WON-DOOR

FireGuard

The ORIGINAL horizontal sliding accordion fire door.

Meets all IBC and NFPA Egress Requirements

Providing Architects with DESIGN FREEDOM since 1962
FIRE SAFETY by Design

Founded in 1962, the Won-Door Corporation introduced the world’s most durable acoustically rated folding partition. In 1977, the company pioneered the development of the first-ever accordion-type, fire rated horizontal sliding door. Today, more than 40 years later, Won-Door remains the industry leader in the manufacture of accordion-type fire doors and moveable firewalls. Technology developed by Won-Door engineers continues to influence the building products and fire protection industries.

SETTING THE STANDARD

The First to Gain Universal Acceptance

The development of the accordion-type, horizontally sliding fire door – as manufactured by Won-Door Corporation – has had a profound influence on the model code requirements that regulate their use, leading to its universal acceptance for use in virtually any means of egress application.

The first to be UL listed

The Won-Door FireGuard was the first accordion-type fire door to successfully pass nationally recognized tests to withstand the passage of fire. Won-Door FireGuard products are listed by Underwriters Laboratories Inc. (UL) for up to 3 hours as a rated door assembly and 2 hours as a moveable fire wall.

Still on the cutting-edge

Only Won-Door FireGuard doors have a flat lead post option that eliminates the need for a pocket cover door. This option along with our compressed stack panels combine to reduce traditional stack depths by up to 50%.

ENGINEERED TO FIT YOUR NEEDS

Why be limited by traditional forms of opening protective like roll-down shutters or swing-type doors? The custom-made Won-Door FireGuard fire door can accommodate virtually any opening. Capable of spanning wide openings and heights up to 28 feet* – even radial configurations are possible. Best of all, the single- or bi-parting doors are engineered to fit your design while meeting all code requirements for egress and fire ratings.
SUPERIOR PERFORMANCE, SUPERIOR SERVICE

Company owned sales offices placed strategically around the country, plus a highly skilled team of designers, engineers and field technicians, provide product service and support across the United States. Thoroughly knowledgeable about building codes as well as construction, our sales team can be relied upon to guide you every step of the way so you can get your ideas off the drawing board and into existence.

Typical applications include:

- Area Separation
- Atrium Separation
- Corridor Separation
- Elevator Lobby Separation
- Horizontal Exits
- Occupancy Separation
- Safe Areas of Refuge

- Smoke Barrier
- Smoke and Draft Control
- Vertical Exit Enclosure Separation
- Smoke Compartmentation
- Stage Proskenium Protective
- Vertical Opening Protective

APPLICATION
Elevator Lobby Separation in Type R Occupancy

PROJECT
Gold Country Hotel & Casino

LOCATION
Grovelle, California

PROJECT ARCHITECT
Varond Design Group

Won-Door FireGuard fire doors are used to create unobtrusive, yet code-compliant, elevator lobbies that are compatible with the decor of this high-rise hotel and casino in Northern California.
EGRESS APPLICATIONS
USE WON-DOOR FIREGUARD IN LIEU OF SWING DOORS

APPLICATION
Vertical Opening Protective

PROJECT
Arizona State University
Athletics Facility

LOCATION
Tempe, Arizona

PROJECT ARCHITECT
DWL Architects

USE WON-DOOR FIREGUARD IN LIEU OF REDUCING THE SIZE OF RATED OPENINGS

Exit Device complies with IBC, NFPA and ADA

Fire doors are not limited to just hollow metal side-hinged doors. Won-Door FireGuard fire doors are code recognized and accepted anywhere an opening protective is required.
ADDITIONAL APPLICATIONS

USE WON-DOOR FIREGUARD IN LIEU OF SHUTTERS

By redefining what is typically described as an “atrium” Won-Door FireGuard fire doors meet the required fire separation between adjacent spaces while eliminating costly atrium requirements such as sprinklers and smoke evacuation systems.

USE WON-DOOR FIREGUARD IN LIEU OF FIRE-RATED GLASS

Specifying Won-Door FireGuard in conjunction with tempered glass can result in significant cost savings compared to using fire-rated glass.

APPLICATION
Area Separation

PROJECT
Provo City Library

LOCATION
Provo, Utah

PROJECT ARCHITECT
A non-rated clerestory joins the renovated historic 1892 building with a large modern library addition. Combining the old and the new presented a code compliance challenge. Since the aggregate square footage exceeded the allowable area defined in the current code, a two hour fire barrier – the Won-Door FireGuard – was used to separate a large portion of the historic renovation. By taking advantage of the approved wide span opening protective capabilities, historic ambiance and code compliance were easily accommodated.
VALUE ENGINEERING OPTIONS using Won-Door FireGuard

A. FIRE-RATED GLASS:
Won-Door is often 1/3 the cost to protect the same opening. Use tempered glass or clear opening with Won-Door FireGuard for:
- Exterior Rated Windows/Facades
- Atriums & Mezzanines
- Rated Glass Enclosure

B. ELEVATOR LOBBIES:
Point of Access single door enclosure is often the least expensive option compared to pressurized shafts and full elevator lobbies on every floor.
- Per ASTM 1784 without an artificial bottom seal
- 2015 IBC 3006.3 exception 3

C. ATRIUMS:
Enclosing the upper floors during fire alarm turns the "atrium" into a "shaft" per 2015 IBC. The following may be omitted:
- Smoke Purge
- 1-hour rating on all adjacent walls
- Full Building Sprinkler
- Class B Finishes

D. AREA ALLOWANCES:
Introduction of Fire Walls with large openings to connect the spaces reduces floor area of an occupancy – sprinkler and construction type requirements are also reduced.
See Table 506.2 2015 IBC

Creative use of fire walls and Won-Door FireGuard doors, resulted in three separate buildings with a single footprint and significantly reduced construction costs.
FireGuard CONFIGURATIONS

All FireGuard doors are made to fit your design. We offer different configurations based on your design criteria. Won-Door FireGuard assemblies meet all egress requirements found in IBC and NFPA. Below are samples of some of the available details.

FLAT LEAD POST

- Opening sizes up to 40 feet wide and 12 feet tall
- Straight, single-parting configurations
- Integrated pocket cover door

NARROW LEAD POST

- Opening sizes
  - Unlimited widths (per U.L. label)
  - Heights up to 28 feet
  - For doors >700 square feet contact local District Manager
- Single-parting or bi-parting configurations
- Pocket cover door by others

CURVED

- Opening sizes
  - Unlimited widths (per U.L. label)
  - Heights up to 28 feet
  - For doors >700 square feet contact local District Manager
- Single-parting or bi-parting configurations
- Minimum radius = 5’0”
- Pocket cover door by others
LISTINGS and APPROVALS

MEANS OF EGRESS APPLICATIONS

<table>
<thead>
<tr>
<th>APPLICATIONS</th>
<th>2012IBC</th>
<th>2015IBC</th>
<th>2015 NFPA 101</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING CODE REFERENCE</td>
<td>1008.1.2 exc #6</td>
<td>1010.1.2 exc #6</td>
<td>7.2.1.14</td>
</tr>
<tr>
<td>PERFORMANCE CRITERIA</td>
<td>1008.1.4.3</td>
<td>1010.1.4.3</td>
<td>7.2.1.14</td>
</tr>
</tbody>
</table>

PRODUCT INFORMATION

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>HOURLY RATING</th>
<th>TEST CRITERIA</th>
<th>U.L. FILE NUMBER</th>
<th>SINGLE OR BI-PARTING</th>
<th>MAX. OVERSIZE LABEL SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door Assembly FireGuard FG20</td>
<td>20 minutes</td>
<td>U.L. 108 (ASTM E-2074)*</td>
<td>R8799</td>
<td>Both Available</td>
<td>2’0”* (h) Unrestricted (w)</td>
</tr>
<tr>
<td>Door Assembly FireGuard FG60*</td>
<td>1 hour</td>
<td>U.L. 108 (ASTM E-2074)*</td>
<td>R8799</td>
<td>Both Available</td>
<td>2’0”* (h) Unrestricted (w)</td>
</tr>
<tr>
<td>Door Assembly FireGuard FG90*</td>
<td>1 ½ hours</td>
<td>U.L. 108 (ASTM E-2074)*</td>
<td>R8799</td>
<td>Both Available</td>
<td>2’0”* (h) Unrestricted (w)</td>
</tr>
<tr>
<td>Door Assembly FireGuard FG180*</td>
<td>3 hours</td>
<td>U.L. 108 (ASTM E-2074)*</td>
<td>R8799</td>
<td>Both Available</td>
<td>2’0”* (h) Unrestricted (w)</td>
</tr>
<tr>
<td>Wall Assembly FireGuard MFW1*</td>
<td>1 hour</td>
<td>U.L. 263 (ASTM E-119)</td>
<td>R12272</td>
<td>Single Parting Only</td>
<td>N.A.</td>
</tr>
<tr>
<td>Wall Assembly FireGuard MFW2*</td>
<td>2 hours</td>
<td>U.L. 263 (ASTM E-119)</td>
<td>R12272</td>
<td>Single Parting Only</td>
<td>N.A.</td>
</tr>
<tr>
<td>Automatic Closing System*</td>
<td>&lt; 3 hours*</td>
<td>U.L. #64</td>
<td>E92690</td>
<td>Can be used for both</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

* Any application without occupant load limitations except H occupancies.
* Each door assembly, when required, complies with UL 1784, and with the exception of FG20, can be labeled as Temperature Rise (TR). See ESR 1394.
* MFW - Movable Fire Wall
* * Excluding cotton pad test.

APPLICATION
Elevator Lobby
Separation/Access Control

PROJECT
San Diego International Airport

LOCATION
San Diego, California

PROJECT ARCHITECT
SPGA

The Won-Door FireGuard fire door can be used to isolate and control a security breach as well as stop the spread of fire and toxic fumes.

Other Won-Door FireGuard LISTINGS and REPORTS

<table>
<thead>
<tr>
<th>ICC</th>
<th>Research Rep. ESR-1394</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of California Door Assemblies MFW</td>
<td>3261-357:001; 1090-357:100</td>
</tr>
<tr>
<td>San Francisco Dept. of Public Works</td>
<td>387W18.2</td>
</tr>
<tr>
<td>City &amp; County of Denver</td>
<td>H-8275</td>
</tr>
<tr>
<td>State of Wisconsin</td>
<td>611003</td>
</tr>
</tbody>
</table>
IMPORTANT INFORMATION about Specifying ACCORDION-TYPE FIRE DOORS

All accordion-type fire doors are not created equal. The Won-Door FireGuard system makes use of the latest technology and is continually tested to make sure all current building code requirements are met or exceeded. Below is a partial list of code requirements for accordion-type, fire rated horizontal sliding fire doors.

<table>
<thead>
<tr>
<th>ACCORDION-TYPE FIRE DOOR CODE REQUIREMENTS</th>
<th>CODE REFERENCE</th>
<th>WON-DOOR FIREGUARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TESTED in accordance with UL 108, NFPA 252</td>
<td>2015 IBC: 716.5.2</td>
<td>✓</td>
</tr>
<tr>
<td>AUTOMATIC CLOSING SYSTEM listed separately; UL 864</td>
<td>2016 NFPA 80: 9.4.1.1</td>
<td>✓</td>
</tr>
<tr>
<td>SMOKE &amp; DRAFT shall bear the “S” label in accordance with UL 1784</td>
<td>2015 IBC: 716.5.3.3</td>
<td>✓</td>
</tr>
<tr>
<td>When used at the POINT OF ACCESS TO AN ELEVATOR shall bear the “S” Label and be tested in accordance with UL 1784 WITHOUT AN ARTIFICIAL BOTTOM SEAL.</td>
<td>2015 IBC: 3006.3 exception #3</td>
<td>✓</td>
</tr>
<tr>
<td>Complies with all EGRESS REQUIREMENTS</td>
<td>2015 IBC: 1010.1.4.3, 2015 NFPA 101: 7.2.1.14</td>
<td>✓</td>
</tr>
<tr>
<td>Doors in EXIT ENCLOSURES AND EXIT PASSAGeways shall meet maximum transmitted temperature requirements.</td>
<td>2015 IBC: 716.5.5</td>
<td>✓</td>
</tr>
<tr>
<td>INSTALLATION of the accordion fire door, including the frame, closing and release devices, and anchorage must be in accordance with NFPA 80</td>
<td>2015 IBC: 1010.1.4.3</td>
<td>✓</td>
</tr>
<tr>
<td>INDEPENDENTLY tested to assure compliance</td>
<td>ICC Evaluation Service Report ESR-1394</td>
<td>✓</td>
</tr>
</tbody>
</table>

Only the Won-Door FireGuard uses a state-of- the-art microprocessor activated control system to guarantee reliability and enhance door function. This technology provides almost limitless opportunities for electronic communication, supervision, alarm activation and more.

<table>
<thead>
<tr>
<th>AVAILABLE OPTIONS</th>
<th>WON-DOOR FIREGUARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire ratings up to 3 hours (A Label)</td>
<td>✓</td>
</tr>
<tr>
<td>ASTM E-119 rating (Movable Fire Wall)</td>
<td>✓</td>
</tr>
<tr>
<td>High Speed Motors (Maximize Egress Width)</td>
<td>✓</td>
</tr>
<tr>
<td>Access control options</td>
<td>✓</td>
</tr>
<tr>
<td>Resist air pressure differential of up to .15 inches</td>
<td>✓</td>
</tr>
<tr>
<td>Use an infrared light beam to monitor the opening</td>
<td>✓</td>
</tr>
<tr>
<td>Control and monitor door functions through Building Automation System</td>
<td>✓</td>
</tr>
</tbody>
</table>
Won-Door Corporation

Horizontal Sliding, Accordion-Type FIRE DOOR
FREQUENTLY ASKED QUESTIONS (FAQ’S)

Is FireGuard approved for egress applications?
Yes, FireGuard meets all egress requirements found in NFPA 101 (Chapter 7) and IBC (Chapter 10). The assembly has also been evaluated through the ICC Evaluation Service. ICC-ES Report 1394 is available upon request.

How much does the assembly weigh?
5.5 pounds per square foot.

At what speed does the FireGuard door travel?
NFPA 80 Chapter 9 limits the speed of the door to not less than 6” per second and not more than 24” per second. FireGuard doors are set to open and close at approximately 10” per second. High speed motor option available.

Will the FireGuard door operate in the event of a power loss?
Yes, as required by NFPA 80 Chapter 9 the system includes a standby power source.

Does the FireGuard door require a floor track?
No, the door does not need a floor track.

What fire ratings are available?
Available fire door ratings are 20, 60, 90 and 180 minutes. The FireGuard assembly is also available as a Moveable Fire Wall tested in accordance with ASTM E-119.

Are smoke ratings available?
Yes, FireGuard doors are available with an “S” label.

What is the size limitation?
FireGuard doors are available in heights up to 28’. Widths are virtually unlimited.

Are radial configurations available?
Yes, standard available radii are 5’ and 10’. Custom radii are also available greater than 5’.

For additional information visit our website at www.wondoor.com

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