CORNELL

SAFE AND SECURE

YOUR SINGLE SOURCE FOR EMERGENCY RESPONSE CLOSURE PRODUCTS

- Coiling Fire Doors
- Firemiser™ Insulated Fire Doors
- SmokeShield® Fire Doors
- SmokeShield® Firemiser™ Doors
- Coiling Counter Fire Doors
- SmokeShield® Counter Fire Doors
- Labeled Integral Frame Units
- CrossingGard® Emergency Response Grille
- TranZform® Fire Accordion Folding Fire Door
- M100 FireGard™ Operating Systems
- A Complete Line of Accessories

Since we opened our doors in 1828, Cornell has led the industry in providing only the highest quality products and unmatched support. Whether seeking quality, performance, reliability or overall satisfaction, customers have always known that they're Safe and Secure with Cornell.

CORNELL EMERGENCY RESPONSE PRODUCTS

Emergency Response Product Operators

Opening Considerations

When choosing an operator, the following opening characteristics will aid in selection:

- **Opening Size** - How big is the opening? Larger, heavier units often require more convenient operation.
- **Cycle Frequency** - How often will the door be opened each day? More frequent opening usually requires more efficient operation.
- **Activation Requirements** - Is the unit required to be fail-safe and to tie into local fire detectors or a central alarm system? Basic fuselink setups do not accommodate this need.
- **Opening Characteristics** - Does the operator need to be concealed above a ceiling, or do mounting conditions limit access to the operator? If so, consider an operating system that does not require manual resetting, thereby reducing the need for operator access.
- **Annual Testing Requirements** - Is a simplified testing and resetting system desired? Basic systems require a trained door system technician and significant opening downtime to complete testing. Advanced systems can be tested at floor level with the touch of a button.
- **Power Failure Frequency** - Power failures can cause a fire door to close without signal from an alarm system. Traditional closing systems require manual resetting by a trained door system technician and significant opening downtime to reset the closing system and continue normal operation. Advanced systems can be reset at floor level with the touch of a button.

Electric M100 Motor Operators

Battery Back Up

Note: above items are not to scale

These systems respond to alarm signals or fuselink activation and are fail-safe by design, functioning even during a power failure. When alarms are cleared and power is restored, resetting is done at floor level with a touch of the "open" button. A sensing edge is recommended or may be required. Available for new or retrofit doors up to 50' wide, 40' high or a maximum of 1200 square feet.

Benefits:

- Dependable automatic closing due to simplified design.
- Slower, safer, uniform closing speed of six to nine inches per second.
- Resetting is done at floor level with the touch of the "open" button on the control station.
- Easy to test: M100 system fire doors can be tested quickly and easily.
- Versatile: M100 systems can be activated by fusible link or thermal sensors, fire alarm systems or smoke detectors *without the need for a mechanical release device*.

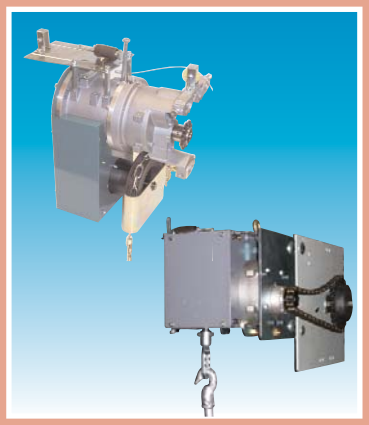
Recommended Applications:

- Any application where mechanical testing and resetting is impractical or not desired.
- Where fire doors are installed within pedestrian thoroughfares.
- Large size fire doors or fire-rated units in recessed applications.
- Units in areas susceptible to frequent power outages.

Options:

- Battery Back Up for M100 F Series Operators
- Horn Strobe
- Sensing Edge
- Locking Mechanisms
- Operator Covers

Manual M100 Chain or M100 Crank Operators



These systems can be fuselink activated alone, or the system can also be tied into local detectors or a central alarm system using an operator mounted release device as listed on the back cover. Automatic closing is tested with routine close operation of the unit. Resetting spring tension or re-engaging the operator is not required! Push to close button activation in lieu of a pull cable is optional. Please consult Cornell for size availability.

Benefits:

- Spring tension is not released for automatic fire door closing.
- Simple testing of automatic closing system.
- Downtime is minimal - doors are easily reset to the open position in minutes by facility personnel following alarm or power failure closing.

Recommended Applications:

- Use for fire products that do not require the daily operating convenience of a motor operator.
- Clearance and access to the hand chain or crank eye is required.

Options:

- Push To Close Station
- Operator Mounted Fail-Safe Release Devices
- Locking Mechanism
- Operator Cover

Conventional Fire Door Operators

Conventional fire door automatic closing systems release spring tension and require mechanical resetting by a trained door systems technician. Although these old style fire door systems are available and frequently specified, the industry has evolved to address today's issues of annual door testing requirements, more frequent alarm testing, recessed installations and power outages. **Cornell strongly recommends you consider the safety and convenience advantages the above M100 Closing Systems can provide your customers.**

Emergency Response Products

Fire Doors Model ERD10

Protect against the spread of fire by automatic closing in the event of fire detection with governed speed control. Fire doors are designed for daily use to provide security and access control.

Additional Benefits:

- Meet insurance and building code requirements.
- Compact overhead storage of curtain is ideal for industrial, commercial and institutional applications.

Sizes: 30’ high, 30’ wide standard construction. Large Openings to 50' wide, 40' high up to 1200 sq. feet consult factory.

Ratings: UL Classified 4, 3, 1 1/2, 1 or 3/4 hour label. Factory Mutual Approval listing.

Practical Design Applications: Fire wall openings in:

- Hospitals and healthcare facilities
- Schools
- Hotels
- High rise construction
- Museums
- Warehouses
- Not for use in openings that are part of a required means of egress. Use TranZform® Fire, page 3, when emergency egress is required.

Firemiser™ Insulated Fire Doors Model ERD20

Provides UL rated fire protection plus security, sound attenuation and environmental separation. Reduce costs by meeting multiple design needs, with continued energy savings generated by Firemiser's sealing and insulation.

Additional Benefits:

- Sound Transmission Class: STC 27; muffles unwanted sound between areas.
- Climate Control: insulated curtain yields a 5.3 R-value that can be combined with full perimeter seals.

Sizes: Standard construction for openings up to 30' wide, 22' high. Large openings to 34’ wide, consult factory.

Ratings: UL Classified 4, 3, 1 1/2, 1 or 3/4 hour label. Factory Mutual Approval listing.

Practical Design Applications

- All fire wall openings where the door is to be closed regularly and a sound attenuation need exists.
- Exterior openings that require a fire rating due to the proximity of other structures or combustible materials.
- Buildings designed for future expansion where current exterior wall openings are to become interior fire wall openings.
- Interior fire wall openings where the door will be normally closed to control varying climatic conditions between two areas.

SmokeShield® UL Classified Smoke and Draft Control Assemblies

Designed to limit the spread of fire and smoke in a fire emergency protecting life and property. Equipped with UL Classified and tested perimeter smoke seals that are UL Classified for proven smoke and draft control per UL 1784. These units carry labels for fire protection and one for smoke and draft control. Insulated SmokeShield Firemiser™ units also provide climate control with a curtain that yields a 5.3 R-value, plus sound attenuation with a Sound Transmission Class STC 27.

Additional Benefits:

- Meets the requirements of NFPA 105 and also the International Building Code®, 2009, Section 715.4.3.
- Doubles protection for building occupants, capital and contents.
- Controlling smoke limits property damage.
- Increases life safety.

SmokeShield® Fire Doors Model ERD11

- **Sizes:** Standard construction for openings up to 30' wide, 25' high. Large openings to 34’ wide, consult factory.
- **Ratings:** UL Classified 4, 3, 1 1/2, 1 or 3/4 hour label for fire and UL “S” label for smoke and draft control.

SmokeShield® Firemiser™ Doors Model ERD21

- **Sizes:** Standard construction for openings up to 30' wide, 22' high. Large openings to 34’ wide, consult factory.
- **Ratings:** UL Classified 4, 3, 1 1/2, 1 or 3/4 hour label for fire and UL “S” label for smoke and draft control.

SmokeShield® Counter Fire Doors Model ERC11

- **Sizes:** Openings up to 16' wide when height is 7' 6" or less. Openings up to 12' wide when height is 10' or less.
- **Ratings:** UL Classified 3, 1 1/2, 1 or 3/4 hour label for fire and UL “S” label for smoke and draft control.
- **SmokeShield® Counter Fire Doors with Integral Frame** also available.

Practical Design Applications:

- Buildings with large occupancy rates.
- Buildings with significant material inventories.
- SmokeShield Firemiser: Openings that will be regularly closed where there is a need for sound attenuation or climate control between two areas, and buildings designed for future expansion where the current exterior wall openings are to become interior fire wall openings.

Individual data sheets available for each product. Contact Cornell for assistance.

Counter Fire Doors Model ERC 10

Also specified as fire shutters, these fire doors secure openings above counters and other similar finished openings on interior and exterior walls.

Additional Benefits:

- Meet insurance and building code requirements.
- Smaller, more aesthetically pleasing guides, slats, brackets and hood than fire doors.

Sizes: Openings up to 16' wide when height is 7' 6" or less, or up to 12' wide when height is 10' or less.

Ratings: UL Classified 3, 1 1/2, 1 or 3/4 hour labels.

Practical Design Applications:

- Smaller openings in rated walls, especially above counters.
- Openings to the floor where more compact door components are desired.

Counter Fire Doors with Integral Frames Model ERC 20

Assembled and welded at the factory for a seamless, custom look without field assembly. Built-in mounted units wrap around wall and are installed while the wall is being constructed. Slip-in units may be set into finished walls.

Additional Benefits:

- The look of a made-to-order product without the inconvenience.
- Fully assembled, ready for placement into wall opening.

Sizes: Openings up to 10' wide by 4' 9" high in walls 4 1/2" to 12" thick.

Ratings: UL Classified 1 1/2, 1 or 3/4 hour labels.

Practical Design Applications:

- Service window openings for rated walls used in:
  - Cafeterias
  - Healthcare facilities
  - Schools and universities

CrossingGard® Emergency Response Grille Model ERG-IBC for Access Controlled Egress per the IBC®

Designed to help address both the security and safety issues of public areas. The CrossingGard provides the day to day security of a locked, rolling grille but immediately responds in an emergency situation to fully open automatically and allow escape. Provides separation control, yet allows for alternate means of egress should an emergency arise. Concealed AutoLock mechanism prevents forced opening of a closed grille, but will not interfere with normal electric or emergency operation.

Additional Benefits:

- ICC-ES evaluated for access controlled egress per the International Building Code®.
- Fail-safe emergency response capability through motor operation, provided as standard.
- No manual locking or unlocking required.
- No resetting is necessary to resume normal operation.

Sizes: Openings from 5' to 24' wide and 4' to 20' high.

Practical Design Applications:

- Corridor protection in any public building that limits functional space at different times or for special events, such as in:
  - Schools
  - Hospitals
  - Office buildings
  - Transportation terminals
- Separation control applications where emergency personnel will require immediate access to secured areas in a crisis situation.
- Applications where combined ease of opening and security is desired.

TranZform® Fire Accordion Folding Fire Door Model ERP 10

Rated physical fire barriers that protect openings with minimal headroom from the spread of fire and smoke. Units provide automatic closing in the event of fire detection. Double wall panel design.

Additional Benefits:

- Acceptable for use in openings that are part of a required means of egress.
- Compliant with the American with Disabilities Act accessibility standards.
- Fail-safe emergency response capability through motor operation, provided as standard.

Sizes: Virtually any width opening from 3' 6" to 22' high.

Ratings: UL Classified 3, 1 1/2, 1, 3/4, 1/2, 1/3 hour and "S" labels available. Factory Mutual Approval Listing. California State Fire Marshal Listing. **ICC-ES ESR-2300.** STC 41.

Practical Design Applications:

- Openings requiring building code compliant emergency egress such as elevator lobbies.
- An alternative to banks of fire rated swing doors where maintaining the use of the full opening width for functionality and aesthetics is desired, such as in atriums, casinos and hotels.
- Openings with minimal headroom requiring rated fire, smoke or ADA compliant fire protection.

Individual data sheets available for each product. Contact Cornell for assistance.

Emergency Response Solutions for All Your Opening Requirements

Interior / Exterior Fire Walls

Potential Requirements

- **Security** - the ability to close and lock.
- **Fire Containment** - product closes automatically in a fire emergency.
- **Smoke Control** - limit the spread of smoke, which can spread faster and cause more damage than fire.
- **Sound Attenuation** - to reduce unwanted sound from one area to another.
- **Weather Control** - when environmental separation or high wind load is required.
- **Aesthetics of Opening** - high traffic areas demanding a more aesthetically pleasing product.

Product Solutions

- **Fire Doors** - provide security and close automatically in a fire.
- **SmokeShield® Fire Doors** - limit the spread of smoke, protecting life and property in addition to fire protection.
- **Firemiser™ Insulated Fire Doors** - provide temperature control and sound attenuation in addition to fire protection.
- **SmokeShield® Firemiser™ Doors** - provide all of the above.
- **TranZform® Fire -** provide UL Classified fire and smoke protection with emergency egress capabilities. Require minimal headroom.
- **Counter Fire Doors** - when compact door components are desired, these units close to the floor.

Counter Openings

Potential Requirements

- **Security** - the ability to close and lock.
- **Fire Containment** - product closes automatically in a fire emergency.
- **Smoke Control** - limit the spread of smoke, which can spread faster and cause more damage than fire.
- **Aesthetics of Opening** - when a unit with integral frame and countertop is desired.

Product Solutions

- **Counter Fire Doors** - base product provides security and close automatically in a fire.
- **SmokeShield® Counter Fire Doors** - limit the spread of smoke, protecting life and property in addition to fire protection.
- **Counter Fire Door with Integral Frame and Countertop** - assembled and welded at the factory for seamless construction with a custom look. UL “S” rating available.

Cross Corridor

Potential Requirements

- **Egress** - a closed product opens on alarm to allow access to means of exit.
- **Security** - the ability to close and lock or prevent entry.
- **Fire Containment** - product closes automatically in a fire emergency.
- **Sound Attenuation** - to reduce unwanted sound from one area to another.
- **Smoke Control** - limit the spread of smoke, which can spread faster and cause more damage than fire.

Product Solutions

- **CrossingGard® Emergency Response Grille** - self locking assemblies prevent forced opening of closed grille. Fully opens on alarm or power failure, allowing access to egress.
- **TranZform® Fire -** provide UL Classified fire and smoke protection with emergency egress capabilities. Require minimal headroom.
- **Fire Doors** - provide security. Close automatically in a fire emergency.
- **SmokeShield® Fire Doors** -limit the spread of smoke, protecting life and property in addition to fire protection.
- **Firemiser™ Insulated Fire Doors** - provide temperature control and sound attenuation in addition to fire protection.
- **SmokeShield® Firemiser™ Doors** - combines the benefits of Fire Doors, SmokeShield Fire Doors and Firemiser Insulated Fire Doors.

Accessories

Release Devices


FireGard AR-D

Electro-mechanical devices enable automatic closing fire doors to respond to alarm signals from detection devices such as smoke detectors, heat sensors and central alarm signals, permitting doors to close long before high temperatures melt fusible links. Fusible links should always be used as backup to the release device.

M100 Chain and Crank Release Devices:

- Floor Level Cable Reset Model
- Automatic Reset Model

Conventional (Non-M100) Fire Door Release Devices:

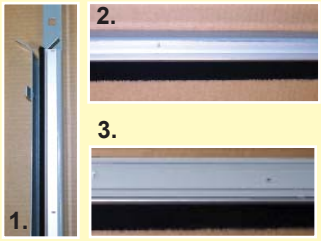
- FireGard AR-D- A fail-safe and UL listed tri-voltage releasing device that accepts 120 or 24 VAC or 24 VDC input voltage. Does not require or have a battery back-up system or require upfront electrical coordination with alarm system providers. Down limit detection: requires closed door signal.
- FireGard DC, BB and BV models available:consult factory.

Conventional Fire Door Annunciators

Optional devices that can be tied into FireGard™ release devices to safely pre-announce closing of the fire door.

- **Horn Strobe -** ADA compliant, 24 volt DC warning devices that are powered by a release device power source to provide an advanced fire door closing warning. Model BB is active upon alarm signal and power failure and model AR-D is active upon alarm signal only.
- **Speaker Strobe** - An ADA compliant model FireGard BV warning device. Provides two different voice warning messages upon activation. Messages are in English and are field selectable.messages upon activation.

Perimeter Seals



- UL listed Perimeter Seals provide weather protection on fire doors and insulated fire doors when a smoke label is not required. Perimeter seals can also be used to add protection against the passage of smoke and drafts for Fire Doors that are outside the limits of SmokeShield® Doors.

  1. UL Listed Perimeter Seal at Guide
  2. UL Listed Perimeter Seal at Header
  3. UL Listed Perimeter Seal at Bottom Bar

- Smoke Seal / Electric Sensing Edge - offer personal safety at the opening and serve as an alternative bottom seal for motorized fire doors. Different profiles, 2-wire and 4-wire are available.

Vision Windows

Available for non-insulated Fire Doors, vision windows enhance life safety and convenience by allowing visibility to the other side of the firewall opening. Up to six 10" x 1 5/8" panes per curtain, spaced a minimum of 5" apart and 12" in from each guide. Placement, quantity and layout of panes is to be set by specifier.

UL Classified Countertops

Conveniently completes fire rated counter openings. UL Classified 1 1/2 hour rating.

- Plastic laminate countertops are available in a range of standard laminates in a single piece up to 10' wide, and in two pieces with center joint to 16' wide.
- Stainless steel countertops are 14 gauge, #4 finish. Custom designed to a maximum wall opening width of 11'2" for face of wall units (T-shape), and 11'10" for between jambs units (rectangular shape). Maximum 12" wall thickness.

Design Assistance

Cornell employs full time professionals to assist architects in specifying emergency response products. Contact our Architect & Design Support Department at 800.233.8366 ext. 551 or ADS@cornelliron.com.

Our website, www.cornelliron.com, provides access to extensive, continually updated product information, including downloadable specifications, drawings and data sheets.

Cornell's comprehensive Rolling Door Resource Manual is newly updated and available for your reference library.

Make Cornell your single source for Emergency Response Closure Products.

CORNELL

SAFE AND SECURE

Crestwood Industrial Park • Mountaintop, PA 18707
Tel. 800.233.8366 • Fax 800.526.0841
www.cornelliron.com

An ISO 9001:2000 Registered Company