What is a fire rated floor?

- A fire rated floor is:
  - Structural Decking
  - Concrete
  - Insulation (Certain types)

- Classification Types:
  - D700 & D800 – require Insulation (WalkerCell)
  - D900 – No Insulation (Poke-Thru Devices)

- 2 hr rated D900 Slab:
  - Decking
  - Concrete
    - Light weight concrete 3-1/4” min. over crest of deck
    - Normal weight concrete 4-1/2” min. over crest of deck
  - No insulation needed
Creating Voids in Concrete

- Voids: Anything that displaces or removed concrete
- Floor boxes and conduits creates a void
- Coring a hole creates a void
- Once voids are created the floor is no longer fire classified

![Diagram of void creation]

Fire Rated Deck Construction
Restoring a Floors Fire Rating

- Spray on insulation: Industry accepted practice
- Not a fire classified system. (Up to inspector’s and fire marshal's approval)

![Diagram of fire rated deck construction]
Poke-Thru Devices and Fire Classified Nonmetallic Floor Box Spacing

Support Beam

65 sq. ft Span

Not to scale

Poke-Thru Devices Non-Metallic Floor Boxes
Spacing: 2ft on center and not more than one per 65 sq. ft. of floor span area in each span

Fire Classified Metallic Floor Box Spacing

Support Beam

Metallic Floor Boxes
Spacing: 2ft on center with not more than one unit per 4 sq. ft. of a floor span

Not to scale
Wiremold® Fire Classified Floor Box

Fire Classified Products
Restoring a Floor’s Fire Rating

Poke-Thru Devices
Fire Classified System
(Approved by UL)

Fire Classified Floor Boxes
Fire Classified System
(Approved by UL)
Fire Classified Floor Box
Construction

- Molded intumescent stem
- Steel adjusting / mounting plate
- Mineral board flute closure
- Mineral board
- Floor Box: Must be located over the valley in the deck to maintain fire classification
- Steel pan
- Carriage bolt

Fire Classified Floor Box
Intumescent Conduit Feed Stem

- Same material that is used in our poke-thru devices
- When heated up to 385 degree F material expands to close off feed channel
Fire Classified Floor Box Mounting Plate

- Plate must be attached to deck structure
- Larger leveling legs for strength
- Easier leveling method

Fire Classified Floor Box Mineral Board

- Mineral board must be applied to the underside of deck structure in order to maintain fire classification
- Mineral board material is currently used to insulate around beams and columns in high rise buildings
Fire Classified Floor Box
Resource RFB™ Series

- RFB2FC
- RFB2-SSFC
- RFB4-4DBFC
- RFB4-SSFC

FloorPort™
Designed with continuous VoC to develop key features

- New hinge designed with enhanced durability. Hinge enables covers to open a full 180 degrees to lie flat on the floor for easy access to all compartments.
- Easy to operate lid. Self-closing, full sized handle provides ease of opening.
- Versatile application for use on both RFB Floorboxes and WalkerCell® Cellular Raceway Systems. Designers can attain a coordinated look in areas requiring both high and low concentration of floor outlets.
- Expanded color options. Now available in durable powder coat painted nickel, bronze, brass, grey, and black, as well as a brushed aluminum finish which provides more aesthetic alternatives.
FloorPort™ Style & Color Options

- Flanged Blank Nickel
- Flanged Blank Br. Alum.
- Flanged Blank Brass
- Flangeless Blank Brass
- Flanged Blank Grey
- Flanged Blank Black
- Flanged Cutout Black
- Flangeless Cutout Bronze
- Flanged Furniture Feed Blank Black

Evolution™ Series Floor Box
Evolution Series Floor Box
One Box Many Applications

Concrete Floors  Raised Floors  Wood Floors

Feature: One box; three floor types
Benefit: Works in all floor types; Only one box to specify, one box to order, one box to stock

Evolution Series Floor Box
Catalog Number Scheme

Box Assembly

EFB = Evolution Floor Box Product Family
# of gangs = 6 or 8 or 10
S = Steel Construction

Furniture Feed Box Assembly

EFB = Evolution Floor Box Product Family
FF = Furniture Feed

EFB,6 S -OG
Blank = Standard Version
-OG = On-Grade Version
-FC = Fire Classified Version
Evolution Series Floor Box
One Box Many Features

Feature: Cable Management Guides
Benefit: Controls and organizes cables

Feature: Full 180° Cover Rotation
Benefit: Cover remains attached to the box and lies flat on floor surface, providing maximum access and reducing tripping hazards

Evolution Series Floor Box
One Box Many Services

Communication
Power
Audio/Video
Evolution Series Floor Box
One Box Many Features

Feature: Removable modules
Benefit: Allows for quicker, easier installation
- Keeps cross service issues to a minimum
- Facilitates adds, moves and changes without the need for additional outside services.

Evolution Series Floor Box
One Box Many Features

Feature: Maximum hand access
Benefit: 5-inches of hand access space min.
- allowing for cables to be plugged and unplugged easily

Feature: 3 ½” to 3 ¾” of Depth behind device plate
Benefit: Accommodates A/V devices from most manufacturers like Extron Electronics and Crestron Electronics®
Evolution Series Floor Box
One Box Many Features

Feature: Finished interior
Benefit: Cleaner non-industrial look, easier to see when working inside the box.

Features:
- Accepts Standard Size Device Plates
- Removable / Relocatable Divider

Benefits:
- Customer can purchase the device plate that best fits their needs
- Increase flexibility: Box can be customized to make wiring compartments as big or small as needed.

Feature: Tunnel
Benefit: Allows services to be wrapped around the box providing increased flexibility
Evolution Series Floor Box
One Box Many Features

Feature: Cover available with a floor covering insert.
Benefit: Minimizes amount of cover and flange showing, allowing to blend into the décor more seamlessly

Feature: Auto close slide egress doors
Benefit: Egress doors stay open when plugging in devices, leaving hands free to close covers. Egress doors automatically close around reducing opening and reducing tripping hazards

Evolution Series Floor Box
One Box Many Aesthetic Finishes

Black
Brass
Gray
Bronze
Nickel

Feature: 5 Aesthetic finishes
Benefit: More finishes allows customer to match room décor. Matches other Legrand/Wiremold products.
**Evolution Series Floor Box**
One Box Many Features

- 1 ¾” Intumescent service feeds (4) Per box
- 3 ¼” of concrete surrounding box

**Feature:** fire classified version

**Benefit:** Maintains fire rating of the floor structure (up to 2 hours)
- No additional fireproofing needed
- Independently tested by a 3rd party nationally recognized laboratory (UL) Underwriters Laboratories, Inc.

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**Wiremold® Evolution™ Series Poke-Thru Device**

Look into a whole new idea in Poke-thru design
Evolution Poke-Thru Device
6AT Capacity

6AT Series (6" core hole size)
- (2) half gang openings (outer perimeter) - accepts per opening:
  - (1) Wiremold proprietary receptacle devices, or
  - (2) RJ45 communication devices, or
  - (2) Extron MAAP A/V devices
- (1) Full 1 – gang center opening accepts:
  - (1) standard power device including standard duplex, GFCI, hospital grade and decorator style devices, or
  - (8) RJ45 communication devices or (4) Series II devices
  - (6) Extron MAAP A/V devices

Evolution Poke-Thru Device
8AT Capacity

8AT Series (8" core hole size)
- (2) half gang openings (outer perimeter) - accepts per opening:
  - (1) Wiremold proprietary receptacle devices, or
  - (2) RJ45 communication devices, or
  - (2) Extron MAAP A/V devices
- Center opening (3) standard gangs with removable dividers – accepts per opening:
  - (1) standard power device including (standard duplex, GFCI, hospital grade and decorator style devices), or
  - (6) RJ45 communication devices or (3) Series II devices
  - (4) Extron MAAP A/V devices
  - Remove a divider and (4) of Extron’s AAP plates can be accommodated
Evolution Poke-Thru Device
Recessed

6” & 8” Devices
- Devices mounted 3” below surface
- To access devices plates can be unscrewed (like a traditional floor box) without having to disassemble

Evolution Poke-Thru Device
Fire Classified

Evolution Series
- Entire enclosure is composed of intumescent material and expands to shut off hole when temperature reaches approximately 385°F
- Large 8” core hole requires significantly more intumescent material
- 2 hr. fire classification
Evolution Poke-Thru Device
Cover Assembly

RC4ATCXX
- Die cast metal flange with a plastic insert
- Cover sits on top of floor covering 5/16" (.3125")
- Power slides close when electrical plug is removed

Evolution Series
- All die cast metal cover assembly
- Carpet cover sits on top of floor covering 1/8" (.125)
- Tile, flush in the floor version also available
- Slide doors shut automatically around wire when cover is closed

Evolution Poke-Thru Device
Cover Assembly Finishes

Nickel    Brass    Bronze
Gray      Black
Legrand | Wiremold Pathway solutions
designed with A/V in mind

- Legrand | Wiremold offers a full line of pathway products ideal for A/V
- Seamless integration with Ortronics® connectivity modules
- Designed to accommodate separation of A/V, data, and power

A wide variety of A/V equipment application and signal types

**Video**
- HDMI
- VGA
- S-Video
- Component RCA
- Composite RCA
- BNC/F Connector

**Audio**
- XLR
- Speakon
- 3.5mm stereo jack
- ¼” stereo jack
- Composite audio
- Speaker Terminals
- Binding Posts

**Additional**
- USB 2.0
- Serial (9 pin)
- Category 5e/6/6a
- Fiber
Questions and Answers