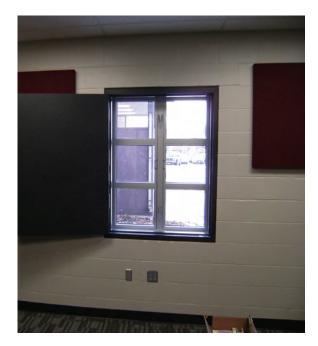


## 11 TORNADO RESISTANT

Strong gusts of winds up to 70 miles per hour are not uncommon anywhere in the world, but sustained winds of 130 -250 miles per hour are generally associated with tornados.

Damage can be caused by flying debris — often referred to as windborne missiles. If wind speeds are high enough, missiles can impact a building with enough force to penetrate windows, walls, or the roof. An object such as a 2" x 4" wood stud weighing 15 pounds, when carried by a 250-mph wind, can have a horizontal speed of 100 mph and impact with enough force to penetrate most common building materials used today.

StormPro tornado resistant products were developed to resist missile penetration for use in buildings designed as shelters to protect occupants from injury.



- 3rd Party certified openings
- UL fire rated
- Multiple hardware applications available
- Glazed openings available

## **Applications**

- Community Shelters
- Storm Shelters
- Disaster and Tornado Shelters
- School Shelters
- School "Safe" Rooms
- Residential "Safe" Rooms

## **Technical Options**

#### StormPro® 361

The International Code Council (ICC) 500-2014 standard defines the construction requirements for safe rooms in order to provide inhabitants protection from tornadoes, hurricanes, and straight line winds.

- StormPro 361 assemblies have been successfully tested in accordance with ICC 500-2014, and met all performance criteria as set forth by the standard
- Opening sizes are available up to 3'0" x 6'8" to 4'0" x 8'0" single, 6'0" x 6'8" to 8'0" x 8'0" pairs
- StormPro frames are available 14-gauge A60 galvanneal steel, unequal rabbet, three sided, and communicating frames with 2" or 4" face heads
- Preparation for approved multi-point locks and exit devices by SARGENT or Corbin Russwin for Storm Pro 361 products are included as specified



#### StormPro® 320

- Storm Pro 320 assemblies have been successfully tested in accordance with ICC500-2014, and have met performance criteria as set forth by the standard
- Doors are available with flush face or 10" x 10" glazed window up to 3'0" x 7'0" with 14-gauge steel
- The assembly requires 1-1/2 pair of 4-1/2 x 4-1/2 heavy weight stainless steel McKinney hinges, one SARGENT 10 line lock with 808 stainless strike, and three Medeco Maxum deadbolts (commercial). The assembly is certified by UL

#### StormPro® Tornado Shutter

- The StormPro Shutter is designed for safe rooms that require natural lighting from windows during normal, non-threatening conditions
- StormPro Window Shutter Systems include a three and four sided StormPro frame unit with StormPro door and hardware
- The units are installed inside the room in front of conventional exterior windows
- Opening sizes are available up to 2'6" x 3'0" to 4'0" x 6'8" single, 5'0" x 4'0" to 8'0" x 6'8" pairs
- When a severe weather threat occurs, the StormPro Window Shutter is closed creating a safe shelter environment

## **Testing**

- StormPro Assemblies Meet UL Certification for Fire, ICC 500 and FEMA Guidelines
- StormPro assemblies may be fire rated for 3 hours and are certified to ICC 500 - 2014. StormPro assemblies also meet FEMA P361 (2015) and FEMA P320 (2014) guidelines



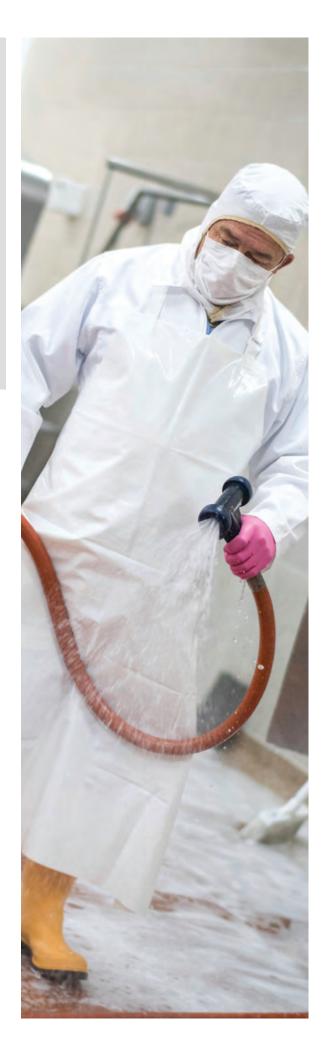
- Pest resistant
- Easy wipe-down and cleaning
- Maximum corrosion resistance
- Long-term strength and durability
- Penetration resistant
- Superior adhesion of finish coat

## **Applications**

- Chemical storage areas
- Clean room environments
- Food processing plants
- Hospitals
- Laboratories
- Marine areas, piers, berths
- Swimming pool areas
- Wastewater treatment plants

## **Technical Options**

- Sealed door core
- Welded seamless door edge
- Custom sanitary door vision lights available
- 14-gauge or 16-gauge door face sheets and frames
- Continuously welded frames
- 14-gauge or 16-gauge frames available
- Factory prime paint
- Stainless steel available
- Consult factory for available fire ratings



ASSA ABLOY is the global leader in door opening solutions, dedicated to satisfying end-user needs for security, safety and convenience



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