

3M™ One Pass Fiber Pathway Duct

Frequently Asked Questions

Q: What is the 3M™ One Pass Fiber Pathway Duct?

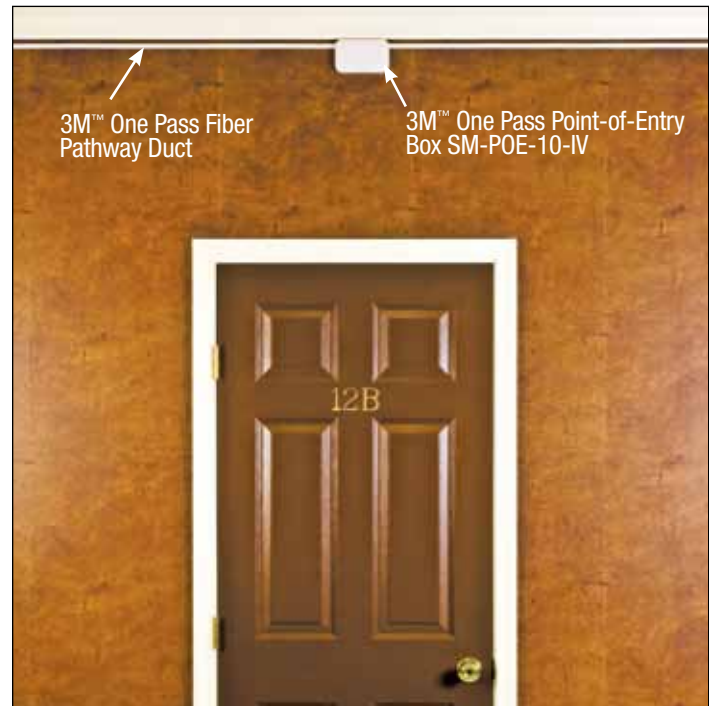
A: The 3M One Pass Fiber Pathway Duct is a surface-mount, adhesive backed indoor drop cable and cable pathway system installed simultaneously in one pass around the perimeter of a multi dwelling unit (MDU) hallway.

Q: Who would use the 3M One Pass Fiber Pathway Duct?

A: The 3M One Pass Fiber Pathway Duct is suitable for network operators deploying fiber-to-the-premise networks (FTTP). It enables them to easily install voice, data and video services to building tenants in brownfield applications.

Q: Why would a network operator choose the 3M One Pass Fiber Pathway Duct over other available horizontal pathway solutions?

- A: The 3M One Pass Fiber Pathway Duct offers many advantages over existing pathway solutions:
- It has a lower profile than existing horizontal pathways used in MDU applications (i.e. crown molding and molded plastic raceways) and because it's flexible, it conforms easily to curved, settled hallway walls frequently found in older MDUs.
 - Sharing cable pathways with competition (i.e. CATV) is not possible and provides greater network security.
 - The cable pathway (duct) and drop cables (900µm fibers pre-populated inside the duct) are installed in one pass around the perimeter of the hallway, helping to save the service provider time and money.
 - Final drop cable connection time is decreased, helping improve the end customer installation experience.
 - A test access point is pre-positioned outside each living unit; entry to the living unit is no longer needed to test the drop cable from the terminal.



3M™ One Pass Fiber Pathway Duct with 3M™ One Pass Point-of-Entry Box SM-POE-10-IV

General Product Questions

Q: What are the components of the 3M One Pass Fiber Pathway Duct?

A: The 3M One Pass Fiber Pathway Duct consists of an extruded PVC duct populated at a 3M factory with 6 or 12 tight buffered, loosely packed 900µm fibers. A 3M adhesive with liner is then applied to the back of the duct for later adhering it to a wall.

Q: In what configurations is the 3M One Pass Fiber Pathway Duct available?

A: The 3M One Pass Fiber Pathway Duct is sold on reels and is available in 100', 200' and 300' lengths. It can also be purchased with SC/APC connectors factory terminated on one end. This allows for plug-and-play installation of the duct in a fiber distribution terminal (FDT) located in a riser closet or stairwell at the end of the hall.



Wall Surface Compatibility Questions

Q: With what wall surfaces is the 3M™ One Pass Fiber Pathway Duct solution compatible?

A: Product testing has been performed on a variety of wall surfaces. See summarized test results in the chart below.

Wall Surface Compatibility Test Results

Wall Surface Type	Pass
Painted Smooth Surfaces	
Flat Latex	Yes
Semi-gloss Latex	Yes
Glossy Latex	Yes
Semi-gloss Alkyd	Yes
Painted Textured Surfaces: Light Stucco & Cement Block	
Flat Latex	Yes
Semi-gloss Latex	Yes
Glossy Latex	Yes
Semi-gloss Alkyd	Yes
Wallpapered Surfaces	
Plain Paper	Yes
Vinyl Coated	Yes
Vinyl	Yes
Polyolefin Woven	No
Unfinished and/or Unpainted Brick, Concrete, or Block	No

Q: How do I confirm a wall surface is compatible with the 3M One Pass Fiber Pathway Duct solution?

A: Test plugs are used prior to installation to ensure wall surface compatibility.

Q: How long should test plugs/bars be left to test surface compatibility?

A: Test plugs should be left on the wall surface for 24 hours. If, after 24 hours, the test plug remains on the wall, the surface is a good candidate for the 3M One Pass Fiber Pathway Duct solution.

Q: Will test plugs damage the wall surface?

A: The adhesive used in this product is engineered for long term performance. Removal of the product from the wall may cause damage. This is why test plugs should be placed in an inconspicuous location.

Building Owner Questions

Q: In what color is the 3M One Pass Fiber Pathway Duct available?

A: The 3M One Pass Fiber Pathway Duct is currently available in ivory.

Q: Can the duct be painted?

A: Yes, the duct can be painted with either latex or oil-based paint.

Q: Will installation be noisy and disruptive to tenants?

A: Because the 3M One Pass Fiber Pathway Duct utilizes 3M adhesive to adhere it to the wall, the use of drills and hammers is kept to a minimum.

System Design and Engineering Questions

Q: How permanent and reliable is the 3M adhesive used on the back of the duct?

A: The specified 3M adhesive is used in a variety of applications. Listed below are some of the most notable:

- Graphic attachment and decorative trims
- Automotive body assembly
- Architectural panels used in the construction of skyscrapers
- Aircraft exteriors

Q: Is the product flame retardant?

A: The 3M One Pass Fiber Pathway Duct passes the UL 746C Section 50 & Section 15 Flammability –12m Flame Test.*

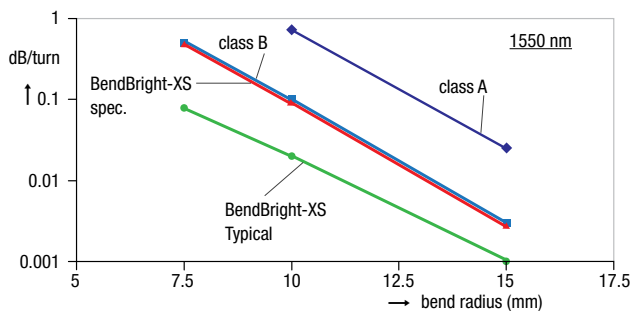
*Based on 3M internal testing

Q: What is the maximum number of living units that can be serviced from a single duct?

A: 12 is the maximum number of fibers sold pre-populated in the 3M One Pass Fiber Pathway Duct.

Q: What bend radius will Draka BendBright-XS™ fiber support in network installation and deployment?

A: The bending performance of Draka BendBright-XS™ fiber is 100 times better than standard single-mode fiber. Draka BendBright-XS™ fiber complies with international fiber bend performance standard ITU G.657A&B which specifies low loss in bending radii as small as 7.5mm.



BendBright-XS™ complies with the ITU-T G.657 Recommendation on bend-insensitive SMF for both class A and class B

Q: How are fibers in the duct accessed?

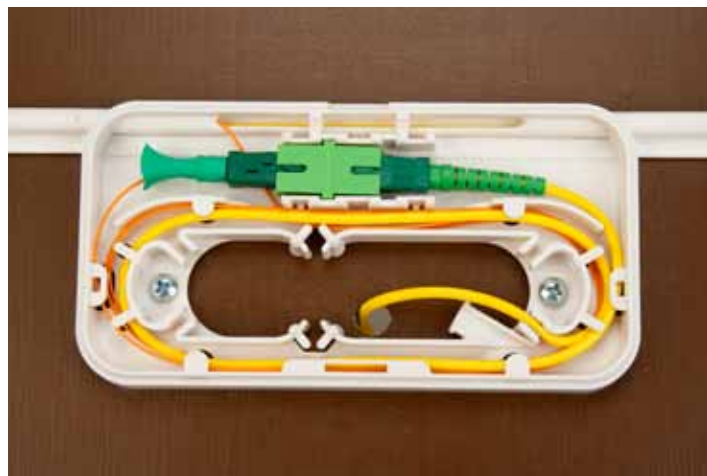
A: Fibers are accessed by making a window cut at a desired access point in the profile of the duct using a window cut template and window cut tool. Fibers are snipped beginning at the access location furthest from the FDT and pulled back to be used at an upstream access location.

Q: What is the purpose of prepositioning a fiber at an access location outside each living unit?

A: Prepositioning fibers outside a living unit significantly reduces the final drop cable installation time improving the customer installation experience. It also allows a network provider to use a less skilled crew to install that final drop as no splicing is required. Lastly, the use of a terminated, prepositioned drop provides a test access point for that fiber without the need to enter a customer's living unit.

Q: Why terminate the prepositioned fiber with a 3M™ No Polish Connector?

A: Terminating fibers in the field with the 3M No Polish Connector is quick and easy. Low cost tooling is used to complete the termination. The tooling requires no power source, often difficult to find in the hallway of a MDU. Lastly, a termination takes less than two minutes. A large number of living units can be passed in a highly concentrated MDU in a short amount of time.



3M™ One Pass Point-of-Entry Box with a 3M™ No Polish Connector

Q: Where is the prepositioned fiber stored?

A: The prepositioned fiber is stored in a 3M™ One Pass Point-of-Entry box.

Installation Questions

Q: How is the product installed?

A: The 3M One Pass Fiber Pathway Duct is installed with an installation tool which uses a reference surface such as a ceiling, crown molding, or existing cable pathway to ensure it is installed straight.

Q: How close to the reference surface can the 3M One Pass Fiber Pathway Duct be installed?

A: The 3M One Pass Fiber Pathway Duct can be installed as close as ¼" from the reference surface. In installations where the hallway ceiling is highly textured, a ½" off-set is recommended. A maximum off-set of 3 ½" is possible.

Q: What if I place the duct incorrectly during installation? How much time do I have to move the duct?

A: If pressure is applied to the duct during installation it will be difficult to reposition without damaging the wall. In general, at room temperature, 50% of the adhesive is bonded to the wall surface within 20 minutes of installation, 90% after 24 hours, and 100% after 72 hours.

Q: How do I ensure the appropriate fiber bend radius is maintained during installation?

A: To prevent macrobends, corner support pieces are installed prior to the 3M™ One Pass Fiber Pathway Duct.

Q: Can the 3M One Pass Fiber Pathway Duct be pulled through conduit?

A: The connectorized end of the duct is shipped with a pull-eye and can be pulled through a minimum 1" conduit.

Q: What if the 3M One Pass Fiber Pathway Duct begins to peel from the wall?

A: The product has been tested under rigorous conditions so this should not happen. However, if it does, a mechanical fastener can be used to secure that section of the duct to the wall.



3M™ One Pass Fiber Pathway Duct on a spool

Where Can I Learn More?

Q: Who can I call at 3M for assistance with questions on product and product installation?

A: 3M Customer Service is available to answer questions. Please contact them at 1-800-426-8688. A datasheet and instruction manuals are also available:

Datasheet, 3M One Pass Fiber Pathway Duct
(3M Stock Number 80-6113-2874-3)

Installation Instructions, 3M™ One Pass Fiber Pathway Duct
(3M Stock Number 78-8140-6222-6)

Instructions, 3M™ One Pass Wall Surface Compatibility Test Procedure
(3M Stock Number 78-8140-6223-4)

Instructions, 3M™ One Pass Fiber Pathway Duct Installation Tool
(3M Stock Number 78-8140-6224-2)

Assembly Instructions, 3M™ One Pass Utility Cart Assembly Kit 800-U-C-Kit
(3M Stock Number 78-8140-6225-9)

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