

FCIA Webinar Series

Fire-Resistance Protection of Swinging Fire Doors



**Rich Walke, CTI
Consultant to FCIA**

FCIA – Firestop Contractors International Association



- **Fire Exits??**
- **Housekeeping....Phones, Hands off Keyboard!**
- **Thanks to FCIA Members**
 - Firestop Contractors
 - Manufacturers, Consultants
 - Firestop Distributors, Reps, Friends
- **FREE PDF MOP/ Word Doc Spec - Specifiers @ AE, Independents, AHJ's with Jurisdictions, More**

FCIA – Firestop Contractors International Association

- **FREE Life Safety Digest**
- **UL/ULC, FM 4991 Contractor Programs
IAS AC 291 Inspection Agency
Accreditation Program, Individual Knowledge**
- **ASTM E2174/E2393 Inspection Standards**
- **Tools @ FCIA.org** for Specifiers, AHJ's, Building Owners,
Firestop Contractors & Inspection Agencies
- **Watch FCIA.org for Webinar Announcements!**



“TOTAL FIRE PROTECTION”

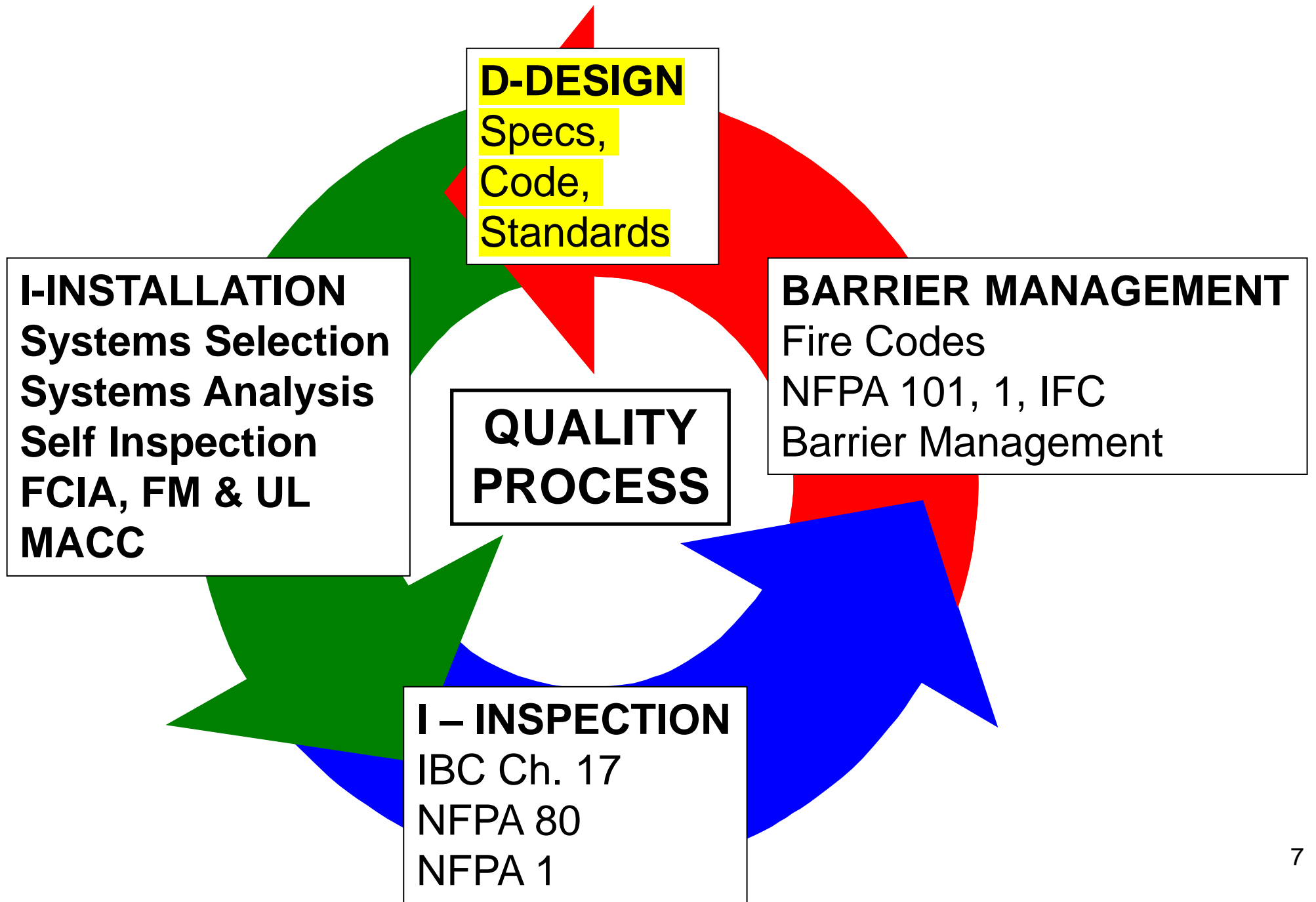
- **Effective Compartmentation**
 - Fire Barriers, Fire Walls/Floors, Smoke Barriers
 - Firestopping, Fire Dampers, Swinging and Rolling Fire Doors, Fire Rated Glazing
- **Detection & Alarm Systems**
- **Sprinkler Suppression Systems**
- **Education for Safety**
 - Building Owners & Managers, Building Occupants and Firefighters

“DIIM” – Design, Install, Inspect, Maintain “DIIM” @ FCIA since 1998....

- Fire Resistance & Smoke Resistant Firestopping
 - Properly *Designed* Building Codes
 - FCIA - 07-84-00 – Specification – *CCS, RSW*
 - *Tested and Listed Systems* – ASTM E814, UL1479, ASTM E1966, UL 2079, ASTM E2307, E2837, E2874, E3037
 - **Movement (M), Smoke (L), Water (W)**
 - Professional *Installation* –
 - FCIA Member, UL/ULC Qualified Contractors, FM 4991 Approved Contractors
 - Properly *Inspected* –
 - ASTM E2174 / E2393, by IAS-AC291 Agency, UL/ULC, IFC, FM Exam
 - *Protection Maintained* – Annually – by FCIA Members

FCIA Actions - 2021

- Conferences - HYBRID
 - FCIA ECA @ Kansas City – May, 2021
 - FCIA FIC @ San Diego – Nov. 2-5
 - FCIA ECA & FIC 2022 – Watch FCIA.org!
- Webinars & Symposiums
- Code Development & Standards Discussions
- Committee Action
- International Discussions
- ***NEW Education in Firestopping!!***
 - ***FCIA's FCAEP Level 1 – Check it out!***



FCIA – Firestop Contractors International Association



- **Thanks FCIA Members**
 - Firestop Contractors
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FCIA Webinar Series

Fire-Resistance Protection of Swinging Fire Doors



Rich Walke, CTI

Introduction

- Original Webinar – December 16, 2020
 - ASTM E119 / UL 263 – Baseline for other fire resistive standards
 - *Overview* of complimentary standards and ratings developed on each unique method for protecting breaches in or through hourly rated assemblies
- 2021 Series of Webinars
 - Multiple webinars which will address the *details* of the standards and ratings developed on each unique method for protecting breaches in or through hourly rated assemblies
- **Today's Webinar – Fire-Resistance Protection of Swinging Fire Doors**

Formal Definition of Opening Protective

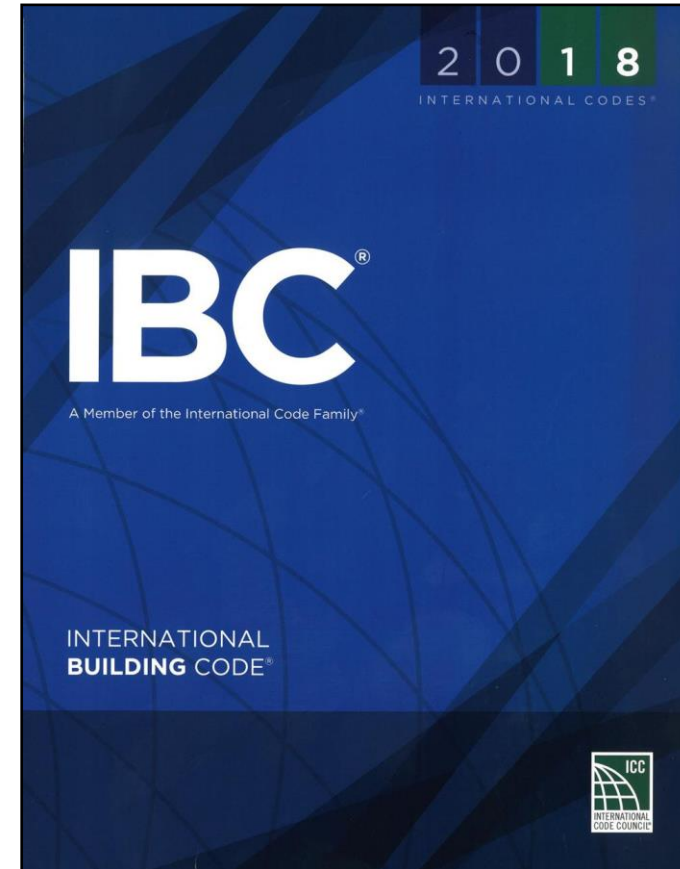
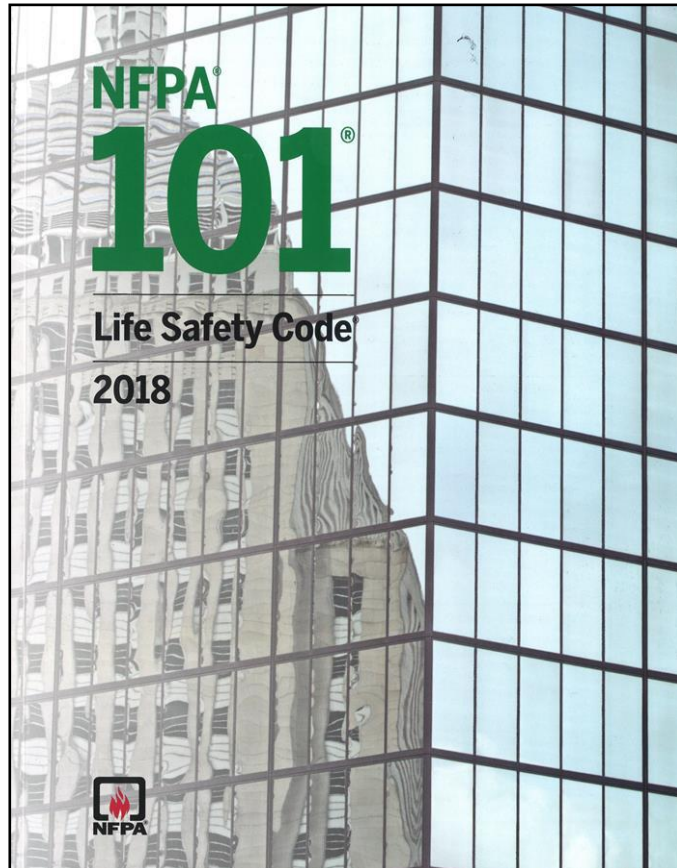
- Opening Protective – *A fire door assembly, fire shutter assembly, fire window assembly or glass-block assembly in a fire-resistance-rated wall or partition.*
(IBC)

Opening Protectives

- Fire Door Assemblies
 - Fire Door Frames
 - Fire Doors
 - Hardware
 - Glazing within Fire Doors
- Fire Window Assemblies
 - Fire Window Frames
 - Glazing



Codes

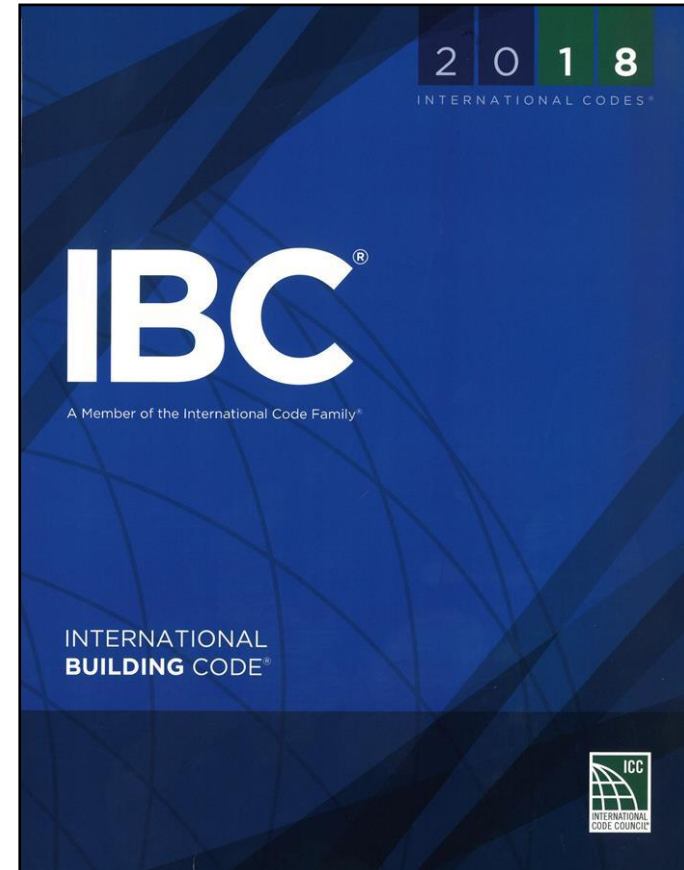


Component Approach Used for Fire Door Assemblies

- Both documents prescribe a component approach for fire door and fire window openings
- IBC and NFPA 101 both reference NFPA 80 and 105 for details on the installation of fire and leakage rated door assemblies, respectively
- Approval of the finished opening protective relies on Listing and ratings of individual components with final approval up to the Code Official

Fire Door Assemblies

Code Requirements



Code Requirements

- Section 716 has been substantially reorganized in the 2018 IBC
- FS101-15
- Separated requirements for fire door assemblies from requirements for fire window assemblies
- Corrected roughly six technical issues

Code Requirements Cont.

- Basic organization:
 - Section 716.1 – General
 - Section 716.2 – Fire Door Assemblies
 - Section 716.3 – Fire Window Assemblies

Code Requirements Cont.

- Section 716 of the 2018 IBC
- 716.1.2.1 - Glazing in and around fire doors must meet safety glazing criteria
 - Wired glass not permitted in or around fire doors
- 716.2.1.1 – Side-hinged or pivoted swinging doors shall be tested to UL 10C or NFPA 252

Code Requirements Cont.

- 716.2.1.2 – Other types of doors shall be tested to UL 10B or NFPA 252
- Table 716.1(2) – Establishes requirements for rating on door based on required vertical assembly rating

**TABLE 716.1(2)
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE ^b	FIRE-RATED GLAZING MARKING DOOR VISION PANEL ^{c, e}	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELIGHT/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	See Note b	D-H-W-240	Not Permitted	4	Not Permitted	W-240
	3	3 ^a	See Note b	D-H-W-180	Not Permitted	3	Not Permitted	W-180
	2	1½	100 sq. in.	≤ 100 sq. in. = D-H-90 >100 sq. in. = D-H-W-90	Not Permitted	2	Not Permitted	W-120
	1½	1½	100 sq. in.	≤ 100 sq. in. = D-H-90 >100 sq. in. = D-H-W-90	Not Permitted	1½	Not Permitted	W-90
Enclosures for shafts, interior exit stairways and interior exit ramps.	2	1½	100 sq. in. ^c	≤ 100 sq. in. = D-H-90 > 100 sq. in. = D-H-T-W-90	Not Permitted	2	Not Permitted	W-120
Horizontal exits in fire walls ^d	4	3	100 sq. in.	≤ 100 sq. in. = D-H-180 > 100 sq. in. = D-H-W-240	Not Permitted	4	Not Permitted	W-240
	3	3 ^a	100 sq. in.	≤ 100 sq. in. = D-H-180 > 100 sq. in. = D-H-W-180	Not Permitted	3	Not Permitted	W-180
Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways and interior exit ramps; and exit passageway walls	1	1	100 sq. in.	≤ 100 sq. in. = D-H-60 >100 sq. in. = D-H-T-W-60	Not Permitted	1	Not Permitted	W-60

Code Requirements Cont.

- 716.2.2.1.1 – Doors in corridors and smoke barriers required to have leakage rating of 3 cfm per sq ft of door opening when tested to UL 1784
- 716.2.2.3 – Doors in interior exit enclosures, ramps and exit passageways shall have maximum transmitted temperature end point of not more than 450°F for 30 minutes

Code Requirements Cont.

- Exception: The temperature rise is not required when an *automatic sprinkler system* is installed
- 716.2.2.3.1 – Fire-protection-rated glazing in doors in interior exit enclosures, ramps and exit passageways is limited to 100 sq in. Fire-resistance-rated glazing having a maximum transmitted temperature end point of not more than 450°F for 30 minutes is permitted up to area tested.

Code Requirements Cont.

- Fire-resistance-rated glazing must also be tested as part of door per UL 10B or 10C, as appropriate
- 716.2.5.1 – Maximum size of glazing in fire doors shall comply with NFPA 80, except where specifically limited in IBC
- 716.2.9 – Doors, along with their frames, glazing and hardware shall be labeled

Fire Door Assemblies

Fire Testing of Door Assemblies



Fire Door and Shutter Assemblies – IBC

Section 716

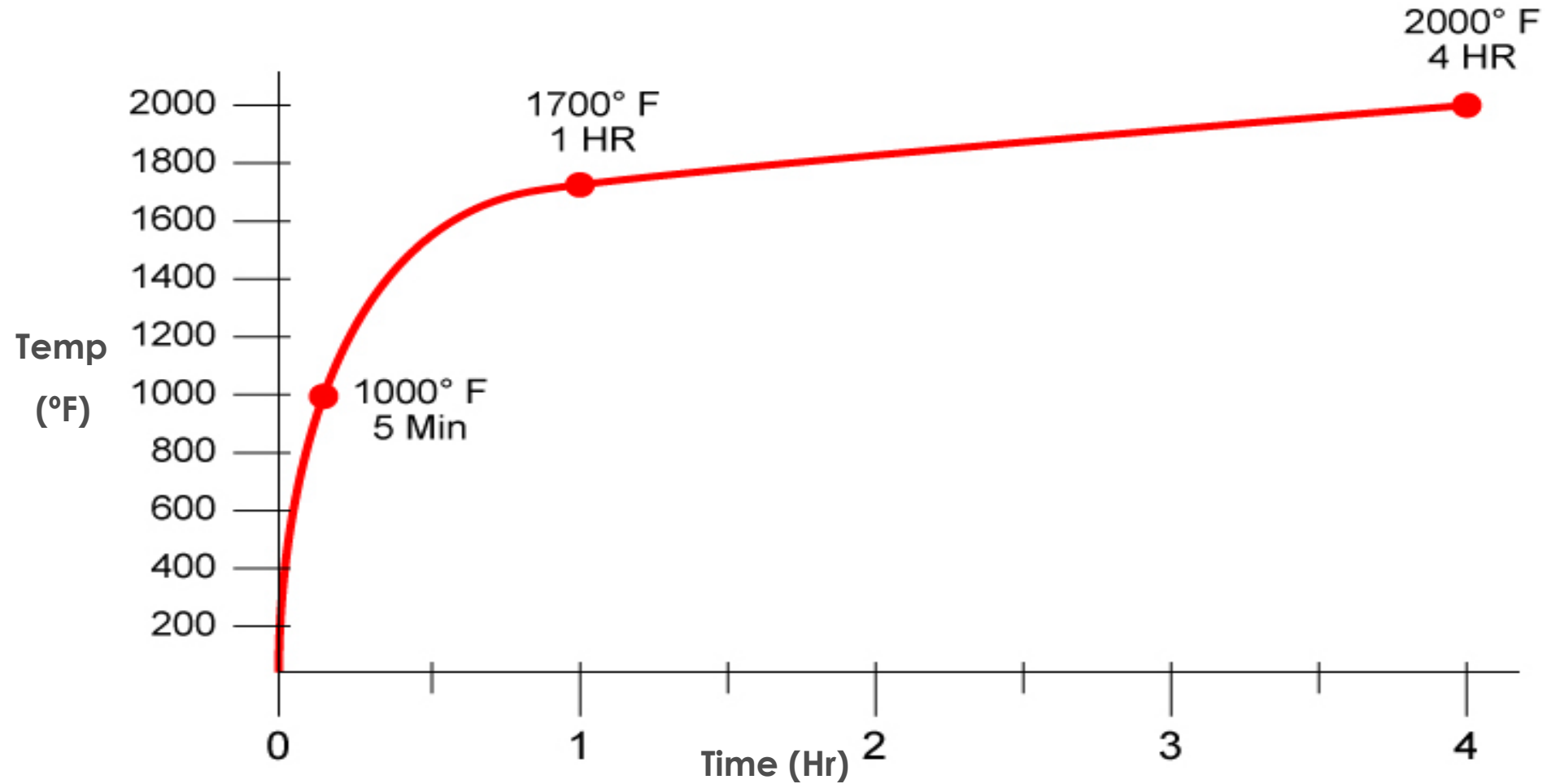
- IBC Referenced Standards
 - Side-hinged or pivoted swinging doors - UL 10C or NFPA 252 (positive pressure)
 - Tin-clad fire door assemblies - UL 10A, UL 14B, and UL 14C
 - Other types of doors - UL 10B or NFPA 252 (neutral pressure)

Fire Door Assembly Ready for Testing





Time - Temperature Curve



Fire Door / Window Assembly Under Test



Fire Door Assemblies Under Test



Hose Stream Test



Conditions of Acceptance Fire Door Assemblies

- Flame Passage
- Hose Stream After Full Duration Fire Exposure



UL



Warrington

Fire Door Assemblies

Fire
Doors



Types of Fire Doors

- Swinging Type Fire Doors – Typically of wood, wood composite, hollow metal and steel composite constructions
- Specialty Doors – Typically passenger elevator doors, freight elevator doors, chute doors, rolling steel or curtain type fire doors

Hollow Metal Doors with Fire Exit Hardware

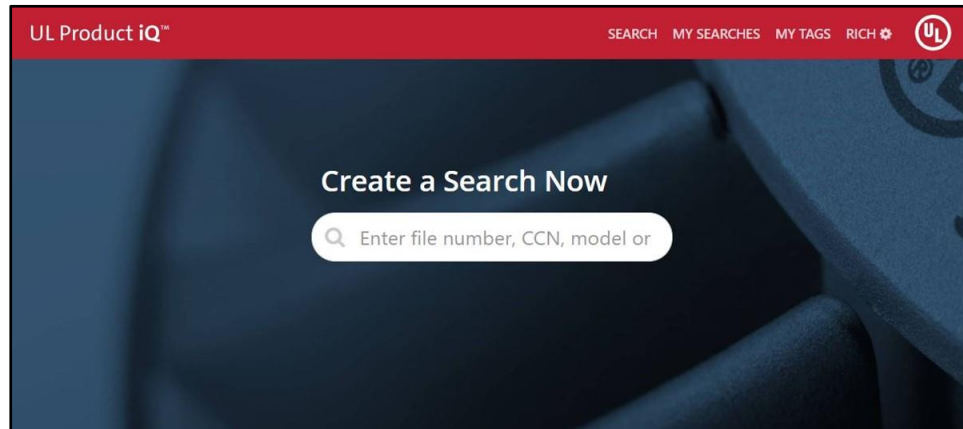


Wood Composite Fire Doors



Where Can I Find The Most Current Listings?

UL Product iQ



INTERTEK DIRECTORY OF BUILDING PRODUCTS

Listed Products, Code Compliance Research Reports (CCRRs), Certificates of Compliance (COCs), Quality Assurance, and Industry Programs

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Listing Category	Nothing selected	
CSI Code	Nothing selected	
Standard	Nothing selected	
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Trade/Brand Name	<input type="text"/>	Design Document <input type="text"/>

Limit results to listings with code compliance research reports (CCRRs)
 Limit results to listings with certificates of compliance (COCs)

Fire Door Assemblies

Glazing in Fire Door and Fire Window Assemblies

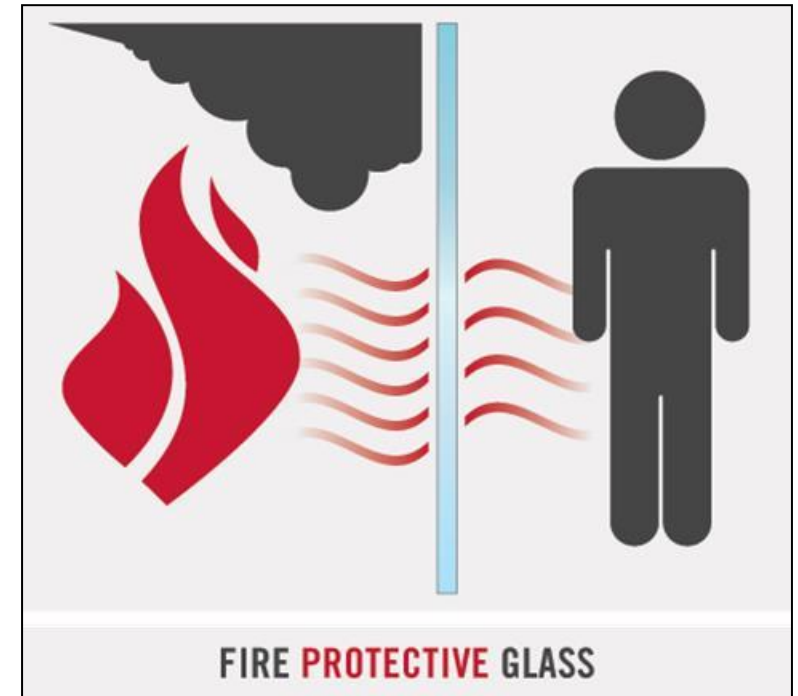


Types of Glazing

- Fire-Rated Glazing
 - Fire-Protection-Rated Glazing Materials
 - Fire-Resistance-Rated Glazing Materials

Fire-Protection-Rated Glazing

- Fire-rated, thin glazing
- Traditional fire-rated material (wired glass, proprietary glass, etc.)
 - Traditional wired glass does not meet safety glazing requirements
- Allows significant radiant heat from unexposed side
- May or may not meet hose stream and temperature requirement



TGP Image

Standards

Fire-Protection-Rated Glazing

- When Used in Fire Door Assemblies
 - UL 10B
 - UL 10C
 - NFPA 252
- Fire Window Assemblies
 - UL 9
 - NFPA 257

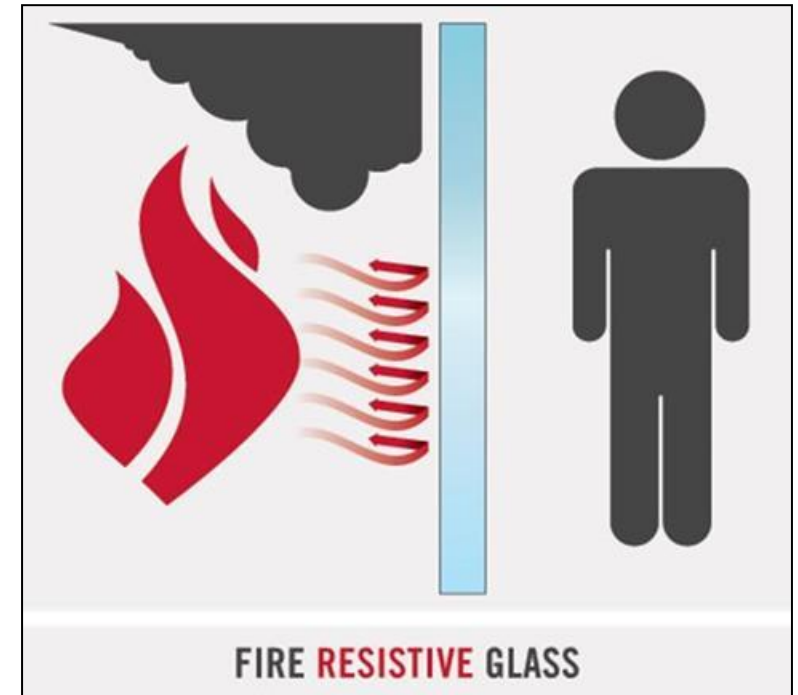
Conditions of Acceptance

Fire-Protection-Rated Glazing

- Flame Passage
- Hose Stream after Full Duration Fire Exposure
 - Limited Openings (Max 5% Fall-Out) Permitted

Fire-Resistance-Rated Glazing

- “Thick” glazing
- Stops fire **AND** radiant heat
- Classified as a “wall” rather than an opening (window)
- Meets same requirements as a gypsum or CMU wall
- When use in walls, both glass and frame must block passage of heat



TGP Image

Standards

Fire-Resistance-Rated Glazing

- UL 263
- ASTM E119

Conditions of Acceptance Fire-Resistance-Rated Glazing

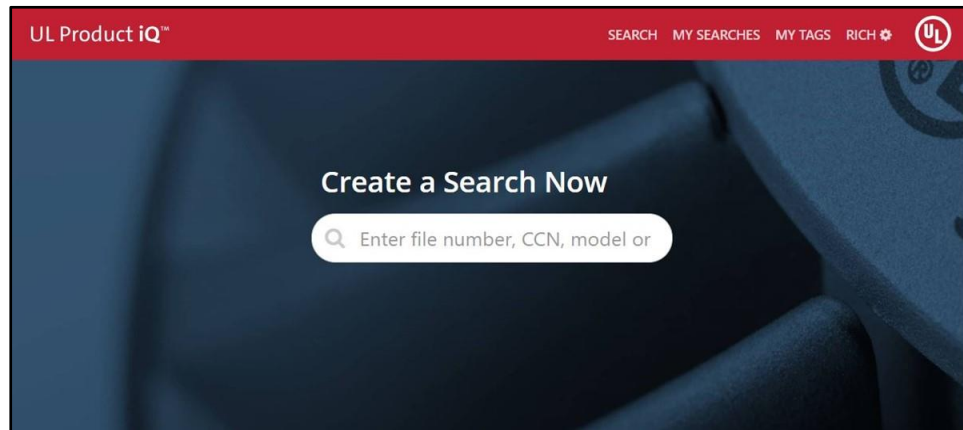
- Flame Passage
- 250°F / 325°F Temperature Rise
- Hose Stream on Duplicate Test Sample Exposed to Fire for Reduced Time Frame

What Type of Glazing is Required?

- The type of glazing required for each of these applications is based on the following:
 - Type of barrier
 - Rating of barrier
 - Application of the glazing panel
 - Size of glazing panel
- The type of glazing required is found in the International Building Code and the Life Safety Code

Where Can I Find The Most Current Listings?

UL Product iQ



UL Category Code: KCMZ
and CCET

INTERTEK DIRECTORY OF BUILDING PRODUCTS

Listed Products, Code Compliance Research Reports (CCRRs), Certificates of Compliance (COCs), Quality Assurance, and Industry Programs

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Listing Category	Nothing selected	
CSI Code	Nothing selected	
Standard	Nothing selected	
Keywords	Spec ID	
CCRR #	COC #	
Trade/Brand Name	Design Document	

Limit results to listings with code compliance research reports (CCRRs)
 Limit results to listings with certificates of compliance (COCs)

Fire Door Assemblies

Leakage Rated Door Assemblies



Leakage Rated Door Assemblies

- Required for rated corridor walls and smoke barriers
- Tested to UL 1784
- Tested as complete package of components necessary to obtain rating
- Maximum 3 cfm per sq ft door area at 0.1 in. WC at ambient and 400°F

Components of a Leakage Rated Door Assembly

- Swinging Fire Door, Positive Pressure
 - Label on swinging fire doors complying with leakage rating bear the statement “Smoke and Draft Control Door” or the letter “S”
- Fire Door Frame
 - Any Listed welded or knock down style frame
 - No special leakage marking required

Components of a Leakage Rated Door Assembly Cont.

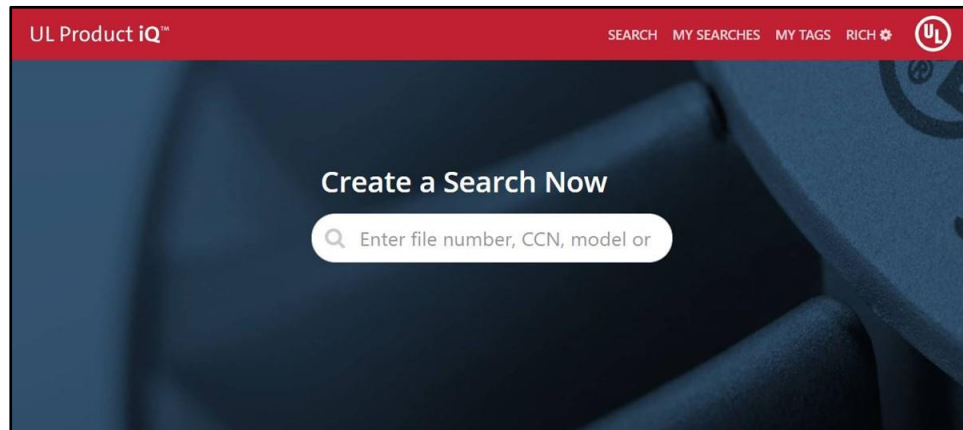
- Category H Gaskets
 - Labeled Category H gasket for use with positive pressure fire doors

OR

- Use a listed “Leakage-Rated Door Assemblies” (**OPBW**)

Where Can I Find The Most Current Listings?

UL Product iQ



UL Category Code: GVYI
and OPBW

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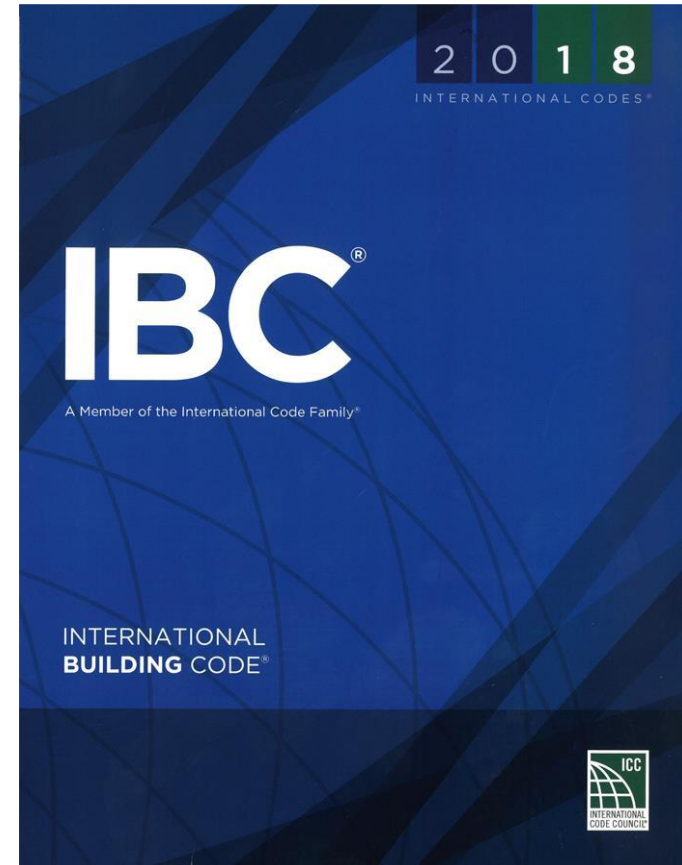
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Limit results to listings with code compliance research reports (CCRRs)
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SEARCH **RESET**

Opening Protectives

IBC Marking Requirements for Glazing



2018 IBC Marking Requirements for Glazing

TABLE 716.1(1)
MARKING FIRE-RATED GLAZING ASSEMBLIES

FIRE TEST STANDARD	MARKING	DEFINITION OF MARKING
ASTM E119 or UL 263	W	Meets wall assembly criteria.
ASTM E119 or UL 263	FC	Meets floor/ceiling criteria ^a
NFPA 257 or UL 9	OH	Meets fire window assembly criteria including the hose stream test.
NFPA 252 or UL 10B or UL 10C	D	Meets fire door assembly criteria.
	H	Meets fire door assembly hose stream test.
	T	Meets 450°F temperature rise criteria for 30 minutes
—	XXX	The time in minutes of the fire resistance or fire protection rating of the glazing assembly.

For SI: °C = [(°F) - 32]/1.8.

a. See Section 2409.1

2018 IBC Marking Requirements for Glazing Cont.

- For fire-protection-rated glazing used in Fire Door Assemblies, glazing marked: D – H – T – XXX, where:
 - D indicates glazing meets the door assembly criteria
 - H indicates the glazing has been subjected to hose stream test
 - T indicates the glazing meets 450°F temperature rise for 30 minutes
 - XXX indicates fire-protection rating in minutes

2018 IBC Marking Requirements for Glazing Cont.

- For fire-resistance-rated glazing used in Fire Door Assemblies, glazing marked: D – H – T – W – XXX, where:
 - D indicates glazing meets the door assembly criteria
 - H indicates the glazing has been subjected to hose stream test
 - T indicates the glazing meets 450°F temperature rise
 - W indicates the glazing meets the wall assembly criteria
 - XXX indicates fire-protection rating in minutes

2018 IBC Marking Requirements for Glazing Cont.

- For glazing used in Fire Window Assemblies, glazing marked: OH – XXX, where:
 - OH indicates glazing indicates glazing meets the fire window criteria including the hose stream test
 - XXX indicates fire-protection rating in minutes

2018 IBC Marking Requirements for Glazing Cont.

- For fire-resistance-rated glazing used as a wall, glazing marked: W – XXX, where:
 - W indicates glazing meets the wall assembly criteria
 - XXX indicates fire-resistance rating in minutes

**TABLE 716.1(2)
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE ^b	FIRE-RATED GLAZING MARKING DOOR VISION PANEL ^{c, e}	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELIGHT/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Fire walls and fire barriers having a required fire-resistance rating greater than 1 hour	4	3	See Note b	D-H-W-240	Not Permitted	4	Not Permitted	W-240
	3	3 ^a	See Note b	D-H-W-180	Not Permitted	3	Not Permitted	W-180
	2	1½	100 sq. in.	≤ 100 sq. in. = D-H-90 >100 sq. in. = D-H-W-90	Not Permitted	2	Not Permitted	W-120
	1½	1½	100 sq. in.	≤ 100 sq. in. = D-H-90 >100 sq. in. = D-H-W-90	Not Permitted	1½	Not Permitted	W-90
Enclosures for shafts, interior exit stairways and interior exit ramps.	2	1½	100 sq. in. ^c	≤ 100 sq. in. = D-H-90 > 100 sq. in. = D-H-T-W-90	Not Permitted	2	Not Permitted	W-120
Horizontal exits in fire walls ^d	4	3	100 sq. in.	≤ 100 sq. in. = D-H-180 > 100 sq. in. = D-H-W-240	Not Permitted	4	Not Permitted	W-240
	3	3 ^a	100 sq. in.	≤ 100 sq. in. = D-H-180 > 100 sq. in. = D-H-W-180	Not Permitted	3	Not Permitted	W-180
Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways and interior exit ramps; and exit passageway walls	1	1	100 sq. in.	≤ 100 sq. in. = D-H-60 >100 sq. in. = D-H-T-W-60	Not Permitted	1	Not Permitted	W-60

Installation Standards

Both the IBC and the NFPA Life Safety Code reference NFPA 80, Standard for Fire Doors and other Opening Protectives, and NFPA 105, Standard for Smoke Door Assemblies and Other Opening Protectives



NFPA 80 - Scope

- This standard regulates the installation and maintenance of assemblies and devices used to protect openings:
 - in walls,
 - in floors,
 - and in ceilings

“against the spread of fire and smoke”

NFPA 80 Requirements – Care and Maintenance

- **5.1.1.2** The requirements of this chapter shall apply to new and existing installations.
- **5.1.3 Replacement** When replaced, fire doors, shutters windows and component parts shall be replaced with components which meet the rating required for new installations.

NFPA 80 Requirements – Care and Maintenance Cont.

- **5.2.4 Periodic Inspection and Testing**
 - **5.2.4.1*** Periodic inspections and testing shall be performed not less than annually.
 - **5.2.4.2** Requires inspection to same criteria as original acceptance testing.

NFPA 80 Requirements – Care and Maintenance Cont.

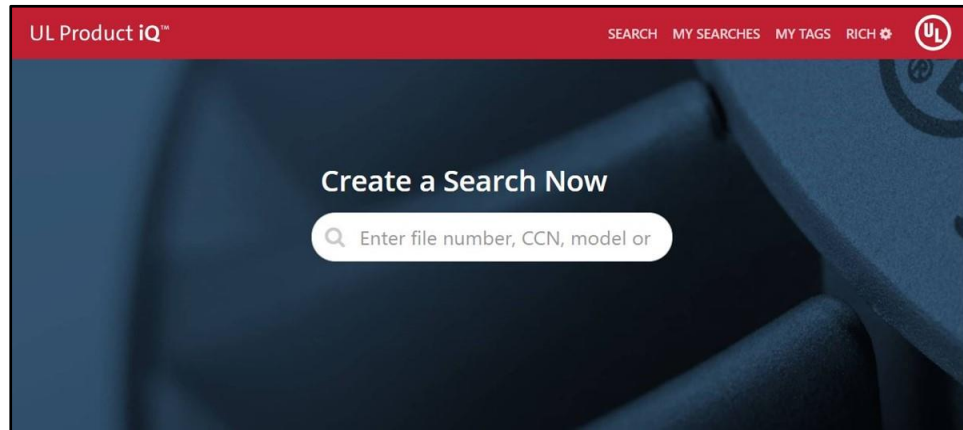
- **5.5 Maintenance**

- **5.5.1*** Repairs shall be made, and defects that could interfere with operation shall be corrected without delay.
- **5.5.2** Damaged glazing material shall be replaced with labeled glazing.
- **5.5.3** Replacement glazing materials shall be installed in accordance with their individual listing.

Opening Protectives

Accessing Certifications

UL Product iQ



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Listed Products, Code Compliance Research Reports (CCRRs), Certificates of Compliance (COCs), Quality Assurance, and Industry Programs

Company

Listing Category

CSI Code

Standard

Keywords

Spec ID

CCRR #

COC #

Trade/Brand Name

Design Document

Limit results to listings with code compliance research reports (CCRRs)

Limit results to listings with certificates of compliance (COCs)

Intertek Directory
of Building Products

UL Product Categories for Fire Doors and Windows

- Door and window related products are listed in individual product categories (CCNs)
- There are approximately 55 product categories that are fire door related
- Each product category describes some generic family of products (e.g. Swinging Type Fire Doors)

UL Product Categories for Fire Doors and Windows Cont.

- Most fire door categories begin with the letter “G”, glazing categories begin with the letter “K”
- Each product category includes Guide Information and the individual manufacturer’s listings
- Each manufacturer’s listings describe Model No. and details of listing

Navigating the UL Online Directory

UL Product iQ



Product iQ – UL's New Online Directory

- Replaces the old Online Certifications Directory which was developed in 1999
- Identifies Certified products, designs, systems, assemblies and constructions
- Helps you achieve code compliance
- Is continuously updated
- Requires registration to create user account
- Basic Service – no charge for use

Product iQ – UL's New Online Directory

- Paid Subscription Service provides more features
 - Save Searches
 - Tags and Groups
 - Confirmation Letters
- <https://iq.ulprospector.com/en/>
- Vanity addresses
 - www.ProductiQ.UL.com
 - www.UL.com/ProductiQ
 - www.UL.com/PiQ

UL Product iQ Cont.

The image shows a screenshot of the UL Product iQ website. At the top is a red navigation bar with the text "UL Product iQ™" on the left, "English" with a dropdown arrow in the center, and "LOG IN" and "CONTACT US" on the right. The UL logo is in the top right corner. The main content area has a dark background with a close-up of a UL-certified component. The heading "Trusted Data. Modern Design." is in large white text. Below it is a paragraph: "UL Product iQ marries the longstanding UL safety certification information relied upon by millions of users with the intuitive design and user-friendliness of a modern search engine." On the right side, there is a blue-bordered box containing a "HAVE AN ACCOUNT?" section with three buttons: "LOG IN" (dark blue), "CREATE YOUR ACCOUNT" (light blue), and "REGISTER FOR FREE" (lighter blue). A red arrow points to the "REGISTER FOR FREE" button.

UL Product iQ™

English

LOG IN CONTACT US

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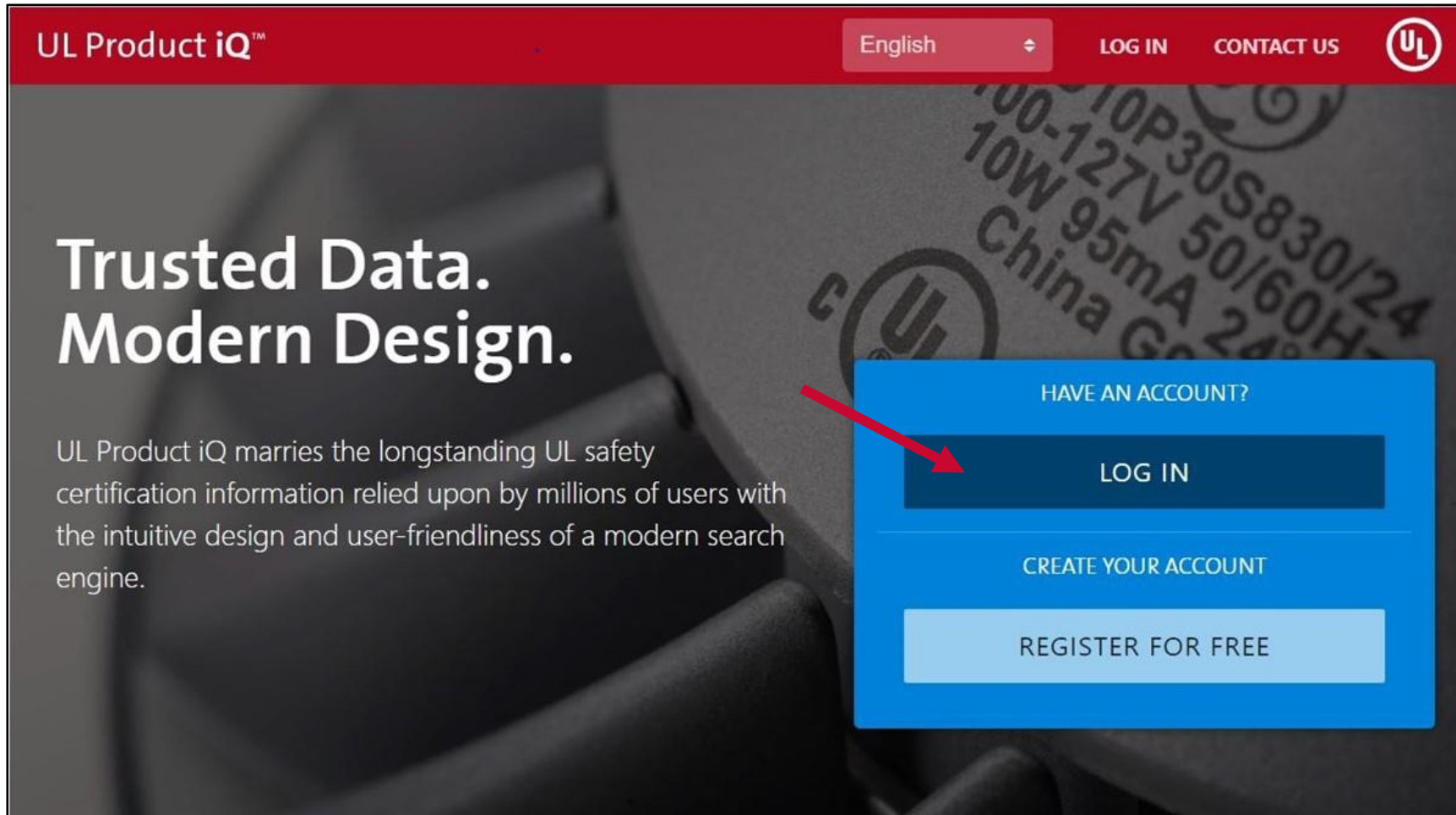
HAVE AN ACCOUNT?

LOG IN

CREATE YOUR ACCOUNT

REGISTER FOR FREE

UL Product iQ Cont.



The screenshot displays the UL Product iQ website interface. At the top, a red navigation bar contains the text "UL Product iQ™" on the left, a language dropdown menu set to "English" in the center, and "LOG IN" and "CONTACT US" links on the right. The UL logo is positioned in the top right corner. The main content area features a dark background with a close-up image of a UL-certified component. The text "Trusted Data. Modern Design." is prominently displayed in white. Below this, a paragraph describes the platform's features. A blue modal box is overlaid on the right side, containing the heading "HAVE AN ACCOUNT?" and three buttons: "LOG IN" (dark blue), "CREATE YOUR ACCOUNT" (medium blue), and "REGISTER FOR FREE" (light blue). A red arrow points to the "LOG IN" button.

UL Product iQ™

English

LOG IN CONTACT US

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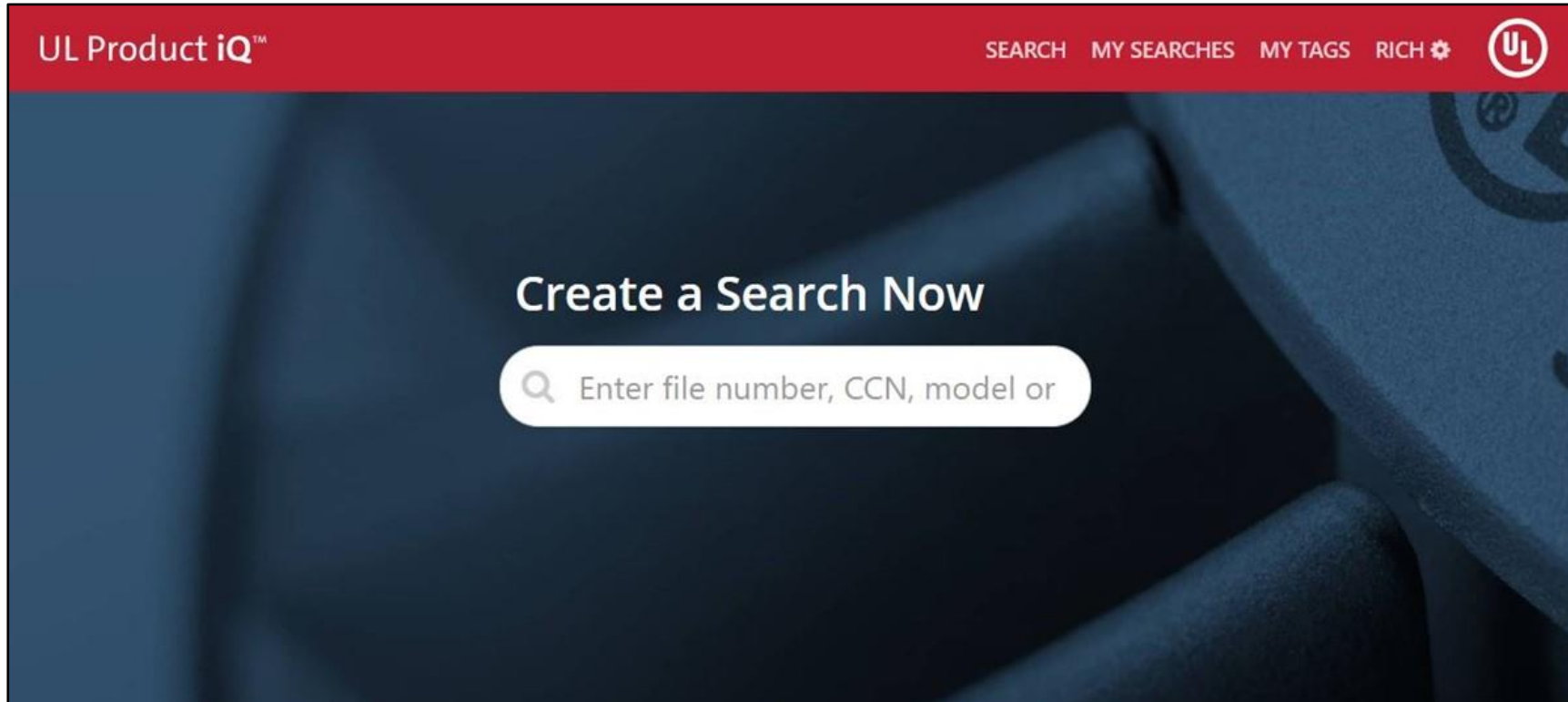
HAVE AN ACCOUNT?

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UL Product iQ Cont. Smart Search



UL Product iQ Cont.

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UL Product iQ™

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Find enhanced information related to fire rated walls, floors, roofs, beams, columns, joints and firestops.

Feedback

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- Other

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Learn more about Product iQ features

UL Product iQ Cont.

The screenshot displays the UL Product iQ website interface. At the top, a red navigation bar contains the text "UL Product iQ™" on the left and "SEARCH MY SEARCHES MY TAGS RICH" with a gear icon and the UL logo on the right. Below the navigation bar, the main content area is divided into two columns. The left column features a dark blue box with the text "UL Architectural Services" and "Find enhanced information related to fire rated walls, floors, roofs, beams, columns, joints and firestops." Below this is a yellow box with a "tip" icon and the text "Confirmation Letters" and "Shareable document confirming a Product iQ listing", with a "LEARN MORE" button. The right column is titled "Building Materials and Systems" with a building icon and a dropdown arrow. Below the title is a search prompt: "Search for designs, systems, assemblies, and products that include, or are related to, hourly fire-resistance ratings." The right column lists several categories with brief descriptions: "Dampers", "Electrical Circuit Protective Systems (FHIT)", "Fire Door and Fire Window Related Certifications", "Fire Rated Roofs, Walls, Floors, Beams and Columns", "Fire-rated Grease Duct Assemblies", and "Fire-resistance Ratings of Structural Steel Used in Petrochemical Facilities".

UL Product iQ™

SEARCH MY SEARCHES MY TAGS RICH

UL Architectural Services
Find enhanced information related to fire rated walls, floors, roofs, beams, columns, joints and firestops.

Product iQ tip
Confirmation Letters
Shareable document confirming a Product iQ listing
[LEARN MORE](#)

Building Materials and Systems

Search for designs, systems, assemblies, and products that include, or are related to, hourly fire-resistance ratings.

Dampers
The category Dampers for Fire Barrier and Smoke Applications covers fire dampers, smoke dampers (leakage-rated dampers), combination fire and smoke dampers (fire and leakage-rated dampers), and corridor dampers.

Electrical Circuit Protective Systems (FHIT)
Electrical Circuit Protective Systems consist of components and materials that are intended for installation as protection for specific electrical wiring systems, with respect to the disruption of electrical circuit integrity upon exterior fire exposure.

Fire Door and Fire Window Related Certifications
Fire door assemblies and window assemblies are construction details and the fire ratings for fire door assemblies and fire window assemblies that are more complex than those typically associated with these assemblies.

Fire Rated Roofs, Walls, Floors, Beams and Columns
This category covers floor-ceilings, roof-ceilings, beams, columns, walls and partitions investigated for an hourly fire-resistance rating.

Fire-rated Grease Duct Assemblies

Fire-resistance Ratings of Structural Steel Used in Petrochemical Facilities
This category covers hourly fire-resistance ratings of steel columns intended for use in petrochemical facilities investigated using a rapid rise fire exposure.

UL Product iQ Cont.

The screenshot displays the UL Product iQ website interface. At the top, there is a red navigation bar with the text "UL Product iQ™" on the left and "SEARCH MY SEARCHES MY TAGS RICH" followed by the UL logo on the right. The main content area is white and contains a list of categories, each with a blue header and a descriptive paragraph:

- Firestop Systems**
This category covers firestop systems, which are specific constructions consisting of a wall or floor assembly, a penetrating item passing through an opening in the wall or floor assembly, and the materials designed to prevent the spread of fire.
- Firestop Systems for Canada**
This category covers firestop systems, which are specific constructions consisting of a wall or floor assembly, a penetrating item passing through an opening in the wall or floor assembly, and the materials designed to prevent the spread of fire.
- Installation Code Search**
Search for UL Certified products by installation code. Select your model installation code and section to locate UL Certified products for Code compliant installations.
- Joint Systems**
This category covers joint systems, which are specific constructions consisting of adjacent fire-resistance-rated wall and/or floor assemblies and the materials designed to prevent the spread of fire through a linear opening between the wall and/or floor.
- Perimeter Fire Containment Systems**
A perimeter fire containment system is a specific construction consisting of a floor with an hourly fire endurance rating, an exterior curtain wall with no hourly fire endurance rating, and the fill material installed between the floor and the curtain wall.
- Qualified Firestop Contractors (RFTI)**
- Roof Deck Constructions**
This category covers roof deck constructions investigated as to the spread of fire on the underside and/or resistance to wind uplift forces.
- Sprinkler Identification Number**

UL Product iQ Cont.

The screenshot displays the UL Product iQ website interface. At the top, a red navigation bar contains the text "UL Product iQ™" on the left and "SEARCH MY SEARCHES MY TAGS RICH ⚙️" on the right, followed by the UL logo. The main content area is divided into several sections:

- Thermal Barrier Systems (XCLF)**: This category covers thermal barrier systems consisting of components and materials intended for installation as protection for electrical wiring systems specified in the individual systems. These systems are investigated with respect to heat transmission.
- UL Evaluation Reports**: A section with a blue header.
- Ventilation Duct Assemblies**: This category covers the fire-resistive performance of ventilation duct assemblies. These assemblies are investigated with respect to their ability to resist the spread of fire from one compartment to another without the aid of fire dampers.
- Windstorm Rated Building Products**: This category covers windstorm-rated exterior building products intended to protect the exterior envelope of structures in the event of hurricanes or tornadoes.

Below these sections is a blue button with a hamburger menu icon and the text "Other" followed by a right-pointing chevron. At the bottom, a dark blue header reads "PIQ DATABASE INFO". Below this header are three white boxes with icons and text:

- Icon of two overlapping documents: **229327** Document Count
- Icon of a circular arrow: **15 Jan, 2019** Last Update
- Icon of a grid of dots: **68474** Companies Listed

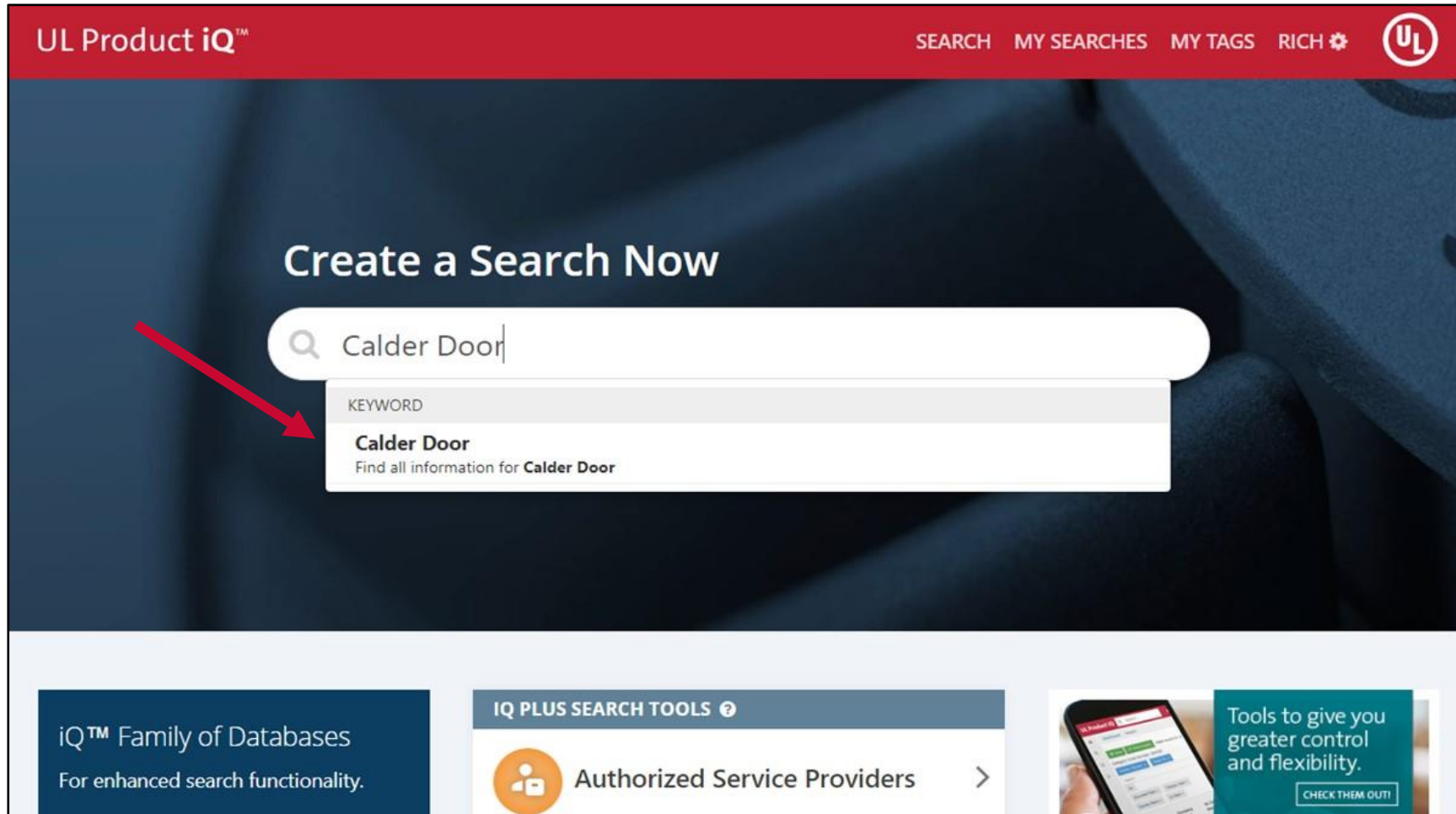
UL Product iQ Cont.

Smart Search for a swinging fire door manufactured by Calder Door




UL Product iQ Cont.

Smart Search



UL Product iQ™

SEARCH MY SEARCHES MY TAGS RICH ⚙️ 

Create a Search Now


🔍 Calder Door


KEYWORD

Calder Door
Find all information for **Calder Door**

iQ™ Family of Databases
For enhanced search functionality.

IQ PLUS SEARCH TOOLS ⓘ

 Authorized Service Providers >

 Tools to give you greater control and flexibility.
[CHECK THEM OUT!](#)

UL Product iQ Cont.

The screenshot displays the UL Product iQ search interface. The top navigation bar includes 'SEARCH', 'MY SEARCHES', 'MY TAGS', 'RICH', and the UL logo. The main content area is divided into a left sidebar for refining results and a central results pane. The sidebar contains filters for Keyword, UL Category Control Number, Company Name, File Number, and Country Name, each with a 'Click to view and filter values' button. The central pane shows search results for the keyword 'Calder Door', with a red circle highlighting the '5 Results' count. Below the count are 'Display: Images' and 'Rows: 100' dropdowns. The results are presented in a table with columns for Document Name, UL CCN Description, Related Images, and My Tags. The table lists five entries related to fire doors and window frames. At the bottom of the results pane are pagination controls showing '1' of 1 page. On the right side, there is a 'Product iQ tip' banner for 'Tag Groups' with a 'LEARN MORE' button and the UL logo.

UL Product iQ™

SEARCH MY SEARCHES MY TAGS RICH UL

Dashboard / Search

REFINE RESULTS

Build or filter your results by keyword and/or adding criteria like document type, file number and country name.

Keyword

Calder Door Search

UL Category Control Number

Click to view and filter values

Company Name

Click to view and filter values

File Number

Click to view and filter values

Country Name

Click to view and filter values

Add Filter

Cancel Reset Save Search

5 Results :: Keyword: Calder Door

Display: Images Rows: 100

Document Name	UL CCN Description	Related Images	My Tags
GSYX.R15652	SWINGING-TYPE FIRE DOORS		
GSZC.R15652	FINISHERS OF FIRE DOORS		
GSZN.R15652	SWINGING-TYPE FIRE DOORS, POSITIVE-PRESSURE TESTED		
GVTV.R15589	FIRE DOOR AND FIRE WINDOW FRAMES		
GVUP.R15589	FINISHERS OF FIRE DOOR FRAMES AND FIRE WINDOW FRAMES		

1 of 1

Product iQ tip

Tag Groups

Organize your personal workspace with custom tags

LEARN MORE

UL

UL Product iQ Cont.

UL Product iQ™													SEARCH MY SEARCHES MY TAGS RICH ⚙		UL
Swinging-type Fire Doors, Positive-pressure Tested															
See General Information for Swinging-type Fire Doors, Positive-pressure Tested															
CALDER DOOR & SPECIALTY CO 1296 LOOP RD PO BOX 4601 LANCASTER, PA 17604-4601 USA Swinging doors may be provided as follows:															R15652
Model	Max. Rating	Door Type	Opening Type	Category	Min Size ft-in(mm)		Max Size ft-in(mm)		Latching Hardware	Accessories [*]	Temp Rise Rating °F(°C)	Smoke Control			
					W	H	W	H							
-	3 hour	Steel Covered Composite	Single	A	-	-	4 - 0 (1219)	8 - 0 (2438)	Cylindrical, Mortise	Cladding, Fire Door Viewer, Glazing, Louver	-	S			
	3 hour	Steel Covered Composite	Single	A	-	-	4 - 0 (1219)	8 - 0 (2438)	Mortise Fire Exit, Rim Exit, Surface Vertical Rod Exit	Cladding, Fire Door Viewer, Glazing	-	S			
	3 hour	Steel Covered Composite	Pair w/ Astragal	A	-	-	8 - 0 (2438)	8 - 0 (2438)	Cylindrical, Mortise	Cladding, Fire Door Viewer, Glazing, Louver	-	S			
	3 hour	Steel Covered Composite	Pair w/ Astragal	A	-	-	8 - 0 (2438)	8 - 0 (2438)	Concealed Vertical Rod Exit, Mortise Fire Exit, Rim Exit, Surface Vertical Rod Exit	Cladding, Fire Door Viewer, Glazing	-	S			

Navigating the Intertek Online Directory

Intertek Directory of Building Products



Intertek Directory of Building Products

- Identifies Certified products, designs, systems, assemblies and constructions
- Helps you achieve code compliance
- Is continuously updated
- <https://bpdirectory.intertek.com>

Intertek Directory of Building Products

INTERTEK DIRECTORY OF BUILDING PRODUCTS

Search and view information on the Directory of Building Products, including Product Listings, Code Compliance Research Reports (CCRRs), Certificates of Compliance (COCs), Quality Assurance, and Industry Programs.

Company	<input type="text" value="Nothing selected"/>		
Listing Category	<input type="text" value="Nothing selected"/>		
CSI Code	<input type="text" value="Nothing selected"/>		
Standard	<input type="text" value="Nothing selected"/>		
Keywords	<input type="text"/>	Spec ID	<input type="text"/>
CCRR #	<input type="text"/>	COC #	<input type="text"/>
Trade/Brand Name	<input type="text"/>	Design Document	<input type="text"/>

Limit results to listings with code compliance research reports (CCRRs)

Limit results to listings with certificates of compliance (COCs)

SEARCH

RESET

RESOURCES

+1 855 944 2378
bpcerthelpdesk@intertek.com

- ▶ [Intertek B&C](#)
- ▶ [Product Directories](#)
- ▶ [AHJ Resources](#)
- ▶ [SpecDIRECT](#)
- ▶ [My TestCentral](#)
- ▶ [Fire Door Categories](#)



Intertek



Intertek



Intertek Directory of Building Products

Search for a 90 minute fire door /
frame assembly manufactured by
Global Security Glazing, LLC



Intertek Directory of Building Products

INTERTEK DIRECTORY OF BUILDING PRODUCTS

Search and view information on the Directory of Building Products, including Product Listings, Code Compliance Research Reports (CCRRs), Certificates of Compliance (COCs), Quality Assurance, and Industry Programs.

Company	Nothing selected		▼
Listing Category	CATEGORY D - DOOR/FRAME ASSEMBLIES		▼
CSI Code	Nothing selected		▼
Standard	UL 10(c)		▼
Keywords	<input type="text"/>	Spec ID	<input type="text"/>
CCRR #	<input type="text"/>	COC #	<input type="text"/>
Trade/Brand Name	<input type="text"/>	Design Document	<input type="text"/>

Limit results to listings with code compliance research reports (CCRRs)

Limit results to listings with certificates of compliance (COCs)

SEARCH RESET

Intertek Directory of Building Products

INTERTEK DIRECTORY OF BUILDING PRODUCTS

Search and view information on the Directory of Building Products, including Product Listings, Code Compliance Research Reports (CCRRs), Certificates of Compliance (COCs), Quality Assurance, and Industry Programs.

Company	<input type="text" value="Nothing selected"/>	
Listing Category	<input type="text" value="CATEGORY D - DOOR/FRAME ASSEMBLIES"/>	
CSI Code	<input type="text" value="Nothing selected"/>	
Standard	<input type="text" value="UL 10(c)"/>	
Keywords	<input type="text"/>	Spec ID <input type="text"/>
CCRR #	<input type="text"/>	COC # <input type="text"/>
Trade/Brand Name	<input type="text"/>	Design Document <input type="text"/>

- Limit results to listings with code compliance research reports (CCRRs)
- Limit results to listings with certificates of compliance (COCs)

Company ▲	Listed Product	Spec ID	Standard	More
A & A Sheet Metal Products, Inc.	A & A Sheet metal Products Inc. SECURALL 2 Hour Fire Rated Magazine Door and Frame Assembly	39574	CAN / ULC S104 (2010); NFPA 252 (2012); UL 10(c) (2016)	



Intertek Directory of Building Products

Company ▲	Listed Product	Spec ID	Standard	More
Global Security Glazing, LLC	INFERNOGARD™ Fire Rated Door System 90 Minute	56532	CAN / ULC S104 (2015); NFPA 252 (2017); UL 10(c) (2016)	
Halspan Limited	Halspan Prima / Prima Plus 20 Minute without Hose Stream Wood Fire Door Assemblies	33316	UL 10(c) (2009)	COC #: WHI18-23137127
Halspan Limited	Halspan Universal Plus 20 Minute without Hose Stream Wood Fire Door Assemblies	33315	UL 10(c) (2009)	COC #: WHI18-23137128
Hope's Windows, Inc.	Hope's Windows 5000 Series 45 Minute Door/Frame Assemblies	29949	CAN / ULC S104 (2015); NFPA 252 (2017); UL 10(c) (2016)	

Intertek Directory of Building Products

INFERNOGARD™ Fire Rated Door System 90 Minute

Company: Global Security Glazing, LLC

INFERNOGARD™ Door Assembly System

Assembly Rating - Up To 90 Minutes

Rating:	Application:	Maximum Size of Openings:
60 Minute	Singles	4' 0" wide x 9' 0" high
	Pairs	8' 0" wide x 9' 0" high
90 Minute	Singles	4' 0" wide x 9' 0" high
	Pairs	8' 0" wide x 9' 0" high

Glazing Markings: D-H-T-60 and D-H-T-90

*Component Bearing the Warnock Hersey Certification Mark

Limitations:

Surface Mounted Vertical Rod Fire Exit Hardware, Pivot Hinges, Offset Hinges.

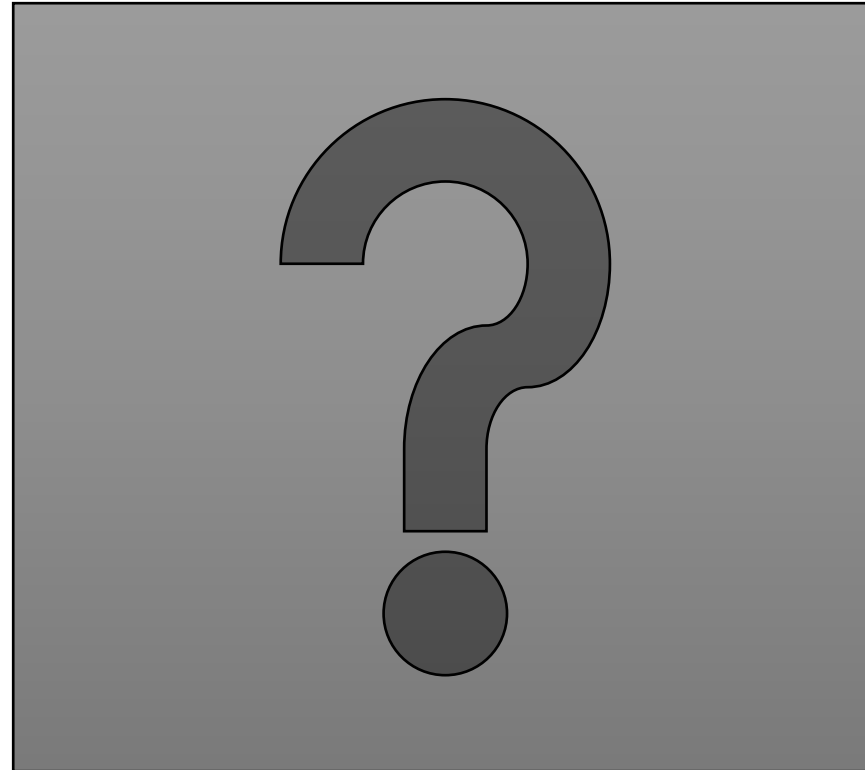
Panels - 4,952 sq. in. (1 hour), 4,876 sq. in. (1-1/2 hour).

Temp Rise - 250°F for full duration, Door and frame to be installed as a unit.

Listed fire-rated open cell glazing tape is allowed for use with INFERNOGARD™ Glazing such that it is approved for fire-rated durations equal to or greater than the respective INFERNOGARD™ Glazing product it is used with.

Due to the thickness of the INFERNOGARD™ products, the vision kit and door assembly must be fire rated and listed and labeled for use with fire rated glazings which are at least of equivalent thickness to the respective INFERNOGARD™ products used.

Questions??



Thanks for Attending!!!

Rich Walke, Consultant to the FCIA
Firestop Contractors International Association
4415 W. Harrison St., #540
Hillside, IL 60162
(708) 202 - 1108