CORNELL

SAFE AND SECURE

800.233.8366

www.cornelliron.com

Cornell's Full Line of Closure Product Solutions

Op = Optional
Std = Standard

	Max Width	Max Height	Solid Curtain	Open Curtain	Clear Solid Curtain	High Cycle Avail.	Min. Headroom Reqd.	Wind Load > 20 PSF	Superior U factor, STC	UL Classification	Factory Mutual Aprvl	ICC-ES Evaluation	Galvanized Steel - w/ Baked-On Poly Enamel	Stainless Steel 300 Series, #4 Finish	Aluminum - Mill, Clear, Color Anodized	Other
Emergency Response																
Fire Doors, SmokeShield® Fire Doors	50'	40'	•		•			•		•	•		Std	•		
Firemiser™ Insulated Fire Doors,	34'	22'	•					•	•	•	•		Std	•		
SmokeShield® Firemiser									•	•	•		Std	•		
Counter Fire Doors,	16'	7'6"-OR	•							•			Std	•		
SmokeShield® Counter Fire Doors	12'	10'	•							•			Std	•		
CrossingGard® Emergency Response Grille	24'	20'		•								•	•	•	Std	
TranZform® Fire	1600 sq. ft.	22'	•				•		•	•	•	•				double wall steel panels, painted finish
Environmental Separation																
Service Door	50'	40'	•	Op	•			•					Std	•	•	
Thermiser® Insulated Doors	38'	40'	•		•			•	•				Std	•	•	
Counter Doors	21' 4"	10'	•	Op									•	•	Std	
Counter Door with Integral Frame	11' 7"	4'10"	•	Op									•	•	Std	
TranZform® Sound	any	22'	•				•		•							double wall steel panels, bonded vinyl finish
TranZform® Space	any	14'	•				•									steel panels, bonded vinyl finish
VisionAire® Open or Brick Pattern Grille	40'	20'		•		•							•	•	Std	
VistaGard™ Glazed Curtain Grille	40'	20'			•										•	Alum. rods, polycarbonate curtain panels
SentryGate®3 Grille	14'	10'		•		•										continuous horizontal rods with nylon
SentryGate®4 Grille	23' 4"	14'		•		•										link curtain
Side Folding Grille - Open Curtain	60'	12'		•		•							•	•Std		
Side Folding Grille - Glazed Curtain	60'	12'	Op		•	•									•	Alum .sctns w/ polycarbonate curt. panels

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Interior / Exterior Walls Not Requiring Fire Rating

Potential Requirements

- **Security** - the ability to close and lock.
- **Weather Control** - when high wind load or environmental separation is required.
- **Sound Attenuation** - to reduce unwanted sound from one area to another.
- **Aesthetics of Opening** - high traffic areas demanding a more aesthetically pleasing product.
- **Opening above a Counter**

Product Solutions

- **Service Doors** - provide security. High wind load designs available.
- **Thermiser® Insulated Doors** - provide temperature control and sound attenuation. High wind load designs available.
- **Counter Doors** - for openings above counter. Or, when compact door components are desired, these units close to the floor. Also **Counter Door with Integral Frame.**
- **TranZform® Sound -** provide sound control, privacy and security separation. Require minimal headroom.
- **TranZform® Space -** provide privacy and security separation. Require minimal headroom.

Storefronts / Parking Garages / Area Separation Not Requiring Fire Rating

Potential Requirements

- **Security** - the ability to close and lock.
- **Visibility** - the need for visual access of separated spaces.
- **Ventilation -** airflow between separated spaces.
- **High Cycle -** Units expected to cycle more than 20 times per day.
- **Sound Attenuation** - to reduce unwanted sound from one area to another.
- **Low Headroom Conditions -** unable to accommodate a coil at the head of the opening.

Product Solutions

- **VisionAire® Open Curtain Grilles** - provide visibility, ventilation and security.
- **VisionAire® Brick Pattern Grille** - provide above, plus superior durability in high cycle applications.
- **VistaGard™ Glazed Curtain Grille** - provide security, visibility. Clear, physical barrier.
- **SentryGate® Grilles** - open curtain grille with aesthetically pleasing, injection molded components and continuous metal rods. Suitable for high cycle applications.
- **VisionGlide™ Side Folding Grille** - provide security, visibility and ventilation in low headroom conditions.
- **VistaGlide™ Glazed Curtain Side Folding Closure -** visibility in low headroom conditions.
- **TranZform® Sound -** provide sound control, privacy and security separation. Require minimal headroom.
- **TranZform® Space -** provide privacy and security separation. Require minimal headroom.

Interior / Exterior Openings in Walls Requiring Fire Rating

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. High wind load designs available.
- **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 rated fire and smoke protection with emergency egress capabilities. Require minimal headroom.
- **Counter Fire Doors** - can close to the floor when compact door components are desired.
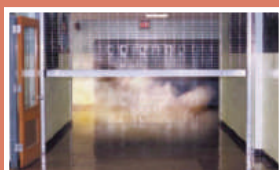
Service Window Openings in Walls Requiring Fire Rating

Potential Requirements
- **Security** - the ability to close and lock.
- **Fire Containment** - product closes automatically in a fire emergency.
- **Smoke Control** - limit the spread of fast spreading, damaging smoke.
- **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.
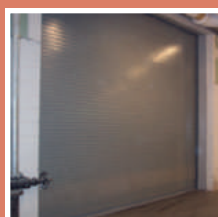
Cross Corridor or Area Separation Requiring Egress and/or Fire Rating
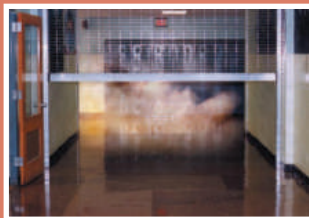
Potential Requirements
- **Egress** - a closed product opens to allow access to exit.
- **Security** - the ability to close and lock or prevent entry.
- **Fire Containment** - product closes automatically in a fire emergency.
- **Sound Attenuation** - to reduce unwanted sound from one area to another.
- **Smoke Control** - limit the spread of damaging smoke.

Product Solutions
- **CrossingGard® Emergency Response Grilles** - self locking assemblies prevent forced opening of closed grille. Fully opens on alarm or power failure, allowing access to egress.
- **TranZform® Fire -** provide UL rated 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 or sound attenuation in addition to fire protection.
- **SmokeShield® Firemiser™ Doors** - combines the benefits of Fire Doors, SmokeShield Fire Doors and Firemiser Insulated Fire Doors.

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CrossingGard® Emergency Response Grille - Model ERG10 and Model ERG-IBC for Access Controlled Egress per the IBC®

Designed to 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:
- Model ERG-IBC is 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.

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 and 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.

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

Ratings: Model ERG-IBC, **ICC-ES ESR-1167**

TranZform® Fire Accordion Folding Fire Door - Model ERP10

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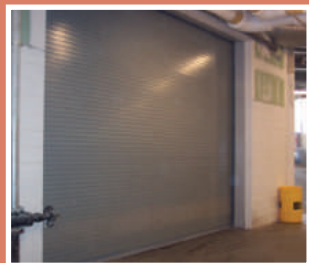
Additional Benefits:
- Designed for use in openings that are part of a required means of egress.
- Compliant with the American with Disabilities Act accessibility standards.
- Fail-safe emergency response capability through motor operation, provided as standard.

Practical Design Applications:
- Egress path openings requiring building code compliant emergency egress.
- An alternative to banks of fire rated swing doors where maintaining the use of the full opening width and height for functionality and aesthetics is desired, such as in atriums, casinos and hotels.
- Curved openings with minimal headroom requiring fire and/or smoke ratings.

Sizes: Openings from 3' 6" to 22' H to a maximum of 1600 square feet, standard construction.

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.

SmokeShield® UL Classified Smoke and Draft Control Assemblies

Limits the spread of fire and smoke in a fire emergency protecting life and property. Equipped with UL listed and tested perimeter smoke seals that are UL classified for proven smoke and draft control per UL 1784. These units are labeled for both fire protection and for smoke and draft control.

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

Practical Design Applications:
- Buildings with large occupancy rates or 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 rated wall openings.

SmokeShield® Fire Doors Model ERD11
- **Sizes:** Openings up to 34' wide by 25' high.
- **Ratings:** UL Classified 4, 3, 1 1/2, 1 or 3/4 hour for fire and UL "S" label for smoke and draft control.

SmokeShield® Firemiser™ Doors Model ERD21
- **Sizes:** Openings up to 34' wide by 22' high.
- **Ratings:** UL Classified 4, 3, 1 1/2, 1 or 3/4 hour for fire and UL "S" label for smoke and draft control.

SmokeShield® Counter Fire Doors Model ERC11
- **Sizes:** Openings to 16' wide if height is 7' 6" or less. Openings to 12' wide if 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.

Fire Rated Doors and Counter Doors

*Specifications in CSI MasterFormat™, BIM RFA, i-drop® and User Dimensioned drawings in .DWG, .PDF at **www.cornelliron.com***

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.

Practical Design Applications: Rated 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 4, when emergency egress is required.

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

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.

Practical Design Applications
- All rated 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 rated wall openings.
- Interior rated wall openings where the door will be normally closed to control varying climatic conditions between two areas.

Sizes: 30' wide, 22' high, standard construction. 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.

Counter Fire Doors - Model ERC10 and
Counter Fire Doors with Integral Frame - Model ERC20

Also specified as fire shutters, these fire doors secure openings above counters and other similar finished openings on interior and exterior walls. Fire rated countertops available. Integral Frame units are fully assembled and welded at the factory for a seamless, custom look without field assembly.

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

Practical Design Applications:
- Smaller openings in rated walls, especially above counters.
- Counter Fire Doors: Openings to the floor where more compact door components are desired.
- Service window openings for rated walls used in cafeterias, healthcare facilities, schools and universities.

Sizes: Openings up to 16' wide if height is 7' 6" or less, or up to 12' wide if height is 10' or less. Integral Frame units: Openings up to 10' wide by 4' 9" high in walls 4 1/2" to 12" thick.

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

Emergency Response Operation Systems - M100 FireGard™

Reliable, fail-safe M100 FireGard Closing Systems automatically close doors in a fire emergency or power outage. M100 Systems include electric motor, chain and crank operated units. Benefits include:
- Ease of testing and resetting, elimination of mechanical spring resetting.
- Controlled, automatic closing speed will not exceed 9" per second.
- Can be applied consistently to fire door and counter fire door products.
- M100's can be retrofit to existing fire doors in most situations.

M100 chain or crank release devices and annunciators are available.

Rolling Doors, Counter Doors, Side Folding Partitions

CORNELL

Service Doors - Model ESD10

Metal slatted rolling doors used to provide security against entry and/or weather protection at exterior and interior openings.

Additional Benefits:
- Wind Load: Cornell service doors can be designed to meet specific PSF wind load requirements. Designs have been performance validated through third party testing.
- Compact overhead storage of curtain is ideal for industrial, commercial and institutional applications.

Practical Design Applications:
- Loading Dock / Freight Doors
- Warehouses
- Water Treatment Facilities
- Large Vehicle Doors
- Power Plants
- Distribution Centers

Sizes: 30' high, 30' wide standard construction. Large Openings to 50' wide, 40' high consult factory.

Specialty Products: Graphic Door with durable, full color images for curtains and hood, **ScreenGard**™ perforated curtain slats and **Matadoor**® breakaway curtain section.

Thermiser® Insulated Doors - Model ESD20

For exterior openings where maintaining different temperatures on each side of the door is desirable. Pay for themselves in energy savings. Also reduce sound transmission.

Additional Benefits:
- Sound Transmission Class: STC 26; muffles unwanted sound between areas.
- Climate Control: insulated curtain yields a 8.0 R-value that can be combined with full perimeter seals.

Practical Design Applications:
- Loading Dock / Freight Doors
- Warehouses
- Water Treatment Facilities
- Large Vehicle Doors
- Power Plants
- Distribution Centers

Sizes: 30' wide, 30' high, standard construction. Large openings to 38' wide, 40' high consult factory.

Counter Doors - Model ESC10 and
Counter Doors with Integral Frames - Model ESC20

Also specified as shutters, these doors secure openings above counters and other similar finished openings on interior and exterior walls. Integral Frame units are fully assembled and welded at the factory for a seamless, custom look without field assembly.

Additional Benefits:
- Smaller, more aesthetically pleasing guides, slats, brackets and hood than service doors.

Practical Design Applications:
- Smaller openings in walls, especially above counters.
- Counter Doors: Openings to the floor where more compact door components are desired.
- Service window openings for use in cafeterias, healthcare facilities, schools and universities

Sizes: Openings up to 21' wide or 10' high. Integral Frame units: Openings up to 11' 7" wide by 4' 10" high in walls 4" to 13" thick.

Options: Countertops in plastic laminate or stainless steel, **Graphic Door** with durable, full color images for curtains and hood, **ScreenGard**™ perforated curtain slats, **Tube Motors** for low profile designs.

TranZform® Accordion Folding Partitions
TranZform Sound - Model ESP20 and TranZform Space - Model ESP10

Separate a large room into two or more independent spaces. **TranZform Sound** offers unparalleled sound control, privacy and security. Use **TranZform Space** in areas where convenient separation of space is desired, but higher level acoustic control is not a concern. A variety of decorative vinyl finishes are available.

Practical Design Applications:
- Religious facilities
- Community Centers
- Conference Centers
- Educational and Healthcare Facilities
- Hotel Multi-Function Rooms

Sizes: Virtually any width opening, Sound 3' 6" to 22' high standard construction, Space 3' 6" to 14' high standard construction

Ratings: TranZform Sound units are STC 45 rated per ASTM E90. Space are STC 30.

Rolling Grilles, Side Folding Grilles

Specifications in CSI MasterFormat™, BIM RFA, i-drop® and User Dimensioned drawings in .DWG, .PDF at www.cornelliron.com

Rolling Grilles: Open Air Curtain - Model ESG10, Brick Pattern - Model ESG12 and Glazed Curtain - Model ESG11

Used to protect both interior and exterior openings to prevent unauthorized access and discourage forced entry. **VisionAire®** grilles have an open curtain formed by horizontal rods and vertical chains, allowing for free circulation of air. **Brick Pattern** VisionAire Grilles are an alternate open configuration that provide superior durability in high cycle applications. **VistaGard™** Grilles have a solid curtain of horizontal rods, vertical nylon links and clear polycarbonate panels that block refuse, odors, bugs and smoke.

Additional Benefits:

- Early Installation Option: early/easy self supporting installation allows grilles to be mounted before walls are built and before there is a finished opening. Structural tubular members, factory machined and fitted for grille guides and brackets, attach directly to the slab below and joists above.
- Aesthetics: a variety of metal finishes from polished stainless to deep bronze are available.
- Low Life Cycle Cost - rugged construction and quality materials assure long life and less costly maintenance.

Practical Design Applications:

- Mall Storefronts
- School Corridors
- Service Window Openings
- Hospitals
- Transportation Terminals
- Government Buildings

Sizes: 40' high, 20' wide standard construction. Larger openings: consult factory.
Options: EZ Lift Package extends the push-up size range for rolling grilles by approximately 33%.

SentryGate® Injection Molded Link Grilles
SentryGate®3 - Model ESG20 and SentryGate®4 - Model ESG21

An alternative to traditional rolling grilles or counter grilles featuring a unique curtain comprised of injection molded components in black or white matte finish and continuous concealed metal rods.

Additional Benefits:

- Lightweight and compact design allows the unit to bolt directly to existing wall construction, frames or mullions. Units can be incorporated into existing construction without the penalty of remodel downtime and cost.
- Rugged Curtain Construction maintains structural integrity and clean look.

Practical Design Applications:

- SentryGate®3 for countertops and smaller openings such as pharmacy or parts counters.
- SentryGate®4 for larger openings and high cycle applications.

Sizes: SentryGate3: openings up to 14' wide by 10' high. SentryGate4: to 23' 4" wide by 14' high.

Side Folding Grilles
Open Air Curtain - Model ESG30 and Glazed Curtain - Model ESG31

Provide security and access control in openings to 12' high. Overhead track is 1 1/2" wide, 1 7/8" high. Manual push / pull operation. **VisionGlide™** Open curtain is formed by vertical tubes and horizontal chains and allows for air circulation. **VistaGlide™** Glazed curtain has vertical interlocking aluminum pivoting sections fitted with clear polycarbonate panels or solid aluminum panels. Blocks refuse, odors, bugs and smoke.
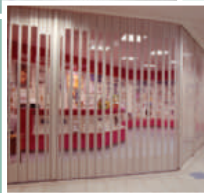
Additional Benefits:

- Accommodates low headroom conditions.
- Can accommodate curved openings, minimum 10" radius curves.

Practical Design Applications:

- Mall Storefronts
- Pharmacies
- Limited Headroom Openings
- Concession Stands
- Cafeterias

Sizes: Openings up to 60' wide, 12' high.
Options: Pocket Door

Cornell Motor Operators and Controls

MG and SG Motor Operators are supplied and supported exclusively by Cornell Iron Works for single source accountability for your motor operated rolling door needs. Available from 1/3 HP industrial duty to 7 1/2 HP continuous duty. Right or Left Hand Operation is available for all units.

Concealed Tubular Motors, Specialty Operators, Control Stations, Sensing Edges, Photo Eyes and a full range of operator accessories are also available.

Over 180 years of Service to the Design and Construction Industry.

For Additional Assistance:

Contact our Architect and Design Support department for answers to your project specific questions.

Our staff of Design Engineers is dedicated to assist you with:

- Product design questions
- Product features and options
- LEED® project requirements
- BIM Project requirements including Revit® Objects
- AutoCAD® Details and Specifications in CSI MasterFormat™
- Detailing Cornell products into your design drawings

Contact:
Architect and Design Support
Phone 800.233.8366 ext. 551
Email: ADS@cornelliron.com

Complete specifications in CSI MasterFormat™, BIM RFA objects and User Dimensioned drawings in .DWG, .PDF and i-drop® are available at www.cornelliron.com

Visit our website for extensive, continually updated product information in an interactive format, including a Drawing Generator that provides user-dimensioned drawings on demand.

Cornell information is also available on your favorite Industry Directory Websites:

Look for Cornell on AutoDesk Seek®, 4specs®, ARCAT®, CADdetails®, McGraw-Hill Sweets® Network, Reed SmartBuilding Index® and Thomas Register®.

Cornell's "Closure Products Manual" and "Side Folding Accordion Products Manual" are available for your architectural library.

Provided free to building industry professionals. Call 800.233.8366 ext. 621 to obtain your copy.
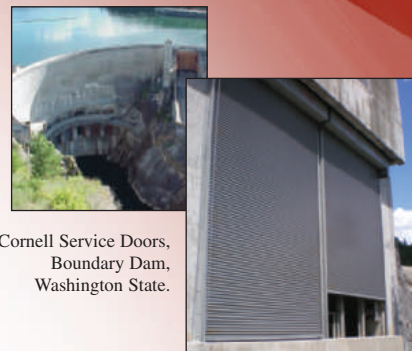
A registered program provider with the American Institute of Architects Continuing Education System, Cornell offers multiple programs on closure product applications.

Contact Sean Smith at seans@cornelliron.com or 800.233.8366 ext. 579 for information or scheduling.

Over 300 approved and authorized independent Cornell distributors are available to provide information, sales, installation and support, worldwide.

To find the distributor near you, use the Distributor Locator link at cornelliron.com, or call 800.233.8366.

Cornell Service Doors, Boundary Dam, Washington State.

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IDA
International Door Association

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