UL Resources for Code Officials and Design Professionals

Presented by:
Bruce E. Johnson
Senior Regulatory Engineer, UL

D·E·S·I·G·N and TRADES CONFERENCE
2016 ▪ 15TH ANNUAL

Construction Institute

Topics to Cover Today

Overview of UL

UL Fire Service Research Institute

UL standards and listing considerations

UL resources for code authorities:

- ✓ ***On-line Certification Directory***
- ✓ ***Product Spec™***
- ✓ ***Code Link***
- ✓ ***Market Surveillance***

UL Standards Technical Panel

Underwriters Laboratories

Our Mission: *Working for a Safer World since 1894*

Underwriters Laboratories Overview

Founded in 1894
21 billion UL Marks applied
80,000 manufacturers
100,000+ product evaluations
700,000 inspection visits
21,000+ types of products evaluated by UL
150 UL inspection centers
100+ countries with UL customers
11,000+ employees

Firefighter Safety Research Institute

www.ulfirefightersafety.com

Firefighter Safety Research Institute

Impact Area

Commitment to the Fire Service

FSRI is a major component of UL's long-standing commitment to the safety of the fire service. We are proud to collaborate with fire departments and agencies around the country and all over the world. FSRI's goal is to execute groundbreaking research and generate life-saving knowledge that can be applied directly by the firefighters as they perform their duty.

Cutting-edge Research

Fires today are fundamentally different than they were 50 years ago. FSRI collaborates with researchers and agencies in the public and private sectors to conduct pioneering, full-scale experiments that help firefighters understand and anticipate new and dangerous situations they may encounter today that did not exist for previous generations.

Firefighter Safety Research Institute

Support & Infrastructure

With more than a century of experience and expertise, UL is the leader in fire safety testing, certification and research. Having access to UL's unmatched infrastructure, equipment and knowledge allows us to conduct one-of-a-kind, full-scale experiments that replicate real life conditions, and to generate the comprehensive scientific data needed to advance firefighting tactics.

Knowledge & Training

All of our scientific research and insights only make a difference when it actually reaches the firefighters we work so hard to make safer. Our insights and data are widely available to the fire service and research community through reports, articles and training programs using rich, easy to share media, in order to stimulate dialogue and accelerate results.

UL Research Projects

- 60+ research projects underway at any given time
- Awarded annual $1M DHS Assistance to Firefighter Grants since 2006
- Work closely with fire service partners, including Chicago FD, FDNY, IAFF and IAFC
- Fire research usually results in training programs and/or report of findings
- Fire research reports and e-learning courses available online at no charge http://ulfirefightersafety.com/training/

UL- Firefighter Safety Research Institute

FSRI Updates

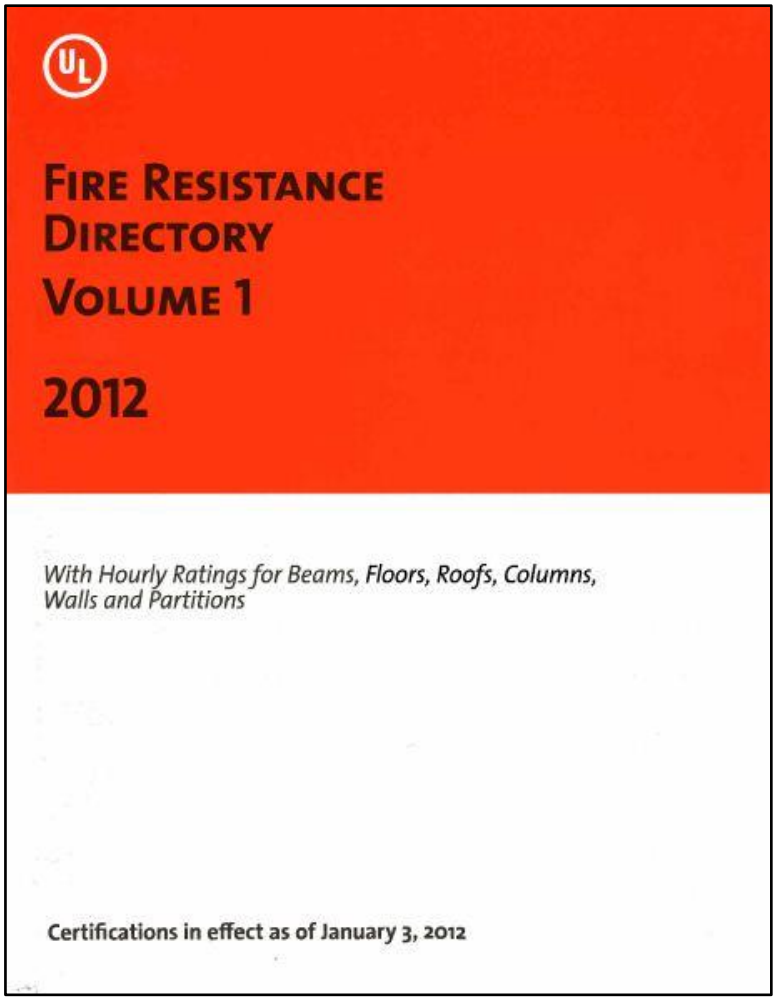
Contact

Email: fsri@ul.com

Connect with FSRI

Questions / Comments

UL Standards and Listing Considerations



UL Standards for Safety

- Over 1,200 published Standards for Safety
- Over 80% of UL Standards are American National Standards Institute (ANSI) accredited
- Developed using collaborative consensus process
- Not typically used by AHJs for code enforcement purposes

Product Investigation

Request for certification (listing) by UL

- Initial manufacturer request received
- UL provides application forms
- Investigation opened
- Successful investigation results in product listing
- A separate investigation may be needed to address problems
- Costs and time frame

Proprietary Information

UL respects our client's proprietary manufacturing and marketing information

Details on product construction, product manuals, test results, and ongoing investigation status cannot be divulged to outside parties

Listing information published in the UL Certifications Directory, On-line Certification Directory or UL Product Spec™ is considered "public information"

Factory Surveillance

Periodic inspections of certified products

UL Marks are only applied at authorized factories

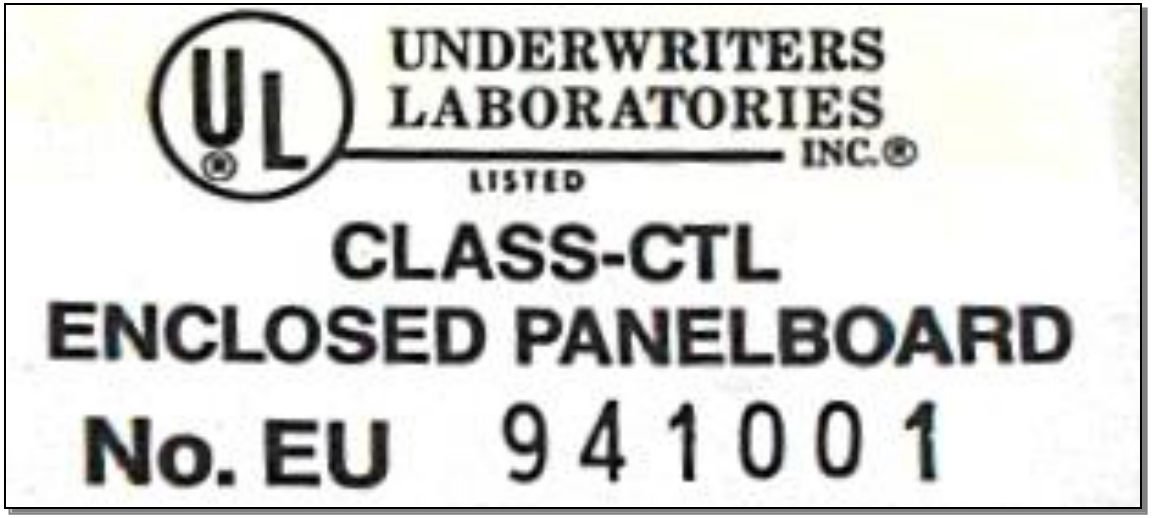
Listing and Labeling

Look for the four element listing mark

- ✓Underwriters Laboratories or UL logo
- ✓“LISTED” in capital letters
- ✓Product name
- ✓Issue number or Control number

Listing and Labeling

Only products bearing the UL Mark are considered to be *Listed*



Options for Unlabeled Equipment

Field evaluation – UL evaluates compliance with product standards

See the Resources Code Authorities web pages for details

Anti-Counterfeiting Efforts

- Long standing partnership with US Customs
- 1,200+ US Customs officers trained
- 1,300 seizures, 40 million items, $150 million
- Public notices warn of counterfeit goods

Questions / Comments

Listing Information

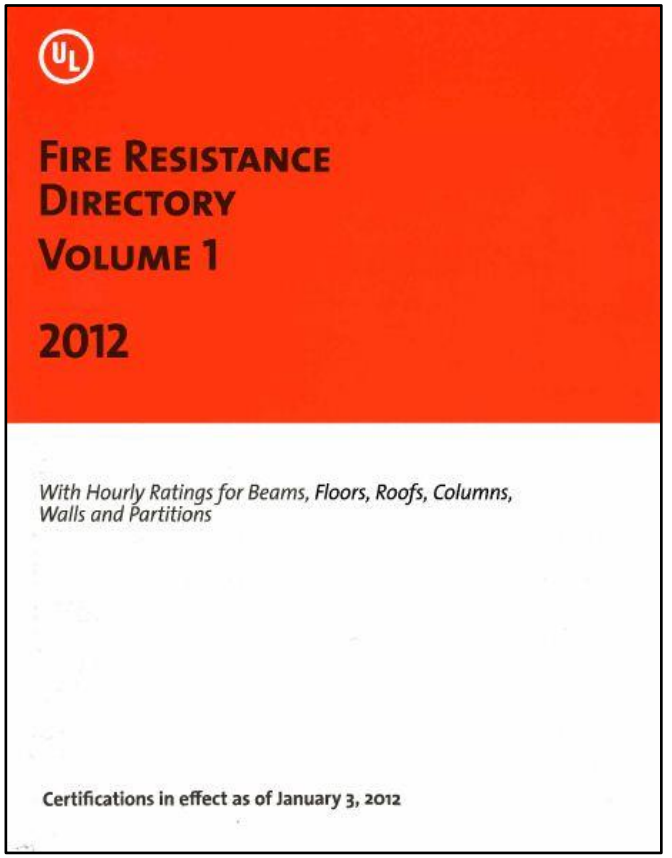
Online Certifications Database (OCD)

Product Spec™

Product directories may be ordered

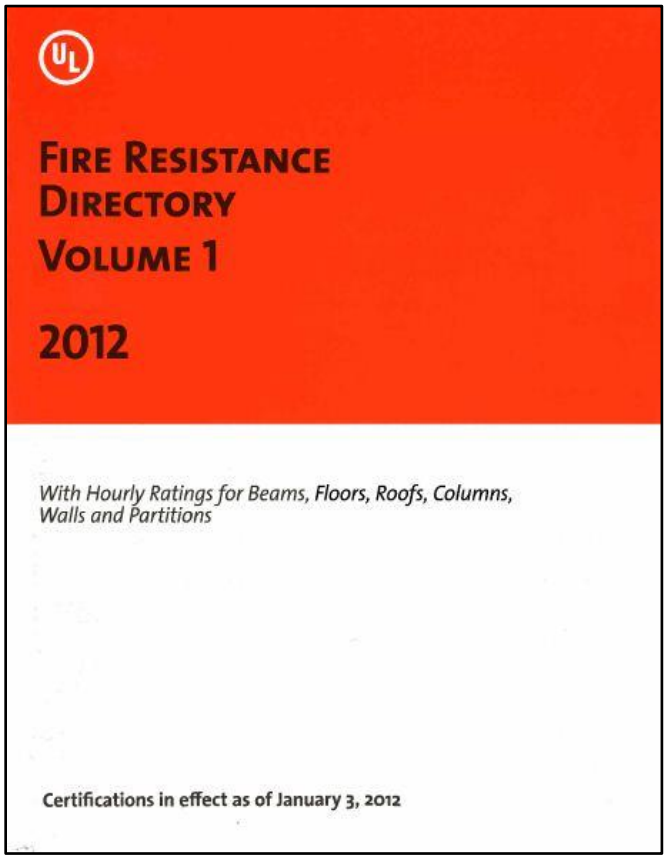
UL Resources for the Fire Service

Navigating the
UL Directories



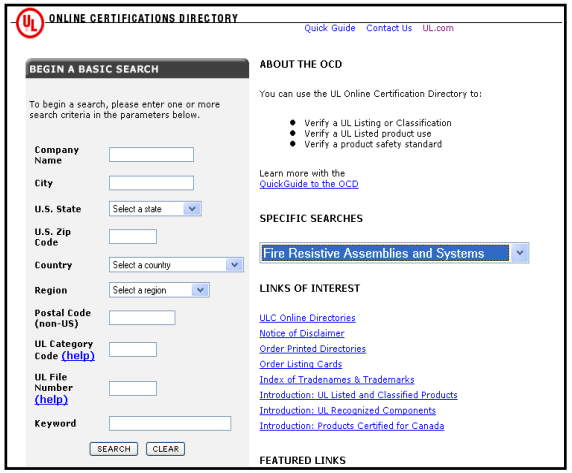
Navigating the UL Directories

Hard Copy



CD-ROM

Online



Guide Information

- Equipment, materials or systems included in the Category
- Intended use, restrictions or supplemental information that apply
- Standard(s) used to evaluate products under the Category
- Listing or Classification Mark information for the Category

NUMBERING SYSTEM FOR FIRE RATED ASSEMBLIES

	TYPES OF PROTECTION								
	Membrane Protection						Direct Applied Protection		Unprotected
Groups of Construction	**000-099**	**100-199**	**200-299**	**300-399**	**400-499**	**500-599**	**600-699**	**700-899**	**900-999**
Floors-Ceilings A, B*, or C* Concrete and Cellular Steel Floor	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
D, E*, or F* Concrete and Steel Floor Units	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Mastic Coating	SFRM +	Unprotected
G, H*, or I* Concrete and Steel Joists	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
J or K Concrete	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
L or M* Wood Joist or Combination Wood and Steel Assemblies	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
Beams: N or O* for Floor Ceiling	Concealed Grid Sys.	(Reserved)	Exposed Grid System	Batts and Blankets or Mineral and Fiber Boards	Metal Lath	Gypsum Board	Mastic Coating	SFRM +	Unprotected
Roof-Ceiling: P, Q* or R*	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
Beams: S or T* Roof-Ceiling	Building Units	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Mastic Coating	SFRM +	Unprotected
Wall & Partition: U, V or W*	Bldg. or Partition Panel Units	(Reserved)	Insulat-ing Concrete	Wood Stud Gypsum Bd Lath &/or Plaster	Metal Stud Gypsum Bd Lath &/or Plaster	Misc.	Metal Panels Gypsum Bd Lath &/or Plaster	SFRM +	Masonry
Columns: X, Y or Z*	Building Units	Prefab-ricated	(Reserved)	Batts and Blankets or Mineral and Fiber Boards	Metal Lath & Plaster	Gypsum Board	Mastic Coating	SFRM +	(Reserved)

The prefix numbers with an asterisk (*) and the design numbers indicated as "Reserved" in the above table are for future expansion and to cater to new types of systems developed in the future.

+ SFRM denotes Spray-Applid Fire Resistive Materials

Designs

- Each design contains specific construction features
- Many designs contain various options and various ratings
- Must be followed exactly for rating to apply

Product Categories

- Each Product Category describes some generic family of products (e.g. Acoustical Materials)

- Each Product Category contains the manufacturers and designations of products tested and specified in the designs

Questions / Comments

UL Resources for the Fire Service

UL's Online Search Tools

UL's Online Search Tools

- ✓ Online Certifications Directory
- ✓ Product Spec™
- ✓ Code Link

Online Certifications Directory

- Helps you achieve code compliance
- Is continuously updated
- Needs no password
- Is free – no charge for use

www.ul.com/database

www.ul.com

UL is a global independent safety science company offering expertise across five key strategic businesses: Public Safety, Environment, Life & Health, Verification Services and University. Our breadth, established objectivity and proven history mean we are a symbol of trust and enable us to help provide peace of mind to all.

more

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- Consumers
- Retailers

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- Environment
- Life & Health
- Verification Services
- University

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- Directories
- The Code Authority
- Fire & Security Authority
- EPH RegULator
- High-Tech Direct
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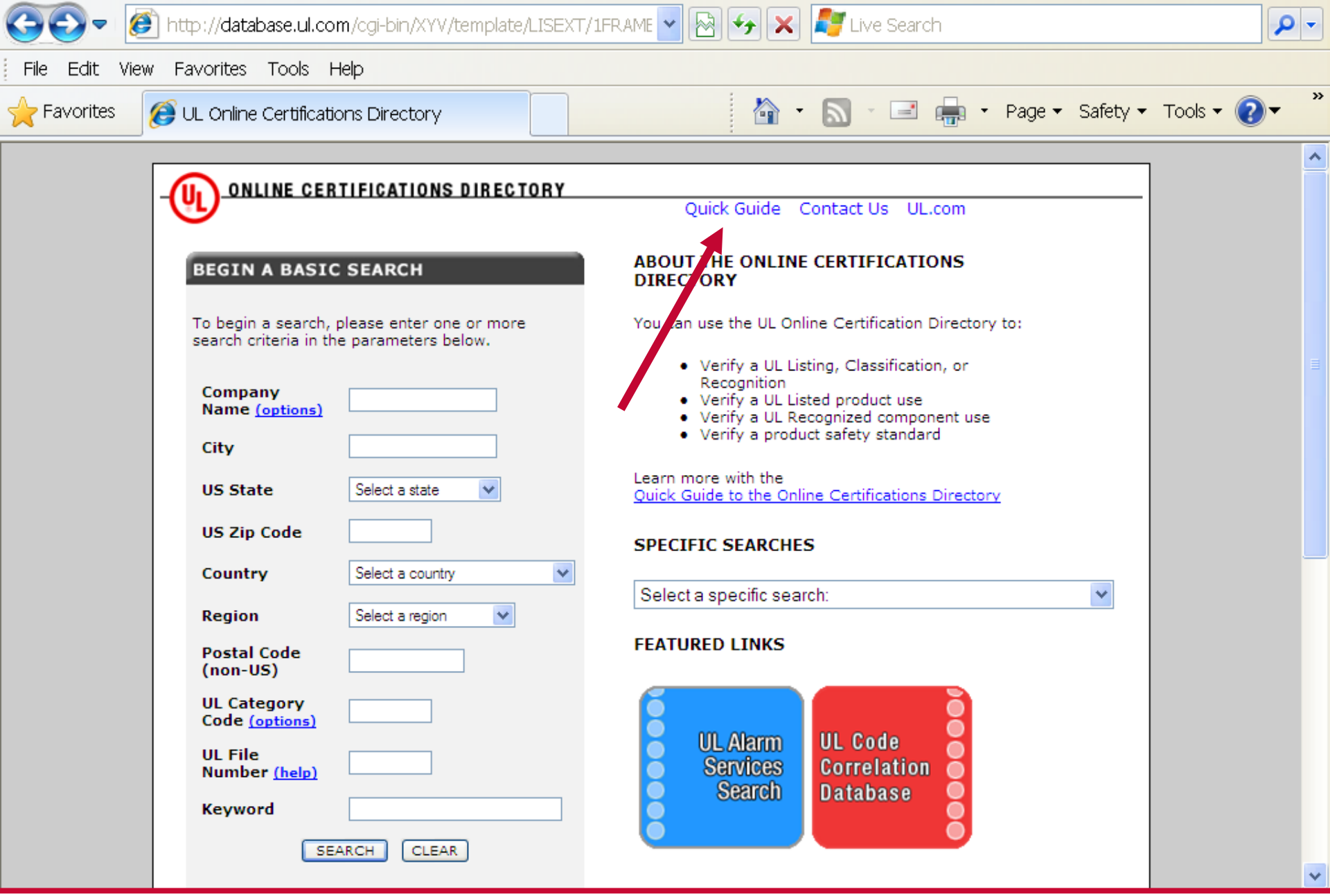
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Select a state
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Keyword
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- Verify a UL Listed product use
- Verify a UL Recognized component use
- Verify a product safety standard

Search The UL Online Certification Directory Using:

General Searches

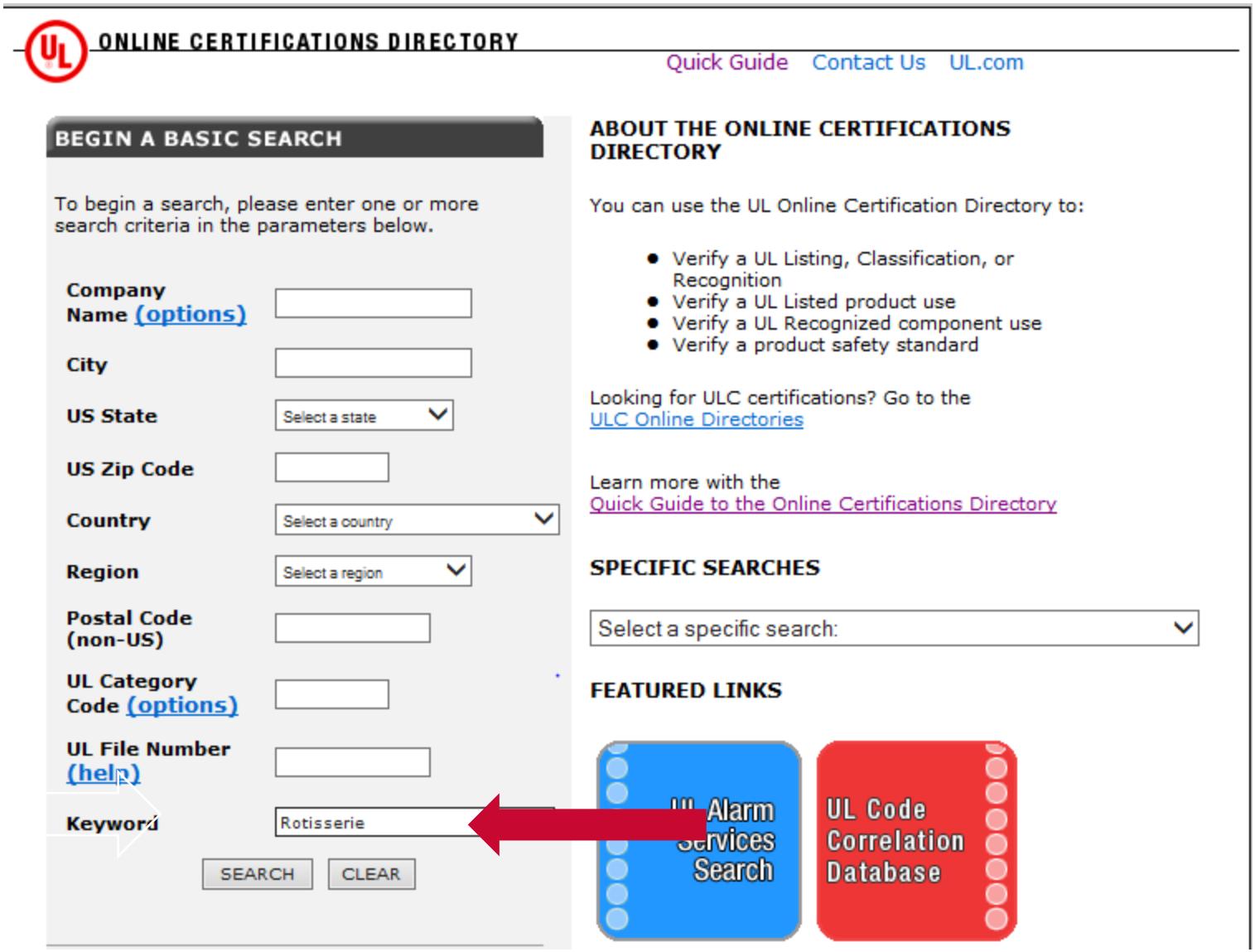
- Company name/location and/or Keywords
- Standard Number
- UL File Number
- UL Category Code

Specific Searches

- Appliance Wiring Material (AWM)
- Authorized Label Supplier Label Type
- Component Supplier
- Components for Transportation Applications
- Fire-resistance-rated Systems & Products
- Food Safety Equipment
- Medical Management Systems Registered Firms
- Sprinkler Identification Number (SIN)

To begin, navigate to http://www.ul.com/.

To access the UL Online Certifications Directory, click "Online Certifications Directory" located in the grey footer at the bottom of the page. Or, for direct access, enter the quick access URL in your web browser -- http://www.ul.com/database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Select a state
US Zip Code
Country
Select a country
Region
Select a region
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UL Category Code (options)
UL File Number (help)
Keyword
Rotisserie
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Verify a product safety standard
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Search results

You may choose to **Refine Your Search.**

Company Name	Category Name	Link to File
AIRLUX ELECTRICAL CO LTD	Household Cooking Appliances	*KNUR.E142889*
AIRLUX ELECTRICAL CO LTD	Household Cooking Appliances Certified for Canada	*KNUR7.E142889*
ALTO-SHAAM INC	Commercial Cooking Appliances	*KNGT.E52279*
ALTO-SHAAM INC	Commercial Cooking Appliances Certified for Canada	*KNGT7.E52279*
ALTO-SHAAM INC	Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air	*KNLZ.E180237*
ALTO-SHAAM INC	Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air Certified for Canada	*KNLZ7.E180237*
ALTO-SHAAM INC	Commercial Cooking, Rethermalization and Powered Hot-food-holding and -Transport Equipment	*TSQT.E159360*
AROMA HOUSEWARES CO	Household Cooking Appliances	*KNUR.E132091*
BROASTER CO L L C	Commercial Cooking Appliances	*KNGT.E40821*
BROASTER CO L L C	Commercial Cooking Appliances Certified for Canada	*KNGT7.E40821*

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Model number information is not published for all product categories. If you require information about a specific model number, please contact Customer Service for further assistance.

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UL Category Code:
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UL File Number:
More information on UL File Numbers

Company Name:

U.S. State: Select a state

U.S. Zip Code:

Canadian Province: Select a province

Postal Code (non-US):

Country: Select a country

Region: Select a region

Registration Standard: Select a Standard

Keyword: commercial

Refine your search for Fire Resistive Hourly Ratings or Companies

Fire Resistive Hourly Rating: Select an Hourly Rating

Company Name within Fire Resistive System, Design, or Assembly:

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Company Name	Category Name	Link to File
ALTO-SHAAM INC	Commercial Cooking Appliances	KNGT.E52279
ALTO-SHAAM INC	Commercial Cooking Appliances Certified for Canada	KNGT7.E52279
ALTO-SHAAM INC	Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air	KNLZ.E180237
ALTO-SHAAM INC	Commercial Cooking Appliances with Integral Systems for Limiting the Emission of Grease-laden Air Certified for Canada	KNLZ7.E180237
ALTO-SHAAM INC	Commercial Cooking, Rethermalization and Powered Hot-food-holding and -Transport Equipment	TSQT.E159360
BROASTER CO L L C	Commercial Cooking Appliances	KNGT.E40821
BROASTER CO L L C	Commercial Cooking Appliances Certified for Canada	KNGT7.E40821
CLEVELAND RANGE L L C	Commercial Cooking Appliances	KNGT.E35238
CLEVELAND RANGE L L C	Commercial Cooking Appliances Certified for Canada	KNGT7.E35238
GILES ENTERPRISES INC	Commercial Cooking Appliances	KNGT.E27594

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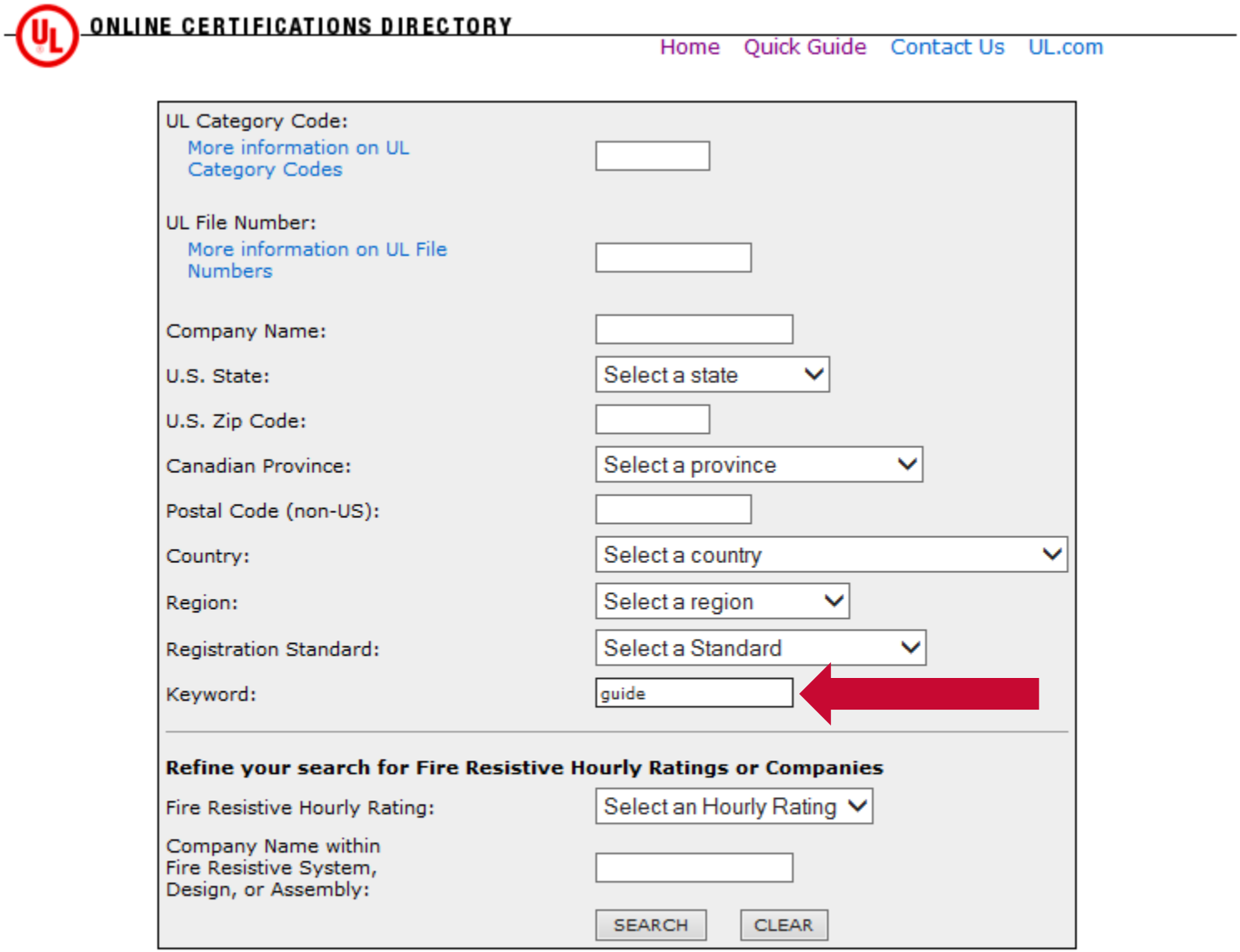
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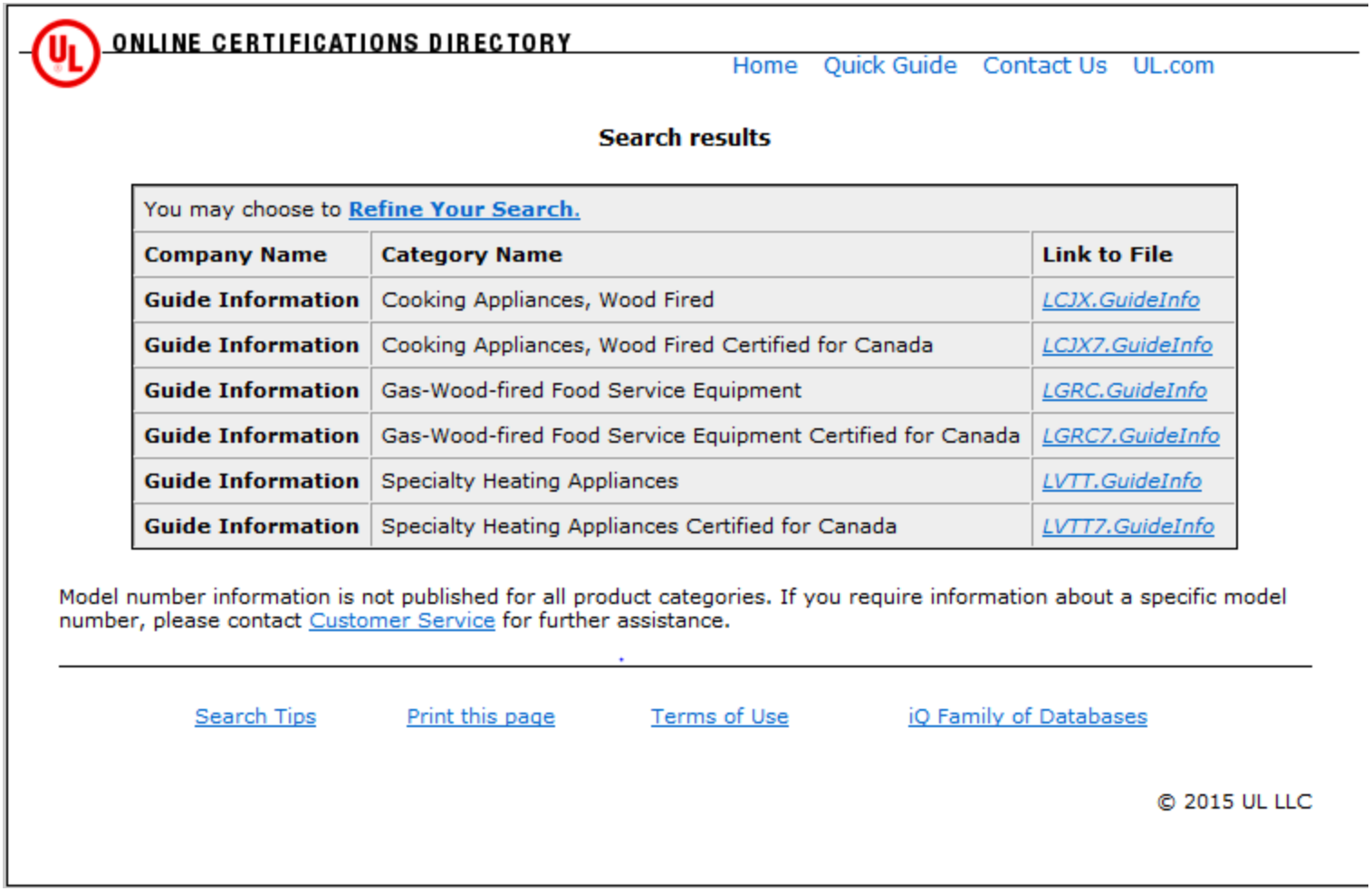
UL Category Code (Guide Information)

Provides details on UL product categories

- ✓Products covered
- ✓Considerations and limitations
- ✓Intended installation standard
- ✓Standard used
- ✓Listing Mark composition



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Company Name	Category Name	Link to File
Guide Information	Cooking Appliances, Wood Fired	*LCJX.GuideInfo*
Guide Information	Cooking Appliances, Wood Fired Certified for Canada	*LCJX7.GuideInfo*
Guide Information	Gas-Wood-fired Food Service Equipment	*LGRC.GuideInfo*
Guide Information	Gas-Wood-fired Food Service Equipment Certified for Canada	*LGRC7.GuideInfo*
Guide Information	Specialty Heating Appliances	*LVTT.GuideInfo*
Guide Information	Specialty Heating Appliances Certified for Canada	*LVTT7.GuideInfo*

Model number information is not published for all product categories. If you require information about a specific model number, please contact Customer Service for further assistance.

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LCJX.GuideInfo
Cooking Appliances, Wood Fired

View Listings Page Bottom

[Heating Appliances] Cooking Appliances, Wood Fired

See General Information for Heating Appliances

USE AND INSTALLATION

This category covers wood-fired cooking appliances, including broilers, ranges, rotisseries, ovens, and the like, as identified in the individual certifications, and intended for use in commercial establishments such as restaurants or for outdoor residential use. These appliances are intended to burn solid wood only, including particulate wood products. Some equipment may be provided with door assemblies, floor protectors and wall shields, adjustable flue-gas dampers, or other optional features as specified in the manufacturer's installation and operating instructions.

This equipment is intended to be installed in accordance with appropriate installation standards, such as the current editions of:

- ANSI/NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations"
- ANSI/NFPA 211, "Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances"
- ANSI/NFPA 70, "National Electrical Code" (NEC)
- "Uniform Mechanical Code"
- "International Mechanical Code"
- "International Residential Code"
- Local codes

Installation is intended to be accomplished by a qualified agency - one who is engaged in, and is responsible for (or is thoroughly familiar with) the installation and operation of solid-fuel-burning heating and/or cooking appliances and who is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the Authority Having Jurisdiction.

Installation is intended to be in strict accordance with the markings on the appliance and the manufacturer's installation instructions furnished with the appliance, including (as applicable) markings and instructions pertaining to clearances, types of adjacent surfaces, and proper vent installation. Equipment suitable for built-in installation, side-by-side mounting, or stacking is indicated in the installation instructions. Some equipment is intended to be placed on noncombustible floors, or on combustible floors covered with an insulating, noncombustible floor protector as specified in the manufacturer's installation instructions, ANSI/NFPA 96 and ANSI/NFPA 211.

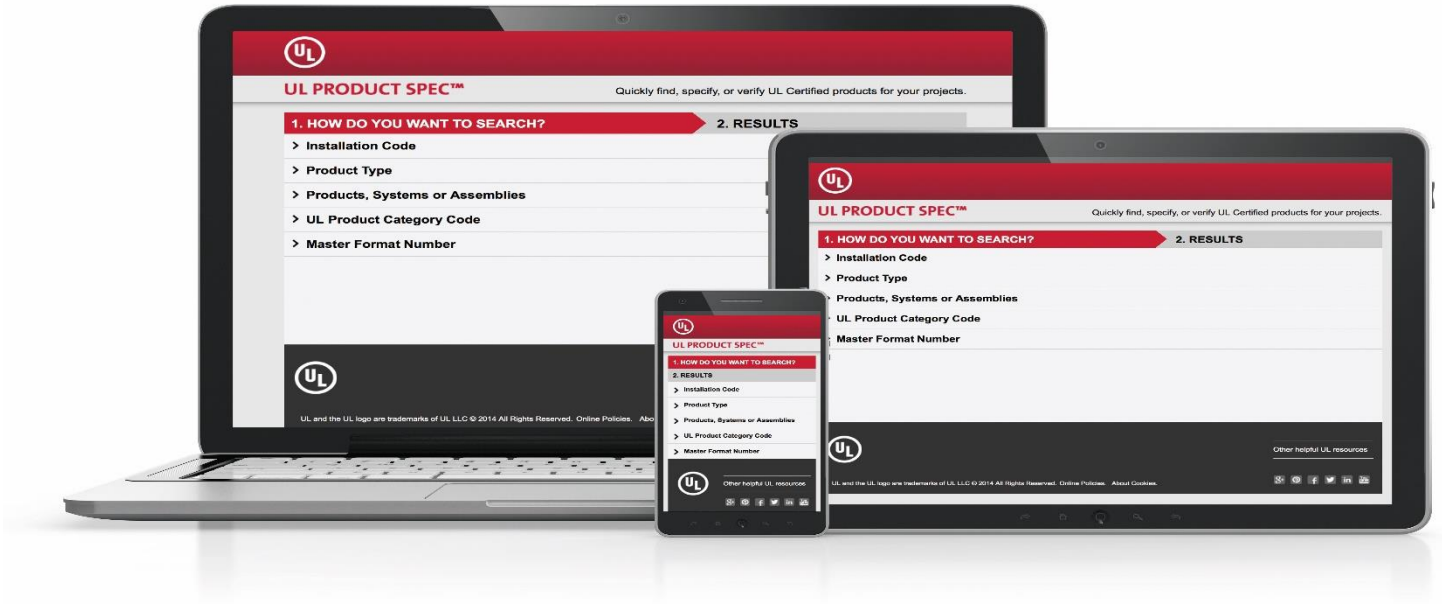
All equipment, but especially equipment that may emit grease-laden vapors, is intended to be provided with an exhaust ventilating system in accordance with ANSI/NFPA 96. See Exhaust Hoods with Exhaust Dampers (YXZR), Exhaust Hoods Without Exhaust Dampers (YYCW) or Grease Ducts for Restaurant Cooking Appliances (YYGQ). Exhaust hood assemblies covered under these categories are intended to be installed in accordance with the manufacturer's installation instructions and ANSI/NFPA 96 and the NEC, as applicable.

All exhaust hoods are marked relative to minimum exhaust airflow and maximum supply airflow directed into the hood and/or out the bottom (if provided). Airflow rates are established under draft-free laboratory conditions. Greater exhaust and/or lesser supply airflow rates may be required for each specific installation to obtain complete vapor and smoke removal.

FACTORS NOT INVESTIGATED

The structural and sanitation properties of the appliance, the toxicity of the products of combustion, the physiological effects on persons consuming food products prepared or served by use of these appliances, the structures in which the appliance may be installed, and the toxicity of coatings have not been investigated.

Questions / Comments



Introducing UL Product Spec™

- Responsive Web site-Right sizes to your screen size, smartphone, tablet or PC
- Works on all web connected devices regardless of platform or OS
- Includes Electrical Construction, Fire and Building Materials and Systems

UL Product Spec™

No charge to access

Find, specify or verify UL certified building products, fire resistance designs, through-penetrations and more

Updated daily

Easy to use

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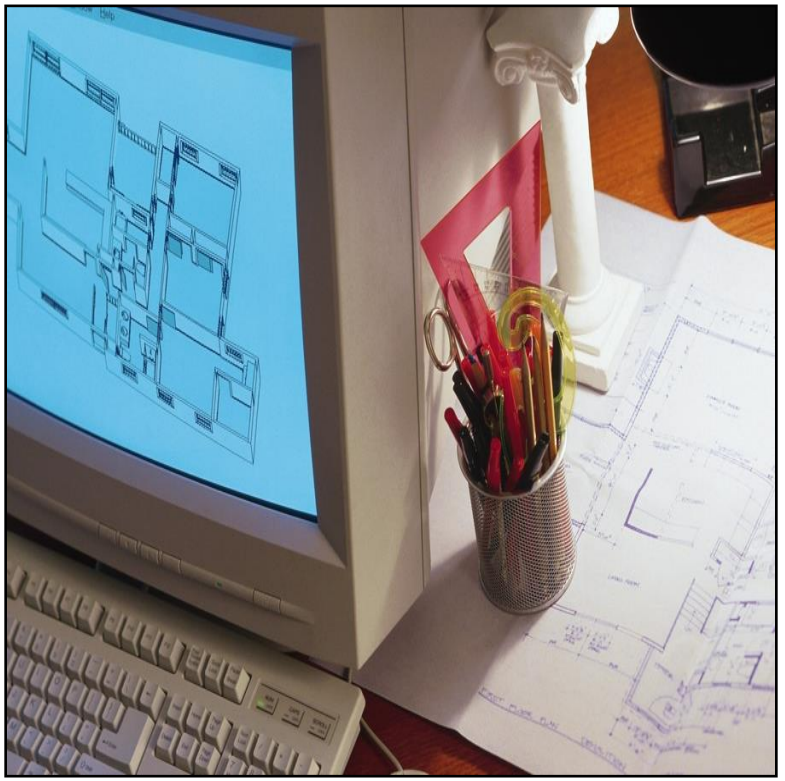
Searching for Information on Fire-Resistance-Rated Construction



Fire Rated Assemblies (BXUV)

The summarized form of the test assembly is identified by an alphanumeric design number. The prefix letter designates the group of construction, the first number designates the type of protection and the other numbers and letters identify the particular assembly.

NUMBERING SYSTEM FOR FIRE RATED ASSEMBLIES

	TYPES OF PROTECTION								
	Membrane Protection						Direct Applied Protection		Unprotected
Groups of Construction	000-099	100-199	200-299	300-399	400-499	500-599	600-699	700-899	900-999
Floors-Ceilings: A or B* Concrete and Cellular Steel Floor C - Glazing Systems	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Misc.	SFRM+	Unprotected
D, E*, F* Concrete and Steel Floor Units	Concealed Grid Sys.	(Reserved)	Exposed Grid System	Mineral and Fiber Boards	Metal Lath	Gypsum Board	Mastic and Intumescent Coatings	SFRM+	Unprotected
G, H*, or I* Concrete and Steel Joists	Concealed Grid Sys.	(Reserved)	Exposed Grid System	Mineral and Fiber Boards	Metal Lath	Gypsum Board	Misc.	SFRM+	Unprotected
J or K Concrete	Concealed Grid Sys.	(Reserved)	Exposed Grid System	Mineral and Fiber Boards	Metal Lath	Gypsum Board	Misc.	SFRM+	Unprotected
L or M Wood Joist or Combination Wood and Steel Assemblies	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Misc.	SFRM+	Unprotected

Roof-Ceiling: P, Q* or R*	Concealed Grid Sys.	(Reserved)	Exposed Grid System	Mineral and Fiber Boards	Metal Lath	Gypsum Board	Misc.	SFRM+	Unprotected
Beams: S or T* for Roof-Ceiling	Building Units	(Reserved)	Exposed Grid System	Mineral and Fiber Boards	Metal Lath	Gypsum Board	Mastic and Intumescent Coatings	SFRM+	Unprotected
Wall and Partition: U, V or W	Building or Partition Panels Units	(Reserved)	Insulating Concrete	Wood Stud, Gypsum Board, Lath &/or Plaster	Metal Stud, Gypsum Board, Lath &/or Plaster	Misc.	Metal Panels, Gypsum Board, Lath &/or Plaster	SFRM+	Masonry
Columns: X, Y or Z*	Building Units	Prefabricated	Mat Materials	Batts and Blankets or Mineral and Fiber Boards	Metal Lath & Plaster	Gypsum Board	Mastic and Intumescent Coatings	SFRM+	Masonry

The prefix numbers with an asterisk (*) and the design numbers indicated as "Reserved" in the above table are for future expansion and to cater to new types of systems developed in the future.

+ SFRM denotes Spray-Applied Fire Resistive Materials

View the UL Guide Information for Fire Resistance Designs (BXUV).

View the UL Guide Information for Fire Resistance Designs Certified for Canada (BXUV7).

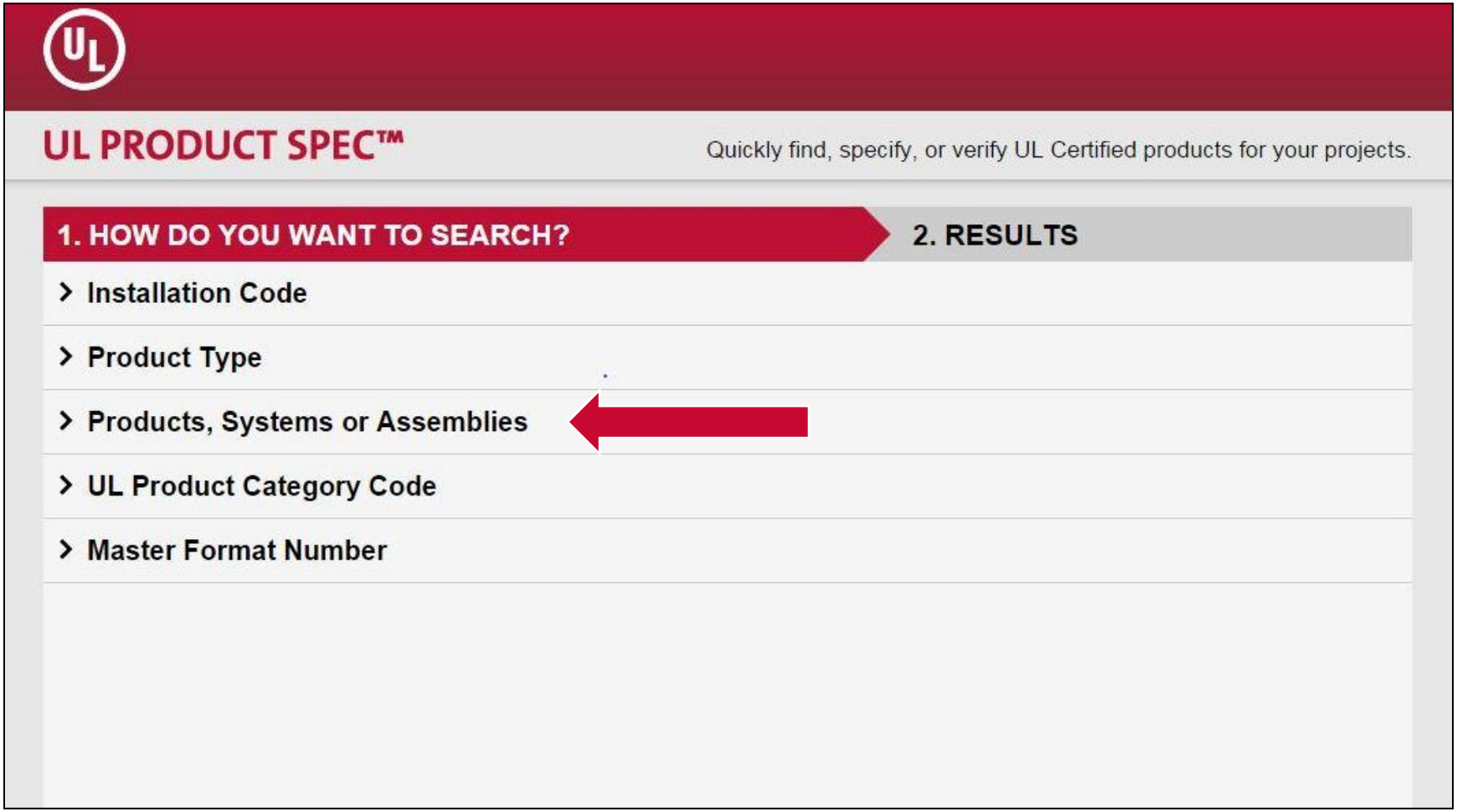
How to use this table to find UL Fire Resistive Design No.:

If you know the exact Design Number, enter this number (i.e. U351, P907, X520) in the available Fire Resistive Design field and click "Search".

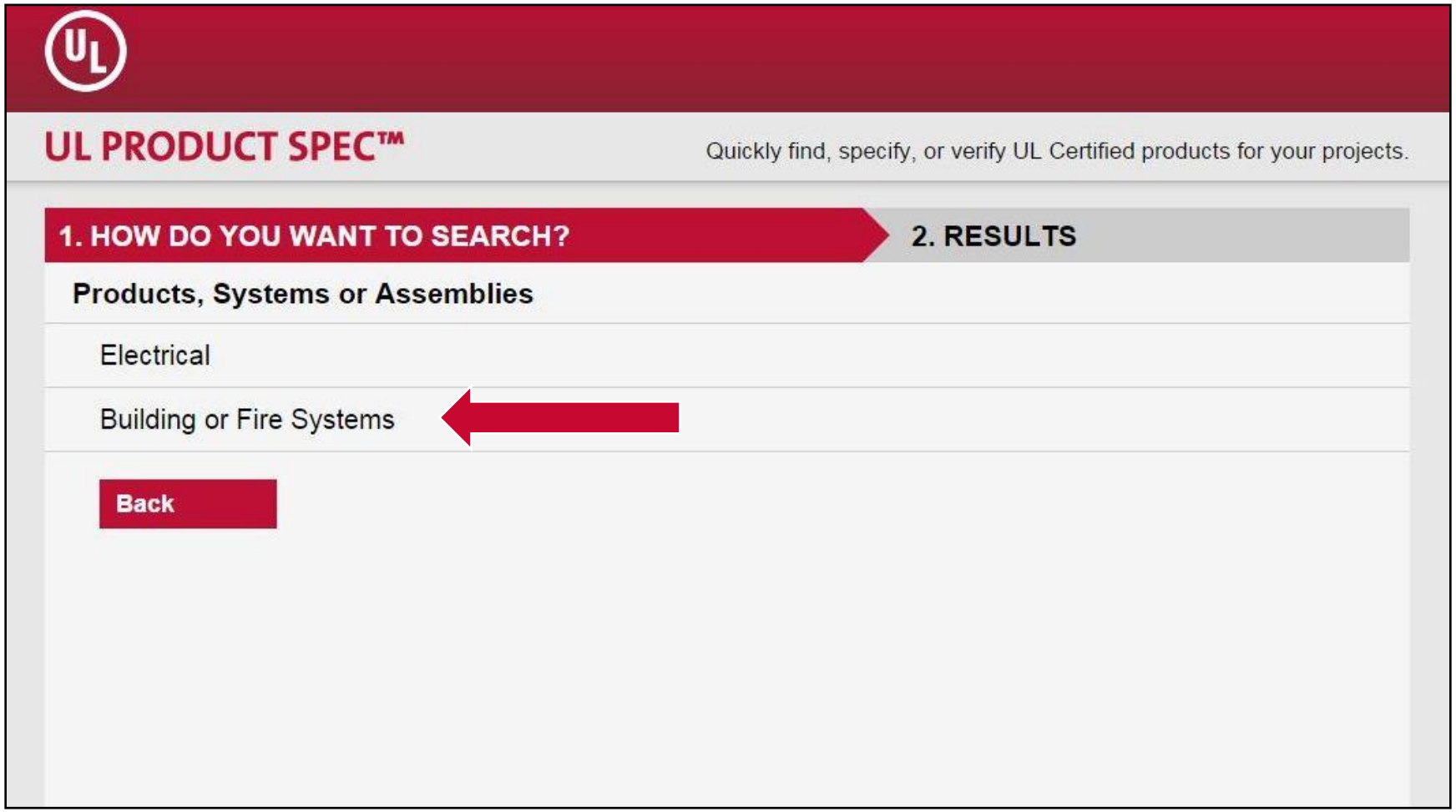
If you do not know the exact Design Number, use the above Numbering System to refine your search options by following these steps:

- Choose the type of construction (i.e. column, wall, roof-ceiling, etc) from the first column, "Groups of Constructions". This will determine the alpha component necessary for your search (i.e. A, U, X, etc.)
- Follow along the respective row until you find the type of Protection (i.e. gypsum board, SFRM, masonry, unprotected, etc.) applicable to your construction then proceed to the top of that column to obtain the numeric components (range of numbers) necessary for your search (i.e. 400-499, 500-599, etc.).
- In the Fire Resistive Design search field, enter the alpha numeric component followed by the first number in the numeric component, then the wildcard * (i.e. U4*, X5*, etc.).
- Click Search.
- The search results will provide all Fire Resistive Design Numbers in the range provided (i.e. U400 . U499). Choose to view each Design individually by clicking the link in the "Link to File" column or choose to "Refine Your Search"
- Refine your search using key words such as 2 hr, vapor barrier, or recessed light.

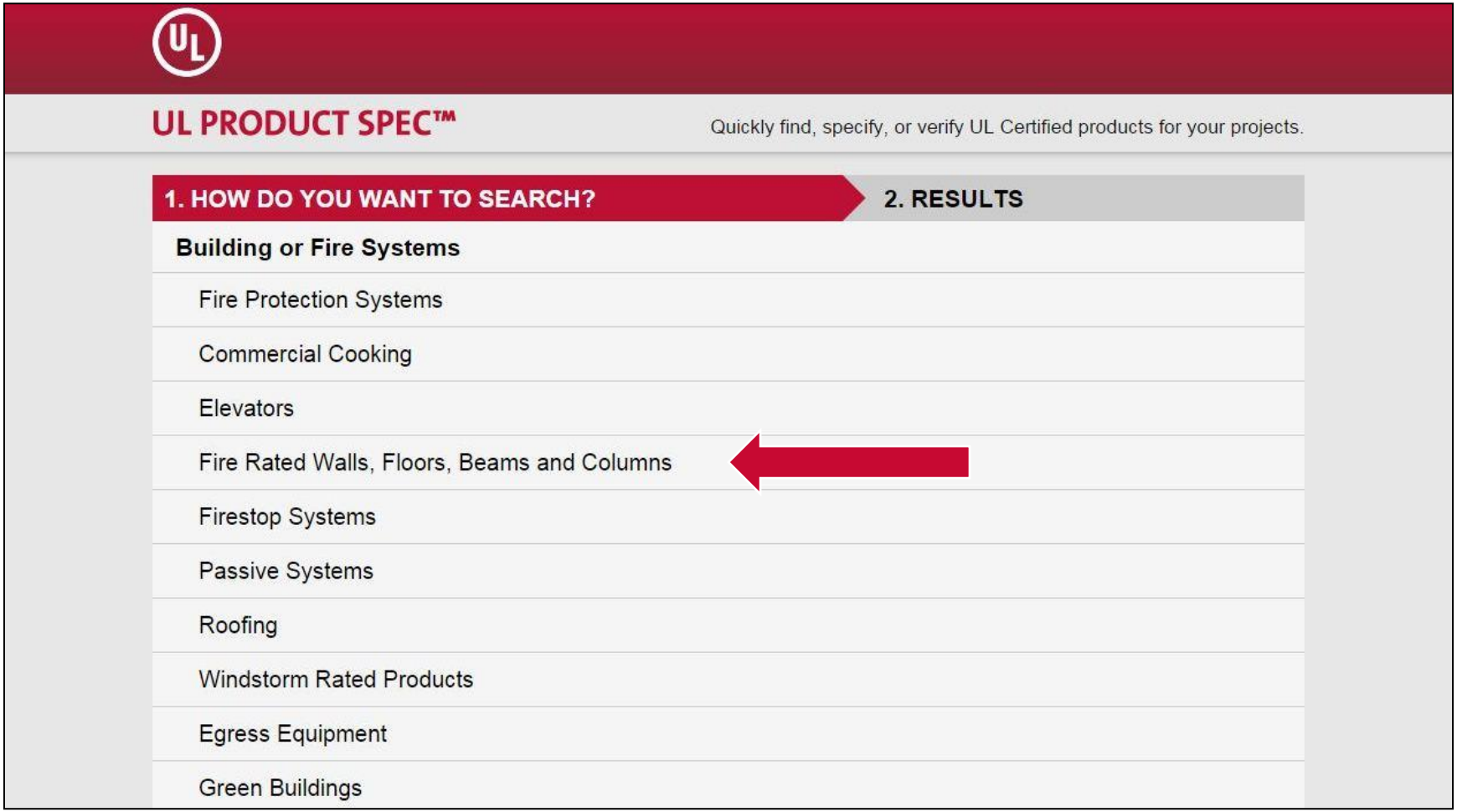
UL Product Spec™



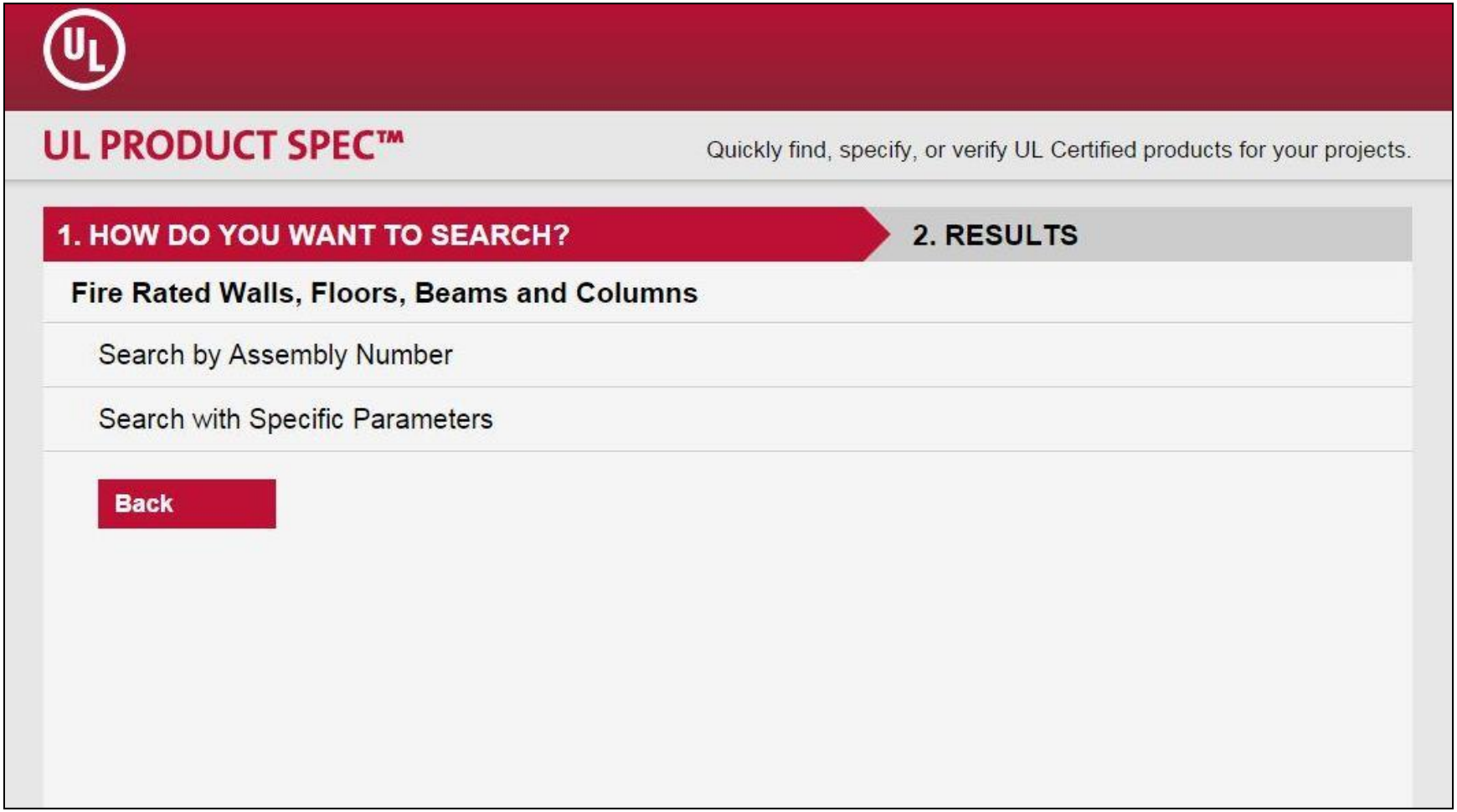
UL Product Spec™



UL Product Spec™



UL Product Spec™



UL Product Spec™

Sample Search - Accessing a design if design number is known

- Design No. L501

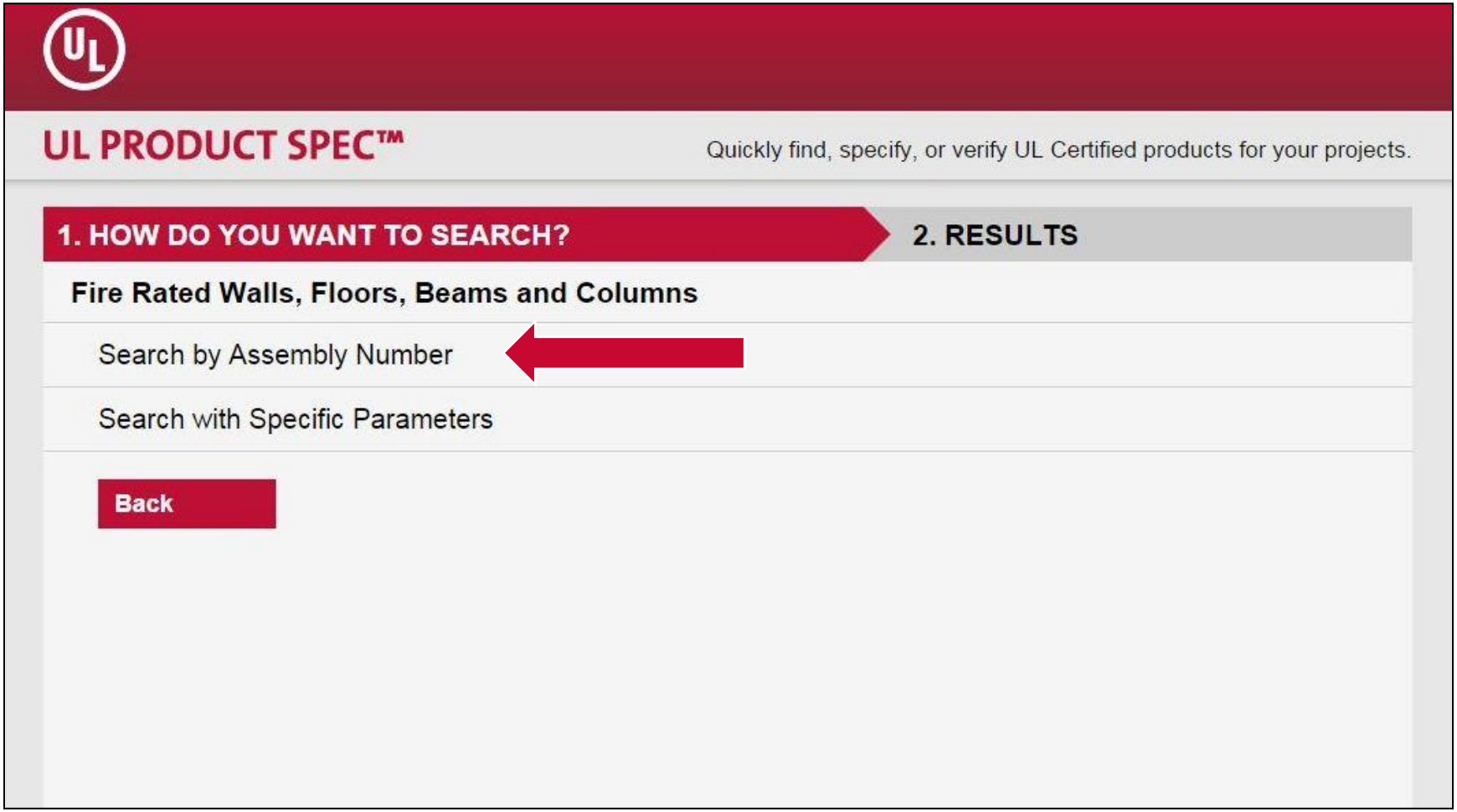
NUMBERING SYSTEM FOR FIRE RATED ASSEMBLIES

	TYPES OF PROTECTION								
	Membrane Protection						Direct Applied Protection		Unprotected
Groups of Construction	**000-099**	**100-199**	**200-299**	**300-399**	**400-499**	**500-599**	**600-699**	**700-899**	**900-999**
Floors-Ceilings A, B*, or C* Concrete and Cellular Steel Floor	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
D, E*, or F* Concrete and Steel Floor Units	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum B	Mastic Coating	SFRM +	Unprotected
G, H*, or I* Concrete and Steel Joists	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	G m B	Miscel-laneous	SFRM +	Unprotected
J or K Concrete	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	G m B	Miscel-laneous	SFRM +	Unprotected
L or M* Wood Joist or Combination Wood and Steel Assemblies	Concealed	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
Beams: N or O* for Floor Ceiling	Concealed Grid Sys.	(Reserved)	Exposed Grid System	Batts and Blankets or Mineral and Fiber Boards	Metal Lath	Gypsum Board	Mastic Coating	SFRM +	Unprotected
Roof-Ceiling: P, Q* or R*	Concealed Grid Sys.	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Miscel-laneous	SFRM +	Unprotected
Beams: S or T* Roof-Ceiling	Building Units	(Reserved)	Exposed Grid System	(Reserved)	Metal Lath	Gypsum Board	Mastic Coating	SFRM +	Unprotected
Wall & Partition: U, V or W*	Bldg. or Partition Panel Units	(Reserved)	Insulat-ing Concrete	Wood Stud Gypsum Bd Lath &/or Plaster	Metal Stud Gypsum Bd Lath &/or Plaster	Misc.	Metal Panels Gypsum Bd Lath &/or Plaster	SFRM +	Masonry
Columns: X, Y or Z*	Building Units	Prefab-ricated	(Reserved)	Batts and Blankets or Mineral and Fiber Boards	Metal Lath & Plaster	Gypsum Board	Mastic Coating	SFRM +	(Reserved)

The prefix numbers with an asterisk (*) and the design numbers indicated as "Reserved" in the above table are for future expansion and to cater to new types of systems developed in the future.

+ SFRM denotes Spray-Applid Fire Resistive Materials

UL Product Spec™



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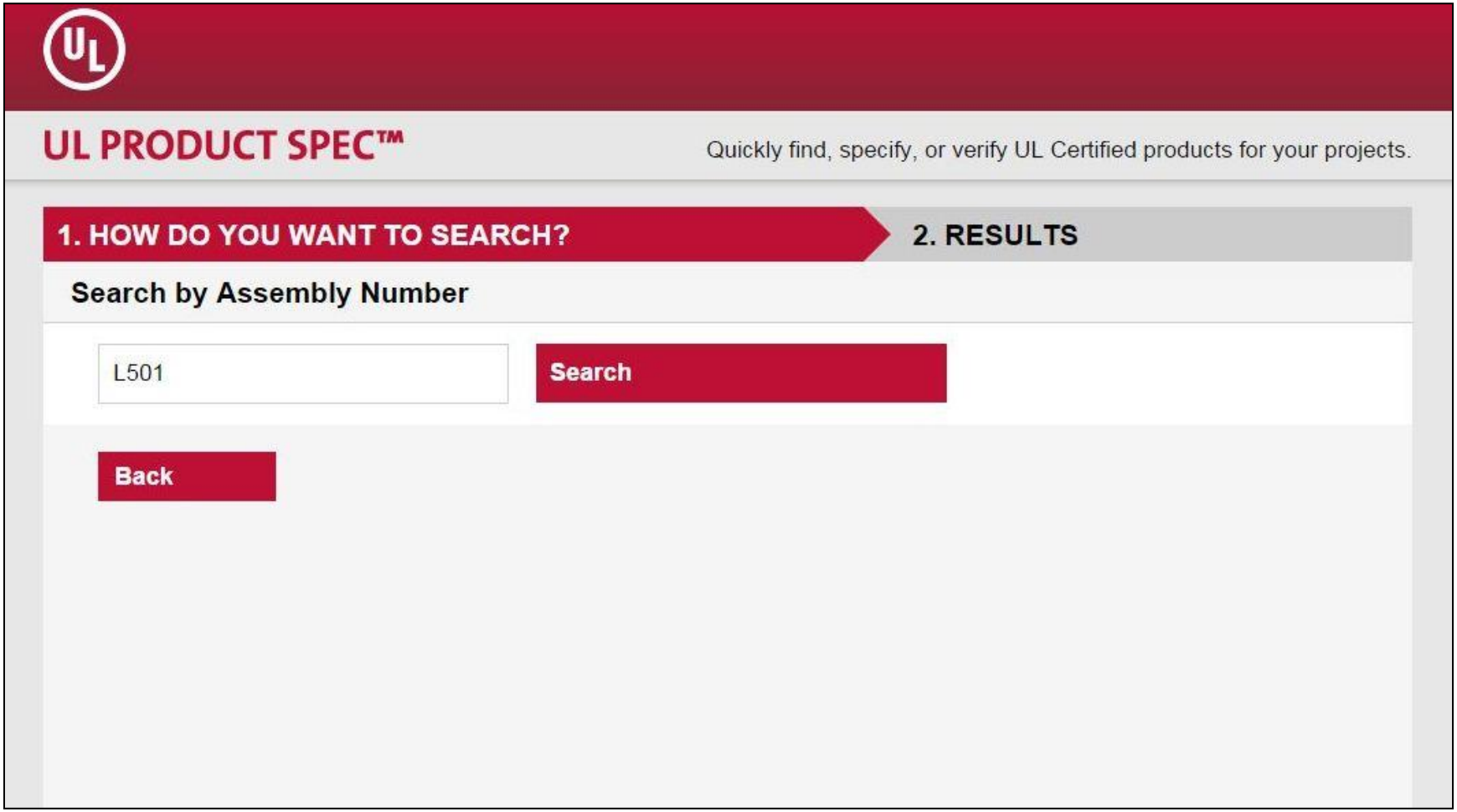

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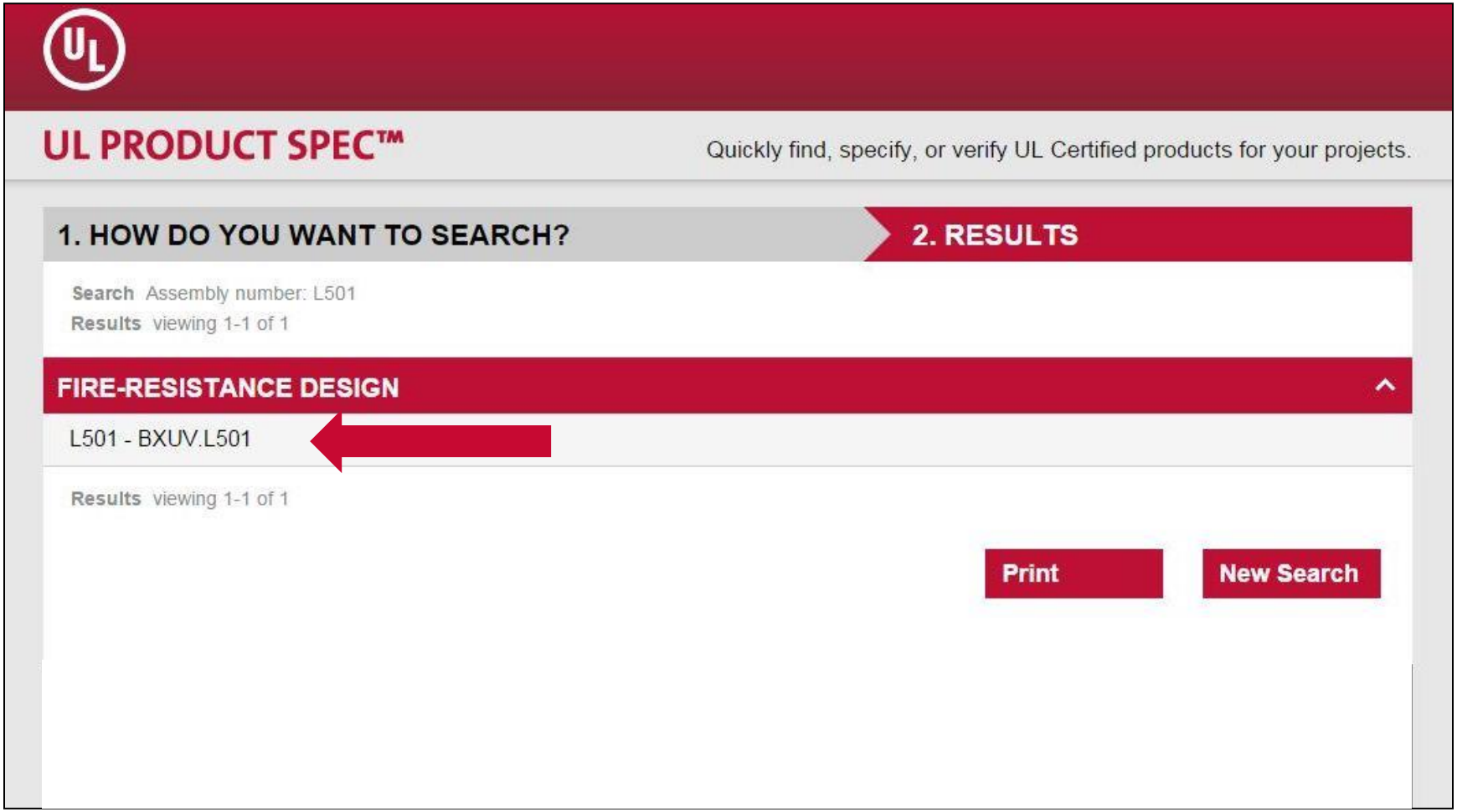

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1. HOW DO YOU WANT TO SEARCH? | 2. RESULTS

FIRE-RESISTANCE DESIGN

Assembly Usage Disclaimer

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. L501

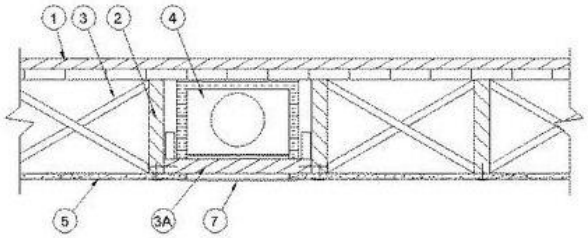
October 28, 2014

Unrestrained Assembly Rating — 1 Hr.

Finish Rating — (See Item 5 and 5A)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



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Live Search
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Favorites
BXUV.L501 - Fire Resistance Ratings - AN...
Page Safety Tools

Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

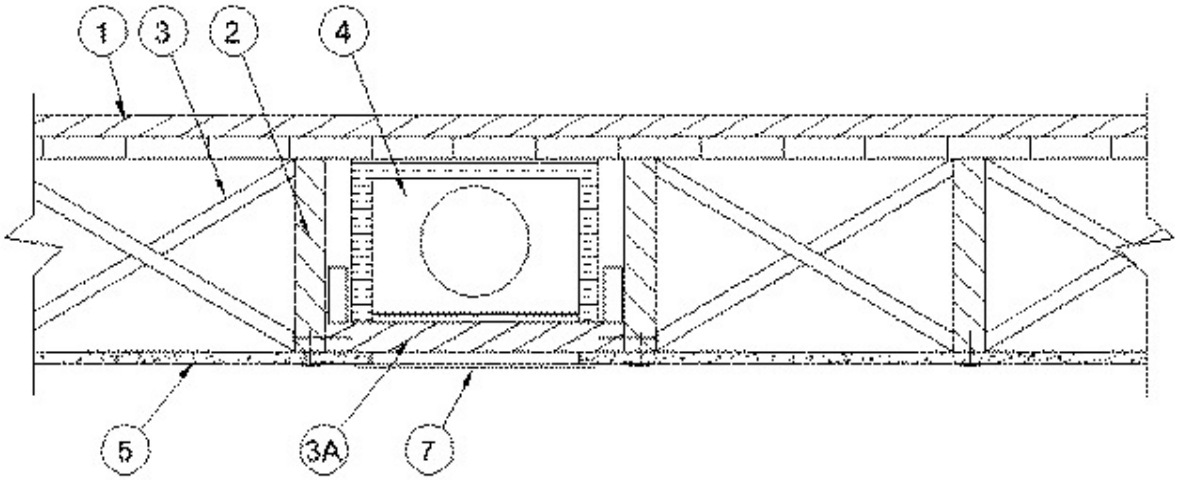
Design No. L501

September 01, 2010

Unrestrained Assembly Rating — 1 Hr.

Finish Rating — 30 Min. or (16 Min. See Item 5A)

Load Restricted for Canadian Applications — See Guide BXUV7



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1. **Flooring Systems** — The flooring system shall consist of one of the following:

System No. 1

Subflooring — Min 1 by 6 in. T & G lumber fastened diagonally to joists, or min 15/32 in. thick plywood or min 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

Vapor Barrier — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring — Min 1 by 4 in. T & G lumber installed perpendicular to joists, or min 19/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to joists with joints staggered.

System No. 2

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Floor Mat Materials* - (Optional) — Min 3/8 in. to max 3/4 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under **Floor Topping Mixture**.

UNITED STATES GYPSUM CO — Levelrock Brand Sound Reduction Board

Alternate Floor Mat Materials* - (Optional) — Nom 1/4 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under **Floor Topping Mixture**.

UNITED STATES GYPSUM CO — Levelrock Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* - (Optional) — Nom 3/8 in. thick floor mat material loose laid over the subfloor. Floor topping thickness shall be as specified under **Floor Topping Mixture**.

SOLUTIA INC — Type SC50

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2. **Wood Joists** — Min 2 by 10, spaced 16 in. OC and effectively fireblocked in accordance with local codes.

3. **Cross Bridging** — Min 1 by 3 in. or min 2 by 10 solid blocking.

3A. **Horizontal Bridging** — Used in lieu of Item 3 in same joist bay as ceiling damper (Item 4), when ceiling damper is employed. Wood 2 by 4 in. secured between joists with nails.

4. **Ceiling Damper* - (Optional)** — Max nom area shall be 198 sq in. Max rectangular size shall be 12 in. wide by 16-1/2 in. long. Max height of damper shall be 9-3/8 in. Aggregate damper openings shall not exceed 99 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille (Item 7) shall be installed in accordance with installation instructions.

AIR BALANCE INC — Type 299 (See Item 5A)

AIR KING VENTILATION PRODUCTS — Series AS, Series AK

DLX: DAMPERS AND LOUVERS EXPRESS — Models CRD.S.HC, CRD.R.HC

E H PRICE LTD — Models CD-S/R-HC, CD-RD-HC

GREENHECK FAN CORP — Model CRD-1WJ

METAL-FAB INC — Models MSCDHC, MRDCHD

NCA MFG INC — Models CD-S/R-HC, CD-RD-HC

RUSKIN CO — Model CFD7

UNITED ENERTECH CORP — Models C-S/R-HC(-A), C-RD-HC(-A)

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5. **Gypsum Board*** — Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long, 6d cement coated nails spaced 6 in. OC.

AMERICAN GYPSUM CO — Types AGX-1, AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC

LTD CO — Type DBX-1

CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, FRPC, SF3, ProRoc Type C, ProRoc Type X

CERTAINTEED GYPSUM CANADA INC — Types ProRoc Type C, ProRoc Type X, ProRoc Type Abuse-Resistant

CANADIAN GYPSUM COMPANY — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 9, C, GPFS1, GPFS6, DA, DAP, DAPC, DGG, DS,

LAFARGE NORTH AMERICA INC — Types LGFC3, LGFC6, LGFC6A, LGFC-C, LGFC-C/A

NATIONAL GYPSUM CO — Types FSK, FSK-C, FSK-G, FSW, FSW-2, FSW-3, FSW-C, FSW-G, FSW-6

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA

PABCO GYPSUM — Types C, PG-3, PG-4, PG-5, PG-6, PG-9, PG-C, PG-11

PANEL REY S A — Type PRC

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

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TEMPLE-INLAND — Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, TG-C, GreenGlass Type X.

UNITED STATES GYPSUM CO — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

USG MEXICO S A DE C V — Types C, IP-X1, IP-X2, IPC-AR, SCX, WRX

5A. **Gypsum Board*** — (Finish Rating - 16 min.) Required when Air Balance Inc. Type 299 ceiling damper (Item 4) is installed. Nom 5/8 in. thick, 48 in. wide gypsum board, installed with long dimension perpendicular to joists. Gypsum board secured with 1-7/8 in. long, 6d cement coated nails spaced 6 in. OC with the first nails located 1/2 in. and 3 in. from the board edges.

UNITED STATES GYPSUM CO — Type C

USG MEXICO S A DE C V — Type C

6. **Finishing System - (Not shown)** — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

7. **Grille** — Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

8. **Steel Corner Fasteners** — (Optional-not shown) - Used to attach ends of gypsum board at wall intersection where joists run parallel to wall. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galvanized steel. Fasteners nailed to face of wall bearing plate through fastener tab with one No. 6d cement coated nail, spaced not greater than 16 in. OC and 2 in. from edge of gypsum board. Fasteners covered with gypsum board facing applied to intersecting wall.

*Bearing the UL Classification Mark

Last Updated on 2010-09-01

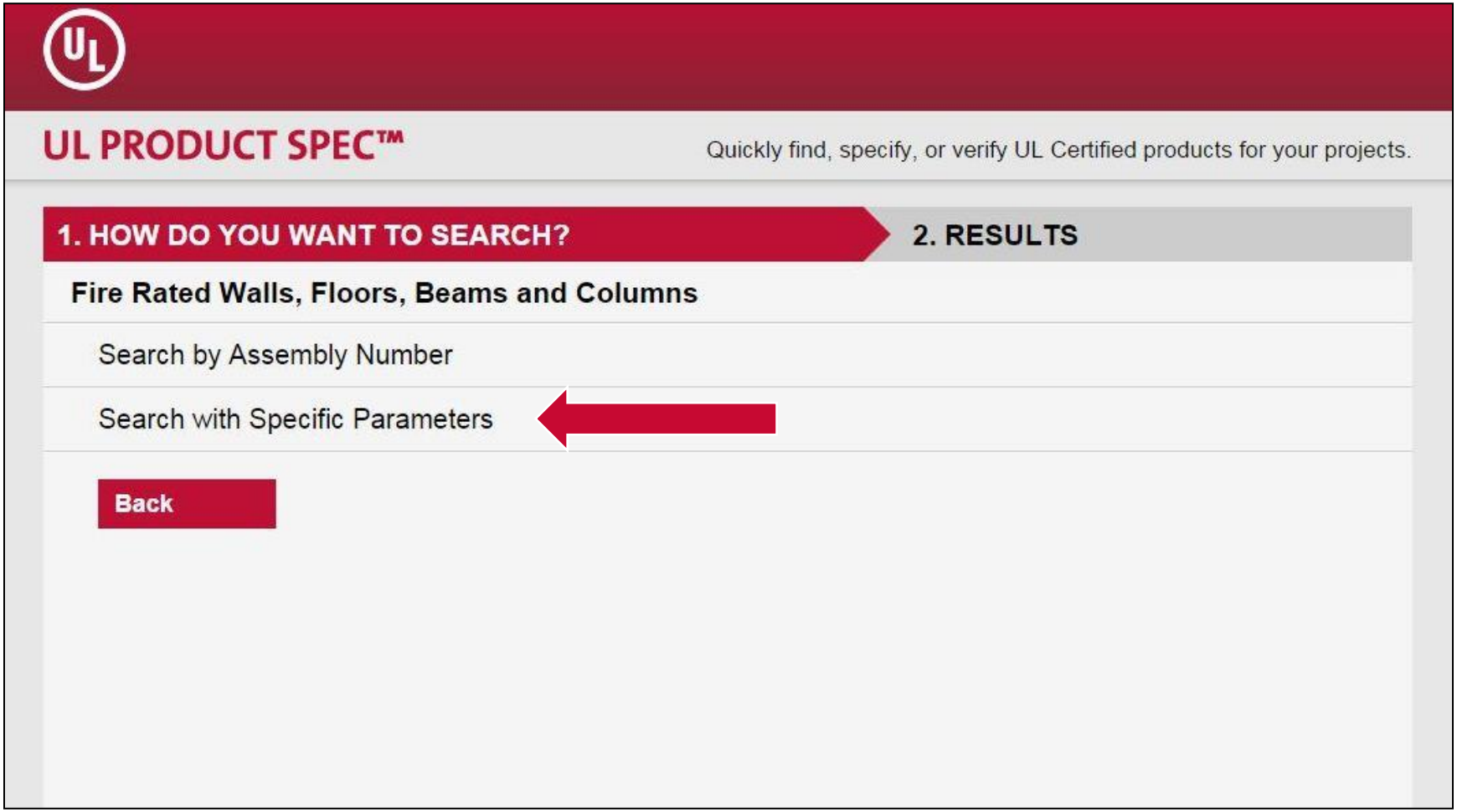
Questions? Print this page Notice of Disclaimer Page Top

UL Product Spec™

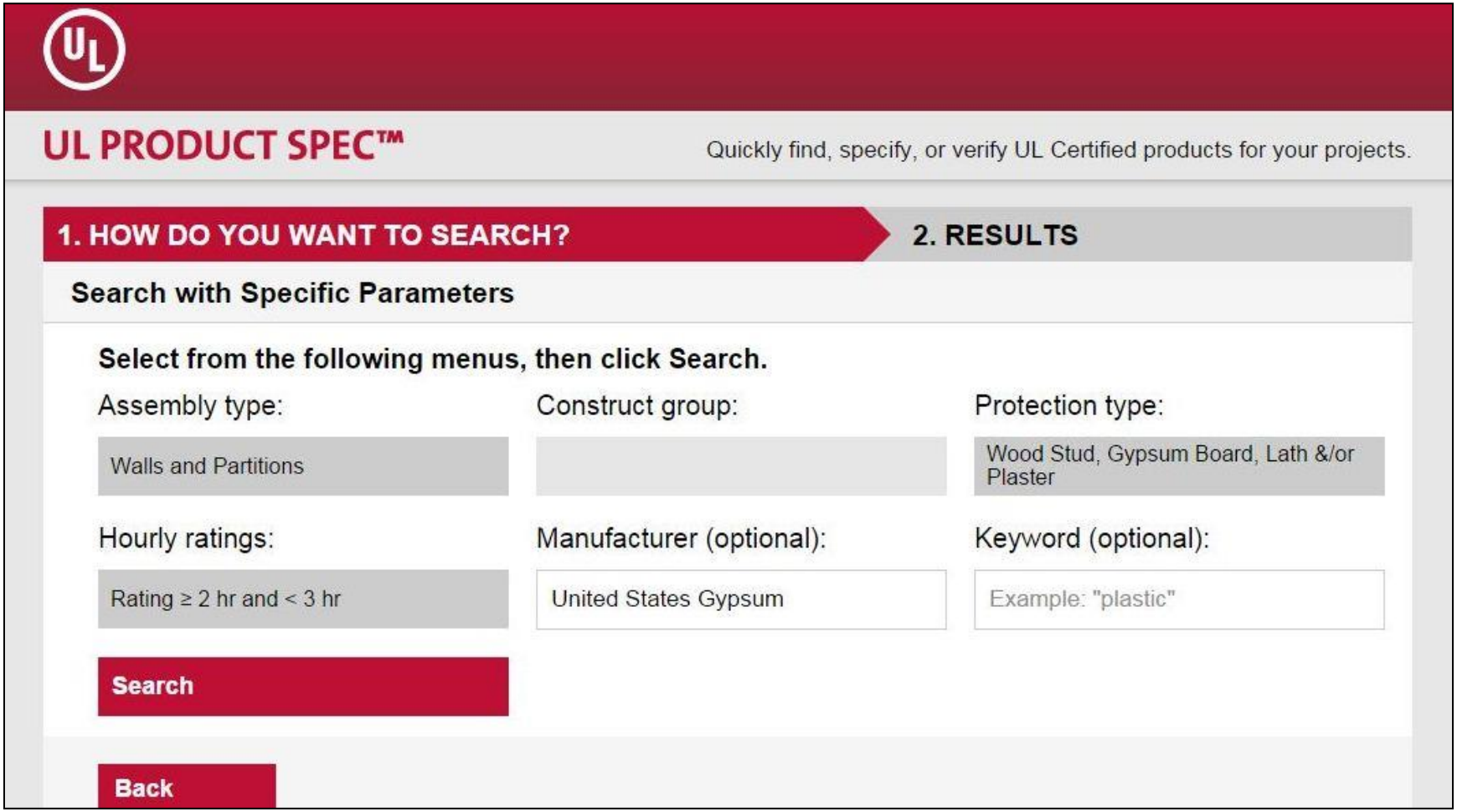
Sample Search - Searching for a design based on specific parameters

- Wood stud/gypsum board wall assembly
- 2 hour rating
- Gypsum board supplied by the United States Gypsum Company

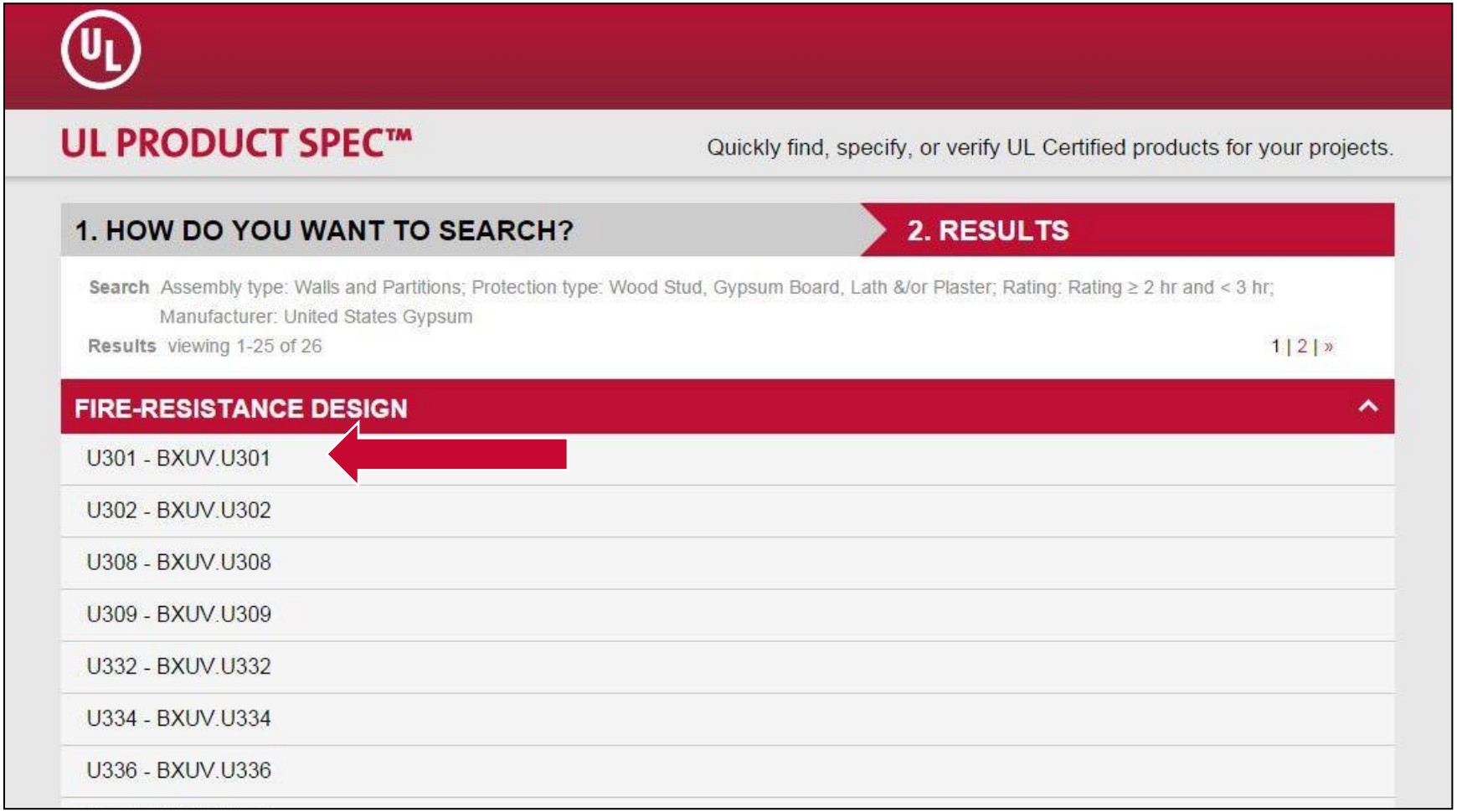
UL Product Spec™



UL Product Spec™



UL Product Spec™



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FIRE-RESISTANCE DESIGN

Assembly Usage Disclaimer

BXUV - Fire Resistance Ratings - ANSI/UL 263

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

Design No. U301

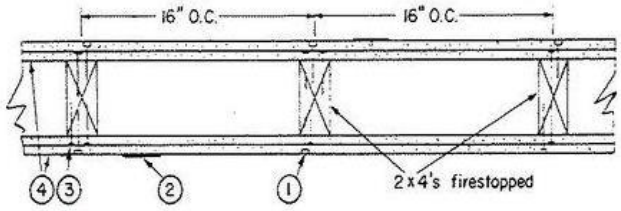
October 29, 2014

Bearing Wall Rating — 2 HR.

Finish Rating — 66 Min.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



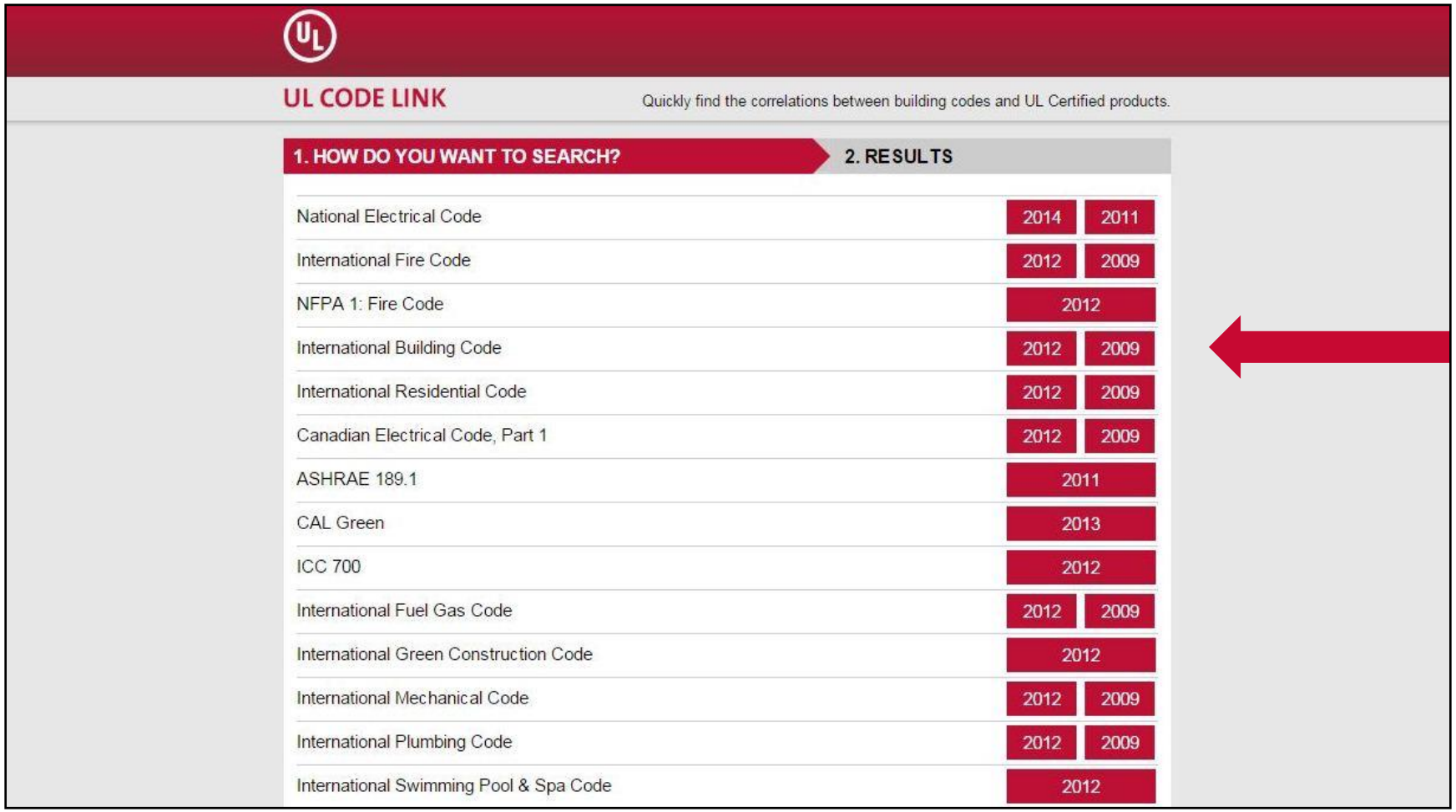
Questions / Comments

Code Link

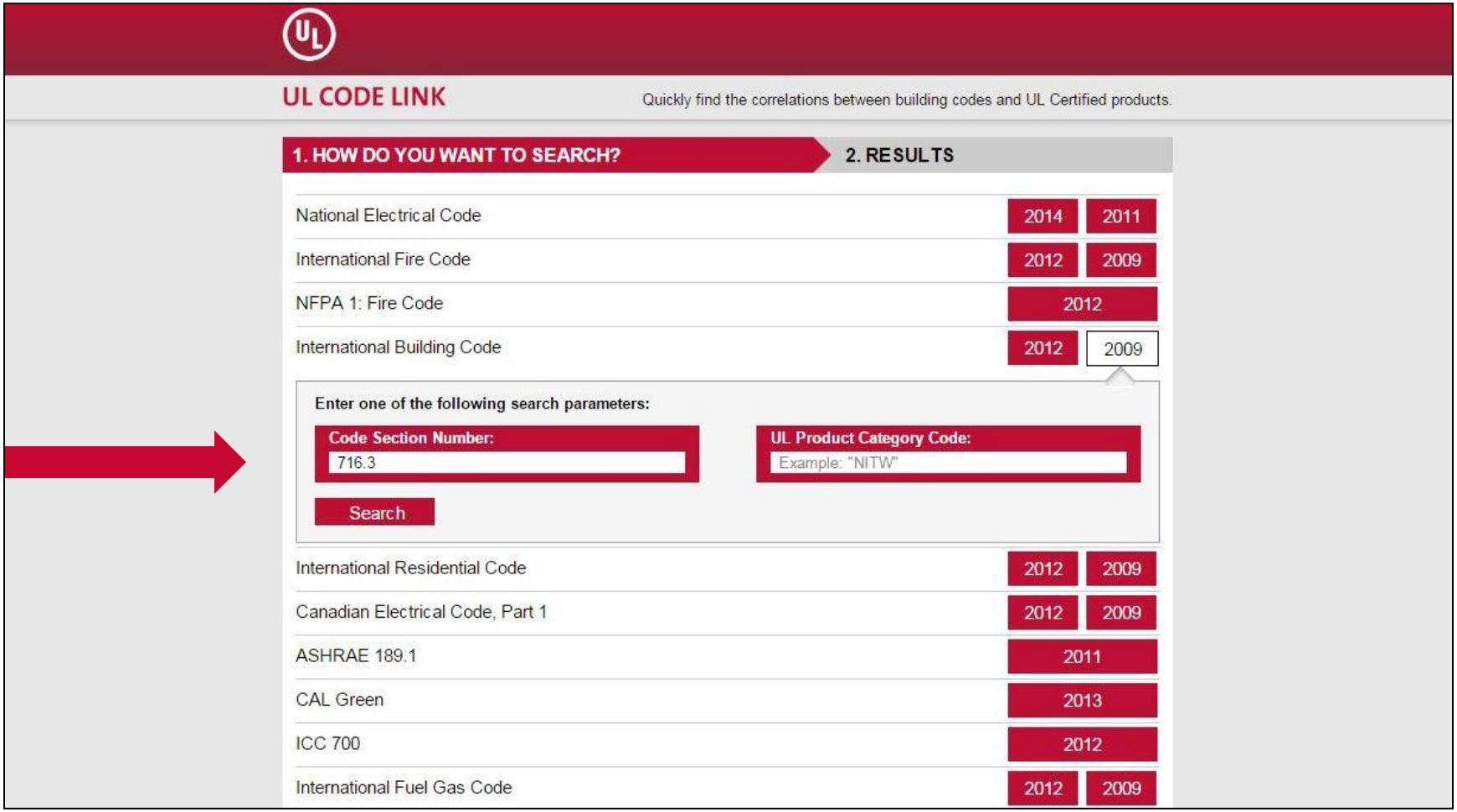
- Correlates model code sections to UL product categories
- Covers many model codes and editions (IBC, IFC, NEC, etc.)
- Flexible search capabilities
- Powerful tool to locate appropriate Listings

www.ul.com/codelink

Code Link


UL CODE LINK
Quickly find the correlations between building codes and UL Certified products.
1. HOW DO YOU WANT TO SEARCH?
2. RESULTS
National Electrical Code 2014 2011
International Fire Code 2012 2009
NFPA 1: Fire Code 2012
International Building Code 2012 2009
International Residential Code 2012 2009
Canadian Electrical Code, Part 1 2012 2009
ASHRAE 189.1 2011
CAL Green 2013
ICC 700 2012
International Fuel Gas Code 2012 2009
International Green Construction Code 2012
International Mechanical Code 2012 2009
International Plumbing Code 2012 2009
International Swimming Pool & Spa Code 2012

Code Link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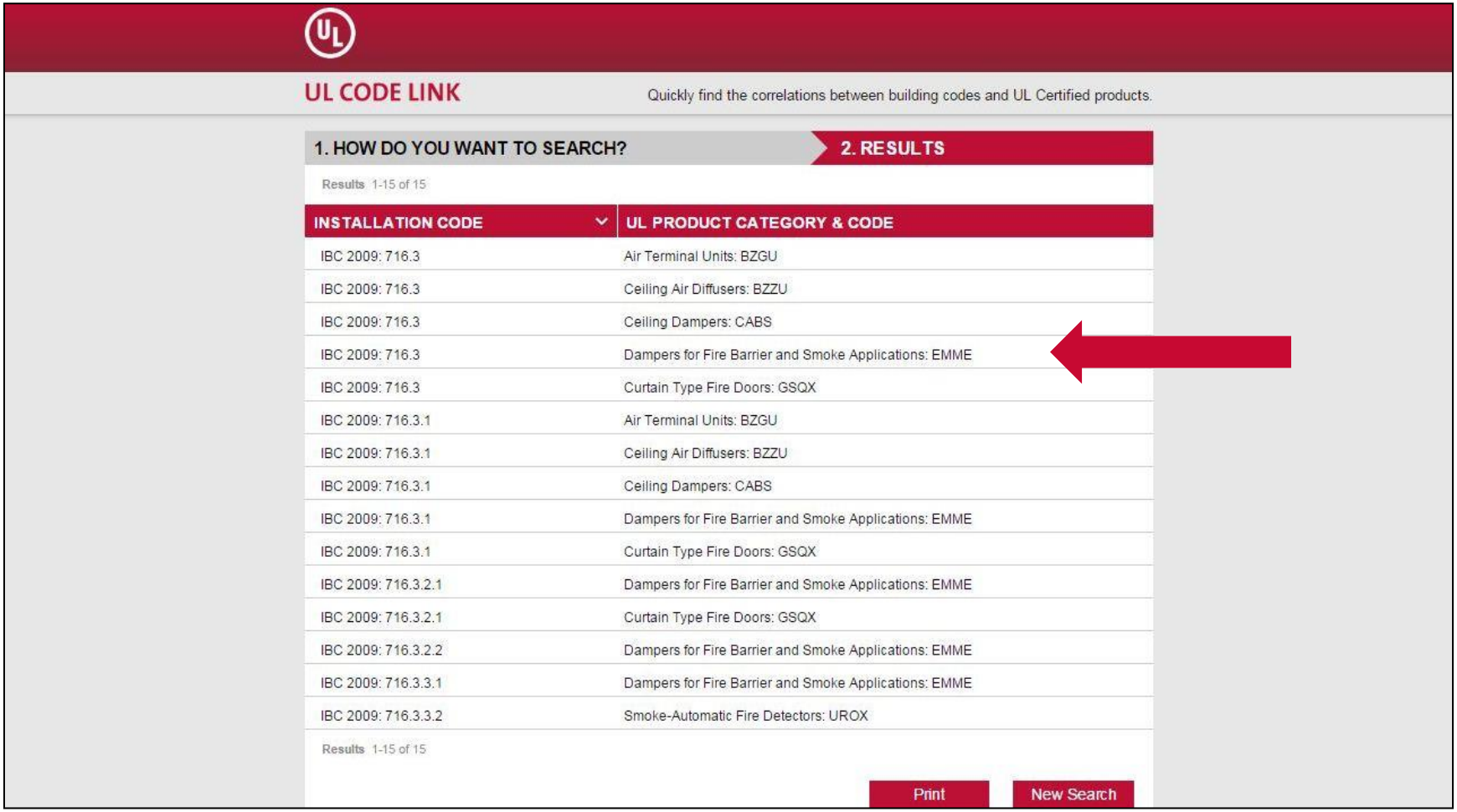
Quickly find the correlations between building codes and UL Certified products.
1. HOW DO YOU WANT TO SEARCH?
2. RESULTS
National Electrical Code
2014
2011
International Fire Code
2012
2009
NFPA 1: Fire Code
2012
International Building Code
2012
2009
Enter one of the following search parameters:
Code Section Number:
716.3
UL Product Category Code:
Example: "NITW"
Search
International Residential Code
2012
2009
Canadian Electrical Code, Part 1
2012
2009
ASHRAE 189.1
2011
CAL Green
2013
ICC 700
2012
International Fuel Gas Code
2012
2009

Code Link



UL CODE LINK

Quickly find the correlations between building codes and UL Certified products.

1. HOW DO YOU WANT TO SEARCH? 2. RESULTS

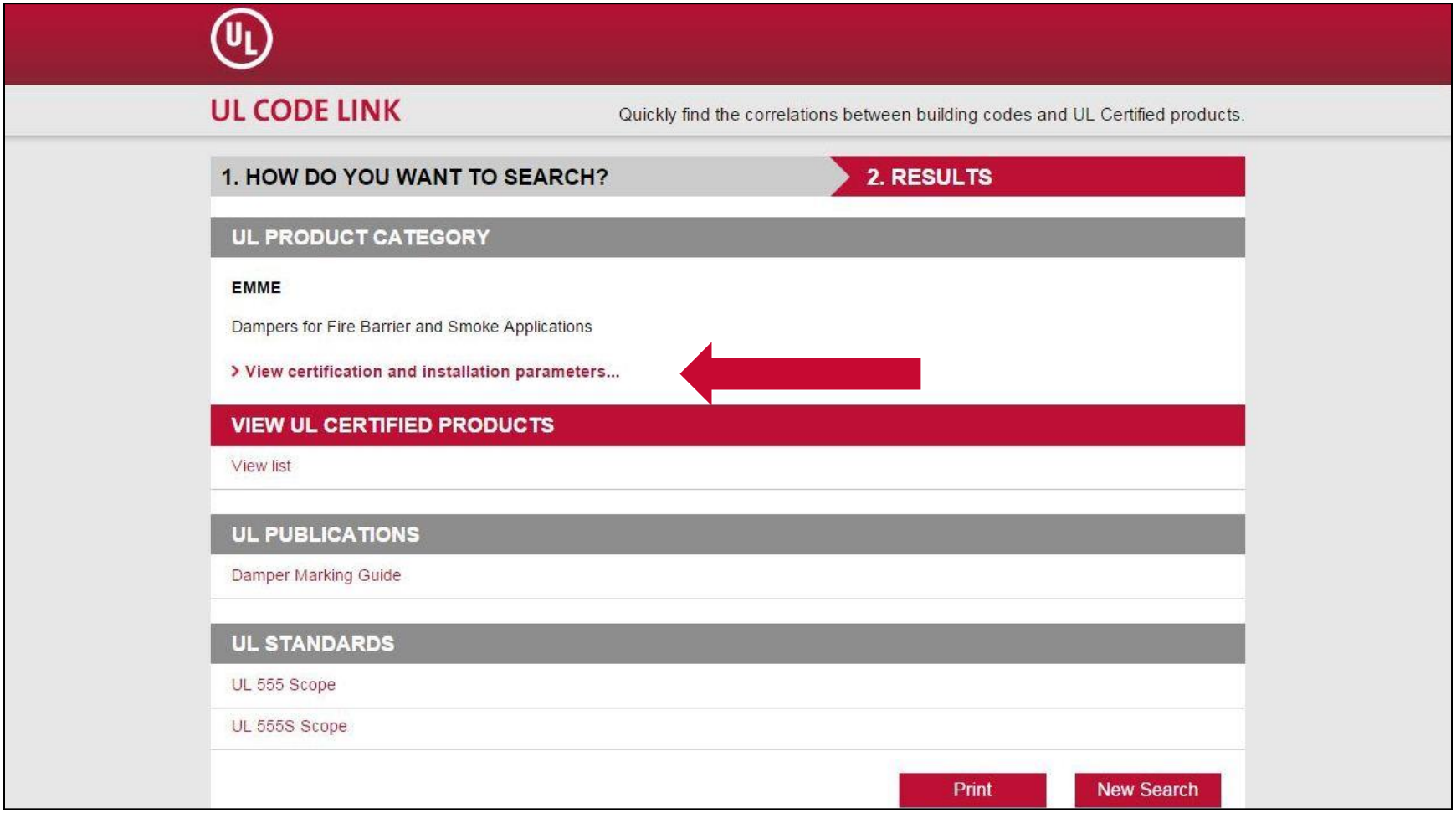
Results 1-15 of 15

INSTALLATION CODE	UL PRODUCT CATEGORY & CODE
IBC 2009: 716.3	Air Terminal Units: BZGU
IBC 2009: 716.3	Ceiling Air Diffusers: BZZU
IBC 2009: 716.3	Ceiling Dampers: CABS
IBC 2009: 716.3	Dampers for Fire Barrier and Smoke Applications: EMME
IBC 2009: 716.3	Curtain Type Fire Doors: GSQX
IBC 2009: 716.3.1	Air Terminal Units: BZGU
IBC 2009: 716.3.1	Ceiling Air Diffusers: BZZU
IBC 2009: 716.3.1	Ceiling Dampers: CABS
IBC 2009: 716.3.1	Dampers for Fire Barrier and Smoke Applications: EMME
IBC 2009: 716.3.1	Curtain Type Fire Doors: GSQX
IBC 2009: 716.3.2.1	Dampers for Fire Barrier and Smoke Applications: EMME
IBC 2009: 716.3.2.1	Curtain Type Fire Doors: GSQX
IBC 2009: 716.3.2.2	Dampers for Fire Barrier and Smoke Applications: EMME
IBC 2009: 716.3.3.1	Dampers for Fire Barrier and Smoke Applications: EMME
IBC 2009: 716.3.3.2	Smoke-Automatic Fire Detectors: UROX

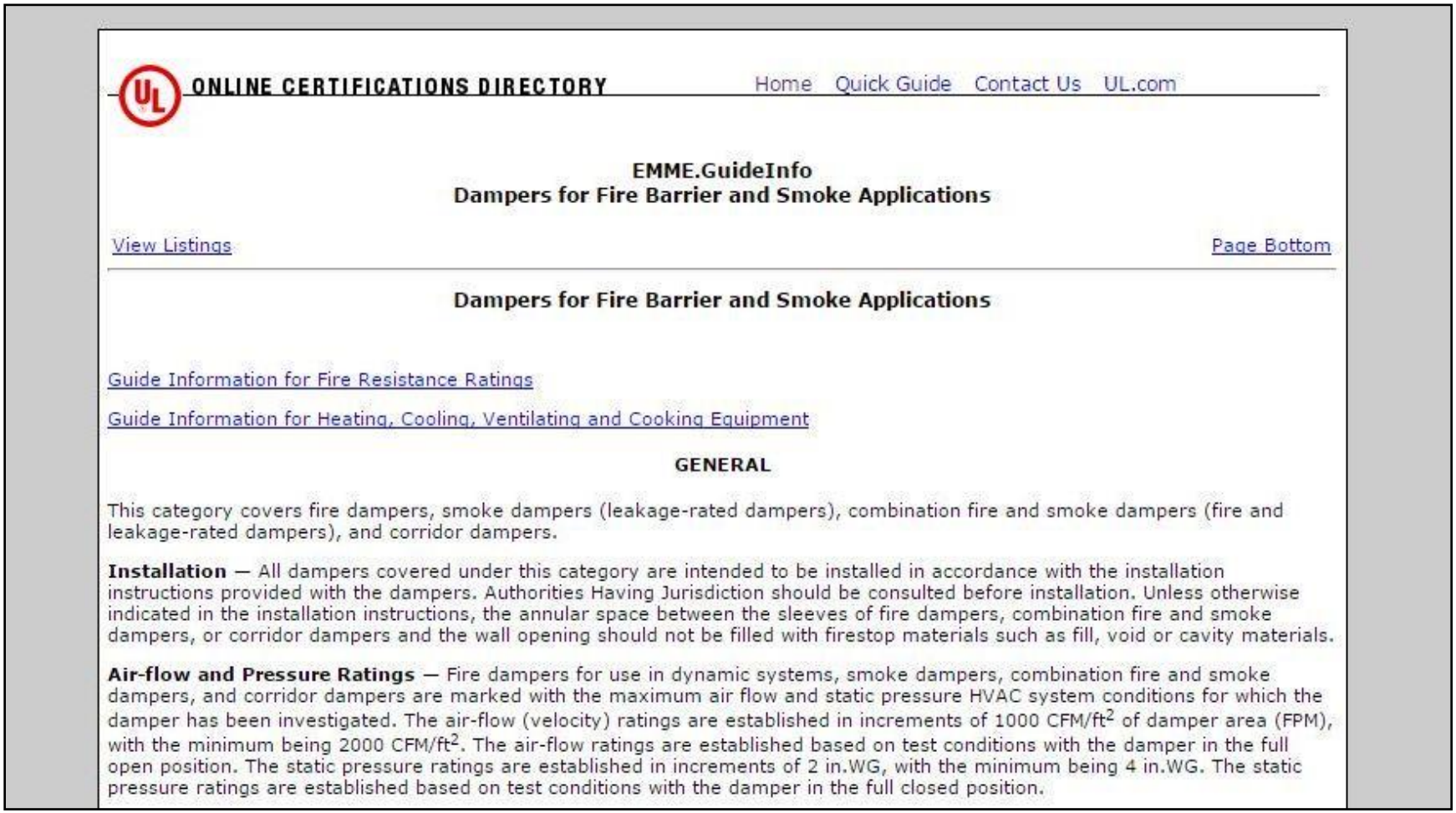
Results 1-15 of 15

Print New Search

Code Link


UL CODE LINK
Quickly find the correlations between building codes and UL Certified products.
1. HOW DO YOU WANT TO SEARCH?
2. RESULTS
UL PRODUCT CATEGORY
EMME
Dampers for Fire Barrier and Smoke Applications
> View certification and installation parameters...
VIEW UL CERTIFIED PRODUCTS
View list
UL PUBLICATIONS
Damper Marking Guide
UL STANDARDS
UL 555 Scope
UL 555S Scope
Print
New Search

Code Link



ONLINE CERTIFICATIONS DIRECTORY

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EMME.GuideInfo
Dampers for Fire Barrier and Smoke Applications

View Listings Page Bottom

Dampers for Fire Barrier and Smoke Applications

Guide Information for Fire Resistance Ratings

Guide Information for Heating, Cooling, Ventilating and Cooking Equipment

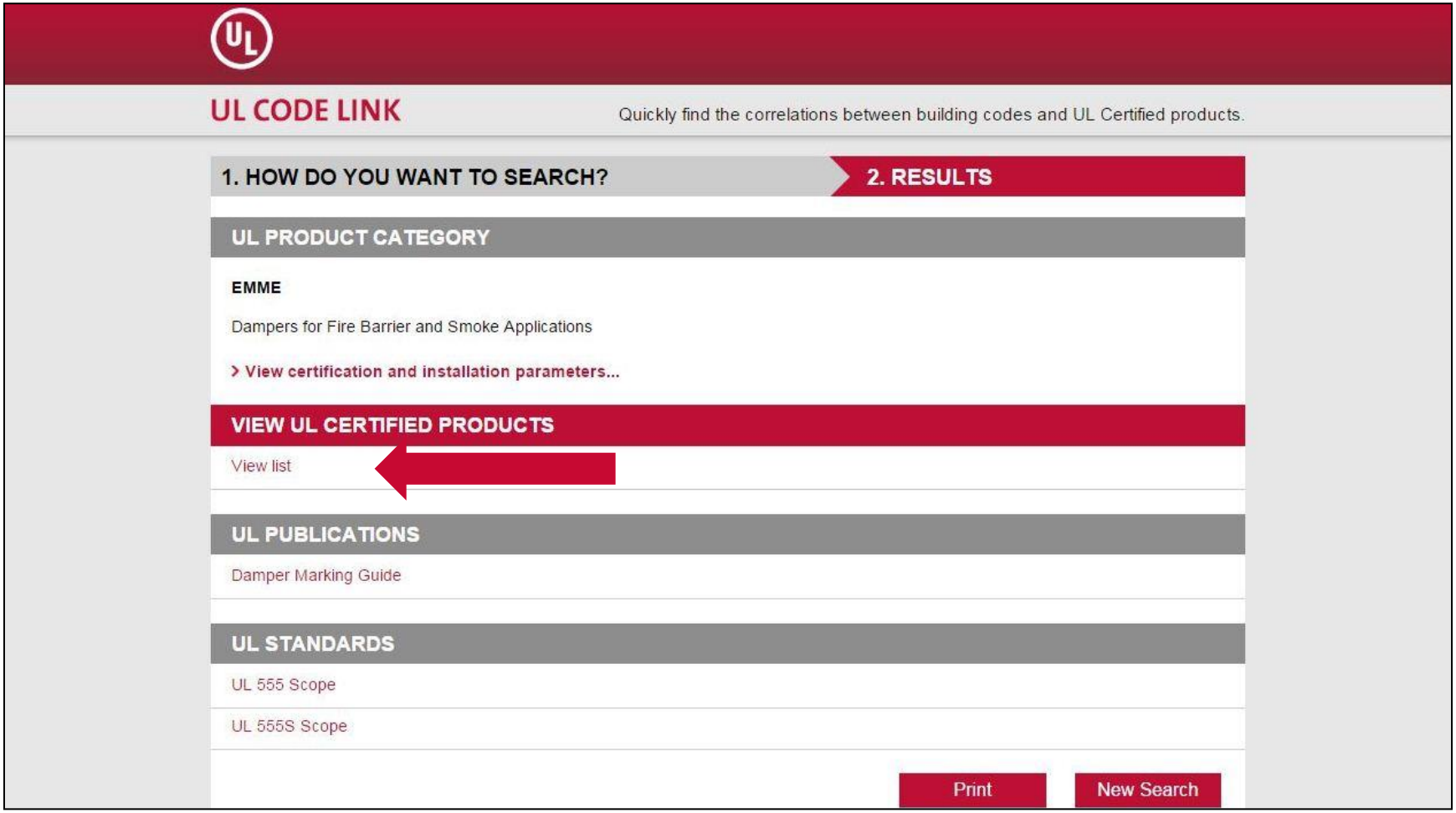
GENERAL

This category covers fire dampers, smoke dampers (leakage-rated dampers), combination fire and smoke dampers (fire and leakage-rated dampers), and corridor dampers.

Installation — All dampers covered under this category are intended to be installed in accordance with the installation instructions provided with the dampers. Authorities Having Jurisdiction should be consulted before installation. Unless otherwise indicated in the installation instructions, the annular space between the sleeves of fire dampers, combination fire and smoke dampers, or corridor dampers and the wall opening should not be filled with firestop materials such as fill, void or cavity materials.

Air-flow and Pressure Ratings — Fire dampers for use in dynamic systems, smoke dampers, combination fire and smoke dampers, and corridor dampers are marked with the maximum air flow and static pressure HVAC system conditions for which the damper has been investigated. The air-flow (velocity) ratings are established in increments of 1000 CFM/ft^2 of damper area (FPM), with the minimum being 2000 CFM/ft^2. The air-flow ratings are established based on test conditions with the damper in the full open position. The static pressure ratings are established in increments of 2 in.WG, with the minimum being 4 in.WG. The static pressure ratings are established based on test conditions with the damper in the full closed position.

Code Link


UL CODE LINK
Quickly find the correlations between building codes and UL Certified products.
1. HOW DO YOU WANT TO SEARCH?
2. RESULTS
UL PRODUCT CATEGORY
EMME
Dampers for Fire Barrier and Smoke Applications
> View certification and installation parameters...
VIEW UL CERTIFIED PRODUCTS
View list
UL PUBLICATIONS
Damper Marking Guide
UL STANDARDS
UL 555 Scope
UL 555S Scope
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New Search

Code Link

ONLINE CERTIFICATIONS DIRECTORY

Home Quick Guide Contact Us UL.com

Search results

You may choose to **Refine Your Search.**

Company Name	Category Name	Link to File
AIR BALANCE INC	Dampers for Fire Barrier and Smoke Applications	EMME.R4708
AIR MANAGEMENT INC	Dampers for Fire Barrier and Smoke Applications	EMME.R22333
AIR MASTER EQUIPMENTS EMIRATES L L C	Dampers for Fire Barrier and Smoke Applications	EMME.R21172
AIRE TECHNOLOGIES INC	Dampers for Fire Barrier and Smoke Applications	EMME.R17066
ALDES MIDDLE EAST	Dampers for Fire Barrier and Smoke Applications	EMME.R25305
ALUMAVENT INC	Dampers for Fire Barrier and Smoke Applications	EMME.R25565
AMERICAN WARMING & VENTILATING	Dampers for Fire Barrier and Smoke Applications	EMME.R16398
ARABIAN THERMAL AIRE INDUSTRIES CO LTD	Dampers for Fire Barrier and Smoke Applications	EMME.R25079
ARLAN DAMPER CORP	Dampers for Fire Barrier and Smoke Applications	EMME.R8610
ARROW UNITED INDUSTRIES, DIV OF MESTEK	Dampers for Fire Barrier and Smoke Applications	EMME.R19235

Page: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

Model number information is not published for all product categories. If you require information about a specific model number, please contact Customer Service for further assistance.

Questions / Comments

Other UL Resources for AHJs

- Code Authorities web page
- Codes & Advisory Services technical support
- Complementary newsletters
- ULtimate e-mail notifications

Fire Service Related Content

Fire authorities

UL conducts world class, cutting edge fire research and provides a wide range of certification programs and services to help fire authorities protect emergency responders and members of their communities.

www.ul.com/codeauthorities

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Code Authorities

- Fire
- Electrical
- Building
- Mechanical
- Plumbing
- Environmental and Public Health
- Fuel Gas
- Sustainability
- Resources
- Services
- Publications
- Keeping in Touch

Code authorities

Code authorities count on UL's technical expertise and over 120 years of experience to provide certification services, product standards, cutting edge research, and the technical support they need to provide safe and sustainable code compliant installations.

Code related content

Resources for Code Authorities

Code Authorities

Fire
Electrical
Building
Mechanical
Plumbing
Environmental and Public Health
Fuel Gas
Sustainability

Resources

Code Correlation Database
Technical Library
Installed Products
Regulatory Support
FAQs

Services
Publications
Keeping in Touch

Resources for code authorities

UL has a wide range of resources to help code authorities, designers, specifiers and installers achieve safe and sustainable code compliant installations.

Code correlation database

A powerful tool that correlates installation code sections with UL certifications and services. Try it now!

Start here

Online certifications directory

A comprehensive database that inlcudes manufacturers' certifications and important product category information.

Start here

Technical library

Technical information on topics of interest to code authorities.

Learn more

Code Official Newsletters

Technical updates and code related considerations for UL certified products

- *The Code Authority*
- *The Code Authority - Electrical Connections*
- *The Fire & Security Authority*

ULtimate E-mail

Electronic notices

- New product categories
- Upcoming seminars
- Product recalls

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UL.com/ultimate

Questions / Comments

Market Surveillance

Works to Protect the Integrity of UL Certifications –

by investigating ***Product Incident Reports*** and

by ***proactive market surveys*** of product samples obtained from the marketplace.

UL Market Surveillance

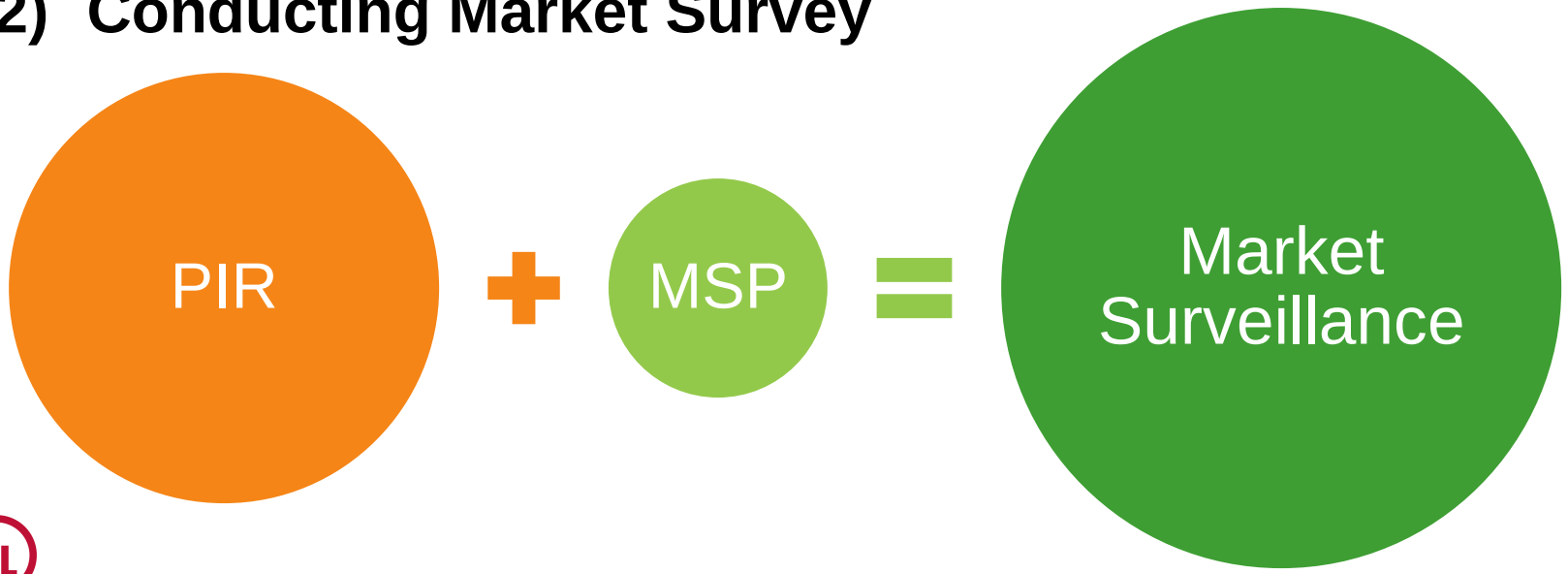
(Formerly FIELD REPORTS)

PURPOSE

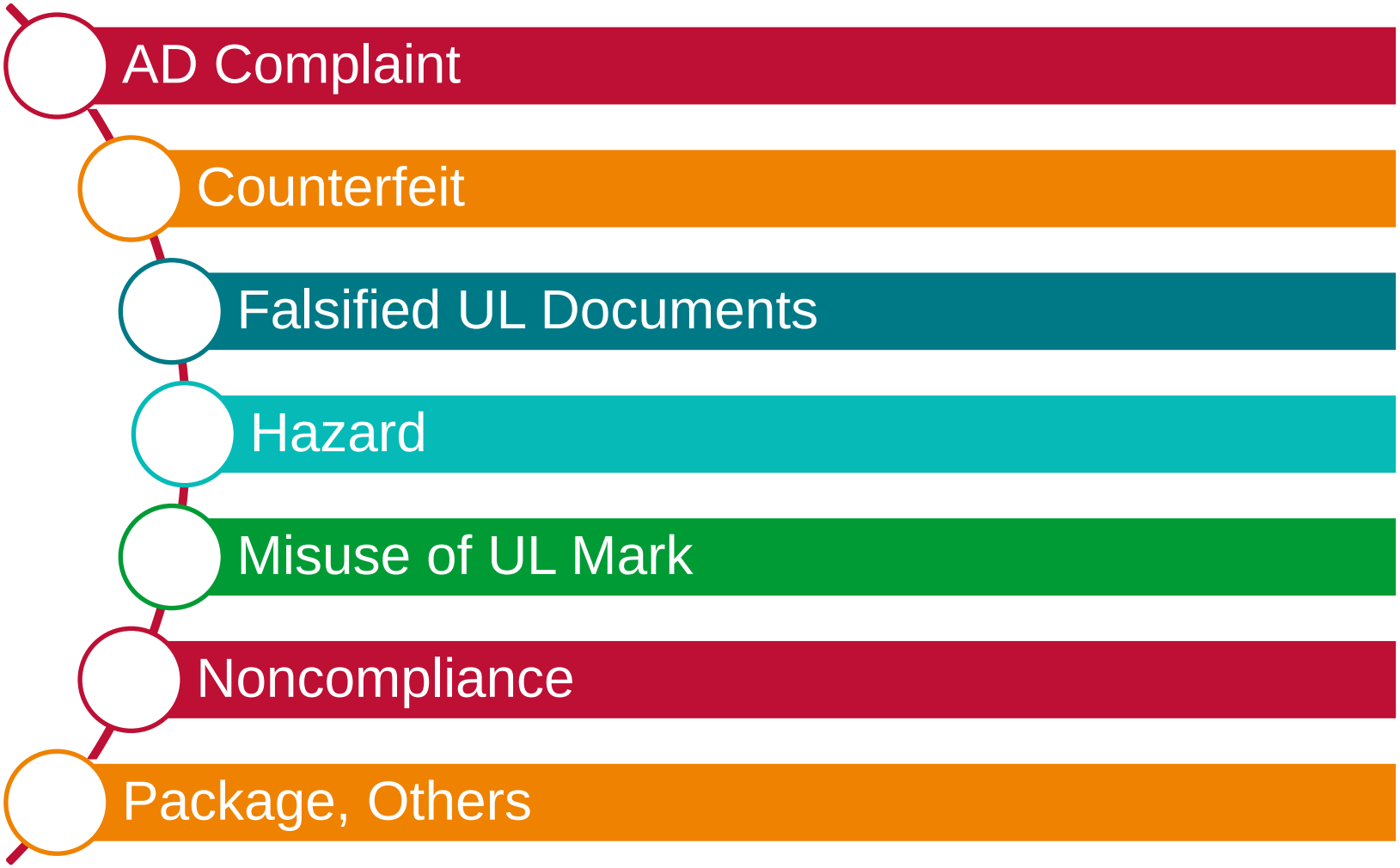
To ensure that safe products are placed on the market.

ELEMENTS

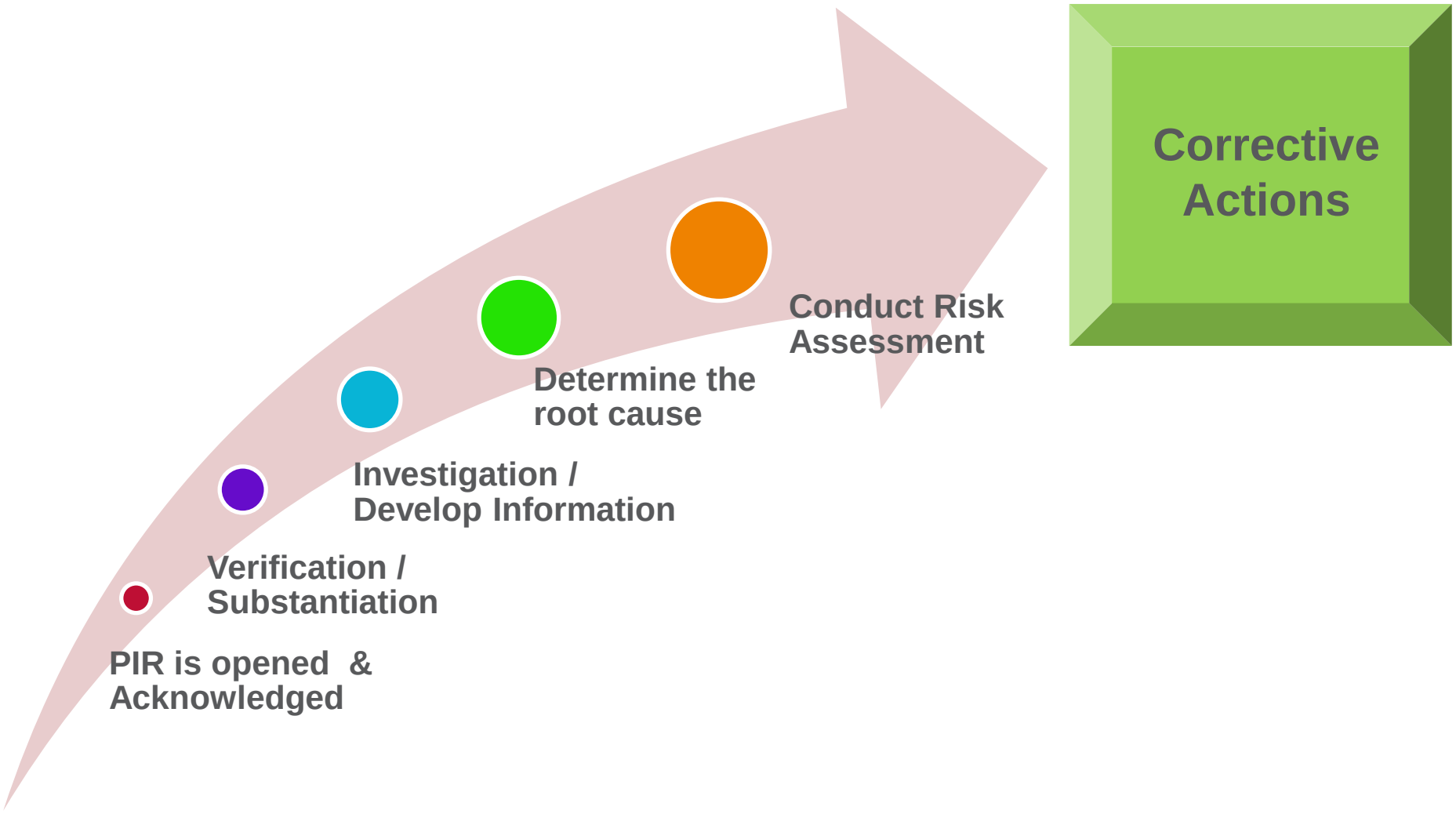
1) **Investigations of Product Incident Reports**
2) **Conducting Market Survey**



UL Market Surveillance
PIR Types



UL Market Surveillance
PIR Investigations



Market Surveillance Product Incident Report Form

If you would like to report a safety-related concern with a product bearing a UL Mark or an advertising concern, please complete and submit the form below. If any of the fields are not applicable, please enter NA.

For more information about UL's Market Surveillance Department click here.

A. Your contact Information

Name
First
Last

Title or position

Company / Jurisdiction / Organization

Address
Street Address
Address Line 2
City
State / Province / Region
ZIP / Postal Code
Country

Phone

Questions?

THANK YOU!

Bruce E. Johnson
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Bruce.Johnson@ul.com